

Appendix V

Fuel Oil UST Report

UST Closure Report

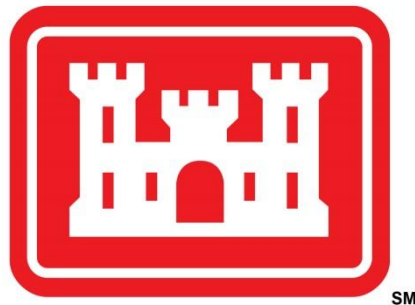
**Former Launch Area Formerly Used Defense Site
Nike Battery BU-34/35
FUDS No. C02NY007701**

East Aurora, New York

Contract No. W912WJ-16-C-0023

Prepared for:

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1.0 Introduction

This Underground Storage Tank (UST) Closure Report describes work activities performed at the former Defense Battery BU-34/35 in East Aurora, NY to complete the removal of a recently discovered UST and associated soil containing diesel fuel from a prior spill event. This work was conducted as part of additional work to close six Nike missile silos at the same property. This project is being executed by the U.S. Army Corps of Engineers (USACE) New England District.

1.1 Site Description and History

The former Niagara Falls-Buffalo Nike Battery BU-34/35 is located in Erie County, New York, and consists of two separate areas, the Launch Area and the Control Area. The property where the UST was located is on the roughly 20-acre Launch Area, located at 601 Willardshire Rd., East Aurora, New York (the Site). The Site is privately owned and contains six former missile silos.

On April 25, 2017, a UST was found as part of a ground penetrating radar (GPR) survey of the Former Launch Area. The GPR survey provided evidence of a possible UST located near, and assumed associated with, a former generator building no longer standing. The depth of the UST was estimated to be 5 feet below ground surface (bgs). There was no visual evidence of piping or of the tank itself.

The USACE contracted with TANTARA to remove the UST and address any environmental hazards that may be associated with the UST. From October 16, 2017 through November 14, 2017, TANTARA performed the UST closure activities, which are described in the following sections of this report.

2.0 Summary of UST Closure Activities

UST closure activities performed by TANTARA included:

- Site preparation activities, including notification to the state and property owner, mobilization, brush and tree clearing, installation of erosion control materials, and marking out utilities;
- Excavation and removal of the tank and piping;
- Excavation and removal of concrete deadman;
- Collection of soil confirmation samples for both field screening and laboratory analysis;
- Accessing and cleaning the interior of the tank;
- Managing the various waste streams, including tank contents, petroleum-contaminated soil, tank cleaning waste, excavation water, and cleaned tank; and
- Site restoration, including backfilling of excavation.

The procedures used to perform the excavation, removal, and disposal of the UST systems, piping, and other related component were all in accordance with the requirements of the US Environmental Protection Agency (USEPA), the American Petroleum Institute (API) Recommended Practice 1604 Closure of Underground Petroleum Storage Tanks, and applicable state and local UST closure regulations and guidance for New York and Erie County.

Site health and safety controls were fully established and operational before the beginning of any handling of contaminated materials. Employees and subcontractors used personal protective equipment (PPE) consistent with the levels of protection listed in the Accident and Prevention Plan (APP). During excavation activities, a photoionization detector (PID) was used to field screen for total volatile organic compounds (VOCs). Excavation was also conducted in a manner as to limit the spread of contamination during handling. Work areas, such as areas close to the excavation, roadways public and private, and any other spaces used for storage or staging were kept free of contaminated materials. Before the removal of the tank, the excavation was maintained to provide sufficient space to allow workers room to complete the investigation and while also protecting from sliding or cave-ins.

Photographs of different phases of the fieldwork are presented in Appendix A.

2.1 Site Preparation Activities

On September 18, 2017, TANTARA submitted to Ms. Andrea Skalski, NYSDEC Buffalo regional office, a completed Pre-Work Notification for Bulk Storage Tank Installation or Closure form. A copy of this form is included in Appendix B. Prior to mobilization, the property owner's consultant, LCS Inc., was notified. On October 4, 2017, Dig Safely New York was contacted, and a utility stakeout request was made, Request No. 10047-900-022.

On October 16, 2017, TANTARA mobilized equipment and supplies to the Site. A storage container and portable toilet were temporarily staged at the Site. Specialized Tree Service, Elma, New York, cleared

brush from the work area, and removed the cut brush from the Site. Straw wattles were installed around the work area to mitigate soil erosion. Also, on the same day, TI2E performed a second GPR survey to investigate whether additional USTs were present near the known UST. The results of this survey suggested that either a second tank was present, or that the known tank was bigger than previously estimated. Subsequent excavation confirmed that the tank was bigger than previously estimated, as noted below.

Other preparation activities were performed after mobilization as circumstances arose that required additional site controls. On October 24, 2017, after it was determined that the limits of contamination extended beyond the original excavation, Specialized Tree Service returned to the Site and removed several trees to increase the size of the work area. This allowed better access for the additional soil excavation that was required, and to provide more space for staging soil piles.

On October 24, 2017, City Fence, Lancaster, New York, erected temporary 6-foot high chain link construction fencing around the excavation to address safety concerns when the Site was unattended.

2.2 Tank Excavation

On October 16, 2017, TANTARA excavated down to, and uncovered, the UST, and determined that the tank had approximate dimensions of 8 ft in diameter and 22 ft long, which corresponds to a tank volume of approximately 8,000 gallons, and the top of the tank was approximately 5 ft bgs. The single-walled steel tank had two 3-in. diameter parallel pipes connected to the top of the tank that both ran parallel to each other at a depth of approximately 2.5 ft. These pipes ran to the southwest approximately 15 ft from the west end of the tank, in the direction of the former generator building. There was also an approximately 18-inch diameter sealed manway opening on the top of tank. Another small diameter opening at the top of the west end of the tank where a pipe was previously attached revealed the tank to be filled with water. A slight petroleum odor was evident emanating from this opening; however, no visible petroleum sheen was present. A sample of the water contained in the tank was collected and submitted to SGS Accutest, Orlando, Florida for analysis for polychlorinated biphenyls (PCBs), metals, ignitability, and pH. A copy of the analytical laboratory report is provided in Appendix C.

On October 17, 2017, TANTARA pumped the water contained within the UST into a frac tank that was brought onto the Site by Baker Corporation. Once the UST was empty of water, it was removed from the ground using the excavator bucket to pull/slide the tank out of the excavation. The tank was moved to a location near the Site's access road and placed on poly sheeting. Visual inspection of the tank did not reveal any corrosion or holes. A creosote-like coating covered the outside of the tank. This coating was brittle but fully intact. The observed condition beneath this coating was excellent, and the welds appeared competent with no signs of corrosion.

A concrete deadman (i.e., concrete slab) was present beneath the removed tank. Stained soil was observed in the western end of the tank excavation, and a distinct petroleum odor was detected. On October 18, 2017, a spill report was made to the NYSDEC, spill no. 1706975 was assigned. A copy of the spill report is provided in Appendix D. Field screening using a PID detected elevated levels of VOCs. The decision was made by the USACE to remove the impacted soil and TANTARA excavated the soil and staged in a pile adjacent to the excavation. The excavated contaminated soil was placed on poly sheeting, and was

covered with poly sheeting at the end of each day. Soil exhibiting elevated VOC concentrations based on the field screening using the PID was segregated from soil exhibiting no VOC concentrations.

From October 17 through October 30, 2017, TANTARA removed approximately 300 cubic yards of petroleum-contaminated soil from the tank excavation. Soil exhibiting elevated PID readings and/or visual or olfactory evidence of petroleum contamination was removed and placed on poly sheeting, and was covered with poly sheeting at the end of each day. Soil confirmation samples were collected from the excavation sidewalls and bottom at various times during this period (October 18, 19, 27 and November 1, 2017) to validate that no petroleum-contaminated remained in the excavation. A composite soil sample was collected from the stockpiled soils for waste characterization purposes (sample ID: SOIL PILE WC UST). A copy of the analytical laboratory report is provided in Appendix C.

On October 19, 2017, Ms. Francine Galeigo, the NYSDEC Spill Case Manager, visited the Site to witness the UST removal work underway.

On October 19, 2017, TANTARA removed the two pipes attached to the tank and collected a soil confirmation from beneath the halfway point of the pipe. On October 26, 2017, the concrete deadman was broken into smaller pieces using a 6,000-lb concrete breaker on the end of an excavator, and the pieces were removed and stockpiled adjacent to the excavation awaiting disposal. The pad was found to be 3-ft thick with dimensions of 14 ft by 24 ft. Stained soil was observed adjacent to the north end of the pad; however, no significant staining was observed beneath the pad.

2.3 Tank Cleaning

On October 31, 2017, Sun Environmental, under TANTARA supervision, cleaned the tank onsite prior to recycling at an offsite facility. Prior to cleaning and entering the tank, the atmosphere was measured for combustible vapors. This was conducted using a PID and LEL meter, and it was conducted continuously throughout cleaning activities. No separate step was required to inert the interior atmosphere of the tank. Sun cut into the end of the tank and cleaned the interior walls of the tank using scrapers and absorbent pads. The sludge removed from the tank consisted primarily of a thick oily sediment. This sludge and the used cleaning supplies were placed into two 55-gallon steel drum and left onsite awaiting disposal. A sample of this material was collected and analyzed by SGS Accutest for waste characterization purposes (sample ID: TANK BOTTOMS). A copy of the analytical laboratory report is included in Appendix C.

2.4 Waste Products and Tank Carcass Disposal

This section provides information related to the management of waste materials associated with the UST closure.

Tank Contents (Liquid Waste): A total of 7,505 gallons of oily water was pumped from the tank into a frac tank staged near the excavation. The water was later pumped from the frac tank into a tanker truck (6,500 gals) and a vacuum truck (1,005 gals) and hauled offsite to Industrial Oil Tank Service Corporation (IOTSC), Oriskany, New York, for treatment and disposal. A waste profile was prepared for this waste based on the results of analytical testing and generator knowledge. A copy of this profile and the bill of lading used to haul this water are provided in Appendix E.

Petroleum-Contaminated Soil: A total of 477.21 tons of petroleum-contaminated excavated soil was hauled offsite to Waste Management's Chaffee Landfill, Chaffee, New York for use as daily cover. The broken pieces of concrete from the deadman were combined with the soil going to Chaffee Landfill. A waste profile was prepared for this waste based on the analytical results of the composite soil sample collected from the stockpile. A copy of this profile and copies of the completed non-hazardous waste solid waste manifests used to haul this soil are provided in Appendix F.

Tank Cleaning Waste: A total of two 55-gallon metal drums were generated from cleaning the interior of the tank and were hauled offsite to IOTSC for treatment and disposal. A waste profile was prepared for this waste based on the results of analytical testing. A copy of this profile and the bill of lading used to haul this waste are provided in Appendix G.

Excavation Water: A total of 14,890 gallons of water was pumped from the excavation to facilitate backfilling. On November 8, 2017, 3,150 gallons of water was pumped directly from the excavation into a vac truck. On the following day, an additional 11,740 gallons of water was pumped to the frac tank staged at the Site. This water was later pumped from the frac tank into tanker trucks and hauled offsite to IOTSC for treatment and disposal. This waste used the same waste profile as was used for the oily water pumped from the tank. Copies of the bill of ladings used to haul this water are provided in Appendix H.

Tank Carcass: The empty and cleaned tank carcass was hauled offsite to Niagara Metals, Niagara Falls, New York, for recycling. The creosote-like coating was not removed from the outside of the tank prior to disposal.

3.0 Confirmation Sampling and Analysis

Soil samples collected to confirm that petroleum-contaminated soil associated with the UST has been removed are reviewed in this section.

Soil exhibiting visual staining from petroleum contamination, or having elevated concentrations of VOCs as measured in the field using a PID, was excavated and stockpiled near the excavation. As the excavation progressed, soil confirmation samples were collected of each newly exposed sidewall or bottom. Soil confirmation samples were collected from the excavation sidewalls and bottom on four separate times during this period (October 18, 19, 27 and November 1, 2017) to validate that no petroleum-contaminated remained in the excavation. Table 1 summarizes the results of soil confirmation sampling, and indicates which samples are from a final exposed surface, sidewall or bottom (i.e., no additional excavation was performed past the location where the sample was collected). Figure 1 indicates the locations where the soil samples were collected.

In a few locations, additional soil was excavated before receiving the results of confirmation samples collected at these locations. At these locations, a decision was made to continue excavation based on visual and olfactory evidence of contamination. However, in some of these locations (SW-N2, SW-N3 EXT, and SW-W2) the results of the confirmation samples did not exceed the NYSDEC CP-51 Soil Cleanup Levels.

Soil confirmation samples were collected from the UST excavation in accordance with NYSDEC's Technical Guidance for Site Investigation and Remediation (DER-10). Pursuant to 5.4(b)(5)(ii) of DER-10, required confirmation sample frequency for excavations with between 20 and 300 ft in perimeter is one sidewall sample for every 30 linear feet (LF) of sidewall and one sample for the excavation bottom for every 900 square feet of bottom area. The final excavation for the UST closure had a perimeter of approximately 120 LF (i.e., minimum of 4 sidewall samples), and an excavation bottom area of approximately 912 square feet (i.e., minimum of 2 bottom samples). The number of soil confirmation samples collected of soil remaining at the completion of the project were 7 sidewall samples and 5 bottom samples.

Sidewall sample locations were biased toward the bottom of the excavation (i.e., within 5 feet from the bottom of the excavation), and the bottom samples were collected approximately 11 ft bgs. No groundwater samples were collected from the excavation as the water table was deeper than the excavation.

Samples collected during closure activities were forwarded to SGS Accutest, a New York State Department of Health (NYSDOH) ELAP-certified laboratory. Soil samples were analyzed pursuant to the Site-Specific Quality Assurance Project Plan (QAPP) for select VOCs and semivolatile organic compounds (SVOCs) listed in NYSDEC's Soil Cleanup Guidance (CP-51), Table 3 - Soil Cleanup Levels for Fuel Oil Contaminated Soil.

For two samples, SW-W2 and BOT-N3, the reporting detection limit for benzene (0.086 mg/kg) slightly exceeded the CP-51 Soil Cleanup Level for benzene (0.060 mg/kg); however, benzene is not a contaminant of concern for the Site because it was not detected in any soil sample collected from the excavation.

The final sidewall soil samples (SW-E, SW-S, SW-N, SW-S2, SW-NW1, SW-N4 EXT, and SW-W3), and final bottom soil samples (BOT-E, BOT-S, BOT-N, BOT-S2, PAD BOT-W, BOT-NW1, and BOT-N3) achieved the soil cleanup levels as specified by the NYSDEC's CP-51 guidance, which are equivalent to the "unrestricted" NYSDEC soil cleanup objectives.

Analytical laboratory reports for this analysis are provided in Appendix C. Analytical results for the soil samples underwent data validation to support project decision making. There were no rejected results and soil confirmation data are considered usable with the understanding of potential bias in the estimated results. Copies of the data validation reports are provided in Appendix I.

4.0 Site Restoration

On November 1, 2017, after completing soil excavation activities, TANTARA lined the excavation with poly sheeting and began backfilling the excavation with surge stone supplied by New Enterprise Stone & Lime Co., Inc., Cheektowaga, New York. Surge stone, a larger (3- to 4-inch in diameter), open-graded stone was used at the deeper depths, because it compacts more easily. Backfilling was suspended the remainder of the week as heavy rain resulted in standing water within the excavation that required removal before backfilling resumed. On November 7 and 8, 2017, water was pumped from the excavation, first to a vacuum truck and then the remaining water was pumped to a frac tank temporarily staged on site. The upper portion of the excavation was backfilled with a combination of the stockpiled, non-contaminated excavation spoils and imported select granular stone. The upper 5 feet of the excavation was backfilled in 12-inch maximum lifts and compacted with a Hamm H 5i vibratory smooth drum roller. Compaction (density) testing was performed by 3rd Rock, LLC, East Aurora, New York to ensure that compaction met the work plan requirement of 90% Modified Proctor. A total of 21 density tests were performed on 7 lifts. Of the 21 tests, 5 failed (<90% Modified Proctor). Following each failed test, the lift was re-rolled and re-tested until it passed. Based on these results, the backfill was successfully compacted to meet the 90% Modified Proctor specification. A copy of the results of the density testing, along with the Modified Proctor analysis of the excavated material, is provided in Appendix J. Backfilling and compaction of the excavation was completed on November 9, 2017. A total of 337.6 tons of imported backfill were placed into the excavation along with the stockpiled non-contaminated excavation spoils.

On November 11, 2017, GPI Engineering, Landscape Architecture & Surveying, LLP surveyed the corners of the excavation, which had been staked by TANTARA prior to backfilling. The surveyed corners are shown on Figure 1, and a copy of the final survey is provided in Appendix K.

On January 12, 2018, TANTARA submitted to Ms. Andrea Skalski, NYSDEC Buffalo regional office, a completed Petroleum Bulk Storage Application to document closure of the UST. A copy of this form is included in Appendix L.

Site restoration is scheduled to be completed in spring 2018 when the disturbed areas will be covered with topsoil and seeded.

TABLES

TABLE 1
Summary of Soil Confirmation Samples
Former Launch Area FUDS - Nike Battery BU-34/35
East Aurora, New York
Units: mg/kg

DRAFT

Sample ID	CP-51 Soil Cleanup Levels	SW-E	BOT-E	SW-W	BOT-W	SW-S	BOT-S	SW-N	BOT-N	SW-N2	BOT-N2	SW-S2	BOT-S2	PAD BOT-W	SW-N3 EXT	BOT-NW1	SW-W2	SW-NW1	SW-N4 EXT	BOT-N3	SW-W3	PIPE
Sampling Date		10/18/17	10/18/17	10/18/17	10/18/17	10/18/17	10/18/17	10/18/17	10/18/17	10/19/17	10/19/17	10/19/17	10/19/17	10/19/17	10/27/17	10/27/17	10/27/17	10/27/17	11/1/17	11/1/17	11/1/17	10/19/17
Sample Depth, ft bgs		7	10	7	10	7	10	7	10	7	11	7	11	13	7	12	7	7	7	13	7	3
Parameter				Excavated	Excavated					Excavated	Excavated				Excavated		Excavated					
Volatile Organic Compounds (VOCs)																						
Benzene	0.06	<0.0015	<0.0015	<0.0015	<0.048	<0.0014	<0.0012	<0.0018	<0.0011	<0.0015	<0.05	<0.0013	<0.0014	<0.0015	<0.0016	<0.0015	<0.084*	<0.0016	<0.0018	<0.086*	<0.0014	<0.0016
n-Butylbenzene	12.0	0.0015 UJ	<0.0015	<0.0015	<0.048	<0.0014	<0.0012	<0.0018	0.0011 UJ	<0.0015	0.223	<0.0013	<0.0014	0.0042	0.0016 UJ	<0.0015	<0.084	<0.0016	<0.0018	<0.086	<0.0014	<0.0016
sec-Butylbenzene	11.0	0.0015 UJ	<0.0015	<0.0015	0.233	<0.0014	<0.0012	<0.0018	0.0058 J	<0.0015	0.120	<0.0013	0.00074 J	0.0529	0.0183 J	<0.0015	0.084 UJ	<0.0016	<0.0018	<0.086	<0.0014	<0.0016
Tert-butylbenzene	5.9	0.0015 UJ	<0.0015	<0.0015	<0.048	<0.0014	<0.0012	<0.0018	0.0011 J	<0.0015	<0.05	<0.0013	<0.0014	0.0083	0.0018 J	<0.0015	0.084 UJ	0.091 J	<0.0018	<0.086	<0.0014	<0.0016
Ethylbenzene	1.0	0.0015 UJ	<0.0015	<0.0015	<0.048	<0.0014	<0.0012	<0.0018	<0.0011	<0.0015	0.0556 J	<0.0013	<0.0014	0.0013 J	0.0016 UJ	<0.0015	<0.084	<0.0016	<0.0018	<0.086	<0.0014	<0.0016
Isopropylbenzene	2.3	0.0015 UJ	<0.0015	<0.0015	0.0383 J	<0.0014	<0.0012	<0.0018	<0.0011	<0.0015	0.0581 J	<0.0013	<0.0014	0.0106	0.00085 J	<0.0015	0.084 UJ	<0.0016	<0.0018	<0.086	<0.0014	<0.0016
p-Isopropyltoluene	10.0	0.0015 UJ	<0.0015	<0.0015	<0.048	<0.0014	<0.0012	<0.0018	0.0011 UJ	<0.0015	0.140	<0.0013	<0.0014	0.0012 J	0.0016 UJ	<0.0015	<0.084	<0.0016	<0.0018	<0.086	<0.0014	<0.0016
n-Propylbenzene	3.9	0.0015 UJ	<0.0015	<0.0015	0.0303 J	<0.0014	<0.0012	<0.0018	0.0011 UJ	<0.0015	0.153	<0.0013	<0.0014	0.0111	0.0016 UJ	<0.0015	0.084 UJ	<0.0016	<0.0018	<0.086	<0.0014	<0.0016
Toluene	0.7	<0.0015	<0.0015	<0.0015	<0.048	<0.0014	<0.0012	<0.0018	<0.0011	<0.0015	<0.05	<0.0013	<0.0014	<0.0015	<0.0016	<0.0015	<0.084	<0.0016	<0.0018	<0.086	0.0025 J	<0.0016
1,2,4-Trimethylbenzene	3.6	<0.0015	<0.0015	<0.0015	<0.048	<0.0014	<0.0012	<0.0018	0.0011 UJ	<0.0015	0.411	<0.0013	<0.0014	0.0038	0.0049 UJ	<0.0015	<0.084	<0.0016	<0.0018	<0.086	0.00089 J	<0.0016
1,3,5-Trimethylbenzene	8.4	<0.0015	<0.0015	<0.0015	<0.048	<0.0014	<0.0012	<0.0018	0.0011 UJ	<0.0015	<0.05	<0.0013	<0.0014	0.001 J	0.0016 UJ	<0.0015	<0.084	<0.0016	<0.0018	<0.086	<0.0014	<0.0016
Xylene (Mixed)	0.26	0.0045 UJ	<0.0046	<0.0045	<0.14	<0.0043	<0.0035	<0.0055	<0.0034	<0.0044	<0.15	<0.0038	<0.0041	0.0036 J	0.0016 UJ	<0.0044	<0.25	<0.0047	<0.0053	<0.086	<0.0041	<0.0047
Semivolatile Organic Compounds (SVOCs)																						
Acenaphthene	20	0.0557 J	<0.038	<0.039	7.16	<0.04	<0.037	<0.036	0.0674 J	<0.036	7.61	<0.038	<0.038	0.886	0.262	<0.039	<0.036	<0.041	<0.038	<0.04	<0.04	<0.036
Acenaphthylene	100	<0.034	<0.038	<0.039	0.843	<0.04	<0.037	<0.036	<0.037	<0.036	2.37	<0.038	<0.038	<0.038	<0.041	<0.039	<0.036	<0.041	<0.038	<0.04	<0.04	0.16 J
Anthracene	100	0.168	<0.038	0.0464 J	5.88	<0.04	<0.037	<0.036	<0.037	<0.036	2.32	<0.038	<0.038	0.513	<0.041	<0.039	<0.036	<0.041	<0.038	<0.04	<0.04	0.0969
Benzo(a)anthracene	1.0	0.276	<0.0075	0.0765	4.83	<0.008	0.0096 J	<0.0072	<0.0075	0.0045 J	1.91	<0.0076	<0.0076	0.293	0.0248 J	<0.0079	<0.0072	<0.0081	<0.0077	<0.04	<0.0081	0.174 J
Dibenzo(a,h)anthracene	0.33	0.0409	<0.0075	0.0926	0.542	<0.008	<0.0074	<0.0072	<0.0075	<0.0072	0.170	<0.0076	<0.0076	0.0317	<0.041	<0.0079	<0.0072	<0.0081	<0.0077	<0.04	<0.0081	0.0543 J
Chrysene	1.0	0.345	<0.0075	0.0747	4.66	<0.008	0.0099 J	<0.0072	0.0059 J	0.0054 J	1.73	<0.0076	<0.0076	0.275	0.0225 J	<0.0079	0.0056 J	<0.0081	<0.0077	0.0287 J	<0.0081	0.136 J
Fluoranthene	100	0.826	<0.038	0.305	19.7	<0.04	0.0327 J	<0.036	0.0312 J	0.0259 J	8.62	<0.038	<0.038	1.33	0.0807 J	<0.039	<0.036	<0.041	<0.038	<0.04	<0.04	0.351 J
Benzo(b)fluoranthene	1.0	0.259	<0.0075	0.355	3.08	<0.008	0.012 J	<0.0072	<0.0075	0.0061 J	1.22	<0.0076	<0.0076	0.195	<0.041	<0.0079	<0.0072	<0.0081	<0.0077	<0.04	<0.0081	0.247 J
Benzo(k)fluoaranthene	0.8	0.271	<0.0075	0.179	3.39	<0.008	0.0113 J	<0.0072	<0.0075	0.0062 J	1.38	<0.0076	<0.0076	0.220	<0.041	<0.0079	<0.0072	<0.0081	<0.0077	<0.04	<0.0081	0.263 J
Fluorene	30	0.0566 J	<0.038	<0.039	8.65	<0.04	<0.037	<0.036	0.110	<0.036	3.93	<0.038	<0.038	0.750	0.448	<0.039	<0.036	<0.041	<0.038	<0.04	<0.04	<0.036
Napthalene	12.0	<0.034	<0.038	<0.039	1.61	<0.04	<0.037	<0.036	<0.037	<0.036	4.31	<0.038	<0.038	0.105	0.0123	<0.039	<0.036	<0.041	<0.038	<0.04	<0.04	<0.036
Benzo(g,h,i)perylene	100	0.268	<0.0075	1.38	1.57	<0.008	0.0273	<0.0072	<0.0075	0.0051 J	0.570	<0.0076	<0.0076	0.105	<0.041	<0.0079	<0.0072	<0.0081	<0.0077	<0.04	<0.0081	0.22 J
Phenanthrene	100	0.406	<0.038	0.104	36.2	<0.04	0.0203 J	<0.036	0.027 J	0.0423 J	15.8	<0.038	0.0268 J	2.92	1.54	<0.039	<0.036	<0.041	<0.038	<0.04	<0.04	0.0471 J
Pyrene	100	0.621	<0.038	0.288	13.4	<0.04	0.0256 J	<0.036	<0.037	<0.036	5.54	<0.038	<0.038	<0.038	0.190 J	<0.039	<0.036	<0.041	<0.038	<0.04	<0.04	0.277 J
Benzo(a)pyrene	1.0	0.306	<0.0075	0.789	3.45	<0.008	0.0157	<0.0072	<0.0075	0.0059 J	1.37	<0.0076	<0.0076	0.215	<0.041	<0.0079	<0.0072	<0.0081	<0.0077	<0.04	<0.0081	0.253 J
Indeno(1,2,3-cd)pyrene	0.5	0.232	<0.0075	1.29	1.59	<0.008	0.0195	<0.0072	<0.0075	0.0045 J	0.548	<0.0076	<0.0076	0.0974	<0.041	<0.0079	<0.0072	<0.0081	<0.0077	<0.04	<0.0081	0.212 J

Notes:

Units are in milligrams/kilograms (mg/kg)

<XXX: Not detected at Quantitation Limit.

J: Reported value is usable as an estimated value.

UJ: Reported non-detected value is usable as an estimated value.

*: Reporting detection limit greater than the CP-51 Soil Cleanup Levels

Highlighted results exceed the CP-51 Soil Cleanup Levels.

Soil representative of a given sample that was subsequently excavated is indicated at the top of the table.

ft bgs: feet below ground surface

Note that some sample names have been slightly altered from those in the laboratory analytical reports for clarity. A detailed sample ID key is provided to the right.

Sample ID Key

Laboratory ID	Corresponding Table & Map ID	Laboratory ID	Corresponding Table & Map ID	Laboratory ID	Corresponding Table & Map ID
NIKE SWE	SW-E	NIKE BOT-N	BOT-N	NIKE BOT NW1	BOT-NW1
NIKE BOTTOM E	BOT-E	NIKE SWN2	SW-N2	NIKE SW2 WEST SIDEWALL	SW-W2
NIKE SW W	SW-W	NIKE BOT N2	BOT-N2	NIKE SIDEWALL NW1	SW-NW1
NIKE BOTTOM W	BOT-W	NIKE SWS2	SW-S2	NIKE SWN EXT4	SW-N4 EXT
NIKE SW-S	SW-S	NIKE BOT S2	BOT-S2	NIKE BOT N3	BOT-N3
NIKE BOTTOM S	BOT-S	NIKE PAD BOT W	PAD BOT-W	NIKE SWW2	SW-W3
NIKE SW-N	SW-N	NIKE SIDEWALL NORTH3 EXT	SW-N3 EXT	NIKE PIPE	PIPE

FIGURES

LEGEND

◆ Excavation bottom soil sample location.

◆ Excavation sidewall soil sample location.

■ Samples highlighted in green represent soil that was subsequently excavated.

--- Approximate excavation limits on 10/18/17 & 10/19/17.

--- Approximate excavation limits on 10/27/17.

== Pipes (2) removed as part of closure activities.

Final Limits of Excavation

Former UST Location

SW-N4 EXT
11/01/17

SW-N3 EXT
10/27/17

SW-N2
10/19/17

SW-NW1
10/27/17

BOT-NW1
10/27/17

BOT-N2
10/19/17

BOT-N3
11/01/17

SW-W3
11/01/17

SW-W2
10/27/17

SW-W
10/18/17

SW-N
10/18/17

BOT-N
10/18/17

BOT-E
10/18/17

SW-E
10/18/17

BOT-S
10/18/17

SW-S
10/18/17

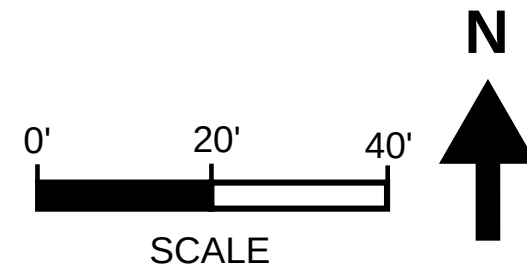
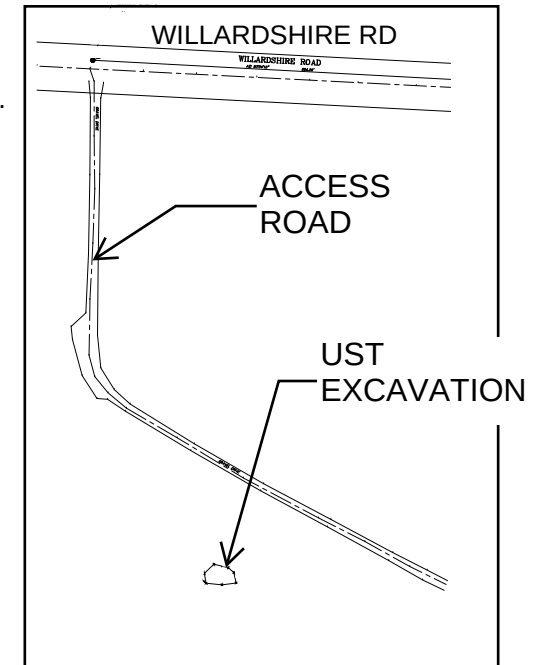
PIPE
10/19/17

BOT-W
10/18/17

PAD BOT-W
10/19/17

BOT-S2
10/18/17

SW-S2
10/18/17



Note: Limits of excavation based on 11/11/17 survey performed by GPI Engineering, Landscape Architecture & Surveying, LLP.

FIGURE 1
CONFIRMATION SOIL SAMPLE LOCATIONS
UST CLOSURE
FORMER LAUNCH AREA FUDS - NIKE BUFFALO BU-34/35
EAST AURORA, NY

APPENDICES

Appendix A

Site Photographs

**APPENDIX A
SITE PHOTOGRAPHS**



Photograph 1: UST after removal from excavation (10/17/17).



Photograph 2: Frac tank used to stage water pumped from UST and excavation (10/17/17).

**APPENDIX A
SITE PHOTOGRAPHS**



Photograph 3: Specialized Tree Service chipping trees removed from around excavation (10/24/17).



Photograph 4: Extent of excavation on 10/18/17.

**APPENDIX A
SITE PHOTOGRAPHS**



Photograph 5: Soil stockpile covered with poly sheeting (10/25/17).



Photograph 6: Exposed west end of concrete deadman (10/25/17).

**APPENDIX A
SITE PHOTOGRAPHS**



Photograph 7: Using hammer attachment to break up and remove concrete deadman (10/26/17).



Photograph 8: West side of excavation. Gray colored soil determined to be native clay (10/26/17).

**APPENDIX A
SITE PHOTOGRAPHS**



Photograph 9: Final limits of excavation prior to backfilling (10/31/17).



Photograph 10: Inside of UST after cleaning (10/31/17).

**APPENDIX A
SITE PHOTOGRAPHS**



Photograph 11: Temporary gravel road installed to access soil piles for transportation to disposal facility (11/01/17).



Photograph 12: Excavation lined with poly sheeting prior to backfilling (11/01/17).

**APPENDIX A
SITE PHOTOGRAPHS**



Photograph 13: Excavation being backfilled with imported gravel (11/08/17).



Photograph 14: Completion of backfilling (11/10/17).

Appendix B

Pre-Work Notification for Bulk Storage Tank Installation or Closure Form

New York State Department of Environmental Conservation
Pre-Work Notification for Bulk Storage (PBS or CBS) Tank Installation or Closure



This form provides notice of an upcoming tank installation and/or closure per 6 NYCRR Sections 613-1.9(h) and (f), 613-2.6(b) (1), 613-3.5 (b) (1) and 613-4.5 (b) (1) of the Petroleum Bulk Storage (PBS) Regulations, or 6 NYCRR Sections 596.2(f) and (h) of the Chemical Bulk Storage (CBS) Regulations. Submit the completed form to the Department's Regional Office at least 30 days prior to action for PBS tank installation * and permanent closure** ; at least 3 days prior for CBS tank installation ***. For CBS permanent tank closure, a minimum of 3 day prior notice is recommended. **If the schedule for work changes you must notify the Department's Regional Office before work begins. Once the work is complete, the facility (property) owner is responsible for submitting a PBS or CBS application to the Department with the complete tank information including the date the action was completed.** The Owner is also responsible to ensure that all work is completed in compliance with the applicable PBS or CBS regulations (i.e., Parts 613 or 598/599). Any questions, call the Department's Regional Office. Information on the Chemical and Petroleum Bulk Storage Programs be found at: <http://www.dec.ny.gov/chemical/287.html>

*not required for temporary tank system

** unless in response to corrective action

*** unless immediate action is required

Check Applicable Program: X PBS CBS **Facility PBS or CBS Registration No.** NA

Site Name: Former Niagara Falls Defense Battery BU-34/35 Launch Area	Contractor: TANTARA Corporation
Site Address: 601 Willardshire Road, East Aurora NY, 14052	Address: 54 Mason St Worcester MA, 01610
Site Address (cont):	Address(cont):
Site Contact: Penelope Reddy, USACE New England District	Contact: Mark Lovejoy, P.E.
Phone Number: 978-318-8160 Fax Number:	Phone Number: 508-752-5599 Fax Number:
Email Address: penelope.w.reddy@usace.army.mil	Email Address: mlovejoy@tantaracorp.com

Tank Number	Type of Action (Close & Remove, Close in Place, Install)	Proposed Date (mm/dd/yy)	Tank Location (Aboveground or Underground)	Capacity (Gallons)	Spills/Leaks? (Yes/No w/Spill # if Yes)	Reason for Action
001	Close & Remove	10/10/17	Underground	4,000	No	Abandoned Tank

I hereby certify under penalty of law that the information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Name of Owner or Authorized Representative (print): Penelope Reddy Title: Engineering Technical Lead

Signature Penelope Reddy Date 9/15/17

Appendix C

Laboratory Analytical Reports



ACCUTEST
Southeast

10/30/17

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION,
VERIFICATION, TESTING AND CERTIFICATION COMPANY.



e-Hardcopy 2.0
Automated Report

Technical Report for

Tantara Corporation

USACE Buffalo Nike Missile UST; E Aurora, NY

16-299

SGS Accutest Job Number: FA48546

Sampling Date: 10/18/17

Report to:

Tantara Corp
54 Mason St
Worcester, MA 01610
mlovejoy@tantaracorp.com

ATTN: Mark Lovejoy

Total number of pages in report: **357**



Test results contained within this data package meet the requirements
of the National Environmental Laboratory Accreditation Program
and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(L-A-B L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
AK, AR, GA, IA, KY, MA, NV, OK, OR, UT, WA

This report shall not be reproduced, except in its entirety, without the written approval of SGS Accutest.
Test results relate only to samples analyzed.



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Sample Summary

Tantara Corporation

Job No: FA48546

USACE Buffalo Nike Missile UST; E Aurora, NY
Project No: 16-299

Sample Number	Collected			Received	Matrix		Client Sample ID
	Date	Time	By		Code	Type	
FA48546-1	10/18/17	12:00	RF	10/19/17	SO	Soil	NIKE SWE
FA48546-2	10/18/17	12:05	RF	10/19/17	SO	Soil	NIKE BOTTOM E
FA48546-3	10/18/17	12:10	RF	10/19/17	SO	Soil	NIKE SW W
FA48546-4	10/18/17	12:15	RF	10/19/17	SO	Soil	NIKE BOTTOM W
FA48546-5	10/18/17	12:20	RF	10/19/17	SO	Soil	NIKE SW-S
FA48546-6	10/18/17	12:25	RF	10/19/17	SO	Soil	NIKE BOTTOM S
FA48546-7	10/18/17	12:30	RF	10/19/17	SO	Soil	NIKE SW-N
FA48546-8	10/18/17	12:35	RF	10/19/17	SO	Soil	NIKE BOT-N

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

2

Client: Tantara Corporation

Job No: FA48546

Site: USACE Buffalo Nike Missile UST; E Aurora, NY

Report Date: 10/30/2017 11:58:14

8 Sample(s) were collected on 10/18/2017 and were received at SGS Accutest Southeast (SASE) on 10/19/2017 properly preserved, at 2.8 Deg. C and intact. These Samples received an SASE job number of FA48546. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260C

Matrix: SO

Batch ID: V2B208

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48546-1MS, FA48546-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Ethylbenzene, Isopropylbenzene, n-Butylbenzene, n-Propylbenzene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Toluene, Xylene (total) are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Ethylbenzene, Isopropylbenzene, n-Butylbenzene, n-Propylbenzene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Xylene (total) are outside control limits. Probable cause is due to matrix interference.

Sample(s) FA48546-6, FA48546-8 have surrogates outside control limits.

FA48546-6 for 4-Bromofluorobenzene: Outside control limits due to matrix interference. Confirmed by reanalysis.

FA48546-8 for 4-Bromofluorobenzene: Outside control limits due to matrix interference. Confirmed by reanalysis.

Matrix: SO

Batch ID: V2B211

FA48546-6: Confirmation run for surrogate recoveries.

FA48546-8: Confirmation run for surrogate recoveries.

MS Semi-volatiles By Method SW846 8270D BY SIM

Matrix: SO

Batch ID: OP67316

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48628-1MS, FA48628-1MSD were used as the QC samples indicated.

Sample(s) FA48546-4 have surrogates outside control limits.

FA48546-4 for Nitrobenzene-d5: Outside control limits due to dilution.

FA48546-4 for Terphenyl-d14: Outside control limits due to dilution.

FA48546-4 for 2-Fluorobiphenyl: Outside control limits due to dilution.

FA48546-4 for Nitrobenzene-d5: Outside control limits due to dilution.

FA48546-4 for Terphenyl-d14: Outside control limits due to dilution.

FA48546-4 for 2-Fluorobiphenyl: Outside control limits due to dilution.

General Chemistry By Method SM19 2540G

Matrix: SO

Batch ID: GN76673

Sample(s) FA48605-1DUP were used as the QC samples for Solids, Percent.

SGS Accutest (SASE) certifies that this report meets the project requirements for analytical data produced for the samples as received at SASE and as stated on the COC. SASE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SASE Quality Manual except as noted above. This report is to be used in its entirety. SASE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA48546
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/18/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method

FA48546-1 NIKE SWE

Acenaphthene	55.7 J	68	34	ug/kg	SW846 8270D BY SIM
Anthracene	168	68	34	ug/kg	SW846 8270D BY SIM
Benzo(a)anthracene	276	14	6.8	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene	306	14	6.8	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene	259	14	6.8	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene	268	14	6.8	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene	271	14	6.8	ug/kg	SW846 8270D BY SIM
Chrysene	345	14	6.8	ug/kg	SW846 8270D BY SIM
Dibenzo(a,h)anthracene	40.9	14	6.8	ug/kg	SW846 8270D BY SIM
Fluoranthene	826	68	34	ug/kg	SW846 8270D BY SIM
Fluorene	56.6 J	68	34	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene	232	14	6.8	ug/kg	SW846 8270D BY SIM
Phenanthrene	406	68	34	ug/kg	SW846 8270D BY SIM
Pyrene	621	68	34	ug/kg	SW846 8270D BY SIM

FA48546-2 NIKE BOTTOM E

No hits reported in this sample.

FA48546-3 NIKE SW W

Anthracene	46.4 J	79	39	ug/kg	SW846 8270D BY SIM
Benzo(a)anthracene	76.5	16	7.9	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene	789	16	7.9	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene	355	16	7.9	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene	1380	16	7.9	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene	179	16	7.9	ug/kg	SW846 8270D BY SIM
Chrysene	74.7	16	7.9	ug/kg	SW846 8270D BY SIM
Dibenzo(a,h)anthracene	92.6	16	7.9	ug/kg	SW846 8270D BY SIM
Fluoranthene	305	79	39	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene	1290	16	7.9	ug/kg	SW846 8270D BY SIM
Phenanthrene	104	79	39	ug/kg	SW846 8270D BY SIM
Pyrene	288	79	39	ug/kg	SW846 8270D BY SIM

FA48546-4 NIKE BOTTOM W

sec-Butylbenzene	233	120	48	ug/kg	SW846 8260C
Isopropylbenzene	38.3 J	120	48	ug/kg	SW846 8260C
n-Propylbenzene	30.3 J	120	48	ug/kg	SW846 8260C
Acenaphthene	7160	740	370	ug/kg	SW846 8270D BY SIM
Acenaphthylene	843	740	370	ug/kg	SW846 8270D BY SIM
Anthracene	5880	740	370	ug/kg	SW846 8270D BY SIM
Benzo(a)anthracene	4830	150	74	ug/kg	SW846 8270D BY SIM

Summary of Hits

Job Number: FA48546
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/18/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Benzo(a)pyrene		3450	150	74	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene		3080	150	74	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		1570	150	74	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene		3390	150	74	ug/kg	SW846 8270D BY SIM
Chrysene		4660	150	74	ug/kg	SW846 8270D BY SIM
Dibenzo(a,h)anthracene		542	150	74	ug/kg	SW846 8270D BY SIM
Fluoranthene		19700	740	370	ug/kg	SW846 8270D BY SIM
Fluorene		8650	740	370	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		1590	150	74	ug/kg	SW846 8270D BY SIM
Naphthalene		1610	740	370	ug/kg	SW846 8270D BY SIM
Phenanthrene		36200	1500	740	ug/kg	SW846 8270D BY SIM
Pyrene		13400	740	370	ug/kg	SW846 8270D BY SIM

FA48546-5 **NIKE SW-S**

No hits reported in this sample.

FA48546-6 **NIKE BOTTOM S**

Benzo(a)anthracene	9.6 J	15	7.4	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene	15.7	15	7.4	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene	12.0 J	15	7.4	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene	27.3	15	7.4	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene	11.3 J	15	7.4	ug/kg	SW846 8270D BY SIM
Chrysene	9.9 J	15	7.4	ug/kg	SW846 8270D BY SIM
Fluoranthene	32.7 J	74	37	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene	19.5	15	7.4	ug/kg	SW846 8270D BY SIM
Phenanthrene	20.3 J	74	37	ug/kg	SW846 8270D BY SIM
Pyrene	25.6 J	74	37	ug/kg	SW846 8270D BY SIM

FA48546-7 **NIKE SW-N**

No hits reported in this sample.

FA48546-8 **NIKE BOT-N**

sec-Butylbenzene	5.8	2.8	1.1	ug/kg	SW846 8260C
tert-Butylbenzene	1.1 J	2.8	1.1	ug/kg	SW846 8260C
Acenaphthene	67.4 J	75	37	ug/kg	SW846 8270D BY SIM
Chrysene	5.9 J	15	7.5	ug/kg	SW846 8270D BY SIM
Fluoranthene	31.2 J	75	37	ug/kg	SW846 8270D BY SIM
Fluorene	110	75	37	ug/kg	SW846 8270D BY SIM
Phenanthrene	27.0 J	75	37	ug/kg	SW846 8270D BY SIM

Sample Results

Report of Analysis

SGS Accutest

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SWE				
Lab Sample ID:	FA48546-1			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8260C			Percent Solids:	93.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5729.D	1	10/19/17 13:08	SP	n/a	n/a	V2B208
Run #2							

	Initial Weight	Final Volume
Run #1	7.14 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.5 U	3.8	1.5	0.92	ug/kg	
104-51-8	n-Butylbenzene	1.5 U	3.8	1.5	0.75	ug/kg	
135-98-8	sec-Butylbenzene	1.5 U	3.8	1.5	0.75	ug/kg	
98-06-6	tert-Butylbenzene	1.5 U	3.8	1.5	0.75	ug/kg	
100-41-4	Ethylbenzene	1.5 U	3.8	1.5	0.75	ug/kg	
98-82-8	Isopropylbenzene	1.5 U	3.8	1.5	0.75	ug/kg	
99-87-6	p-Isopropyltoluene	1.5 U	3.8	1.5	0.75	ug/kg	
103-65-1	n-Propylbenzene	1.5 U	3.8	1.5	0.75	ug/kg	
108-88-3	Toluene	1.5 U	3.8	1.5	0.75	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.5 U	3.8	1.5	0.75	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.5 U	3.8	1.5	0.75	ug/kg	
1330-20-7	Xylene (total)	4.5 U	11	4.5	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		75-124%
17060-07-0	1,2-Dichloroethane-D4	108%		72-135%
2037-26-5	Toluene-D8	95%		75-126%
460-00-4	4-Bromofluorobenzene	116%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE SWE				
Lab Sample ID:	FA48546-1			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	93.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103597.D	1	10/25/17 10:59	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	55.7	68	34	27	ug/kg	J
208-96-8	Acenaphthylene	34 U	68	34	27	ug/kg	
120-12-7	Anthracene	168	68	34	17	ug/kg	
56-55-3	Benzo(a)anthracene	276	14	6.8	3.4	ug/kg	
50-32-8	Benzo(a)pyrene	306	14	6.8	3.4	ug/kg	
205-99-2	Benzo(b)fluoranthene	259	14	6.8	3.4	ug/kg	
191-24-2	Benzo(g,h,i)perylene	268	14	6.8	3.4	ug/kg	
207-08-9	Benzo(k)fluoranthene	271	14	6.8	3.4	ug/kg	
218-01-9	Chrysene	345	14	6.8	3.4	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	40.9	14	6.8	3.4	ug/kg	
206-44-0	Fluoranthene	826	68	34	17	ug/kg	
86-73-7	Fluorene	56.6	68	34	27	ug/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	232	14	6.8	3.4	ug/kg	
91-20-3	Naphthalene	34 U	68	34	27	ug/kg	
85-01-8	Phenanthrene	406	68	34	17	ug/kg	
129-00-0	Pyrene	621	68	34	17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	99%		40-105%
321-60-8	2-Fluorobiphenyl	87%		43-107%
1718-51-0	Terphenyl-d14	103%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE BOTTOM E				
Lab Sample ID:	FA48546-2			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8260C			Percent Solids:	85.7
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5730.D	1	10/19/17 13:32	SP	n/a	n/a	V2B208
Run #2							

	Initial Weight	Final Volume
Run #1	7.54 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.5 U	3.9	1.5	0.94	ug/kg	
104-51-8	n-Butylbenzene	1.5 U	3.9	1.5	0.77	ug/kg	
135-98-8	sec-Butylbenzene	1.5 U	3.9	1.5	0.77	ug/kg	
98-06-6	tert-Butylbenzene	1.5 U	3.9	1.5	0.77	ug/kg	
100-41-4	Ethylbenzene	1.5 U	3.9	1.5	0.77	ug/kg	
98-82-8	Isopropylbenzene	1.5 U	3.9	1.5	0.77	ug/kg	
99-87-6	p-Isopropyltoluene	1.5 U	3.9	1.5	0.77	ug/kg	
103-65-1	n-Propylbenzene	1.5 U	3.9	1.5	0.77	ug/kg	
108-88-3	Toluene	1.5 U	3.9	1.5	0.77	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.5 U	3.9	1.5	0.77	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.5 U	3.9	1.5	0.77	ug/kg	
1330-20-7	Xylene (total)	4.6 U	12	4.6	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		75-124%
17060-07-0	1,2-Dichloroethane-D4	101%		72-135%
2037-26-5	Toluene-D8	102%		75-126%
460-00-4	4-Bromofluorobenzene	108%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE BOTTOM E			Date Sampled:	10/18/17
Lab Sample ID:	FA48546-2			Date Received:	10/19/17
Matrix:	SO - Soil			Percent Solids:	85.7
Method:	SW846 8270D BY SIM SW846 3546				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103598.D	1	10/25/17 11:25	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	38 U	75	38	30	ug/kg	
208-96-8	Acenaphthylene	38 U	75	38	30	ug/kg	
120-12-7	Anthracene	38 U	75	38	19	ug/kg	
56-55-3	Benzo(a)anthracene	7.5 U	15	7.5	3.8	ug/kg	
50-32-8	Benzo(a)pyrene	7.5 U	15	7.5	3.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	7.5 U	15	7.5	3.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	7.5 U	15	7.5	3.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.5 U	15	7.5	3.8	ug/kg	
218-01-9	Chrysene	7.5 U	15	7.5	3.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	7.5 U	15	7.5	3.8	ug/kg	
206-44-0	Fluoranthene	38 U	75	38	19	ug/kg	
86-73-7	Fluorene	38 U	75	38	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	7.5 U	15	7.5	3.8	ug/kg	
91-20-3	Naphthalene	38 U	75	38	30	ug/kg	
85-01-8	Phenanthrene	38 U	75	38	19	ug/kg	
129-00-0	Pyrene	38 U	75	38	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	98%		40-105%
321-60-8	2-Fluorobiphenyl	85%		43-107%
1718-51-0	Terphenyl-d14	80%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE SW W				
Lab Sample ID:	FA48546-3			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8260C			Percent Solids:	82.5
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5731.D	1	10/19/17 13:56	SP	n/a	n/a	V2B208
Run #2							

	Initial Weight	Final Volume
Run #1	8.11 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.5 U	3.7	1.5	0.91	ug/kg	
104-51-8	n-Butylbenzene	1.5 U	3.7	1.5	0.75	ug/kg	
135-98-8	sec-Butylbenzene	1.5 U	3.7	1.5	0.75	ug/kg	
98-06-6	tert-Butylbenzene	1.5 U	3.7	1.5	0.75	ug/kg	
100-41-4	Ethylbenzene	1.5 U	3.7	1.5	0.75	ug/kg	
98-82-8	Isopropylbenzene	1.5 U	3.7	1.5	0.75	ug/kg	
99-87-6	p-Isopropyltoluene	1.5 U	3.7	1.5	0.75	ug/kg	
103-65-1	n-Propylbenzene	1.5 U	3.7	1.5	0.75	ug/kg	
108-88-3	Toluene	1.5 U	3.7	1.5	0.75	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.5 U	3.7	1.5	0.75	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.5 U	3.7	1.5	0.75	ug/kg	
1330-20-7	Xylene (total)	4.5 U	11	4.5	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		75-124%
17060-07-0	1,2-Dichloroethane-D4	106%		72-135%
2037-26-5	Toluene-D8	100%		75-126%
460-00-4	4-Bromofluorobenzene	109%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE SW W				
Lab Sample ID:	FA48546-3			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	82.5
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103599.D	1	10/25/17 11:50	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	39 U	79	39	31	ug/kg	
208-96-8	Acenaphthylene	39 U	79	39	31	ug/kg	
120-12-7	Anthracene	46.4	79	39	20	ug/kg	J
56-55-3	Benzo(a)anthracene	76.5	16	7.9	3.9	ug/kg	
50-32-8	Benzo(a)pyrene	789	16	7.9	3.9	ug/kg	
205-99-2	Benzo(b)fluoranthene	355	16	7.9	3.9	ug/kg	
191-24-2	Benzo(g,h,i)perylene	1380	16	7.9	3.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	179	16	7.9	3.9	ug/kg	
218-01-9	Chrysene	74.7	16	7.9	3.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	92.6	16	7.9	3.9	ug/kg	
206-44-0	Fluoranthene	305	79	39	20	ug/kg	
86-73-7	Fluorene	39 U	79	39	31	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1290	16	7.9	3.9	ug/kg	
91-20-3	Naphthalene	39 U	79	39	31	ug/kg	
85-01-8	Phenanthrene	104	79	39	20	ug/kg	
129-00-0	Pyrene	288	79	39	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	103%		40-105%
321-60-8	2-Fluorobiphenyl	98%		43-107%
1718-51-0	Terphenyl-d14	106%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE BOTTOM W			Date Sampled:	10/18/17
Lab Sample ID:	FA48546-4			Date Received:	10/19/17
Matrix:	SO - Soil			Percent Solids:	87.7
Method:	SW846 8260C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5732.D	1	10/19/17 14:21	SP	n/a	n/a	V2B208
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	16.9 g	5.0 ml	100 ul
Run #2			

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	48 U	120	48	29	ug/kg	
104-51-8	n-Butylbenzene	48 U	120	48	24	ug/kg	
135-98-8	sec-Butylbenzene	233	120	48	24	ug/kg	
98-06-6	tert-Butylbenzene	48 U	120	48	24	ug/kg	
100-41-4	Ethylbenzene	48 U	120	48	24	ug/kg	
98-82-8	Isopropylbenzene	38.3	120	48	24	ug/kg	J
99-87-6	p-Isopropyltoluene	48 U	120	48	24	ug/kg	
103-65-1	n-Propylbenzene	30.3	120	48	24	ug/kg	J
108-88-3	Toluene	48 U	120	48	24	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	48 U	120	48	24	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	48 U	120	48	24	ug/kg	
1330-20-7	Xylene (total)	140 U	360	140	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		75-124%
17060-07-0	1,2-Dichloroethane-D4	103%		72-135%
2037-26-5	Toluene-D8	100%		75-126%
460-00-4	4-Bromofluorobenzene	99%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE BOTTOM W			Date Sampled:	10/18/17
Lab Sample ID:	FA48546-4			Date Received:	10/19/17
Matrix:	SO - Soil			Percent Solids:	87.7
Method:	SW846 8270D BY SIM SW846 3546				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103600.D	10	10/25/17 12:16	FS	10/23/17 09:43	OP67316	SW4505
Run #2	W103645.D	20	10/27/17 12:18	FS	10/23/17 09:43	OP67316	SW4507

	Initial Weight	Final Volume
Run #1	15.4 g	1.0 ml
Run #2	15.4 g	1.0 ml

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	7160	740	370	300	ug/kg	
208-96-8	Acenaphthylene	843	740	370	300	ug/kg	
120-12-7	Anthracene	5880	740	370	190	ug/kg	
56-55-3	Benzo(a)anthracene	4830	150	74	37	ug/kg	
50-32-8	Benzo(a)pyrene	3450	150	74	37	ug/kg	
205-99-2	Benzo(b)fluoranthene	3080	150	74	37	ug/kg	
191-24-2	Benzo(g,h,i)perylene	1570	150	74	37	ug/kg	
207-08-9	Benzo(k)fluoranthene	3390	150	74	37	ug/kg	
218-01-9	Chrysene	4660	150	74	37	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	542	150	74	37	ug/kg	
206-44-0	Fluoranthene	19700	740	370	190	ug/kg	
86-73-7	Fluorene	8650	740	370	300	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1590	150	74	37	ug/kg	
91-20-3	Naphthalene	1610	740	370	300	ug/kg	
85-01-8	Phenanthrene	36200 ^a	1500	740	370	ug/kg	
129-00-0	Pyrene	13400	740	370	190	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% ^b	0% ^b	40-105%
321-60-8	2-Fluorobiphenyl	0% ^b	0% ^b	43-107%
1718-51-0	Terphenyl-d14	0% ^b	0% ^b	45-119%

(a) Result is from Run# 2

(b) Outside control limits due to dilution.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE SW-S				
Lab Sample ID:	FA48546-5			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8260C			Percent Solids:	83.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5733.D	1	10/19/17 14:45	SP	n/a	n/a	V2B208
Run #2							

	Initial Weight	Final Volume
Run #1	8.39 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.4 U	3.6	1.4	0.87	ug/kg	
104-51-8	n-Butylbenzene	1.4 U	3.6	1.4	0.72	ug/kg	
135-98-8	sec-Butylbenzene	1.4 U	3.6	1.4	0.72	ug/kg	
98-06-6	tert-Butylbenzene	1.4 U	3.6	1.4	0.72	ug/kg	
100-41-4	Ethylbenzene	1.4 U	3.6	1.4	0.72	ug/kg	
98-82-8	Isopropylbenzene	1.4 U	3.6	1.4	0.72	ug/kg	
99-87-6	p-Isopropyltoluene	1.4 U	3.6	1.4	0.72	ug/kg	
103-65-1	n-Propylbenzene	1.4 U	3.6	1.4	0.72	ug/kg	
108-88-3	Toluene	1.4 U	3.6	1.4	0.72	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.4 U	3.6	1.4	0.72	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.4 U	3.6	1.4	0.72	ug/kg	
1330-20-7	Xylene (total)	4.3 U	11	4.3	1.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		75-124%
17060-07-0	1,2-Dichloroethane-D4	99%		72-135%
2037-26-5	Toluene-D8	102%		75-126%
460-00-4	4-Bromofluorobenzene	113%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE SW-S				
Lab Sample ID:	FA48546-5			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	83.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103601.D	1	10/25/17 12:42	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	40 U	80	40	32	ug/kg	
208-96-8	Acenaphthylene	40 U	80	40	32	ug/kg	
120-12-7	Anthracene	40 U	80	40	20	ug/kg	
56-55-3	Benzo(a)anthracene	8.0 U	16	8.0	4.0	ug/kg	
50-32-8	Benzo(a)pyrene	8.0 U	16	8.0	4.0	ug/kg	
205-99-2	Benzo(b)fluoranthene	8.0 U	16	8.0	4.0	ug/kg	
191-24-2	Benzo(g,h,i)perylene	8.0 U	16	8.0	4.0	ug/kg	
207-08-9	Benzo(k)fluoranthene	8.0 U	16	8.0	4.0	ug/kg	
218-01-9	Chrysene	8.0 U	16	8.0	4.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	8.0 U	16	8.0	4.0	ug/kg	
206-44-0	Fluoranthene	40 U	80	40	20	ug/kg	
86-73-7	Fluorene	40 U	80	40	32	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	8.0 U	16	8.0	4.0	ug/kg	
91-20-3	Naphthalene	40 U	80	40	32	ug/kg	
85-01-8	Phenanthrene	40 U	80	40	20	ug/kg	
129-00-0	Pyrene	40 U	80	40	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	97%		40-105%
321-60-8	2-Fluorobiphenyl	88%		43-107%
1718-51-0	Terphenyl-d14	93%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE BOTTOM S			Date Sampled:	10/18/17
Lab Sample ID:	FA48546-6			Date Received:	10/19/17
Matrix:	SO - Soil			Percent Solids:	89.5
Method:	SW846 8260C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5734.D	1	10/19/17 15:09	SP	n/a	n/a	V2B208
Run #2 ^a	2B5752.D	1	10/20/17 12:41	SP	n/a	n/a	V2B211

	Initial Weight	Final Volume
Run #1	9.66 g	5.0 ml
Run #2	9.10 g	5.0 ml

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.2 U	2.9	1.2	0.71	ug/kg	
104-51-8	n-Butylbenzene	1.2 U	2.9	1.2	0.58	ug/kg	
135-98-8	sec-Butylbenzene	1.2 U	2.9	1.2	0.58	ug/kg	
98-06-6	tert-Butylbenzene	1.2 U	2.9	1.2	0.58	ug/kg	
100-41-4	Ethylbenzene	1.2 U	2.9	1.2	0.58	ug/kg	
98-82-8	Isopropylbenzene	1.2 U	2.9	1.2	0.58	ug/kg	
99-87-6	p-Isopropyltoluene	1.2 U	2.9	1.2	0.58	ug/kg	
103-65-1	n-Propylbenzene	1.2 U	2.9	1.2	0.58	ug/kg	
108-88-3	Toluene	1.2 U	2.9	1.2	0.58	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.2 U	2.9	1.2	0.58	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.2 U	2.9	1.2	0.58	ug/kg	
1330-20-7	Xylene (total)	3.5 U	8.7	3.5	1.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	102%	75-124%
17060-07-0	1,2-Dichloroethane-D4	103%	104%	72-135%
2037-26-5	Toluene-D8	109%	115%	75-126%
460-00-4	4-Bromofluorobenzene	135% ^b	153% ^b	71-133%

(a) Confirmation run for surrogate recoveries.

(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE BOTTOM S			Date Sampled:	10/18/17
Lab Sample ID:	FA48546-6			Date Received:	10/19/17
Matrix:	SO - Soil			Percent Solids:	89.5
Method:	SW846 8270D BY SIM SW846 3546				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103609.D	1	10/25/17 16:07	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	37 U	74	37	29	ug/kg	
208-96-8	Acenaphthylene	37 U	74	37	29	ug/kg	
120-12-7	Anthracene	37 U	74	37	18	ug/kg	
56-55-3	Benzo(a)anthracene	9.6	15	7.4	3.7	ug/kg	J
50-32-8	Benzo(a)pyrene	15.7	15	7.4	3.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	12.0	15	7.4	3.7	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	27.3	15	7.4	3.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	11.3	15	7.4	3.7	ug/kg	J
218-01-9	Chrysene	9.9	15	7.4	3.7	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	7.4 U	15	7.4	3.7	ug/kg	
206-44-0	Fluoranthene	32.7	74	37	18	ug/kg	J
86-73-7	Fluorene	37 U	74	37	29	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	19.5	15	7.4	3.7	ug/kg	
91-20-3	Naphthalene	37 U	74	37	29	ug/kg	
85-01-8	Phenanthrene	20.3	74	37	18	ug/kg	J
129-00-0	Pyrene	25.6	74	37	18	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	92%		40-105%
321-60-8	2-Fluorobiphenyl	81%		43-107%
1718-51-0	Terphenyl-d14	87%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SW-N		Date Sampled:	10/18/17
Lab Sample ID:	FA48546-7		Date Received:	10/19/17
Matrix:	SO - Soil		Percent Solids:	90.7
Method:	SW846 8260C			
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5735.D	1	10/19/17 15:33	SP	n/a	n/a	V2B208
Run #2							

	Initial Weight	Final Volume
Run #1	6.00 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.8 U	4.6	1.8	1.1	ug/kg	
104-51-8	n-Butylbenzene	1.8 U	4.6	1.8	0.92	ug/kg	
135-98-8	sec-Butylbenzene	1.8 U	4.6	1.8	0.92	ug/kg	
98-06-6	tert-Butylbenzene	1.8 U	4.6	1.8	0.92	ug/kg	
100-41-4	Ethylbenzene	1.8 U	4.6	1.8	0.92	ug/kg	
98-82-8	Isopropylbenzene	1.8 U	4.6	1.8	0.92	ug/kg	
99-87-6	p-Isopropyltoluene	1.8 U	4.6	1.8	0.92	ug/kg	
103-65-1	n-Propylbenzene	1.8 U	4.6	1.8	0.92	ug/kg	
108-88-3	Toluene	1.8 U	4.6	1.8	0.92	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.8 U	4.6	1.8	0.92	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.8 U	4.6	1.8	0.92	ug/kg	
1330-20-7	Xylene (total)	5.5 U	14	5.5	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		75-124%
17060-07-0	1,2-Dichloroethane-D4	100%		72-135%
2037-26-5	Toluene-D8	101%		75-126%
460-00-4	4-Bromofluorobenzene	117%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SW-N				
Lab Sample ID:	FA48546-7			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	90.7
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103603.D	1	10/25/17 13:33	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	36 U	72	36	29	ug/kg	
208-96-8	Acenaphthylene	36 U	72	36	29	ug/kg	
120-12-7	Anthracene	36 U	72	36	18	ug/kg	
56-55-3	Benzo(a)anthracene	7.2 U	14	7.2	3.6	ug/kg	
50-32-8	Benzo(a)pyrene	7.2 U	14	7.2	3.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	7.2 U	14	7.2	3.6	ug/kg	
191-24-2	Benzo(g,h,i)perylene	7.2 U	14	7.2	3.6	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.2 U	14	7.2	3.6	ug/kg	
218-01-9	Chrysene	7.2 U	14	7.2	3.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	7.2 U	14	7.2	3.6	ug/kg	
206-44-0	Fluoranthene	36 U	72	36	18	ug/kg	
86-73-7	Fluorene	36 U	72	36	29	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	7.2 U	14	7.2	3.6	ug/kg	
91-20-3	Naphthalene	36 U	72	36	29	ug/kg	
85-01-8	Phenanthrene	36 U	72	36	18	ug/kg	
129-00-0	Pyrene	36 U	72	36	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	93%		40-105%
321-60-8	2-Fluorobiphenyl	84%		43-107%
1718-51-0	Terphenyl-d14	96%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

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Client Sample ID:	NIKE BOT-N				
Lab Sample ID:	FA48546-8			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8260C			Percent Solids:	86.0
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5736.D	1	10/19/17 15:58	SP	n/a	n/a	V2B208
Run #2 ^a	2B5753.D	1	10/20/17 13:05	SP	n/a	n/a	V2B211

	Initial Weight	Final Volume
Run #1	10.2 g	5.0 ml
Run #2	8.72 g	5.0 ml

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.1 U	2.8	1.1	0.69	ug/kg	
104-51-8	n-Butylbenzene	1.1 U	2.8	1.1	0.57	ug/kg	
135-98-8	sec-Butylbenzene	5.8	2.8	1.1	0.57	ug/kg	
98-06-6	tert-Butylbenzene	1.1	2.8	1.1	0.57	ug/kg	J
100-41-4	Ethylbenzene	1.1 U	2.8	1.1	0.57	ug/kg	
98-82-8	Isopropylbenzene	1.1 U	2.8	1.1	0.57	ug/kg	
99-87-6	p-Isopropyltoluene	1.1 U	2.8	1.1	0.57	ug/kg	
103-65-1	n-Propylbenzene	1.1 U	2.8	1.1	0.57	ug/kg	
108-88-3	Toluene	1.1 U	2.8	1.1	0.57	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.1 U	2.8	1.1	0.57	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.1 U	2.8	1.1	0.57	ug/kg	
1330-20-7	Xylene (total)	3.4 U	8.5	3.4	1.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	106%	75-124%
17060-07-0	1,2-Dichloroethane-D4	101%	108%	72-135%
2037-26-5	Toluene-D8	126%	131% ^b	75-126%
460-00-4	4-Bromofluorobenzene	161% ^c	177% ^c	71-133%

(a) Confirmation run for surrogate recoveries.

(b) Outside control limits due to matrix interference.

(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE BOT-N				
Lab Sample ID:	FA48546-8			Date Sampled:	10/18/17
Matrix:	SO - Soil			Date Received:	10/19/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	86.0
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103604.D	1	10/25/17 13:59	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	67.4	75	37	30	ug/kg	J
208-96-8	Acenaphthylene	37 U	75	37	30	ug/kg	
120-12-7	Anthracene	37 U	75	37	19	ug/kg	
56-55-3	Benzo(a)anthracene	7.5 U	15	7.5	3.7	ug/kg	
50-32-8	Benzo(a)pyrene	7.5 U	15	7.5	3.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	7.5 U	15	7.5	3.7	ug/kg	
191-24-2	Benzo(g,h,i)perylene	7.5 U	15	7.5	3.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.5 U	15	7.5	3.7	ug/kg	
218-01-9	Chrysene	5.9	15	7.5	3.7	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	7.5 U	15	7.5	3.7	ug/kg	
206-44-0	Fluoranthene	31.2	75	37	19	ug/kg	J
86-73-7	Fluorene	110	75	37	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	7.5 U	15	7.5	3.7	ug/kg	
91-20-3	Naphthalene	37 U	75	37	30	ug/kg	
85-01-8	Phenanthrene	27.0	75	37	19	ug/kg	J
129-00-0	Pyrene	37 U	75	37	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		40-105%
321-60-8	2-Fluorobiphenyl	79%		43-107%
1718-51-0	Terphenyl-d14	85%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job #

[illegible]

SGS Accutest Sample Receipt Summary

Job Number: FA48546

Client: TANTARA CORP

Project: USACE BUFFALO NIKE MISSLE

Date / Time Received: 10/19/2017 8:45:00 AM

Delivery Method: FX

Airbill #s: 7881 2495 6553

Therm ID: IR 1;

Therm CF: -0.2;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.8);

Cooler Information
Y or N

1. Custody Seals Present	☒	☐
2. Custody Seals Intact	☒	☐
3. Temp criteria achieved	☒	☐
4. Cooler temp verification	<u>IR Gun</u>	
5. Cooler media	<u>Ice (Bag)</u>	

Trip Blank Information
Y or N N/A

1. Trip Blank present / cooler	☐	☐	☒
2. Trip Blank listed on COC	☐	☐	☒
	W or S	N/A	
3. Type Of TB Received	☐	☐	☒

Sample Information
Y or N N/A

1. Sample labels present on bottles	☒	☐	
2. Samples preserved properly	☒	☐	
3. Sufficient volume/containers recvd for analysis:	☒	☐	
4. Condition of sample	<u>Intact</u>		
5. Sample recvd within HT	☒	☐	
6. Dates/Times/IDs on COC match Sample Label	☒	☐	
7. VOCs have headspace	☐	☐	☒
8. Bottles received for unspecified tests	☐	☒	
9. Compositing instructions clear	☐	☐	☒
10. Voa Soil Kits/Jars received past 48hrs?	☐	☐	☒
11. % Solids Jar received?	☐	☐	☒
12. Residual Chlorine Present?	☐	☐	☒

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____

 Number of 5035 Field Kits: 8

Number of Lab Filtered Metals: _____

 Test Strip Lot #s: pH 0-3 230315

 pH 10-12 219813A

Other: (Specify) _____

Residual Chlorine Test Strip Lot #: _____

Comments

 SM001
Rev. Date 05/24/17

 Technician: coryr

 Date: 10/19/2017 8:45:00 A

Reviewer: _____

Date: _____

FA48546: Chain of Custody

Page 2 of 2

QC Evaluation: DOD QSM5 Limits

Page 1 of 6

Job Number: FA48546
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/18/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V2B208	SW846 8260C						
V2B208-BS	71-43-2	Benzene	BSP	REC	96	%	77-121
V2B208-BS	104-51-8	n-Butylbenzene	BSP	REC	91	%	70-128
V2B208-BS	135-98-8	sec-Butylbenzene	BSP	REC	88	%	73-126
V2B208-BS	98-06-6	tert-Butylbenzene	BSP	REC	87	%	73-125
V2B208-BS	100-41-4	Ethylbenzene	BSP	REC	94	%	76-122
V2B208-BS	98-82-8	Isopropylbenzene	BSP	REC	89	%	68-134
V2B208-BS	99-87-6	p-Isopropyltoluene	BSP	REC	95	%	73-127
V2B208-BS	103-65-1	n-Propylbenzene	BSP	REC	89	%	73-125
V2B208-BS	108-88-3	Toluene	BSP	REC	96	%	77-121
V2B208-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	95	%	75-123
V2B208-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	94	%	73-124
V2B208-BS	1330-20-7	Xylene (total)	BSP	REC	91	%	78-124
V2B208-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	100	%	78-119
V2B208-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	96	%	71-136
V2B208-BS	2037-26-5	Toluene-D8	BSP	SURR	99	%	85-116
V2B208-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	103	%	79-119
FA48546-1MS	71-43-2	Benzene	MS	REC	77	%	77-121
FA48546-1MS	104-51-8	n-Butylbenzene	MS	REC	64	%	70-128
FA48546-1MS	135-98-8	sec-Butylbenzene	MS	REC	65	%	73-126
FA48546-1MS	98-06-6	tert-Butylbenzene	MS	REC	67	%	73-125
FA48546-1MS	100-41-4	Ethylbenzene	MS	REC	73	%	76-122
FA48546-1MS	98-82-8	Isopropylbenzene	MS	REC	68	%	68-134
FA48546-1MS	99-87-6	p-Isopropyltoluene	MS	REC	70	%	73-127
FA48546-1MS	103-65-1	n-Propylbenzene	MS	REC	74	%	73-125
FA48546-1MS	108-88-3	Toluene	MS	REC	75	%	77-121
FA48546-1MS	95-63-6	1,2,4-Trimethylbenzene	MS	REC	76	%	75-123
FA48546-1MS	108-67-8	1,3,5-Trimethylbenzene	MS	REC	75	%	73-124
FA48546-1MS	1330-20-7	Xylene (total)	MS	REC	74	%	78-124
FA48546-1MS	1868-53-7	Dibromofluoromethane	MS	SURR	101	%	78-119
FA48546-1MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	97	%	71-136
FA48546-1MS	2037-26-5	Toluene-D8	MS	SURR	100	%	85-116
FA48546-1MS	460-00-4	4-Bromofluorobenzene	MS	SURR	110	%	79-119
FA48546-1MSD	71-43-2	Benzene	MSD	REC	78	%	77-121
FA48546-1MSD	71-43-2	Benzene	MSD	RPD	1	%	20
FA48546-1MSD	104-51-8	n-Butylbenzene	MSD	REC	62	%	70-128
FA48546-1MSD	104-51-8	n-Butylbenzene	MSD	RPD	4	%	20
FA48546-1MSD	135-98-8	sec-Butylbenzene	MSD	REC	63	%	73-126
FA48546-1MSD	135-98-8	sec-Butylbenzene	MSD	RPD	2	%	20
FA48546-1MSD	98-06-6	tert-Butylbenzene	MSD	REC	67	%	73-125
FA48546-1MSD	98-06-6	tert-Butylbenzene	MSD	RPD	0	%	20
FA48546-1MSD	100-41-4	Ethylbenzene	MSD	REC	74	%	76-122
FA48546-1MSD	100-41-4	Ethylbenzene	MSD	RPD	1	%	20

* Sample used for QC is not from job FA48546

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48546
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/18/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48546-1MSD	98-82-8	Isopropylbenzene	MSD	REC	68	%	68-134
FA48546-1MSD	98-82-8	Isopropylbenzene	MSD	RPD	0	%	20
FA48546-1MSD	99-87-6	p-Isopropyltoluene	MSD	REC	69	%	73-127
FA48546-1MSD	99-87-6	p-Isopropyltoluene	MSD	RPD	2	%	20
FA48546-1MSD	103-65-1	n-Propylbenzene	MSD	REC	74	%	73-125
FA48546-1MSD	103-65-1	n-Propylbenzene	MSD	RPD	0	%	20
FA48546-1MSD	108-88-3	Toluene	MSD	REC	76	%	77-121
FA48546-1MSD	108-88-3	Toluene	MSD	RPD	2	%	20
FA48546-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	76	%	75-123
FA48546-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	0	%	20
FA48546-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	75	%	73-124
FA48546-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	0	%	20
FA48546-1MSD	1330-20-7	Xylene (total)	MSD	REC	74	%	78-124
FA48546-1MSD	1330-20-7	Xylene (total)	MSD	RPD	1	%	20
FA48546-1MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	101	%	78-119
FA48546-1MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	96	%	71-136
FA48546-1MSD	2037-26-5	Toluene-D8	MSD	SURR	100	%	85-116
FA48546-1MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	110	%	79-119
V2B208-MB	1868-53-7	Dibromofluoromethane	MB	SURR	100	%	78-119
V2B208-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	101	%	71-136
V2B208-MB	2037-26-5	Toluene-D8	MB	SURR	95	%	85-116
V2B208-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	105	%	79-119
FA48546-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	114	%	78-119
FA48546-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	71-136
FA48546-1	2037-26-5	Toluene-D8	SAMP	SURR	95	%	85-116
FA48546-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	116	%	79-119
FA48546-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	78-119
FA48546-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	101	%	71-136
FA48546-2	2037-26-5	Toluene-D8	SAMP	SURR	102	%	85-116
FA48546-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	108	%	79-119
FA48546-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	78-119
FA48546-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	106	%	71-136
FA48546-3	2037-26-5	Toluene-D8	SAMP	SURR	100	%	85-116
FA48546-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	109	%	79-119
FA48546-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	78-119
FA48546-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	71-136
FA48546-4	2037-26-5	Toluene-D8	SAMP	SURR	100	%	85-116
FA48546-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	99	%	79-119
FA48546-5	1868-53-7	Dibromofluoromethane	SAMP	SURR	97	%	78-119
FA48546-5	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	99	%	71-136
FA48546-5	2037-26-5	Toluene-D8	SAMP	SURR	102	%	85-116
FA48546-5	460-00-4	4-Bromofluorobenzene	SAMP	SURR	113	%	79-119
FA48546-6	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	78-119
FA48546-6	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	71-136
FA48546-6	2037-26-5	Toluene-D8	SAMP	SURR	109	%	85-116

* Sample used for QC is not from job FA48546

QC Evaluation: DOD QSM5 Limits

Job Number: FA48546
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/18/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48546-6	460-00-4	4-Bromofluorobenzene	SAMP	SURR	135 ^a	%	79-119
FA48546-7	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	78-119
FA48546-7	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	100	%	71-136
FA48546-7	2037-26-5	Toluene-D8	SAMP	SURR	101	%	85-116
FA48546-7	460-00-4	4-Bromofluorobenzene	SAMP	SURR	117	%	79-119
FA48546-8	1868-53-7	Dibromofluoromethane	SAMP	SURR	100	%	78-119
FA48546-8	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	101	%	71-136
FA48546-8	2037-26-5	Toluene-D8	SAMP	SURR	126	%	85-116
FA48546-8	460-00-4	4-Bromofluorobenzene	SAMP	SURR	161 ^a	%	79-119
OP67316 SW846 8270D BY SIM							
OP67316-BS	83-32-9	Acenaphthene	BSP	REC	88	%	44-111
OP67316-BS	83-32-9	Acenaphthene	BSP	REC	88	%	44-111
OP67316-BS	208-96-8	Acenaphthylene	BSP	REC	85	%	39-116
OP67316-BS	208-96-8	Acenaphthylene	BSP	REC	86	%	39-116
OP67316-BS	120-12-7	Anthracene	BSP	REC	86	%	50-114
OP67316-BS	120-12-7	Anthracene	BSP	REC	86	%	50-114
OP67316-BS	56-55-3	Benzo(a)anthracene	BSP	REC	91	%	54-122
OP67316-BS	56-55-3	Benzo(a)anthracene	BSP	REC	90	%	54-122
OP67316-BS	50-32-8	Benzo(a)pyrene	BSP	REC	90	%	50-125
OP67316-BS	50-32-8	Benzo(a)pyrene	BSP	REC	89	%	50-125
OP67316-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	95	%	53-128
OP67316-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	91	%	53-128
OP67316-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	94	%	49-127
OP67316-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	95	%	49-127
OP67316-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	90	%	56-123
OP67316-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	91	%	56-123
OP67316-BS	218-01-9	Chrysene	BSP	REC	94	%	57-118
OP67316-BS	218-01-9	Chrysene	BSP	REC	94	%	57-118
OP67316-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	94	%	50-129
OP67316-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	90	%	50-129
OP67316-BS	206-44-0	Fluoranthene	BSP	REC	103	%	55-119
OP67316-BS	206-44-0	Fluoranthene	BSP	REC	105	%	55-119
OP67316-BS	86-73-7	Fluorene	BSP	REC	85	%	47-114
OP67316-BS	86-73-7	Fluorene	BSP	REC	88	%	47-114
OP67316-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	92	%	49-130
OP67316-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	94	%	49-130
OP67316-BS	91-20-3	Naphthalene	BSP	REC	83	%	38-111
OP67316-BS	91-20-3	Naphthalene	BSP	REC	83	%	38-111
OP67316-BS	85-01-8	Phenanthrene	BSP	REC	89	%	49-113
OP67316-BS	85-01-8	Phenanthrene	BSP	REC	90	%	49-113
OP67316-BS	129-00-0	Pyrene	BSP	REC	98	%	55-117
OP67316-BS	129-00-0	Pyrene	BSP	REC	97	%	55-117
OP67316-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	97	%	44-125

* Sample used for QC is not from job FA48546

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48546
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/18/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67316-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	95	%	44-125
OP67316-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	93	%	46-115
OP67316-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	95	%	46-115
OP67316-BS	1718-51-0	Terphenyl-d14	BSP	SURR	109	%	58-133
OP67316-BS	1718-51-0	Terphenyl-d14	BSP	SURR	106	%	58-133
OP67316-MS*	83-32-9	Acenaphthene	MS	REC	86	%	44-111
OP67316-MS*	208-96-8	Acenaphthylene	MS	REC	79	%	39-116
OP67316-MS*	120-12-7	Anthracene	MS	REC	87	%	50-114
OP67316-MS*	56-55-3	Benzo(a)anthracene	MS	REC	82	%	54-122
OP67316-MS*	50-32-8	Benzo(a)pyrene	MS	REC	82	%	50-125
OP67316-MS*	205-99-2	Benzo(b)fluoranthene	MS	REC	84	%	53-128
OP67316-MS*	191-24-2	Benzo(g,h,i)perylene	MS	REC	88	%	49-127
OP67316-MS*	207-08-9	Benzo(k)fluoranthene	MS	REC	80	%	56-123
OP67316-MS*	218-01-9	Chrysene	MS	REC	86	%	57-118
OP67316-MS*	53-70-3	Dibenzo(a,h)anthracene	MS	REC	86	%	50-129
OP67316-MS*	206-44-0	Fluoranthene	MS	REC	106	%	55-119
OP67316-MS*	86-73-7	Fluorene	MS	REC	84	%	47-114
OP67316-MS*	193-39-5	Indeno(1,2,3-cd)pyrene	MS	REC	85	%	49-130
OP67316-MS*	91-20-3	Naphthalene	MS	REC	70	%	38-111
OP67316-MS*	85-01-8	Phenanthrene	MS	REC	88	%	49-113
OP67316-MS*	129-00-0	Pyrene	MS	REC	92	%	55-117
OP67316-MS*	4165-60-0	Nitrobenzene-d5	MS	SURR	85	%	44-125
OP67316-MS*	321-60-8	2-Fluorobiphenyl	MS	SURR	87	%	46-115
OP67316-MS*	1718-51-0	Terphenyl-d14	MS	SURR	102	%	58-133
OP67316-MSD*	83-32-9	Acenaphthene	MSD	REC	89	%	44-111
OP67316-MSD*	83-32-9	Acenaphthene	MSD	RPD	1	%	20
OP67316-MSD*	208-96-8	Acenaphthylene	MSD	REC	82	%	39-116
OP67316-MSD*	208-96-8	Acenaphthylene	MSD	RPD	2	%	20
OP67316-MSD*	120-12-7	Anthracene	MSD	REC	88	%	50-114
OP67316-MSD*	120-12-7	Anthracene	MSD	RPD	1	%	20
OP67316-MSD*	56-55-3	Benzo(a)anthracene	MSD	REC	85	%	54-122
OP67316-MSD*	56-55-3	Benzo(a)anthracene	MSD	RPD	2	%	20
OP67316-MSD*	50-32-8	Benzo(a)pyrene	MSD	REC	85	%	50-125
OP67316-MSD*	50-32-8	Benzo(a)pyrene	MSD	RPD	2	%	20
OP67316-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	REC	88	%	53-128
OP67316-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	RPD	2	%	20
OP67316-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	REC	91	%	49-127
OP67316-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	RPD	1	%	20
OP67316-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	REC	83	%	56-123
OP67316-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	RPD	1	%	20
OP67316-MSD*	218-01-9	Chrysene	MSD	REC	90	%	57-118
OP67316-MSD*	218-01-9	Chrysene	MSD	RPD	3	%	20
OP67316-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	REC	89	%	50-129
OP67316-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	RPD	1	%	20
OP67316-MSD*	206-44-0	Fluoranthene	MSD	REC	108	%	55-119

* Sample used for QC is not from job FA48546

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48546
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/18/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67316-MSD*	206-44-0	Fluoranthene	MSD	RPD	0	%	20
OP67316-MSD*	86-73-7	Fluorene	MSD	REC	87	%	47-114
OP67316-MSD*	86-73-7	Fluorene	MSD	RPD	2	%	20
OP67316-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	REC	90	%	49-130
OP67316-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	RPD	3	%	20
OP67316-MSD*	91-20-3	Naphthalene	MSD	REC	89	%	38-111
OP67316-MSD*	91-20-3	Naphthalene	MSD	RPD	14	%	20
OP67316-MSD*	85-01-8	Phenanthrene	MSD	REC	91	%	49-113
OP67316-MSD*	85-01-8	Phenanthrene	MSD	RPD	2	%	20
OP67316-MSD*	129-00-0	Pyrene	MSD	REC	95	%	55-117
OP67316-MSD*	129-00-0	Pyrene	MSD	RPD	1	%	20
OP67316-MSD*	4165-60-0	Nitrobenzene-d5	MSD	SURR	96	%	44-125
OP67316-MSD*	321-60-8	2-Fluorobiphenyl	MSD	SURR	90	%	46-115
OP67316-MSD*	1718-51-0	Terphenyl-d14	MSD	SURR	106	%	58-133
OP67316-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	98	%	44-125
OP67316-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	97	%	44-125
OP67316-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	92	%	46-115
OP67316-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	91	%	46-115
OP67316-MB	1718-51-0	Terphenyl-d14	MB	SURR	99	%	58-133
OP67316-MB	1718-51-0	Terphenyl-d14	MB	SURR	102	%	58-133
FA48546-1	4165-60-0	Nitrobenzene-d5	SAMP	SURR	99	%	44-125
FA48546-1	321-60-8	2-Fluorobiphenyl	SAMP	SURR	87	%	46-115
FA48546-1	1718-51-0	Terphenyl-d14	SAMP	SURR	103	%	58-133
FA48546-2	4165-60-0	Nitrobenzene-d5	SAMP	SURR	98	%	44-125
FA48546-2	321-60-8	2-Fluorobiphenyl	SAMP	SURR	85	%	46-115
FA48546-2	1718-51-0	Terphenyl-d14	SAMP	SURR	80	%	58-133
FA48546-3	4165-60-0	Nitrobenzene-d5	SAMP	SURR	103	%	44-125
FA48546-3	321-60-8	2-Fluorobiphenyl	SAMP	SURR	98	%	46-115
FA48546-3	1718-51-0	Terphenyl-d14	SAMP	SURR	106	%	58-133
FA48546-4	4165-60-0	Nitrobenzene-d5	SAMP	SURR	0 ^b	%	44-125
FA48546-4	4165-60-0	Nitrobenzene-d5	SAMP	SURR	0 ^b	%	44-125
FA48546-4	321-60-8	2-Fluorobiphenyl	SAMP	SURR	0 ^b	%	46-115
FA48546-4	321-60-8	2-Fluorobiphenyl	SAMP	SURR	0 ^b	%	46-115
FA48546-4	1718-51-0	Terphenyl-d14	SAMP	SURR	0 ^b	%	58-133
FA48546-4	1718-51-0	Terphenyl-d14	SAMP	SURR	0 ^b	%	58-133
FA48546-5	4165-60-0	Nitrobenzene-d5	SAMP	SURR	97	%	44-125
FA48546-5	321-60-8	2-Fluorobiphenyl	SAMP	SURR	88	%	46-115
FA48546-5	1718-51-0	Terphenyl-d14	SAMP	SURR	93	%	58-133
FA48546-6	4165-60-0	Nitrobenzene-d5	SAMP	SURR	92	%	44-125
FA48546-6	321-60-8	2-Fluorobiphenyl	SAMP	SURR	81	%	46-115
FA48546-6	1718-51-0	Terphenyl-d14	SAMP	SURR	87	%	58-133
FA48546-7	4165-60-0	Nitrobenzene-d5	SAMP	SURR	93	%	44-125
FA48546-7	321-60-8	2-Fluorobiphenyl	SAMP	SURR	84	%	46-115
FA48546-7	1718-51-0	Terphenyl-d14	SAMP	SURR	96	%	58-133
FA48546-8	4165-60-0	Nitrobenzene-d5	SAMP	SURR	87	%	44-125

* Sample used for QC is not from job FA48546

QC Evaluation: DOD QSM5 Limits

Job Number: FA48546
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/18/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48546-8	321-60-8	2-Fluorobiphenyl	SAMP	SURR	79	%	46-115
FA48546-8	1718-51-0	Terphenyl-d14	SAMP	SURR	85	%	58-133

- (a) Outside control limits due to matrix interference. Confirmed by reanalysis.
(b) Outside control limits due to dilution.

* Sample used for QC is not from job FA48546

Technical Report for

Tantara Corporation

USACE Buffalo Nike Missile UST; E Aurora, NY

16-299

SGS Accutest Job Number: FA48580

Sampling Date: 10/19/17

Report to:

andrea.colby@sgs.com

Total number of pages in report: 39



Test results contained within this data package meet the requirements
of the National Environmental Laboratory Accreditation Program
and/or state specific certification programs as applicable.



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Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)
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Test results relate only to samples analyzed.

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Sample Summary

Tantara Corporation

Job No: FA48580

USACE Buffalo Nike Missile UST; E Aurora, NY
Project No: 16-299

Sample Number	Collected			Received	Matrix		Client Sample ID
	Date	Time	By		Code	Type	
FA48580-1	10/19/17	14:00	RF	10/20/17	SO	Soil	NIKE SWN2
FA48580-2	10/19/17	14:00	RF	10/20/17	SO	Soil	NIKE BOT N2
FA48580-3	10/19/17	14:00	RF	10/20/17	SO	Soil	NIKE SWS2
FA48580-4	10/19/17	14:00	RF	10/20/17	SO	Soil	NIKE BOT S2
FA48580-5	10/19/17	14:00	RF	10/20/17	SO	Soil	NIKE PAD BOT W
FA48580-6	10/19/17	14:00	RF	10/20/17	SO	Soil	NIKE PIPE
FA48580-7	10/19/17	14:00	RF	10/20/17	SO	Soil	NIKE PIPE DUP
FA48580-8	10/19/17	14:00	RF	10/20/17	SO	Soil	SOIL PILE WC UST

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

2

Client: Tantara Corporation

Job No: FA48580

Site: USACE Buffalo Nike Missile UST; E Aurora, NY

Report Date: 11/1/2017 12:07:48

8 Sample(s) were collected on 10/19/2017 and were received at SGS Accutest Southeast (SASE) on 10/20/2017 properly preserved, at 3.8 Deg. C and intact. These Samples received an SASE job number of FA48580. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260C

Matrix: SO

Batch ID: VF2931

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48580-2MS, FA48580-2MSD were used as the QC samples indicated.

Matrix: SO

Batch ID: VY1449

All samples were analyzed within the recommended method holding time.

Sample(s) FA48580-5MS, FA48580-5MSD were used as the QC samples indicated.

Sample(s) FA48580-8 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.

Matrix Spike Recovery(s) for 2,2-Dichloropropane, Carbon Tetrachloride, Chloroethane, Dichlorodifluoromethane, Hexachlorobutadiene, Trichlorofluoromethane are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethylene, 2,2-Dichloropropane, Carbon Tetrachloride, Chloroethane, Dichlorodifluoromethane, Hexachlorobutadiene, Trichlorofluoromethane, Vinyl Chloride are outside control limits. Probable cause is due to matrix interference.

FA48580-5: Confirmation run.

FA48580-8 for Acetone: Suspected laboratory contaminant.

FA48580-8 for Vinyl Acetate: Associated CCV outside of control limits high, sample was ND.

FA48580-8 for Methylene Chloride: Suspected laboratory contaminant.

MS Semi-volatiles By Method SW846 8270D

Matrix: SO

Batch ID: OP67326

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48394-5MS, FA48394-5MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Benzoic Acid are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Benzoic Acid, bis(2-Chloroethoxy)methane, Hexachlorocyclopentadiene, N-Nitrosodi-n-propylamine are outside control limits. Probable cause is due to matrix interference.

MS Semi-volatiles By Method SW846 8270D BY SIM

Matrix: SO

Batch ID: OP67316

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48628-1MS, FA48628-1MSD were used as the QC samples indicated.

Sample(s) FA48580-2, FA48580-5 have surrogates outside control limits.

FA48580-2 for Terphenyl-d14: Outside control limits due to dilution.

FA48580-2 for Nitrobenzene-d5: Outside control limits due to dilution.

FA48580-2 for 2-Fluorobiphenyl: Outside control limits due to dilution.

FA48580-5 for Nitrobenzene-d5: Outside control limits due to matrix interference.

GC Volatiles By Method SW846 8015C

Matrix: SO

Batch ID: GCD6122

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48683-1MS, FA48683-1MSD were used as the QC samples indicated.

GC/LC Semi-volatiles By Method SW846 8015C

Matrix: SO

Batch ID: OP67319

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48581-13MS, FA48581-13MSD were used as the QC samples indicated.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO

Batch ID: OP67334

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48580-8MS, FA48580-8MSD were used as the QC samples indicated.

Metals Analysis By Method SW846 6010C

Matrix: LEACHATE

Batch ID: MP32918

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA48565-1DUP, FA48565-1MS, FA48565-1MSD, FA48565-1SDL were used as the QC samples for metals.

MP32918-MB2 for Lead: All associated samples with results >MDL "B" coded.

FA48580-8 for Lead: Analyte detected in the associated leachate blank.

Metals Analysis By Method SW846 7470A

Matrix: LEACHATE

Batch ID: MP32910

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48403-1LMS, FA48403-1LMSD, FA48403-1LSL, FA48403-1LDUP were used as the QC samples for RPD(s) for Duplicate for Mercury are outside control limits for sample MP32910-D1, MP32910-D2. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP32910-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

General Chemistry By Method SM19 2540G

Matrix: SO

Batch ID: GN76657

Sample(s) FA48580-2DUP were used as the QC samples for Solids, Percent.

General Chemistry By Method SW846 1010

Matrix: SO

Batch ID: GN76752

Sample(s) FA48580-8DUP were used as the QC samples for Ignitability (Flashpoint).

FA48580-8 for Ignitability (Flashpoint): Not ignitable.

General Chemistry By Method SW846 9045D

Matrix: SO

Batch ID: GN76718

Sample(s) FA48580-8DUP were used as the QC samples for pH.

General Chemistry By Method SW846 CHAP7

Matrix: SO

Batch ID: GP30487

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48462-1DUP were used as the QC samples for Cyanide Reactivity.

Matrix: SO

Batch ID: GP30488

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48462-1DUP were used as the QC samples for Sulfide Reactivity.

RPD(s) for Duplicate for Sulfide Reactivity are outside control limits for sample GP30488-D1. RPD acceptable due to low duplicate and sample concentrations.

SGS Accutest (SASE) certifies that this report meets the project requirements for analytical data produced for the samples as received at SASE and as stated on the COC. SASE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SASE Quality Manual except as noted above. This report is to be used in its entirety. SASE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA48580
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/19/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method

FA48580-1 NIKE SWN2

Benzo(a)anthracene	4.5 J	14	7.2	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene	5.9 J	14	7.2	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene	6.1 J	14	7.2	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene	5.1 J	14	7.2	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene	6.2 J	14	7.2	ug/kg	SW846 8270D BY SIM
Chrysene	5.4 J	14	7.2	ug/kg	SW846 8270D BY SIM
Fluoranthene	25.9 J	72	36	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene	4.5 J	14	7.2	ug/kg	SW846 8270D BY SIM
Phenanthrene	42.3 J	72	36	ug/kg	SW846 8270D BY SIM

FA48580-2 NIKE BOT N2

n-Butylbenzene	223	120	50	ug/kg	SW846 8260C
sec-Butylbenzene	120	120	50	ug/kg	SW846 8260C
Ethylbenzene	55.6 J	120	50	ug/kg	SW846 8260C
Isopropylbenzene	58.1 J	120	50	ug/kg	SW846 8260C
p-Isopropyltoluene	140	120	50	ug/kg	SW846 8260C
n-Propylbenzene	153	120	50	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene	411	120	50	ug/kg	SW846 8260C
Acenaphthene	7610	750	370	ug/kg	SW846 8270D BY SIM
Acenaphthylene	2370	750	370	ug/kg	SW846 8270D BY SIM
Anthracene	2320	750	370	ug/kg	SW846 8270D BY SIM
Benzo(a)anthracene	1910	150	75	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene	1370	150	75	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene	1220	150	75	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene	570	150	75	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene	1380	150	75	ug/kg	SW846 8270D BY SIM
Chrysene	1730	150	75	ug/kg	SW846 8270D BY SIM
Dibenzo(a,h)anthracene	170	150	75	ug/kg	SW846 8270D BY SIM
Fluoranthene	8620	750	370	ug/kg	SW846 8270D BY SIM
Fluorene	3930	750	370	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene	548	150	75	ug/kg	SW846 8270D BY SIM
Naphthalene	4310	750	370	ug/kg	SW846 8270D BY SIM
Phenanthrene	15800	750	370	ug/kg	SW846 8270D BY SIM
Pyrene	5540	750	370	ug/kg	SW846 8270D BY SIM

FA48580-3 NIKE SWS2

No hits reported in this sample.

FA48580-4 NIKE BOT S2

sec-Butylbenzene	0.74 J	3.4	1.4	ug/kg	SW846 8260C

Summary of Hits

Job Number: FA48580
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/19/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method

Phenanthrene		26.8 J	76	38	ug/kg	SW846 8270D BY SIM

FA48580-5 NIKE PAD BOT W

n-Butylbenzene	4.2	3.7	1.5	ug/kg	SW846 8260C
sec-Butylbenzene	52.9	3.7	1.5	ug/kg	SW846 8260C
tert-Butylbenzene	8.3	3.7	1.5	ug/kg	SW846 8260C
Ethylbenzene	1.3 J	3.7	1.5	ug/kg	SW846 8260C
Isopropylbenzene	10.6	3.7	1.5	ug/kg	SW846 8260C
p-Isopropyltoluene	1.2 J	3.7	1.5	ug/kg	SW846 8260C
n-Propylbenzene	11.1	3.7	1.5	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene	3.8	3.7	1.5	ug/kg	SW846 8260C
1,3,5-Trimethylbenzene	1.0 J	3.7	1.5	ug/kg	SW846 8260C
Xylene (total)	3.6 J	11	4.5	ug/kg	SW846 8260C
Acenaphthene	886	76	38	ug/kg	SW846 8270D BY SIM
Anthracene	513	76	38	ug/kg	SW846 8270D BY SIM
Benzo(a)anthracene	293	15	7.6	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene	215	15	7.6	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene	195	15	7.6	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene	105	15	7.6	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene	220	15	7.6	ug/kg	SW846 8270D BY SIM
Chrysene	275	15	7.6	ug/kg	SW846 8270D BY SIM
Dibenzo(a,h)anthracene	31.7	15	7.6	ug/kg	SW846 8270D BY SIM
Fluoranthene	1330	76	38	ug/kg	SW846 8270D BY SIM
Fluorene	750	76	38	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene	97.4	15	7.6	ug/kg	SW846 8270D BY SIM
Naphthalene	105	76	38	ug/kg	SW846 8270D BY SIM
Phenanthrene	2920	76	38	ug/kg	SW846 8270D BY SIM

FA48580-6 NIKE PIPE

Acenaphthylene	160	73	36	ug/kg	SW846 8270D BY SIM
Anthracene	96.9	73	36	ug/kg	SW846 8270D BY SIM
Benzo(a)anthracene	174	15	7.3	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene	253	15	7.3	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene	247	15	7.3	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene	220	15	7.3	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene	263	15	7.3	ug/kg	SW846 8270D BY SIM
Chrysene	136	15	7.3	ug/kg	SW846 8270D BY SIM
Dibenzo(a,h)anthracene	54.3	15	7.3	ug/kg	SW846 8270D BY SIM
Fluoranthene	351	73	36	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene	212	15	7.3	ug/kg	SW846 8270D BY SIM
Phenanthrene	47.1 J	73	36	ug/kg	SW846 8270D BY SIM
Pyrene	277	73	36	ug/kg	SW846 8270D BY SIM

Summary of Hits

Job Number: FA48580
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/19/17

Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method

FA48580-7 NIKE PIPE DUP

Benzo(a)anthracene	11.5 J	15	7.7	ug/kg	SW846 8270D BY SIM
Benzo(a)pyrene	16.5	15	7.7	ug/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene	15.5	15	7.7	ug/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene	13.2 J	15	7.7	ug/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene	17.0	15	7.7	ug/kg	SW846 8270D BY SIM
Chrysene	9.2 J	15	7.7	ug/kg	SW846 8270D BY SIM
Fluoranthene	30.2 J	77	38	ug/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene	12.8 J	15	7.7	ug/kg	SW846 8270D BY SIM

FA48580-8 SOIL PILE WC UST

Acetone ^a	64.2 B	35	17	ug/kg	SW846 8260C
n-Butylbenzene	4.7	3.5	1.4	ug/kg	SW846 8260C
sec-Butylbenzene	22.4	3.5	1.4	ug/kg	SW846 8260C
tert-Butylbenzene	2.8 J	3.5	1.4	ug/kg	SW846 8260C
Ethylbenzene	1.5 J	3.5	1.4	ug/kg	SW846 8260C
Isopropylbenzene	5.3	3.5	1.4	ug/kg	SW846 8260C
p-Isopropyltoluene	1.2 J	3.5	1.4	ug/kg	SW846 8260C
Methylene Chloride ^a	7.8 B	6.9	3.5	ug/kg	SW846 8260C
Naphthalene	26.9	3.5	2.4	ug/kg	SW846 8260C
n-Propylbenzene	11.8	3.5	1.4	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene	3.9	3.5	1.4	ug/kg	SW846 8260C
1,3,5-Trimethylbenzene	1.2 J	3.5	1.4	ug/kg	SW846 8260C
o-Xylene	1.3 J	3.5	1.4	ug/kg	SW846 8260C
Acenaphthene	794	200	39	ug/kg	SW846 8270D
Anthracene	632	200	39	ug/kg	SW846 8270D
Benzo(a)anthracene	577	200	39	ug/kg	SW846 8270D
Benzo(a)pyrene	423	200	39	ug/kg	SW846 8270D
Benzo(b)fluoranthene	405	200	39	ug/kg	SW846 8270D
Benzo(g,h,i)perylene	226	200	39	ug/kg	SW846 8270D
Benzo(k)fluoranthene	328	200	39	ug/kg	SW846 8270D
Carbazole	180 J	200	39	ug/kg	SW846 8270D
Chrysene	509	200	39	ug/kg	SW846 8270D
Dibenzo(a,h)anthracene	43.4 J	200	39	ug/kg	SW846 8270D
Dibenzofuran	420	200	39	ug/kg	SW846 8270D
Fluoranthene	1590	200	39	ug/kg	SW846 8270D
Fluorene	976	200	39	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene	261	200	39	ug/kg	SW846 8270D
1-Methylnaphthalene	50.5 J	200	39	ug/kg	SW846 8270D
N-Nitrosodiphenylamine	1060	200	78	ug/kg	SW846 8270D
Phenanthrene	3770	200	39	ug/kg	SW846 8270D
Pyrene	1560	200	39	ug/kg	SW846 8270D
TPH-GRO (C6-C10)	4.56	2.9	1.5	mg/kg	SW846 8015C

Summary of Hits

Job Number: FA48580
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/19/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
TPH (C10-C28)		1180	59	44	mg/kg	SW846 8015C
Ignitability (Flashpoint) ^b		> 200		^c	Deg. F	SW846 1010
pH		7.61		^c	su	SW846 9045D
Barium		0.57 J	2.0	0.050	mg/l	SW846 6010C
Lead ^d		0.019 JB	0.050	0.020	mg/l	SW846 6010C
Mercury		0.00052 J	0.0050	0.0010	mg/l	SW846 7470A

(a) Suspected laboratory contaminant.

(b) Not ignitable.

(c) Value reported is laboratory DL (MDL).

(d) Analyte detected in the associated leachate blank.

Sample Results

Report of Analysis

Report of Analysis

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Client Sample ID:	NIKE SWN2				
Lab Sample ID:	FA48580-1			Date Sampled:	10/19/17
Matrix:	SO - Soil			Date Received:	10/20/17
Method:	SW846 8260C			Percent Solids:	89.8
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0084597.D	1	10/20/17 11:46	EP	n/a	n/a	VF2931
Run #2							

	Initial Weight	Final Volume
Run #1	7.64 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.5 U	3.6	1.5	0.89	ug/kg	
104-51-8	n-Butylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
135-98-8	sec-Butylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
98-06-6	tert-Butylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
100-41-4	Ethylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
98-82-8	Isopropylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
99-87-6	p-Isopropyltoluene	1.5 U	3.6	1.5	0.73	ug/kg	
103-65-1	n-Propylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
108-88-3	Toluene	1.5 U	3.6	1.5	0.73	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
1330-20-7	Xylene (total)	4.4 U	11	4.4	1.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		75-124%
17060-07-0	1,2-Dichloroethane-D4	117%		72-135%
2037-26-5	Toluene-D8	105%		75-126%
460-00-4	4-Bromofluorobenzene	101%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	NIKE SWN2				
Lab Sample ID:	FA48580-1			Date Sampled:	10/19/17
Matrix:	SO - Soil			Date Received:	10/20/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	89.8
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103610.D	1	10/25/17 16:33	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	36 U	72	36	29	ug/kg	
208-96-8	Acenaphthylene	36 U	72	36	29	ug/kg	
120-12-7	Anthracene	36 U	72	36	18	ug/kg	
56-55-3	Benzo(a)anthracene	4.5	14	7.2	3.6	ug/kg	J
50-32-8	Benzo(a)pyrene	5.9	14	7.2	3.6	ug/kg	J
205-99-2	Benzo(b)fluoranthene	6.1	14	7.2	3.6	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	5.1	14	7.2	3.6	ug/kg	J
207-08-9	Benzo(k)fluoranthene	6.2	14	7.2	3.6	ug/kg	J
218-01-9	Chrysene	5.4	14	7.2	3.6	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	7.2 U	14	7.2	3.6	ug/kg	
206-44-0	Fluoranthene	25.9	72	36	18	ug/kg	J
86-73-7	Fluorene	36 U	72	36	29	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	4.5	14	7.2	3.6	ug/kg	J
91-20-3	Naphthalene	36 U	72	36	29	ug/kg	
85-01-8	Phenanthrene	42.3	72	36	18	ug/kg	J
129-00-0	Pyrene	36 U	72	36	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	102%		40-105%
321-60-8	2-Fluorobiphenyl	99%		43-107%
1718-51-0	Terphenyl-d14	108%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	NIKE BOT N2			
Lab Sample ID:	FA48580-2			Date Sampled: 10/19/17
Matrix:	SO - Soil			Date Received: 10/20/17
Method:	SW846 8260C			Percent Solids: 85.0
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0084598.D	1	10/20/17 12:10	EP	n/a	n/a	VF2931
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	18.4 g	5.0 ml	100 ul
Run #2			

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	50 U	120	50	30	ug/kg	
104-51-8	n-Butylbenzene	223	120	50	25	ug/kg	
135-98-8	sec-Butylbenzene	120	120	50	25	ug/kg	
98-06-6	tert-Butylbenzene	50 U	120	50	25	ug/kg	
100-41-4	Ethylbenzene	55.6	120	50	25	ug/kg	J
98-82-8	Isopropylbenzene	58.1	120	50	25	ug/kg	J
99-87-6	p-Isopropyltoluene	140	120	50	25	ug/kg	
103-65-1	n-Propylbenzene	153	120	50	25	ug/kg	
108-88-3	Toluene	50 U	120	50	25	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	411	120	50	25	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	50 U	120	50	25	ug/kg	
1330-20-7	Xylene (total)	150 U	370	150	52	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		75-124%
17060-07-0	1,2-Dichloroethane-D4	119%		72-135%
2037-26-5	Toluene-D8	92%		75-126%
460-00-4	4-Bromofluorobenzene	99%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE BOT N2			Date Sampled:	10/19/17
Lab Sample ID:	FA48580-2			Date Received:	10/20/17
Matrix:	SO - Soil			Percent Solids:	85.0
Method:	SW846 8270D BY SIM SW846 3546				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103611.D	10	10/25/17 16:58	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	7610	750	370	300	ug/kg	
208-96-8	Acenaphthylene	2370	750	370	300	ug/kg	
120-12-7	Anthracene	2320	750	370	190	ug/kg	
56-55-3	Benzo(a)anthracene	1910	150	75	37	ug/kg	
50-32-8	Benzo(a)pyrene	1370	150	75	37	ug/kg	
205-99-2	Benzo(b)fluoranthene	1220	150	75	37	ug/kg	
191-24-2	Benzo(g,h,i)perylene	570	150	75	37	ug/kg	
207-08-9	Benzo(k)fluoranthene	1380	150	75	37	ug/kg	
218-01-9	Chrysene	1730	150	75	37	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	170	150	75	37	ug/kg	
206-44-0	Fluoranthene	8620	750	370	190	ug/kg	
86-73-7	Fluorene	3930	750	370	300	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	548	150	75	37	ug/kg	
91-20-3	Naphthalene	4310	750	370	300	ug/kg	
85-01-8	Phenanthrene	15800	750	370	190	ug/kg	
129-00-0	Pyrene	5540	750	370	190	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% ^a		40-105%
321-60-8	2-Fluorobiphenyl	0% ^a		43-107%
1718-51-0	Terphenyl-d14	0% ^a		45-119%

(a) Outside control limits due to dilution.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE SWS2			
Lab Sample ID:	FA48580-3			Date Sampled: 10/19/17
Matrix:	SO - Soil			Date Received: 10/20/17
Method:	SW846 8260C			Percent Solids: 85.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0084599.D	1	10/20/17 12:34	EP	n/a	n/a	VF2931
Run #2							

	Initial Weight	Final Volume
Run #1	9.31 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.3 U	3.2	1.3	0.77	ug/kg	
104-51-8	n-Butylbenzene	1.3 U	3.2	1.3	0.63	ug/kg	
135-98-8	sec-Butylbenzene	1.3 U	3.2	1.3	0.63	ug/kg	
98-06-6	tert-Butylbenzene	1.3 U	3.2	1.3	0.63	ug/kg	
100-41-4	Ethylbenzene	1.3 U	3.2	1.3	0.63	ug/kg	
98-82-8	Isopropylbenzene	1.3 U	3.2	1.3	0.63	ug/kg	
99-87-6	p-Isopropyltoluene	1.3 U	3.2	1.3	0.63	ug/kg	
103-65-1	n-Propylbenzene	1.3 U	3.2	1.3	0.63	ug/kg	
108-88-3	Toluene	1.3 U	3.2	1.3	0.63	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.3 U	3.2	1.3	0.63	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.3 U	3.2	1.3	0.63	ug/kg	
1330-20-7	Xylene (total)	3.8 U	9.5	3.8	1.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		75-124%
17060-07-0	1,2-Dichloroethane-D4	116%		72-135%
2037-26-5	Toluene-D8	105%		75-126%
460-00-4	4-Bromofluorobenzene	101%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE SWS2				
Lab Sample ID:	FA48580-3			Date Sampled:	10/19/17
Matrix:	SO - Soil			Date Received:	10/20/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	85.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103612.D	1	10/25/17 17:24	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	38 U	76	38	30	ug/kg	
208-96-8	Acenaphthylene	38 U	76	38	30	ug/kg	
120-12-7	Anthracene	38 U	76	38	19	ug/kg	
56-55-3	Benzo(a)anthracene	7.6 U	15	7.6	3.8	ug/kg	
50-32-8	Benzo(a)pyrene	7.6 U	15	7.6	3.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	7.6 U	15	7.6	3.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	7.6 U	15	7.6	3.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.6 U	15	7.6	3.8	ug/kg	
218-01-9	Chrysene	7.6 U	15	7.6	3.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	7.6 U	15	7.6	3.8	ug/kg	
206-44-0	Fluoranthene	38 U	76	38	19	ug/kg	
86-73-7	Fluorene	38 U	76	38	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	7.6 U	15	7.6	3.8	ug/kg	
91-20-3	Naphthalene	38 U	76	38	30	ug/kg	
85-01-8	Phenanthrene	38 U	76	38	19	ug/kg	
129-00-0	Pyrene	38 U	76	38	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	87%		40-105%
321-60-8	2-Fluorobiphenyl	82%		43-107%
1718-51-0	Terphenyl-d14	94%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	NIKE BOT S2			
Lab Sample ID:	FA48580-4			Date Sampled: 10/19/17
Matrix:	SO - Soil			Date Received: 10/20/17
Method:	SW846 8260C			Percent Solids: 84.6
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F0084600.D	1	10/20/17 12:58	EP	n/a	n/a	VF2931
Run #2							

	Initial Weight	Final Volume
Run #1	8.70 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.4 U	3.4	1.4	0.83	ug/kg	
104-51-8	n-Butylbenzene	1.4 U	3.4	1.4	0.68	ug/kg	
135-98-8	sec-Butylbenzene	0.74	3.4	1.4	0.68	ug/kg	J
98-06-6	tert-Butylbenzene	1.4 U	3.4	1.4	0.68	ug/kg	
100-41-4	Ethylbenzene	1.4 U	3.4	1.4	0.68	ug/kg	
98-82-8	Isopropylbenzene	1.4 U	3.4	1.4	0.68	ug/kg	
99-87-6	p-Isopropyltoluene	1.4 U	3.4	1.4	0.68	ug/kg	
103-65-1	n-Propylbenzene	1.4 U	3.4	1.4	0.68	ug/kg	
108-88-3	Toluene	1.4 U	3.4	1.4	0.68	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.4 U	3.4	1.4	0.68	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.4 U	3.4	1.4	0.68	ug/kg	
1330-20-7	Xylene (total)	4.1 U	10	4.1	1.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		75-124%
17060-07-0	1,2-Dichloroethane-D4	107%		72-135%
2037-26-5	Toluene-D8	108%		75-126%
460-00-4	4-Bromofluorobenzene	102%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	NIKE BOT S2			Date Sampled:	10/19/17
Lab Sample ID:	FA48580-4			Date Received:	10/20/17
Matrix:	SO - Soil			Percent Solids:	84.6
Method:	SW846 8270D BY SIM SW846 3546				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103613.D	1	10/25/17 17:50	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.6 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	38 U	76	38	30	ug/kg	
208-96-8	Acenaphthylene	38 U	76	38	30	ug/kg	
120-12-7	Anthracene	38 U	76	38	19	ug/kg	
56-55-3	Benzo(a)anthracene	7.6 U	15	7.6	3.8	ug/kg	
50-32-8	Benzo(a)pyrene	7.6 U	15	7.6	3.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	7.6 U	15	7.6	3.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	7.6 U	15	7.6	3.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.6 U	15	7.6	3.8	ug/kg	
218-01-9	Chrysene	7.6 U	15	7.6	3.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	7.6 U	15	7.6	3.8	ug/kg	
206-44-0	Fluoranthene	38 U	76	38	19	ug/kg	
86-73-7	Fluorene	38 U	76	38	30	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	7.6 U	15	7.6	3.8	ug/kg	
91-20-3	Naphthalene	38 U	76	38	30	ug/kg	
85-01-8	Phenanthrene	26.8	76	38	19	ug/kg	J
129-00-0	Pyrene	38 U	76	38	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		40-105%
321-60-8	2-Fluorobiphenyl	81%		43-107%
1718-51-0	Terphenyl-d14	85%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	NIKE PAD BOT W			Date Sampled:	10/19/17
Lab Sample ID:	FA48580-5			Date Received:	10/20/17
Matrix:	SO - Soil			Percent Solids:	84.6
Method:	SW846 8260C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y36493.D	1	10/20/17 11:48	EP	n/a	n/a	VY1449
Run #2 ^a	Y36494.D	1	10/20/17 12:12	EP	n/a	n/a	VY1449

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	7.89 g	5.0 ml	
Run #2	14.1 g	5.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.5 U	3.7	1.5	0.91	ug/kg	
104-51-8	n-Butylbenzene	4.2	3.7	1.5	0.75	ug/kg	
135-98-8	sec-Butylbenzene	52.9	3.7	1.5	0.75	ug/kg	
98-06-6	tert-Butylbenzene	8.3	3.7	1.5	0.75	ug/kg	
100-41-4	Ethylbenzene	1.3	3.7	1.5	0.75	ug/kg	J
98-82-8	Isopropylbenzene	10.6	3.7	1.5	0.75	ug/kg	
99-87-6	p-Isopropyltoluene	1.2	3.7	1.5	0.75	ug/kg	J
103-65-1	n-Propylbenzene	11.1	3.7	1.5	0.75	ug/kg	
108-88-3	Toluene	1.5 U	3.7	1.5	0.75	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	3.8	3.7	1.5	0.75	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.0	3.7	1.5	0.75	ug/kg	J
1330-20-7	Xylene (total)	3.6	11	4.5	1.6	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	99%	75-124%
17060-07-0	1,2-Dichloroethane-D4	106%	103%	72-135%
2037-26-5	Toluene-D8	108%	96%	75-126%
460-00-4	4-Bromofluorobenzene	109%	96%	71-133%

(a) Confirmation run.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	NIKE PAD BOT W			Date Sampled:	10/19/17
Lab Sample ID:	FA48580-5			Date Received:	10/20/17
Matrix:	SO - Soil			Percent Solids:	84.6
Method:	SW846 8270D BY SIM SW846 3546				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103614.D	1	10/25/17 18:15	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	886	76	38	31	ug/kg	
208-96-8	Acenaphthylene	38 U	76	38	31	ug/kg	
120-12-7	Anthracene	513	76	38	19	ug/kg	
56-55-3	Benzo(a)anthracene	293	15	7.6	3.8	ug/kg	
50-32-8	Benzo(a)pyrene	215	15	7.6	3.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	195	15	7.6	3.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	105	15	7.6	3.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	220	15	7.6	3.8	ug/kg	
218-01-9	Chrysene	275	15	7.6	3.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	31.7	15	7.6	3.8	ug/kg	
206-44-0	Fluoranthene	1330	76	38	19	ug/kg	
86-73-7	Fluorene	750	76	38	31	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	97.4	15	7.6	3.8	ug/kg	
91-20-3	Naphthalene	105	76	38	31	ug/kg	
85-01-8	Phenanthrene	2920	76	38	19	ug/kg	
129-00-0	Pyrene	38 U	76	38	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	142% ^a		40-105%
321-60-8	2-Fluorobiphenyl	89%		43-107%
1718-51-0	Terphenyl-d14	105%		45-119%

(a) Outside control limits due to matrix interference.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	NIKE PIPE				
Lab Sample ID:	FA48580-6			Date Sampled:	10/19/17
Matrix:	SO - Soil			Date Received:	10/20/17
Method:	SW846 8260C			Percent Solids:	89.6
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y36495.D	1	10/20/17 12:36	EP	n/a	n/a	VY1449
Run #2							

	Initial Weight	Final Volume
Run #1	7.17 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.6 U	3.9	1.6	0.95	ug/kg	
104-51-8	n-Butylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
135-98-8	sec-Butylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
98-06-6	tert-Butylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
100-41-4	Ethylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
98-82-8	Isopropylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
99-87-6	p-Isopropyltoluene	1.6 U	3.9	1.6	0.78	ug/kg	
103-65-1	n-Propylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
108-88-3	Toluene	1.6 U	3.9	1.6	0.78	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
1330-20-7	Xylene (total)	4.7 U	12	4.7	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		75-124%
17060-07-0	1,2-Dichloroethane-D4	102%		72-135%
2037-26-5	Toluene-D8	106%		75-126%
460-00-4	4-Bromofluorobenzene	110%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	NIKE PIPE				
Lab Sample ID:	FA48580-6			Date Sampled:	10/19/17
Matrix:	SO - Soil			Date Received:	10/20/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	89.6
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103615.D	1	10/25/17 18:41	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	36 U	73	36	29	ug/kg	
208-96-8	Acenaphthylene	160	73	36	29	ug/kg	
120-12-7	Anthracene	96.9	73	36	18	ug/kg	
56-55-3	Benzo(a)anthracene	174	15	7.3	3.6	ug/kg	
50-32-8	Benzo(a)pyrene	253	15	7.3	3.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	247	15	7.3	3.6	ug/kg	
191-24-2	Benzo(g,h,i)perylene	220	15	7.3	3.6	ug/kg	
207-08-9	Benzo(k)fluoranthene	263	15	7.3	3.6	ug/kg	
218-01-9	Chrysene	136	15	7.3	3.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	54.3	15	7.3	3.6	ug/kg	
206-44-0	Fluoranthene	351	73	36	18	ug/kg	
86-73-7	Fluorene	36 U	73	36	29	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	212	15	7.3	3.6	ug/kg	
91-20-3	Naphthalene	36 U	73	36	29	ug/kg	
85-01-8	Phenanthrene	47.1	73	36	18	ug/kg	J
129-00-0	Pyrene	277	73	36	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	98%		40-105%
321-60-8	2-Fluorobiphenyl	96%		43-107%
1718-51-0	Terphenyl-d14	104%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE PIPE DUP			
Lab Sample ID:	FA48580-7			Date Sampled: 10/19/17
Matrix:	SO - Soil			Date Received: 10/20/17
Method:	SW846 8260C			Percent Solids: 84.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y36496.D	1	10/20/17 13:00	EP	n/a	n/a	VY1449
Run #2							

	Initial Weight	Final Volume
Run #1	6.79 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.8 U	4.4	1.8	1.1	ug/kg	
104-51-8	n-Butylbenzene	1.8 U	4.4	1.8	0.88	ug/kg	
135-98-8	sec-Butylbenzene	1.8 U	4.4	1.8	0.88	ug/kg	
98-06-6	tert-Butylbenzene	1.8 U	4.4	1.8	0.88	ug/kg	
100-41-4	Ethylbenzene	1.8 U	4.4	1.8	0.88	ug/kg	
98-82-8	Isopropylbenzene	1.8 U	4.4	1.8	0.88	ug/kg	
99-87-6	p-Isopropyltoluene	1.8 U	4.4	1.8	0.88	ug/kg	
103-65-1	n-Propylbenzene	1.8 U	4.4	1.8	0.88	ug/kg	
108-88-3	Toluene	1.8 U	4.4	1.8	0.88	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.8 U	4.4	1.8	0.88	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.8 U	4.4	1.8	0.88	ug/kg	
1330-20-7	Xylene (total)	5.3 U	13	5.3	1.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		75-124%
17060-07-0	1,2-Dichloroethane-D4	100%		72-135%
2037-26-5	Toluene-D8	103%		75-126%
460-00-4	4-Bromofluorobenzene	114%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

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N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE PIPE DUP			Date Sampled:	10/19/17
Lab Sample ID:	FA48580-7			Date Received:	10/20/17
Matrix:	SO - Soil			Percent Solids:	84.1
Method:	SW846 8270D BY SIM SW846 3546				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103616.D	1	10/25/17 19:06	FS	10/23/17 09:43	OP67316	SW4505
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	38 U	77	38	31	ug/kg	
208-96-8	Acenaphthylene	38 U	77	38	31	ug/kg	
120-12-7	Anthracene	38 U	77	38	19	ug/kg	
56-55-3	Benzo(a)anthracene	11.5	15	7.7	3.8	ug/kg	J
50-32-8	Benzo(a)pyrene	16.5	15	7.7	3.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	15.5	15	7.7	3.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	13.2	15	7.7	3.8	ug/kg	J
207-08-9	Benzo(k)fluoranthene	17.0	15	7.7	3.8	ug/kg	
218-01-9	Chrysene	9.2	15	7.7	3.8	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	7.7 U	15	7.7	3.8	ug/kg	
206-44-0	Fluoranthene	30.2	77	38	19	ug/kg	J
86-73-7	Fluorene	38 U	77	38	31	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	12.8	15	7.7	3.8	ug/kg	J
91-20-3	Naphthalene	38 U	77	38	31	ug/kg	
85-01-8	Phenanthrene	38 U	77	38	19	ug/kg	
129-00-0	Pyrene	38 U	77	38	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	96%		40-105%
321-60-8	2-Fluorobiphenyl	88%		43-107%
1718-51-0	Terphenyl-d14	91%		45-119%

U = Not detected

LOD = Limit of Detection

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Report of Analysis

Page 1 of 3

Client Sample ID:	SOIL PILE WC UST			
Lab Sample ID:	FA48580-8			Date Sampled: 10/19/17
Matrix:	SO - Soil			Date Received: 10/20/17
Method:	SW846 8260C			Percent Solids: 84.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y36497.D	1	10/20/17 13:24	EP	n/a	n/a	VY1449
Run #2							

	Initial Weight	Final Volume
Run #1	8.56 g	5.0 ml
Run #2		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone ^a	64.2	35	17	6.9	ug/kg	B
71-43-2	Benzene	1.4 U	3.5	1.4	0.84	ug/kg	
108-86-1	Bromobenzene	1.4 U	3.5	1.4	0.69	ug/kg	
74-97-5	Bromochloromethane	1.4 U	3.5	1.4	1.0	ug/kg	
75-27-4	Bromodichloromethane	1.4 U	3.5	1.4	0.69	ug/kg	
75-25-2	Bromoform	1.4 U	3.5	1.4	0.69	ug/kg	
78-93-3	2-Butanone (MEK)	10 U	17	10	5.0	ug/kg	
104-51-8	n-Butylbenzene	4.7	3.5	1.4	0.69	ug/kg	
135-98-8	sec-Butylbenzene	22.4	3.5	1.4	0.69	ug/kg	
98-06-6	tert-Butylbenzene	2.8	3.5	1.4	0.69	ug/kg	J
75-15-0	Carbon Disulfide	1.4 U	3.5	1.4	0.69	ug/kg	
56-23-5	Carbon Tetrachloride	1.4 U	3.5	1.4	0.71	ug/kg	
108-90-7	Chlorobenzene	1.4 U	3.5	1.4	0.69	ug/kg	
75-00-3	Chloroethane	2.4 U	3.5	2.4	1.4	ug/kg	
67-66-3	Chloroform	1.4 U	3.5	1.4	0.92	ug/kg	
95-49-8	o-Chlorotoluene	1.4 U	3.5	1.4	0.69	ug/kg	
106-43-4	p-Chlorotoluene	1.4 U	3.5	1.4	0.69	ug/kg	
124-48-1	Dibromochloromethane	1.4 U	3.5	1.4	0.69	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	2.4 U	3.5	2.4	1.3	ug/kg	
106-93-4	1,2-Dibromoethane	1.4 U	3.5	1.4	0.69	ug/kg	
75-71-8	Dichlorodifluoromethane	2.4 U	3.5	2.4	1.4	ug/kg	
95-50-1	1,2-Dichlorobenzene	1.4 U	3.5	1.4	0.69	ug/kg	
541-73-1	1,3-Dichlorobenzene	1.4 U	3.5	1.4	0.69	ug/kg	
106-46-7	1,4-Dichlorobenzene	1.4 U	3.5	1.4	0.80	ug/kg	
75-34-3	1,1-Dichloroethane	1.4 U	3.5	1.4	1.2	ug/kg	
107-06-2	1,2-Dichloroethane	1.4 U	3.5	1.4	0.69	ug/kg	
75-35-4	1,1-Dichloroethylene	1.4 U	3.5	1.4	0.69	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	1.4 U	3.5	1.4	0.96	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	1.4 U	3.5	1.4	0.69	ug/kg	
78-87-5	1,2-Dichloropropane	1.4 U	3.5	1.4	0.69	ug/kg	
142-28-9	1,3-Dichloropropane	1.4 U	3.5	1.4	0.69	ug/kg	
594-20-7	2,2-Dichloropropane	1.4 U	3.5	1.4	0.69	ug/kg	

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LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SOIL PILE WC UST

Lab Sample ID: FA48580-8

Date Sampled: 10/19/17

Matrix: SO - Soil

Date Received: 10/20/17

Method: SW846 8260C

Percent Solids: 84.4

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	1.4 U	3.5	1.4	0.71	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	1.4 U	3.5	1.4	0.69	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	1.4 U	3.5	1.4	0.69	ug/kg	
100-41-4	Ethylbenzene	1.5	3.5	1.4	0.69	ug/kg	J
87-68-3	Hexachlorobutadiene	1.4 U	3.5	1.4	0.89	ug/kg	
591-78-6	2-Hexanone	10 U	17	10	5.2	ug/kg	
98-82-8	Isopropylbenzene	5.3	3.5	1.4	0.69	ug/kg	
99-87-6	p-Isopropyltoluene	1.2	3.5	1.4	0.69	ug/kg	J
74-83-9	Methyl Bromide	2.4 U	3.5	2.4	1.4	ug/kg	
74-87-3	Methyl Chloride	2.4 U	3.5	2.4	1.4	ug/kg	
74-95-3	Methylene Bromide	1.4 U	3.5	1.4	0.69	ug/kg	
75-09-2	Methylene Chloride ^a	7.8	6.9	3.5	2.8	ug/kg	B
108-10-1	4-Methyl-2-pentanone (MIBK)	10 U	17	10	5.2	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1.4 U	3.5	1.4	0.69	ug/kg	
91-20-3	Naphthalene	26.9	3.5	2.4	1.4	ug/kg	
103-65-1	n-Propylbenzene	11.8	3.5	1.4	0.69	ug/kg	
100-42-5	Styrene	1.4 U	3.5	1.4	0.69	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	1.4 U	3.5	1.4	0.71	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	1.4 U	3.5	1.4	0.69	ug/kg	
127-18-4	Tetrachloroethylene	1.4 U	3.5	1.4	0.89	ug/kg	
108-88-3	Toluene	1.4 U	3.5	1.4	0.69	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	2.4 U	3.5	2.4	0.97	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	2.4 U	3.5	2.4	0.69	ug/kg	
71-55-6	1,1,1-Trichloroethane	1.4 U	3.5	1.4	0.69	ug/kg	
79-00-5	1,1,2-Trichloroethane	1.4 U	3.5	1.4	0.69	ug/kg	
79-01-6	Trichloroethylene	1.4 U	3.5	1.4	0.69	ug/kg	
75-69-4	Trichlorofluoromethane	2.4 U	3.5	2.4	1.4	ug/kg	
96-18-4	1,2,3-Trichloropropane	2.4 U	3.5	2.4	0.87	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	3.9	3.5	1.4	0.69	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.2	3.5	1.4	0.69	ug/kg	J
108-05-4	Vinyl Acetate ^b	14 U	17	14	11	ug/kg	
75-01-4	Vinyl Chloride	1.4 U	3.5	1.4	0.69	ug/kg	
	m,p-Xylene	2.8 U	6.9	2.8	0.76	ug/kg	
95-47-6	o-Xylene	1.3	3.5	1.4	0.69	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		75-124%
17060-07-0	1,2-Dichloroethane-D4	101%		72-135%
2037-26-5	Toluene-D8	102%		75-126%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SOIL PILE WC UST			Date Sampled:	10/19/17
Lab Sample ID:	FA48580-8			Date Received:	10/20/17
Matrix:	SO - Soil			Percent Solids:	84.4
Method:	SW846 8260C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	130%		71-133%

- (a) Suspected laboratory contaminant.
(b) Associated CCV outside of control limits high, sample was ND.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.8
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Report of Analysis

Page 1 of 3

Client Sample ID:	SOIL PILE WC UST			Date Sampled:	10/19/17
Lab Sample ID:	FA48580-8			Date Received:	10/20/17
Matrix:	SO - Soil			Percent Solids:	84.4
Method:	SW846 8270D SW846 3550C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X056637.D	1	10/24/17 22:12	MV	10/24/17 08:45	OP67326	SX2385
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
65-85-0	Benzoic Acid	390 U	980	390	200	ug/kg	
59-50-7	4-Chloro-3-methyl Phenol	39 U	200	39	22	ug/kg	
95-57-8	2-Chlorophenol	39 U	200	39	24	ug/kg	
120-83-2	2,4-Dichlorophenol	39 U	200	39	23	ug/kg	
105-67-9	2,4-Dimethylphenol	78 U	200	78	52	ug/kg	
51-28-5	2,4-Dinitrophenol	590 U	980	590	200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	160 U	390	160	78	ug/kg	
95-48-7	2-Methylphenol	39 U	200	39	24	ug/kg	
	3&4-Methylphenol	78 U	200	78	32	ug/kg	
88-75-5	2-Nitrophenol	39 U	200	39	21	ug/kg	
100-02-7	4-Nitrophenol	390 U	980	390	200	ug/kg	
87-86-5	Pentachlorophenol	390 U	980	390	200	ug/kg	
108-95-2	Phenol	39 U	200	39	20	ug/kg	
95-95-4	2,4,5-Trichlorophenol	39 U	200	39	32	ug/kg	
88-06-2	2,4,6-Trichlorophenol	39 U	200	39	23	ug/kg	
83-32-9	Acenaphthene	794	200	39	21	ug/kg	
208-96-8	Acenaphthylene	39 U	200	39	20	ug/kg	
62-53-3	Aniline	78 U	200	78	42	ug/kg	
120-12-7	Anthracene	632	200	39	22	ug/kg	
92-87-5	Benzidine	980 U	2000	980	390	ug/kg	
56-55-3	Benzo(a)anthracene	577	200	39	20	ug/kg	
50-32-8	Benzo(a)pyrene	423	200	39	23	ug/kg	
205-99-2	Benzo(b)fluoranthene	405	200	39	21	ug/kg	
191-24-2	Benzo(g,h,i)perylene	226	200	39	20	ug/kg	
207-08-9	Benzo(k)fluoranthene	328	200	39	26	ug/kg	
100-51-6	Benzyl Alcohol	39 U	200	39	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	39 U	200	39	20	ug/kg	
85-68-7	Butyl benzyl phthalate	78 U	200	78	39	ug/kg	
86-74-8	Carbazole	180	200	39	27	ug/kg	J
106-47-8	4-Chloroaniline	78 U	200	78	49	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	39 U	200	39	20	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	39 U	200	39	23	ug/kg	

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N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 3

Client Sample ID:	SOIL PILE WC UST		
Lab Sample ID:	FA48580-8	Date Sampled:	10/19/17
Matrix:	SO - Soil	Date Received:	10/20/17
Method:	SW846 8270D SW846 3550C	Percent Solids:	84.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

ABN Full List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	39 U	200	39	25	ug/kg	
91-58-7	2-Chloronaphthalene	39 U	200	39	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	39 U	200	39	20	ug/kg	
218-01-9	Chrysene	509	200	39	20	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	43.4	200	39	25	ug/kg	J
132-64-9	Dibenzofuran	420	200	39	20	ug/kg	
95-50-1	1,2-Dichlorobenzene	78 U	200	78	20	ug/kg	
541-73-1	1,3-Dichlorobenzene	78 U	200	78	21	ug/kg	
106-46-7	1,4-Dichlorobenzene	78 U	200	78	26	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	78 U	200	78	47	ug/kg	
84-66-2	Diethyl Phthalate	140 U	390	140	39	ug/kg	
131-11-3	Dimethyl Phthalate	78 U	200	78	39	ug/kg	
117-84-0	Di-n-octyl Phthalate	78 U	200	78	39	ug/kg	
84-74-2	Di-n-butyl Phthalate	140 U	390	140	78	ug/kg	
121-14-2	2,4-Dinitrotoluene	39 U	200	39	20	ug/kg	
606-20-2	2,6-Dinitrotoluene	39 U	200	39	25	ug/kg	
122-66-7	1,2-Diphenylhydrazine	39 U	200	39	20	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	140 U	390	140	39	ug/kg	
206-44-0	Fluoranthene	1590	200	39	20	ug/kg	
86-73-7	Fluorene	976	200	39	21	ug/kg	
118-74-1	Hexachlorobenzene	39 U	200	39	20	ug/kg	
87-68-3	Hexachlorobutadiene	78 U	200	78	20	ug/kg	
77-47-4	Hexachlorocyclopentadiene	78 U	200	78	39	ug/kg	
67-72-1	Hexachloroethane	78 U	200	78	23	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	261	200	39	24	ug/kg	
78-59-1	Isophorone	39 U	200	39	20	ug/kg	
90-12-0	1-Methylnaphthalene	50.5	200	39	20	ug/kg	J
91-57-6	2-Methylnaphthalene	39 U	200	39	20	ug/kg	
91-20-3	Naphthalene	39 U	200	39	20	ug/kg	
88-74-4	2-Nitroaniline	78 U	200	78	46	ug/kg	
99-09-2	3-Nitroaniline	78 U	200	78	23	ug/kg	
100-01-6	4-Nitroaniline	78 U	200	78	56	ug/kg	
98-95-3	Nitrobenzene	39 U	200	39	20	ug/kg	
62-75-9	N-Nitrosodimethylamine	78 U	200	78	33	ug/kg	
621-64-7	N-Nitrosodi-n-propylamine	39 U	200	39	20	ug/kg	
86-30-6	N-Nitrosodiphenylamine	1060	200	78	21	ug/kg	
85-01-8	Phenanthrene	3770	200	39	20	ug/kg	
129-00-0	Pyrene	1560	200	39	23	ug/kg	
110-86-1	Pyridine	140 U	390	140	78	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	39 U	200	39	23	ug/kg	

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SOIL PILE WC UST			Date Sampled:	10/19/17
Lab Sample ID:	FA48580-8			Date Received:	10/20/17
Matrix:	SO - Soil			Percent Solids:	84.4
Method:	SW846 8270D SW846 3550C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	61%		40-102%
4165-62-2	Phenol-d5	64%		41-100%
118-79-6	2,4,6-Tribromophenol	87%		42-108%
4165-60-0	Nitrobenzene-d5	67%		40-105%
321-60-8	2-Fluorobiphenyl	75%		43-107%
1718-51-0	Terphenyl-d14	83%		45-119%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SOIL PILE WC UST			
Lab Sample ID:	FA48580-8		Date Sampled:	10/19/17
Matrix:	SO - Soil		Date Received:	10/20/17
Method:	SW846 8015C		Percent Solids:	84.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD146755.D	1	10/25/17 13:27	EG	n/a	n/a	GCD6122
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	14.9 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
	TPH-GRO (C6-C10)	4.56	2.9	1.5	1.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		56-149%
98-08-8	aaa-Trifluorotoluene	74%		66-132%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.8
4

Report of Analysis

Client Sample ID:	SOIL PILE WC UST				
Lab Sample ID:	FA48580-8			Date Sampled:	10/19/17
Matrix:	SO - Soil			Date Received:	10/20/17
Method:	SW846 8082A SW846 3546			Percent Solids:	84.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM46060.D	1	10/25/17 11:42	NJ	10/24/17 10:30	OP67334	GMM883
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
12674-11-2	Aroclor 1016	14 U	20	14	7.9	ug/kg	
11104-28-2	Aroclor 1221	14 U	20	14	9.9	ug/kg	
11141-16-5	Aroclor 1232	14 U	20	14	9.9	ug/kg	
53469-21-9	Aroclor 1242	14 U	20	14	7.9	ug/kg	
12672-29-6	Aroclor 1248	14 U	20	14	7.9	ug/kg	
11097-69-1	Aroclor 1254	14 U	20	14	7.9	ug/kg	
11096-82-5	Aroclor 1260	14 U	20	14	7.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	58%		44-126%
2051-24-3	Decachlorobiphenyl	56%		41-145%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SOIL PILE WC UST				
Lab Sample ID:	FA48580-8			Date Sampled:	10/19/17
Matrix:	SO - Soil			Date Received:	10/20/17
Method:	SW846 8015C SW846 3546			Percent Solids:	84.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ017284.D	10	10/25/17 22:44	NJ	10/23/17 13:35	OP67319	GJJ721
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
	TPH (C10-C28)	1180	59	44	30	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	99%		56-122%

U = Not detected

LOQ = Limit of Quantitation

E = Indicates value exceeds calibration range

LOD = Limit of Detection

DL = Detection Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: SOIL PILE WC UST

Lab Sample ID: FA48580-8

Matrix: SO - Soil

Date Sampled: 10/19/17

Date Received: 10/20/17

Percent Solids: 84.4

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	LOQ	LOD	DL	Units	DF	Prep	Analyzed By	Method
Arsenic	0.050 U	D004	5.0	0.10	0.050	0.013	mg/l	1	10/27/17	10/27/17 LM	SW846 6010C ²
Barium	0.57 J	D005	100	2.0	0.050	0.050	mg/l	1	10/27/17	10/27/17 LM	SW846 6010C ²
Cadmium	0.010 U	D006	1.0	0.050	0.010	0.0020	mg/l	1	10/27/17	10/27/17 LM	SW846 6010C ²
Chromium	0.050 U	D007	5.0	0.10	0.050	0.010	mg/l	1	10/27/17	10/27/17 LM	SW846 6010C ²
Lead ^a	0.019 JB	D008	5.0	0.050	0.020	0.011	mg/l	1	10/27/17	10/27/17 LM	SW846 6010C ²
Mercury	0.00052 J	D009	0.20	0.0050	0.0010	0.00050	mg/l	1	10/26/17	10/26/17 DM	SW846 7470A ¹
Selenium	0.050 U	D010	1.0	0.10	0.050	0.029	mg/l	1	10/27/17	10/27/17 LM	SW846 6010C ²
Silver	0.020 U	D011	5.0	0.10	0.020	0.0070	mg/l	1	10/27/17	10/27/17 LM	SW846 6010C ²

(1) Instrument QC Batch: MA14459

(2) Instrument QC Batch: MA14462

(3) Prep QC Batch: MP32910

(4) Prep QC Batch: MP32918

(a) Analyte detected in the associated leachate blank.

LOQ = Limit of Quantitation

DL = Detection Limit

U = Indicates a result < LOD

LOD = Limit of Detection

B = Analyte found in associated blank

J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Client Sample ID:	SOIL PILE WC UST	Date Sampled:	10/19/17
Lab Sample ID:	FA48580-8	Date Received:	10/20/17
Matrix:	SO - Soil	Percent Solids:	84.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By Method
Cyanide Reactivity	0.89 U	1.8	0.89 ^a	0.89	mg/kg	1	10/21/17 13:58	VK SW846 CHAP7
Ignitability (Flashpoint) ^b	> 200				Deg. F	1	10/31/17 17:35	KH SW846 1010
Solids, Percent	84.4				%	1	10/24/17 09:27	VK SM19 2540G
Sulfide Reactivity	50 U	50	50 ^a	50	mg/kg	1	10/23/17 12:59	LJ SW846 CHAP7
pH	7.61				su	1	10/27/17 15:51	JK SW846 9045D

(a) Value reported is laboratory DL (MDL).

(b) Not ignitable.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

4.8
4

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Client / Reporting Information				Project Information				Analytical Information												Matrix Codes									
Company Name: TANTARA Corp				Project Name: USNIKE Buffalo Mkt Miss. b VST				130260 130270 Water class 130260 130270 Water class												DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OI - Oil LIQ - Other Liquid AIR - Air									
Address: 54 MASON Street				Street: 601 Willardshire Rd																									
City: Worcester State: MA Zip: 01610				City: East Rutherford State: NJ																									
Project Contact: Mark Lowrey Email: _____				Project # 16-299																									
Phone #: 508-752-5599				Fax # _____																									
Sampler(s) Name(s) (Printed) Sampler 1: 3FLM Sampler 2: _____				Client Purchase Order # _____																									
SGS Accutest Sample #		Field ID / Point of Collection		DATE		TIME		COLLECTION		CONTAINER INFORMATION												LAB USE ONLY							
								SAMPLED BY:		MATRIX		TOTAL # OF BOTTLES		OTHER	NONE	NO	NO	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO	
1		NIKE SWN Z		10/19		1500		BF		5	4																		
2		NIKE BOT NZ		10/19				BF		5	4																		
3		NIKE SW S Z		10/19				BF		5	4																		
4		NIKE BOT S Z		10/19				BF		5	4																		
5		NIKE PAD BOT W		10/19				BF		5	4																		
6		NIKE APE		10/19				BF		5	4																		
7		NIKE APE DUP		10/19				BF		5	4																		
8		Soil Pile w. S. 15T		10/19				BF		5	6																		
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks																					
10 Day (Business) Approved By: / Date: _____ 7 Day _____ 5 Day _____ 3 Day RUSH _____ 2 Day RUSH _____ 1 Day RUSH _____ Other _____ Rush T/A Data Available VIA Email or Lablink				☐ COMMERCIAL "A" (RESULTS ONLY) ☐ COMMERCIAL "B" (RESULTS PLUS QC) ☐ REDT1 (EPA LEVEL 3) ☐ FULLT1 (EPA LEVEL 4) ☐ EDD'S				Seal numbers 921-922 SGS-ACCUTEST MARLBOR																					
Relinquished by Sampler/Affiliation				Date Time:				Received By/Affiliation				Relinquished By/Affiliation				Date Time:				Received By/Affiliation									
1. BoL Fuby Tantara				10/19 1500				2. FX				3. FX				10/20-17				4. J. Corne 09:00									
Relinquished by/Affiliation				Date Time:				Received By/Affiliation				Relinquished By/Affiliation				Date Time:				Received By/Affiliation									
5								6				7				07:00				8									
Lab Use Only : Cooler Temperature (s) Celsius: 3.8																													

SGS Accutest Sample Receipt Summary

Job Number: FA48580

Client: TANTARA CORP

Project: 16-299

Date / Time Received: 10/20/2017 7:00:00 AM

Delivery Method: FX

Airbill #s: 1002261912860003281100811162167540

Therm ID: IR 1;

Therm CF: -0.2;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.0);

Cooler Temps (Corrected) °C: Cooler 1: (3.8);

Cooler Information

Y or N

1. Custody Seals Present ☒ ☐
2. Custody Seals Intact ☒ ☐
3. Temp criteria achieved ☒ ☐
4. Cooler temp verification IR Gun
5. Cooler media Ice (Bag)

Trip Blank Information

Y or N N/A

1. Trip Blank present / cooler ☐ ☒ ☐
2. Trip Blank listed on COC ☐ ☒ ☐

W or S N/A

3. Type Of TB Received ☐ ☐ ☒

Sample Information

Y or N N/A

1. Sample labels present on bottles ☒ ☐
2. Samples preserved properly ☒ ☐
3. Sufficient volume/containers recvd for analysis: ☒ ☐
4. Condition of sample Intact
5. Sample recvd within HT ☒ ☐
6. Dates/Times/IDs on COC match Sample Label ☒ ☐
7. VOCs have headspace ☐ ☐ ☒
8. Bottles received for unspecified tests ☐ ☒ ☐
9. Compositing instructions clear ☐ ☐ ☒
10. Voa Soil Kits/Jars received past 48hrs? ☐ ☐ ☒
11. % Solids Jar received? ☐ ☐ ☒
12. Residual Chlorine Present? ☐ ☐ ☒

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____

Number of 5035 Field Kits: 8

Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 _____ 230315

pH 10-12 _____ 219813A

Other: (Specify) _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: JORGE C

Date: 10/20/2017 7:00:00 A

Reviewer: BR

Date: 10/20/2017

FA48580: Chain of Custody

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Technical Report for

Tantara Corporation

USACE Buffalo Nike Missile UST; E Aurora, NY

16-299

SGS Accutest Job Number: FA48865

Sampling Date: 10/27/17

Report to:

mlovejoy@tantaracorp.com
andrea.colby@sgs.com

ATTN: Distribution3

Total number of pages in report: **261**



Test results contained within this data package meet the requirements
of the National Environmental Laboratory Accreditation Program
and/or state specific certification programs as applicable.



Caitlin Brice, M.S.
General Manager

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)
DoD ELAP(L-A-B L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),
AK, AR, GA, IA, KY, MA, NV, OK, OR, UT, WA

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Test results relate only to samples analyzed.

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10.1: Percent Solids Raw Data Summary 261



Sample Summary

Tantara Corporation

Job No: FA48865

USACE Buffalo Nike Missile UST; E Aurora, NY
Project No: 16-299

Sample Number	Collected		Matrix Code	Type	Client Sample ID
	Date	Time By			
FA48865-1	10/27/17	00:00 MC	10/28/17	SO Soil	NIKE SIDEWALL NORTH3 EXT
FA48865-2	10/27/17	00:00 MC	10/28/17	SO Soil	NIKE BOT NW1
FA48865-3	10/27/17	00:00 MC	10/28/17	SO Soil	NIKE SW2 WEST SIDEWALL
FA48865-4	10/27/17	00:00 MC	10/28/17	SO Soil	NIKE SIDEWALL NW1

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

2

Client: Tantara Corporation

Job No: FA48865

Site: USACE Buffalo Nike Missile UST; E Aurora, NY

Report Date: 11/10/2017 9:48:23

4 Sample(s) were collected on 10/27/2017 and were received at SGS Accutest Southeast (SASE) on 10/28/2017 properly preserved, at 4.5 Deg. C and intact. These Samples received an SASE job number of FA48865. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260C

Matrix: SO

Batch ID: V2B216

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48865-1MS, FA48865-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Isopropylbenzene, sec-Butylbenzene, tert-Butylbenzene are outside control limits. Probable cause is due to matrix interference.

Sample(s) FA48865-1MS, FA48865-3 have surrogates outside control limits.

FA48865-1: Confirmation run.

FA48865-3 (Run#2): Confirmation run for surrogate recoveries.

FA48865-3 (Run#3): Confirmation run for surrogate recoveries.

Matrix: SO

Batch ID: V2B219

All samples were analyzed within the recommended method holding time.

Sample(s) FA48865-1MS, FA48865-1MSD were used as the QC samples indicated.

Sample(s) FA48865-1 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.

Blank Spike Recovery(s) for 1,2,3-Trichlorobenzene are outside lab control limits. % Recovery was within DOD QSM control limits.

Matrix Spike Recovery(s) for 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethylene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromo-3-chloropropane, 1,3,5-Trimethylbenzene, 2,2-Dichloropropane, Bromobenzene, Carbon Tetrachloride, Chloroethane, Dichlorodifluoromethane, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, m,p-Xylene, Methyl Chloride, n-Butylbenzene, n-Propylbenzene, o-Xylene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Tetrachloroethylene, Trichlorofluoromethane, Vinyl Chloride are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethylene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dichlorobenzene, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2,2-Dichloropropane, Carbon Tetrachloride, Dichlorodifluoromethane, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, m,p-Xylene, n-Butylbenzene, n-Propylbenzene, o-Chlorotoluene, o-Xylene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Tetrachloroethylene, Trichlorofluoromethane, Vinyl Chloride are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 1,2,4-Trichlorobenzene are outside control limits for sample FA48865-1MSD. Probable cause is due to sample non-homogeneity.

V2B219-BS for 1,2,3-Trichlorobenzene: Sporadic marginal failure.

FA48865-1 for 1,2,3-Trichlorobenzene: Associated BS recovery outside control limits.

Matrix: SO

Batch ID: V2B222

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48865-3MS, FA48865-3MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Isopropylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Isopropylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene are outside control limits. Probable cause is due to matrix interference.

FA48865-3: Dilution required due to matrix interference (surrogate standard failure).

MS Semi-volatiles By Method SW846 8270D

Matrix: SO

Batch ID: OP67487

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) JC54036-31MS, JC54036-31MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Benzoic Acid are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol, 3,3'-Dichlorobenzidine, Benzoic Acid, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for 2,4-Dinitrophenol, Benzo(g,h,i)perylene, Benzoic Acid, Hexachlorobutadiene, Indeno(1,2,3-cd)pyrene, Pentachlorophenol are outside control limits for sample OP67487-MSD. Probable cause is due to matrix interference.

FA48865-1 for Benzidine: Associated ICV outside DoD control limits.

FA48865-1 for 3,3'-Dichlorobenzidine: Associated ICV outside DoD control limits.

MS Semi-volatiles By Method SW846 8270D BY SIM

Matrix: SO

Batch ID: OP67433

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48785-1MS, FA48785-1MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for Pyrene are outside lab control limits. % recovery was within DOD QSM control limits.

Matrix Spike Duplicate Recovery(s) for Pyrene are outside control limits. Probable cause is due to matrix interference.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO

Batch ID: OP67457

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48865-1MS, FA48865-1MSD were used as the QC samples indicated.

Metals Analysis By Method SW846 6010C

Matrix: SO

Batch ID: MP32960

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48843-9MS, FA48843-9MSD, FA48843-9PS, FA48843-9SDL, FA48843-9DUP were used as the QC samples for metals.

Matrix Spike Recovery(s) for Arsenic, Barium, Cadmium, Silver are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Arsenic, Cadmium are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Recovery(s) for Chromium, Lead are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Matrix Spike Duplicate Recovery(s) for Lead are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD(s) for Duplicate for Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver are outside control limits for sample MP32960-D1. High RPD due to possible sample non-homogeneity.

RPD(s) for MSD for Silver are outside control limits for sample MP32960-S2. High RPD due to possible sample non-homogeneity.

RPD(s) for Serial Dilution for Silver, Arsenic, Barium, Cadmium, Chromium are outside control limits for sample MP32960-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Sample(s) FA48865-1 for Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver have elevated reporting limit(s) due to matrix interference.

MP32960-D1 for Silver: RPD acceptable due to low duplicate and sample concentrations.

MP32960-D1 for Selenium: RPD acceptable due to low duplicate and sample concentrations.

MP32960-PS1 for Lead: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

Metals Analysis By Method SW846 6010C

Matrix: SO

Batch ID: MP32960

MP32960-SD1 for Barium: Serial dilution indicates possible matrix interference.

MP32960-SD1 for Chromium: Serial dilution indicates possible matrix interference.

MP32960-SD1 for Cadmium: Serial dilution indicates possible matrix interference.

MP32960-SD1 for Arsenic: Serial dilution indicates possible matrix interference.

MP32960-S1 for Silver: Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MP32960-S1 for Cadmium: Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MP32960-S1 for Arsenic: Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MP32960-S1 for Barium: Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

Metals Analysis By Method SW846 7471B

Matrix: SO

Batch ID: MP32970

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48865-1DUP, FA48865-1MS, FA48865-1MSD, FA48865-1SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP32970-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

General Chemistry By Method SM19 2540G

Matrix: SO

Batch ID: GN76792

Sample(s) FA48858-1DUP were used as the QC samples for Solids, Percent.

SGS Accutest (SASE) certifies that this report meets the project requirements for analytical data produced for the samples as received at SASE and as stated on the COC. SASE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SASE Quality Manual except as noted above. This report is to be used in its entirety. SASE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

Lab Sample ID	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method

FA48865-1 NIKE SIDEWALL NORTH3 EXT

Acetone	61.6 B	41	21	ug/kg	SW846 8260C
2-Butanone (MEK)	7.0 J	21	12	ug/kg	SW846 8260C
sec-Butylbenzene	18.3	4.1	1.6	ug/kg	SW846 8260C
tert-Butylbenzene	1.8 J	4.1	1.6	ug/kg	SW846 8260C
Isopropylbenzene	0.85 J	4.1	1.6	ug/kg	SW846 8260C
Naphthalene	12.3	4.1	2.9	ug/kg	SW846 8260C
Acenaphthene	262	210	41	ug/kg	SW846 8270D
Benzo(a)anthracene	24.8 J	210	41	ug/kg	SW846 8270D
Carbazole	46.0 J	210	41	ug/kg	SW846 8270D
Chrysene	22.5 J	210	41	ug/kg	SW846 8270D
Dibenzofuran	200 J	210	41	ug/kg	SW846 8270D
Fluoranthene	80.7 J	210	41	ug/kg	SW846 8270D
Fluorene	448	210	41	ug/kg	SW846 8270D
Phenanthrene	1540	210	41	ug/kg	SW846 8270D
Pyrene	190 J	210	41	ug/kg	SW846 8270D
Arsenic ^a	5.0	2.0	1.0	mg/kg	SW846 6010C
Barium ^a	38.9 J	40	0.40	mg/kg	SW846 6010C
Cadmium ^a	0.15 J	0.80	0.20	mg/kg	SW846 6010C
Chromium ^a	19.8	2.0	0.40	mg/kg	SW846 6010C
Lead ^a	14.7	4.0	0.80	mg/kg	SW846 6010C
Mercury	0.024 J	0.052	0.021	mg/kg	SW846 7471B
Selenium ^a	3.9 J	4.0	1.0	mg/kg	SW846 6010C

FA48865-2 NIKE BOT NW1

No hits reported in this sample.

FA48865-3 NIKE SW2 WEST SIDEWALL

Chrysene	5.6 J	14	7.2	ug/kg	SW846 8270D BY SIM

FA48865-4 NIKE SIDEWALL NW1

tert-Butylbenzene	0.91 J	3.9	1.6	ug/kg	SW846 8260C

(a) Elevated reporting limit(s) due to matrix interference.

Sample Results

Report of Analysis

Report of Analysis

Page 1 of 3

Client Sample ID:	NIKE SIDEWALL NORTH3 EXT			Date Sampled:	10/27/17
Lab Sample ID:	FA48865-1			Date Received:	10/28/17
Matrix:	SO - Soil			Percent Solids:	79.8
Method:	SW846 8260C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5915.D	1	11/02/17 10:53	EP	n/a	n/a	V2B219
Run #2 ^a	2B5889.D	1	10/30/17 16:18	SP	n/a	n/a	V2B216

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	7.64 g	5.0 ml	
Run #2	5.01 g	5.0 ml	100 ul

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	61.6	41	21	8.2	ug/kg	B
71-43-2	Benzene	1.6 U	4.1	1.6	1.0	ug/kg	
108-86-1	Bromobenzene	1.6 U	4.1	1.6	0.82	ug/kg	
74-97-5	Bromochloromethane	1.6 U	4.1	1.6	1.2	ug/kg	
75-27-4	Bromodichloromethane	1.6 U	4.1	1.6	0.82	ug/kg	
75-25-2	Bromoform	1.6 U	4.1	1.6	0.82	ug/kg	
78-93-3	2-Butanone (MEK)	7.0	21	12	6.0	ug/kg	J
104-51-8	n-Butylbenzene	1.6 U	4.1	1.6	0.82	ug/kg	
135-98-8	sec-Butylbenzene	18.3	4.1	1.6	0.82	ug/kg	
98-06-6	tert-Butylbenzene	1.8	4.1	1.6	0.82	ug/kg	J
75-15-0	Carbon Disulfide	1.6 U	4.1	1.6	0.82	ug/kg	
56-23-5	Carbon Tetrachloride	1.6 U	4.1	1.6	0.84	ug/kg	
108-90-7	Chlorobenzene	1.6 U	4.1	1.6	0.82	ug/kg	
75-00-3	Chloroethane	2.9 U	4.1	2.9	1.6	ug/kg	
67-66-3	Chloroform	1.6 U	4.1	1.6	1.1	ug/kg	
95-49-8	o-Chlorotoluene	1.6 U	4.1	1.6	0.82	ug/kg	
106-43-4	p-Chlorotoluene	1.6 U	4.1	1.6	0.82	ug/kg	
124-48-1	Dibromochloromethane	1.6 U	4.1	1.6	0.82	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	2.9 U	4.1	2.9	1.6	ug/kg	
106-93-4	1,2-Dibromoethane	1.6 U	4.1	1.6	0.82	ug/kg	
75-71-8	Dichlorodifluoromethane	2.9 U	4.1	2.9	1.6	ug/kg	
95-50-1	1,2-Dichlorobenzene	1.6 U	4.1	1.6	0.82	ug/kg	
541-73-1	1,3-Dichlorobenzene	1.6 U	4.1	1.6	0.82	ug/kg	
106-46-7	1,4-Dichlorobenzene	1.6 U	4.1	1.6	0.94	ug/kg	
75-34-3	1,1-Dichloroethane	1.6 U	4.1	1.6	1.5	ug/kg	
107-06-2	1,2-Dichloroethane	1.6 U	4.1	1.6	0.82	ug/kg	
75-35-4	1,1-Dichloroethylene	1.6 U	4.1	1.6	0.82	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	1.6 U	4.1	1.6	1.1	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	1.6 U	4.1	1.6	0.82	ug/kg	
78-87-5	1,2-Dichloropropane	1.6 U	4.1	1.6	0.82	ug/kg	
142-28-9	1,3-Dichloropropane	1.6 U	4.1	1.6	0.82	ug/kg	
594-20-7	2,2-Dichloropropane	1.6 U	4.1	1.6	0.82	ug/kg	

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 3

Client Sample ID: NIKE SIDEWALL NORTH3 EXT

Lab Sample ID: FA48865-1

Date Sampled: 10/27/17

Matrix: SO - Soil

Date Received: 10/28/17

Method: SW846 8260C

Percent Solids: 79.8

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	1.6 U	4.1	1.6	0.84	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	1.6 U	4.1	1.6	0.82	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	1.6 U	4.1	1.6	0.82	ug/kg	
100-41-4	Ethylbenzene	1.6 U	4.1	1.6	0.82	ug/kg	
87-68-3	Hexachlorobutadiene	1.6 U	4.1	1.6	1.1	ug/kg	
591-78-6	2-Hexanone	12 U	21	12	6.2	ug/kg	
98-82-8	Isopropylbenzene	0.85	4.1	1.6	0.82	ug/kg	J
99-87-6	p-Isopropyltoluene	1.6 U	4.1	1.6	0.82	ug/kg	
74-83-9	Methyl Bromide	2.9 U	4.1	2.9	1.6	ug/kg	
74-87-3	Methyl Chloride	2.9 U	4.1	2.9	1.6	ug/kg	
74-95-3	Methylene Bromide	1.6 U	4.1	1.6	0.82	ug/kg	
75-09-2	Methylene Chloride	4.1 U	8.2	4.1	3.3	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	12 U	21	12	6.2	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1.6 U	4.1	1.6	0.82	ug/kg	
91-20-3	Naphthalene	12.3	4.1	2.9	1.6	ug/kg	
103-65-1	n-Propylbenzene	1.6 U	4.1	1.6	0.82	ug/kg	
100-42-5	Styrene	1.6 U	4.1	1.6	0.82	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	1.6 U	4.1	1.6	0.84	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	1.6 U	4.1	1.6	0.82	ug/kg	
127-18-4	Tetrachloroethylene	1.6 U	4.1	1.6	1.0	ug/kg	
108-88-3	Toluene	1.6 U	4.1	1.6	0.82	ug/kg	
87-61-6	1,2,3-Trichlorobenzene ^b	2.9 U	4.1	2.9	1.1	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	2.9 U	4.1	2.9	0.82	ug/kg	
71-55-6	1,1,1-Trichloroethane	1.6 U	4.1	1.6	0.82	ug/kg	
79-00-5	1,1,2-Trichloroethane	1.6 U	4.1	1.6	0.82	ug/kg	
79-01-6	Trichloroethylene	1.6 U	4.1	1.6	0.82	ug/kg	
75-69-4	Trichlorofluoromethane	2.9 U	4.1	2.9	1.6	ug/kg	
96-18-4	1,2,3-Trichloropropane	2.9 U	4.1	2.9	1.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.6 U	4.1	1.6	0.82	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.6 U	4.1	1.6	0.82	ug/kg	
108-05-4	Vinyl Acetate	16 U	21	16	13	ug/kg	
75-01-4	Vinyl Chloride	1.6 U	4.1	1.6	0.82	ug/kg	
	m,p-Xylene	3.3 U	8.2	3.3	0.90	ug/kg	
95-47-6	o-Xylene	1.6 U	4.1	1.6	0.82	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	99%	75-124%
17060-07-0	1,2-Dichloroethane-D4	99%	100%	72-135%
2037-26-5	Toluene-D8	107%	104%	75-126%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	NIKE SIDEWALL NORTH3 EXT		
Lab Sample ID:	FA48865-1	Date Sampled:	10/27/17
Matrix:	SO - Soil	Date Received:	10/28/17
Method:	SW846 8260C	Percent Solids:	79.8
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	116%	98%	71-133%

- (a) Confirmation run.
(b) Associated BS recovery outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
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4.1
4

Report of Analysis

Page 1 of 3

Client Sample ID:	NIKE SIDEWALL NORTH3 EXT			Date Sampled:	10/27/17
Lab Sample ID:	FA48865-1			Date Received:	10/28/17
Matrix:	SO - Soil			Percent Solids:	79.8
Method:	SW846 8270D SW846 3510C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057032.D	1	11/08/17 20:08	MV	11/03/17 07:47	OP67487	SX2396
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
65-85-0	Benzoic Acid	410 U	1000	410	210	ug/kg	
59-50-7	4-Chloro-3-methyl Phenol	41 U	210	41	23	ug/kg	
95-57-8	2-Chlorophenol	41 U	210	41	25	ug/kg	
120-83-2	2,4-Dichlorophenol	41 U	210	41	24	ug/kg	
105-67-9	2,4-Dimethylphenol	82 U	210	82	55	ug/kg	
51-28-5	2,4-Dinitrophenol	620 U	1000	620	210	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	160 U	410	160	82	ug/kg	
95-48-7	2-Methylphenol	41 U	210	41	25	ug/kg	
	3&4-Methylphenol	82 U	210	82	34	ug/kg	
88-75-5	2-Nitrophenol	41 U	210	41	22	ug/kg	
100-02-7	4-Nitrophenol	410 U	1000	410	210	ug/kg	
87-86-5	Pentachlorophenol	410 U	1000	410	210	ug/kg	
108-95-2	Phenol	41 U	210	41	21	ug/kg	
95-95-4	2,4,5-Trichlorophenol	41 U	210	41	33	ug/kg	
88-06-2	2,4,6-Trichlorophenol	41 U	210	41	24	ug/kg	
83-32-9	Acenaphthene	262	210	41	22	ug/kg	
208-96-8	Acenaphthylene	41 U	210	41	21	ug/kg	
62-53-3	Aniline	82 U	210	82	44	ug/kg	
120-12-7	Anthracene	41 U	210	41	23	ug/kg	
92-87-5	Benzidine ^a	1000 U	2100	1000	410	ug/kg	
56-55-3	Benzo(a)anthracene	24.8	210	41	21	ug/kg	J
50-32-8	Benzo(a)pyrene	41 U	210	41	24	ug/kg	
205-99-2	Benzo(b)fluoranthene	41 U	210	41	23	ug/kg	
191-24-2	Benzo(g,h,i)perylene	41 U	210	41	21	ug/kg	
207-08-9	Benzo(k)fluoranthene	41 U	210	41	27	ug/kg	
100-51-6	Benzyl Alcohol	41 U	210	41	21	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	41 U	210	41	21	ug/kg	
85-68-7	Butyl benzyl phthalate	82 U	210	82	41	ug/kg	
86-74-8	Carbazole	46.0	210	41	29	ug/kg	J
106-47-8	4-Chloroaniline	82 U	210	82	52	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	41 U	210	41	21	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	41 U	210	41	24	ug/kg	

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Report of Analysis

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Client Sample ID:	NIKE SIDEWALL NORTH3 EXT		
Lab Sample ID:	FA48865-1	Date Sampled:	10/27/17
Matrix:	SO - Soil	Date Received:	10/28/17
Method:	SW846 8270D SW846 3510C	Percent Solids:	79.8
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

ABN Full List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	41 U	210	41	26	ug/kg	
91-58-7	2-Chloronaphthalene	41 U	210	41	21	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	41 U	210	41	21	ug/kg	
218-01-9	Chrysene	22.5	210	41	21	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	41 U	210	41	26	ug/kg	
132-64-9	Dibenzofuran	200	210	41	21	ug/kg	J
95-50-1	1,2-Dichlorobenzene	82 U	210	82	21	ug/kg	
541-73-1	1,3-Dichlorobenzene	82 U	210	82	22	ug/kg	
106-46-7	1,4-Dichlorobenzene	82 U	210	82	27	ug/kg	
91-94-1	3,3'-Dichlorobenzidine ^a	82 U	210	82	49	ug/kg	
84-66-2	Diethyl Phthalate	140 U	410	140	41	ug/kg	
131-11-3	Dimethyl Phthalate	82 U	210	82	41	ug/kg	
117-84-0	Di-n-octyl Phthalate	82 U	210	82	41	ug/kg	
84-74-2	Di-n-butyl Phthalate	140 U	410	140	82	ug/kg	
121-14-2	2,4-Dinitrotoluene	41 U	210	41	21	ug/kg	
606-20-2	2,6-Dinitrotoluene	41 U	210	41	27	ug/kg	
122-66-7	1,2-Diphenylhydrazine	41 U	210	41	21	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	140 U	410	140	41	ug/kg	
206-44-0	Fluoranthene	80.7	210	41	21	ug/kg	J
86-73-7	Fluorene	448	210	41	22	ug/kg	
118-74-1	Hexachlorobenzene	41 U	210	41	21	ug/kg	
87-68-3	Hexachlorobutadiene	82 U	210	82	21	ug/kg	
77-47-4	Hexachlorocyclopentadiene	82 U	210	82	41	ug/kg	
67-72-1	Hexachloroethane	82 U	210	82	24	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	41 U	210	41	25	ug/kg	
78-59-1	Isophorone	41 U	210	41	21	ug/kg	
90-12-0	1-Methylnaphthalene	41 U	210	41	21	ug/kg	
91-57-6	2-Methylnaphthalene	41 U	210	41	21	ug/kg	
91-20-3	Naphthalene	41 U	210	41	21	ug/kg	
88-74-4	2-Nitroaniline	82 U	210	82	48	ug/kg	
99-09-2	3-Nitroaniline	82 U	210	82	24	ug/kg	
100-01-6	4-Nitroaniline	82 U	210	82	59	ug/kg	
98-95-3	Nitrobenzene	41 U	210	41	21	ug/kg	
62-75-9	N-Nitrosodimethylamine	82 U	210	82	34	ug/kg	
621-64-7	N-Nitrosodi-n-propylamine	41 U	210	41	21	ug/kg	
86-30-6	N-Nitrosodiphenylamine	82 U	210	82	22	ug/kg	
85-01-8	Phenanthrene	1540	210	41	21	ug/kg	
129-00-0	Pyrene	190	210	41	24	ug/kg	J
110-86-1	Pyridine	140 U	410	140	82	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	41 U	210	41	24	ug/kg	

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E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	NIKE SIDEWALL NORTH3 EXT		
Lab Sample ID:	FA48865-1	Date Sampled:	10/27/17
Matrix:	SO - Soil	Date Received:	10/28/17
Method:	SW846 8270D SW846 3510C	Percent Solids:	79.8
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	59%		40-102%
4165-62-2	Phenol-d5	64%		41-100%
118-79-6	2,4,6-Tribromophenol	88%		42-108%
4165-60-0	Nitrobenzene-d5	68%		40-105%
321-60-8	2-Fluorobiphenyl	73%		43-107%
1718-51-0	Terphenyl-d14	83%		45-119%

(a) Associated ICV outside DoD control limits.

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 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SIDEWALL NORTH3 EXT			Date Sampled:	10/27/17
Lab Sample ID:	FA48865-1			Date Received:	10/28/17
Matrix:	SO - Soil			Percent Solids:	79.8
Method:	SW846 8082A SW846 3546				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM46602.D	1	11/06/17 19:08	NJ	11/01/17 13:00	OP67457	GMM892
Run #2							

	Initial Weight	Final Volume
Run #1	15.1 g	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
12674-11-2	Aroclor 1016	15 U	21	15	8.3	ug/kg	
11104-28-2	Aroclor 1221	15 U	21	15	10	ug/kg	
11141-16-5	Aroclor 1232	15 U	21	15	10	ug/kg	
53469-21-9	Aroclor 1242	15 U	21	15	8.3	ug/kg	
12672-29-6	Aroclor 1248	15 U	21	15	8.3	ug/kg	
11097-69-1	Aroclor 1254	15 U	21	15	8.3	ug/kg	
11096-82-5	Aroclor 1260	15 U	21	15	8.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	58%		44-126%
2051-24-3	Decachlorobiphenyl	71%		41-145%

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Report of Analysis

Page 1 of 1

Client Sample ID: NIKE SIDEWALL NORTH3 EXT

Lab Sample ID: FA48865-1

Matrix: SO - Soil

Date Sampled: 10/27/17

Date Received: 10/28/17

Percent Solids: 79.8

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic ^a	5.0	2.0	1.0	0.40	mg/kg	5	11/06/17	11/07/17 LM	SW846 6010C ¹	SW846 3050B ³
Barium ^a	38.9 J	40	0.40	0.20	mg/kg	5	11/06/17	11/07/17 LM	SW846 6010C ¹	SW846 3050B ³
Cadmium ^a	0.15 J	0.80	0.20	0.10	mg/kg	5	11/06/17	11/07/17 LM	SW846 6010C ¹	SW846 3050B ³
Chromium ^a	19.8	2.0	0.40	0.20	mg/kg	5	11/06/17	11/07/17 LM	SW846 6010C ¹	SW846 3050B ³
Lead ^a	14.7	4.0	0.80	0.20	mg/kg	5	11/06/17	11/07/17 LM	SW846 6010C ¹	SW846 3050B ³
Mercury	0.024 J	0.052	0.021	0.0052	mg/kg	1	11/08/17	11/08/17 DM	SW846 7471B ²	SW846 7471B ⁴
Selenium ^a	3.9 J	4.0	1.0	0.48	mg/kg	5	11/06/17	11/07/17 LM	SW846 6010C ¹	SW846 3050B ³
Silver ^a	0.40 U	2.0	0.40	0.16	mg/kg	5	11/06/17	11/07/17 LM	SW846 6010C ¹	SW846 3050B ³

(1) Instrument QC Batch: MA14484

(2) Instrument QC Batch: MA14485

(3) Prep QC Batch: MP32960

(4) Prep QC Batch: MP32970

(a) Elevated reporting limit(s) due to matrix interference.

LOQ = Limit of Quantitation

DL = Detection Limit

U = Indicates a result < LOD

LOD = Limit of Detection

B = Analyte found in associated blank

J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE BOT NW1				
Lab Sample ID:	FA48865-2			Date Sampled:	10/27/17
Matrix:	SO - Soil			Date Received:	10/28/17
Method:	SW846 8260C			Percent Solids:	83.2
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5892.D	1	10/30/17 17:31	SP	n/a	n/a	V2B216
Run #2							

	Initial Weight	Final Volume
Run #1	8.26 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.5 U	3.6	1.5	0.89	ug/kg	
104-51-8	n-Butylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
135-98-8	sec-Butylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
98-06-6	tert-Butylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
100-41-4	Ethylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
98-82-8	Isopropylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
99-87-6	p-Isopropyltoluene	1.5 U	3.6	1.5	0.73	ug/kg	
103-65-1	n-Propylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
108-88-3	Toluene	1.5 U	3.6	1.5	0.73	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.5 U	3.6	1.5	0.73	ug/kg	
1330-20-7	Xylene (total)	4.4 U	11	4.4	1.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		75-124%
17060-07-0	1,2-Dichloroethane-D4	104%		72-135%
2037-26-5	Toluene-D8	106%		75-126%
460-00-4	4-Bromofluorobenzene	121%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE BOT NW1			
Lab Sample ID:	FA48865-2		Date Sampled:	10/27/17
Matrix:	SO - Soil		Date Received:	10/28/17
Method:	SW846 8270D BY SIM SW846 3546		Percent Solids:	83.2
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103822.D	1	11/02/17 20:34	NJ	10/31/17 10:29	OP67433	SW4513
Run #2							

	Initial Weight	Final Volume
Run #1	15.3 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	39 U	79	39	31	ug/kg	
208-96-8	Acenaphthylene	39 U	79	39	31	ug/kg	
120-12-7	Anthracene	39 U	79	39	20	ug/kg	
56-55-3	Benzo(a)anthracene	7.9 U	16	7.9	3.9	ug/kg	
50-32-8	Benzo(a)pyrene	7.9 U	16	7.9	3.9	ug/kg	
205-99-2	Benzo(b)fluoranthene	7.9 U	16	7.9	3.9	ug/kg	
191-24-2	Benzo(g,h,i)perylene	7.9 U	16	7.9	3.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.9 U	16	7.9	3.9	ug/kg	
218-01-9	Chrysene	7.9 U	16	7.9	3.9	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	7.9 U	16	7.9	3.9	ug/kg	
206-44-0	Fluoranthene	39 U	79	39	20	ug/kg	
86-73-7	Fluorene	39 U	79	39	31	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	7.9 U	16	7.9	3.9	ug/kg	
91-20-3	Naphthalene	39 U	79	39	31	ug/kg	
85-01-8	Phenanthrene	39 U	79	39	20	ug/kg	
129-00-0	Pyrene	39 U	79	39	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	93%		40-105%
321-60-8	2-Fluorobiphenyl	90%		43-107%
1718-51-0	Terphenyl-d14	99%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SW2 WEST SIDEWALL			Date Sampled:	10/27/17
Lab Sample ID:	FA48865-3			Date Received:	10/28/17
Matrix:	SO - Soil			Percent Solids:	88.6
Method:	SW846 8260C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	2B5993.D	1	11/06/17 12:51	SP	n/a	n/a	V2B222
Run #2 ^b	2B5887.D	1	10/30/17 15:29	SP	n/a	n/a	V2B216
Run #3 ^b	2B5893.D	1	10/30/17 17:55	SP	n/a	n/a	V2B216

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	7.91 g	5.0 ml	100 ul
Run #2	8.28 g	5.0 ml	
Run #3	8.73 g	5.0 ml	

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	84 U	210	84	51	ug/kg	
104-51-8	n-Butylbenzene	84 U	210	84	42	ug/kg	
135-98-8	sec-Butylbenzene	84 U	210	84	42	ug/kg	
98-06-6	tert-Butylbenzene	84 U	210	84	42	ug/kg	
100-41-4	Ethylbenzene	84 U	210	84	42	ug/kg	
98-82-8	Isopropylbenzene	84 U	210	84	42	ug/kg	
99-87-6	p-Isopropyltoluene	84 U	210	84	42	ug/kg	
103-65-1	n-Propylbenzene	84 U	210	84	42	ug/kg	
108-88-3	Toluene	84 U	210	84	42	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	84 U	210	84	42	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	84 U	210	84	42	ug/kg	
1330-20-7	Xylene (total)	250 U	630	250	88	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	96%	104%	104%	75-124%
17060-07-0	1,2-Dichloroethane-D4	100%	108%	105%	72-135%
2037-26-5	Toluene-D8	99%	135% ^c	140% ^c	75-126%
460-00-4	4-Bromofluorobenzene	105%	173% ^c	174% ^c	71-133%

(a) Dilution required due to matrix interference (surrogate standard failure).

(b) Confirmation run for surrogate recoveries.

(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SW2 WEST SIDEWALL			Date Sampled:	10/27/17
Lab Sample ID:	FA48865-3			Date Received:	10/28/17
Matrix:	SO - Soil			Percent Solids:	88.6
Method:	SW846 8270D BY SIM SW846 3546				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103823.D	1	11/02/17 21:00	NJ	10/31/17 10:29	OP67433	SW4513
Run #2							

	Initial Weight	Final Volume
Run #1	15.7 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	36 U	72	36	29	ug/kg	
208-96-8	Acenaphthylene	36 U	72	36	29	ug/kg	
120-12-7	Anthracene	36 U	72	36	18	ug/kg	
56-55-3	Benzo(a)anthracene	7.2 U	14	7.2	3.6	ug/kg	
50-32-8	Benzo(a)pyrene	7.2 U	14	7.2	3.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	7.2 U	14	7.2	3.6	ug/kg	
191-24-2	Benzo(g,h,i)perylene	7.2 U	14	7.2	3.6	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.2 U	14	7.2	3.6	ug/kg	
218-01-9	Chrysene	5.6	14	7.2	3.6	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	7.2 U	14	7.2	3.6	ug/kg	
206-44-0	Fluoranthene	36 U	72	36	18	ug/kg	
86-73-7	Fluorene	36 U	72	36	29	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	7.2 U	14	7.2	3.6	ug/kg	
91-20-3	Naphthalene	36 U	72	36	29	ug/kg	
85-01-8	Phenanthrene	36 U	72	36	18	ug/kg	
129-00-0	Pyrene	36 U	72	36	18	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	93%		40-105%
321-60-8	2-Fluorobiphenyl	93%		43-107%
1718-51-0	Terphenyl-d14	106%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SIDEWALL NW1			
Lab Sample ID:	FA48865-4		Date Sampled:	10/27/17
Matrix:	SO - Soil		Date Received:	10/28/17
Method:	SW846 8260C		Percent Solids:	80.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY			

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5888.D	1	10/30/17 15:54	SP	n/a	n/a	V2B216
Run #2							

	Initial Weight	Final Volume
Run #1	8.05 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.6 U	3.9	1.6	0.95	ug/kg	
104-51-8	n-Butylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
135-98-8	sec-Butylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
98-06-6	tert-Butylbenzene	0.91	3.9	1.6	0.78	ug/kg	J
100-41-4	Ethylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
98-82-8	Isopropylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
99-87-6	p-Isopropyltoluene	1.6 U	3.9	1.6	0.78	ug/kg	
103-65-1	n-Propylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
108-88-3	Toluene	1.6 U	3.9	1.6	0.78	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.6 U	3.9	1.6	0.78	ug/kg	
1330-20-7	Xylene (total)	4.7 U	12	4.7	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		75-124%
17060-07-0	1,2-Dichloroethane-D4	96%		72-135%
2037-26-5	Toluene-D8	106%		75-126%
460-00-4	4-Bromofluorobenzene	121%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SIDEWALL NW1				
Lab Sample ID:	FA48865-4			Date Sampled:	10/27/17
Matrix:	SO - Soil			Date Received:	10/28/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	80.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103824.D	1	11/02/17 21:26	NJ	10/31/17 10:29	OP67433	SW4513
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	41 U	81	41	32	ug/kg	
208-96-8	Acenaphthylene	41 U	81	41	32	ug/kg	
120-12-7	Anthracene	41 U	81	41	20	ug/kg	
56-55-3	Benzo(a)anthracene	8.1 U	16	8.1	4.1	ug/kg	
50-32-8	Benzo(a)pyrene	8.1 U	16	8.1	4.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	8.1 U	16	8.1	4.1	ug/kg	
191-24-2	Benzo(g,h,i)perylene	8.1 U	16	8.1	4.1	ug/kg	
207-08-9	Benzo(k)fluoranthene	8.1 U	16	8.1	4.1	ug/kg	
218-01-9	Chrysene	8.1 U	16	8.1	4.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	8.1 U	16	8.1	4.1	ug/kg	
206-44-0	Fluoranthene	41 U	81	41	20	ug/kg	
86-73-7	Fluorene	41 U	81	41	32	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	8.1 U	16	8.1	4.1	ug/kg	
91-20-3	Naphthalene	41 U	81	41	32	ug/kg	
85-01-8	Phenanthrene	41 U	81	41	20	ug/kg	
129-00-0	Pyrene	41 U	81	41	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	92%		40-105%
321-60-8	2-Fluorobiphenyl	86%		43-107%
1718-51-0	Terphenyl-d14	94%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

SGS

ACCUTEST

SGS Accutest Southeast

Chain of Custody

4405 Vineland Road, Suite C-15, Orlando, FL 32811
TEL: 407-425-6700 FAX: 407-425-0707
www.acctest.com

FA48865

SGS Accutest Job #:

PAGE 1 OF 2

Client / Reporting Information				Project Information				Analytical Information												Matrix Codes
Company Name: TANTARA CORP				Project Name: Buffalo Mike Bank																DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge OI - Oil LIQ - Other Liquid AIR - Air
Address: 54 MASON ST				Street: 602 Willardshire Rd																
City: Worcester State: MA Zip: 01610				City: East Aurora State: NY																
Project Contact: Mark Conroy Email: mark.conroy@tantara.com				Project # 16-299																
Phone #: 508 252-5599				Fax #																
Sampler(s) Name(s) (Printed)				Client Purchase Order #																
Sampler 1:				Sampler 2:																
SGS Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH-Zn	DI WATER	MICH					
1	MIKE Sweeney 10/27/17	10/27		N	S	5														
2	MIKE BOT NW1	10/27		N	S	1														
3	MIKE SW 2nd 10/27	10/27		N	S	4														
4	MIKE Sweeney NW1	10/27		N	S	4														
Turnaround Time (Business days)				Data Deliverable Information				Comments / Remarks												
10 Day (Business) 7 Day 5 Day 3 Day RUSH 2 Day RUSH 1 Day RUSH Other				Approved By: / Date: ☐ COMMERCIAL "A" (RESULTS ONLY) ☐ COMMERCIAL "B" (RESULTS PLUS QC) ☐ REDT1 (EPA LEVEL 3) ☐ FULLT1 (EPA LEVEL 4) ☐ EDD'S																
Rush T/A Data Available VIA Email or Lablink																				
Relinquished by Sampler/Affiliation				Date Time: Received By/Affiliation				Relinquished By/Affiliation				Date Time: Received By/Affiliation								
1 OR 901				10/27/17 Fed Ex				3 Fed Ex				4 10/28/17								
Relinquished by/Affiliation				Date Time: Received By/Affiliation				Relinquished By/Affiliation				Date Time: Received By/Affiliation								
5				6				7				8								
Lab Use Only: Cooler Temperature (s) Celsius: 4.5																				

FA48865: Chain of Custody

Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: FA48865

Client: TANATARA CORP

Project: BUFFALO NIKE STORE

Date / Time Received: 10/28/2017 11:30:00 AM

Delivery Method: FED EX

Airbill #'s: 1002262714060003281100812191628734

Therm ID: IR 1;

Therm CF: 0.4;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.1);

Cooler Temps (Corrected) °C: Cooler 1: (4.5);

Cooler Information

Y or N

1. Custody Seals Present ☒ ☐
2. Custody Seals Intact ☒ ☐
3. Temp criteria achieved ☒ ☐
4. Cooler temp verification IR Gun
5. Cooler media Ice (Bag)

Trip Blank Information

Y or N N/A

1. Trip Blank present / cooler ☐ ☒ ☐
2. Trip Blank listed on COC ☐ ☒ ☐

W or S N/A

3. Type Of TB Received ☐ ☐ ☒

Sample Information

Y or N N/A

1. Sample labels present on bottles ☒ ☐
2. Samples preserved properly ☒ ☐
3. Sufficient volume/containers recvd for analysis: ☒ ☐
4. Condition of sample Intact
5. Sample recvd within HT ☒ ☐
6. Dates/Times/IDs on COC match Sample Label ☒ ☐
7. VOCs have headspace ☐ ☐ ☒
8. Bottles received for unspecified tests ☐ ☒ ☐
9. Compositing instructions clear ☐ ☐ ☒
10. Voa Soil Kits/Jars received past 48hrs? ☐ ☐ ☒
11. % Solids Jar received? ☒ ☐ ☐
12. Residual Chlorine Present? ☐ ☐ ☒

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____

Test Strip Lot #s: pH 0-3 _____ 230315 _____

Residual Chlorine Test Strip Lot #: _____

Number of 5035 Field Kits: 4

pH 10-12 219813A

Number of Lab Filtered Metals: _____

Other: (Specify) _____

Comments

SM001
Rev. Date 05/24/17

Technician: SHAYLAP

Date: 10/28/2017 11:30:00

Reviewer: P.H

Date: 10/28/2017

FA48865: Chain of Custody

Page 2 of 2

QC Evaluation: DOD QSM5 Limits

Page 1 of 20

Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V2B216	SW846 8260C						
V2B216-BS	71-43-2	Benzene	BSP	REC	104	%	77-121
V2B216-BS	104-51-8	n-Butylbenzene	BSP	REC	111	%	70-128
V2B216-BS	135-98-8	sec-Butylbenzene	BSP	REC	103	%	73-126
V2B216-BS	98-06-6	tert-Butylbenzene	BSP	REC	101	%	73-125
V2B216-BS	100-41-4	Ethylbenzene	BSP	REC	106	%	76-122
V2B216-BS	98-82-8	Isopropylbenzene	BSP	REC	98	%	68-134
V2B216-BS	99-87-6	p-Isopropyltoluene	BSP	REC	113	%	73-127
V2B216-BS	103-65-1	n-Propylbenzene	BSP	REC	104	%	73-125
V2B216-BS	108-88-3	Toluene	BSP	REC	107	%	77-121
V2B216-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	111	%	75-123
V2B216-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	110	%	73-124
V2B216-BS	1330-20-7	Xylene (total)	BSP	REC	101	%	78-124
V2B216-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	96	%	78-119
V2B216-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	96	%	71-136
V2B216-BS	2037-26-5	Toluene-D8	BSP	SURR	101	%	85-116
V2B216-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	103	%	79-119
FA48865-1MS	71-43-2	Benzene	MS	REC	85	%	77-121
FA48865-1MS	104-51-8	n-Butylbenzene	MS	REC	91	%	70-128
FA48865-1MS	135-98-8	sec-Butylbenzene	MS	REC	78	%	73-126
FA48865-1MS	98-06-6	tert-Butylbenzene	MS	REC	76	%	73-125
FA48865-1MS	100-41-4	Ethylbenzene	MS	REC	85	%	76-122
FA48865-1MS	98-82-8	Isopropylbenzene	MS	REC	79	%	68-134
FA48865-1MS	99-87-6	p-Isopropyltoluene	MS	REC	90	%	73-127
FA48865-1MS	103-65-1	n-Propylbenzene	MS	REC	82	%	73-125
FA48865-1MS	108-88-3	Toluene	MS	REC	85	%	77-121
FA48865-1MS	95-63-6	1,2,4-Trimethylbenzene	MS	REC	90	%	75-123
FA48865-1MS	108-67-8	1,3,5-Trimethylbenzene	MS	REC	87	%	73-124
FA48865-1MS	1330-20-7	Xylene (total)	MS	REC	84	%	78-124
FA48865-1MS	1868-53-7	Dibromofluoromethane	MS	SURR	98	%	78-119
FA48865-1MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	94	%	71-136
FA48865-1MS	2037-26-5	Toluene-D8	MS	SURR	97	%	85-116
FA48865-1MS	460-00-4	4-Bromofluorobenzene	MS	SURR	102	%	79-119
FA48865-1MSD	71-43-2	Benzene	MSD	REC	98	%	77-121
FA48865-1MSD	71-43-2	Benzene	MSD	RPD	14	%	20
FA48865-1MSD	104-51-8	n-Butylbenzene	MSD	REC	104	%	70-128
FA48865-1MSD	104-51-8	n-Butylbenzene	MSD	RPD	13	%	20
FA48865-1MSD	135-98-8	sec-Butylbenzene	MSD	REC	91	%	73-126
FA48865-1MSD	135-98-8	sec-Butylbenzene	MSD	RPD	15	%	20
FA48865-1MSD	98-06-6	tert-Butylbenzene	MSD	REC	90	%	73-125
FA48865-1MSD	98-06-6	tert-Butylbenzene	MSD	RPD	17	%	20
FA48865-1MSD	100-41-4	Ethylbenzene	MSD	REC	99	%	76-122
FA48865-1MSD	100-41-4	Ethylbenzene	MSD	RPD	15	%	20

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MSD	98-82-8	Isopropylbenzene	MSD	REC	93	%	68-134
FA48865-1MSD	98-82-8	Isopropylbenzene	MSD	RPD	15	%	20
FA48865-1MSD	99-87-6	p-Isopropyltoluene	MSD	REC	103	%	73-127
FA48865-1MSD	99-87-6	p-Isopropyltoluene	MSD	RPD	14	%	20
FA48865-1MSD	103-65-1	n-Propylbenzene	MSD	REC	95	%	73-125
FA48865-1MSD	103-65-1	n-Propylbenzene	MSD	RPD	15	%	20
FA48865-1MSD	108-88-3	Toluene	MSD	REC	100	%	77-121
FA48865-1MSD	108-88-3	Toluene	MSD	RPD	16	%	20
FA48865-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	105	%	75-123
FA48865-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	15	%	20
FA48865-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	102	%	73-124
FA48865-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	16	%	20
FA48865-1MSD	1330-20-7	Xylene (total)	MSD	REC	98	%	78-124
FA48865-1MSD	1330-20-7	Xylene (total)	MSD	RPD	15	%	20
FA48865-1MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	96	%	78-119
FA48865-1MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	94	%	71-136
FA48865-1MSD	2037-26-5	Toluene-D8	MSD	SURR	99	%	85-116
FA48865-1MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	102	%	79-119
V2B216-MB	1868-53-7	Dibromofluoromethane	MB	SURR	96	%	78-119
V2B216-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	103	%	71-136
V2B216-MB	2037-26-5	Toluene-D8	MB	SURR	101	%	85-116
V2B216-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	105	%	79-119
FA48865-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	99	%	78-119
FA48865-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	100	%	71-136
FA48865-1	2037-26-5	Toluene-D8	SAMP	SURR	104	%	85-116
FA48865-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	98	%	79-119
FA48865-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	96	%	78-119
FA48865-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	104	%	71-136
FA48865-2	2037-26-5	Toluene-D8	SAMP	SURR	106	%	85-116
FA48865-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	121	%	79-119
FA48865-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	78-119
FA48865-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	104	%	78-119
FA48865-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	108	%	71-136
FA48865-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	105	%	71-136
FA48865-3	2037-26-5	Toluene-D8	SAMP	SURR	140 ^a	%	85-116
FA48865-3	2037-26-5	Toluene-D8	SAMP	SURR	135 ^a	%	85-116
FA48865-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	174 ^a	%	79-119
FA48865-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	173 ^a	%	79-119
FA48865-4	1868-53-7	Dibromofluoromethane	SAMP	SURR	91	%	78-119
FA48865-4	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	96	%	71-136
FA48865-4	2037-26-5	Toluene-D8	SAMP	SURR	106	%	85-116
FA48865-4	460-00-4	4-Bromofluorobenzene	SAMP	SURR	121	%	79-119
V2B219	SW846 8260C						

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V2B219-BS	67-64-1	Acetone	BSP	REC	106	%	36-164
V2B219-BS	71-43-2	Benzene	BSP	REC	101	%	77-121
V2B219-BS	108-86-1	Bromobenzene	BSP	REC	102	%	78-121
V2B219-BS	74-97-5	Bromochloromethane	BSP	REC	89	%	78-125
V2B219-BS	75-27-4	Bromodichloromethane	BSP	REC	95	%	75-127
V2B219-BS	75-25-2	Bromoform	BSP	REC	96	%	67-132
V2B219-BS	78-93-3	2-Butanone (MEK)	BSP	REC	101	%	51-148
V2B219-BS	104-51-8	n-Butylbenzene	BSP	REC	91	%	70-128
V2B219-BS	135-98-8	sec-Butylbenzene	BSP	REC	88	%	73-126
V2B219-BS	98-06-6	tert-Butylbenzene	BSP	REC	88	%	73-125
V2B219-BS	75-15-0	Carbon Disulfide	BSP	REC	84	%	63-132
V2B219-BS	56-23-5	Carbon Tetrachloride	BSP	REC	86	%	70-135
V2B219-BS	108-90-7	Chlorobenzene	BSP	REC	92	%	79-120
V2B219-BS	75-00-3	Chloroethane	BSP	REC	100	%	59-139
V2B219-BS	67-66-3	Chloroform	BSP	REC	90	%	78-123
V2B219-BS	95-49-8	o-Chlorotoluene	BSP	REC	90	%	75-122
V2B219-BS	106-43-4	p-Chlorotoluene	BSP	REC	89	%	72-124
V2B219-BS	124-48-1	Dibromochloromethane	BSP	REC	96	%	74-126
V2B219-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	85	%	61-132
V2B219-BS	106-93-4	1,2-Dibromoethane	BSP	REC	96	%	78-122
V2B219-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	84	%	29-149
V2B219-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	88	%	78-121
V2B219-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	90	%	77-121
V2B219-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	88	%	75-120
V2B219-BS	75-34-3	1,1-Dichloroethane	BSP	REC	94	%	76-125
V2B219-BS	107-06-2	1,2-Dichloroethane	BSP	REC	92	%	73-128
V2B219-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	86	%	70-131
V2B219-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	92	%	77-123
V2B219-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	90	%	74-125
V2B219-BS	78-87-5	1,2-Dichloropropane	BSP	REC	94	%	76-123
V2B219-BS	142-28-9	1,3-Dichloropropane	BSP	REC	91	%	77-121
V2B219-BS	594-20-7	2,2-Dichloropropane	BSP	REC	89	%	67-133
V2B219-BS	563-58-6	1,1-Dichloropropene	BSP	REC	87	%	76-125
V2B219-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	97	%	74-126
V2B219-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	102	%	71-130
V2B219-BS	100-41-4	Ethylbenzene	BSP	REC	97	%	76-122
V2B219-BS	87-68-3	Hexachlorobutadiene	BSP	REC	78	%	61-135
V2B219-BS	591-78-6	2-Hexanone	BSP	REC	100	%	53-145
V2B219-BS	98-82-8	Isopropylbenzene	BSP	REC	89	%	68-134
V2B219-BS	99-87-6	p-Isopropyltoluene	BSP	REC	96	%	73-127
V2B219-BS	74-83-9	Methyl Bromide	BSP	REC	92	%	53-143
V2B219-BS	74-87-3	Methyl Chloride	BSP	REC	86	%	50-136
V2B219-BS	74-95-3	Methylene Bromide	BSP	REC	95	%	78-125
V2B219-BS	75-09-2	Methylene Chloride	BSP	REC	90	%	70-128
V2B219-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	96	%	65-135

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V2B219-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	89	%	73-125
V2B219-BS	91-20-3	Naphthalene	BSP	REC	83	%	62-129
V2B219-BS	103-65-1	n-Propylbenzene	BSP	REC	90	%	73-125
V2B219-BS	100-42-5	Styrene	BSP	REC	96	%	76-124
V2B219-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	94	%	78-125
V2B219-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	94	%	70-124
V2B219-BS	127-18-4	Tetrachloroethylene	BSP	REC	89	%	73-128
V2B219-BS	108-88-3	Toluene	BSP	REC	98	%	77-121
V2B219-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	76 ^b	%	66-130
V2B219-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	83	%	67-129
V2B219-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	88	%	73-130
V2B219-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	95	%	78-121
V2B219-BS	79-01-6	Trichloroethylene	BSP	REC	93	%	77-123
V2B219-BS	75-69-4	Trichlorofluoromethane	BSP	REC	90	%	62-140
V2B219-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	95	%	73-125
V2B219-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	97	%	75-123
V2B219-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	95	%	73-124
V2B219-BS	108-05-4	Vinyl Acetate	BSP	REC	90	%	50-151
V2B219-BS	75-01-4	Vinyl Chloride	BSP	REC	87	%	56-135
V2B219-BS		m,p-Xylene	BSP	REC	94	%	77-124
V2B219-BS	95-47-6	o-Xylene	BSP	REC	88	%	77-123
V2B219-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	99	%	78-119
V2B219-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	96	%	71-136
V2B219-BS	2037-26-5	Toluene-D8	BSP	SURR	98	%	85-116
V2B219-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	103	%	79-119
FA48865-1MS	67-64-1	Acetone	MS	REC	76	%	36-164
FA48865-1MS	71-43-2	Benzene	MS	REC	88	%	77-121
FA48865-1MS	108-86-1	Bromobenzene	MS	REC	128	%	78-121
FA48865-1MS	74-97-5	Bromochloromethane	MS	REC	84	%	78-125
FA48865-1MS	75-27-4	Bromodichloromethane	MS	REC	87	%	75-127
FA48865-1MS	75-25-2	Bromoform	MS	REC	90	%	67-132
FA48865-1MS	78-93-3	2-Butanone (MEK)	MS	REC	89	%	51-148
FA48865-1MS	104-51-8	n-Butylbenzene	MS	REC	40	%	70-128
FA48865-1MS	135-98-8	sec-Butylbenzene	MS	REC	207	%	73-126
FA48865-1MS	98-06-6	tert-Butylbenzene	MS	REC	61	%	73-125
FA48865-1MS	75-15-0	Carbon Disulfide	MS	REC	75	%	63-132
FA48865-1MS	56-23-5	Carbon Tetrachloride	MS	REC	71	%	70-135
FA48865-1MS	108-90-7	Chlorobenzene	MS	REC	90	%	79-120
FA48865-1MS	75-00-3	Chloroethane	MS	REC	61	%	59-139
FA48865-1MS	67-66-3	Chloroform	MS	REC	82	%	78-123
FA48865-1MS	95-49-8	o-Chlorotoluene	MS	REC	85	%	75-122
FA48865-1MS	106-43-4	p-Chlorotoluene	MS	REC	106	%	72-124
FA48865-1MS	124-48-1	Dibromochloromethane	MS	REC	97	%	74-126
FA48865-1MS	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	164	%	61-132
FA48865-1MS	106-93-4	1,2-Dibromoethane	MS	REC	96	%	78-122

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MS	75-71-8	Dichlorodifluoromethane	MS	REC	63	%	29-149
FA48865-1MS	95-50-1	1,2-Dichlorobenzene	MS	REC	83	%	78-121
FA48865-1MS	541-73-1	1,3-Dichlorobenzene	MS	REC	81	%	77-121
FA48865-1MS	106-46-7	1,4-Dichlorobenzene	MS	REC	80	%	75-120
FA48865-1MS	75-34-3	1,1-Dichloroethane	MS	REC	82	%	76-125
FA48865-1MS	107-06-2	1,2-Dichloroethane	MS	REC	85	%	73-128
FA48865-1MS	75-35-4	1,1-Dichloroethylene	MS	REC	75	%	70-131
FA48865-1MS	156-59-2	cis-1,2-Dichloroethylene	MS	REC	85	%	77-123
FA48865-1MS	156-60-5	trans-1,2-Dichloroethylene	MS	REC	80	%	74-125
FA48865-1MS	78-87-5	1,2-Dichloropropane	MS	REC	88	%	76-123
FA48865-1MS	142-28-9	1,3-Dichloropropane	MS	REC	96	%	77-121
FA48865-1MS	594-20-7	2,2-Dichloropropane	MS	REC	71	%	67-133
FA48865-1MS	563-58-6	1,1-Dichloropropene	MS	REC	77	%	76-125
FA48865-1MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	90	%	74-126
FA48865-1MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	102	%	71-130
FA48865-1MS	100-41-4	Ethylbenzene	MS	REC	76	%	76-122
FA48865-1MS	87-68-3	Hexachlorobutadiene	MS	REC	9	%	61-135
FA48865-1MS	591-78-6	2-Hexanone	MS	REC	109	%	53-145
FA48865-1MS	98-82-8	Isopropylbenzene	MS	REC	59	%	68-134
FA48865-1MS	99-87-6	p-Isopropyltoluene	MS	REC	41	%	73-127
FA48865-1MS	74-83-9	Methyl Bromide	MS	REC	76	%	53-143
FA48865-1MS	74-87-3	Methyl Chloride	MS	REC	68	%	50-136
FA48865-1MS	74-95-3	Methylene Bromide	MS	REC	89	%	78-125
FA48865-1MS	75-09-2	Methylene Chloride	MS	REC	81	%	70-128
FA48865-1MS	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	117	%	65-135
FA48865-1MS	1634-04-4	Methyl Tert Butyl Ether	MS	REC	84	%	73-125
FA48865-1MS	91-20-3	Naphthalene	MS	REC	104	%	62-129
FA48865-1MS	103-65-1	n-Propylbenzene	MS	REC	74	%	73-125
FA48865-1MS	100-42-5	Styrene	MS	REC	84	%	76-124
FA48865-1MS	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	86	%	78-125
FA48865-1MS	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	831	%	70-124
FA48865-1MS	127-18-4	Tetrachloroethylene	MS	REC	72	%	73-128
FA48865-1MS	108-88-3	Toluene	MS	REC	98	%	77-121
FA48865-1MS	87-61-6	1,2,3-Trichlorobenzene	MS	REC	50	%	66-130
FA48865-1MS	120-82-1	1,2,4-Trichlorobenzene	MS	REC	50	%	67-129
FA48865-1MS	71-55-6	1,1,1-Trichloroethane	MS	REC	76	%	73-130
FA48865-1MS	79-00-5	1,1,2-Trichloroethane	MS	REC	250	%	78-121
FA48865-1MS	79-01-6	Trichloroethylene	MS	REC	85	%	77-123
FA48865-1MS	75-69-4	Trichlorofluoromethane	MS	REC	70	%	62-140
FA48865-1MS	96-18-4	1,2,3-Trichloropropane	MS	REC	326	%	73-125
FA48865-1MS	95-63-6	1,2,4-Trimethylbenzene	MS	REC	72	%	75-123
FA48865-1MS	108-67-8	1,3,5-Trimethylbenzene	MS	REC	65	%	73-124
FA48865-1MS	108-05-4	Vinyl Acetate	MS	REC	79	%	50-151
FA48865-1MS	75-01-4	Vinyl Chloride	MS	REC	69	%	56-135
FA48865-1MS		m,p-Xylene	MS	REC	76	%	77-124

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MS	95-47-6	o-Xylene	MS	REC	79	%	77-123
FA48865-1MS	1868-53-7	Dibromofluoromethane	MS	SURR	99	%	78-119
FA48865-1MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	96	%	71-136
FA48865-1MS	2037-26-5	Toluene-D8	MS	SURR	112	%	85-116
FA48865-1MS	460-00-4	4-Bromofluorobenzene	MS	SURR	134	%	79-119
FA48865-1MSD	67-64-1	Acetone	MSD	REC	81	%	36-164
FA48865-1MSD	67-64-1	Acetone	MSD	RPD	3	%	20
FA48865-1MSD	71-43-2	Benzene	MSD	REC	87	%	77-121
FA48865-1MSD	71-43-2	Benzene	MSD	RPD	4	%	20
FA48865-1MSD	108-86-1	Bromobenzene	MSD	REC	111	%	78-121
FA48865-1MSD	108-86-1	Bromobenzene	MSD	RPD	17	%	20
FA48865-1MSD	74-97-5	Bromochloromethane	MSD	REC	84	%	78-125
FA48865-1MSD	74-97-5	Bromochloromethane	MSD	RPD	3	%	20
FA48865-1MSD	75-27-4	Bromodichloromethane	MSD	REC	87	%	75-127
FA48865-1MSD	75-27-4	Bromodichloromethane	MSD	RPD	3	%	20
FA48865-1MSD	75-25-2	Bromoform	MSD	REC	93	%	67-132
FA48865-1MSD	75-25-2	Bromoform	MSD	RPD	0	%	20
FA48865-1MSD	78-93-3	2-Butanone (MEK)	MSD	REC	94	%	51-148
FA48865-1MSD	78-93-3	2-Butanone (MEK)	MSD	RPD	2	%	20
FA48865-1MSD	104-51-8	n-Butylbenzene	MSD	REC	33	%	70-128
FA48865-1MSD	104-51-8	n-Butylbenzene	MSD	RPD	23	%	20
FA48865-1MSD	135-98-8	sec-Butylbenzene	MSD	REC	187	%	73-126
FA48865-1MSD	135-98-8	sec-Butylbenzene	MSD	RPD	12	%	20
FA48865-1MSD	98-06-6	tert-Butylbenzene	MSD	REC	53	%	73-125
FA48865-1MSD	98-06-6	tert-Butylbenzene	MSD	RPD	17	%	20
FA48865-1MSD	75-15-0	Carbon Disulfide	MSD	REC	74	%	63-132
FA48865-1MSD	75-15-0	Carbon Disulfide	MSD	RPD	4	%	20
FA48865-1MSD	56-23-5	Carbon Tetrachloride	MSD	REC	70	%	70-135
FA48865-1MSD	56-23-5	Carbon Tetrachloride	MSD	RPD	5	%	20
FA48865-1MSD	108-90-7	Chlorobenzene	MSD	REC	89	%	79-120
FA48865-1MSD	108-90-7	Chlorobenzene	MSD	RPD	4	%	20
FA48865-1MSD	75-00-3	Chloroethane	MSD	REC	78	%	59-139
FA48865-1MSD	75-00-3	Chloroethane	MSD	RPD	22	%	20
FA48865-1MSD	67-66-3	Chloroform	MSD	REC	81	%	78-123
FA48865-1MSD	67-66-3	Chloroform	MSD	RPD	4	%	20
FA48865-1MSD	95-49-8	o-Chlorotoluene	MSD	REC	71	%	75-122
FA48865-1MSD	95-49-8	o-Chlorotoluene	MSD	RPD	21	%	20
FA48865-1MSD	106-43-4	p-Chlorotoluene	MSD	REC	88	%	72-124
FA48865-1MSD	106-43-4	p-Chlorotoluene	MSD	RPD	21	%	20
FA48865-1MSD	124-48-1	Dibromochloromethane	MSD	REC	96	%	74-126
FA48865-1MSD	124-48-1	Dibromochloromethane	MSD	RPD	4	%	20
FA48865-1MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	144	%	61-132
FA48865-1MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	16	%	20
FA48865-1MSD	106-93-4	1,2-Dibromoethane	MSD	REC	98	%	78-122
FA48865-1MSD	106-93-4	1,2-Dibromoethane	MSD	RPD	2	%	20

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MSD	75-71-8	Dichlorodifluoromethane	MSD	REC	64	%	29-149
FA48865-1MSD	75-71-8	Dichlorodifluoromethane	MSD	RPD	1	%	20
FA48865-1MSD	95-50-1	1,2-Dichlorobenzene	MSD	REC	69	%	78-121
FA48865-1MSD	95-50-1	1,2-Dichlorobenzene	MSD	RPD	20	%	20
FA48865-1MSD	541-73-1	1,3-Dichlorobenzene	MSD	REC	68	%	77-121
FA48865-1MSD	541-73-1	1,3-Dichlorobenzene	MSD	RPD	21	%	20
FA48865-1MSD	106-46-7	1,4-Dichlorobenzene	MSD	REC	67	%	75-120
FA48865-1MSD	106-46-7	1,4-Dichlorobenzene	MSD	RPD	21	%	20
FA48865-1MSD	75-34-3	1,1-Dichloroethane	MSD	REC	81	%	76-125
FA48865-1MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	4	%	20
FA48865-1MSD	107-06-2	1,2-Dichloroethane	MSD	REC	86	%	73-128
FA48865-1MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	3	%	20
FA48865-1MSD	75-35-4	1,1-Dichloroethylene	MSD	REC	73	%	70-131
FA48865-1MSD	75-35-4	1,1-Dichloroethylene	MSD	RPD	5	%	20
FA48865-1MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	84	%	77-123
FA48865-1MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	3	%	20
FA48865-1MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	80	%	74-125
FA48865-1MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA48865-1MSD	78-87-5	1,2-Dichloropropane	MSD	REC	88	%	76-123
FA48865-1MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	3	%	20
FA48865-1MSD	142-28-9	1,3-Dichloropropane	MSD	REC	96	%	77-121
FA48865-1MSD	142-28-9	1,3-Dichloropropane	MSD	RPD	3	%	20
FA48865-1MSD	594-20-7	2,2-Dichloropropane	MSD	REC	73	%	67-133
FA48865-1MSD	594-20-7	2,2-Dichloropropane	MSD	RPD	0	%	20
FA48865-1MSD	563-58-6	1,1-Dichloropropene	MSD	REC	75	%	76-125
FA48865-1MSD	563-58-6	1,1-Dichloropropene	MSD	RPD	6	%	20
FA48865-1MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	90	%	74-126
FA48865-1MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	4	%	20
FA48865-1MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	100	%	71-130
FA48865-1MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	5	%	20
FA48865-1MSD	100-41-4	Ethylbenzene	MSD	REC	74	%	76-122
FA48865-1MSD	100-41-4	Ethylbenzene	MSD	RPD	6	%	20
FA48865-1MSD	87-68-3	Hexachlorobutadiene	MSD	REC	8	%	61-135
FA48865-1MSD	87-68-3	Hexachlorobutadiene	MSD	RPD	15	%	20
FA48865-1MSD	591-78-6	2-Hexanone	MSD	REC	115	%	53-145
FA48865-1MSD	591-78-6	2-Hexanone	MSD	RPD	2	%	20
FA48865-1MSD	98-82-8	Isopropylbenzene	MSD	REC	56	%	68-134
FA48865-1MSD	98-82-8	Isopropylbenzene	MSD	RPD	8	%	20
FA48865-1MSD	99-87-6	p-Isopropyltoluene	MSD	REC	34	%	73-127
FA48865-1MSD	99-87-6	p-Isopropyltoluene	MSD	RPD	21	%	20
FA48865-1MSD	74-83-9	Methyl Bromide	MSD	REC	78	%	53-143
FA48865-1MSD	74-83-9	Methyl Bromide	MSD	RPD	1	%	20
FA48865-1MSD	74-87-3	Methyl Chloride	MSD	REC	71	%	50-136
FA48865-1MSD	74-87-3	Methyl Chloride	MSD	RPD	1	%	20
FA48865-1MSD	74-95-3	Methylene Bromide	MSD	REC	89	%	78-125

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MSD	74-95-3	Methylene Bromide	MSD	RPD	3	%	20
FA48865-1MSD	75-09-2	Methylene Chloride	MSD	REC	79	%	70-128
FA48865-1MSD	75-09-2	Methylene Chloride	MSD	RPD	5	%	20
FA48865-1MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	126	%	65-135
FA48865-1MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	4	%	20
FA48865-1MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	87	%	73-125
FA48865-1MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	0	%	20
FA48865-1MSD	91-20-3	Naphthalene	MSD	REC	88	%	62-129
FA48865-1MSD	91-20-3	Naphthalene	MSD	RPD	16	%	20
FA48865-1MSD	103-65-1	n-Propylbenzene	MSD	REC	62	%	73-125
FA48865-1MSD	103-65-1	n-Propylbenzene	MSD	RPD	21	%	20
FA48865-1MSD	100-42-5	Styrene	MSD	REC	84	%	76-124
FA48865-1MSD	100-42-5	Styrene	MSD	RPD	4	%	20
FA48865-1MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	85	%	78-125
FA48865-1MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	4	%	20
FA48865-1MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	760	%	70-124
FA48865-1MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	12	%	20
FA48865-1MSD	127-18-4	Tetrachloroethylene	MSD	REC	69	%	73-128
FA48865-1MSD	127-18-4	Tetrachloroethylene	MSD	RPD	7	%	20
FA48865-1MSD	108-88-3	Toluene	MSD	REC	95	%	77-121
FA48865-1MSD	108-88-3	Toluene	MSD	RPD	6	%	20
FA48865-1MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	45	%	66-130
FA48865-1MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	15	%	20
FA48865-1MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	24	%	67-129
FA48865-1MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	72	%	20
FA48865-1MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	76	%	73-130
FA48865-1MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	3	%	20
FA48865-1MSD	79-00-5	1,1,2-Trichloroethane	MSD	REC	245	%	78-121
FA48865-1MSD	79-00-5	1,1,2-Trichloroethane	MSD	RPD	5	%	20
FA48865-1MSD	79-01-6	Trichloroethylene	MSD	REC	82	%	77-123
FA48865-1MSD	79-01-6	Trichloroethylene	MSD	RPD	6	%	20
FA48865-1MSD	75-69-4	Trichlorofluoromethane	MSD	REC	71	%	62-140
FA48865-1MSD	75-69-4	Trichlorofluoromethane	MSD	RPD	2	%	20
FA48865-1MSD	96-18-4	1,2,3-Trichloropropane	MSD	REC	297	%	73-125
FA48865-1MSD	96-18-4	1,2,3-Trichloropropane	MSD	RPD	12	%	20
FA48865-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	59	%	75-123
FA48865-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	23	%	20
FA48865-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	53	%	73-124
FA48865-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	23	%	20
FA48865-1MSD	108-05-4	Vinyl Acetate	MSD	REC	79	%	50-151
FA48865-1MSD	108-05-4	Vinyl Acetate	MSD	RPD	4	%	20
FA48865-1MSD	75-01-4	Vinyl Chloride	MSD	REC	71	%	56-135
FA48865-1MSD	75-01-4	Vinyl Chloride	MSD	RPD	1	%	20
FA48865-1MSD		m,p-Xylene	MSD	REC	72	%	77-124
FA48865-1MSD		m,p-Xylene	MSD	RPD	8	%	20

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MSD	95-47-6	o-Xylene	MSD	REC	77	%	77-123
FA48865-1MSD	95-47-6	o-Xylene	MSD	RPD	6	%	20
FA48865-1MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	99	%	78-119
FA48865-1MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	97	%	71-136
FA48865-1MSD	2037-26-5	Toluene-D8	MSD	SURR	110	%	85-116
FA48865-1MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	115	%	79-119
V2B219-MB	1868-53-7	Dibromofluoromethane	MB	SURR	93	%	78-119
V2B219-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	100	%	71-136
V2B219-MB	2037-26-5	Toluene-D8	MB	SURR	100	%	85-116
V2B219-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	105	%	79-119
FA48865-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	95	%	78-119
FA48865-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	99	%	71-136
FA48865-1	2037-26-5	Toluene-D8	SAMP	SURR	107	%	85-116
FA48865-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	116	%	79-119
V2B222	SW846 8260C						
V2B222-BS	71-43-2	Benzene	BSP	REC	102	%	77-121
V2B222-BS	104-51-8	n-Butylbenzene	BSP	REC	107	%	70-128
V2B222-BS	135-98-8	sec-Butylbenzene	BSP	REC	99	%	73-126
V2B222-BS	98-06-6	tert-Butylbenzene	BSP	REC	96	%	73-125
V2B222-BS	100-41-4	Ethylbenzene	BSP	REC	104	%	76-122
V2B222-BS	98-82-8	Isopropylbenzene	BSP	REC	95	%	68-134
V2B222-BS	99-87-6	p-Isopropyltoluene	BSP	REC	109	%	73-127
V2B222-BS	103-65-1	n-Propylbenzene	BSP	REC	101	%	73-125
V2B222-BS	108-88-3	Toluene	BSP	REC	104	%	77-121
V2B222-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	107	%	75-123
V2B222-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	105	%	73-124
V2B222-BS	1330-20-7	Xylene (total)	BSP	REC	99	%	78-124
V2B222-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	98	%	78-119
V2B222-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	97	%	71-136
V2B222-BS	2037-26-5	Toluene-D8	BSP	SURR	99	%	85-116
V2B222-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	105	%	79-119
FA48865-3MS	71-43-2	Benzene	MS	REC	79	%	77-121
FA48865-3MS	104-51-8	n-Butylbenzene	MS	REC	85	%	70-128
FA48865-3MS	135-98-8	sec-Butylbenzene	MS	REC	74	%	73-126
FA48865-3MS	98-06-6	tert-Butylbenzene	MS	REC	74	%	73-125
FA48865-3MS	100-41-4	Ethylbenzene	MS	REC	82	%	76-122
FA48865-3MS	98-82-8	Isopropylbenzene	MS	REC	77	%	68-134
FA48865-3MS	99-87-6	p-Isopropyltoluene	MS	REC	84	%	73-127
FA48865-3MS	103-65-1	n-Propylbenzene	MS	REC	77	%	73-125
FA48865-3MS	108-88-3	Toluene	MS	REC	84	%	77-121
FA48865-3MS	95-63-6	1,2,4-Trimethylbenzene	MS	REC	85	%	75-123
FA48865-3MS	108-67-8	1,3,5-Trimethylbenzene	MS	REC	82	%	73-124
FA48865-3MS	1330-20-7	Xylene (total)	MS	REC	81	%	78-124

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-3MS	1868-53-7	Dibromofluoromethane	MS	SURR	98	%	78-119
FA48865-3MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	96	%	71-136
FA48865-3MS	2037-26-5	Toluene-D8	MS	SURR	101	%	85-116
FA48865-3MS	460-00-4	4-Bromofluorobenzene	MS	SURR	102	%	79-119
FA48865-3MSD	71-43-2	Benzene	MSD	REC	81	%	77-121
FA48865-3MSD	71-43-2	Benzene	MSD	RPD	2	%	20
FA48865-3MSD	104-51-8	n-Butylbenzene	MSD	REC	86	%	70-128
FA48865-3MSD	104-51-8	n-Butylbenzene	MSD	RPD	1	%	20
FA48865-3MSD	135-98-8	sec-Butylbenzene	MSD	REC	75	%	73-126
FA48865-3MSD	135-98-8	sec-Butylbenzene	MSD	RPD	1	%	20
FA48865-3MSD	98-06-6	tert-Butylbenzene	MSD	REC	74	%	73-125
FA48865-3MSD	98-06-6	tert-Butylbenzene	MSD	RPD	0	%	20
FA48865-3MSD	100-41-4	Ethylbenzene	MSD	REC	83	%	76-122
FA48865-3MSD	100-41-4	Ethylbenzene	MSD	RPD	2	%	20
FA48865-3MSD	98-82-8	Isopropylbenzene	MSD	REC	77	%	68-134
FA48865-3MSD	98-82-8	Isopropylbenzene	MSD	RPD	1	%	20
FA48865-3MSD	99-87-6	p-Isopropyltoluene	MSD	REC	85	%	73-127
FA48865-3MSD	99-87-6	p-Isopropyltoluene	MSD	RPD	2	%	20
FA48865-3MSD	103-65-1	n-Propylbenzene	MSD	REC	79	%	73-125
FA48865-3MSD	103-65-1	n-Propylbenzene	MSD	RPD	2	%	20
FA48865-3MSD	108-88-3	Toluene	MSD	REC	85	%	77-121
FA48865-3MSD	108-88-3	Toluene	MSD	RPD	1	%	20
FA48865-3MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	87	%	75-123
FA48865-3MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	2	%	20
FA48865-3MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	84	%	73-124
FA48865-3MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	2	%	20
FA48865-3MSD	1330-20-7	Xylene (total)	MSD	REC	83	%	78-124
FA48865-3MSD	1330-20-7	Xylene (total)	MSD	RPD	2	%	20
FA48865-3MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	98	%	78-119
FA48865-3MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	96	%	71-136
FA48865-3MSD	2037-26-5	Toluene-D8	MSD	SURR	98	%	85-116
FA48865-3MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	102	%	79-119
V2B222-MB	1868-53-7	Dibromofluoromethane	MB	SURR	97	%	78-119
V2B222-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	99	%	71-136
V2B222-MB	2037-26-5	Toluene-D8	MB	SURR	100	%	85-116
V2B222-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	106	%	79-119
FA48865-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	96	%	78-119
FA48865-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	100	%	71-136
FA48865-3	2037-26-5	Toluene-D8	SAMP	SURR	99	%	85-116
FA48865-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	105	%	79-119
OP67433	SW846 8270D BY SIM						
OP67433-BS	83-32-9	Acenaphthene	BSP	REC	92	%	44-111
OP67433-BS	208-96-8	Acenaphthylene	BSP	REC	90	%	39-116

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67433-BS	120-12-7	Anthracene	BSP	REC	95	%	50-114
OP67433-BS	56-55-3	Benzo(a)anthracene	BSP	REC	98	%	54-122
OP67433-BS	50-32-8	Benzo(a)pyrene	BSP	REC	97	%	50-125
OP67433-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	102	%	53-128
OP67433-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	100	%	49-127
OP67433-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	101	%	56-123
OP67433-BS	218-01-9	Chrysene	BSP	REC	101	%	57-118
OP67433-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	97	%	50-129
OP67433-BS	206-44-0	Fluoranthene	BSP	REC	93	%	55-119
OP67433-BS	86-73-7	Fluorene	BSP	REC	92	%	47-114
OP67433-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	99	%	49-130
OP67433-BS	91-20-3	Naphthalene	BSP	REC	89	%	38-111
OP67433-BS	85-01-8	Phenanthrene	BSP	REC	98	%	49-113
OP67433-BS	129-00-0	Pyrene	BSP	REC	109	%	55-117
OP67433-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	96	%	44-125
OP67433-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	92	%	46-115
OP67433-BS	1718-51-0	Terphenyl-d14	BSP	SURR	104	%	58-133
OP67433-MS*	83-32-9	Acenaphthene	MS	REC	94	%	44-111
OP67433-MS*	208-96-8	Acenaphthylene	MS	REC	92	%	39-116
OP67433-MS*	120-12-7	Anthracene	MS	REC	91	%	50-114
OP67433-MS*	56-55-3	Benzo(a)anthracene	MS	REC	92	%	54-122
OP67433-MS*	50-32-8	Benzo(a)pyrene	MS	REC	89	%	50-125
OP67433-MS*	205-99-2	Benzo(b)fluoranthene	MS	REC	92	%	53-128
OP67433-MS*	191-24-2	Benzo(g,h,i)perylene	MS	REC	89	%	49-127
OP67433-MS*	207-08-9	Benzo(k)fluoranthene	MS	REC	93	%	56-123
OP67433-MS*	218-01-9	Chrysene	MS	REC	96	%	57-118
OP67433-MS*	53-70-3	Dibenzo(a,h)anthracene	MS	REC	93	%	50-129
OP67433-MS*	206-44-0	Fluoranthene	MS	REC	94	%	55-119
OP67433-MS*	86-73-7	Fluorene	MS	REC	91	%	47-114
OP67433-MS*	193-39-5	Indeno(1,2,3-cd)pyrene	MS	REC	96	%	49-130
OP67433-MS*	91-20-3	Naphthalene	MS	REC	91	%	38-111
OP67433-MS*	85-01-8	Phenanthrene	MS	REC	96	%	49-113
OP67433-MS*	129-00-0	Pyrene	MS	REC	104	%	55-117
OP67433-MS*	4165-60-0	Nitrobenzene-d5	MS	SURR	94	%	44-125
OP67433-MS*	321-60-8	2-Fluorobiphenyl	MS	SURR	94	%	46-115
OP67433-MS*	1718-51-0	Terphenyl-d14	MS	SURR	106	%	58-133
OP67433-MSD*	83-32-9	Acenaphthene	MSD	REC	92	%	44-111
OP67433-MSD*	83-32-9	Acenaphthene	MSD	RPD	2	%	20
OP67433-MSD*	208-96-8	Acenaphthylene	MSD	REC	90	%	39-116
OP67433-MSD*	208-96-8	Acenaphthylene	MSD	RPD	1	%	20
OP67433-MSD*	120-12-7	Anthracene	MSD	REC	92	%	50-114
OP67433-MSD*	120-12-7	Anthracene	MSD	RPD	2	%	20
OP67433-MSD*	56-55-3	Benzo(a)anthracene	MSD	REC	99	%	54-122
OP67433-MSD*	56-55-3	Benzo(a)anthracene	MSD	RPD	8	%	20
OP67433-MSD*	50-32-8	Benzo(a)pyrene	MSD	REC	92	%	50-125

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67433-MSD*	50-32-8	Benzo(a)pyrene	MSD	RPD	4	%	20
OP67433-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	REC	92	%	53-128
OP67433-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	RPD	1	%	20
OP67433-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	REC	98	%	49-127
OP67433-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	RPD	10	%	20
OP67433-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	REC	94	%	56-123
OP67433-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	RPD	1	%	20
OP67433-MSD*	218-01-9	Chrysene	MSD	REC	100	%	57-118
OP67433-MSD*	218-01-9	Chrysene	MSD	RPD	4	%	20
OP67433-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	REC	95	%	50-129
OP67433-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	RPD	2	%	20
OP67433-MSD*	206-44-0	Fluoranthene	MSD	REC	95	%	55-119
OP67433-MSD*	206-44-0	Fluoranthene	MSD	RPD	2	%	20
OP67433-MSD*	86-73-7	Fluorene	MSD	REC	91	%	47-114
OP67433-MSD*	86-73-7	Fluorene	MSD	RPD	1	%	20
OP67433-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	REC	95	%	49-130
OP67433-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	RPD	1	%	20
OP67433-MSD*	91-20-3	Naphthalene	MSD	REC	89	%	38-111
OP67433-MSD*	91-20-3	Naphthalene	MSD	RPD	1	%	20
OP67433-MSD*	85-01-8	Phenanthrene	MSD	REC	94	%	49-113
OP67433-MSD*	85-01-8	Phenanthrene	MSD	RPD	1	%	20
OP67433-MSD*	129-00-0	Pyrene	MSD	REC	111	%	55-117
OP67433-MSD*	129-00-0	Pyrene	MSD	RPD	7	%	20
OP67433-MSD*	4165-60-0	Nitrobenzene-d5	MSD	SURR	88	%	44-125
OP67433-MSD*	321-60-8	2-Fluorobiphenyl	MSD	SURR	94	%	46-115
OP67433-MSD*	1718-51-0	Terphenyl-d14	MSD	SURR	112	%	58-133
OP67433-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	101	%	44-125
OP67433-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	94	%	46-115
OP67433-MB	1718-51-0	Terphenyl-d14	MB	SURR	115	%	58-133
FA48865-2	4165-60-0	Nitrobenzene-d5	SAMP	SURR	93	%	44-125
FA48865-2	321-60-8	2-Fluorobiphenyl	SAMP	SURR	90	%	46-115
FA48865-2	1718-51-0	Terphenyl-d14	SAMP	SURR	99	%	58-133
FA48865-3	4165-60-0	Nitrobenzene-d5	SAMP	SURR	93	%	44-125
FA48865-3	321-60-8	2-Fluorobiphenyl	SAMP	SURR	93	%	46-115
FA48865-3	1718-51-0	Terphenyl-d14	SAMP	SURR	106	%	58-133
FA48865-4	4165-60-0	Nitrobenzene-d5	SAMP	SURR	92	%	44-125
FA48865-4	321-60-8	2-Fluorobiphenyl	SAMP	SURR	86	%	46-115
FA48865-4	1718-51-0	Terphenyl-d14	SAMP	SURR	94	%	58-133
OP67487	SW846 8270D						
OP67487-BS	59-50-7	4-Chloro-3-methyl Phenol	BSP	REC	76	%	45-122
OP67487-BS	95-57-8	2-Chlorophenol	BSP	REC	77	%	34-121
OP67487-BS	120-83-2	2,4-Dichlorophenol	BSP	REC	75	%	40-122
OP67487-BS	105-67-9	2,4-Dimethylphenol	BSP	REC	64	%	30-127

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67487-BS	534-52-1	4,6-Dinitro-o-cresol	BSP	REC	96	%	29-132
OP67487-BS	95-48-7	2-Methylphenol	BSP	REC	77	%	32-122
OP67487-BS		3&4-Methylphenol	BSP	REC	77	%	34-119
OP67487-BS	88-75-5	2-Nitrophenol	BSP	REC	85	%	36-123
OP67487-BS	100-02-7	4-Nitrophenol	BSP	REC	89	%	30-132
OP67487-BS	87-86-5	Pentachlorophenol	BSP	REC	97	%	25-133
OP67487-BS	108-95-2	Phenol	BSP	REC	78	%	34-121
OP67487-BS	95-95-4	2,4,5-Trichlorophenol	BSP	REC	91	%	41-124
OP67487-BS	88-06-2	2,4,6-Trichlorophenol	BSP	REC	92	%	39-126
OP67487-BS	83-32-9	Acenaphthene	BSP	REC	83	%	40-123
OP67487-BS	208-96-8	Acenaphthylene	BSP	REC	88	%	32-132
OP67487-BS	120-12-7	Anthracene	BSP	REC	84	%	47-123
OP67487-BS	56-55-3	Benzo(a)anthracene	BSP	REC	85	%	49-126
OP67487-BS	50-32-8	Benzo(a)pyrene	BSP	REC	85	%	45-129
OP67487-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	85	%	45-132
OP67487-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	91	%	43-134
OP67487-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	89	%	47-132
OP67487-BS	100-51-6	Benzyl Alcohol	BSP	REC	77	%	29-122
OP67487-BS	101-55-3	4-Bromophenyl phenyl ether	BSP	REC	86	%	46-124
OP67487-BS	85-68-7	Butyl benzyl phthalate	BSP	REC	89	%	48-132
OP67487-BS	86-74-8	Carbazole	BSP	REC	89	%	50-123
OP67487-BS	106-47-8	4-Chloroaniline	BSP	REC	86	%	17-106
OP67487-BS	111-91-1	bis(2-Chloroethoxy)methane	BSP	REC	65	%	36-121
OP67487-BS	111-44-4	bis(2-Chloroethyl)ether	BSP	REC	74	%	31-120
OP67487-BS	108-60-1	bis(2-Chloroisopropyl)ether	BSP	REC	71	%	33-131
OP67487-BS	91-58-7	2-Chloronaphthalene	BSP	REC	82	%	41-114
OP67487-BS	7005-72-3	4-Chlorophenyl phenyl ether	BSP	REC	85	%	45-121
OP67487-BS	218-01-9	Chrysene	BSP	REC	86	%	50-124
OP67487-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	90	%	45-134
OP67487-BS	132-64-9	Dibenzofuran	BSP	REC	86	%	44-120
OP67487-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	77	%	33-117
OP67487-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	75	%	30-115
OP67487-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	76	%	31-115
OP67487-BS	91-94-1	3,3'-Dichlorobenzidine	BSP	REC	100	%	22-121
OP67487-BS	84-66-2	Diethyl Phthalate	BSP	REC	84	%	50-124
OP67487-BS	131-11-3	Dimethyl Phthalate	BSP	REC	85	%	48-124
OP67487-BS	117-84-0	Di-n-octyl Phthalate	BSP	REC	93	%	45-140
OP67487-BS	84-74-2	Di-n-butyl Phthalate	BSP	REC	88	%	51-128
OP67487-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	94	%	48-126
OP67487-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	91	%	46-124
OP67487-BS	122-66-7	1,2-Diphenylhydrazine	BSP	REC	85	%	41-125
OP67487-BS	117-81-7	bis(2-Ethylhexyl)phthalate	BSP	REC	90	%	51-133
OP67487-BS	206-44-0	Fluoranthene	BSP	REC	85	%	50-127
OP67487-BS	86-73-7	Fluorene	BSP	REC	87	%	43-125
OP67487-BS	118-74-1	Hexachlorobenzene	BSP	REC	87	%	45-122

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67487-BS	87-68-3	Hexachlorobutadiene	BSP	REC	63	%	32-123
OP67487-BS	67-72-1	Hexachloroethane	BSP	REC	74	%	28-117
OP67487-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	92	%	45-133
OP67487-BS	78-59-1	Isophorone	BSP	REC	72	%	30-122
OP67487-BS	90-12-0	1-Methylnaphthalene	BSP	REC	71	%	40-119
OP67487-BS	91-57-6	2-Methylnaphthalene	BSP	REC	71	%	38-122
OP67487-BS	91-20-3	Naphthalene	BSP	REC	68	%	35-123
OP67487-BS	88-74-4	2-Nitroaniline	BSP	REC	96	%	44-127
OP67487-BS	99-09-2	3-Nitroaniline	BSP	REC	98	%	33-119
OP67487-BS	98-95-3	Nitrobenzene	BSP	REC	71	%	34-122
OP67487-BS	62-75-9	N-Nitrosodimethylamine	BSP	REC	70	%	23-120
OP67487-BS	621-64-7	N-Nitrosodi-n-propylamine	BSP	REC	77	%	36-120
OP67487-BS	86-30-6	N-Nitrosodiphenylamine	BSP	REC	87	%	38-127
OP67487-BS	85-01-8	Phenanthrene	BSP	REC	85	%	50-121
OP67487-BS	129-00-0	Pyrene	BSP	REC	88	%	47-127
OP67487-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	70	%	34-118
OP67487-BS	367-12-4	2-Fluorophenol	BSP	SURR	76	%	35-115
OP67487-BS	4165-62-2	Phenol-d5	BSP	SURR	76	%	33-122
OP67487-BS	118-79-6	2,4,6-Tribromophenol	BSP	SURR	96	%	39-132
OP67487-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	71	%	37-122
OP67487-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	81	%	44-115
OP67487-BS	1718-51-0	Terphenyl-d14	BSP	SURR	88	%	54-127
OP67487-MS*	59-50-7	4-Chloro-3-methyl Phenol	MS	REC	69	%	45-122
OP67487-MS*	95-57-8	2-Chlorophenol	MS	REC	63	%	34-121
OP67487-MS*	120-83-2	2,4-Dichlorophenol	MS	REC	67	%	40-122
OP67487-MS*	105-67-9	2,4-Dimethylphenol	MS	REC	57	%	30-127
OP67487-MS*	534-52-1	4,6-Dinitro-o-cresol	MS	REC	74	%	29-132
OP67487-MS*	95-48-7	2-Methylphenol	MS	REC	64	%	32-122
OP67487-MS*		3&4-Methylphenol	MS	REC	65	%	34-119
OP67487-MS*	88-75-5	2-Nitrophenol	MS	REC	71	%	36-123
OP67487-MS*	100-02-7	4-Nitrophenol	MS	REC	79	%	30-132
OP67487-MS*	87-86-5	Pentachlorophenol	MS	REC	64	%	25-133
OP67487-MS*	108-95-2	Phenol	MS	REC	65	%	34-121
OP67487-MS*	95-95-4	2,4,5-Trichlorophenol	MS	REC	81	%	41-124
OP67487-MS*	88-06-2	2,4,6-Trichlorophenol	MS	REC	79	%	39-126
OP67487-MS*	83-32-9	Acenaphthene	MS	REC	74	%	40-123
OP67487-MS*	208-96-8	Acenaphthylene	MS	REC	78	%	32-132
OP67487-MS*	120-12-7	Anthracene	MS	REC	78	%	47-123
OP67487-MS*	56-55-3	Benzo(a)anthracene	MS	REC	80	%	49-126
OP67487-MS*	50-32-8	Benzo(a)pyrene	MS	REC	81	%	45-129
OP67487-MS*	205-99-2	Benzo(b)fluoranthene	MS	REC	79	%	45-132
OP67487-MS*	191-24-2	Benzo(g,h,i)perylene	MS	REC	81	%	43-134
OP67487-MS*	207-08-9	Benzo(k)fluoranthene	MS	REC	82	%	47-132
OP67487-MS*	100-51-6	Benzyl Alcohol	MS	REC	65	%	29-122
OP67487-MS*	101-55-3	4-Bromophenyl phenyl ether	MS	REC	80	%	46-124

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67487-MS*	85-68-7	Butyl benzyl phthalate	MS	REC	84	%	48-132
OP67487-MS*	86-74-8	Carbazole	MS	REC	83	%	50-123
OP67487-MS*	106-47-8	4-Chloroaniline	MS	REC	77	%	17-106
OP67487-MS*	111-91-1	bis(2-Chloroethoxy)methane	MS	REC	55	%	36-121
OP67487-MS*	111-44-4	bis(2-Chloroethyl)ether	MS	REC	61	%	31-120
OP67487-MS*	108-60-1	bis(2-Chloroisopropyl)ether	MS	REC	58	%	33-131
OP67487-MS*	91-58-7	2-Chloronaphthalene	MS	REC	72	%	41-114
OP67487-MS*	7005-72-3	4-Chlorophenyl phenyl ether	MS	REC	76	%	45-121
OP67487-MS*	218-01-9	Chrysene	MS	REC	79	%	50-124
OP67487-MS*	53-70-3	Dibenzo(a,h)anthracene	MS	REC	82	%	45-134
OP67487-MS*	132-64-9	Dibenzofuran	MS	REC	77	%	44-120
OP67487-MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	63	%	33-117
OP67487-MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	61	%	30-115
OP67487-MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	62	%	31-115
OP67487-MS*	91-94-1	3,3'-Dichlorobenzidine	MS	REC	101	%	22-121
OP67487-MS*	84-66-2	Diethyl Phthalate	MS	REC	78	%	50-124
OP67487-MS*	131-11-3	Dimethyl Phthalate	MS	REC	76	%	48-124
OP67487-MS*	117-84-0	Di-n-octyl Phthalate	MS	REC	90	%	45-140
OP67487-MS*	84-74-2	Di-n-butyl Phthalate	MS	REC	82	%	51-128
OP67487-MS*	121-14-2	2,4-Dinitrotoluene	MS	REC	88	%	48-126
OP67487-MS*	606-20-2	2,6-Dinitrotoluene	MS	REC	81	%	46-124
OP67487-MS*	122-66-7	1,2-Diphenylhydrazine	MS	REC	78	%	41-125
OP67487-MS*	117-81-7	bis(2-Ethylhexyl)phthalate	MS	REC	86	%	51-133
OP67487-MS*	206-44-0	Fluoranthene	MS	REC	77	%	50-127
OP67487-MS*	86-73-7	Fluorene	MS	REC	79	%	43-125
OP67487-MS*	118-74-1	Hexachlorobenzene	MS	REC	81	%	45-122
OP67487-MS*	87-68-3	Hexachlorobutadiene	MS	REC	52	%	32-123
OP67487-MS*	67-72-1	Hexachloroethane	MS	REC	60	%	28-117
OP67487-MS*	193-39-5	Indeno(1,2,3-cd)pyrene	MS	REC	83	%	45-133
OP67487-MS*	78-59-1	Isophorone	MS	REC	63	%	30-122
OP67487-MS*	90-12-0	1-Methylnaphthalene	MS	REC	63	%	40-119
OP67487-MS*	91-57-6	2-Methylnaphthalene	MS	REC	63	%	38-122
OP67487-MS*	91-20-3	Naphthalene	MS	REC	59	%	35-123
OP67487-MS*	88-74-4	2-Nitroaniline	MS	REC	84	%	44-127
OP67487-MS*	99-09-2	3-Nitroaniline	MS	REC	92	%	33-119
OP67487-MS*	98-95-3	Nitrobenzene	MS	REC	60	%	34-122
OP67487-MS*	62-75-9	N-Nitrosodimethylamine	MS	REC	56	%	23-120
OP67487-MS*	621-64-7	N-Nitrosodi-n-propylamine	MS	REC	63	%	36-120
OP67487-MS*	86-30-6	N-Nitrosodiphenylamine	MS	REC	81	%	38-127
OP67487-MS*	85-01-8	Phenanthrene	MS	REC	79	%	50-121
OP67487-MS*	129-00-0	Pyrene	MS	REC	81	%	47-127
OP67487-MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	60	%	34-118
OP67487-MS*	367-12-4	2-Fluorophenol	MS	SURR	62	%	35-115
OP67487-MS*	4165-62-2	Phenol-d5	MS	SURR	64	%	33-122
OP67487-MS*	118-79-6	2,4,6-Tribromophenol	MS	SURR	85	%	39-132

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67487-MS*	4165-60-0	Nitrobenzene-d5	MS	SURR	61	%	37-122
OP67487-MS*	321-60-8	2-Fluorobiphenyl	MS	SURR	70	%	44-115
OP67487-MS*	1718-51-0	Terphenyl-d14	MS	SURR	84	%	54-127
OP67487-MSD*	59-50-7	4-Chloro-3-methyl Phenol	MSD	REC	81	%	45-122
OP67487-MSD*	59-50-7	4-Chloro-3-methyl Phenol	MSD	RPD	16	%	20
OP67487-MSD*	95-57-8	2-Chlorophenol	MSD	REC	81	%	34-121
OP67487-MSD*	95-57-8	2-Chlorophenol	MSD	RPD	25	%	20
OP67487-MSD*	120-83-2	2,4-Dichlorophenol	MSD	REC	80	%	40-122
OP67487-MSD*	120-83-2	2,4-Dichlorophenol	MSD	RPD	18	%	20
OP67487-MSD*	105-67-9	2,4-Dimethylphenol	MSD	REC	69	%	30-127
OP67487-MSD*	105-67-9	2,4-Dimethylphenol	MSD	RPD	19	%	20
OP67487-MSD*	534-52-1	4,6-Dinitro-o-cresol	MSD	REC	64	%	29-132
OP67487-MSD*	534-52-1	4,6-Dinitro-o-cresol	MSD	RPD	15	%	20
OP67487-MSD*	95-48-7	2-Methylphenol	MSD	REC	81	%	32-122
OP67487-MSD*	95-48-7	2-Methylphenol	MSD	RPD	22	%	20
OP67487-MSD*		3&4-Methylphenol	MSD	REC	81	%	34-119
OP67487-MSD*		3&4-Methylphenol	MSD	RPD	21	%	20
OP67487-MSD*	88-75-5	2-Nitrophenol	MSD	REC	91	%	36-123
OP67487-MSD*	88-75-5	2-Nitrophenol	MSD	RPD	24	%	20
OP67487-MSD*	100-02-7	4-Nitrophenol	MSD	REC	83	%	30-132
OP67487-MSD*	100-02-7	4-Nitrophenol	MSD	RPD	5	%	20
OP67487-MSD*	87-86-5	Pentachlorophenol	MSD	REC	48	%	25-133
OP67487-MSD*	87-86-5	Pentachlorophenol	MSD	RPD	30	%	20
OP67487-MSD*	108-95-2	Phenol	MSD	REC	82	%	34-121
OP67487-MSD*	108-95-2	Phenol	MSD	RPD	23	%	20
OP67487-MSD*	95-95-4	2,4,5-Trichlorophenol	MSD	REC	93	%	41-124
OP67487-MSD*	95-95-4	2,4,5-Trichlorophenol	MSD	RPD	14	%	20
OP67487-MSD*	88-06-2	2,4,6-Trichlorophenol	MSD	REC	87	%	39-126
OP67487-MSD*	88-06-2	2,4,6-Trichlorophenol	MSD	RPD	10	%	20
OP67487-MSD*	83-32-9	Acenaphthene	MSD	REC	90	%	40-123
OP67487-MSD*	83-32-9	Acenaphthene	MSD	RPD	19	%	20
OP67487-MSD*	208-96-8	Acenaphthylene	MSD	REC	95	%	32-132
OP67487-MSD*	208-96-8	Acenaphthylene	MSD	RPD	20	%	20
OP67487-MSD*	120-12-7	Anthracene	MSD	REC	91	%	47-123
OP67487-MSD*	120-12-7	Anthracene	MSD	RPD	15	%	20
OP67487-MSD*	56-55-3	Benzo(a)anthracene	MSD	REC	95	%	49-126
OP67487-MSD*	56-55-3	Benzo(a)anthracene	MSD	RPD	17	%	20
OP67487-MSD*	50-32-8	Benzo(a)pyrene	MSD	REC	96	%	45-129
OP67487-MSD*	50-32-8	Benzo(a)pyrene	MSD	RPD	17	%	20
OP67487-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	REC	96	%	45-132
OP67487-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	RPD	19	%	20
OP67487-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	REC	103	%	43-134
OP67487-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	RPD	23	%	20
OP67487-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	REC	93	%	47-132
OP67487-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	RPD	12	%	20

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67487-MSD*	100-51-6	Benzyl Alcohol	MSD	REC	81	%	29-122
OP67487-MSD*	100-51-6	Benzyl Alcohol	MSD	RPD	21	%	20
OP67487-MSD*	101-55-3	4-Bromophenyl phenyl ether	MSD	REC	96	%	46-124
OP67487-MSD*	101-55-3	4-Bromophenyl phenyl ether	MSD	RPD	18	%	20
OP67487-MSD*	85-68-7	Butyl benzyl phthalate	MSD	REC	99	%	48-132
OP67487-MSD*	85-68-7	Butyl benzyl phthalate	MSD	RPD	16	%	20
OP67487-MSD*	86-74-8	Carbazole	MSD	REC	93	%	50-123
OP67487-MSD*	86-74-8	Carbazole	MSD	RPD	11	%	20
OP67487-MSD*	106-47-8	4-Chloroaniline	MSD	REC	91	%	17-106
OP67487-MSD*	106-47-8	4-Chloroaniline	MSD	RPD	17	%	20
OP67487-MSD*	111-91-1	bis(2-Chloroethoxy)methane	MSD	REC	69	%	36-121
OP67487-MSD*	111-91-1	bis(2-Chloroethoxy)methane	MSD	RPD	23	%	20
OP67487-MSD*	111-44-4	bis(2-Chloroethyl)ether	MSD	REC	78	%	31-120
OP67487-MSD*	111-44-4	bis(2-Chloroethyl)ether	MSD	RPD	24	%	20
OP67487-MSD*	108-60-1	bis(2-Chloroisopropyl)ether	MSD	REC	74	%	33-131
OP67487-MSD*	108-60-1	bis(2-Chloroisopropyl)ether	MSD	RPD	24	%	20
OP67487-MSD*	91-58-7	2-Chloronaphthalene	MSD	REC	89	%	41-114
OP67487-MSD*	91-58-7	2-Chloronaphthalene	MSD	RPD	21	%	20
OP67487-MSD*	7005-72-3	4-Chlorophenyl phenyl ether	MSD	REC	92	%	45-121
OP67487-MSD*	7005-72-3	4-Chlorophenyl phenyl ether	MSD	RPD	19	%	20
OP67487-MSD*	218-01-9	Chrysene	MSD	REC	95	%	50-124
OP67487-MSD*	218-01-9	Chrysene	MSD	RPD	17	%	20
OP67487-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	REC	99	%	45-134
OP67487-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	RPD	19	%	20
OP67487-MSD*	132-64-9	Dibenzofuran	MSD	REC	92	%	44-120
OP67487-MSD*	132-64-9	Dibenzofuran	MSD	RPD	18	%	20
OP67487-MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	81	%	33-117
OP67487-MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	24	%	20
OP67487-MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	79	%	30-115
OP67487-MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	26	%	20
OP67487-MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	80	%	31-115
OP67487-MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	26	%	20
OP67487-MSD*	91-94-1	3,3'-Dichlorobenzidine	MSD	REC	116	%	22-121
OP67487-MSD*	91-94-1	3,3'-Dichlorobenzidine	MSD	RPD	14	%	20
OP67487-MSD*	84-66-2	Diethyl Phthalate	MSD	REC	91	%	50-124
OP67487-MSD*	84-66-2	Diethyl Phthalate	MSD	RPD	15	%	20
OP67487-MSD*	131-11-3	Dimethyl Phthalate	MSD	REC	90	%	48-124
OP67487-MSD*	131-11-3	Dimethyl Phthalate	MSD	RPD	17	%	20
OP67487-MSD*	117-84-0	Di-n-octyl Phthalate	MSD	REC	102	%	45-140
OP67487-MSD*	117-84-0	Di-n-octyl Phthalate	MSD	RPD	13	%	20
OP67487-MSD*	84-74-2	Di-n-butyl Phthalate	MSD	REC	94	%	51-128
OP67487-MSD*	84-74-2	Di-n-butyl Phthalate	MSD	RPD	13	%	20
OP67487-MSD*	121-14-2	2,4-Dinitrotoluene	MSD	REC	102	%	48-126
OP67487-MSD*	121-14-2	2,4-Dinitrotoluene	MSD	RPD	15	%	20
OP67487-MSD*	606-20-2	2,6-Dinitrotoluene	MSD	REC	97	%	46-124

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67487-MSD*	606-20-2	2,6-Dinitrotoluene	MSD	RPD	18	%	20
OP67487-MSD*	122-66-7	1,2-Diphenylhydrazine	MSD	REC	93	%	41-125
OP67487-MSD*	122-66-7	1,2-Diphenylhydrazine	MSD	RPD	18	%	20
OP67487-MSD*	117-81-7	bis(2-Ethylhexyl)phthalate	MSD	REC	102	%	51-133
OP67487-MSD*	117-81-7	bis(2-Ethylhexyl)phthalate	MSD	RPD	18	%	20
OP67487-MSD*	206-44-0	Fluoranthene	MSD	REC	92	%	50-127
OP67487-MSD*	206-44-0	Fluoranthene	MSD	RPD	16	%	20
OP67487-MSD*	86-73-7	Fluorene	MSD	REC	93	%	43-125
OP67487-MSD*	86-73-7	Fluorene	MSD	RPD	16	%	20
OP67487-MSD*	118-74-1	Hexachlorobenzene	MSD	REC	96	%	45-122
OP67487-MSD*	118-74-1	Hexachlorobenzene	MSD	RPD	16	%	20
OP67487-MSD*	87-68-3	Hexachlorobutadiene	MSD	REC	68	%	32-123
OP67487-MSD*	87-68-3	Hexachlorobutadiene	MSD	RPD	28	%	20
OP67487-MSD*	67-72-1	Hexachloroethane	MSD	REC	79	%	28-117
OP67487-MSD*	67-72-1	Hexachloroethane	MSD	RPD	27	%	20
OP67487-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	REC	106	%	45-133
OP67487-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	RPD	24	%	20
OP67487-MSD*	78-59-1	Isophorone	MSD	REC	77	%	30-122
OP67487-MSD*	78-59-1	Isophorone	MSD	RPD	20	%	20
OP67487-MSD*	90-12-0	1-Methylnaphthalene	MSD	REC	76	%	40-119
OP67487-MSD*	90-12-0	1-Methylnaphthalene	MSD	RPD	19	%	20
OP67487-MSD*	91-57-6	2-Methylnaphthalene	MSD	REC	76	%	38-122
OP67487-MSD*	91-57-6	2-Methylnaphthalene	MSD	RPD	18	%	20
OP67487-MSD*	91-20-3	Naphthalene	MSD	REC	73	%	35-123
OP67487-MSD*	91-20-3	Naphthalene	MSD	RPD	22	%	20
OP67487-MSD*	88-74-4	2-Nitroaniline	MSD	REC	102	%	44-127
OP67487-MSD*	88-74-4	2-Nitroaniline	MSD	RPD	19	%	20
OP67487-MSD*	99-09-2	3-Nitroaniline	MSD	REC	107	%	33-119
OP67487-MSD*	99-09-2	3-Nitroaniline	MSD	RPD	15	%	20
OP67487-MSD*	98-95-3	Nitrobenzene	MSD	REC	76	%	34-122
OP67487-MSD*	98-95-3	Nitrobenzene	MSD	RPD	24	%	20
OP67487-MSD*	62-75-9	N-Nitrosodimethylamine	MSD	REC	72	%	23-120
OP67487-MSD*	62-75-9	N-Nitrosodimethylamine	MSD	RPD	25	%	20
OP67487-MSD*	621-64-7	N-Nitrosodi-n-propylamine	MSD	REC	79	%	36-120
OP67487-MSD*	621-64-7	N-Nitrosodi-n-propylamine	MSD	RPD	23	%	20
OP67487-MSD*	86-30-6	N-Nitrosodiphenylamine	MSD	REC	95	%	38-127
OP67487-MSD*	86-30-6	N-Nitrosodiphenylamine	MSD	RPD	16	%	20
OP67487-MSD*	85-01-8	Phenanthrene	MSD	REC	93	%	50-121
OP67487-MSD*	85-01-8	Phenanthrene	MSD	RPD	16	%	20
OP67487-MSD*	129-00-0	Pyrene	MSD	REC	102	%	47-127
OP67487-MSD*	129-00-0	Pyrene	MSD	RPD	22	%	20
OP67487-MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	77	%	34-118
OP67487-MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	24	%	20
OP67487-MSD*	367-12-4	2-Fluorophenol	MSD	SURR	78	%	35-115
OP67487-MSD*	4165-62-2	Phenol-d5	MSD	SURR	79	%	33-122

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67487-MSD*	118-79-6	2,4,6-Tribromophenol	MSD	SURR	93	%	39-132
OP67487-MSD*	4165-60-0	Nitrobenzene-d5	MSD	SURR	76	%	37-122
OP67487-MSD*	321-60-8	2-Fluorobiphenyl	MSD	SURR	88	%	44-115
OP67487-MSD*	1718-51-0	Terphenyl-d14	MSD	SURR	99	%	54-127
OP67487-MB	367-12-4	2-Fluorophenol	MB	SURR	56	%	35-115
OP67487-MB	4165-62-2	Phenol-d5	MB	SURR	61	%	33-122
OP67487-MB	118-79-6	2,4,6-Tribromophenol	MB	SURR	76	%	39-132
OP67487-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	61	%	37-122
OP67487-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	65	%	44-115
OP67487-MB	1718-51-0	Terphenyl-d14	MB	SURR	76	%	54-127
FA48865-1	367-12-4	2-Fluorophenol	SAMP	SURR	59	%	35-115
FA48865-1	4165-62-2	Phenol-d5	SAMP	SURR	64	%	33-122
FA48865-1	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	88	%	39-132
FA48865-1	4165-60-0	Nitrobenzene-d5	SAMP	SURR	68	%	37-122
FA48865-1	321-60-8	2-Fluorobiphenyl	SAMP	SURR	73	%	44-115
FA48865-1	1718-51-0	Terphenyl-d14	SAMP	SURR	83	%	54-127
OP67457 SW846 8082A							
OP67457-BS	12674-11-2	Aroclor 1016	BSP	REC	108	%	47-134
OP67457-BS	11096-82-5	Aroclor 1260	BSP	REC	109	%	53-140
OP67457-BS	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	81	%	44-130
OP67457-MS	12674-11-2	Aroclor 1016	MS	REC	83	%	47-134
OP67457-MS	11096-82-5	Aroclor 1260	MS	REC	96	%	53-140
OP67457-MS	877-09-8	Tetrachloro-m-xylene (sig#1)	MS	SURR	63	%	44-130
OP67457-MSD	12674-11-2	Aroclor 1016	MSD	REC	82	%	47-134
OP67457-MSD	12674-11-2	Aroclor 1016	MSD	RPD	1	%	30
OP67457-MSD	11096-82-5	Aroclor 1260	MSD	REC	99	%	53-140
OP67457-MSD	11096-82-5	Aroclor 1260	MSD	RPD	3	%	30
OP67457-MSD	877-09-8	Tetrachloro-m-xylene (sig#1)	MSD	SURR	63	%	44-130
OP67457-MB	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	81	%	44-130
FA48865-1	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	58	%	44-130
MP32960 SW846 6010C							
MP32960-B1	7440-38-2	Arsenic	BSP	REC	97.3	%	82-111
MP32960-B1	7440-39-3	Barium	BSP	REC	106	%	83-113
MP32960-B1	7440-43-9	Cadmium	BSP	REC	104	%	82-113
MP32960-B1	7440-47-3	Chromium	BSP	REC	105	%	85-113
MP32960-B1	7439-92-1	Lead	BSP	REC	99.2	%	81-112
MP32960-B1	7782-49-2	Selenium	BSP	REC	96.8	%	78-111
MP32960-B1	7440-22-4	Silver	BSP	REC	104	%	82-112
MP32960-S1*	7440-38-2	Arsenic	MS	REC	69.5 ^c	%	82-111
MP32960-S1*	7440-39-3	Barium	MS	REC	73.9 ^c	%	83-113
MP32960-S1*	7440-43-9	Cadmium	MS	REC	68.6 ^c	%	82-113

* Sample used for QC is not from job FA48865

QC Evaluation: DOD QSM5 Limits

Job Number: FA48865
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 10/27/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP32960-S1*	7440-47-3	Chromium	MS	REC	167.2 ^d	%	85-113
MP32960-S1*	7439-92-1	Lead	MS	REC	137.2 ^d	%	81-112
MP32960-S1*	7782-49-2	Selenium	MS	REC	93	%	78-111
MP32960-S1*	7440-22-4	Silver	MS	REC	66 ^c	%	82-112
MP32960-S2*	7440-38-2	Arsenic	MSD	REC	75.1 ^c	%	82-111
MP32960-S2*	7440-38-2	Arsenic	MSD	RPD	18.9	%	20
MP32960-S2*	7440-39-3	Barium	MSD	REC	90.3	%	83-113
MP32960-S2*	7440-39-3	Barium	MSD	RPD	14.9	%	20
MP32960-S2*	7440-43-9	Cadmium	MSD	REC	70.8 ^c	%	82-113
MP32960-S2*	7440-43-9	Cadmium	MSD	RPD	6.7	%	20
MP32960-S2*	7440-47-3	Chromium	MSD	REC	115.5	%	85-113
MP32960-S2*	7440-47-3	Chromium	MSD	RPD	4.6	%	20
MP32960-S2*	7439-92-1	Lead	MSD	REC	137.8 ^d	%	81-112
MP32960-S2*	7439-92-1	Lead	MSD	RPD	2.9	%	20
MP32960-S2*	7782-49-2	Selenium	MSD	REC	92.5	%	78-111
MP32960-S2*	7782-49-2	Selenium	MSD	RPD	13.4	%	20
MP32960-S2*	7440-22-4	Silver	MSD	REC	83.4	%	82-112
MP32960-S2*	7440-22-4	Silver	MSD	RPD	24.6 ^e	%	20
MP32960-D1*	7440-38-2	Arsenic	DUP	RPD	25.6 ^e	%	20
MP32960-D1*	7440-39-3	Barium	DUP	RPD	35.9 ^e	%	20
MP32960-D1*	7440-43-9	Cadmium	DUP	RPD	28.6 ^e	%	20
MP32960-D1*	7440-47-3	Chromium	DUP	RPD	29.6 ^e	%	20
MP32960-D1*	7439-92-1	Lead	DUP	RPD	123 ^e	%	20
MP32960-D1*	7782-49-2	Selenium	DUP	RPD	200 ^f	%	20
MP32960-D1*	7440-22-4	Silver	DUP	RPD	30.1 ^f	%	20
MP32970	SW846 7471B						
MP32970-B1	7439-97-6	Mercury	BSP	REC	96	%	80-124
MP32970-S1	7439-97-6	Mercury	MS	REC	108	%	80-124
MP32970-S2	7439-97-6	Mercury	MSD	REC	110.4	%	80-124
MP32970-S2	7439-97-6	Mercury	MSD	RPD	17.6	%	20
MP32970-D1	7439-97-6	Mercury	DUP	RPD	4.3	%	20

(a) Outside control limits due to matrix interference. Confirmed by reanalysis.

(b) Sporadic marginal failure.

(c) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

(d) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

(e) High RPD due to possible sample non-homogeneity.

(f) RPD acceptable due to low duplicate and sample concentrations.

* Sample used for QC is not from job FA48865

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

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Job Number: FA48865

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B216-MB	2B5883.D	1	10/30/17	SP	n/a	n/a	V2B216

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-2, FA48865-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.2	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	96% 75-124%
17060-07-0	1,2-Dichloroethane-D4	103% 72-135%
2037-26-5	Toluene-D8	101% 75-126%
460-00-4	4-Bromofluorobenzene	105% 71-133%

Method Blank Summary

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Job Number: FA48865

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-MB	2B5913.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	18.1	50	10	ug/kg	J
71-43-2	Benzene	ND	5.0	1.2	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.0	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	25	7.3	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
75-15-0	Carbon Disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon Tetrachloride	ND	5.0	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.3	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.0	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.9	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.0	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.8	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.4	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	

Method Blank Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-MB	2B5913.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-1

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/kg	
591-78-6	2-Hexanone	ND	25	7.5	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl Chloride	ND	5.0	2.0	ug/kg	
74-95-3	Methylene Bromide	ND	5.0	1.0	ug/kg	
75-09-2	Methylene Chloride	ND	10	4.0	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.0	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.4	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.3	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	16	ug/kg	
75-01-4	Vinyl Chloride	ND	5.0	1.0	ug/kg	
	m,p-Xylene	ND	10	1.1	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	93% 75-124%
17060-07-0	1,2-Dichloroethane-D4	100% 72-135%

Method Blank Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-MB	2B5913.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples: Method: SW846 8260C
FA48865-1

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	100% 75-126%
460-00-4	4-Bromofluorobenzene	105% 71-133%

Method Blank Summary

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Job Number: FA48865

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B222-MB	2B5991.D	1	11/06/17	SP	n/a	n/a	V2B222

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.2	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	97% 75-124%
17060-07-0	1,2-Dichloroethane-D4	99% 72-135%
2037-26-5	Toluene-D8	100% 75-126%
460-00-4	4-Bromofluorobenzene	106% 71-133%

Blank Spike Summary

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Job Number: FA48865

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B216-BS	2B5884.D	1	10/30/17	SP	n/a	n/a	V2B216

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-2, FA48865-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	51.9	104	76-126
104-51-8	n-Butylbenzene	50	55.7	111	71-128
135-98-8	sec-Butylbenzene	50	51.3	103	79-135
98-06-6	tert-Butylbenzene	50	50.4	101	77-133
100-41-4	Ethylbenzene	50	52.8	106	77-123
98-82-8	Isopropylbenzene	50	49.0	98	80-136
99-87-6	p-Isopropyltoluene	50	56.5	113	77-131
103-65-1	n-Propylbenzene	50	51.9	104	80-135
108-88-3	Toluene	50	53.3	107	76-124
95-63-6	1,2,4-Trimethylbenzene	50	55.7	111	74-123
108-67-8	1,3,5-Trimethylbenzene	50	54.8	110	73-122
1330-20-7	Xylene (total)	150	152	101	80-129

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	75-124%
17060-07-0	1,2-Dichloroethane-D4	96%	72-135%
2037-26-5	Toluene-D8	101%	75-126%
460-00-4	4-Bromofluorobenzene	103%	71-133%

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-BS	2B5914.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	265	106	61-152
71-43-2	Benzene	50	50.7	101	76-126
108-86-1	Bromobenzene	50	50.8	102	76-122
74-97-5	Bromochloromethane	50	44.6	89	77-120
75-27-4	Bromodichloromethane	50	47.4	95	74-130
75-25-2	Bromoform	50	48.1	96	76-127
78-93-3	2-Butanone (MEK)	250	252	101	75-137
104-51-8	n-Butylbenzene	50	45.3	91	71-128
135-98-8	sec-Butylbenzene	50	44.2	88	79-135
98-06-6	tert-Butylbenzene	50	43.8	88	77-133
75-15-0	Carbon Disulfide	50	42.2	84	72-122
56-23-5	Carbon Tetrachloride	50	43.2	86	78-133
108-90-7	Chlorobenzene	50	45.8	92	81-129
75-00-3	Chloroethane	50	49.8	100	68-133
67-66-3	Chloroform	50	44.9	90	72-123
95-49-8	o-Chlorotoluene	50	45.2	90	77-129
106-43-4	p-Chlorotoluene	50	44.7	89	80-134
124-48-1	Dibromochloromethane	50	47.8	96	76-127
96-12-8	1,2-Dibromo-3-chloropropane	50	42.6	85	70-137
106-93-4	1,2-Dibromoethane	50	48.2	96	77-126
75-71-8	Dichlorodifluoromethane	50	41.8	84	68-168
95-50-1	1,2-Dichlorobenzene	50	44.2	88	80-129
541-73-1	1,3-Dichlorobenzene	50	45.0	90	81-129
106-46-7	1,4-Dichlorobenzene	50	44.1	88	76-130
75-34-3	1,1-Dichloroethane	50	47.1	94	73-125
107-06-2	1,2-Dichloroethane	50	46.0	92	74-128
75-35-4	1,1-Dichloroethylene	50	43.1	86	81-136
156-59-2	cis-1,2-Dichloroethylene	50	46.2	92	74-126
156-60-5	trans-1,2-Dichloroethylene	50	44.8	90	70-127
78-87-5	1,2-Dichloropropane	50	46.8	94	74-125
142-28-9	1,3-Dichloropropane	50	45.3	91	76-122
594-20-7	2,2-Dichloropropane	50	44.6	89	77-133
563-58-6	1,1-Dichloropropene	50	43.4	87	75-130
10061-01-5	cis-1,3-Dichloropropene	50	48.7	97	80-123
10061-02-6	trans-1,3-Dichloropropene	50	50.8	102	75-131
100-41-4	Ethylbenzene	50	48.3	97	77-123

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-BS	2B5914.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	50	39.0	78	74-136
591-78-6	2-Hexanone	250	250	100	72-133
98-82-8	Isopropylbenzene	50	44.3	89	80-136
99-87-6	p-Isopropyltoluene	50	48.0	96	77-131
74-83-9	Methyl Bromide	50	46.0	92	65-139
74-87-3	Methyl Chloride	50	42.8	86	71-144
74-95-3	Methylene Bromide	50	47.4	95	74-124
75-09-2	Methylene Chloride	50	44.8	90	74-137
108-10-1	4-Methyl-2-pentanone (MIBK)	250	240	96	76-132
1634-04-4	Methyl Tert Butyl Ether	50	44.5	89	77-120
91-20-3	Naphthalene	50	41.5	83	79-129
103-65-1	n-Propylbenzene	50	45.1	90	80-135
100-42-5	Styrene	50	48.0	96	78-125
630-20-6	1,1,1,2-Tetrachloroethane	50	47.0	94	78-126
79-34-5	1,1,2,2-Tetrachloroethane	50	47.0	94	71-126
127-18-4	Tetrachloroethylene	50	44.5	89	79-130
108-88-3	Toluene	50	49.2	98	76-124
87-61-6	1,2,3-Trichlorobenzene	50	37.9	76* a	77-128
120-82-1	1,2,4-Trichlorobenzene	50	41.6	83	78-130
71-55-6	1,1,1-Trichloroethane	50	43.9	88	70-129
79-00-5	1,1,2-Trichloroethane	50	47.4	95	74-124
79-01-6	Trichloroethylene	50	46.5	93	75-128
75-69-4	Trichlorofluoromethane	50	44.8	90	73-145
96-18-4	1,2,3-Trichloropropane	50	47.3	95	74-127
95-63-6	1,2,4-Trimethylbenzene	50	48.4	97	74-123
108-67-8	1,3,5-Trimethylbenzene	50	47.6	95	73-122
108-05-4	Vinyl Acetate	250	224	90	48-164
75-01-4	Vinyl Chloride	50	43.3	87	76-141
	m,p-Xylene	100	93.9	94	80-128
95-47-6	o-Xylene	50	44.0	88	80-132

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	75-124%
17060-07-0	1,2-Dichloroethane-D4	96%	72-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-BS	2B5914.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples: Method: SW846 8260C

FA48865-1

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	98%	75-126%
460-00-4	4-Bromofluorobenzene	103%	71-133%

(a) Sporadic marginal failure.

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B222-BS	2B5992.D	1	11/06/17	SP	n/a	n/a	V2B222

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	51.1	102	76-126
104-51-8	n-Butylbenzene	50	53.3	107	71-128
135-98-8	sec-Butylbenzene	50	49.4	99	79-135
98-06-6	tert-Butylbenzene	50	47.8	96	77-133
100-41-4	Ethylbenzene	50	51.8	104	77-123
98-82-8	Isopropylbenzene	50	47.7	95	80-136
99-87-6	p-Isopropyltoluene	50	54.7	109	77-131
103-65-1	n-Propylbenzene	50	50.4	101	80-135
108-88-3	Toluene	50	52.1	104	76-124
95-63-6	1,2,4-Trimethylbenzene	50	53.6	107	74-123
108-67-8	1,3,5-Trimethylbenzene	50	52.7	105	73-122
1330-20-7	Xylene (total)	150	149	99	80-129

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	75-124%
17060-07-0	1,2-Dichloroethane-D4	97%	72-135%
2037-26-5	Toluene-D8	99%	75-126%
460-00-4	4-Bromofluorobenzene	105%	71-133%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA48865-1MS	2B5890.D	1	10/30/17	SP	n/a	n/a	V2B216
FA48865-1MSD	2B5891.D	1	10/30/17	SP	n/a	n/a	V2B216
FA48865-1 ^a	2B5889.D	1	10/30/17	SP	n/a	n/a	V2B216

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-2, FA48865-4

CAS No.	Compound	FA48865-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	380 U	3760	3210	85	3760	3700	98	14	76-126/26
104-51-8	n-Butylbenzene	380 U	3760	3420	91	3760	3910	104	13	71-128/35
135-98-8	sec-Butylbenzene	380 U	3760	2950	78*	3760	3430	91	15	79-135/34
98-06-6	tert-Butylbenzene	380 U	3760	2870	76*	3760	3390	90	17	77-133/34
100-41-4	Ethylbenzene	380 U	3760	3200	85	3760	3730	99	15	77-123/31
98-82-8	Isopropylbenzene	380 U	3760	2980	79*	3760	3480	93	15	80-136/32
99-87-6	p-Isopropyltoluene	380 U	3760	3370	90	3760	3890	103	14	77-131/34
103-65-1	n-Propylbenzene	380 U	3760	3070	82	3760	3570	95	15	80-135/33
108-88-3	Toluene	380 U	3760	3210	85	3760	3760	100	16	76-124/30
95-63-6	1,2,4-Trimethylbenzene	380 U	3760	3390	90	3760	3950	105	15	74-123/34
108-67-8	1,3,5-Trimethylbenzene	380 U	3760	3260	87	3760	3820	102	16	73-122/33
1330-20-7	Xylene (total)	1100 U	11300	9520	84	11300	11100	98	15	80-129/30

CAS No.	Surrogate Recoveries	MS	MSD	FA48865-1	Limits
1868-53-7	Dibromofluoromethane	98%	96%	99%	75-124%
17060-07-0	1,2-Dichloroethane-D4	94%	94%	100%	72-135%
2037-26-5	Toluene-D8	97%	99%	104%	75-126%
460-00-4	4-Bromofluorobenzene	102%	102%	98%	71-133%

(a) Confirmation run.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: FA48865

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA48865-1MS	2B5916.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1MSD	2B5917.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1	2B5915.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-1

CAS No.	Compound	FA48865-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	61.6	B	347	326	76	336	335	81	3	61-152/27
71-43-2	Benzene	4.1 U		69.3	60.8	88	67.2	58.6	87	4	76-126/26
108-86-1	Bromobenzene	4.1 U		69.3	88.5	128*	67.2	74.3	111	17	76-122/32
74-97-5	Bromochloromethane	4.1 U		69.3	58.1	84	67.2	56.3	84	3	77-120/24
75-27-4	Bromodichloromethane	4.1 U		69.3	60.5	87	67.2	58.5	87	3	74-130/25
75-25-2	Bromoform	4.1 U		69.3	62.4	90	67.2	62.6	93	0	76-127/26
78-93-3	2-Butanone (MEK)	7.0	J	347	316	89	336	322	94	2	75-137/25
104-51-8	n-Butylbenzene	4.1 U		69.3	27.9	40*	67.2	22.2	33*	23	71-128/35
135-98-8	sec-Butylbenzene	18.3		69.3	162	207*	67.2	144	187*	12	79-135/34
98-06-6	tert-Butylbenzene	1.8	J	69.3	44.2	61*	67.2	37.4	53*	17	77-133/34
75-15-0	Carbon Disulfide	4.1 U		69.3	52.3	75	67.2	50.0	74	4	72-122/29
56-23-5	Carbon Tetrachloride	4.1 U		69.3	49.4	71*	67.2	47.2	70*	5	78-133/29
108-90-7	Chlorobenzene	4.1 U		69.3	62.3	90	67.2	59.9	89	4	81-129/29
75-00-3	Chloroethane	4.1 U		69.3	42.1	61*	67.2	52.4	78	22	68-133/29
67-66-3	Chloroform	4.1 U		69.3	56.8	82	67.2	54.6	81	4	72-123/26
95-49-8	o-Chlorotoluene	4.1 U		69.3	58.6	85	67.2	47.5	71*	21	77-129/33
106-43-4	p-Chlorotoluene	4.1 U		69.3	73.2	106	67.2	59.3	88	21	80-134/33
124-48-1	Dibromochloromethane	4.1 U		69.3	67.3	97	67.2	64.5	96	4	76-127/27
96-12-8	1,2-Dibromo-3-chloropropane	4.1 U		69.3	114	164*	67.2	96.9	144*	16	70-137/29
106-93-4	1,2-Dibromoethane	4.1 U		69.3	66.8	96	67.2	65.8	98	2	77-126/26
75-71-8	Dichlorodifluoromethane	4.1 U		69.3	43.6	63*	67.2	43.2	64*	1	68-168/29
95-50-1	1,2-Dichlorobenzene	4.1 U		69.3	57.2	83	67.2	46.6	69*	20	80-129/32
541-73-1	1,3-Dichlorobenzene	4.1 U		69.3	55.9	81	67.2	45.4	68*	21	81-129/33
106-46-7	1,4-Dichlorobenzene	4.1 U		69.3	55.3	80	67.2	44.9	67*	21	76-130/32
75-34-3	1,1-Dichloroethane	4.1 U		69.3	56.5	82	67.2	54.2	81	4	73-125/27
107-06-2	1,2-Dichloroethane	4.1 U		69.3	59.2	85	67.2	57.6	86	3	74-128/23
75-35-4	1,1-Dichloroethylene	4.1 U		69.3	51.9	75*	67.2	49.2	73*	5	81-136/28
156-59-2	cis-1,2-Dichloroethylene	4.1 U		69.3	58.7	85	67.2	56.7	84	3	74-126/26
156-60-5	trans-1,2-Dichloroethylene	4.1 U		69.3	55.7	80	67.2	53.7	80	4	70-127/27
78-87-5	1,2-Dichloropropane	4.1 U		69.3	61.0	88	67.2	59.1	88	3	74-125/25
142-28-9	1,3-Dichloropropane	4.1 U		69.3	66.5	96	67.2	64.3	96	3	76-122/26
594-20-7	2,2-Dichloropropane	4.1 U		69.3	49.1	71*	67.2	49.2	73*	0	77-133/28
563-58-6	1,1-Dichloropropene	4.1 U		69.3	53.5	77	67.2	50.5	75	6	75-130/28
10061-01-5	cis-1,3-Dichloropropene	4.1 U		69.3	62.7	90	67.2	60.3	90	4	80-123/26
10061-02-6	trans-1,3-Dichloropropene	4.1 U		69.3	70.6	102	67.2	67.4	100	5	75-131/28
100-41-4	Ethylbenzene	4.1 U		69.3	52.9	76*	67.2	49.7	74*	6	77-123/31

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA48865-1MS	2B5916.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1MSD	2B5917.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1	2B5915.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-1

CAS No.	Compound	FA48865-1 ug/kg	Spike Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD	
87-68-3	Hexachlorobutadiene	4.1 U		69.3	5.9	9*	67.2	5.1	8*	15	74-136/38
591-78-6	2-Hexanone	21 U		347	379	109	336	388	115	2	72-133/26
98-82-8	Isopropylbenzene	0.85	J	69.3	41.8	59*	67.2	38.7	56*	8	80-136/32
99-87-6	p-Isopropyltoluene	4.1 U		69.3	28.4	41*	67.2	23.1	34*	21	77-131/34
74-83-9	Methyl Bromide	4.1 U		69.3	52.8	76	67.2	52.5	78	1	65-139/31
74-87-3	Methyl Chloride	4.1 U		69.3	47.4	68*	67.2	47.9	71	1	71-144/27
74-95-3	Methylene Bromide	4.1 U		69.3	62.0	89	67.2	59.9	89	3	74-124/24
75-09-2	Methylene Chloride	8.2 U		69.3	56.1	81	67.2	53.3	79	5	74-137/28
108-10-1	4-Methyl-2-pentanone (MIBK)	21 U		347	406	117	336	422	126	4	76-132/26
1634-04-4	Methyl Tert Butyl Ether	4.1 U		69.3	58.4	84	67.2	58.2	87	0	77-120/24
91-20-3	Naphthalene	12.3		69.3	84.4	104	67.2	71.6	88	16	79-129/33
103-65-1	n-Propylbenzene	4.1 U		69.3	51.5	74*	67.2	41.7	62*	21	80-135/33
100-42-5	Styrene	4.1 U		69.3	58.4	84	67.2	56.2	84	4	78-125/30
630-20-6	1,1,1,2-Tetrachloroethane	4.1 U		69.3	59.4	86	67.2	57.2	85	4	78-126/27
79-34-5	1,1,2,2-Tetrachloroethane	4.1 U		69.3	576	831*	67.2	511	760*	12	71-126/30
127-18-4	Tetrachloroethylene	4.1 U		69.3	50.1	72*	67.2	46.5	69*	7	79-130/31
108-88-3	Toluene	4.1 U		69.3	67.7	98	67.2	63.8	95	6	76-124/30
87-61-6	1,2,3-Trichlorobenzene	4.1 U		69.3	34.7	50*	67.2	30.0	45*	15	77-128/35
120-82-1	1,2,4-Trichlorobenzene	4.1 U		69.3	35.0	50*	67.2	16.4	24*	72*	78-130/34
71-55-6	1,1,1-Trichloroethane	4.1 U		69.3	52.5	76	67.2	50.8	76	3	70-129/27
79-00-5	1,1,2-Trichloroethane	4.1 U		69.3	173	250*	67.2	165	245*	5	74-124/28
79-01-6	Trichloroethylene	4.1 U		69.3	58.7	85	67.2	55.3	82	6	75-128/27
75-69-4	Trichlorofluoromethane	4.1 U		69.3	48.5	70*	67.2	47.4	71*	2	73-145/31
96-18-4	1,2,3-Trichloropropane	4.1 U		69.3	226	326*	67.2	200	297*	12	74-127/27
95-63-6	1,2,4-Trimethylbenzene	4.1 U		69.3	49.7	72*	67.2	39.5	59*	23	74-123/34
108-67-8	1,3,5-Trimethylbenzene	4.1 U		69.3	44.8	65*	67.2	35.6	53*	23	73-122/33
108-05-4	Vinyl Acetate	21 U		347	275	79	336	265	79	4	48-164/37
75-01-4	Vinyl Chloride	4.1 U		69.3	48.0	69*	67.2	47.5	71*	1	76-141/27
	m,p-Xylene	8.2 U		139	105	76*	134	97.3	72*	8	80-128/30
95-47-6	o-Xylene	4.1 U		69.3	55.1	79*	67.2	52.1	77*	6	80-132/30

CAS No.	Surrogate Recoveries	MS	MSD	FA48865-1	Limits
1868-53-7	Dibromofluoromethane	99%	99%	95%	75-124%
17060-07-0	1,2-Dichloroethane-D4	96%	97%	99%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA48865-1MS	2B5916.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1MSD	2B5917.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1	2B5915.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples: Method: SW846 8260C

FA48865-1

CAS No.	Surrogate Recoveries	MS	MSD	FA48865-1	Limits
2037-26-5	Toluene-D8	112%	110%	107%	75-126%
460-00-4	4-Bromofluorobenzene	134%*	115%	116%	71-133%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: FA48865

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA48865-3MS	2B5994.D	1	11/06/17	SP	n/a	n/a	V2B222
FA48865-3MSD	2B5995.D	1	11/06/17	SP	n/a	n/a	V2B222
FA48865-3 ^a	2B5993.D	1	11/06/17	SP	n/a	n/a	V2B222

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48865-3

CAS No.	Compound	FA48865-3 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	210 U	2110	1670	79	2110	1710	81	2	76-126/26
104-51-8	n-Butylbenzene	210 U	2110	1790	85	2110	1810	86	1	71-128/35
135-98-8	sec-Butylbenzene	210 U	2110	1560	74*	2110	1580	75*	1	79-135/34
98-06-6	tert-Butylbenzene	210 U	2110	1560	74*	2110	1560	74*	0	77-133/34
100-41-4	Ethylbenzene	210 U	2110	1720	82	2110	1750	83	2	77-123/31
98-82-8	Isopropylbenzene	210 U	2110	1620	77*	2110	1630	77*	1	80-136/32
99-87-6	p-Isopropyltoluene	210 U	2110	1760	84	2110	1790	85	2	77-131/34
103-65-1	n-Propylbenzene	210 U	2110	1630	77*	2110	1660	79*	2	80-135/33
108-88-3	Toluene	210 U	2110	1770	84	2110	1780	85	1	76-124/30
95-63-6	1,2,4-Trimethylbenzene	210 U	2110	1790	85	2110	1830	87	2	74-123/34
108-67-8	1,3,5-Trimethylbenzene	210 U	2110	1720	82	2110	1760	84	2	73-122/33
1330-20-7	Xylene (total)	630 U	6320	5140	81	6320	5230	83	2	80-129/30

CAS No.	Surrogate Recoveries	MS	MSD	FA48865-3	Limits
1868-53-7	Dibromofluoromethane	98%	98%	96%	75-124%
17060-07-0	1,2-Dichloroethane-D4	96%	96%	100%	72-135%
2037-26-5	Toluene-D8	101%	98%	99%	75-126%
460-00-4	4-Bromofluorobenzene	102%	102%	105%	71-133%

(a) Dilution required due to matrix interference (surrogate standard failure).

* = Outside of Control Limits.

Instrument Performance Check (BFB)

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-BFB
Lab File ID: 2B5774.D
Instrument ID: GCMS2B
Injection Date: 10/24/17
Injection Time: 09:49

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	85885	21.1	Pass
75	30.0 - 60.0% of mass 95	205504	50.4	Pass
95	Base peak, 100% relative abundance	407872	100.0	Pass
96	5.0 - 9.0% of mass 95	27469	6.73	Pass
173	Less than 2.0% of mass 174	2160	0.53 (0.80) ^a	Pass
174	50.0 - 100.0% of mass 95	268352	65.8	Pass
175	5.0 - 9.0% of mass 174	19983	4.90 (7.45) ^a	Pass
176	95.0 - 101.0% of mass 174	259328	63.6 (96.6) ^a	Pass
177	5.0 - 9.0% of mass 176	17309	4.24 (6.67) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B212-IC0212	2B5775.D	10/24/17	10:20	00:31	Initial cal 1
V2B212-IC0212	2B5776.D	10/24/17	10:45	00:56	Initial cal 2
V2B212-IC0212	2B5777.D	10/24/17	11:09	01:20	Initial cal 3
V2B212-IC0212	2B5778.D	10/24/17	11:33	01:44	Initial cal 4
V2B212-IC0212	2B5779.D	10/24/17	11:57	02:08	Initial cal 5
V2B212-IC0212	2B5780.D	10/24/17	12:21	02:32	Initial cal 6
V2B212-IC0212	2B5781.D	10/24/17	12:45	02:56	Initial cal 7
V2B212-ICV0212	2B5788.D	10/24/17	15:36	05:47	Initial cal verification 5
V2B212-BS	2B5788.D	10/24/17	15:36	05:47	Blank Spike
V2B212-MB	2B5789.D	10/24/17	16:00	06:11	Method Blank
ZZZZZZ	2B5790.D	10/24/17	16:28	06:39	(unrelated sample)
ZZZZZZ	2B5791.D	10/24/17	16:52	07:03	(unrelated sample)
ZZZZZZ	2B5792.D	10/24/17	17:16	07:27	(unrelated sample)
FA48590-4	2B5793.D	10/24/17	17:41	07:52	(used for QC only; not part of job FA48865)
ZZZZZZ	2B5794.D	10/24/17	18:05	08:16	(unrelated sample)
ZZZZZZ	2B5795.D	10/24/17	18:29	08:40	(unrelated sample)
ZZZZZZ	2B5796.D	10/24/17	18:53	09:04	(unrelated sample)
ZZZZZZ	2B5797.D	10/24/17	19:17	09:28	(unrelated sample)
FA48590-4MS	2B5798.D	10/24/17	19:41	09:52	Matrix Spike
FA48590-4MSD	2B5799.D	10/24/17	20:06	10:17	Matrix Spike Duplicate
V2B212-ECC0212	2B5800.D	10/24/17	20:30	10:41	Ending cal 5

Instrument Performance Check (BFB)

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B216-BFB **Injection Date:** 10/30/17
Lab File ID: 2B5881.D **Injection Time:** 10:59
Instrument ID: GCMS2B

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	89587	20.8	Pass
75	30.0 - 60.0% of mass 95	214955	50.0	Pass
95	Base peak, 100% relative abundance	429696	100.0	Pass
96	5.0 - 9.0% of mass 95	29120	6.78	Pass
173	Less than 2.0% of mass 174	2317	0.54 (0.82) ^a	Pass
174	50.0 - 100.0% of mass 95	283243	65.9	Pass
175	5.0 - 9.0% of mass 174	20779	4.84 (7.34) ^a	Pass
176	95.0 - 101.0% of mass 174	275029	64.0 (97.1) ^a	Pass
177	5.0 - 9.0% of mass 176	18022	4.19 (6.55) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B216-CC0212	2B5882.D	10/30/17	13:18	02:19	Continuing cal 5
V2B218-MB	2B5883.D	10/30/17	13:42	02:43	Method Blank
V2B216-MB	2B5883.D	10/30/17	13:42	02:43	Method Blank
V2B217-MB	2B5883.D	10/30/17	13:42	02:43	Method Blank
V2B216-BS	2B5884.D	10/30/17	14:07	03:08	Blank Spike
V2B217-BS	2B5884.D	10/30/17	14:07	03:08	Blank Spike
V2B218-BS	2B5884.D	10/30/17	14:07	03:08	Blank Spike
FA48865-3	2B5887.D	10/30/17	15:29	04:30	NIKE SW2 WEST SIDEWALL
FA48865-4	2B5888.D	10/30/17	15:54	04:55	NIKE SIDEWALL NW1
FA48865-1	2B5889.D	10/30/17	16:18	05:19	NIKE SIDEWALL NORTH3 EXT
FA48865-1MS	2B5890.D	10/30/17	16:43	05:44	Matrix Spike
FA48865-1MSD	2B5891.D	10/30/17	17:07	06:08	Matrix Spike Duplicate
FA48865-2	2B5892.D	10/30/17	17:31	06:32	NIKE BOT NW1
FA48865-3	2B5893.D	10/30/17	17:55	06:56	NIKE SW2 WEST SIDEWALL
ZZZZZZ	2B5894.D	10/30/17	18:20	07:21	(unrelated sample)
V2B216-ECC0212	2B5906.D	10/30/17	23:12	12:13	Ending cal 5

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-BFB **Injection Date:** 11/02/17
Lab File ID: 2B5911.D **Injection Time:** 09:17
Instrument ID: GCMS2B

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	76885	20.0	Pass
75	30.0 - 60.0% of mass 95	187264	48.7	Pass
95	Base peak, 100% relative abundance	384597	100.0	Pass
96	5.0 - 9.0% of mass 95	26123	6.79	Pass
173	Less than 2.0% of mass 174	1358	0.35 (0.52) ^a	Pass
174	50.0 - 100.0% of mass 95	259648	67.5	Pass
175	5.0 - 9.0% of mass 174	19114	4.97 (7.36) ^a	Pass
176	95.0 - 101.0% of mass 174	251264	65.3 (96.8) ^a	Pass
177	5.0 - 9.0% of mass 176	16407	4.27 (6.53) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B219-CC0212	2B5912.D	11/02/17	09:41	00:24	Continuing cal 5
V2B219-MB	2B5913.D	11/02/17	10:05	00:48	Method Blank
V2B219-BS	2B5914.D	11/02/17	10:30	01:13	Blank Spike
FA48865-1	2B5915.D	11/02/17	10:53	01:36	NIKE SIDEWALL NORTH3 EXT
FA48865-1MS	2B5916.D	11/02/17	11:17	02:00	Matrix Spike
FA48865-1MSD	2B5917.D	11/02/17	11:42	02:25	Matrix Spike Duplicate
ZZZZZZ	2B5918.D	11/02/17	12:19	03:02	(unrelated sample)
ZZZZZZ	2B5919.D	11/02/17	12:43	03:26	(unrelated sample)
ZZZZZZ	2B5920.D	11/02/17	13:07	03:50	(unrelated sample)
ZZZZZZ	2B5921.D	11/02/17	14:21	05:04	(unrelated sample)
ZZZZZZ	2B5922.D	11/02/17	14:45	05:28	(unrelated sample)
V2B219-ECC0212	2B5923.D	11/02/17	15:09	05:52	Ending cal 5

Instrument Performance Check (BFB)

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample:	V2B222-BFB	Injection Date:	11/06/17
Lab File ID:	2B5989.D	Injection Time:	11:04
Instrument ID:	GCMS2B		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	72032	19.9	Pass
75	30.0 - 60.0% of mass 95	176341	48.7	Pass
95	Base peak, 100% relative abundance	361963	100.0	Pass
96	5.0 - 9.0% of mass 95	24939	6.89	Pass
173	Less than 2.0% of mass 174	1536	0.42 (0.62) ^a	Pass
174	50.0 - 100.0% of mass 95	249067	68.8	Pass
175	5.0 - 9.0% of mass 174	18205	5.03 (7.31) ^a	Pass
176	95.0 - 101.0% of mass 174	242496	67.0 (97.4) ^a	Pass
177	5.0 - 9.0% of mass 176	16192	4.47 (6.68) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B222-CC0212	2B5990.D	11/06/17	11:31	00:27	Continuing cal 5
V2B222-MB	2B5991.D	11/06/17	12:03	00:59	Method Blank
V2B222-BS	2B5992.D	11/06/17	12:27	01:23	Blank Spike
FA48865-3	2B5993.D	11/06/17	12:51	01:47	NIKE SW2 WEST SIDEWALL
FA48865-3MS	2B5994.D	11/06/17	13:15	02:11	Matrix Spike
FA48865-3MSD	2B5995.D	11/06/17	13:39	02:35	Matrix Spike Duplicate
V2B222-ECC0212	2B5996.D	11/06/17	14:03	02:59	Ending cal 5

Internal Standard Area Summary

Page 1 of 1

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: V2B216-CC0212	Injection Date: 10/30/17
Lab File ID: 2B5882.D	Injection Time: 13:18
Instrument ID: GCMS2B	Method: SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal ^a	1164392	9.97	815217	12.83	400604	14.48	138415	6.38
Check Std ^b	1285295	9.97	861521	12.82	389949	14.48	165810	6.38
Upper Limit ^c	2570590	10.14	1723042	12.99	779898	14.65	331620	6.55
Lower Limit ^d	642648	9.80	430761	12.65	194975	14.31	82905	6.21

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
V2B218-MB	1295168	9.97	939302	12.82	427002	14.48	178979	6.44
V2B217-MB	1295544	9.97	939302	12.82	427002	14.48	166858	6.44
V2B216-MB	1295168	9.97	939302	12.82	427002	14.48	178979	6.44
V2B216-BS	1297422	9.97	928996	12.83	439220	14.48	138054	6.38
V2B218-BS	1297422	9.97	928996	12.83	439220	14.48	138054	6.38
V2B217-BS	1297422	9.97	928996	12.83	439220	14.48	138054	6.38
FA48865-3 ^e	880637	9.97	377755*	12.83	76290*	14.48	68642*	6.38
FA48865-4	1259157	9.97	852027	12.83	320739	14.48	103557	6.38
FA48865-1 ^f	1407651	9.97	849969	12.83	472712	14.48	161930	6.46
FA48865-1MS	1528089	9.97	1135643	12.83	564125	14.48	143558	6.48
FA48865-1MSD	1365630	9.97	979046	12.83	484870	14.48	130004	6.46
FA48865-2	1345299	9.97	884339	12.83	338473	14.48	96987	6.38
FA48865-3 ^e	906971	9.97	388261*	12.83	74782*	14.48	42971*	6.38
ZZZZZZ	1405002	9.97	1004786	12.83	497518	14.48	170143	6.38
V2B216-ECC0212	1302793	9.97	917256	12.83	430774	14.48	176906	6.38

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

- (a) Initial Cal is: V2B212-ICC0212 2B5779.D 10/24/17 11:57
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.
(e) Confirmation run for surrogate recoveries.
(f) Confirmation run.

Internal Standard Area Summary

Page 1 of 1

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: V2B219-CC0212	Injection Date: 11/02/17
Lab File ID: 2B5912.D	Injection Time: 09:41
Instrument ID: GCMS2B	Method: SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal ^a	1164392	9.97	815217	12.83	400604	14.48	138415	6.38
Check Std ^b	1293166	9.97	926788	12.83	432132	14.48	155942	6.38
Upper Limit ^c	2586332	10.14	1853576	13.00	864264	14.65	311884	6.55
Lower Limit ^d	646583	9.80	463394	12.66	216066	14.31	77971	6.21

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
V2B219-MB	1278395	9.97	948398	12.82	433978	14.48	149906	6.45
V2B219-BS	1235488	9.97	909891	12.83	434469	14.48	156589	6.39
FA48865-1	1168891	9.97	797315	12.83	329982	14.48	86488	6.37
FA48865-1MS	1216086	9.97	806846	12.83	272504	14.48	117972	6.39
FA48865-1MSD	1230433	9.97	827272	12.83	322732	14.48	125659	6.38
ZZZZZZ	984188	9.97	789202	12.83	336451	14.48	46366*	6.37
ZZZZZZ	1095675	9.97	553661	12.83	133753*	14.48	96911	6.38
ZZZZZZ	1224234	9.97	814729	12.83	293228	14.48	71205*	6.37
ZZZZZZ	884627	9.97	492845	12.82	107854*	14.48	94874	6.37
ZZZZZZ	1293060	9.97	974690	12.83	455110	14.48	151161	6.44
V2B219-ECC0212	1265403	9.97	897264	12.83	436632	14.48	170102	6.38

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

- (a) Initial Cal is: V2B212-ICC0212 2B5779.D 10/24/17 11:57
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: V2B222-CC0212	Injection Date: 11/06/17
Lab File ID: 2B5990.D	Injection Time: 11:31
Instrument ID: GCMS2B	Method: SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal ^a	1164392	9.97	815217	12.83	400604	14.48	138415	6.38
Check Std ^b	1007194	9.97	788225	12.83	386976	14.48	137320	6.38
Upper Limit ^c	2014388	10.14	1576450	13.00	773952	14.65	274640	6.55
Lower Limit ^d	503597	9.80	394113	12.66	193488	14.31	68660	6.21

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
V2B222-MB	1137229	9.97	835218	12.83	391154	14.48	147273	6.44
V2B222-BS	1222519	9.97	896597	12.83	424202	14.48	142377	6.38
FA48865-3 ^e	1181785	9.97	865006	12.83	408181	14.48	147084	6.45
FA48865-3MS	1374412	9.97	972334	12.83	489497	14.48	155047	6.46
FA48865-3MSD	1332356	9.97	961820	12.83	480749	14.48	154236	6.45
V2B222-ECC0212	1303296	9.97	948856	12.83	456104	14.48	157937	6.38

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

- (a) Initial Cal is: V2B212-ICC0212 2B5779.D 10/24/17 11:57
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.
(e) Dilution required due to matrix interference (surrogate standard failure).

Surrogate Recovery Summary

Page 1 of 1

Job Number: FA48865

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8260C

Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA48865-1	2B5889.D	99	100	104	98
FA48865-1	2B5915.D	95	99	107	116
FA48865-2	2B5892.D	96	104	106	121
FA48865-3	2B5893.D	104	105	140* a	174* a
FA48865-3	2B5993.D	96	100	99	105
FA48865-3	2B5887.D	104	108	135* a	173* a
FA48865-4	2B5888.D	91	96	106	121
FA48865-1MS	2B5890.D	98	94	97	102
FA48865-1MS	2B5916.D	99	96	112	134*
FA48865-1MSD	2B5891.D	96	94	99	102
FA48865-1MSD	2B5917.D	99	97	110	115
FA48865-3MS	2B5994.D	98	96	101	102
FA48865-3MSD	2B5995.D	98	96	98	102
V2B216-BS	2B5884.D	96	96	101	103
V2B216-MB	2B5883.D	96	103	101	105
V2B219-BS	2B5914.D	99	96	98	103
V2B219-MB	2B5913.D	93	100	100	105
V2B222-BS	2B5992.D	98	97	99	105
V2B222-MB	2B5991.D	97	99	100	106

Surrogate Compounds

Recovery Limits

S1 = Dibromofluoromethane	75-124%
S2 = 1,2-Dichloroethane-D4	72-135%
S3 = Toluene-D8	75-126%
S4 = 4-Bromofluorobenzene	71-133%

(a) Outside control limits due to matrix interference. Confirmed by reanalysis.

6.6.1

6

Initial Calibration Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICC0212
Lab FileID: 2B5779.D

Response Factor Report MSVOA18

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Oct 24 16:02:23 2017
Response via : Initial Calibration

Calibration Files

1 =2B5775.D 2 =2B5776.D 3 =2B5777.D 4 =2B5778.D
5 =2B5779.D 6 =2B5780.D 7 =2B5781.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) I Fluorobenzene	-----ISTD-----								
2) Dichlorodifluorom	0.457	0.411	0.409	0.414	0.408	0.386	0.365	0.407	6.95
3)P Chloromethane	0.645	0.602	0.603	0.593	0.601	0.570	0.527	0.592	6.12
4)C Vinyl Chloride	0.618	0.569	0.569	0.572	0.579	0.539	0.501	0.564	6.42
5) Bromomethane	0.296	0.269	0.275	0.269	0.276	0.262	0.244	0.270	5.80
6) Chloroethane	0.341	0.306	0.309	0.304	0.302	0.207		0.295	15.39
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9964									
Response Ratio = 0.00000 + 0.36389 *A + -0.07780 *A^2									
7) Trichlorofluorome	0.547	0.510	0.506	0.512	0.509	0.482	0.434	0.500	7.00
8) Ethyl Ether	0.322	0.323	0.331	0.324	0.324	0.310	0.303	0.319	3.02
9) 1,2-Dichlorotrifl	0.498	0.457	0.471	0.468	0.468	0.441	0.413	0.460	5.84
10)C 1,1-Dichloroethen	0.636	0.586	0.598	0.602	0.600	0.575	0.536	0.590	5.18
11) Freon 113	0.371	0.333	0.353	0.361	0.351	0.331	0.313	0.345	5.80
12) Carbon Disulfide	1.320	1.186	1.243	1.257	1.261	1.210	1.131	1.230	4.93
13) Iodomethane	0.499	0.464	0.507	0.501	0.504	0.483	0.437	0.485	5.35
14) Allyl chloride	0.743	0.702	0.722	0.732	0.737	0.703	0.659	0.714	4.07
15) Methylene Chlorid	1.063	0.754	0.618	0.568	0.568	0.502	0.470	0.649	31.47
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9987									
Response Ratio = 0.00000 + 0.57380 *A + -0.02648 *A^2									
16) Acetone	0.127	0.134	0.115	0.102	0.096	0.090	0.087	0.107	16.86
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991									
Response Ratio = 0.00000 + 0.09925 *A + -0.00060 *A^2									
17) Methyl acetate	0.258	0.274	0.288	0.273	0.261	0.267	0.259	0.269	4.03
18) trans-1,2-Dichlor	0.580	0.545	0.553	0.552	0.547	0.518	0.476	0.539	6.12
19) Hexane	0.397	0.342	0.332	0.347	0.336	0.311	0.299	0.338	9.20
20) Methyl Tert Butyl	0.913	0.884	0.940	0.908	0.909	0.885	0.872	0.902	2.55
21) Acetonitrile	0.063	0.053	0.053	0.049	0.045	0.045	0.043	0.050	13.68
22) Di-isopropyl ethe	1.267	1.300	1.361	1.351	1.375	1.316	1.289	1.323	3.07
23) Chloroprene	0.523	0.535	0.566	0.590	0.596	0.572	0.539	0.560	5.04
24)P 1,1-Dichloroethan	0.670	0.664	0.674	0.669	0.668	0.633	0.602	0.654	4.11
25) Acrylonitrile	0.123	0.123	0.130	0.121	0.118	0.116	0.114	0.121	4.35
26) ETBE	1.043	1.055	1.113	1.089	1.099	1.061	1.049	1.073	2.54
27) Vinyl acetate	0.618	0.700	0.766	0.736	0.752	0.693	0.702	0.709	6.95
28) cis-1,2-Dichloroe	0.350	0.342	0.344	0.344	0.346	0.329	0.317	0.339	3.38
29) 2,2-Dichloropropa	0.443	0.406	0.395	0.389	0.385	0.358	0.319	0.385	10.07
30) Bromochloromethan	0.143	0.142	0.146	0.143	0.144	0.140	0.139	0.142	1.71
31) Cyclohexane	0.812	0.771	0.801	0.813	0.813	0.778	0.748	0.791	3.21
32)C Chloroform	0.540	0.547	0.559	0.559	0.560	0.530	0.516	0.545	3.10
33) Ethyl acetate	0.243	0.298	0.321	0.303	0.302	0.296	0.311	0.296	8.46
34) Tetrahydrofuran	0.179	0.207	0.222	0.206	0.205	0.195	0.201	0.202	6.43
35)S Dibromofluorometh	0.237	0.220	0.225	0.225	0.226	0.224	0.227	0.226	2.26
36) Carbon Tetrachlor	0.364	0.346	0.362	0.366	0.369	0.359	0.345	0.359	2.67
37) 1,1,1-Trichloroet	0.508	0.489	0.495	0.495	0.495	0.474	0.453	0.487	3.74

Initial Calibration Summary

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Job Number: FA48865
 Account: TCMaw Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICC0212
 Lab FileID: 2B5779.D

38)	2-Butanone	0.130	0.148	0.161	0.151	0.148	0.147	0.152	0.148	6.29
39)	1,1-Dichloroprope	0.440	0.457	0.474	0.485	0.484	0.461	0.438	0.463	4.20
40)	tert-Butyl Format	0.240	0.253	0.280	0.278	0.290	0.288	0.300	0.275	7.73
41)	Propionitrile	0.043	0.046	0.050	0.046	0.044	0.044	0.044	0.045	4.84
42)	Methacrylonitrile	0.178	0.206	0.220	0.207	0.204	0.201	0.199	0.202	6.22
43)	Benzene	1.185	1.261	1.265	1.273	1.280	1.223	1.202	1.241	3.02
44)	TAME	0.931	0.939	0.989	0.966	0.981	0.954	0.966	0.961	2.17
45)S	1,2-Dichloroethan	0.284	0.273	0.281	0.274	0.271	0.271	0.276	0.276	1.85
46)	1,2-Dichloroethan	0.357	0.389	0.403	0.394	0.391	0.373	0.369	0.382	4.27
47)	Trichloroethene	0.281	0.304	0.307	0.308	0.309	0.296	0.285	0.298	3.90
48)	Methylcyclohexane	0.696	0.666	0.689	0.721	0.715	0.682	0.673	0.692	2.94
49)	Dibromomethane	0.138	0.154	0.159	0.155	0.155	0.150	0.152	0.152	4.33
50)C	1,2-Dichloropropa	0.301	0.342	0.350	0.343	0.350	0.336	0.339	0.337	4.99
51)	Bromodichlorometh	0.289	0.335	0.350	0.353	0.364	0.353	0.364	0.344	7.60
52)	Methyl methacryla	0.194	0.246	0.271	0.262	0.263	0.261	0.277	0.253	10.98
53)	2-Chloroethyl vin	0.139	0.173	0.192	0.181	0.180	0.172	0.183	0.174	9.70
54)	cis-1,3-Dichlorop	0.381	0.464	0.479	0.470	0.474	0.459	0.479	0.458	7.53
55) I	Chlorobenzene-d5	-----ISTD-----								
56)S	Toluene-d8	1.298	1.386	1.354	1.360	1.362	1.367	1.384	1.359	2.16
57)C	Toluene	1.529	1.745	1.708	1.731	1.728	1.661	1.632	1.676	4.58
58)	2-Nitropropane	0.060	0.079	0.088	0.086	0.090	0.096	0.102	0.086	15.89
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999										
Response Ratio = 0.00000 + 0.08689 *A + 0.00075 *A^2										
59)	4-Methyl-2-pentan	0.373	0.464	0.500	0.472	0.471	0.469	0.457	0.458	8.69
60)	trans-1,3-Dichlor	0.438	0.539	0.554	0.548	0.551	0.529	0.550	0.530	7.79
61)	Tetrachloroethene	0.340	0.387	0.386	0.394	0.387	0.389	0.376	0.380	4.89
62)	Ethyl methacrylat	0.369	0.475	0.536	0.526	0.535	0.526	0.541	0.501	12.44
63)	1,1,2-Trichloroet	0.245	0.284	0.291	0.281	0.280	0.271	0.278	0.276	5.32
64)	Dibromochlorometh	0.234	0.282	0.303	0.306	0.315	0.312	0.326	0.297	10.31
65)	1,3-Dichloropropa	0.550	0.651	0.655	0.638	0.638	0.609	0.626	0.624	5.77
66)	1,2-Dibromoethane	0.255	0.302	0.311	0.307	0.312	0.301	0.301	0.298	6.61
67)	2-hexanone	0.256	0.322	0.356	0.334	0.329	0.322	0.315	0.319	9.64
68)	1-Chlorohexane	0.577	0.627	0.644	0.665	0.638	0.599	0.549	0.614	6.66
69)C	Ethylbenzene	1.851	2.024	2.026	2.062	2.022	1.958	1.861	1.972	4.31
70)P	Chlorobenzene	1.051	1.156	1.148	1.150	1.142	1.082	1.053	1.112	4.28
71)	1,1,1,2-Tetrachlo	0.298	0.335	0.351	0.356	0.368	0.368	0.371	0.350	7.45
72)	m,p-Xylene	1.430	1.574	1.594	1.622	1.594	1.538	1.372	1.532	6.18
73)	o-Xylene	1.498	1.649	1.689	1.711	1.723	1.667	1.603	1.649	4.72
74)	Styrene	0.881	1.042	1.111	1.145	1.140	1.119	1.052	1.070	8.66
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999										
Response Ratio = 0.00000 + 1.16893 *A + -0.02909 *A^2										
75)P	Bromoform	0.126	0.151	0.172	0.176	0.183	0.190	0.198	0.171	14.61
76)	Isopropylbenzene	1.816	2.023	2.052	2.113	2.095	2.047	1.942	2.013	5.10
77) I	1,4-Dichlorobenzene-d	-----ISTD-----								
78)S	4-Bromofluorobenz	0.736	0.733	0.725	0.721	0.728	0.705	0.702	0.721	1.85
79)	cis-1,4-Dichloro-	0.179	0.226	0.247	0.247	0.253	0.251	0.261	0.238	11.83
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999										
Response Ratio = 0.00000 + 0.24402 *A + 0.00415 *A^2										
80)	n-Propylbenzene	4.775	5.151	5.113	5.199	5.043	4.688	4.335	4.901	6.44
81)	Bromobenzene	0.734	0.802	0.797	0.795	0.796	0.746	0.745	0.773	3.92
82)P	1,1,2,2-Tetrachlo	0.880	0.966	0.998	0.971	0.962	0.927	0.964	0.952	4.01
83)	1,3,5-Trimethylbe	2.962	3.241	3.261	3.326	3.292	3.107	3.051	3.177	4.33
84)	2-Chlorotoluene	3.200	3.397	3.363	3.379	3.347	3.139	3.038	3.266	4.30
85)	trans-1,4-Dichlor	0.219	0.284	0.297	0.296	0.300	0.301	0.315	0.287	11.02
86)	1,2,3-Trichloropr	0.245	0.266	0.267	0.259	0.261	0.252	0.256	0.258	2.98

6.7.1
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Initial Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICC0212
Lab FileID: 2B5779.D

87)	Cyclohexanone	0.055	0.060	0.067	0.064	0.064	0.063	0.065	0.062	6.25
88)	4-Chlorotoluene	2.841	3.086	3.053	3.042	2.939	2.717	2.489	2.881	7.54
89)	tert-Butylbenzene	1.636	1.979	1.976	2.052	2.071	1.978	2.017	1.958	7.51
90)	1,2,4-Trimethylbe	2.959	3.206	3.238	3.265	3.221	3.028	2.934	3.121	4.56
91)	Pentachloroethane	0.361	0.429	0.437	0.458	0.474	0.451	0.497	0.444	9.70
92)	sec-Butylbenzene	4.246	4.620	4.628	4.740	4.663	4.387	4.237	4.503	4.63
93)	4-Isopropyltoluen	3.158	3.402	3.424	3.496	3.354	3.153	2.971	3.280	5.76
94)	1,3-Dichlorobenze	1.578	1.681	1.671	1.654	1.583	1.467	1.359	1.571	7.57
95)	1,4-Dichlorobenze	1.616	1.723	1.695	1.673	1.592	1.473	1.355	1.590	8.33
96)	n-Butylbenzene	1.794	1.975	1.985	2.000	1.876	1.734	1.567	1.847	8.66
97)	Benzyl Chloride	0.266	0.326	0.348	0.362	0.363	0.362	0.386	0.345	11.41
98)	1,2-Dichlorobenze	1.500	1.618	1.615	1.614	1.569	1.480	1.418	1.545	5.14
99)	1,2-Dibromo-3-Chl	0.154	0.168	0.181	0.172	0.176	0.179	0.188	0.174	6.19
100)	Hexachlorobutadie	0.544	0.554	0.555	0.567	0.504	0.477	0.420	0.517	10.36
101)	1,2,4-Trichlorobe	0.966	0.959	0.947	0.923	0.852	0.767	0.680	0.871	12.65
102)	Naphthalene	2.235	2.326	2.464	2.408	2.375	2.318	2.286	2.345	3.29
103)	1,2,3-Trichlorobe	0.917	0.894	0.904	0.889	0.839	0.778	0.720	0.849	8.75
104)	I Tert Butyl Alcohol-d1	-----ISTD-----								
105)	Ethanol	0.228	0.225	0.220	0.210	0.202	0.188	0.187	0.209	8.12
106)	Acrolein	2.065	2.280	2.192	2.317	2.389	2.279	2.269	2.256	4.55
107)	Tert butyl alcoho	1.504	1.662	1.613	1.647	1.646	1.592	1.608	1.610	3.29
108)	Isobutyl alcohol	0.326	0.406	0.413	0.428	0.440	0.426	0.451	0.413	10.02
109)	Tert Amyl Alcohol	0.926	1.177	1.206	1.247	1.285	1.239	1.314	1.199	10.74
110)	1,4-Dioxane	0.106	0.130	0.126	0.137	0.135	0.127	0.130	0.127	7.95

(#) = Out of Range

102417APP9-2B.m

Tue Oct 24 16:05:30 2017

6.7.1
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Initial Calibration Verification

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICV0212
Lab FileID: 2B5788.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\102417\2B5788.D Vial: 19
Acq On : 24 Oct 2017 3:36 pm Operator: seanp
Sample : ICV0212-5, BS Inst : MSVOA18
Misc : MS38601,V2B212,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Oct 24 16:02:23 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	103	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.416	-2.2	105	0.00	2.64
3 P	Chloromethane	0.592	0.573	3.2	98	0.00	2.93
4 C	Vinyl Chloride	0.564	0.550	2.5	98	0.00	3.09
5	Bromomethane	0.270	0.271	-0.4	101	0.00	3.61
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	59.881	-19.8	111	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.532	-6.4	108	0.00	4.05
8	Ethyl Ether	0.319	0.315	1.3	100	0.00	4.57
9	1,2-Dichlorotrifluoroetha	0.460	0.468	-1.7	103	0.00	4.90
10 C	1,1-Dichloroethene	0.590	0.596	-1.0	102	0.00	4.86
11	Freon 113	0.345	0.303	12.2	89	0.00	4.97
12	Carbon Disulfide	1.230	1.097	10.8	90	0.00	4.89
13	Iodomethane	0.485	0.458	5.6	94	0.00	5.08
14	Allyl chloride	0.714	0.668	6.4	93	0.00	5.66
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	50.417	-0.8	100	0.00	5.83
16	Acetone	250.000	267.335	-6.9	110	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.276	-2.6	109	0.00	6.16
18	trans-1,2-Dichloroethene	0.539	0.555	-3.0	105	0.00	6.10
19	Hexane	0.338	0.324	4.1	99	0.00	6.24
20	Methyl Tert Butyl Ether	0.902	0.914	-1.3	104	0.00	6.31
21	Acetonitrile	0.050	0.046	8.0	105	0.00	6.72
22	Di-isopropyl ether	1.323	1.342	-1.4	101	0.00	6.97
23	Chloroprene	0.560	0.594	-6.1	103	0.00	7.12
24 P	1,1-Dichloroethane	0.654	0.699	-6.9	108	0.00	7.16
25	Acrylonitrile	0.121	0.120	0.8	105	0.00	7.27
26	ETBE	1.073	1.093	-1.9	103	0.00	7.62
27	Vinyl acetate	0.709	0.746	-5.2	102	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.354	-4.4	105	0.00	8.13
29	2,2-Dichloropropane	0.385	0.392	-1.8	105	0.00	8.33
30	Bromochloromethane	0.142	0.141	0.7	101	0.00	8.48
31	Cyclohexane	0.791	0.764	3.4	97	0.00	8.47
32 C	Chloroform	0.545	0.557	-2.2	102	0.00	8.61
33	Ethyl acetate	0.296	0.312	-5.4	107	0.00	8.85
34	Tetrahydrofuran	0.202	0.210	-4.0	105	0.00	8.88

Initial Calibration Verification

Page 2 of 3

Job Number: FA48865
 Account: TCMaw Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICV0212
 Lab FileID: 2B5788.D

35	S	Dibromofluoromethane	0.226	0.226	0.0	103	0.00	8.90
36		Carbon Tetrachloride	0.359	0.366	-1.9	102	0.00	8.81
37		1,1,1-Trichloroethane	0.487	0.486	0.2	101	0.00	8.93
38		2-Butanone	0.148	0.162	-9.5	113	0.00	9.11
39		1,1-Dichloropropene	0.463	0.467	-0.9	100	0.00	9.11
40		tert-Butyl Formate	0.275	0.282	-2.5	100	0.00	9.30
41		Propionitrile	0.045	0.046	-2.2	108	0.00	9.51
42		Methacrylonitrile	0.202	0.209	-3.5	105	0.00	9.53
43		Benzene	1.241	1.394	-12.3	112	0.00	9.45
44		TAME	0.961	0.969	-0.8	102	0.00	9.62
45	S	1,2-Dichloroethane-d4	0.276	0.277	-0.4	106	0.00	9.63
46		1,2-Dichloroethane	0.382	0.407	-6.5	107	0.00	9.72
47		Trichloroethene	0.298	0.314	-5.4	105	0.00	10.16
48		Methylcyclohexane	0.692	0.702	-1.4	101	0.00	10.14
49		Dibromomethane	0.152	0.162	-6.6	108	0.00	10.62
50	C	1,2-Dichloropropane	0.337	0.357	-5.9	105	0.00	10.72
51		Bromodichloromethane	0.344	0.374	-8.7	106	0.00	10.78
52		Methyl methacrylate	0.253	0.277	-9.5	108	0.00	10.95
53		2-Chloroethyl vinyl ether	0.174	0.178	-2.3	102	0.00	11.33
54		cis-1,3-Dichloropropene	0.458	0.497	-8.5	108	0.00	11.39
55	I	Chlorobenzene-d5	1.000	1.000	0.0	105	0.00	12.83
56	S	Toluene-d8	1.359	1.356	0.2	105	0.00	11.56
57	C	Toluene	1.676	1.866	-11.3	114	0.00	11.60
----- Amount Calc. %Drift -----								
58		2-Nitropropane	250.000	232.229	7.1	99	0.00	11.81
----- AvgRF CCRF %Dev -----								
59		4-Methyl-2-pentanone	0.458	0.502	-9.6	112	0.00	11.92
60		trans-1,3-Dichloropropene	0.530	0.609	-14.9	116	0.00	11.95
61		Tetrachloroethene	0.380	0.383	-0.8	104	0.00	11.93
62		Ethyl methacrylate	0.501	0.535	-6.8	105	0.00	12.08
63		1,1,2-Trichloroethane	0.276	0.292	-5.8	110	0.00	12.09
64		Dibromochloromethane	0.297	0.324	-9.1	108	0.00	12.24
65		1,3-Dichloropropane	0.624	0.638	-2.2	105	0.00	12.31
66		1,2-Dibromoethane	0.298	0.319	-7.0	108	0.00	12.44
67		2-hexanone	0.319	0.349	-9.4	112	0.00	12.59
68		1-Chlorohexane	0.614	0.607	1.1	100	0.00	12.80
69	C	Ethylbenzene	1.972	2.170	-10.0	113	0.00	12.84
70	P	Chlorobenzene	1.112	1.143	-2.8	106	0.00	12.84
71		1,1,1,2-Tetrachloroethane	0.350	0.381	-8.9	109	0.00	12.88
72		m,p-Xylene	1.532	1.655	-8.0	109	0.00	12.95
73		o-Xylene	1.649	1.700	-3.1	104	0.00	13.27
----- Amount Calc. %Drift -----								
74		Styrene	50.000	54.729	-9.5	115	0.00	13.31
----- AvgRF CCRF %Dev -----								
75	P	Bromoform	0.171	0.187	-9.4	107	0.00	13.34
76		Isopropylbenzene	2.013	2.102	-4.4	106	0.00	13.49
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	14.48
78	S	4-Bromofluorobenzene	0.721	0.720	0.1	105	0.00	13.70
----- Amount Calc. %Drift -----								
79		cis-1,4-Dichloro-2-butene	50.000	60.670	-21.3#	127	0.00	13.74
----- AvgRF CCRF %Dev -----								
80		n-Propylbenzene	4.901	5.037	-2.8	106	0.00	13.78

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Initial Calibration Verification

Page 3 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICV0212
Lab FileID: 2B5788.D

81	Bromobenzene	0.773	0.860	-11.3	115	0.00	13.80
82 P	1,1,2,2-Tetrachloroethane	0.952	0.989	-3.9	110	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	3.477	-9.4	113	0.00	13.90
84	2-Chlorotoluene	3.266	3.343	-2.4	106	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.285	0.7	101	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.270	-4.7	110	0.00	13.94
87	Cyclohexanone	0.062	0.063	-1.6	105	0.00	13.99
88	4-Chlorotoluene	2.881	2.886	-0.2	105	0.00	14.02
89	tert-Butylbenzene	1.958	2.018	-3.1	104	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	3.466	-11.1	115	0.00	14.18
91	Pentachloroethane	0.444	0.469	-5.6	105	0.00	14.17
92	sec-Butylbenzene	4.503	4.651	-3.3	106	0.00	14.25
93	4-Isopropyltoluene	3.280	3.673	-12.0	117	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.599	-1.8	108	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.589	0.1	106	0.00	14.49
96	n-Butylbenzene	1.847	1.977	-7.0	112	0.00	14.63
97	Benzyl Chloride	0.345	0.349	-1.2	102	0.00	14.66
98	1,2-Dichlorobenzene	1.545	1.565	-1.3	106	0.00	14.79
99	1,2-Dibromo-3-Chloropropa	0.174	0.176	-1.1	107	0.00	15.32
100	Hexachlorobutadiene	0.517	0.501	3.1	106	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	0.884	-1.5	111	0.00	15.77
102	Naphthalene	2.345	2.603	-11.0	117	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.845	0.5	107	0.00	16.15

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	111	0.00	6.38
105	Ethanol	0.209	0.200	4.3	109	0.00	4.84
106	Acrolein	2.256	2.482	-10.0	115	0.00	5.44
107	Tert butyl alcohol	1.610	1.573	2.3	106	0.00	6.50
108	Isobutyl alcohol	0.413	0.422	-2.2	106	0.00	9.77
109	Tert Amyl Alcohol	1.199	1.226	-2.3	106	0.00	9.88
110	1,4-Dioxane	0.127	0.129	-1.6	106	0.00	10.99

(#) = Out of Range
 2B5779.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 0
 Tue Oct 24 16:04:15 2017

6.7.2
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Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B216-CC0212
Lab FileID: 2B5882.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\103017\2B5882.D Vial: 6
Acq On : 30 Oct 2017 1:18 pm Operator: seanp
Sample : CC0212-5 Inst : MSVOA18
Misc : MS38677,V2B216,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Mon Oct 30 13:59:15 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	110	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.366	10.1	99	0.00	2.64
3 P	Chloromethane	0.592	0.520	12.2	96	0.00	2.93
4 C	Vinyl Chloride	0.564	0.498	11.7	95	0.00	3.08
5	Bromomethane	0.270	0.242	10.4	97	0.00	3.61
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	45.193	9.6	97	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.445	11.0	97	0.00	4.05
8	Ethyl Ether	0.319	0.263	17.6	90	0.00	4.56
9	1,2-Dichlorotrifluoroetha	0.460	0.397	13.7	94	0.00	4.89
10 C	1,1-Dichloroethene	0.590	0.531	10.0	98	0.00	4.86
11	Freon 113	0.345	0.310	10.1	98	0.00	4.96
12	Carbon Disulfide	1.230	1.133	7.9	99	0.00	4.88
13	Iodomethane	0.485	0.435	10.3	95	0.00	5.08
14	Allyl chloride	0.714	0.641	10.2	96	0.00	5.65
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	45.370	9.3	97	0.00	5.82
16	Acetone	250.000	225.165	9.9	100	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.202	24.9#	85	0.00	6.15
18	trans-1,2-Dichloroethene	0.539	0.482	10.6	97	0.00	6.09
19	Hexane	0.338	0.285	15.7	93	0.00	6.23
20	Methyl Tert Butyl Ether	0.902	0.775	14.1	94	0.00	6.30
21	Acetonitrile	0.050	0.039	22.0#	94	0.00	6.72
22	Di-isopropyl ether	1.323	1.126	14.9	90	0.00	6.97
23	Chloroprene	0.560	0.489	12.7	91	0.00	7.11
24 P	1,1-Dichloroethane	0.654	0.556	15.0	92	0.00	7.16
25	Acrylonitrile	0.121	0.099	18.2	93	0.00	7.27
26	ETBE	1.073	0.917	14.5	92	0.00	7.61
27	Vinyl acetate	0.709	0.614	13.4	90	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.291	14.2	93	0.00	8.12
29	2,2-Dichloropropane	0.385	0.358	7.0	103	0.00	8.33
30	Bromochloromethane	0.142	0.118	16.9	91	0.00	8.47
31	Cyclohexane	0.791	0.697	11.9	95	0.00	8.47
32 C	Chloroform	0.545	0.457	16.1	90	0.00	8.61
33	Ethyl acetate	0.296	0.242	18.2	89	0.00	8.84
34	Tetrahydrofuran	0.202	0.163	19.3	88	0.00	8.87

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B216-CC0212
Lab FileID: 2B5882.D

35	S	Dibromofluoromethane	0.226	0.237	-4.9	116	0.00	8.90
36		Carbon Tetrachloride	0.359	0.327	8.9	98	0.00	8.81
37		1,1,1-Trichloroethane	0.487	0.437	10.3	97	0.00	8.92
38		2-Butanone	0.148	0.121	18.2	90	0.00	9.11
39		1,1-Dichloropropene	0.463	0.389	16.0	89	0.00	9.11
40		tert-Butyl Formate	0.275	0.246	10.5	94	0.00	9.29
41		Propionitrile	0.045	0.036	20.0#	88	0.00	9.50
42		Methacrylonitrile	0.202	0.161	20.3#	87	0.00	9.53
43		Benzene	1.241	1.037	16.4	89	0.00	9.45
44		TAME	0.961	0.808	15.9	91	0.00	9.61
45	S	1,2-Dichloroethane-d4	0.276	0.285	-3.3	116	0.00	9.63
46		1,2-Dichloroethane	0.382	0.314	17.8	89	0.00	9.71
47		Trichloroethene	0.298	0.255	14.4	91	0.00	10.16
48		Methylcyclohexane	0.692	0.618	10.7	95	0.00	10.14
49		Dibromomethane	0.152	0.126	17.1	90	0.00	10.61
50	C	1,2-Dichloropropane	0.337	0.286	15.1	90	0.00	10.72
51		Bromodichloromethane	0.344	0.298	13.4	90	0.00	10.78
52		Methyl methacrylate	0.253	0.210	17.0	88	0.00	10.94
53		2-Chloroethyl vinyl ether	0.174	0.121	30.5#	74	0.00	11.33
54		cis-1,3-Dichloropropene	0.458	0.402	12.2	94	0.00	11.39
55	I	Chlorobenzene-d5	1.000	1.000	0.0	106	0.00	12.82
56	S	Toluene-d8	1.359	1.454	-7.0	113	0.00	11.55
57	C	Toluene	1.676	1.546	7.8	95	0.00	11.60
58		2-Nitropropane	250.000	224.897	10.0	96	0.00	11.81
59		4-Methyl-2-pentanone	0.458	0.416	9.2	93	0.00	11.92
60		trans-1,3-Dichloropropene	0.530	0.476	10.2	91	0.00	11.95
61		Tetrachloroethene	0.380	0.356	6.3	97	0.00	11.93
62		Ethyl methacrylate	0.501	0.444	11.4	88	0.00	12.07
63		1,1,2-Trichloroethane	0.276	0.241	12.7	91	0.00	12.09
64		Dibromochloromethane	0.297	0.275	7.4	92	0.00	12.23
65		1,3-Dichloropropane	0.624	0.533	14.6	88	0.00	12.31
66		1,2-Dibromoethane	0.298	0.253	15.1	86	0.00	12.44
67		2-hexanone	0.319	0.263	17.6	85	0.00	12.59
68		1-Chlorohexane	0.614	0.558	9.1	92	0.00	12.80
69	C	Ethylbenzene	1.972	1.789	9.3	94	0.00	12.84
70	P	Chlorobenzene	1.112	1.000	10.1	93	0.00	12.84
71		1,1,1,2-Tetrachloroethane	0.350	0.323	7.7	93	0.00	12.88
72		m,p-Xylene	1.532	1.429	6.7	95	0.00	12.95
73		o-Xylene	1.649	1.531	7.2	94	0.00	13.27
74		Styrene	50.000	42.478	15.0	90	0.00	13.31
75	P	Bromoform	0.171	0.154	9.9	89	0.00	13.34
76		Isopropylbenzene	2.013	1.902	5.5	96	0.00	13.48
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	14.48
78	S	4-Bromofluorobenzene	0.721	0.745	-3.3	100	0.00	13.70
79		cis-1,4-Dichloro-2-butene	50.000	43.650	12.7	83	0.00	13.74
80		n-Propylbenzene	4.901	5.049	-3.0	97	0.00	13.78

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B216-CC0212
Lab FileID: 2B5882.D

81	Bromobenzene	0.773	0.739	4.4	90	0.00	13.79
82 P	1,1,2,2-Tetrachloroethane	0.952	0.878	7.8	89	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	3.323	-4.6	98	0.00	13.90
84	2-Chlorotoluene	3.266	3.331	-2.0	97	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.247	13.9	80	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.231	10.5	86	0.00	13.94
87	Cyclohexanone	0.062	0.071	-14.5	107	0.00	13.99
88	4-Chlorotoluene	2.881	2.917	-1.2	97	0.00	14.02
89	tert-Butylbenzene	1.958	1.953	0.3	92	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	3.291	-5.4	99	0.00	14.18
91	Pentachloroethane	0.444	0.493	-11.0	101	0.00	14.17
92	sec-Butylbenzene	4.503	4.690	-4.2	98	0.00	14.25
93	4-Isopropyltoluene	3.280	3.534	-7.7	103	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.616	-2.9	99	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.640	-3.1	100	0.00	14.49
96	n-Butylbenzene	1.847	2.071	-12.1	108	0.00	14.63
97	Benzyl Chloride	0.345	0.331	4.1	89	0.00	14.65
98	1,2-Dichlorobenzene	1.545	1.556	-0.7	97	0.00	14.79
99	1,2-Dibromo-3-Chloropropa	0.174	0.157	9.8	87	0.00	15.32
100	Hexachlorobutadiene	0.517	0.583	-12.8	113	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	1.056	-21.2#	121	0.00	15.77
102	Naphthalene	2.345	2.400	-2.3	98	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.964	-13.5	112	0.00	16.15

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	120	0.00	6.38
105	Ethanol	0.209	0.158	24.4#	93	0.00	4.83
106	Acrolein	2.256	1.859	17.6	93	0.00	5.44
107	Tert butyl alcohol	1.610	1.207	25.0#	88	0.00	6.50
108	Isobutyl alcohol	0.413	0.322	22.0#	87	0.00	9.76
109	Tert Amyl Alcohol	1.199	0.928	22.6#	86	0.00	9.88
110	1,4-Dioxane	0.127	0.100	21.3#	88	0.00	10.99

(#) = Out of Range
 2B5882.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 0
 Mon Oct 30 15:06:33 2017

6.7.3
 6

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B216-ECC0212
Lab FileID: 2B5906.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\103017\2B5906.D Vial: 30
Acq On : 30 Oct 2017 11:12 pm Operator: seanp
Sample : ECC0212-5 Inst : MSVOA18
Misc : MS38691,V2B216,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Mon Oct 30 13:59:15 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	112	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.354	13.0	97	0.00	2.64
3 P	Chloromethane	0.592	0.535	9.6	100	0.00	2.93
4 C	Vinyl Chloride	0.564	0.516	8.5	100	0.00	3.09
5	Bromomethane	0.270	0.253	6.3	102	0.00	3.61
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	46.325	7.3	100	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.448	10.4	98	0.00	4.06
8	Ethyl Ether	0.319	0.304	4.7	105	0.00	4.57
9	1,2-Dichlorotrifluoroetha	0.460	0.422	8.3	101	0.00	4.89
10 C	1,1-Dichloroethene	0.590	0.549	6.9	102	0.00	4.86
11	Freon 113	0.345	0.320	7.2	102	0.00	4.97
12	Carbon Disulfide	1.230	1.122	8.8	100	0.00	4.89
13	Iodomethane	0.485	0.474	2.3	105	0.00	5.08
14	Allyl chloride	0.714	0.675	5.5	103	0.00	5.65
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	48.147	3.7	104	0.00	5.82
16	Acetone	250.000	261.520	-4.6	117	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.285	-5.9	122	0.00	6.15
18	trans-1,2-Dichloroethene	0.539	0.488	9.5	100	0.00	6.10
19	Hexane	0.338	0.297	12.1	99	0.00	6.24
20	Methyl Tert Butyl Ether	0.902	0.869	3.7	107	0.00	6.31
21	Acetonitrile	0.050	0.046	8.0	113	0.00	6.72
22	Di-isopropyl ether	1.323	1.259	4.8	102	0.00	6.97
23	Chloroprene	0.560	0.539	3.8	101	0.00	7.11
24 P	1,1-Dichloroethane	0.654	0.616	5.8	103	0.00	7.16
25	Acrylonitrile	0.121	0.121	0.0	115	0.00	7.27
26	ETBE	1.073	1.015	5.4	103	0.00	7.62
27	Vinyl acetate	0.709	0.615	13.3	91	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.322	5.0	104	0.00	8.13
29	2,2-Dichloropropane	0.385	0.336	12.7	98	0.00	8.33
30	Bromochloromethane	0.142	0.135	4.9	105	0.00	8.48
31	Cyclohexane	0.791	0.744	5.9	102	0.00	8.47
32 C	Chloroform	0.545	0.512	6.1	102	0.00	8.61
33	Ethyl acetate	0.296	0.306	-3.4	113	0.00	8.85
34	Tetrahydrofuran	0.202	0.204	-1.0	111	0.00	8.88

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B216-ECC0212
Lab FileID: 2B5906.D

35	S	Dibromofluoromethane	0.226	0.222	1.8	110	0.00	8.90
36		Carbon Tetrachloride	0.359	0.336	6.4	102	0.00	8.81
37		1,1,1-Trichloroethane	0.487	0.457	6.2	103	0.00	8.93
38		2-Butanone	0.148	0.159	-7.4	120	0.00	9.11
39		1,1-Dichloropropene	0.463	0.432	6.7	100	0.00	9.11
40		tert-Butyl Formate	0.275	0.258	6.2	100	0.00	9.30
41		Propionitrile	0.045	0.046	-2.2	116	0.00	9.51
42		Methacrylonitrile	0.202	0.203	-0.5	111	0.00	9.53
43		Benzene	1.241	1.198	3.5	105	0.00	9.46
44		TAME	0.961	0.909	5.4	104	0.00	9.62
45	S	1,2-Dichloroethane-d4	0.276	0.261	5.4	108	0.00	9.63
46		1,2-Dichloroethane	0.382	0.358	6.3	102	0.00	9.72
47		Trichloroethene	0.298	0.275	7.7	100	0.00	10.16
48		Methylcyclohexane	0.692	0.651	5.9	102	0.00	10.14
49		Dibromomethane	0.152	0.150	1.3	108	0.00	10.61
50	C	1,2-Dichloropropane	0.337	0.331	1.8	106	0.00	10.72
51		Bromodichloromethane	0.344	0.339	1.5	104	0.00	10.78
52		Methyl methacrylate	0.253	0.273	-7.9	116	0.00	10.94
53		2-Chloroethyl vinyl ether	0.174	0.144	17.2	89	0.00	11.33
54		cis-1,3-Dichloropropene	0.458	0.445	2.8	105	0.00	11.39
55	I	Chlorobenzene-d5	1.000	1.000	0.0	113	0.00	12.83
56	S	Toluene-d8	1.359	1.372	-1.0	113	0.00	11.55
57	C	Toluene	1.676	1.585	5.4	103	0.00	11.60
----- Amount Calc. %Drift -----								
58		2-Nitropropane	250.000	235.577	5.8	107	0.00	11.81
----- AvgRF CCRF %Dev -----								
59		4-Methyl-2-pentanone	0.458	0.493	-7.6	118	0.00	11.92
60		trans-1,3-Dichloropropene	0.530	0.512	3.4	105	0.00	11.95
61		Tetrachloroethene	0.380	0.361	5.0	105	0.00	11.93
62		Ethyl methacrylate	0.501	0.550	-9.8	116	0.00	12.07
63		1,1,2-Trichloroethane	0.276	0.275	0.4	111	0.00	12.09
64		Dibromochloromethane	0.297	0.302	-1.7	108	0.00	12.24
65		1,3-Dichloropropane	0.624	0.623	0.2	110	0.00	12.31
66		1,2-Dibromoethane	0.298	0.301	-1.0	109	0.00	12.44
67		2-hexanone	0.319	0.358	-12.2	123	0.00	12.59
68		1-Chlorohexane	0.614	0.546	11.1	96	0.00	12.80
69	C	Ethylbenzene	1.972	1.773	10.1	99	0.00	12.84
70	P	Chlorobenzene	1.112	1.005	9.6	99	0.00	12.84
71		1,1,1,2-Tetrachloroethane	0.350	0.337	3.7	103	0.00	12.88
72		m,p-Xylene	1.532	1.344	12.3	95	0.00	12.95
73		o-Xylene	1.649	1.491	9.6	97	0.00	13.27
----- Amount Calc. %Drift -----								
74		Styrene	50.000	43.637	12.7	99	0.00	13.31
----- AvgRF CCRF %Dev -----								
75	P	Bromoform	0.171	0.177	-3.5	109	0.00	13.34
76		Isopropylbenzene	2.013	1.814	9.9	97	0.00	13.49
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	14.48
78	S	4-Bromofluorobenzene	0.721	0.759	-5.3	112	0.00	13.70
----- Amount Calc. %Drift -----								
79		cis-1,4-Dichloro-2-butene	50.000	50.453	-0.9	107	0.00	13.74
----- AvgRF CCRF %Dev -----								
80		n-Propylbenzene	4.901	4.227	13.8	90	0.00	13.78

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B216-ECC0212
Lab FileID: 2B5906.D

81	Bromobenzene	0.773	0.724	6.3	98	0.00	13.79
82 P	1,1,2,2-Tetrachloroethane	0.952	0.979	-2.8	110	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	2.775	12.7	91	0.00	13.90
84	2-Chlorotoluene	3.266	2.832	13.3	91	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.287	0.0	103	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.268	-3.9	110	0.00	13.94
87	Cyclohexanone	0.062	0.079	-27.4	132	0.00	13.99
88	4-Chlorotoluene	2.881	2.349	18.5	86	0.00	14.02
89	tert-Butylbenzene	1.958	1.878	4.1	98	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	2.612	16.3	87	0.00	14.17
91	Pentachloroethane	0.444	0.400	9.9	91	0.00	14.17
92	sec-Butylbenzene	4.503	4.077	9.5	94	0.00	14.25
93	4-Isopropyltoluene	3.280	2.720	17.1	87	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.235	21.4	84	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.216	23.5	82	0.00	14.49
96	n-Butylbenzene	1.847	1.356	26.6	78	0.00	14.63
97	Benzyl Chloride	0.345	0.287	16.8	85	0.00	14.65
98	1,2-Dichlorobenzene	1.545	1.300	15.9	89	0.00	14.78
99	1,2-Dibromo-3-Chloropropa	0.174	0.171	1.7	105	0.00	15.32
100	Hexachlorobutadiene	0.517	0.399	22.8	85	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	0.528	39.4	67	0.00	15.77
102	Naphthalene	2.345	2.055	12.4	93	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.594	30.0	76	0.00	16.14

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	128	0.00	6.38
105	Ethanol	0.209	0.186	11.0	118	0.00	4.83
106	Acrolein	2.256	1.857	17.7	99	0.00	5.44
107	Tert butyl alcohol	1.610	1.535	4.7	119	0.00	6.50
108	Isobutyl alcohol	0.413	0.413	0.0	120	0.00	9.76
109	Tert Amyl Alcohol	1.199	1.180	1.6	117	0.00	9.88
110	1,4-Dioxane	0.127	0.125	1.6	118	0.00	10.99

(#) = Out of Range
 2B5882.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 0
 Tue Oct 31 09:45:26 2017

6.7.4
 6

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-CC0212
Lab FileID: 2B5912.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\110217\2B5912.D Vial: 6
Acq On : 2 Nov 2017 9:41 am Operator: ericp
Sample : CC0212-5 Inst : MSVOA18
Misc : MS38691,V2B219,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Mon Oct 30 13:59:15 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	111	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.338	17.0	92	0.00	2.64
3 P	Chloromethane	0.592	0.481	18.8	89	0.00	2.93
4 C	Vinyl Chloride	0.564	0.466	17.4	89	0.00	3.09
5	Bromomethane	0.270	0.228	15.6	92	0.00	3.62
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	40.369	19.3	89	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.413	17.4	90	0.00	4.05
8	Ethyl Ether	0.319	0.271	15.0	93	0.00	4.57
9	1,2-Dichlorotrifluoroetha	0.460	0.384	16.5	91	0.00	4.89
10 C	1,1-Dichloroethene	0.590	0.499	15.4	92	0.00	4.86
11	Freon 113	0.345	0.293	15.1	93	0.00	4.97
12	Carbon Disulfide	1.230	1.031	16.2	91	0.00	4.89
13	Iodomethane	0.485	0.428	11.8	94	0.00	5.08
14	Allyl chloride	0.714	0.598	16.2	90	0.00	5.65
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	41.769	16.5	90	0.00	5.83
16	Acetone	250.000	221.278	11.5	99	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.239	11.2	102	0.00	6.15
18	trans-1,2-Dichloroethene	0.539	0.452	16.1	92	0.00	6.10
19	Hexane	0.338	0.265	21.6#	88	0.00	6.24
20	Methyl Tert Butyl Ether	0.902	0.775	14.1	95	0.00	6.31
21	Acetonitrile	0.050	0.039	22.0#	95	0.00	6.72
22	Di-isopropyl ether	1.323	1.119	15.4	90	0.00	6.97
23	Chloroprene	0.560	0.475	15.2	88	0.00	7.12
24 P	1,1-Dichloroethane	0.654	0.547	16.4	91	0.00	7.16
25	Acrylonitrile	0.121	0.102	15.7	97	0.00	7.27
26	ETBE	1.073	0.904	15.8	91	0.00	7.62
27	Vinyl acetate	0.709	0.607	14.4	90	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.290	14.5	93	0.00	8.13
29	2,2-Dichloropropane	0.385	0.325	15.6	94	0.00	8.33
30	Bromochloromethane	0.142	0.122	14.1	95	0.00	8.48
31	Cyclohexane	0.791	0.664	16.1	91	0.00	8.47
32 C	Chloroform	0.545	0.459	15.8	91	0.00	8.61
33	Ethyl acetate	0.296	0.277	6.4	102	0.00	8.85
34	Tetrahydrofuran	0.202	0.184	8.9	100	0.00	8.87

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-CC0212
Lab FileID: 2B5912.D

35	S	Dibromofluoromethane	0.226	0.217	4.0	107	0.00	8.90
36		Carbon Tetrachloride	0.359	0.301	16.2	91	0.00	8.81
37		1,1,1-Trichloroethane	0.487	0.414	15.0	93	0.00	8.93
38		2-Butanone	0.148	0.137	7.4	103	0.00	9.11
39		1,1-Dichloropropene	0.463	0.402	13.2	92	0.00	9.11
40		tert-Butyl Formate	0.275	0.238	13.5	91	0.00	9.30
41		Propionitrile	0.045	0.040	11.1	99	0.00	9.51
42		Methacrylonitrile	0.202	0.180	10.9	98	0.00	9.53
43		Benzene	1.241	1.104	11.0	96	0.00	9.45
44		TAME	0.961	0.810	15.7	92	0.00	9.62
45	S	1,2-Dichloroethane-d4	0.276	0.261	5.4	107	0.00	9.63
46		1,2-Dichloroethane	0.382	0.331	13.4	94	0.00	9.72
47		Trichloroethene	0.298	0.269	9.7	97	0.00	10.16
48		Methylcyclohexane	0.692	0.580	16.2	90	0.00	10.14
49		Dibromomethane	0.152	0.138	9.2	99	0.00	10.61
50	C	1,2-Dichloropropane	0.337	0.309	8.3	98	0.00	10.72
51		Bromodichloromethane	0.344	0.314	8.7	96	0.00	10.78
52		Methyl methacrylate	0.253	0.256	-1.2	108	0.00	10.94
53		2-Chloroethyl vinyl ether	0.174	0.152	12.6	94	0.00	11.33
54		cis-1,3-Dichloropropene	0.458	0.447	2.4	105	0.00	11.39
55	I	Chlorobenzene-d5	1.000	1.000	0.0	114	0.00	12.83
56	S	Toluene-d8	1.359	1.394	-2.6	116	0.00	11.55
57	C	Toluene	1.676	1.566	6.6	103	0.00	11.60
----- Amount Calc. %Drift -----								
58		2-Nitropropane	250.000	204.117	18.4	93	0.00	11.81
----- AvgRF CCRF %Dev -----								
59		4-Methyl-2-pentanone	0.458	0.428	6.6	103	0.00	11.92
60		trans-1,3-Dichloropropene	0.530	0.502	5.3	104	0.00	11.95
61		Tetrachloroethene	0.380	0.352	7.4	104	0.00	11.93
62		Ethyl methacrylate	0.501	0.481	4.0	102	0.00	12.07
63		1,1,2-Trichloroethane	0.276	0.256	7.2	104	0.00	12.09
64		Dibromochloromethane	0.297	0.278	6.4	100	0.00	12.24
65		1,3-Dichloropropane	0.624	0.579	7.2	103	0.00	12.31
66		1,2-Dibromoethane	0.298	0.274	8.1	100	0.00	12.44
67		2-hexanone	0.319	0.298	6.6	103	0.00	12.59
68		1-Chlorohexane	0.614	0.554	9.8	99	0.00	12.80
69	C	Ethylbenzene	1.972	1.770	10.2	100	0.00	12.84
70	P	Chlorobenzene	1.112	1.019	8.4	102	0.00	12.84
71		1,1,1,2-Tetrachloroethane	0.350	0.308	12.0	95	0.00	12.88
72		m,p-Xylene	1.532	1.400	8.6	100	0.00	12.95
73		o-Xylene	1.649	1.467	11.0	97	0.00	13.27
----- Amount Calc. %Drift -----								
74		Styrene	50.000	43.001	14.0	98	0.00	13.31
----- AvgRF CCRF %Dev -----								
75	P	Bromoform	0.171	0.154	9.9	96	0.00	13.34
76		Isopropylbenzene	2.013	1.793	10.9	97	0.00	13.49
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	14.48
78	S	4-Bromofluorobenzene	0.721	0.744	-3.2	110	0.00	13.70
----- Amount Calc. %Drift -----								
79		cis-1,4-Dichloro-2-butene	50.000	46.437	7.1	98	0.00	13.74
----- AvgRF CCRF %Dev -----								
80		n-Propylbenzene	4.901	4.513	7.9	97	0.00	13.78

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-CC0212
Lab FileID: 2B5912.D

81	Bromobenzene	0.773	0.730	5.6	99	0.00	13.79
82 P	1,1,2,2-Tetrachloroethane	0.952	0.876	8.0	98	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	2.980	6.2	98	0.00	13.90
84	2-Chlorotoluene	3.266	3.003	8.1	97	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.269	6.3	97	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.235	8.9	97	0.00	13.94
87	Cyclohexanone	0.062	0.069	-11.3	116	0.00	13.99
88	4-Chlorotoluene	2.881	2.686	6.8	99	0.00	14.02
89	tert-Butylbenzene	1.958	1.841	6.0	96	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	2.905	6.9	97	0.00	14.18
91	Pentachloroethane	0.444	0.436	1.8	99	0.00	14.17
92	sec-Butylbenzene	4.503	4.172	7.4	97	0.00	14.25
93	4-Isopropyltoluene	3.280	3.077	6.2	99	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.469	6.5	100	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.490	6.3	101	0.00	14.49
96	n-Butylbenzene	1.847	1.710	7.4	98	0.00	14.63
97	Benzyl Chloride	0.345	0.320	7.2	95	0.00	14.65
98	1,2-Dichlorobenzene	1.545	1.410	8.7	97	0.00	14.79
99	1,2-Dibromo-3-Chloropropa	0.174	0.148	14.9	91	0.00	15.32
100	Hexachlorobutadiene	0.517	0.474	8.3	101	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	0.797	8.5	101	0.00	15.77
102	Naphthalene	2.345	2.077	11.4	94	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.755	11.1	97	0.00	16.14

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	112	0.00	6.38
105	Ethanol	0.209	0.174	16.7	97	0.00	4.83
106	Acrolein	2.256	2.111	6.4	99	0.00	5.44
107	Tert butyl alcohol	1.610	1.419	11.9	97	0.00	6.50
108	Isobutyl alcohol	0.413	0.389	5.8	100	0.00	9.76
109	Tert Amyl Alcohol	1.199	1.112	7.3	97	0.00	9.88
110	1,4-Dioxane	0.127	0.121	4.7	101	0.00	10.99

(#) = Out of Range
 2B5779.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 0
 Thu Nov 02 10:57:48 2017

6.7.5
 6

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-ECC0212
Lab FileID: 2B5923.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\110217\2B5923.D Vial: 17
Acq On : 2 Nov 2017 3:09 pm Operator: ericp
Sample : ECC0212-5 Inst : MSVOA18
Misc : MS38724,V2B219,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Nov 02 10:58:34 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	109	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.331	18.7	88	0.00	2.64
3 P	Chloromethane	0.592	0.494	16.6	89	0.00	2.93
4 C	Vinyl Chloride	0.564	0.477	15.4	90	0.00	3.09
5	Bromomethane	0.270	0.233	13.7	92	0.00	3.61
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	40.448	19.1	88	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.407	18.6	87	0.00	4.06
8	Ethyl Ether	0.319	0.280	12.2	94	0.00	4.57
9	1,2-Dichlorotrifluoroetha	0.460	0.390	15.2	91	0.00	4.90
10 C	1,1-Dichloroethene	0.590	0.506	14.2	92	0.00	4.86
11	Freon 113	0.345	0.290	15.9	90	0.00	4.97
12	Carbon Disulfide	1.230	1.056	14.1	91	0.00	4.88
13	Iodomethane	0.485	0.439	9.5	95	0.00	5.08
14	Allyl chloride	0.714	0.615	13.9	91	0.00	5.65
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	42.167	15.7	89	0.00	5.82
16	Acetone	250.000	230.027	8.0	100	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.287	-6.7	119	0.00	6.15
18	trans-1,2-Dichloroethene	0.539	0.461	14.5	92	0.00	6.10
19	Hexane	0.338	0.267	21.0	86	0.00	6.24
20	Methyl Tert Butyl Ether	0.902	0.793	12.1	95	0.00	6.31
21	Acetonitrile	0.050	0.042	16.0	100	0.00	6.72
22	Di-isopropyl ether	1.323	1.145	13.5	90	0.00	6.97
23	Chloroprene	0.560	0.494	11.8	90	0.00	7.11
24 P	1,1-Dichloroethane	0.654	0.565	13.6	92	0.00	7.16
25	Acrylonitrile	0.121	0.108	10.7	100	0.00	7.27
26	ETBE	1.073	0.926	13.7	92	0.00	7.62
27	Vinyl acetate	0.709	0.532	25.0	77	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.298	12.1	93	0.00	8.13
29	2,2-Dichloropropane	0.385	0.328	14.8	93	0.00	8.33
30	Bromochloromethane	0.142	0.125	12.0	95	0.00	8.48
31	Cyclohexane	0.791	0.668	15.5	89	0.00	8.47
32 C	Chloroform	0.545	0.473	13.2	92	0.00	8.61
33	Ethyl acetate	0.296	0.269	9.1	97	0.00	8.85
34	Tetrahydrofuran	0.202	0.186	7.9	99	0.00	8.87

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-ECC0212
Lab FileID: 2B5923.D

35	S	Dibromofluoromethane	0.226	0.220	2.7	106	0.00	8.90
36		Carbon Tetrachloride	0.359	0.305	15.0	90	0.00	8.81
37		1,1,1-Trichloroethane	0.487	0.421	13.6	92	0.00	8.93
38		2-Butanone	0.148	0.144	2.7	106	0.00	9.11
39		1,1-Dichloropropene	0.463	0.414	10.6	93	0.00	9.11
40		tert-Butyl Formate	0.275	0.250	9.1	94	0.00	9.30
41		Propionitrile	0.045	0.042	6.7	104	0.00	9.51
42		Methacrylonitrile	0.202	0.188	6.9	100	0.00	9.53
43		Benzene	1.241	1.130	8.9	96	0.00	9.46
44		TAME	0.961	0.833	13.3	92	0.00	9.62
45	S	1,2-Dichloroethane-d4	0.276	0.259	6.2	104	0.00	9.63
46		1,2-Dichloroethane	0.382	0.333	12.8	92	0.00	9.72
47		Trichloroethene	0.298	0.265	11.1	93	0.00	10.16
48		Methylcyclohexane	0.692	0.591	14.6	90	0.00	10.14
49		Dibromomethane	0.152	0.139	8.6	98	0.00	10.61
50	C	1,2-Dichloropropane	0.337	0.310	8.0	96	0.00	10.72
51		Bromodichloromethane	0.344	0.312	9.3	93	0.00	10.78
52		Methyl methacrylate	0.253	0.259	-2.4	107	0.00	10.94
53		2-Chloroethyl vinyl ether	0.174	0.149	14.4	90	0.00	11.33
54		cis-1,3-Dichloropropene	0.458	0.429	6.3	98	0.00	11.39
55	I	Chlorobenzene-d5	1.000	1.000	0.0	110	0.00	12.83
56	S	Toluene-d8	1.359	1.374	-1.1	111	0.00	11.55
57	C	Toluene	1.676	1.528	8.8	97	0.00	11.60
----- Amount Calc. %Drift -----								
58		2-Nitropropane	250.000	210.825	15.7	93	0.00	11.81
----- AvgRF CCRF %Dev -----								
59		4-Methyl-2-pentanone	0.458	0.442	3.5	103	0.00	11.92
60		trans-1,3-Dichloropropene	0.530	0.491	7.4	98	0.00	11.95
61		Tetrachloroethene	0.380	0.335	11.8	95	0.00	11.93
62		Ethyl methacrylate	0.501	0.478	4.6	98	0.00	12.07
63		1,1,2-Trichloroethane	0.276	0.254	8.0	100	0.00	12.09
64		Dibromochloromethane	0.297	0.279	6.1	97	0.00	12.24
65		1,3-Dichloropropane	0.624	0.577	7.5	99	0.00	12.31
66		1,2-Dibromoethane	0.298	0.280	6.0	99	0.00	12.44
67		2-hexanone	0.319	0.319	0.0	107	0.00	12.59
68		1-Chlorohexane	0.614	0.544	11.4	94	0.00	12.80
69	C	Ethylbenzene	1.972	1.744	11.6	95	0.00	12.84
70	P	Chlorobenzene	1.112	0.998	10.3	96	0.00	12.84
71		1,1,1,2-Tetrachloroethane	0.350	0.313	10.6	94	0.00	12.88
72		m,p-Xylene	1.532	1.359	11.3	94	0.00	12.95
73		o-Xylene	1.649	1.453	11.9	93	0.00	13.27
----- Amount Calc. %Drift -----								
74		Styrene	50.000	43.372	13.3	96	0.00	13.31
----- AvgRF CCRF %Dev -----								
75	P	Bromoform	0.171	0.163	4.7	98	0.00	13.34
76		Isopropylbenzene	2.013	1.766	12.3	93	0.00	13.49
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	109	0.00	14.48
78	S	4-Bromofluorobenzene	0.721	0.738	-2.4	111	0.00	13.70
----- Amount Calc. %Drift -----								
79		cis-1,4-Dichloro-2-butene	50.000	48.080	3.8	103	0.00	13.74
----- AvgRF CCRF %Dev -----								
80		n-Propylbenzene	4.901	4.207	14.2	91	0.00	13.78

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-ECC0212
Lab FileID: 2B5923.D

81	Bromobenzene	0.773	0.694	10.2	95	0.00	13.79
82 P	1,1,2,2-Tetrachloroethane	0.952	0.884	7.1	100	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	2.769	12.8	92	0.00	13.90
84	2-Chlorotoluene	3.266	2.799	14.3	91	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.276	3.8	100	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.239	7.4	100	0.00	13.94
87	Cyclohexanone	0.062	0.072	-16.1	122	0.00	13.99
88	4-Chlorotoluene	2.881	2.461	14.6	91	0.00	14.02
89	tert-Butylbenzene	1.958	1.758	10.2	93	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	2.675	14.3	91	0.00	14.17
91	Pentachloroethane	0.444	0.411	7.4	95	0.00	14.17
92	sec-Butylbenzene	4.503	3.899	13.4	91	0.00	14.25
93	4-Isopropyltoluene	3.280	2.784	15.1	90	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.330	15.3	92	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.337	15.9	92	0.00	14.49
96	n-Butylbenzene	1.847	1.486	19.5	86	0.00	14.63
97	Benzyl Chloride	0.345	0.313	9.3	94	0.00	14.65
98	1,2-Dichlorobenzene	1.545	1.327	14.1	92	0.00	14.79
99	1,2-Dibromo-3-Chloropropa	0.174	0.155	10.9	96	0.00	15.32
100	Hexachlorobutadiene	0.517	0.425	17.8	92	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	0.662	24.0	85	0.00	15.77
102	Naphthalene	2.345	2.034	13.3	93	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.680	19.9	88	0.00	16.14

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	123	0.00	6.38
105	Ethanol	0.209	0.172	17.7	105	0.00	4.83
106	Acrolein	2.256	1.861	17.5	96	0.00	5.44
107	Tert butyl alcohol	1.610	1.389	13.7	104	0.00	6.50
108	Isobutyl alcohol	0.413	0.383	7.3	107	0.00	9.76
109	Tert Amyl Alcohol	1.199	1.110	7.4	106	0.00	9.88
110	1,4-Dioxane	0.127	0.117	7.9	106	0.00	10.99

(#) = Out of Range
 2B5912.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 0
 Thu Nov 02 16:40:52 2017

6.7.6
 6

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B222-CC0212
Lab FileID: 2B5990.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\110617\2B5990.D Vial: 6
Acq On : 6 Nov 2017 11:31 am Operator: seanp
Sample : CC0212-5 Inst : MSVOA18
Misc : MS38741,V2B222,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Sat Nov 04 11:35:17 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	86	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.411	-1.0	87	0.00	2.64
3 P	Chloromethane	0.592	0.582	1.7	84	0.00	2.93
4 C	Vinyl Chloride	0.564	0.581	-3.0	87	0.00	3.09
5	Bromomethane	0.270	0.282	-4.4	88	0.00	3.61
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	54.402	-8.8	87	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.513	-2.6	87	0.00	4.05
8	Ethyl Ether	0.319	0.308	3.4	82	0.00	4.57
9	1,2-Dichlorotrifluoroetha	0.460	0.468	-1.7	86	0.00	4.89
10 C	1,1-Dichloroethene	0.590	0.626	-6.1	90	0.00	4.86
11	Freon 113	0.345	0.370	-7.2	91	0.00	4.96
12	Carbon Disulfide	1.230	1.360	-10.6	93	0.00	4.89
13	Iodomethane	0.485	0.551	-13.6	95	0.00	5.08
14	Allyl chloride	0.714	0.757	-6.0	89	0.00	5.65
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	49.122	1.8	82	0.00	5.83
16	Acetone	250.000	230.335	7.9	80	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.226	16.0	75	0.00	6.15
18	trans-1,2-Dichloroethene	0.539	0.570	-5.8	90	0.00	6.10
19	Hexane	0.338	0.313	7.4	81	0.00	6.24
20	Methyl Tert Butyl Ether	0.902	0.921	-2.1	88	0.00	6.31
21	Acetonitrile	0.050	0.043	14.0	83	0.00	6.72
22	Di-isopropyl ether	1.323	1.283	3.0	81	0.00	6.97
23	Chloroprene	0.560	0.589	-5.2	86	0.00	7.11
24 P	1,1-Dichloroethane	0.654	0.652	0.3	84	0.00	7.16
25	Acrylonitrile	0.121	0.112	7.4	82	0.00	7.27
26	ETBE	1.073	1.070	0.3	84	0.00	7.62
27	Vinyl acetate	0.709	0.658	7.2	76	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.354	-4.4	88	0.00	8.13
29	2,2-Dichloropropane	0.385	0.451	-17.1	101	0.00	8.33
30	Bromochloromethane	0.142	0.142	0.0	86	0.00	8.48
31	Cyclohexane	0.791	0.820	-3.7	87	0.00	8.47
32 C	Chloroform	0.545	0.541	0.7	84	0.00	8.61
33	Ethyl acetate	0.296	0.241	18.6	69	0.00	8.85
34	Tetrahydrofuran	0.202	0.170	15.8	72	0.00	8.88

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B222-CC0212
Lab FileID: 2B5990.D

35	S	Dibromofluoromethane	0.226	0.241	-6.6	92	0.00	8.90
36		Carbon Tetrachloride	0.359	0.380	-5.8	89	0.00	8.81
37		1,1,1-Trichloroethane	0.487	0.510	-4.7	89	0.00	8.93
38		2-Butanone	0.148	0.127	14.2	74	0.00	9.11
39		1,1-Dichloropropene	0.463	0.463	0.0	83	0.00	9.11
40		tert-Butyl Formate	0.275	0.290	-5.5	87	0.00	9.30
41		Propionitrile	0.045	0.041	8.9	80	0.00	9.51
42		Methacrylonitrile	0.202	0.176	12.9	75	0.00	9.53
43		Benzene	1.241	1.199	3.4	81	0.00	9.45
44		TAME	0.961	0.962	-0.1	85	0.00	9.62
45	S	1,2-Dichloroethane-d4	0.276	0.267	3.3	85	0.00	9.63
46		1,2-Dichloroethane	0.382	0.342	10.5	76	0.00	9.72
47		Trichloroethene	0.298	0.280	6.0	79	0.00	10.16
48		Methylcyclohexane	0.692	0.729	-5.3	88	0.00	10.14
49		Dibromomethane	0.152	0.138	9.2	77	0.00	10.61
50	C	1,2-Dichloropropane	0.337	0.313	7.1	77	0.00	10.72
51		Bromodichloromethane	0.344	0.319	7.3	76	0.00	10.78
52		Methyl methacrylate	0.253	0.240	5.1	79	0.00	10.94
53		2-Chloroethyl vinyl ether	0.174	0.148	14.9	71	0.00	11.33
54		cis-1,3-Dichloropropene	0.458	0.432	5.7	79	0.00	11.39
55	I	Chlorobenzene-d5	1.000	1.000	0.0	97	0.00	12.83
56	S	Toluene-d8	1.359	1.266	6.8	90	0.00	11.55
57	C	Toluene	1.676	1.510	9.9	84	0.00	11.60
----- Amount Calc. %Drift -----								
58		2-Nitropropane	250.000	192.512	23.0#	74	0.00	11.81
----- AvgRF CCRF %Dev -----								
59		4-Methyl-2-pentanone	0.458	0.384	16.2	79	0.00	11.92
60		trans-1,3-Dichloropropene	0.530	0.477	10.0	84	0.00	11.95
61		Tetrachloroethene	0.380	0.356	6.3	89	0.00	11.93
62		Ethyl methacrylate	0.501	0.486	3.0	88	0.00	12.07
63		1,1,2-Trichloroethane	0.276	0.240	13.0	83	0.00	12.09
64		Dibromochloromethane	0.297	0.279	6.1	86	0.00	12.24
65		1,3-Dichloropropane	0.624	0.553	11.4	84	0.00	12.31
66		1,2-Dibromoethane	0.298	0.278	6.7	86	0.00	12.44
67		2-hexanone	0.319	0.292	8.5	86	0.00	12.59
68		1-Chlorohexane	0.614	0.622	-1.3	94	0.00	12.80
69	C	Ethylbenzene	1.972	1.912	3.0	91	0.00	12.84
70	P	Chlorobenzene	1.112	1.084	2.5	92	0.00	12.84
71		1,1,1,2-Tetrachloroethane	0.350	0.320	8.6	84	0.00	12.88
72		m,p-Xylene	1.532	1.535	-0.2	93	0.00	12.95
73		o-Xylene	1.649	1.575	4.5	88	0.00	13.27
----- Amount Calc. %Drift -----								
74		Styrene	50.000	49.320	1.4	95	0.00	13.31
----- AvgRF CCRF %Dev -----								
75	P	Bromoform	0.171	0.176	-2.9	93	0.00	13.34
76		Isopropylbenzene	2.013	1.923	4.5	89	0.00	13.49
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	14.48
78	S	4-Bromofluorobenzene	0.721	0.765	-6.1	101	0.00	13.70
----- Amount Calc. %Drift -----								
79		cis-1,4-Dichloro-2-butene	50.000	48.808	2.4	93	0.00	13.74
----- AvgRF CCRF %Dev -----								
80		n-Propylbenzene	4.901	5.022	-2.5	96	0.00	13.78

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B222-CC0212
Lab FileID: 2B5990.D

81	Bromobenzene	0.773	0.786	-1.7	95	0.00	13.79
82 P	1,1,2,2-Tetrachloroethane	0.952	0.870	8.6	87	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	3.136	1.3	92	0.00	13.90
84	2-Chlorotoluene	3.266	3.237	0.9	93	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.271	5.6	87	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.238	7.8	88	0.00	13.94
87	Cyclohexanone	0.062	0.070	-12.9	106	0.00	13.99
88	4-Chlorotoluene	2.881	3.027	-5.1	99	0.00	14.02
89	tert-Butylbenzene	1.958	1.638	16.3	76	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	3.187	-2.1	96	0.00	14.17
91	Pentachloroethane	0.444	0.439	1.1	89	0.00	14.17
92	sec-Butylbenzene	4.503	4.315	4.2	89	0.00	14.25
93	4-Isopropyltoluene	3.280	3.399	-3.6	98	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.661	-5.7	101	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.678	-5.5	102	0.00	14.49
96	n-Butylbenzene	1.847	2.024	-9.6	104	0.00	14.63
97	Benzyl Chloride	0.345	0.348	-0.9	93	0.00	14.65
98	1,2-Dichlorobenzene	1.545	1.560	-1.0	96	0.00	14.78
99	1,2-Dibromo-3-Chloropropa	0.174	0.151	13.2	83	0.00	15.32
100	Hexachlorobutadiene	0.517	0.542	-4.8	104	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	0.947	-8.7	107	0.00	15.77
102	Naphthalene	2.345	2.229	4.9	91	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.877	-3.3	101	0.00	16.14

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	99	0.00	6.38
105	Ethanol	0.209	0.168	19.6	82	0.00	4.83
106	Acrolein	2.256	2.068	8.3	86	0.00	5.44
107	Tert butyl alcohol	1.610	1.397	13.2	84	0.00	6.50
108	Isobutyl alcohol	0.413	0.355	14.0	80	0.00	9.76
109	Tert Amyl Alcohol	1.199	1.087	9.3	84	0.00	9.88
110	1,4-Dioxane	0.127	0.110	13.4	81	0.00	10.99

(#) = Out of Range
 2B5960.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 0
 Mon Nov 06 11:58:04 2017

6.7.7
 6

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B222-ECC0212
Lab FileID: 2B5996.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\110617\2B5996.D Vial: 12
Acq On : 6 Nov 2017 2:03 pm Operator: seanp
Sample : ECC0212-5 Inst : MSVOA18
Misc : MS38691,V2B222,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Mon Nov 06 11:59:32 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	112	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.305	25.1	84	0.00	2.64
3 P	Chloromethane	0.592	0.458	22.6	85	0.00	2.93
4 C	Vinyl Chloride	0.564	0.447	20.7#	86	0.00	3.09
5	Bromomethane	0.270	0.218	19.3	88	0.00	3.61
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	37.515	25.0	85	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.392	21.6	86	0.00	4.06
8	Ethyl Ether	0.319	0.264	17.2	91	0.00	4.57
9	1,2-Dichlorotrifluoroetha	0.460	0.370	19.6	89	0.00	4.89
10 C	1,1-Dichloroethene	0.590	0.485	17.8	91	0.00	4.86
11	Freon 113	0.345	0.279	19.1	89	0.00	4.97
12	Carbon Disulfide	1.230	1.020	17.1	91	0.00	4.89
13	Iodomethane	0.485	0.424	12.6	94	0.00	5.08
14	Allyl chloride	0.714	0.599	16.1	91	0.00	5.65
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	40.172	19.7	87	0.00	5.83
16	Acetone	250.000	208.896	16.4	94	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.201	25.3	86	0.00	6.15
18	trans-1,2-Dichloroethene	0.539	0.440	18.4	90	0.00	6.10
19	Hexane	0.338	0.262	22.5	87	0.00	6.24
20	Methyl Tert Butyl Ether	0.902	0.763	15.4	94	0.00	6.31
21	Acetonitrile	0.050	0.036	28.0	88	0.00	6.72
22	Di-isopropyl ether	1.323	1.103	16.6	90	0.00	6.97
23	Chloroprene	0.560	0.483	13.8	91	0.00	7.11
24 P	1,1-Dichloroethane	0.654	0.535	18.2	90	0.00	7.16
25	Acrylonitrile	0.121	0.096	20.7	91	0.00	7.27
26	ETBE	1.073	0.901	16.0	92	0.00	7.62
27	Vinyl acetate	0.709	0.622	12.3	93	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.285	15.9	92	0.00	8.12
29	2,2-Dichloropropane	0.385	0.313	18.7	91	0.00	8.33
30	Bromochloromethane	0.142	0.118	16.9	92	0.00	8.48
31	Cyclohexane	0.791	0.645	18.5	89	0.00	8.47
32 C	Chloroform	0.545	0.450	17.4	90	0.00	8.61
33	Ethyl acetate	0.296	0.258	12.8	96	0.00	8.85
34	Tetrahydrofuran	0.202	0.168	16.8	92	0.00	8.88

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B222-ECC0212
Lab FileID: 2B5996.D

35 S	Dibromofluoromethane	0.226	0.220	2.7	109	0.00	8.90
36	Carbon Tetrachloride	0.359	0.300	16.4	91	0.00	8.81
37	1,1,1-Trichloroethane	0.487	0.405	16.8	91	0.00	8.93
38	2-Butanone	0.148	0.126	14.9	95	0.00	9.11
39	1,1-Dichloropropene	0.463	0.394	14.9	91	0.00	9.11
40	tert-Butyl Formate	0.275	0.241	12.4	93	0.00	9.30
41	Propionitrile	0.045	0.037	17.8	94	0.00	9.51
42	Methacrylonitrile	0.202	0.170	15.8	93	0.00	9.53
43	Benzene	1.241	1.063	14.3	93	0.00	9.45
44	TAME	0.961	0.816	15.1	93	0.00	9.62
45 S	1,2-Dichloroethane-d4	0.276	0.265	4.0	110	0.00	9.63
46	1,2-Dichloroethane	0.382	0.319	16.5	91	0.00	9.72
47	Trichloroethene	0.298	0.253	15.1	92	0.00	10.16
48	Methylcyclohexane	0.692	0.572	17.3	90	0.00	10.14
49	Dibromomethane	0.152	0.132	13.2	95	0.00	10.61
50 C	1,2-Dichloropropane	0.337	0.295	12.5	94	0.00	10.72
51	Bromodichloromethane	0.344	0.302	12.2	93	0.00	10.78
52	Methyl methacrylate	0.253	0.240	5.1	102	0.00	10.94
53	2-Chloroethyl vinyl ether	0.174	0.143	17.8	89	0.00	11.33
54	cis-1,3-Dichloropropene	0.458	0.420	8.3	99	0.00	11.39
55 I	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00	12.83
56 S	Toluene-d8	1.359	1.360	-0.1	116	0.00	11.55
57 C	Toluene	1.676	1.476	11.9	99	0.00	11.60
----- Amount Calc. %Drift -----							
58	2-Nitropropane	250.000	185.692	25.7	86	0.00	11.81
----- AvgRF CCRF %Dev -----							
59	4-Methyl-2-pentanone	0.458	0.391	14.6	97	0.00	11.92
60	trans-1,3-Dichloropropene	0.530	0.476	10.2	100	0.00	11.95
61	Tetrachloroethene	0.380	0.328	13.7	99	0.00	11.93
62	Ethyl methacrylate	0.501	0.486	3.0	106	0.00	12.08
63	1,1,2-Trichloroethane	0.276	0.243	12.0	101	0.00	12.09
64	Dibromochloromethane	0.297	0.272	8.4	101	0.00	12.24
65	1,3-Dichloropropane	0.624	0.548	12.2	100	0.00	12.31
66	1,2-Dibromoethane	0.298	0.267	10.4	100	0.00	12.44
67	2-hexanone	0.319	0.285	10.7	101	0.00	12.59
68	1-Chlorohexane	0.614	0.527	14.2	96	0.00	12.80
69 C	Ethylbenzene	1.972	1.679	14.9	97	0.00	12.84
70 P	Chlorobenzene	1.112	0.955	14.1	97	0.00	12.84
71	1,1,1,2-Tetrachloroethane	0.350	0.299	14.6	94	0.00	12.88
72	m,p-Xylene	1.532	1.309	14.6	96	0.00	12.95
73	o-Xylene	1.649	1.386	15.9	94	0.00	13.27
----- Amount Calc. %Drift -----							
74	Styrene	50.000	41.836	16.3	98	0.00	13.31
----- AvgRF CCRF %Dev -----							
75 P	Bromoform	0.171	0.157	8.2	100	0.00	13.34
76	Isopropylbenzene	2.013	1.688	16.1	94	0.00	13.49
77 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	114	0.00	14.48
78 S	4-Bromofluorobenzene	0.721	0.744	-3.2	116	0.00	13.70
----- Amount Calc. %Drift -----							
79	cis-1,4-Dichloro-2-butene	50.000	45.051	9.9	101	0.00	13.74
----- AvgRF CCRF %Dev -----							
80	n-Propylbenzene	4.901	4.087	16.6	92	0.00	13.78

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B222-ECC0212
Lab FileID: 2B5996.D

81	Bromobenzene	0.773	0.670	13.3	96	0.00	13.79
82 P	1,1,2,2-Tetrachloroethane	0.952	0.818	14.1	97	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	2.689	15.4	93	0.00	13.90
84	2-Chlorotoluene	3.266	2.715	16.9	92	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.254	11.5	96	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.217	15.9	95	0.00	13.94
87	Cyclohexanone	0.062	0.064	-3.2	113	0.00	13.99
88	4-Chlorotoluene	2.881	2.372	17.7	92	0.00	14.02
89	tert-Butylbenzene	1.958	1.667	14.9	92	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	2.593	16.9	92	0.00	14.17
91	Pentachloroethane	0.444	0.401	9.7	96	0.00	14.17
92	sec-Butylbenzene	4.503	3.791	15.8	93	0.00	14.25
93	4-Isopropyltoluene	3.280	2.717	17.2	92	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.278	18.7	92	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.274	19.9	91	0.00	14.49
96	n-Butylbenzene	1.847	1.470	20.4	89	0.00	14.63
97	Benzyl Chloride	0.345	0.293	15.1	92	0.00	14.65
98	1,2-Dichlorobenzene	1.545	1.267	18.0	92	0.00	14.79
99	1,2-Dibromo-3-Chloropropa	0.174	0.140	19.5	91	0.00	15.32
100	Hexachlorobutadiene	0.517	0.407	21.3	92	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	0.636	27.0	85	0.00	15.77
102	Naphthalene	2.345	1.920	18.1	92	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.649	23.6	88	0.00	16.14

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	114	0.00	6.38
105	Ethanol	0.209	0.156	25.4	88	0.00	4.83
106	Acrolein	2.256	1.867	17.2	89	0.00	5.44
107	Tert butyl alcohol	1.610	1.337	17.0	93	0.00	6.50
108	Isobutyl alcohol	0.413	0.368	10.9	95	0.00	9.76
109	Tert Amyl Alcohol	1.199	1.053	12.2	93	0.00	9.88
110	1,4-Dioxane	0.127	0.112	11.8	94	0.00	10.99

(#) = Out of Range
 2B5990.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 1
 Mon Nov 06 14:52:52 2017

6.7.8
 6

MS Semi-volatiles

QC Data Summaries

7

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67487-MB	X057031.D	1	11/08/17	MV	11/03/17	OP67487	SX2396

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48865-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
59-50-7	4-Chloro-3-methyl Phenol	ND	170	19	ug/kg	
95-57-8	2-Chlorophenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	44	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	20	ug/kg	
	3&4-Methylphenol	ND	170	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	18	ug/kg	
100-02-7	4-Nitrophenol	ND	830	170	ug/kg	
87-86-5	Pentachlorophenol	ND	830	170	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	27	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	19	ug/kg	
83-32-9	Acenaphthene	ND	170	18	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
62-53-3	Aniline	ND	170	36	ug/kg	
120-12-7	Anthracene	ND	170	19	ug/kg	
92-87-5	Benzidine	ND	1700	330	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	22	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	23	ug/kg	
106-47-8	4-Chloroaniline	ND	170	42	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	19	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	21	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	

Method Blank Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67487-MB	X057031.D	1	11/08/17	MV	11/03/17	OP67487	SX2396

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48865-1

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	170	21	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	22	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	40	ug/kg	
84-66-2	Diethyl Phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl Phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl Phthalate	ND	170	33	ug/kg	
84-74-2	Di-n-butyl Phthalate	ND	330	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	21	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	17	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	20	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	39	ug/kg	
99-09-2	3-Nitroaniline	ND	170	19	ug/kg	
100-01-6	4-Nitroaniline	ND	170	48	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	28	ug/kg	
621-64-7	N-Nitrosodi-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	18	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	19	ug/kg	
110-86-1	Pyridine	ND	330	67	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	20	ug/kg	

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67487-MB	X057031.D	1	11/08/17	MV	11/03/17	OP67487	SX2396

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48865-1

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	56% 40-102%
4165-62-2	Phenol-d5	61% 41-100%
118-79-6	2,4,6-Tribromophenol	76% 42-108%
4165-60-0	Nitrobenzene-d5	61% 40-105%
321-60-8	2-Fluorobiphenyl	65% 43-107%
1718-51-0	Terphenyl-d14	76% 45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
563-80-4	2-Butanone, 3-methyl-	2.67	400	ug/kg	JN
	Total TIC, Semi-Volatile		400	ug/kg	J

Method Blank Summary

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Job Number: FA48865

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67433-MB	W103803.D	1	11/02/17	NJ	10/31/17	OP67433	SW4513

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

FA48865-2, FA48865-3, FA48865-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	67	27	ug/kg	
208-96-8	Acenaphthylene	ND	67	27	ug/kg	
120-12-7	Anthracene	ND	67	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	13	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	13	3.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	13	3.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	13	3.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	13	3.3	ug/kg	
218-01-9	Chrysene	ND	13	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	13	3.3	ug/kg	
206-44-0	Fluoranthene	ND	67	17	ug/kg	
86-73-7	Fluorene	ND	67	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	3.3	ug/kg	
91-20-3	Naphthalene	ND	67	27	ug/kg	
85-01-8	Phenanthrene	ND	67	17	ug/kg	
129-00-0	Pyrene	ND	67	17	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	101% 40-105%
321-60-8	2-Fluorobiphenyl	94% 43-107%
1718-51-0	Terphenyl-d14	115% 45-119%

Blank Spike Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67487-BS	X057030.D	1	11/08/17	MV	11/03/17	OP67487	SX2396

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48865-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2390	72	36-118
59-50-7	4-Chloro-3-methyl Phenol	1670	1260	76	52-108
95-57-8	2-Chlorophenol	1670	1290	77	48-104
120-83-2	2,4-Dichlorophenol	1670	1250	75	51-105
105-67-9	2,4-Dimethylphenol	1670	1070	64	43-96
51-28-5	2,4-Dinitrophenol	3330	2970	89	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	3200	96	64-121
95-48-7	2-Methylphenol	1670	1280	77	46-107
	3&4-Methylphenol	3330	2550	77	44-111
88-75-5	2-Nitrophenol	1670	1420	85	49-104
100-02-7	4-Nitrophenol	3330	2980	89	56-116
87-86-5	Pentachlorophenol	3330	3220	97	61-114
108-95-2	Phenol	1670	1300	78	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1520	91	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1530	92	56-109
83-32-9	Acenaphthene	1670	1380	83	56-109
208-96-8	Acenaphthylene	1670	1460	88	56-106
62-53-3	Aniline	1670	1240	74	42-108
120-12-7	Anthracene	1670	1400	84	61-110
92-87-5	Benzidine	1670	1040	62	10-109
56-55-3	Benzo(a)anthracene	1670	1410	85	66-111
50-32-8	Benzo(a)pyrene	1670	1420	85	59-104
205-99-2	Benzo(b)fluoranthene	1670	1420	85	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1510	91	67-113
207-08-9	Benzo(k)fluoranthene	1670	1490	89	67-114
100-51-6	Benzyl Alcohol	1670	1290	77	53-108
101-55-3	4-Bromophenyl phenyl ether	1670	1440	86	62-110
85-68-7	Butyl benzyl phthalate	1670	1480	89	65-113
86-74-8	Carbazole	1670	1480	89	60-111
106-47-8	4-Chloroaniline	1670	1430	86	30-115
111-91-1	bis(2-Chloroethoxy)methane	1670	1080	65	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1230	74	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1190	71	40-110
91-58-7	2-Chloronaphthalene	1670	1370	82	53-106
7005-72-3	4-Chlorophenyl phenyl ether	1670	1410	85	58-106
218-01-9	Chrysene	1670	1430	86	65-112

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67487-BS	X057030.D	1	11/08/17	MV	11/03/17	OP67487	SX2396

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48865-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
53-70-3	Dibenzo(a,h)anthracene	1670	1500	90	68-115
132-64-9	Dibenzofuran	1670	1440	86	57-108
95-50-1	1,2-Dichlorobenzene	1670	1280	77	44-102
541-73-1	1,3-Dichlorobenzene	1670	1250	75	42-100
106-46-7	1,4-Dichlorobenzene	1670	1260	76	40-106
91-94-1	3,3'-Dichlorobenzidine	1670	1670	100	36-114
84-66-2	Diethyl Phthalate	1670	1400	84	61-109
131-11-3	Dimethyl Phthalate	1670	1410	85	59-108
117-84-0	Di-n-octyl Phthalate	1670	1550	93	64-119
84-74-2	Di-n-butyl Phthalate	1670	1460	88	63-108
121-14-2	2,4-Dinitrotoluene	1670	1560	94	59-109
606-20-2	2,6-Dinitrotoluene	1670	1510	91	61-107
122-66-7	1,2-Diphenylhydrazine	1670	1410	85	58-112
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1500	90	64-115
206-44-0	Fluoranthene	1670	1420	85	60-108
86-73-7	Fluorene	1670	1450	87	58-109
118-74-1	Hexachlorobenzene	1670	1450	87	59-111
87-68-3	Hexachlorobutadiene	1670	1050	63	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1450	87	49-110
67-72-1	Hexachloroethane	1670	1240	74	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1540	92	66-116
78-59-1	Isophorone	1670	1200	72	42-89
90-12-0	1-Methylnaphthalene	1670	1190	71	49-106
91-57-6	2-Methylnaphthalene	1670	1190	71	47-106
91-20-3	Naphthalene	1670	1140	68	44-104
88-74-4	2-Nitroaniline	1670	1600	96	56-123
99-09-2	3-Nitroaniline	1670	1630	98	41-111
100-01-6	4-Nitroaniline	1670	1480	89	54-113
98-95-3	Nitrobenzene	1670	1190	71	43-108
62-75-9	N-Nitrosodimethylamine	1670	1170	70	40-106
621-64-7	N-Nitrosodi-n-propylamine	1670	1280	77	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1450	87	62-110
85-01-8	Phenanthrene	1670	1420	85	63-111
129-00-0	Pyrene	1670	1470	88	65-115
110-86-1	Pyridine	1670	1100	66	31-102
120-82-1	1,2,4-Trichlorobenzene	1670	1170	70	45-100

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67487-BS	X057030.D	1	11/08/17	MV	11/03/17	OP67487	SX2396

The QC reported here applies to the following samples: Method: SW846 8270D

FA48865-1

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	76%	40-102%
4165-62-2	Phenol-d5	76%	41-100%
118-79-6	2,4,6-Tribromophenol	96%	42-108%
4165-60-0	Nitrobenzene-d5	71%	40-105%
321-60-8	2-Fluorobiphenyl	81%	43-107%
1718-51-0	Terphenyl-d14	88%	45-119%

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67433-BS	W103802.D	1	11/02/17	NJ	10/31/17	OP67433	SW4513

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

FA48865-2, FA48865-3, FA48865-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	667	612	92	53-100
208-96-8	Acenaphthylene	667	601	90	51-100
120-12-7	Anthracene	333	317	95	60-102
56-55-3	Benzo(a)anthracene	333	326	98	60-106
50-32-8	Benzo(a)pyrene	333	324	97	58-105
205-99-2	Benzo(b)fluoranthene	333	339	102	59-112
191-24-2	Benzo(g,h,i)perylene	333	332	100	56-109
207-08-9	Benzo(k)fluoranthene	333	336	101	58-109
218-01-9	Chrysene	333	337	101	62-104
53-70-3	Dibenzo(a,h)anthracene	333	322	97	55-110
206-44-0	Fluoranthene	667	621	93	59-109
86-73-7	Fluorene	667	612	92	56-104
193-39-5	Indeno(1,2,3-cd)pyrene	333	330	99	54-110
91-20-3	Naphthalene	667	591	89	49-101
85-01-8	Phenanthrene	667	654	98	57-104
129-00-0	Pyrene	667	724	109*	58-106

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	96%	40-105%
321-60-8	2-Fluorobiphenyl	92%	43-107%
1718-51-0	Terphenyl-d14	104%	45-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67487-MS	X057037.D	1	11/08/17	MV	11/03/17	OP67487	SX2396
OP67487-MSD	X057038.D	1	11/08/17	MV	11/03/17	OP67487	SX2396
JC54036-31 ^a	X057036.D	1	11/08/17	MV	11/03/17	OP67487	SX2396

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48865-1

CAS No.	Compound	JC54036-31 ug/kg	Spike Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		3600	249	7*	3600	ND	0*	200*	36-118/41
59-50-7	4-Chloro-3-methyl Phenol	ND		1800	1240	69	1800	1450	81	16	52-108/21
95-57-8	2-Chlorophenol	ND		1800	1140	63	1800	1460	81	25	48-104/26
120-83-2	2,4-Dichlorophenol	ND		1800	1200	67	1800	1440	80	18	51-105/27
105-67-9	2,4-Dimethylphenol	ND		1800	1020	57	1800	1240	69	19	43-96/23
51-28-5	2,4-Dinitrophenol	ND		3600	1480	41	3600	945	26*	44*	40-119/32
534-52-1	4,6-Dinitro-o-cresol	ND		3600	2660	74	3600	2300	64	15	64-121/29
95-48-7	2-Methylphenol	ND		1800	1160	64	1800	1450	81	22	46-107/24
	3&4-Methylphenol	ND		3600	2350	65	3600	2910	81	21	44-111/24
88-75-5	2-Nitrophenol	ND		1800	1280	71	1800	1630	91	24	49-104/27
100-02-7	4-Nitrophenol	ND		3600	2840	79	3600	2990	83	5	56-116/23
87-86-5	Pentachlorophenol	ND		3600	2320	64	3600	1710	48*	30*	61-114/23
108-95-2	Phenol	ND		1800	1170	65	1800	1470	82	23	45-110/24
95-95-4	2,4,5-Trichlorophenol	ND		1800	1460	81	1800	1680	93	14	58-112/22
88-06-2	2,4,6-Trichlorophenol	ND		1800	1420	79	1800	1570	87	10	56-109/25
83-32-9	Acenaphthene	ND		1800	1340	74	1800	1620	90	19	56-109/23
208-96-8	Acenaphthylene	ND		1800	1400	78	1800	1710	95	20	56-106/23
62-53-3	Aniline	ND		1800	1110	62	1800	1330	74	18	42-108/28
120-12-7	Anthracene	ND		1800	1410	78	1800	1640	91	15	61-110/21
92-87-5	Benzidine	ND		1800	1180	66	1800	1300	72	10	10-109/35
56-55-3	Benzo(a)anthracene	45.9	J	1800	1480	80	1800	1760	95	17	66-111/23
50-32-8	Benzo(a)pyrene	37.9	J	1800	1490	81	1800	1760	96	17	59-104/23
205-99-2	Benzo(b)fluoranthene	34.0	J	1800	1460	79	1800	1760	96	19	67-113/24
191-24-2	Benzo(g,h,i)perylene	26.7	J	1800	1490	81	1800	1880	103	23*	67-113/21
207-08-9	Benzo(k)fluoranthene	38.5	J	1800	1520	82	1800	1720	93	12	67-114/22
100-51-6	Benzyl Alcohol	ND		1800	1170	65	1800	1450	81	21	53-108/24
101-55-3	4-Bromophenyl phenyl ether	ND		1800	1440	80	1800	1720	96	18	62-110/21
85-68-7	Butyl benzyl phthalate	ND		1800	1520	84	1800	1790	99	16	65-113/20
86-74-8	Carbazole	ND		1800	1490	83	1800	1670	93	11	60-111/19
106-47-8	4-Chloroaniline	ND		1800	1390	77	1800	1640	91	17	30-115/30
111-91-1	bis(2-Chloroethoxy)methane	ND		1800	988	55	1800	1240	69	23	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND		1800	1100	61	1800	1400	78	24	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND		1800	1050	58	1800	1330	74	24	40-110/25
91-58-7	2-Chloronaphthalene	ND		1800	1300	72	1800	1600	89	21	53-106/23
7005-72-3	4-Chlorophenyl phenyl ether	ND		1800	1370	76	1800	1650	92	19	58-106/21
218-01-9	Chrysene	51.3	J	1800	1480	79	1800	1760	95	17	65-112/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67487-MS	X057037.D	1	11/08/17	MV	11/03/17	OP67487	SX2396
OP67487-MSD	X057038.D	1	11/08/17	MV	11/03/17	OP67487	SX2396
JC54036-31 ^a	X057036.D	1	11/08/17	MV	11/03/17	OP67487	SX2396

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48865-1

CAS No.	Compound	JC54036-31 ug/kg	Spike Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
53-70-3	Dibenzo(a,h)anthracene	ND		1800	1480	82	1800	1790	99	19	68-115/23
132-64-9	Dibenzofuran	ND		1800	1390	77	1800	1660	92	18	57-108/22
95-50-1	1,2-Dichlorobenzene	ND		1800	1140	63	1800	1450	81	24	44-102/28
541-73-1	1,3-Dichlorobenzene	ND		1800	1100	61	1800	1430	79	26	42-100/30
106-46-7	1,4-Dichlorobenzene	ND		1800	1110	62	1800	1440	80	26	40-106/29
91-94-1	3,3'-Dichlorobenzidine	ND		1800	1820	101	1800	2090	116*	14	36-114/28
84-66-2	Diethyl Phthalate	ND		1800	1400	78	1800	1630	91	15	61-109/20
131-11-3	Dimethyl Phthalate	ND		1800	1360	76	1800	1620	90	17	59-108/20
117-84-0	Di-n-octyl Phthalate	ND		1800	1620	90	1800	1840	102	13	64-119/21
84-74-2	Di-n-butyl Phthalate	ND		1800	1480	82	1800	1690	94	13	63-108/19
121-14-2	2,4-Dinitrotoluene	ND		1800	1580	88	1800	1840	102	15	59-109/20
606-20-2	2,6-Dinitrotoluene	ND		1800	1460	81	1800	1750	97	18	61-107/22
122-66-7	1,2-Diphenylhydrazine	ND		1800	1400	78	1800	1670	93	18	58-112/22
117-81-7	bis(2-Ethylhexyl)phthalate	ND		1800	1540	86	1800	1840	102	18	64-115/23
206-44-0	Fluoranthene	100	J	1800	1490	77	1800	1750	92	16	60-108/25
86-73-7	Fluorene	ND		1800	1430	79	1800	1680	93	16	58-109/21
118-74-1	Hexachlorobenzene	ND		1800	1460	81	1800	1720	96	16	59-111/21
87-68-3	Hexachlorobutadiene	ND		1800	931	52	1800	1230	68	28*	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND		1800	1180	66	1800	1400	78	17	49-110/31
67-72-1	Hexachloroethane	ND		1800	1080	60	1800	1420	79	27	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	26.9	J	1800	1520	83	1800	1930	106	24*	66-116/22
78-59-1	Isophorone	ND		1800	1130	63	1800	1380	77	20	42-89/22
90-12-0	1-Methylnaphthalene	ND		1800	1130	63	1800	1370	76	19	49-106/26
91-57-6	2-Methylnaphthalene	ND		1800	1140	63	1800	1370	76	18	47-106/27
91-20-3	Naphthalene	ND		1800	1060	59	1800	1320	73	22	44-104/27
88-74-4	2-Nitroaniline	ND		1800	1510	84	1800	1830	102	19	56-123/24
99-09-2	3-Nitroaniline	ND		1800	1660	92	1800	1930	107	15	41-111/25
100-01-6	4-Nitroaniline	ND		1800	1500	83	1800	1710	95	13	54-113/22
98-95-3	Nitrobenzene	ND		1800	1080	60	1800	1370	76	24	43-108/25
62-75-9	N-Nitrosodimethylamine	ND		1800	1010	56	1800	1300	72	25	40-106/27
621-64-7	N-Nitrosodi-n-propylamine	ND		1800	1130	63	1800	1430	79	23	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND		1800	1460	81	1800	1710	95	16	62-110/21
85-01-8	Phenanthrene	44.4	J	1800	1460	79	1800	1720	93	16	63-111/22
129-00-0	Pyrene	89.0	J	1800	1540	81	1800	1920	102	22	65-115/25
110-86-1	Pyridine	ND		1800	971	54	1800	1250	69	25	31-102/38
120-82-1	1,2,4-Trichlorobenzene	ND		1800	1080	60	1800	1380	77	24	45-100/26

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 3 of 3

Job Number: FA48865

Account: TCMAW Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67487-MS	X057037.D	1	11/08/17	MV	11/03/17	OP67487	SX2396
OP67487-MSD	X057038.D	1	11/08/17	MV	11/03/17	OP67487	SX2396
JC54036-31 ^a	X057036.D	1	11/08/17	MV	11/03/17	OP67487	SX2396

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48865-1

CAS No.	Surrogate Recoveries	MS	MSD	JC54036-31	Limits
367-12-4	2-Fluorophenol	62%	78%	49%	40-102%
4165-62-2	Phenol-d5	64%	79%	56%	41-100%
118-79-6	2,4,6-Tribromophenol	85%	93%	73%	42-108%
4165-60-0	Nitrobenzene-d5	61%	76%	56%	40-105%
321-60-8	2-Fluorobiphenyl	70%	88%	61%	43-107%
1718-51-0	Terphenyl-d14	84%	99%	77%	45-119%

(a) Confirmation run.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67433-MS	W103805.D	1	11/02/17	NJ	10/31/17	OP67433	SW4513
OP67433-MSD	W103806.D	1	11/02/17	NJ	10/31/17	OP67433	SW4513
FA48785-1	W103804.D	1	11/02/17	NJ	10/31/17	OP67433	SW4513

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

FA48865-2, FA48865-3, FA48865-4

CAS No.	Compound	FA48785-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	75 U	774	725	94	779	714	92	2	53-100/28
208-96-8	Acenaphthylene	75 U	774	711	92	779	704	90	1	51-100/25
120-12-7	Anthracene	75 U	387	352	91	390	359	92	2	60-102/29
56-55-3	Benzo(a)anthracene	15 U	387	355	92	390	386	99	8	60-106/30
50-32-8	Benzo(a)pyrene	15 U	387	344	89	390	358	92	4	58-105/30
205-99-2	Benzo(b)fluoranthene	15 U	387	356	92	390	358	92	1	59-112/33
191-24-2	Benzo(g,h,i)perylene	15 U	387	345	89	390	381	98	10	56-109/31
207-08-9	Benzo(k)fluoranthene	15 U	387	360	93	390	365	94	1	58-109/33
218-01-9	Chrysene	15 U	387	373	96	390	390	100	4	62-104/30
53-70-3	Dibenzo(a,h)anthracene	15 U	387	361	93	390	369	95	2	55-110/31
206-44-0	Fluoranthene	75 U	774	728	94	779	741	95	2	59-109/29
86-73-7	Fluorene	75 U	774	703	91	779	713	91	1	56-104/27
193-39-5	Indeno(1,2,3-cd)pyrene	15 U	387	370	96	390	372	95	1	54-110/32
91-20-3	Naphthalene	75 U	774	702	91	779	695	89	1	49-101/28
85-01-8	Phenanthrene	75 U	774	740	96	779	733	94	1	57-104/27
129-00-0	Pyrene	75 U	774	805	104	779	866	111*	7	58-106/29

CAS No.	Surrogate Recoveries	MS	MSD	FA48785-1	Limits
4165-60-0	Nitrobenzene-d5	94%	88%	96%	40-105%
321-60-8	2-Fluorobiphenyl	94%	94%	82%	43-107%
1718-51-0	Terphenyl-d14	106%	112%	83%	45-119%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4504-DFTPP
Lab File ID: W103557.D
Instrument ID: GCMSW
Injection Date: 10/24/17
Injection Time: 08:35

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	86099	33.6	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	102423	40.0	Pass
70	Less than 2.0% of mass 69	555	0.22 (0.54) ^a	Pass
127	40.0 - 60.0% of mass 198	117248	45.8	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	256170	100.0	Pass
199	5.0 - 9.0% of mass 198	17849	6.97	Pass
275	10.0 - 30.0% of mass 198	66776	26.1	Pass
365	1.0 - 100.0% of mass 198	8521	3.33	Pass
441	Present, but less than mass 443	31109	12.1 (80.8) ^b	Pass
442	40.0 - 100.0% of mass 198	191722	74.8	Pass
443	17.0 - 23.0% of mass 442	38490	15.0 (20.1) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW4504-IC4504	W103559.D	10/24/17	10:55	02:20	Initial cal 1
SW4504-IC4504	W103560.D	10/24/17	11:20	02:45	Initial cal 2
SW4504-IC4504	W103561.D	10/24/17	11:46	03:11	Initial cal 3
SW4504-ICC4504	W103562.D	10/24/17	12:12	03:37	Initial cal 4
SW4504-IC4504	W103563.D	10/24/17	12:37	04:02	Initial cal 5
SW4504-IC4504	W103564.D	10/24/17	13:03	04:28	Initial cal 6
SW4504-IC4504	W103565.D	10/24/17	13:29	04:54	Initial cal 7
SW4504-ICV4504	W103566.D	10/24/17	13:54	05:19	Initial cal verification 4

Instrument Performance Check (DFTPP)

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4513-DFTPP
Lab File ID: W103797.D
Instrument ID: GCMSW
Injection Date: 11/02/17
Injection Time: 10:04

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	64331	35.4	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	82615	45.5	Pass
70	Less than 2.0% of mass 69	328	0.18 (0.40) ^a	Pass
127	40.0 - 60.0% of mass 198	81637	45.0	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	181482	100.0	Pass
199	5.0 - 9.0% of mass 198	12428	6.85	Pass
275	10.0 - 30.0% of mass 198	42240	23.3	Pass
365	1.0 - 100.0% of mass 198	5580	3.07	Pass
441	Present, but less than mass 443	18271	10.1 (87.1) ^b	Pass
442	40.0 - 100.0% of mass 198	111944	61.7	Pass
443	17.0 - 23.0% of mass 442	20966	11.6 (18.7) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW4513-CC4504	W103798.D	11/02/17	10:17	00:13	Continuing cal 4
OP67461-BS	W103799.D	11/02/17	10:43	00:39	Blank Spike
OP67461-MB	W103800.D	11/02/17	11:09	01:05	Method Blank
ZZZZZZ	W103801.D	11/02/17	11:34	01:30	(unrelated sample)
OP67433-BS	W103802.D	11/02/17	12:00	01:56	Blank Spike
OP67433-MB	W103803.D	11/02/17	12:26	02:22	Method Blank
FA48785-1	W103804.D	11/02/17	12:51	02:47	(used for QC only; not part of job FA48865)
OP67433-MS	W103805.D	11/02/17	13:17	03:13	Matrix Spike
OP67433-MSD	W103806.D	11/02/17	13:43	03:39	Matrix Spike Duplicate
ZZZZZZ	W103807.D	11/02/17	14:09	04:05	(unrelated sample)
ZZZZZZ	W103808.D	11/02/17	14:34	04:30	(unrelated sample)
ZZZZZZ	W103809.D	11/02/17	15:00	04:56	(unrelated sample)
ZZZZZZ	W103810.D	11/02/17	15:26	05:22	(unrelated sample)
ZZZZZZ	W103811.D	11/02/17	15:52	05:48	(unrelated sample)
ZZZZZZ	W103812.D	11/02/17	16:18	06:14	(unrelated sample)
ZZZZZZ	W103813.D	11/02/17	16:43	06:39	(unrelated sample)
ZZZZZZ	W103814.D	11/02/17	17:09	07:05	(unrelated sample)
ZZZZZZ	W103815.D	11/02/17	17:35	07:31	(unrelated sample)
ZZZZZZ	W103816.D	11/02/17	18:01	07:57	(unrelated sample)

Instrument Performance Check (DFTPP)

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Job Number: FA48865

Account: TCMAW Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4513-DFTPP

Injection Date: 11/02/17

Lab File ID: W103797.D

Injection Time: 10:04

Instrument ID: GCMSW

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	W103817.D	11/02/17	18:26	08:22	(unrelated sample)
ZZZZZZ	W103818.D	11/02/17	18:52	08:48	(unrelated sample)
ZZZZZZ	W103819.D	11/02/17	19:18	09:14	(unrelated sample)
ZZZZZZ	W103820.D	11/02/17	19:43	09:39	(unrelated sample)
ZZZZZZ	W103821.D	11/02/17	20:09	10:05	(unrelated sample)
FA48865-2	W103822.D	11/02/17	20:34	10:30	NIKE BOT NW1
FA48865-3	W103823.D	11/02/17	21:00	10:56	NIKE SW2 WEST SIDEWALL
FA48865-4	W103824.D	11/02/17	21:26	11:22	NIKE SIDEWALL NW1
SW4513-ECC4504	W103825.D	11/02/17	21:51	11:47	Ending cal 4

7.4.2

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Instrument Performance Check (DFTPP)

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-DFTPP **Injection Date:** 11/07/17
Lab File ID: X056978.D **Injection Time:** 08:34
Instrument ID: GCMSX

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	26567	35.0	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	30793	40.5	Pass
70	Less than 2.0% of mass 69	111	0.15 (0.36) ^a	Pass
127	40.0 - 60.0% of mass 198	37203	49.0	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	75965	100.0	Pass
199	5.0 - 9.0% of mass 198	5257	6.92	Pass
275	10.0 - 30.0% of mass 198	19037	25.1	Pass
365	1.0 - 100.0% of mass 198	1975	2.60	Pass
441	Present, but less than mass 443	8101	10.7 (74.3) ^b	Pass
442	40.0 - 100.0% of mass 198	55256	72.7	Pass
443	17.0 - 23.0% of mass 442	10899	14.3 (19.7) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2395-IC2395	X056979.D	11/07/17	08:54	00:20	Initial cal 5
SX2395-IC2395	X056980.D	11/07/17	09:20	00:46	Initial cal 10
SX2395-IC2395	X056981.D	11/07/17	09:45	01:11	Initial cal 25
SX2395-ICC2395	X056982.D	11/07/17	10:10	01:36	Initial cal 50
SX2395-IC2395	X056983.D	11/07/17	10:35	02:01	Initial cal 60
SX2395-IC2395	X056984.D	11/07/17	11:01	02:27	Initial cal 75
SX2395-IC2395	X056985.D	11/07/17	11:26	02:52	Initial cal 100
SX2395-ICV2395	X056986.D	11/07/17	11:51	03:17	Initial cal verification 50
SX2395-ICV2395	X056987.D	11/07/17	12:17	03:43	Initial cal verification 50

Instrument Performance Check (DFTPP)

Page 1 of 2

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2396-DFTPP
Lab File ID: X057016.D
Instrument ID: GCMSX
Injection Date: 11/08/17
Injection Time: 13:18

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	20771	36.2	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	24249	42.2	Pass
70	Less than 2.0% of mass 69	82	0.14 (0.34) ^a	Pass
127	40.0 - 60.0% of mass 198	28203	49.1	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	57456	100.0	Pass
199	5.0 - 9.0% of mass 198	3908	6.80	Pass
275	10.0 - 30.0% of mass 198	13993	24.4	Pass
365	1.0 - 100.0% of mass 198	1272	2.21	Pass
441	Present, but less than mass 443	5281	9.19 (70.1) ^b	Pass
442	40.0 - 100.0% of mass 198	37573	65.4	Pass
443	17.0 - 23.0% of mass 442	7536	13.1 (20.1) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2396-CC2395	X057017.D	11/08/17	13:36	00:18	Continuing cal 50
OP67384-BS	X057018.D	11/08/17	14:01	00:43	Blank Spike
OP67384-MB	X057019.D	11/08/17	14:27	01:09	Method Blank
ZZZZZZ	X057020.D	11/08/17	14:53	01:35	(unrelated sample)
ZZZZZZ	X057021.D	11/08/17	15:18	02:00	(unrelated sample)
ZZZZZZ	X057022.D	11/08/17	15:44	02:26	(unrelated sample)
ZZZZZZ	X057023.D	11/08/17	16:18	03:00	(unrelated sample)
OP67421-BS	X057024.D	11/08/17	16:43	03:25	Blank Spike
OP67421-MB	X057025.D	11/08/17	17:09	03:51	Method Blank
ZZZZZZ	X057026.D	11/08/17	17:35	04:17	(unrelated sample)
ZZZZZZ	X057027.D	11/08/17	18:01	04:43	(unrelated sample)
ZZZZZZ	X057028.D	11/08/17	18:26	05:08	(unrelated sample)
ZZZZZZ	X057029.D	11/08/17	18:52	05:34	(unrelated sample)
OP67487-BS	X057030.D	11/08/17	19:17	05:59	Blank Spike
OP67487-MB	X057031.D	11/08/17	19:43	06:25	Method Blank
FA48865-1	X057032.D	11/08/17	20:08	06:50	NIKE SIDEWALL NORTH3 EXT
JC54036-31	X057036.D	11/08/17	21:49	08:31	(used for QC only; not part of job FA48865)
OP67487-MS	X057037.D	11/08/17	22:14	08:56	Matrix Spike
OP67487-MSD	X057038.D	11/08/17	22:39	09:21	Matrix Spike Duplicate

Instrument Performance Check (DFTPP)

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample:	SX2396-DFTPP	Injection Date:	11/08/17
Lab File ID:	X057016.D	Injection Time:	13:18
Instrument ID:	GCMSX		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	X057039.D	11/08/17	23:05	09:47	(unrelated sample)
ZZZZZZ	X057040.D	11/08/17	23:30	10:12	(unrelated sample)
ZZZZZZ	X057041.D	11/08/17	23:55	10:37	(unrelated sample)
ZZZZZZ	X057042.D	11/09/17	00:20	11:02	(unrelated sample)
SX2396-ECC2395	X057043.D	11/09/17	00:45	11:27	Ending cal 50

7.4.4
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Internal Standard Area Summary

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: SW4513-CC4504	Injection Date: 11/02/17
Lab File ID: W103798.D	Injection Time: 10:17
Instrument ID: GCMSW	Method: SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Initial Cal ^a	124319	5.46	61385	7.13	124395	8.59	86230	12.26	78867	15.91
Check Std ^b	102667	5.41	50876	7.07	95610	8.54	66288	12.16	63131	15.80
Upper Limit ^c	205334	5.58	101752	7.24	191220	8.71	132576	12.33	126262	15.97
Lower Limit ^d	51334	5.24	25438	6.90	47805	8.37	33144	11.99	31566	15.63

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
OP67461-BS ^e	115455	5.41	58324	7.08	101711	8.54	70256	12.16	61832	15.79
OP67461-MB	101919	5.41	55929	7.07	104380	8.54	73734	12.15	61146	15.79
ZZZZZZ	110883	5.41	60625	7.07	108191	8.54	82373	12.16	68944	15.79
OP67433-BS	94525	5.41	47255	7.08	94947	8.53	63107	12.16	54981	15.79
OP67433-MB	99567	5.41	54120	7.08	97305	8.53	70641	12.16	58640	15.79
FA48785-1	101918	5.41	55858	7.08	105658	8.53	81869	12.16	65612	15.79
OP67433-MS	108435	5.40	48062	7.07	89360	8.54	62560	12.16	55290	15.79
OP67433-MSD	107237	5.41	52985	7.07	100686	8.54	65412	12.16	63743	15.79
ZZZZZZ	110811	5.41	60531	7.08	112060	8.53	76990	12.16	64929	15.79
ZZZZZZ	100686	5.41	51439	7.07	98209	8.53	76600	12.16	60740	15.79
ZZZZZZ	105473	5.41	50696	7.07	92105	8.54	70792	12.16	59672	15.79
ZZZZZZ	105914	5.41	56141	7.07	100975	8.54	75403	12.16	57455	15.79
ZZZZZZ	91153	5.41	52192	7.07	105407	8.54	73255	12.16	60210	15.79
ZZZZZZ	110395	5.41	59830	7.07	104151	8.53	78991	12.16	66800	15.79
ZZZZZZ	103815	5.41	64388	7.07	116709	8.54	86230	12.16	66404	15.79
ZZZZZZ	87464	5.41	46850	7.07	100913	8.54	75485	12.16	65162	15.79
ZZZZZZ	124999	5.41	64867	7.08	107188	8.53	78124	12.15	64530	15.79
ZZZZZZ	124710	5.41	65939	7.07	104694	8.53	80780	12.16	72734	15.79
ZZZZZZ	95674	5.41	58581	7.07	110022	8.54	82516	12.16	70726	15.79
ZZZZZZ	80084	5.41	43986	7.07	80239	8.54	64654	12.16	56228	15.79
ZZZZZZ	94583	5.41	52606	7.08	97131	8.53	68202	12.16	65573	15.78
ZZZZZZ	92980	5.41	53892	7.07	81479	8.54	75578	12.16	68577	15.79
ZZZZZZ	98758	5.41	54309	7.07	111170	8.54	85545	12.16	77218	15.79
FA48865-2	108046	5.41	57066	7.08	105082	8.53	69754	12.16	59838	15.79
FA48865-3	112477	5.41	56325	7.07	102468	8.53	75084	12.16	59257	15.79
FA48865-4	99795	5.41	57472	7.08	106151	8.53	79803	12.16	66871	15.79
SW4513-ECC450499339		5.41	48808	7.07	93645	8.53	69753	12.16	62277	15.79

IS 1 = Naphthalene-d8
IS 2 = Acenaphthene-D10
IS 3 = Phenanthrene-d10
IS 4 = Chrysene-d12
IS 5 = Perylene-d12

Internal Standard Area Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std:	SW4513-CC4504	Injection Date:	11/02/17
Lab File ID:	W103798.D	Injection Time:	10:17
Instrument ID:	GCMSW	Method:	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

- (a) Initial Cal is: SW4504-ICC4504 W103562.D 10/24/17 12:12
- (b) Check Std Limit = -50 to +100% of initial cal area.
- (c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
- (d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.
- (e) Insufficient sample for MS/MSD.

7.5.1
7

Internal Standard Area Summary

Page 1 of 2

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: SX2396-CC2395	Injection Date: 11/08/17
Lab File ID: X057017.D	Injection Time: 13:36
Instrument ID: GCMSX	Method: SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Initial Cal ^a	127093	6.23	496689	7.66	284627	9.72	482690	11.45	493623	14.77	506910	17.15
Check Std ^b	162361	6.22	594623	7.65	336101	9.71	535269	11.43	523702	14.75	541106	17.13
Upper Limit ^c	324722	6.39	1189246	7.82	672202	9.88	1070538	11.60	1047404	14.92	1082212	17.30
Lower Limit ^d	81181	6.05	297312	7.48	168051	9.54	267635	11.26	261851	14.58	270553	16.96

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP67384-BS	200351	6.22	820498	7.65	430921	9.71	712384	11.43	720822	14.75	752346	17.13
OP67384-MB	152840	6.22	582075	7.64	370592	9.70	629776	11.43	668410	14.75	681651	17.13
ZZZZZZ	137791	6.22	528874	7.64	310643	9.70	527077	11.43	556802	14.74	571308	17.13
ZZZZZZ	148315	6.22	563502	7.64	325324	9.70	542865	11.43	561792	14.75	574727	17.13
ZZZZZZ	138800	6.21	530256	7.64	307447	9.70	516669	11.43	543302	14.75	559308	17.13
ZZZZZZ	129533	6.21	496777	7.65	289519	9.70	478618	11.43	491724	14.75	500652	17.13
OP67421-BS	153567	6.22	641926	7.65	327832	9.71	532521	11.43	534059	14.75	546973	17.13
OP67421-MB	139196	6.22	535048	7.64	316012	9.70	534569	11.43	555305	14.75	565105	17.13
ZZZZZZ	150797	6.22	566309	7.64	332114	9.70	549118	11.43	563174	14.74	573440	17.13
ZZZZZZ	155799	6.22	584306	7.64	329763	9.70	540350	11.43	584475	14.75	570296	17.14
ZZZZZZ	153917	6.22	577197	7.65	334522	9.70	552602	11.43	569606	14.75	587154	17.13
ZZZZZZ	145386	6.22	545150	7.64	314577	9.70	534025	11.43	564190	14.75	583442	17.13
OP67487-BS	146101	6.22	608910	7.65	311006	9.71	510716	11.43	507012	14.75	512042	17.13
OP67487-MB	144697	6.21	547500	7.64	315786	9.70	527786	11.43	546048	14.74	554288	17.12
FA48865-1	153124	6.22	562944	7.65	331208	9.71	574295	11.44	591628	14.74	598424	17.12
JC54036-31	153781	6.21	571800	7.64	326723	9.70	551177	11.43	562463	14.74	571823	17.12
OP67487-MS	148470	6.22	610268	7.65	317541	9.70	521200	11.43	521416	14.75	526952	17.13
OP67487-MSD	147248	6.22	601691	7.65	301941	9.71	489337	11.43	458264	14.75	476702	17.13
ZZZZZZ	149238	6.22	562795	7.64	320873	9.70	529425	11.43	537828	14.74	542964	17.13
ZZZZZZ	146772	6.22	555124	7.65	314005	9.70	524899	11.43	523326	14.74	515159	17.13
ZZZZZZ	154429	6.22	572338	7.65	320464	9.70	529385	11.43	531081	14.75	525688	17.13
ZZZZZZ	147385	6.22	562262	7.65	323250	9.70	534851	11.43	538530	14.75	537111	17.13
SX2396-ECC2395	167539	6.22	608405	7.65	327925	9.71	500175	11.43	455958	14.75	473977	17.13

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX2395-ICC2395 X056982.D 11/07/17 10:10

(b) Check Std Limit = -50 to +100% of initial cal area.

Internal Standard Area Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std:	SX2396-CC2395	Injection Date:	11/08/17
Lab File ID:	X057017.D	Injection Time:	13:36
Instrument ID:	GCMSX	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(c) Upper Limit = + 100% of check standard area; Retention time + 0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

7.5.2
7

Surrogate Recovery Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8270D	Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
FA48865-1	X057032.D	59	64	88	68	73	83
OP67487-BS	X057030.D	76	76	96	71	81	88
OP67487-MB	X057031.D	56	61	76	61	65	76
OP67487-MS	X057037.D	62	64	85	61	70	84
OP67487-MSD	X057038.D	78	79	93	76	88	99

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	40-102%
S2 = Phenol-d5	41-100%
S3 = 2,4,6-Tribromophenol	42-108%
S4 = Nitrobenzene-d5	40-105%
S5 = 2-Fluorobiphenyl	43-107%
S6 = Terphenyl-d14	45-119%

7.6.1
7

Surrogate Recovery Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8270D BY SIM	Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
FA48865-2	W103822.D	93	90	99
FA48865-3	W103823.D	93	93	106
FA48865-4	W103824.D	92	86	94
OP67433-BS	W103802.D	96	92	104
OP67433-MB	W103803.D	101	94	115
OP67433-MS	W103805.D	94	94	106
OP67433-MSD	W103806.D	88	94	112

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	40-105%
S2 = 2-Fluorobiphenyl	43-107%
S3 = Terphenyl-d14	45-119%

Initial Calibration Summary

Page 1 of 2

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4504-ICC4504
Lab FileID: W103562.D

Response Factor Report MSBNA01

Method : C:\msdchem\1\METHODS\simpahf1024.m (RTE Integrator)
Title : PAH's by 8270 SIM
Last Update : Tue Oct 24 14:16:52 2017
Response via : Initial Calibration

Calibration Files

L1 =W103559.D L2 =W103560.D L3 =W103561.D L4 =W103562.D
L5 =W103563.D L6 =W103564.D L7 =W103565.D

Compound	L1	L2	L3	L4	L5	L6	L7	Avg	%RSD
-----ISTD-----									
1) I Naphthalene-d8									
2)S Nitrobenzene-d5	0.426	0.376	0.363	0.334	0.322	0.323	0.341	0.355	10.47
3)P Naphthalene	1.000	0.894	0.831	0.769	0.773	0.747	0.816	0.833	10.60
4)P 2-Methylnaphthale	0.834	0.720	0.686	0.625	0.598	0.584	0.640	0.670	12.97
5)P 1-Methylnaphthale	0.751	0.635	0.579	0.531	0.529	0.521	0.565	0.587	14.01
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9995									
Response Ratio = 0.00000 + 0.50711 *A + 0.00561 *A^2									
-----ISTD-----									
6) I Acenaphthene-d10									
7)S 2-Fluorobiphenyl	1.746	1.481	1.381	1.299	1.213	1.179	1.395	1.385	13.81
8)P Acenaphthylene	2.385	2.079	1.953	1.819	1.662	1.608	1.847	1.908	13.89
9)P Acenaphthene	1.182	1.077	1.045	0.995	0.939	0.927	1.100	1.038	8.79
10) Dibenzofuran	2.106	1.798	1.713	1.570	1.495	1.465	1.630	1.682	13.10
11)P Fluorene	1.769	1.479	1.410	1.303	1.240	1.218	1.378	1.400	13.41
-----ISTD-----									
12) I Phenanthrene-d10									
13)S 2,4,6-Tribromophe	0.026	0.027	0.027	0.033	0.038	0.044	0.067	0.037#	39.28
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000									
Response Ratio = 0.00000 + 0.02057 *A + 0.00234 *A^2									
0.004 0.009 0.025 0.013# 85.52									
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000									
Response Ratio = 0.00000 + -0.00765 *A + 0.00129 *A^2									
15)P Phenanthrene	1.137	0.963	0.902	0.847	0.813	0.807	0.936	0.915	12.54
16)P Anthracene	1.290	1.068	0.989	0.925	0.893	0.876	0.999	1.006	14.11
17) Carbazole	1.255	1.068	0.995	0.939	0.891	0.871	0.957	0.997	13.21
18)P Fluoranthene	1.922	1.548	1.293	1.185	1.104	1.085	1.245	1.340	22.35
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9981									
Response Ratio = 0.00000 + 1.04692 *A + 0.01915 *A^2									
-----ISTD-----									
19) I Chrysene-d12									
20)P Pyrene	2.152	1.634	1.476	1.382	1.361	1.358	1.622	1.569	17.98
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991									
Response Ratio = 0.00000 + 1.21208 *A + 0.04040 *A^2									
21)S Terphenyl-d14	0.956	0.763	0.689	0.643	0.628	0.612	0.714	0.715	16.57
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9976									
Response Ratio = 0.00000 + 0.61987 *A + 0.00803 *A^2									
22)P Benzo[a]anthracen	1.881	1.623	1.529	1.416	1.365	1.316	1.444	1.511	12.74
23)P Chrysene	1.415	1.226	1.196	1.158	1.121	1.114	1.243	1.210	8.51
-----ISTD-----									
24) I Perylene-d12									

Initial Calibration Summary

Page 2 of 2

Job Number: FA48865

Sample: SW4504-ICC4504

Account: TCMAW Tantara Corporation

Lab FileID: W103562.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

25)P	Benzo[b]fluoranth	1.736	1.514	1.448	1.353	1.299	1.275	1.406	1.433	10.97
26)P	Benzo[k]fluoranth	1.709	1.467	1.335	1.251	1.210	1.171	1.259	1.343	14.00
27)P	Benzo[a]pyrene	1.644	1.442	1.357	1.288	1.242	1.230	1.330	1.362	10.57
28)P	Indeno[1,2,3-cd]p	1.262	1.183	1.158	1.116	1.091	1.098	1.250	1.166	6.00
29)P	Dibenz[a,h]anthra	1.008	0.933	0.934	0.901	0.894	0.896	1.018	0.941	5.55
30)P	Benzo[g,h,i]peryl	1.173	1.119	1.094	1.071	1.042	1.035	1.161	1.099	4.97

(#) = Out of Range

simpahf1024.m

Wed Oct 25 11:22:36 2017

7.7.1

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Initial Calibration Verification

Page 1 of 2

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4504-ICV4504
Lab FileID: W103566.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4504\W103566.D Vial: 10
Acq On : 24 Oct 2017 1:54 pm Operator: fouads
Sample : icv4504-4 Inst : MSBNA01
Misc : op67226,sw4504,15.0,,,1,1,soil Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf1024.m (RTE Integrator)
Title : PAH's by 8270 SIM
Last Update : Tue Oct 24 14:16:52 2017
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	4.000	4.000	0.0	82	0.00	5.46
2 S	Nitrobenzene-d5			NA			
3 P	Naphthalene	10.000	9.160	8.4	81	0.00	5.48
4 P	2-Methylnaphthalene	10.000	8.594	14.1	75	0.02	6.06
		Amount	Calc.	%Drift			
5 P	1-Methylnaphthalene	10.000	8.841	11.6	71	0.02	6.19
		Amount	Calc.	%Drift			
6 I	Acenaphthene-d10	4.000	4.000	0.0	80	0.00	7.13
7 S	2-Fluorobiphenyl			NA			
8 P	Acenaphthylene	10.000	9.121	8.8	76	0.00	7.03
9 P	Acenaphthene	10.000	9.225	7.8	77	0.00	7.16
10	Dibenzofuran	10.000	8.987	10.1	77	0.00	7.29
11 P	Fluorene	10.000	9.181	8.2	79	0.02	7.62
12 I	Phenanthrene-d10	4.000	4.000	0.0	80	0.00	8.59
		Amount	Calc.	%Drift			
13 S	2,4,6-Tribromophenol			NA			
14 P	Pentachlorophenol			NA			
		Amount	Calc.	%Drift			
15 P	Phenanthrene	10.000	8.990	10.1	78	0.00	8.62
16 P	Anthracene	5.000	4.106	17.9	71	0.00	8.65
17	Carbazole	5.000	4.581	8.4	78	0.01	8.97
		Amount	Calc.	%Drift			
18 P	Fluoranthene	10.000	10.551	-5.5	78	0.00	9.87
		Amount	Calc.	%Drift			
19 I	Chrysene-d12	4.000	4.000	0.0	78	0.00	12.27
		Amount	Calc.	%Drift			
20 P	Pyrene	10.000	10.814	-8.1	80	0.03	10.22
21 S	Terphenyl-d14			NA			
		Amount	Calc.	%Drift			
22 P	Benzo[a]anthracene	5.000	4.594	8.1	76	0.00	12.18
23 P	Chrysene	5.000	4.847	3.1	79	0.00	12.33

Initial Calibration Verification

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4504-ICV4504
Lab FileID: W103566.D

24	I	Perylene-d12	4.000	4.000	0.0	79	0.00	15.92
25	P	Benzo[b]fluoranthene	5.000	4.725	5.5	79	0.00	14.74
26	P	Benzo[k]fluoranthene	5.000	4.458	10.8	76	0.00	14.80
27	P	Benzo[a]pyrene	5.000	4.452	11.0	74	-0.01	15.74
28	P	Indeno[1,2,3-cd]pyrene	5.000	4.692	6.2	78	-0.04	18.25
29	P	Dibenz[a,h]anthracene	5.000	4.629	7.4	76	-0.04	18.24
30	P	Benzo[g,h,i]perylene	5.000	4.701	6.0	76	0.00	19.13

(#) = Out of Range
W103562.D simpahf1024.m

SPCC's out = 0 CCC's out = 0
Wed Oct 25 11:23:49 2017

7.7.2
7

Continuing Calibration Summary

Page 1 of 2

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4513-CC4504
Lab FileID: W103798.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4513\W103798.D Vial: 2
Acq On : 2 Nov 2017 10:17 am Operator: nareshj
Sample : cc4504-4 Inst : MSBNA01
Misc : op67433,sw4513,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf1024.m (RTE Integrator)
Title : PAH's by 8270 SIM
Last Update : Fri Nov 03 08:36:32 2017
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	83	0.00	5.41
2 S	Nitrobenzene-d5	0.355	0.369	-3.9	91	0.00	4.94
3 P	Naphthalene	0.833	0.823	1.2	88	0.00	5.43
4 P	2-Methylnaphthalene	0.670	0.657	1.9	87	0.00	6.01
----- Amount Calc. %Drift -----							
5 P	1-Methylnaphthalene	10.000	10.946	-9.5	89	0.00	6.14
----- AvgRF CCRF %Dev -----							
6 I	Acenaphthene-d10	1.000	1.000	0.0	83	0.00	7.07
7 S	2-Fluorobiphenyl	1.385	1.350	2.5	86	0.00	6.35
8 P	Acenaphthylene	1.908	1.854	2.8	84	0.00	6.98
9 P	Acenaphthene	1.038	1.031	0.7	86	0.00	7.11
10	Dibenzofuran	1.682	1.639	2.6	87	0.00	7.24
11 P	Fluorene	1.400	1.366	2.4	87	0.00	7.57
12 I	Phenanthrene-d10	1.000	1.000	0.0	77	0.00	8.54
----- Amount Calc. %Drift -----							
13 S	2,4,6-Tribromophenol			NA			
14 P	Pentachlorophenol			NA			
----- AvgRF CCRF %Dev -----							
15 P	Phenanthrene	0.915	0.935	-2.2	85	0.00	8.56
16 P	Anthracene	1.006	1.035	-2.9	86	0.00	8.60
17	Carbazole	0.997	1.066	-6.9	87	0.00	8.90
----- Amount Calc. %Drift -----							
18 P	Fluoranthene	10.000	10.993	-9.9	78	0.00	9.80
----- AvgRF CCRF %Dev -----							
19 I	Chrysene-d12	1.000	1.000	0.0	77	0.00	12.16
----- Amount Calc. %Drift -----							
20 P	Pyrene	10.000	11.917	-19.2	88	0.00	10.14
21 S	Terphenyl-d14	10.000	11.062	-10.6	85	0.00	10.14
----- AvgRF CCRF %Dev -----							
22 P	Benzo[a]anthracene	1.511	1.564	-3.5	85	0.00	12.07
23 P	Chrysene	1.210	1.265	-4.5	84	0.00	12.22

Continuing Calibration Summary

Page 2 of 2

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4513-CC4504
Lab FileID: W103798.D

24	I	Perylene-d12	1.000	1.000	0.0	80	0.00	15.80
25	P	Benzo[b]fluoranthene	1.433	1.443	-0.7	85	0.00	14.60
26	P	Benzo[k]fluoranthene	1.343	1.350	-0.5	86	0.00	14.66
27	P	Benzo[a]pyrene	1.362	1.410	-3.5	88	0.00	15.61
28	P	Indeno[1,2,3-cd]pyrene	1.166	1.206	-3.4	86	0.00	18.09
29	P	Dibenz[a,h]anthracene	0.941	0.979	-4.0	87	0.00	18.09
30	P	Benzo[g,h,i]perylene	1.099	1.164	-5.9	87	0.00	18.94

(#) = Out of Range
W103562.D simpahf1024.m

SPCC's out = 0 CCC's out = 0
Fri Nov 03 09:36:58 2017

Continuing Calibration Summary

Page 1 of 2

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4513-ECC4504
Lab FileID: W103825.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4513\W103825.D Vial: 2
Acq On : 2 Nov 2017 9:51 pm Operator: nareshj
Sample : ecc4504-4 Inst : MSBNA01
Misc : op67433,sw4513,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf1024.m (RTE Integrator)
Title : PAH's by 8270 SIM
Last Update : Fri Nov 03 08:36:32 2017
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	80	0.00	5.41
2 S	Nitrobenzene-d5	0.355	0.366	-3.1	88	-0.01	4.94
3 P	Naphthalene	0.833	0.842	-1.1	87	0.00	5.43
4 P	2-Methylnaphthalene	0.670	0.650	3.0	83	0.00	6.01
----- Amount Calc. %Drift -----							
5 P	1-Methylnaphthalene	10.000	10.809	-8.1	85	0.00	6.14
----- AvgRF CCRF %Dev -----							
6 I	Acenaphthene-d10	1.000	1.000	0.0	80	0.00	7.07
7 S	2-Fluorobiphenyl	1.385	1.383	0.1	85	0.00	6.35
8 P	Acenaphthylene	1.908	1.931	-1.2	84	0.00	6.97
9 P	Acenaphthene	1.038	1.044	-0.6	83	0.00	7.11
10	Dibenzofuran	1.682	1.687	-0.3	85	0.00	7.24
11 P	Fluorene	1.400	1.383	1.2	84	0.00	7.57
12 I	Phenanthrene-d10	1.000	1.000	0.0	75	0.00	8.53
----- Amount Calc. %Drift -----							
13 S	2,4,6-Tribromophenol			-----NA-----			
14 P	Pentachlorophenol			-----NA-----			
----- AvgRF CCRF %Dev -----							
15 P	Phenanthrene	0.915	0.931	-1.7	83	0.00	8.56
16 P	Anthracene	1.006	1.039	-3.3	85	0.00	8.60
17	Carbazole	0.997	1.046	-4.9	84	0.00	8.90
----- Amount Calc. %Drift -----							
18 P	Fluoranthene	10.000	11.179	-11.8	78	0.00	9.79
----- AvgRF CCRF %Dev -----							
19 I	Chrysene-d12	1.000	1.000	0.0	81	0.00	12.16
----- Amount Calc. %Drift -----							
20 P	Pyrene	10.000	11.629	-16.3	91	0.00	10.14
21 S	Terphenyl-d14	10.000	10.779	-7.8	87	0.00	10.13
----- AvgRF CCRF %Dev -----							
22 P	Benzo[a]anthracene	1.511	1.560	-3.2	89	0.00	12.07
23 P	Chrysene	1.210	1.257	-3.9	88	0.00	12.22

Continuing Calibration Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4513-ECC4504
Lab FileID: W103825.D

24	I	Perylene-d12	1.000	1.000	0.0	79	0.00	15.79
25	P	Benzo[b]fluoranthene	1.433	1.465	-2.2	85	0.00	14.59
26	P	Benzo[k]fluoranthene	1.343	1.351	-0.6	85	0.00	14.66
27	P	Benzo[a]pyrene	1.362	1.402	-2.9	86	0.00	15.61
28	P	Indeno[1,2,3-cd]pyrene	1.166	1.185	-1.6	84	-0.01	18.08
29	P	Dibenz[a,h]anthracene	0.941	0.961	-2.1	84	-0.01	18.08
30	P	Benzo[g,h,i]perylene	1.099	1.124	-2.3	83	-0.01	18.93

(#) = Out of Range
W103562.D simpahf1024.m

SPCC's out = 0 CCC's out = 0
Fri Nov 03 09:47:46 2017

7.7.4
7

Initial Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICC2395
Lab FileID: X056982.D

Response Factor Report MSBNA05

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Initial Calibration

Calibration Files

5 =x056979.D 10 =x056980.D 25 =x056981.D 50 =x056982.D
60 =x056983.D 75 =x056984.D 100 =x056985.D

Compound	5	10	25	50	60	75	100	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	-----ISTD-----								
2) 1,4-Dioxane	0.769	0.734	0.721	0.726	0.727	0.722	0.714	0.731	2.48
3) N-nitrosodimethyl	0.754	0.789	0.765	0.757	0.764	0.736	0.718	0.755	3.00
4) Pyridine	1.989	1.936	1.997	1.952	1.985	1.946	1.919	1.960	1.52
5)P Benzaldehyde	1.140	1.284	1.272	1.260	1.234	1.192	0.930	1.187	10.43
6) Aniline	1.856	1.819	1.984	2.275	2.347	2.271	2.196	2.107	10.28
7)S 2-Fluorophenol	1.560	1.534	1.541	1.517	1.538	1.479	1.429	1.514	2.99
8)P bis(2-Chloroethyl	1.565	1.531	1.514	1.496	1.527	1.489	1.465	1.512	2.16
9)S Phenol-d5	1.977	1.905	1.901	1.854	1.866	1.778	1.724	1.858	4.53
10)P Phenol	2.151	2.095	2.133	2.079	2.098	1.981	1.902	2.063	4.33
11)P 2-Chlorophenol	1.585	1.545	1.551	1.572	1.597	1.567	1.563	1.569	1.18
12) 1,3-Dichlorobenze	1.723	1.651	1.657	1.661	1.662	1.624	1.608	1.655	2.20
13) 1,4-Dichlorobenze	1.736	1.678	1.663	1.643	1.681	1.630	1.596	1.661	2.67
14) 1,2-Dichlorobenze	1.640	1.563	1.594	1.569	1.594	1.565	1.533	1.580	2.14
15) Benzyl alcohol	1.049	1.021	1.018	1.022	1.058	1.024	1.015	1.030	1.62
16)P bis(2-chloroisopr	2.102	2.065	2.018	1.973	1.970	1.912	1.828	1.981	4.69
17)P 2-Methylphenol	1.427	1.396	1.435	1.409	1.432	1.387	1.359	1.407	1.99
18)P Acetophenone	1.812	2.048	2.019	1.992	2.006	1.933	1.862	1.953	4.50
19)P Hexachloroethane	0.612	0.609	0.615	0.630	0.643	0.633	0.623	0.624	2.01
20)P N-Nitroso-di-n-pr	1.037	1.023	1.029	1.019	1.029	1.012	0.992	1.020	1.45
21)P 3&4-Methylphenol	1.503	1.484	1.499	1.445	1.470	1.403	1.362	1.452	3.63
22) I Naphthalene-d8	-----ISTD-----								
23)S Nitrobenzene-d5	0.391	0.378	0.390	0.395	0.403	0.397	0.391	0.392	1.97
24)P Nitrobenzene	0.401	0.395	0.393	0.394	0.399	0.388	0.378	0.393	1.89
25)P Isophorone	0.775	0.759	0.740	0.714	0.724	0.697	0.675	0.726	4.82
26)P 2-Nitrophenol	0.154	0.156	0.178	0.191	0.204	0.205	0.206	0.185	12.36
27)P 2,4-Dimethylpheno	0.391	0.385	0.381	0.371	0.376	0.369	0.356	0.375	3.08
28) 0,0,0-Triethylpho	0.161	0.179	0.181	0.182	0.183	0.185	0.180	0.179	4.48
29)P bis(2-Chloroethox	0.507	0.510	0.491	0.491	0.495	0.465	0.475	0.491	3.32
30) Benzoic Acid	0.128	0.150	0.203	0.249	0.272	0.283	0.297	0.226	29.53
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9982									
Response Ratio = 0.00000 + 0.20343 *A + 0.03892 *A^2									
31)P 2,4-Dichloropheno	0.321	0.313	0.323	0.324	0.332	0.325	0.319	0.322	1.74
32) 1,2,4-Trichlorobe	0.357	0.352	0.348	0.343	0.349	0.343	0.337	0.347	1.94
33) alpha-Terpineol								0.000	-1.00
34)P Naphthalene	1.189	1.159	1.116	1.059	1.059	1.019	0.971	1.082	7.16
35)P 4-Chloroaniline	0.358	0.348	0.336	0.393	0.433	0.405	0.373	0.378	9.09
36) 2,6-Dichloropheno	0.326	0.322	0.324	0.322	0.330	0.322	0.316	0.323	1.29
37)P Hexachlorobutadie	0.206	0.201	0.200	0.200	0.205	0.204	0.201	0.202	1.26
38)P Caprolactam	0.106	0.118	0.121	0.129	0.131	0.129	0.129	0.123	7.26
39)P 4-Chloro-3-methyl	0.314	0.316	0.318	0.319	0.323	0.318	0.309	0.317	1.43
40)P 2-Methylnaphthale	0.676	0.663	0.640	0.608	0.623	0.600	0.572	0.626	5.82
41) 1-Methylnaphthale	0.769	0.733	0.704	0.683	0.690	0.666	0.644	0.699	6.04
42)P 1,2,4,5-Tetrachlo	0.378	0.363	0.363	0.359	0.369	0.362	0.353	0.364	2.19

Initial Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E. Aurora, NY

Sample: SX2395-ICC2395
Lab FileID: X056982.D

43) I	Acenaphthene-d10	-----ISTD-----								
44)P	Hexachlorocyclope	0.343	0.351	0.399	0.417	0.438	0.446	0.436	0.404	10.40
45)P	2,4,6-Trichloroph	0.352	0.360	0.383	0.393	0.406	0.405	0.405	0.386	5.80
46)P	2,4,5-Trichloroph	0.382	0.379	0.414	0.429	0.432	0.437	0.430	0.414	5.91
47)S	2-Fluorobiphenyl	1.430	1.434	1.432	1.362	1.368	1.345	1.282	1.379	4.14
48)P	1,1'-Biphenyl	1.346	1.554	1.536	1.451	1.454	1.415	1.325	1.440	6.03
49)P	2-Chloronaphthale	1.221	1.212	1.214	1.139	1.143	1.129	1.063	1.160	5.04
50)P	2-Nitroaniline	0.263	0.283	0.316	0.333	0.342	0.345	0.336	0.317	10.08
51)	p-Dinitrobenzene	0.139	0.150	0.192	0.216	0.227	0.230	0.231	0.198	19.71
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9985										
Response Ratio = 0.00000 + 0.20056 *A + 0.01334 *A^2										
52)P	Acenaphthylene	1.889	1.898	1.844	1.757	1.743	1.679	1.591	1.772	6.41
53)P	Dimethylphthalate	1.386	1.399	1.385	1.342	1.334	1.303	1.241	1.341	4.20
54)	m-Dinitrobenzene	0.160	0.173	0.210	0.225	0.235	0.235	0.234	0.210	14.96
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990										
Response Ratio = 0.00000 + 0.21787 *A + 0.00725 *A^2										
55)P	2,6-Dinitrotoluen	0.275	0.280	0.317	0.316	0.319	0.320	0.307	0.305	6.36
56)	o-Dinitrobenzene	0.128	0.130	0.149	0.158	0.157	0.157	0.154	0.147	8.82
57)P	Acenaphthene	1.238	1.215	1.207	1.167	1.160	1.143	1.090	1.174	4.27
58)P	3-Nitroaniline	0.281	0.289	0.298	0.332	0.354	0.336	0.312	0.314	8.54
59)P	2,4-Dinitrophenol	0.050	0.060	0.098	0.130	0.149	0.164	0.178	0.118	42.59
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9976										
Response Ratio = 0.00000 + 0.08826 *A + 0.03696 *A^2										
60)P	Dibenzofuran	1.735	1.738	1.733	1.658	1.663	1.617	1.533	1.668	4.55
61)P	2,4-Dinitrotoluen	0.332	0.349	0.411	0.428	0.440	0.442	0.434	0.405	11.25
62)P	4-Nitrophenol	0.123	0.131	0.157	0.158	0.165	0.167	0.166	0.152	11.65
63)	2,3,5,6-Tetrachlo	0.292	0.300	0.336	0.356	0.372	0.378	0.375	0.344	10.46
64)P	2,3,4,6-Tetrachlo	0.311	0.333	0.352	0.379	0.385	0.390	0.387	0.363	8.59
65)P	Fluorene	1.398	1.378	1.351	1.299	1.299	1.269	1.192	1.312	5.39
66)P	4-Chlorophenyl-ph	0.701	0.683	0.696	0.672	0.682	0.667	0.635	0.677	3.25
67)P	Diethylphthalate	1.343	1.343	1.362	1.321	1.333	1.322	1.277	1.329	2.03
68)	Thionazin	0.239	0.286	0.295	0.291	0.291	0.291	0.282	0.282	6.85
69)P	4-Nitroaniline	0.309	0.324	0.363	0.380	0.394	0.391	0.394	0.365	9.65
70) I	Phenanthrene-d10	-----ISTD-----								
71)P	4,6-Dinitro-2-met	0.053	0.067	0.097	0.123	0.137	0.146	0.151	0.110	35.15
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9971										
Response Ratio = 0.00000 + 0.09816 *A + 0.02225 *A^2										
72)P	n-Nitrosodiphenyl	0.589	0.596	0.590	0.575	0.581	0.574	0.544	0.578	2.99
73)	Diphenylamine	0.707	0.715	0.708	0.690	0.697	0.689	0.652	0.694	2.99
74)	1,2-Diphenylhydra	0.788	0.795	0.789	0.757	0.759	0.744	0.685	0.760	5.00
75)S	2,4,6-Tribromophe	0.158	0.165	0.179	0.187	0.197	0.197	0.192	0.182	8.47
76)	Sulfotep	0.107	0.127	0.127	0.126	0.128	0.126	0.118	0.123	6.38
77)	Phorate	0.412	0.482	0.500	0.483	0.492	0.483	0.443	0.471	6.70
78)P	4-Bromophenyl-phe	0.262	0.271	0.271	0.269	0.276	0.273	0.267	0.270	1.72
79)P	Hexachlorobenzene	0.314	0.319	0.328	0.325	0.334	0.331	0.324	0.325	2.13
80)	Dimethoate	0.249	0.308	0.324	0.324	0.332	0.326	0.311	0.311	9.21
81)	Simazine	0.155	0.156	0.159	0.153	0.157	0.155	0.149	0.155	2.11
82)P	Atrazine	0.201	0.243	0.244	0.245	0.243	0.247	0.234	0.237	6.81
83)P	Pentachlorophenol			0.155	0.176	0.188	0.192	0.194	0.181	8.84
84)P	Phenanthrene	1.204	1.215	1.184	1.132	1.132	1.116	1.042	1.146	5.24
85)P	Anthracene	1.229	1.251	1.221	1.158	1.168	1.128	1.058	1.173	5.74
86)	Disulfoton	0.404	0.466	0.469	0.442	0.446	0.433	0.403	0.438	6.11
87)P	Carbazole	1.149	1.162	1.130	1.082	1.096	1.063	1.005	1.098	4.98
88)	Methyl Parathion	0.128	0.171	0.231	0.254	0.263	0.263	0.249	0.223	23.62

Initial Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICC2395
Lab FileID: X056982.D

----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9973
Response Ratio = 0.00000 + 0.25587 *A + -0.00086 *A^2

89)P Di-n-butylphthala 1.297 1.322 1.320 1.264 1.264 1.217 1.140 1.261 5.14
90) Ethyl Parathion 0.079 0.104 0.139 0.152 0.155 0.155 0.149 0.133 22.53
----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9981
Response Ratio = 0.00000 + 0.15157 *A + -0.00018 *A^2

91)P Fluoranthene 1.299 1.333 1.304 1.238 1.235 1.199 1.142 1.250 5.36

92) I Chrysene-d12 -----ISTD-----
93) Benzidine 0.290 0.348 0.508 0.636 0.672 0.634 0.515 31.53
----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9929
Response Ratio = 0.00000 + 0.52304 *A + 0.07225 *A^2

94)P Pyrene 1.259 1.298 1.295 1.257 1.248 1.229 1.169 1.251 3.49
95)S Terphenyl-d14 0.919 0.958 0.968 0.953 0.973 0.953 0.909 0.948 2.58
96) Famphur 0.350 0.421 0.400 0.354 0.361 0.321 0.277 0.355 13.47
97)P Butylbenzylphthal 0.485 0.514 0.541 0.546 0.551 0.536 0.518 0.527 4.36
98)P 3,3'-Dichlorobenz 0.301 0.277 0.295 0.373 0.429 0.413 0.395 0.355 17.57
----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9911
Response Ratio = 0.00000 + 0.37478 *A + 0.01218 *A^2

99)P Benzo[a]anthracen 1.159 1.207 1.200 1.172 1.192 1.162 1.111 1.172 2.80
100)P Chrysene 1.098 1.161 1.145 1.125 1.131 1.104 1.072 1.119 2.71
101)P bis(2-Ethylhexyl) 0.639 0.678 0.702 0.713 0.726 0.715 0.686 0.694 4.25

102) I Perylene-d12 -----ISTD-----
103)P Di-n-octylphthala 0.836 0.898 0.994 1.059 1.079 1.078 1.042 0.998 9.58
104)P Benzo[b]fluoranth 0.982 1.097 1.134 1.135 1.135 1.116 1.074 1.096 5.04
105)P Benzo[k]fluoranth 1.089 1.136 1.119 1.115 1.149 1.154 1.124 1.127 1.99
106)P Benzo[a]pyrene 1.000 1.089 1.104 1.115 1.158 1.143 1.112 1.103 4.64
107)P Indeno[1,2,3-cd]p 0.883 0.995 1.065 1.107 1.124 1.151 1.134 1.066 9.02
108)P Dibenz[a,h]anthra 1.048 1.142 1.181 1.206 1.237 1.219 1.195 1.175 5.42
109)P Benzo[g,h,i]peryl 1.106 1.202 1.217 1.234 1.246 1.232 1.205 1.206 3.89

(#) = Out of Range

8270d110717.m

Wed Nov 08 10:16:16 2017

Initial Calibration Verification

Page 1 of 3

Job Number: FA48865
 Account: TCMAW Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056986.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2395_1107\x056986.D Vial: 10
 Acq On : 7 Nov 2017 11:51 am Operator: marthav
 Sample : icv2395-50 Inst : MSBNA05
 Misc : op67449,sx2395,1000,,,1,1,water Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
 Title : SW846 8270D OR EPA 625
 Last Update : Tue Nov 07 12:26:42 2017
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	107	0.00	6.23
2	1,4-Dioxane	50.000	44.869	10.3	96	0.01	3.14
3	N-nitrosodimethylamine	50.000	46.212	7.6	98	0.00	3.50
4	Pyridine		-----NA-----				
5 P	Benzaldehyde	50.000	43.032	13.9	87	0.00	5.76
6	Aniline		-----NA-----				
7 S	2-Fluorophenol		-----NA-----				
8 P	bis(2-Chloroethyl)ether	50.000	44.541	10.9	96	0.00	5.98
9 S	Phenol-d5		-----NA-----				
10 P	Phenol	50.000	44.254	11.5	94	0.00	5.89
11 P	2-Chlorophenol	50.000	46.427	7.1	99	0.00	6.03
12	1,3-Dichlorobenzene	50.000	46.146	7.7	98	0.00	6.19
13	1,4-Dichlorobenzene	50.000	47.186	5.6	102	0.00	6.24
14	1,2-Dichlorobenzene	50.000	46.757	6.5	100	0.00	6.45
15	Benzyl alcohol		-----NA-----				
16 P	bis(2-chloroisopropyl)eth	50.000	45.004	10.0	96	0.00	6.58
17 P	2-Methylphenol	50.000	44.920	10.2	96	0.00	6.54
18 P	Acetophenone	50.000	46.271	7.5	97	0.00	6.70
19 P	Hexachloroethane	50.000	47.278	5.4	100	0.00	6.79
20 P	N-Nitroso-di-n-propylamin	50.000	45.528	8.9	97	0.00	6.73
21 P	3&4-Methylphenol	100.000	87.040	13.0	98	0.00	6.71
22 I	Naphthalene-d8	40.000	40.000	0.0	104	0.00	7.66
23 S	Nitrobenzene-d5		-----NA-----				
24 P	Nitrobenzene	50.000	47.191	5.6	97	0.00	6.89
25 P	Isophorone	50.000	46.306	7.4	98	0.00	7.15
26 P	2-Nitrophenol	50.000	52.520	-5.0	105	0.00	7.25
27 P	2,4-Dimethylphenol	50.000	40.779	18.4	86	0.00	7.30
28	0,0,0-Triethylphosphoroth		-----NA-----				
29 P	bis(2-Chloroethoxy)methan	50.000	41.933	16.1	87	0.00	7.41
30	Benzoic Acid	100.000	91.295	8.7	92	0.04	7.47
31 P	2,4-Dichlorophenol	50.000	47.148	5.7	97	0.00	7.51
32	1,2,4-Trichlorobenzene	50.000	46.519	7.0	98	0.00	7.62
33	alpha-Terpineol		-----NA-----				
34 P	Naphthalene	50.000	46.076	7.8	98	0.00	7.68
35 P	4-Chloroaniline		-----NA-----				
36	2,6-Dichlorophenol	50.000	45.466	9.1	95	0.00	7.78
37 P	Hexachlorobutadiene	50.000	41.510	17.0	87	0.00	7.90

Initial Calibration Verification

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Job Number: FA48865
 Account: TCMaw Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056986.D

38 P	Caprolactam	50.000	45.615	8.8	90	0.00	8.15
39 P	4-Chloro-3-methylphenol	50.000	45.046	9.9	93	0.00	8.33
40 P	2-Methylnaphthalene		-----NA-----				
41	1-Methylnaphthalene	50.000	44.800	10.4	95	0.00	8.61
42 P	1,2,4,5-Tetrachlorobenzen	50.000	44.333	11.3	93	0.00	8.73
43 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00	9.72
44 P	Hexachlorocyclopentadiene	50.000	50.747	-1.5	98	0.00	8.75
45 P	2,4,6-Trichlorophenol	50.000	50.410	-0.8	99	0.00	8.84
46 P	2,4,5-Trichlorophenol	50.000	49.824	0.4	96	0.00	8.88
47 S	2-Fluorobiphenyl		-----NA-----				
48 P	1,1'-Biphenyl	50.000	47.958	4.1	95	0.00	9.04
49 P	2-Chloronaphthalene	50.000	47.335	5.3	96	0.00	9.05
50 P	2-Nitroaniline		-----NA-----				
	----- Amount		Calc.	%Drift			
51	p-Dinitrobenzene		-----NA-----				
	----- Amount		Calc.	%Drift			
52 P	Acenaphthylene	50.000	49.987	0.0	100	0.00	9.54
53 P	Dimethylphthalate	50.000	46.562	6.9	93	0.00	9.46
	----- Amount		Calc.	%Drift			
54	m-Dinitrobenzene		-----NA-----				
	----- Amount		Calc.	%Drift			
55 P	2,6-Dinitrotoluene	50.000	45.982	8.0	88	0.00	9.53
56	o-Dinitrobenzene		-----NA-----				
57 P	Acenaphthene	50.000	47.150	5.7	94	0.00	9.76
58 P	3-Nitroaniline		-----NA-----				
	----- Amount		Calc.	%Drift			
59 P	2,4-Dinitrophenol	100.000	87.539	12.5	81	0.00	9.81
	----- Amount		Calc.	%Drift			
60 P	Dibenzofuran		-----NA-----				
61 P	2,4-Dinitrotoluene	50.000	50.979	-2.0	96	0.00	9.99
62 P	4-Nitrophenol	100.000	99.353	0.6	89	0.00	9.89
63	2,3,5,6-Tetrachlorophenol		-----NA-----				
64 P	2,3,4,6-Tetrachlorophenol	50.000	47.009	6.0	89	0.00	10.14
65 P	Fluorene	50.000	46.998	6.0	95	0.00	10.35
66 P	4-Chlorophenyl-phenylethe	50.000	46.988	6.0	94	0.00	10.35
67 P	Diethylphthalate	50.000	45.965	8.1	92	0.00	10.29
68	Thionazin		-----NA-----				
69 P	4-Nitroaniline		-----NA-----				
70 I	Phenanthrene-d10	40.000	40.000	0.0	97	0.00	11.44
	----- Amount		Calc.	%Drift			
71 P	4,6-Dinitro-2-methylpheno	100.000	95.791	4.2	91	0.00	10.46
	----- Amount		Calc.	%Drift			
72 P	n-Nitrosodiphenylamine	50.000	46.054	7.9	75	0.00	10.50
73	Diphenylamine		-----NA-----				
74	1,2-Diphenylhydrazine	50.000	48.173	3.7	94	0.00	10.53
75 S	2,4,6-Tribromophenol		-----NA-----				
76	Sulfotep		-----NA-----				
77	Phorate		-----NA-----				
78 P	4-Bromophenyl-phenylether	50.000	46.832	6.3	91	0.00	10.92
79 P	Hexachlorobenzene	50.000	47.618	4.8	92	0.00	11.09

7.7.6
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Initial Calibration Verification

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Job Number: FA48865
 Account: TCMAW Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056986.D

80	Dimethoate							-----NA-----
81	Simazine							-----NA-----
82 P	Atrazine	50.000	45.892	8.2	86	-0.01	11.17	
83 P	Pentachlorophenol	100.000	102.884	-2.9	91	0.00	11.30	
84 P	Phenanthrene	50.000	46.222	7.6	91	0.00	11.47	
85 P	Anthracene	50.000	45.022	10.0	89	0.00	11.52	
86	Disulfoton							-----NA-----
87 P	Carbazole							-----NA-----

		Amount	Calc.	%Drift				-----
88	Methyl Parathion							-----NA-----

		Amount	Calc.	%Drift				-----
89 P	Di-n-butylphthalate	50.000	46.864	6.3	91	0.00	12.21	

90	Ethyl Parathion							-----NA-----

		Amount	Calc.	%Drift				-----
91 P	Fluoranthene	50.000	45.986	8.0	90	0.00	12.88	
92 I	Chrysene-d12	40.000	40.000	0.0	93	0.00	14.76	

93	Benzidine							-----NA-----

		Amount	Calc.	%Drift				-----
94 P	Pyrene	50.000	48.152	3.7	89	0.00	13.14	
95 S	Terphenyl-d14							-----NA-----
96	Famphur							-----NA-----
97 P	Butylbenzylphthalate	50.000	47.726	4.5	85	0.00	14.05	

		Amount	Calc.	%Drift				-----
98 P	3,3'-Dichlorobenzidine							-----NA-----

		Amount	Calc.	%Drift				-----
99 P	Benzo[a]anthracene	50.000	46.150	7.7	85	0.00	14.74	
100 P	Chrysene	50.000	46.965	6.1	87	-0.01	14.80	
101 P	bis(2-Ethylhexyl)phthalat	50.000	48.491	3.0	87	0.00	14.93	
102 I	Perylene-d12	40.000	40.000	0.0	91	0.00	17.15	
103 P	Di-n-octylphthalate	50.000	49.172	1.7	84	0.00	15.95	
104 P	Benzo[b]fluoranthene	50.000	49.126	1.7	86	0.00	16.51	
105 P	Benzo[k]fluoranthene	50.000	46.774	6.5	86	0.00	16.56	
106 P	Benzo[a]pyrene	50.000	46.665	6.7	84	0.00	17.05	
107 P	Indeno[1,2,3-cd]pyrene	50.000	46.445	7.1	81	0.00	18.79	
108 P	Dibenz[a,h]anthracene	50.000	47.654	4.7	84	0.00	18.83	
109 P	Benzo[g,h,i]perylene	50.000	48.481	3.0	86	0.00	19.17	

(#) = Out of Range
 x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
 Tue Nov 07 12:30:21 2017

7.7.6

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Initial Calibration Verification

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
Lab FileID: X056987.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2395_1107\x056987.D Vial: 11
Acq On : 7 Nov 2017 12:17 pm Operator: marthav
Sample : icv2395-50 Inst : MSBNA05
Misc : op67449,sx2395,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	99	0.00	6.23
2	1,4-Dioxane		-----NA-----				
3	N-nitrosodimethylamine		-----NA-----				
4	Pyridine	50.000	49.084	1.8	97	0.00	3.49
5 P	Benzaldehyde		-----NA-----				
6	Aniline	50.000	54.885	-9.8	100	0.00	5.91
7 S	2-Fluorophenol		-----NA-----				
8 P	bis(2-Chloroethyl)ether		-----NA-----				
9 S	Phenol-d5		-----NA-----				
10 P	Phenol		-----NA-----				
11 P	2-Chlorophenol		-----NA-----				
12	1,3-Dichlorobenzene		-----NA-----				
13	1,4-Dichlorobenzene		-----NA-----				
14	1,2-Dichlorobenzene		-----NA-----				
15	Benzyl alcohol	50.000	50.550	-1.1	101	0.00	6.40
16 P	bis(2-chloroisopropyl)eth		-----NA-----				
17 P	2-Methylphenol		-----NA-----				
18 P	Acetophenone		-----NA-----				
19 P	Hexachloroethane		-----NA-----				
20 P	N-Nitroso-di-n-propylamin		-----NA-----				
21 P	3&4-Methylphenol		-----NA-----				
22 I	Naphthalene-d8	40.000	40.000	0.0	112	0.00	7.66
23 S	Nitrobenzene-d5		-----NA-----				
24 P	Nitrobenzene		-----NA-----				
25 P	Isophorone		-----NA-----				
26 P	2-Nitrophenol		-----NA-----				
27 P	2,4-Dimethylphenol		-----NA-----				
28	0,0,0-Triethylphosphoroth		-----NA-----				
29 P	bis(2-Chloroethoxy)methan		-----NA-----				
30	Benzoic Acid		-----NA-----				
31 P	2,4-Dichlorophenol		-----NA-----				
32	1,2,4-Trichlorobenzene		-----NA-----				
33	alpha-Terpineol		-----NA-----				
34 P	Naphthalene		-----NA-----				
35 P	4-Chloroaniline	50.000	56.484	-13.0	122	0.00	7.77
36	2,6-Dichlorophenol		-----NA-----				
37 P	Hexachlorobutadiene		-----NA-----				

Initial Calibration Verification

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Job Number: FA48865
 Account: TCMaw Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056987.D

38	P	Caprolactam			-----NA-----				
39	P	4-Chloro-3-methylphenol			-----NA-----				
40	P	2-Methylnaphthalene	50.000	41.960	16.1	97	0.00	8.48	
41		1-Methylnaphthalene			-----NA-----				
42	P	1,2,4,5-Tetrachlorobenzen			-----NA-----				
43	I	Acenaphthene-d10	40.000	40.000	0.0	97	0.00	9.71	
44	P	Hexachlorocyclopentadiene			-----NA-----				
45	P	2,4,6-Trichlorophenol			-----NA-----				
46	P	2,4,5-Trichlorophenol			-----NA-----				
47	S	2-Fluorobiphenyl			-----NA-----				
48	P	1,1'-Biphenyl			-----NA-----				
49	P	2-Chloronaphthalene			-----NA-----				
50	P	2-Nitroaniline	50.000	53.832	-7.7	99	0.00	9.20	
----- Amount Calc. %Drift -----									
51		p-Dinitrobenzene			-----NA-----				
----- Amount Calc. %Drift -----									
52	P	Acenaphthylene			-----NA-----				
53	P	Dimethylphthalate			-----NA-----				
----- Amount Calc. %Drift -----									
54		m-Dinitrobenzene	50.000	48.871	2.3	96	0.00	9.46	
----- Amount Calc. %Drift -----									
55	P	2,6-Dinitrotoluene			-----NA-----				
56		o-Dinitrobenzene			-----NA-----				
57	P	Acenaphthene			-----NA-----				
58	P	3-Nitroaniline	50.000	59.834	-19.7	110	0.00	9.69	
----- Amount Calc. %Drift -----									
59	P	2,4-Dinitrophenol			-----NA-----				
----- Amount Calc. %Drift -----									
60	P	Dibenzofuran	50.000	49.867	0.3	97	0.00	9.94	
61	P	2,4-Dinitrotoluene			-----NA-----				
62	P	4-Nitrophenol			-----NA-----				
63		2,3,5,6-Tetrachlorophenol			-----NA-----				
64	P	2,3,4,6-Tetrachlorophenol			-----NA-----				
65	P	Fluorene			-----NA-----				
66	P	4-Chlorophenyl-phenylethe			-----NA-----				
67	P	Diethylphthalate			-----NA-----				
68		Thionazin			-----NA-----				
69	P	4-Nitroaniline	50.000	51.319	-2.6	96	-0.02	10.40	
70	I	Phenanthrene-d10	40.000	40.000	0.0	96	-0.01	11.44	
----- Amount Calc. %Drift -----									
71	P	4,6-Dinitro-2-methylpheno			-----NA-----				
----- Amount Calc. %Drift -----									
72	P	n-Nitrosodiphenylamine	60.000	59.991	0.0	97	-0.01	10.50	
73		Diphenylamine	50.000	49.992	0.0	97	-0.01	10.50	
74		1,2-Diphenylhydrazine			-----NA-----				
75	S	2,4,6-Tribromophenol			-----NA-----				
76		Sulfotep			-----NA-----				
77		Phorate			-----NA-----				
78	P	4-Bromophenyl-phenylether			-----NA-----				
79	P	Hexachlorobenzene			-----NA-----				

Initial Calibration Verification

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
Lab FileID: X056987.D

80	Dimethoate			-----NA-----				
81	Simazine			-----NA-----				
82 P	Atrazine			-----NA-----				
83 P	Pentachlorophenol			-----NA-----				
84 P	Phenanthrene			-----NA-----				
85 P	Anthracene			-----NA-----				
86	Disulfoton			-----NA-----				
87 P	Carbazole	50.000	49.387	1.2	97	0.00	11.72	
		----- Amount	Calc.	%Drift	-----			
88	Methyl Parathion			-----NA-----				
		----- Amount	Calc.	%Drift	-----			
89 P	Di-n-butylphthalate			-----NA-----				
		----- Amount	Calc.	%Drift	-----			
90	Ethyl Parathion			-----NA-----				
		----- Amount	Calc.	%Drift	-----			
91 P	Fluoranthene			-----NA-----				
92 I	Chrysene-d12	40.000	40.000	0.0	99	0.00	14.76	
		----- Amount	Calc.	%Drift	-----			
93	Benzidine	50.000	61.830	-23.7#	123	0.00	13.05	
		----- Amount	Calc.	%Drift	-----			
94 P	Pyrene			-----NA-----				
95 S	Terphenyl-d14			-----NA-----				
96	Famphur			-----NA-----				
97 P	Butylbenzylphthalate			-----NA-----				
		----- Amount	Calc.	%Drift	-----			
98 P	3,3'-Dichlorobenzidine	50.000	62.150	-24.3#	130	0.00	14.74	
		----- Amount	Calc.	%Drift	-----			
99 P	Benzo[a]anthracene			-----NA-----				
100 P	Chrysene			-----NA-----				
101 P	bis(2-Ethylhexyl)phthalat			-----NA-----				
102 I	Perylene-d12	40.000	40.000	0.0	98	-0.01	17.14	
103 P	Di-n-octylphthalate			-----NA-----				
104 P	Benzo[b]fluoranthene			-----NA-----				
105 P	Benzo[k]fluoranthene			-----NA-----				
106 P	Benzo[a]pyrene			-----NA-----				
107 P	Indeno[1,2,3-cd]pyrene			-----NA-----				
108 P	Dibenz[a,h]anthracene			-----NA-----				
109 P	Benzo[g,h,i]perylene			-----NA-----				

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 12:43:56 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2396-CC2395
Lab FileID: X057017.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2396_1108\x057017.D Vial: 2
Acq On : 8 Nov 2017 1:36 pm Operator: marthav
Sample : cc2395-50 Inst : MSBNA05
Misc : op67449,sx2396,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	128	0.00	6.22
2	1,4-Dioxane	0.731	0.691	5.5	122	-0.01	3.11
3	N-nitrosodimethylamine	0.755	0.676	10.5	114	-0.01	3.48
4	Pyridine	1.960	1.819	7.2	119	-0.01	3.48
5 P	Benzaldehyde	1.187	1.169	1.5	119	0.00	5.75
6	Aniline	2.107	1.933	8.3	109	0.00	5.90
7 S	2-Fluorophenol	1.514	1.398	7.7	118	0.00	4.90
8 P	bis(2-Chloroethyl)ether	1.512	1.363	9.9	116	0.00	5.97
9 S	Phenol-d5	1.858	1.637	11.9	113	0.00	5.87
10 P	Phenol	2.063	1.838	10.9	113	0.00	5.89
11 P	2-Chlorophenol	1.569	1.445	7.9	117	0.00	6.02
12	1,3-Dichlorobenzene	1.655	1.532	7.4	118	0.00	6.17
13	1,4-Dichlorobenzene	1.661	1.536	7.5	119	0.00	6.23
14	1,2-Dichlorobenzene	1.580	1.458	7.7	119	0.00	6.44
15	Benzyl alcohol	1.030	0.923	10.4	115	0.00	6.39
16 P	bis(2-chloroisopropyl)eth	1.981	1.727	12.8	112	0.00	6.56
17 P	2-Methylphenol	1.407	1.275	9.4	116	0.00	6.53
18 P	Acetophenone	1.953	1.772	9.3	114	0.00	6.69
19 P	Hexachloroethane	0.624	0.579	7.2	117	0.00	6.78
20 P	N-Nitroso-di-n-propylamin	1.020	0.907	11.1	114	0.00	6.72
21 P	3&4-Methylphenol	1.452	1.301	10.4	115	0.00	6.69
22 I	Naphthalene-d8	1.000	1.000	0.0	120	0.00	7.65
23 S	Nitrobenzene-d5	0.392	0.379	3.3	115	0.00	6.86
24 P	Nitrobenzene	0.393	0.374	4.8	114	0.00	6.87
25 P	Isophorone	0.726	0.664	8.5	111	0.00	7.14
26 P	2-Nitrophenol	0.185	0.208	-12.4	130	0.00	7.24
27 P	2,4-Dimethylphenol	0.375	0.348	7.2	112	0.00	7.29
28	0,0,0-Triethylphosphoroth	0.179	0.176	1.7	115	0.00	7.41
29 P	bis(2-Chloroethoxy)methan	0.491	0.442	10.0	108	0.00	7.40
30	Benzoic Acid	50.000	53.823	-7.6	133	0.00	7.41
31 P	2,4-Dichlorophenol	0.322	0.309	4.0	115	0.00	7.50
32	1,2,4-Trichlorobenzene	0.347	0.333	4.0	116	0.00	7.60
33	alpha-Terpineol			NA			
34 P	Naphthalene	1.082	1.004	7.2	113	0.00	7.67
35 P	4-Chloroaniline	0.378	0.308	18.5	94	0.00	7.76
36	2,6-Dichlorophenol	0.323	0.311	3.7	116	0.00	7.77
37 P	Hexachlorobutadiene	0.202	0.195	3.5	117	0.00	7.89

Continuing Calibration Summary

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2396-CC2395
Lab FileID: X057017.D

38 P	Caprolactam	0.123	0.117	4.9	109	0.00	8.14
39 P	4-Chloro-3-methylphenol	0.317	0.294	7.3	111	0.00	8.32
40 P	2-Methylnaphthalene	0.626	0.576	8.0	113	0.00	8.47
41	1-Methylnaphthalene	0.699	0.640	8.4	112	0.00	8.60
42 P	1,2,4,5-Tetrachlorobenzen	0.364	0.343	5.8	115	0.00	8.71
43 I	Acenaphthene-d10	1.000	1.000	0.0	118	0.00	9.71
44 P	Hexachlorocyclopentadiene	0.404	0.431	-6.7	122	0.00	8.74
45 P	2,4,6-Trichlorophenol	0.386	0.387	-0.3	116	0.00	8.83
46 P	2,4,5-Trichlorophenol	0.414	0.409	1.2	113	0.00	8.87
47 S	2-Fluorobiphenyl	1.379	1.300	5.7	113	0.00	8.92
48 P	1,1'-Biphenyl	1.440	1.376	4.4	112	0.00	9.02
49 P	2-Chloronaphthalene	1.160	1.080	6.9	112	0.00	9.04
50 P	2-Nitroaniline	0.317	0.314	0.9	111	0.00	9.19
----- Amount Calc. %Drift -----							
51	p-Dinitrobenzene	50.000	49.021	2.0	116	0.00	9.32
----- AvgRF CCRF %Dev -----							
52 P	Acenaphthylene	1.772	1.624	8.4	109	0.00	9.53
53 P	Dimethylphthalate	1.341	1.221	8.9	107	0.00	9.45
----- Amount Calc. %Drift -----							
54	m-Dinitrobenzene	50.000	48.911	2.2	117	0.00	9.46
----- AvgRF CCRF %Dev -----							
55 P	2,6-Dinitrotoluene	0.305	0.298	2.3	111	0.00	9.52
56	o-Dinitrobenzene	0.147	0.138	6.1	103	0.00	9.60
57 P	Acenaphthene	1.174	1.079	8.1	109	0.00	9.75
58 P	3-Nitroaniline	0.314	0.288	8.3	102	0.00	9.68
----- Amount Calc. %Drift -----							
59 P	2,4-Dinitrophenol	50.000	57.593	-15.2	148	0.00	9.79
----- AvgRF CCRF %Dev -----							
60 P	Dibenzofuran	1.668	1.549	7.1	110	0.00	9.93
61 P	2,4-Dinitrotoluene	0.405	0.401	1.0	111	0.00	9.98
62 P	4-Nitrophenol	0.152	0.143	5.9	107	0.00	9.88
63	2,3,5,6-Tetrachlorophenol	0.344	0.345	-0.3	114	0.00	10.07
64 P	2,3,4,6-Tetrachlorophenol	0.363	0.359	1.1	112	0.00	10.13
65 P	Fluorene	1.312	1.198	8.7	109	0.00	10.34
66 P	4-Chlorophenyl-phenylethe	0.677	0.624	7.8	110	0.00	10.34
67 P	Diethylphthalate	1.329	1.185	10.8	106	0.00	10.28
68	Thionazin	0.282	0.262	7.1	106	0.00	10.38
69 P	4-Nitroaniline	0.365	0.349	4.4	108	0.00	10.40
70 I	Phenanthrene-d10	1.000	1.000	0.0	111	0.00	11.43
----- Amount Calc. %Drift -----							
71 P	4,6-Dinitro-2-methylpheno	50.000	56.064	-12.1	131	0.00	10.45
----- AvgRF CCRF %Dev -----							
72 P	n-Nitrosodiphenylamine	0.578	0.550	4.8	106	0.00	10.49
73	Diphenylamine	0.694	0.660	4.9	106	0.00	10.49
74	1,2-Diphenylhydrazine	0.760	0.714	6.1	105	0.00	10.52
75 S	2,4,6-Tribromophenol	0.182	0.191	-4.9	113	0.00	10.64
76	Sulfotep	0.123	0.119	3.3	105	0.00	10.80
77	Phorate	0.471	0.463	1.7	106	0.00	10.89
78 P	4-Bromophenyl-phenylether	0.270	0.264	2.2	109	0.00	10.91
79 P	Hexachlorobenzene	0.325	0.315	3.1	108	0.00	11.08

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2396-CC2395
Lab FileID: X057017.D

80	Dimethoate	0.311	0.301	3.2	103	0.00	11.09
81	Simazine	0.155	0.147	5.2	107	0.00	11.12
82 P	Atrazine	0.237	0.228	3.8	103	0.00	11.16
83 P	Pentachlorophenol	0.181	0.178	1.7	112	0.00	11.29
84 P	Phenanthrene	1.146	1.073	6.4	105	0.00	11.46
85 P	Anthracene	1.173	1.088	7.2	104	0.00	11.51
86	Disulfoton	0.438	0.416	5.0	104	0.00	11.50
87 P	Carbazole	1.098	1.012	7.8	104	0.00	11.71

88	Methyl Parathion	50.000	48.797	2.4	109	0.00	11.94

89 P	Di-n-butylphthalate	1.261	1.176	6.7	103	0.00	12.20

90	Ethyl Parathion	50.000	48.459	3.1	107	0.00	12.42

91 P	Fluoranthene	1.250	1.142	8.6	102	0.00	12.87
92 I	Chrysene-d12	1.000	1.000	0.0	106	0.00	14.75

93	Benzidine	50.000	45.904	8.2	93	0.00	13.04

94 P	Pyrene	1.251	1.216	2.8	103	0.00	13.13
95 S	Terphenyl-d14	0.948	0.917	3.3	102	0.00	13.35
96	Famphur	0.355	0.332	6.5	99	0.00	13.98
97 P	Butylbenzylphthalate	0.527	0.518	1.7	101	0.00	14.04

98 P	3,3'-Dichlorobenzidine	50.000	41.280	17.4	91	0.00	14.73

99 P	Benzo[a]anthracene	1.172	1.099	6.2	100	0.00	14.73
100 P	Chrysene	1.119	1.044	6.7	99	0.00	14.79
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.680	2.0	101	0.00	14.91
102 I	Perylene-d12	1.000	1.000	0.0	107	0.00	17.13
103 P	Di-n-octylphthalate	0.998	0.995	0.3	100	0.00	15.93
104 P	Benzo[b]fluoranthene	1.096	1.009	7.9	95	0.00	16.49
105 P	Benzo[k]fluoranthene	1.127	1.060	5.9	101	0.00	16.53
106 P	Benzo[a]pyrene	1.103	1.032	6.4	99	0.00	17.04
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.055	1.0	102	0.00	18.77
108 P	Dibenz[a,h]anthracene	1.175	1.151	2.0	102	0.00	18.81
109 P	Benzo[g,h,i]perylene	1.206	1.203	0.2	104	0.00	19.14

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Thu Nov 09 09:29:39 2017

7.7.8
7

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2396-ECC2395
Lab FileID: X057043.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2396_1108\x057043.D Vial: 2
Acq On : 9 Nov 2017 12:45 am Operator: marthav
Sample : ecc2395-50 Inst : MSBNA05
Misc : op67449,sx2396,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	132	0.00	6.22
2	1,4-Dioxane	0.731	0.685	6.3	124	0.00	3.11
3	N-nitrosodimethylamine	0.755	0.646	14.4	112	0.00	3.48
4	Pyridine	1.960	1.750	10.7	118	0.00	3.48
5 P	Benzaldehyde	1.187	0.965	18.7	101	0.00	5.75
6	Aniline	2.107	2.007	4.7	116	0.00	5.90
7 S	2-Fluorophenol	1.514	1.368	9.6	119	0.00	4.90
8 P	bis(2-Chloroethyl)ether	1.512	1.336	11.6	118	0.00	5.97
9 S	Phenol-d5	1.858	1.585	14.7	113	0.00	5.88
10 P	Phenol	2.063	1.778	13.8	113	0.00	5.89
11 P	2-Chlorophenol	1.569	1.421	9.4	119	0.00	6.02
12	1,3-Dichlorobenzene	1.655	1.543	6.8	122	0.00	6.18
13	1,4-Dichlorobenzene	1.661	1.540	7.3	124	0.00	6.23
14	1,2-Dichlorobenzene	1.580	1.457	7.8	122	0.00	6.44
15	Benzyl alcohol	1.030	0.884	14.2	114	0.00	6.39
16 P	bis(2-chloroisopropyl)eth	1.981	1.687	14.8	113	0.00	6.56
17 P	2-Methylphenol	1.407	1.233	12.4	115	0.00	6.54
18 P	Acetophenone	1.953	1.718	12.0	114	0.00	6.69
19 P	Hexachloroethane	0.624	0.585	6.3	122	0.00	6.78
20 P	N-Nitroso-di-n-propylamin	1.020	0.878	13.9	114	0.00	6.72
21 P	3&4-Methylphenol	1.452	1.257	13.4	115	0.00	6.70
22 I	Naphthalene-d8	1.000	1.000	0.0	122	0.00	7.65
23 S	Nitrobenzene-d5	0.392	0.368	6.1	114	0.00	6.86
24 P	Nitrobenzene	0.393	0.366	6.9	114	0.00	6.88
25 P	Isophorone	0.726	0.644	11.3	110	0.00	7.14
26 P	2-Nitrophenol	0.185	0.201	-8.6	128	0.00	7.24
27 P	2,4-Dimethylphenol	0.375	0.341	9.1	113	0.00	7.29
28	0,0,0-Triethylphosphoroth	0.179	0.173	3.4	117	0.00	7.42
29 P	bis(2-Chloroethoxy)methan	0.491	0.462	5.9	115	0.00	7.40
30	Benzoic Acid	50.000	50.269	-0.5	125	0.00	7.42
31 P	2,4-Dichlorophenol	0.322	0.303	5.9	115	0.00	7.51
32	1,2,4-Trichlorobenzene	0.347	0.331	4.6	118	0.00	7.61
33	alpha-Terpineol			NA			
34 P	Naphthalene	1.082	0.993	8.2	115	0.00	7.68
35 P	4-Chloroaniline	0.378	0.394	-4.2	123	0.00	7.76
36	2,6-Dichlorophenol	0.323	0.303	6.2	115	0.00	7.77
37 P	Hexachlorobutadiene	0.202	0.200	1.0	123	0.00	7.89

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2396-ECC2395
Lab FileID: X057043.D

38 P	Caprolactam	0.123	0.107	13.0	102	0.00	8.14
39 P	4-Chloro-3-methylphenol	0.317	0.279	12.0	107	0.00	8.32
40 P	2-Methylnaphthalene	0.626	0.565	9.7	114	0.00	8.47
41	1-Methylnaphthalene	0.699	0.627	10.3	112	0.00	8.60
42 P	1,2,4,5-Tetrachlorobenzen	0.364	0.338	7.1	115	0.00	8.71
43 I	Acenaphthene-d10	1.000	1.000	0.0	115	0.00	9.71
44 P	Hexachlorocyclopentadiene	0.404	0.391	3.2	108	0.00	8.74
45 P	2,4,6-Trichlorophenol	0.386	0.390	-1.0	114	0.00	8.83
46 P	2,4,5-Trichlorophenol	0.414	0.407	1.7	109	0.00	8.87
47 S	2-Fluorobiphenyl	1.379	1.330	3.6	113	0.00	8.92
48 P	1,1'-Biphenyl	1.440	1.392	3.3	110	0.00	9.02
49 P	2-Chloronaphthalene	1.160	1.095	5.6	111	0.00	9.04
50 P	2-Nitroaniline	0.317	0.304	4.1	105	0.00	9.19
----- Amount Calc. %Drift -----							
51	p-Dinitrobenzene	50.000	46.672	6.7	108	0.00	9.32
----- AvgRF CCRF %Dev -----							
52 P	Acenaphthylene	1.772	1.641	7.4	108	0.00	9.53
53 P	Dimethylphthalate	1.341	1.213	9.5	104	0.00	9.45
----- Amount Calc. %Drift -----							
54	m-Dinitrobenzene	50.000	46.682	6.6	108	0.00	9.46
----- AvgRF CCRF %Dev -----							
55 P	2,6-Dinitrotoluene	0.305	0.294	3.6	107	0.00	9.53
56	o-Dinitrobenzene	0.147	0.134	8.8	98	0.00	9.60
57 P	Acenaphthene	1.174	1.081	7.9	107	0.00	9.75
58 P	3-Nitroaniline	0.314	0.323	-2.9	112	0.00	9.68
----- Amount Calc. %Drift -----							
59 P	2,4-Dinitrophenol	50.000	46.251	7.5	107	0.00	9.79
----- AvgRF CCRF %Dev -----							
60 P	Dibenzofuran	1.668	1.542	7.6	107	0.00	9.93
61 P	2,4-Dinitrotoluene	0.405	0.382	5.7	103	0.00	9.98
62 P	4-Nitrophenol	0.152	0.135	11.2	98	0.00	9.88
63	2,3,5,6-Tetrachlorophenol	0.344	0.346	-0.6	112	0.00	10.08
64 P	2,3,4,6-Tetrachlorophenol	0.363	0.356	1.9	108	0.00	10.13
65 P	Fluorene	1.312	1.178	10.2	104	0.00	10.33
66 P	4-Chlorophenyl-phenylethe	0.677	0.622	8.1	107	0.00	10.34
67 P	Diethylphthalate	1.329	1.171	11.9	102	0.00	10.29
68	Thionazin	0.282	0.253	10.3	100	0.00	10.38
69 P	4-Nitroaniline	0.365	0.325	11.0	98	0.00	10.41
70 I	Phenanthrene-d10	1.000	1.000	0.0	104	0.00	11.43
----- Amount Calc. %Drift -----							
71 P	4,6-Dinitro-2-methylpheno	50.000	48.578	2.8	103	0.00	10.46
----- AvgRF CCRF %Dev -----							
72 P	n-Nitrosodiphenylamine	0.578	0.566	2.1	102	0.00	10.49
73	Diphenylamine	0.694	0.680	2.0	102	0.00	10.49
74	1,2-Diphenylhydrazine	0.760	0.728	4.2	100	0.00	10.53
75 S	2,4,6-Tribromophenol	0.182	0.194	-6.6	107	0.00	10.65
76	Sulfotep	0.123	0.121	1.6	100	0.00	10.80
77	Phorate	0.471	0.460	2.3	99	0.00	10.89
78 P	4-Bromophenyl-phenylether	0.270	0.270	0.0	104	0.00	10.91
79 P	Hexachlorobenzene	0.325	0.317	2.5	101	0.00	11.08

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2396-ECC2395
Lab FileID: X057043.D

80	Dimethoate	0.311	0.288	7.4	92	0.00	11.09
81	Simazine	0.155	0.139	10.3	95	0.00	11.12
82 P	Atrazine	0.237	0.225	5.1	95	0.00	11.16
83 P	Pentachlorophenol	0.181	0.176	2.8	104	0.00	11.29
84 P	Phenanthrene	1.146	1.072	6.5	98	0.00	11.46
85 P	Anthracene	1.173	1.090	7.1	98	0.00	11.51
86	Disulfoton	0.438	0.420	4.1	98	0.00	11.50
87 P	Carbazole	1.098	0.988	10.0	95	0.00	11.71

88	Methyl Parathion	50.000	47.234	5.5	98	0.00	11.94

89 P	Di-n-butylphthalate	1.261	1.153	8.6	95	0.00	12.21

90	Ethyl Parathion	50.000	46.572	6.9	96	0.00	12.42

91 P	Fluoranthene	1.250	1.105	11.6	93	0.00	12.87
92 I	Chrysene-d12	1.000	1.000	0.0	92	0.00	14.75

93	Benzidine	50.000	47.381	5.2	84	0.00	13.04

94 P	Pyrene	1.251	1.231	1.6	90	0.00	13.13
95 S	Terphenyl-d14	0.948	0.938	1.1	91	0.00	13.35
96	Famphur	0.355	0.360	-1.4	94	0.00	13.98
97 P	Butylbenzylphthalate	0.527	0.522	0.9	88	0.00	14.04

98 P	3,3'-Dichlorobenzidine	50.000	56.082	-12.2	109	0.00	14.73

99 P	Benzo[a]anthracene	1.172	1.102	6.0	87	0.00	14.73
100 P	Chrysene	1.119	1.054	5.8	87	0.00	14.79
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.681	1.9	88	0.00	14.91
102 I	Perylene-d12	1.000	1.000	0.0	94	0.00	17.13
103 P	Di-n-octylphthalate	0.998	0.973	2.5	86	0.00	15.93
104 P	Benzo[b]fluoranthene	1.096	0.989	9.8	82	0.00	16.50
105 P	Benzo[k]fluoranthene	1.127	1.068	5.2	90	0.00	16.54
106 P	Benzo[a]pyrene	1.103	1.046	5.2	88	0.00	17.04
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.092	-2.4	92	0.00	18.78
108 P	Dibenz[a,h]anthracene	1.175	1.151	2.0	89	0.00	18.81
109 P	Benzo[g,h,i]perylene	1.206	1.218	-1.0	92	0.00	19.15

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Thu Nov 09 10:07:05 2017

GC/LC Semi-volatiles

QC Data Summaries



Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67457-MB	MM46599.D	1	11/06/17	NJ	11/01/17	OP67457	GMM892

The QC reported here applies to the following samples: Method: SW846 8082A

FA48865-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	17	8.3	ug/kg	
11141-16-5	Aroclor 1232	ND	17	8.3	ug/kg	
53469-21-9	Aroclor 1242	ND	17	6.7	ug/kg	
12672-29-6	Aroclor 1248	ND	17	6.7	ug/kg	
11097-69-1	Aroclor 1254	ND	17	6.7	ug/kg	
11096-82-5	Aroclor 1260	ND	17	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	81% 44-126%
2051-24-3	Decachlorobiphenyl	96% 41-145%

Blank Spike Summary

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67457-BS	MM46598.D	1	11/06/17	NJ	11/01/17	OP67457	GMM892

The QC reported here applies to the following samples: Method: SW846 8082A

FA48865-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	144	108	58-126
11096-82-5	Aroclor 1260	133	145	109	59-133

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	81%	44-126%
2051-24-3	Decachlorobiphenyl	96%	41-145%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67457-MS	MM46603.D	1	11/06/17	NJ	11/01/17	OP67457	GMM892
OP67457-MSD	MM46604.D	1	11/06/17	NJ	11/01/17	OP67457	GMM892
FA48865-1	MM46602.D	1	11/06/17	NJ	11/01/17	OP67457	GMM892

The QC reported here applies to the following samples: Method: SW846 8082A

FA48865-1

CAS No.	Compound	FA48865-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	21 U	166	137	83	166	136	82	1	58-126/25
11096-82-5	Aroclor 1260	21 U	166	160	96	166	165	99	3	59-133/31

CAS No.	Surrogate Recoveries	MS	MSD	FA48865-1	Limits
877-09-8	Tetrachloro-m-xylene	63%	63%	58%	44-126%
2051-24-3	Decachlorobiphenyl	82%	85%	71%	41-145%

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8082A	Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S2 ^a
FA48865-1	MM46602.D	58	71
OP67457-BS	MM46598.D	81	96
OP67457-MB	MM46599.D	81	96
OP67457-MS	MM46603.D	63	82
OP67457-MSD	MM46604.D	63	85

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	44-126%
S2 = Decachlorobiphenyl	41-145%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std:	GMM892-CC891	Injection Date:	11/06/17
Lab File ID:	MM46593.D	Injection Time:	17:23
Instrument ID:	GCMM	Method:	SW846 8082A

S1^a	S2^a
RT	RT

Check Std	3.40	7.16

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S2 ^a RT
OP67457-BS	MM46598.D	11/06/17	18:21	3.40	7.15
OP67457-MB	MM46599.D	11/06/17	18:33	3.40	7.15
ZZZZZZ	MM46600.D	11/06/17	18:45	3.40	7.15
ZZZZZZ	MM46601.D	11/06/17	18:56	3.40	7.16
FA48865-1	MM46602.D	11/06/17	19:08	3.40	7.15
OP67457-MS	MM46603.D	11/06/17	19:20	3.40	7.15
OP67457-MSD	MM46604.D	11/06/17	19:31	3.40	7.16
ZZZZZZ	MM46605.D	11/06/17	19:43	3.40	7.15
ZZZZZZ	MM46606.D	11/06/17	19:55	3.40	7.16
ZZZZZZ	MM46607.D	11/06/17	20:06	3.40	7.15

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

8.5.1
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Initial Calibration Verification

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46526.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46526.D\ECD1A.ch Vial: 15
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46526.D\ECD2B.ch
Acq On : 3 Nov 2017 8:56 pm Operator: nareshj
Sample : icv891-400 1242/1262 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A	400.000	393.270	1.7	96	0.00	3.64-	3.74
20 L4	AR1242-B	400.000	374.834	6.3	92	0.00	4.00-	4.10
21 L4	AR1242-C	400.000	384.083	4.0	98	0.00	4.19-	4.29
22 L4	AR1242-D	400.000	379.401	5.1	95	0.00	4.23-	4.33
23 L4	AR1242-E	400.000	358.640	10.3	87	0.00	4.37-	4.47
24 L4	AR1242-F	400.000	358.801	10.3	93	0.00	4.59-	4.69
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A			-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA48865

Sample: GMM891-ICV891

Account: TCMaw Tantara Corporation

Lab FileID: MM46526.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

	Amount	Calc.	%Drift	
55 S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

	Amount	Calc.	%Drift	
57 S	Tetrachloro-m-xylene #2		-----NA-----	

	Amount	Calc.	%Drift	
58 L1	AR1016-A #2		-----NA-----	
59 L1	AR1016-B #2		-----NA-----	
60 L1	AR1016-C #2		-----NA-----	
61 L1	AR1016-D #2		-----NA-----	
62 L1	AR1016-E #2		-----NA-----	
63 L1	AR1016-F #2		-----NA-----	
64 L2	AR1221-A #2		-----NA-----	
65 L2	AR1221-B #2		-----NA-----	
66 L2	AR1221-C #2		-----NA-----	
67 L2	AR1221-D #2		-----NA-----	
68 L2	AR1221-E #2		-----NA-----	
69 L3	AR1232-A #2		-----NA-----	
70 L3	AR1232-B #2		-----NA-----	
71 L3	AR1232-C #2		-----NA-----	
72 L3	AR1232-D #2		-----NA-----	
73 L3	AR1232-E #2		-----NA-----	
74 L3	AR1232-F #2		-----NA-----	
75 L4	AR1242-A #2	400.000 397.875	0.5 93 0.00	3.56- 3.66
76 L4	AR1242-B #2	400.000 397.604	0.6 92 0.00	3.93- 4.03
77 L4	AR1242-C #2	400.000 400.288	-0.1 95 0.00	4.15- 4.25
78 L4	AR1242-D #2	400.000 383.987	4.0 96 0.00	4.41- 4.51
79 L4	AR1242-E #2	400.000 301.985	24.5# 75 0.00	4.66- 4.76
80 L4	AR1242-F #2	400.000 359.645	10.1 94 0.00	4.81- 4.91
81 L5	AR1248-A #2		-----NA-----	
82 L5	AR1248-B #2		-----NA-----	
83 L5	AR1248-C #2		-----NA-----	
84 L5	AR1248-D #2		-----NA-----	
85 L5	AR1248-E #2		-----NA-----	
86 L5	AR1248-F #2		-----NA-----	
87 L6	AR1254-A #2		-----NA-----	
88 L6	AR1254-B #2		-----NA-----	
89 L6	AR1254-C #2		-----NA-----	

Initial Calibration Verification

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46526.D

90	L6	AR1254-D #2			-----NA-----
91	L6	AR1254-E #2			-----NA-----
92	L6	AR1254-F #2			-----NA-----
93	L7	AR1260-A #2			-----NA-----
94	L7	AR1260-B #2			-----NA-----
95	L7	AR1260-C #2			-----NA-----
96	L7	AR1260-D #2			-----NA-----
97	L7	AR1260-E #2			-----NA-----
98	L7	AR1260-F #2			-----NA-----
			----- Amount	Calc.	%Drift -----
99	L9	AR1262-A #2			-----NA-----
100	L9	AR1262-B #2			-----NA-----
101	L9	AR1262-C #2			-----NA-----
102	L9	AR1262-D #2			-----NA-----
103	L9	AR1262-E #2			-----NA-----
104	L9	AR1262-F #2			-----NA-----
105	L8	AR1268-A #2			-----NA-----
106	L8	AR1268-B #2			-----NA-----
107	L8	AR1268-C #2			-----NA-----
108	L8	AR1268-D #2			-----NA-----
109	L8	AR1268-E #2			-----NA-----
110	L8	AR1268-F #2			-----NA-----
			----- Amount	Calc.	%Drift -----
111	S	Decachlorobiphenyl #2			-----NA-----

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Sun Nov 05 14:27:51 2017

8.6.1
8

Initial Calibration Verification

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46533.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46533.D\ECD1A.ch Vial: 22
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46533.D\ECD2B.ch
Acq On : 3 Nov 2017 10:18 pm Operator: nareshj
Sample : icv891-400 1232/1268 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
13 L3	AR1232-A	400.000	413.591	-3.4	97	0.00	3.64-	3.74
14 L3	AR1232-B	400.000	343.940	14.0	84	0.00	4.00-	4.10
15 L3	AR1232-C	400.000	356.773	10.8	87	0.00	4.19-	4.29
16 L3	AR1232-D	400.000	345.016	13.7	86	0.00	4.30-	4.40
17 L3	AR1232-E	400.000	348.436	12.9	85	0.00	4.50-	4.59
18 L3	AR1232-F	400.000	345.175	13.7	87	0.00	4.79-	4.89
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A			-----NA-----				

Initial Calibration Verification

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Job Number: FA48865

Sample: GMM891-ICV891

Account: TCMAW Tantara Corporation

Lab FileID: MM46533.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2		-----NA-----	
59	L1	AR1016-B #2		-----NA-----	
60	L1	AR1016-C #2		-----NA-----	
61	L1	AR1016-D #2		-----NA-----	
62	L1	AR1016-E #2		-----NA-----	
63	L1	AR1016-F #2		-----NA-----	
64	L2	AR1221-A #2		-----NA-----	
65	L2	AR1221-B #2		-----NA-----	
66	L2	AR1221-C #2		-----NA-----	
67	L2	AR1221-D #2		-----NA-----	
68	L2	AR1221-E #2		-----NA-----	
69	L3	AR1232-A #2	400.000 426.271	-6.6 99 0.00	3.56- 3.66
70	L3	AR1232-B #2	400.000 359.207	10.2 86 0.00	3.93- 4.03
71	L3	AR1232-C #2	400.000 377.480	5.6 90 0.00	4.11- 4.21
72	L3	AR1232-D #2	400.000 351.884	12.0 87 0.00	4.23- 4.33
73	L3	AR1232-E #2	400.000 355.504	11.1 84 0.00	4.41- 4.51
74	L3	AR1232-F #2	400.000 348.361	12.9 84 0.00	4.66- 4.76
75	L4	AR1242-A #2		-----NA-----	
76	L4	AR1242-B #2		-----NA-----	
77	L4	AR1242-C #2		-----NA-----	
78	L4	AR1242-D #2		-----NA-----	
79	L4	AR1242-E #2		-----NA-----	
80	L4	AR1242-F #2		-----NA-----	
81	L5	AR1248-A #2		-----NA-----	
82	L5	AR1248-B #2		-----NA-----	
83	L5	AR1248-C #2		-----NA-----	
84	L5	AR1248-D #2		-----NA-----	
85	L5	AR1248-E #2		-----NA-----	
86	L5	AR1248-F #2		-----NA-----	
87	L6	AR1254-A #2		-----NA-----	
88	L6	AR1254-B #2		-----NA-----	
89	L6	AR1254-C #2		-----NA-----	

Initial Calibration Verification

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46533.D

90	L6	AR1254-D #2		-----NA-----
91	L6	AR1254-E #2		-----NA-----
92	L6	AR1254-F #2		-----NA-----
93	L7	AR1260-A #2		-----NA-----
94	L7	AR1260-B #2		-----NA-----
95	L7	AR1260-C #2		-----NA-----
96	L7	AR1260-D #2		-----NA-----
97	L7	AR1260-E #2		-----NA-----
98	L7	AR1260-F #2		-----NA-----
----- Amount Calc. %Drift -----				
99	L9	AR1262-A #2		-----NA-----
100	L9	AR1262-B #2		-----NA-----
101	L9	AR1262-C #2		-----NA-----
102	L9	AR1262-D #2		-----NA-----
103	L9	AR1262-E #2		-----NA-----
104	L9	AR1262-F #2		-----NA-----
105	L8	AR1268-A #2		-----NA-----
106	L8	AR1268-B #2		-----NA-----
107	L8	AR1268-C #2		-----NA-----
108	L8	AR1268-D #2		-----NA-----
109	L8	AR1268-E #2		-----NA-----
110	L8	AR1268-F #2		-----NA-----
----- Amount Calc. %Drift -----				
111	S	Decachlorobiphenyl #2		-----NA-----

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46545.D 8082dod1103.m Sun Nov 05 14:27:53 2017

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Initial Calibration Verification

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46540.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46540.D\ECD1A.ch Vial: 29
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46540.D\ECD2B.ch
Acq On : 3 Nov 2017 11:39 pm Operator: nareshj
Sample : icv891-400 1221 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A	400.000	391.935	2.0	89	0.00	2.96-	3.06
9 L2	AR1221-B	400.000	402.340	-0.6	89	0.00	3.27-	3.37
10 L2	AR1221-C	400.000	366.726	8.3	87	0.00	3.52-	3.63
11 L2	AR1221-D	400.000	377.157	5.7	88	0.00	3.59-	3.69
12 L2	AR1221-E	400.000	372.223	6.9	87	0.00	3.64-	3.74
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A			-----NA-----				

Initial Calibration Verification

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46540.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl			-----NA-----

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2			-----NA-----

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2			-----NA-----
59	L1	AR1016-B #2			-----NA-----
60	L1	AR1016-C #2			-----NA-----
61	L1	AR1016-D #2			-----NA-----
62	L1	AR1016-E #2			-----NA-----
63	L1	AR1016-F #2			-----NA-----
64	L2	AR1221-A #2	400.000	391.349	2.2 88 0.00 2.87- 2.97
65	L2	AR1221-B #2	400.000	408.301	-2.1 88 0.00 3.19- 3.29
66	L2	AR1221-C #2	400.000	384.800	3.8 88 0.00 3.43- 3.53
67	L2	AR1221-D #2	400.000	386.655	3.3 87 0.00 3.50- 3.60
68	L2	AR1221-E #2	400.000	389.867	2.5 88 0.00 3.56- 3.66
69	L3	AR1232-A #2			-----NA-----
70	L3	AR1232-B #2			-----NA-----
71	L3	AR1232-C #2			-----NA-----
72	L3	AR1232-D #2			-----NA-----
73	L3	AR1232-E #2			-----NA-----
74	L3	AR1232-F #2			-----NA-----
75	L4	AR1242-A #2			-----NA-----
76	L4	AR1242-B #2			-----NA-----
77	L4	AR1242-C #2			-----NA-----
78	L4	AR1242-D #2			-----NA-----
79	L4	AR1242-E #2			-----NA-----
80	L4	AR1242-F #2			-----NA-----
81	L5	AR1248-A #2			-----NA-----
82	L5	AR1248-B #2			-----NA-----
83	L5	AR1248-C #2			-----NA-----
84	L5	AR1248-D #2			-----NA-----
85	L5	AR1248-E #2			-----NA-----
86	L5	AR1248-F #2			-----NA-----
87	L6	AR1254-A #2			-----NA-----
88	L6	AR1254-B #2			-----NA-----
89	L6	AR1254-C #2			-----NA-----

Initial Calibration Verification

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46540.D

90	L6	AR1254-D #2			-----NA-----
91	L6	AR1254-E #2			-----NA-----
92	L6	AR1254-F #2			-----NA-----
93	L7	AR1260-A #2			-----NA-----
94	L7	AR1260-B #2			-----NA-----
95	L7	AR1260-C #2			-----NA-----
96	L7	AR1260-D #2			-----NA-----
97	L7	AR1260-E #2			-----NA-----
98	L7	AR1260-F #2			-----NA-----

			Amount	Calc.	%Drift
99	L9	AR1262-A #2			-----NA-----
100	L9	AR1262-B #2			-----NA-----
101	L9	AR1262-C #2			-----NA-----
102	L9	AR1262-D #2			-----NA-----
103	L9	AR1262-E #2			-----NA-----
104	L9	AR1262-F #2			-----NA-----
105	L8	AR1268-A #2			-----NA-----
106	L8	AR1268-B #2			-----NA-----
107	L8	AR1268-C #2			-----NA-----
108	L8	AR1268-D #2			-----NA-----
109	L8	AR1268-E #2			-----NA-----
110	L8	AR1268-F #2			-----NA-----

			Amount	Calc.	%Drift
111	S	Decachlorobiphenyl #2			-----NA-----

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Sun Nov 05 14:27:55 2017

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Initial Calibration Verification

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46541.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46541.D\ECD1A.ch Vial: 30
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46541.D\ECD2B.ch
Acq On : 3 Nov 2017 11:51 pm Operator: nareshj
Sample : icv891-400 1254 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S		Tetrachloro-m-xylene			-----NA-----				
			Amount	Calc.	%Drift				
2	L1	AR1016-A			-----NA-----				
3	L1	AR1016-B			-----NA-----				
4	L1	AR1016-C			-----NA-----				
5	L1	AR1016-D			-----NA-----				
6	L1	AR1016-E			-----NA-----				
7	L1	AR1016-F			-----NA-----				
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
			Amount	Calc.	%Drift				
31	L6	AR1254-A	400.000	351.057	12.2	92	0.00	4.37-	4.47
32	L6	AR1254-B	400.000	339.106	15.2	86	0.00	4.74-	4.84
33	L6	AR1254-C	400.000	359.500	10.1	86	0.00	5.14-	5.24
34	L6	AR1254-D	400.000	363.639	9.1	86	0.00	5.34-	5.43
35	L6	AR1254-E	400.000	361.194	9.7	85	0.00	5.52-	5.62
36	L6	AR1254-F	400.000	341.434	14.6	80	0.00	5.62-	5.72
37	L7	AR1260-A			-----NA-----				

Initial Calibration Verification

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46541.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2	-----NA-----		
59	L1	AR1016-B #2	-----NA-----		
60	L1	AR1016-C #2	-----NA-----		
61	L1	AR1016-D #2	-----NA-----		
62	L1	AR1016-E #2	-----NA-----		
63	L1	AR1016-F #2	-----NA-----		
64	L2	AR1221-A #2	-----NA-----		
65	L2	AR1221-B #2	-----NA-----		
66	L2	AR1221-C #2	-----NA-----		
67	L2	AR1221-D #2	-----NA-----		
68	L2	AR1221-E #2	-----NA-----		
69	L3	AR1232-A #2	-----NA-----		
70	L3	AR1232-B #2	-----NA-----		
71	L3	AR1232-C #2	-----NA-----		
72	L3	AR1232-D #2	-----NA-----		
73	L3	AR1232-E #2	-----NA-----		
74	L3	AR1232-F #2	-----NA-----		
75	L4	AR1242-A #2	-----NA-----		
76	L4	AR1242-B #2	-----NA-----		
77	L4	AR1242-C #2	-----NA-----		
78	L4	AR1242-D #2	-----NA-----		
79	L4	AR1242-E #2	-----NA-----		
80	L4	AR1242-F #2	-----NA-----		
81	L5	AR1248-A #2	-----NA-----		
82	L5	AR1248-B #2	-----NA-----		
83	L5	AR1248-C #2	-----NA-----		
84	L5	AR1248-D #2	-----NA-----		
85	L5	AR1248-E #2	-----NA-----		
86	L5	AR1248-F #2	-----NA-----		
87	L6	AR1254-A #2	400.000 384.290	3.9 89 0.00	4.27- 4.37
88	L6	AR1254-B #2	400.000 372.113	7.0 90 0.00	4.66- 4.76
89	L6	AR1254-C #2	400.000 367.863	8.0 89 0.00	5.05- 5.15

Initial Calibration Verification

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46541.D

90	L6	AR1254-D #2	400.000	354.268	11.4	86	0.00	5.21-	5.31
91	L6	AR1254-E #2	400.000	344.843	13.8	84	0.00	5.38-	5.48
92	L6	AR1254-F #2	400.000	345.419	13.6	82	0.00	5.51-	5.61
93	L7	AR1260-A #2							
94	L7	AR1260-B #2							
95	L7	AR1260-C #2							
96	L7	AR1260-D #2							
97	L7	AR1260-E #2							
98	L7	AR1260-F #2							
			Amount	Calc.	%Drift				
99	L9	AR1262-A #2							
100	L9	AR1262-B #2							
101	L9	AR1262-C #2							
102	L9	AR1262-D #2							
103	L9	AR1262-E #2							
104	L9	AR1262-F #2							
105	L8	AR1268-A #2							
106	L8	AR1268-B #2							
107	L8	AR1268-C #2							
108	L8	AR1268-D #2							
109	L8	AR1268-E #2							
110	L8	AR1268-F #2							
			Amount	Calc.	%Drift				
111	S	Decachlorobiphenyl #2							

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Sun Nov 05 14:27:57 2017

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Initial Calibration Summary

Page 1 of 6

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICC891
Lab FileID: MM46545.D

Response Factor Report ECD 9

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Initial Calibration

Calibration Files

20 =MM46542.D 50 =MM46543.D 200 =MM46544.D 400 =MM46545.D
600 =MM46546.D 1000 =MM46547.D

	Compound	20	50	200	400	600	1000	Avg	%RSD
1) S	Tetrachloro-m-xylene	1.488	1.644	1.460	1.462	1.492	1.414	1.493	E6 5.29
2) L1	AR1016-A	2.910	2.878	2.294	2.269	2.306	2.149	2.468	E4 13.58
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9984							
	Response Ratio = 0.00000 + 22025.74690 *A								
3) L1	AR1016-B	4.101	3.977	3.213	3.057	3.164	2.950	3.410	E4 14.57
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9985							
	Response Ratio = 0.00000 + 30189.46640 *A								
4) L1	AR1016-C	6.001	6.353	5.684	5.801	6.225	5.925	5.998	E4 4.22
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9987							
	Response Ratio = 0.00000 + 59757.32972 *A								
5) L1	AR1016-D	3.666	3.828	3.183	3.266	3.511	3.296	3.458	E4 7.33
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9981							
	Response Ratio = 0.00000 + 33407.02676 *A								
6) L1	AR1016-E	2.945	3.174	2.637	2.712	3.004	2.766	2.873	E4 7.07
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9967							
	Response Ratio = 0.00000 + 28126.81046 *A								
7) L1	AR1016-F	2.894	3.063	2.515	2.516	2.732	2.550	2.712	E4 8.41
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9978							
	Response Ratio = 0.00000 + 25887.14187 *A								
8) L2	AR1221-A	1.356	1.279	1.036	0.950	0.874	0.840	1.056	E4 20.35
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9975							
	Response Ratio = 0.00000 + 8651.00747 *A								
9) L2	AR1221-B	5.235	3.792	3.359	3.160	2.810	2.691	3.508	E3 26.63
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9959							
	Response Ratio = 0.00000 + 2785.59779 *A								
10) L2	AR1221-C	1.671	1.495	1.304	1.286	1.209	1.204	1.362	E4 13.58
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9994							
	Response Ratio = 0.00000 + 12168.49980 *A								
11) L2	AR1221-D	1.063	1.079	0.932	0.913	0.856	0.830	0.945	E4 11.00
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9986							
	Response Ratio = 0.00000 + 8472.81584 *A								
12) L2	AR1221-E	3.971	3.566	3.252	3.220	3.007	2.960	3.329	E4 11.45
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9990							
	Response Ratio = 0.00000 + 30061.98506 *A								
13) L3	AR1232-A	3.333	2.783	2.728	2.570	2.505	2.349	2.712	E4 12.62
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9979							

Initial Calibration Summary

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICC891
Lab FileID: MM46545.D

Response Ratio = 0.00000 + 24183.55595 *A										
14)	L3	AR1232-B	1.898	1.587	1.553	1.470	1.452	1.428	1.565	E4 11.14
---- Linear regr., Force(0,0) ----			Coefficient = 0.9998				Response Ratio = 0.00000 + 14415.14844 *A			
15)	L3	AR1232-C	3.102	2.548	2.675	2.754	2.684	2.693	2.743	E4 6.88
---- Linear regr., Force(0,0) ----			Coefficient = 0.9999				Response Ratio = 0.00000 + 26965.07377 *A			
16)	L3	AR1232-D	1.452	1.303	1.314	1.289	1.302	1.286	1.324	E4 4.80
---- Linear regr., Force(0,0) ----			Coefficient = 0.9999				Response Ratio = 0.00000 + 12905.82681 *A			
17)	L3	AR1232-E	1.394	1.209	1.191	1.127	1.136	1.077	1.189	E4 9.32
---- Linear regr., Force(0,0) ----			Coefficient = 0.9989				Response Ratio = 0.00000 + 10991.45427 *A			
18)	L3	AR1232-F	1.172	1.003	1.044	1.038	1.076	1.043	1.063	E4 5.49
---- Linear regr., Force(0,0) ----			Coefficient = 0.9996				Response Ratio = 0.00000 + 10500.79796 *A			
19)	L4	AR1242-A	2.409	2.116	2.035	1.863	1.791	1.811	2.004	E4 11.80
---- Linear regr., Force(0,0) ----			Coefficient = 0.9994				Response Ratio = 0.00000 + 18183.06698 *A			
20)	L4	AR1242-B	2.987	2.614	2.593	2.418	2.374	2.371	2.560	E4 9.19
---- Linear regr., Force(0,0) ----			Coefficient = 0.9998				Response Ratio = 0.00000 + 23828.17190 *A			
21)	L4	AR1242-C	5.154	4.674	5.092	4.814	4.817	4.949	4.917	E4 3.72
---- Linear regr., Force(0,0) ----			Coefficient = 0.9996				Response Ratio = 0.00000 + 49080.25707 *A			
22)	L4	AR1242-D	3.092	2.754	2.847	2.674	2.643	2.701	2.785	E4 5.97
---- Linear regr., Force(0,0) ----			Coefficient = 0.9996				Response Ratio = 0.00000 + 26885.29598 *A			
23)	L4	AR1242-E	2.430	2.086	2.043	1.905	1.840	1.838	2.023	E4 11.08
---- Linear regr., Force(0,0) ----			Coefficient = 0.9996				Response Ratio = 0.00000 + 18510.76437 *A			
24)	L4	AR1242-F	2.046	1.855	1.989	1.833	1.826	1.936	1.914	E4 4.75
---- Linear regr., Force(0,0) ----			Coefficient = 0.9984				Response Ratio = 0.00000 + 19010.14989 *A			
25)	L5	AR1248-A	1.921	1.831	1.695	1.654	1.586	1.535	1.704	E4 8.63
---- Linear regr., Force(0,0) ----			Coefficient = 0.9991				Response Ratio = 0.00000 + 15639.56197 *A			
26)	L5	AR1248-B	3.032	2.942	3.018	3.131	3.151	3.145	3.070	E4 2.79
---- Linear regr., Force(0,0) ----			Coefficient = 0.9999				Response Ratio = 0.00000 + 31412.45672 *A			
27)	L5	AR1248-C	3.506	3.448	3.315	3.375	3.286	3.241	3.362	E4 3.00
---- Linear regr., Force(0,0) ----			Coefficient = 0.9997				Response Ratio = 0.00000 + 32674.79194 *A			
28)	L5	AR1248-D	3.754	3.738	3.708	3.762	3.785	3.744	3.749	E4 0.69
---- Linear regr., Force(0,0) ----			Coefficient = 0.9999							

Initial Calibration Summary

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Job Number: FA48865

Sample: GMM891-ICC891

Account: TCMAW Tantara Corporation

Lab FileID: MM46545.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Response Ratio = 0.00000 + 37540.84374 *A

29) L5 AR1248-E 3.497 3.573 3.634 3.974 4.001 4.057 3.789 E4 6.53

---- Linear regr., Force(0,0) ---- Coefficient = 0.9997

Response Ratio = 0.00000 + 40235.26765 *A

30) L5 AR1248-F 2.924 3.014 3.064 3.290 3.276 3.289 3.143 E4 5.16

---- Linear regr., Force(0,0) ---- Coefficient = 0.9998

Response Ratio = 0.00000 + 32796.32258 *A

31) L6 AR1254-A 2.837 2.643 2.394 2.365 2.273 2.304 2.469 E4 9.02

32) L6 AR1254-B 4.691 4.373 4.172 4.289 4.181 4.294 4.333 E4 4.40

33) L6 AR1254-C 6.002 6.087 6.013 6.507 6.310 6.593 6.252 E4 4.11

34) L6 AR1254-D 3.604 3.492 3.548 4.026 3.788 4.292 3.792 E4 8.26

35) L6 AR1254-E 2.935 2.860 2.940 3.292 3.097 3.466 3.098 E4 7.66

36) L6 AR1254-F 5.127 4.985 4.857 5.468 5.034 5.457 5.155 E4 4.92

37) L7 AR1260-A 5.606 5.978 4.844 4.939 5.448 5.091 5.318 E4 8.22

38) L7 AR1260-B 6.659 6.958 5.810 5.962 6.642 6.145 6.363 E4 7.15

39) L7 AR1260-C 7.196 7.854 6.600 6.884 7.668 7.231 7.239 E4 6.47

40) L7 AR1260-D 4.706 4.973 4.150 4.035 4.636 4.374 4.479 E4 7.96

41) L7 AR1260-E 0.995 1.049 0.909 0.924 1.020 0.968 0.978 E5 5.57

42) L7 AR1260-F 6.206 6.691 5.587 5.595 6.391 5.915 6.064 E4 7.33

43) L9 AR1262-A 4.637 4.023 4.197 3.993 3.778 3.990 4.103 E4 7.16

44) L9 AR1262-B 4.888 4.523 4.635 4.307 4.254 4.493 4.517 E4 5.10

45) L9 AR1262-C 7.018 6.351 6.563 6.056 5.969 6.236 6.365 E4 6.02

46) L9 AR1262-D 6.089 5.485 5.697 5.309 5.268 5.464 5.552 E4 5.47

47) L9 AR1262-E 1.119 1.086 1.162 1.083 1.073 1.147 1.112 E5 3.30

48) L9 AR1262-F 7.711 7.452 7.584 7.129 6.956 7.304 7.356 E4 3.85

49) L8 AR1268-A 3.982 3.300 3.313 3.261 3.349 3.261 3.411 E4 8.26

50) L8 AR1268-B 4.757 3.840 3.728 3.715 3.714 3.471 3.871 E4 11.64

51) L8 AR1268-C 1.759 1.418 1.521 1.562 1.512 1.467 1.540 E5 7.65

52) L8 AR1268-D 1.506 1.246 1.369 1.380 1.392 1.353 1.374 E5 6.06

53) L8 AR1268-E 5.554 4.282 4.629 4.620 4.771 4.638 4.749 E4 8.98

54) L8 AR1268-F 3.023 2.489 2.730 2.682 2.722 2.690 2.722 E5 6.31

55) S Decachlorobiphenyl 8.565 9.325 7.440 7.112 7.831 7.473 7.958 E5 10.47

---- Linear regr., Force(0,0) ---- Coefficient = 0.9982

Response Ratio = 0.00000 + 752107.05792 *A

Signal #2

1) S Tetrachloro-m-xylene 4.744 5.511 4.717 4.556 4.649 4.397 4.762 E6 8.15

2) L1 AR1016-A 9.685 9.851 7.779 7.384 7.431 6.795 8.154 E4 15.83

---- Linear regr., Force(0,0) ---- Coefficient = 0.9972

Response Ratio = 0.00000 + 70323.80616 *A

3) L1 AR1016-B 1.305 1.328 1.050 0.980 0.985 0.896 1.091 E5 16.66

---- Linear regr., Force(0,0) ---- Coefficient = 0.9968

Response Ratio = 0.00000 + 93001.70862 *A

4) L1 AR1016-C 2.193 2.335 2.030 2.006 2.093 1.904 2.093 E5 7.26

---- Linear regr., Force(0,0) ---- Coefficient = 0.9968

Response Ratio = 0.00000 + 196218.73061 *A

5) L1 AR1016-D 1.178 1.265 1.030 1.022 1.064 0.971 1.088 E5 10.18

---- Linear regr., Force(0,0) ---- Coefficient = 0.9971

Response Ratio = 0.00000 + 99972.33266 *A

6) L1 AR1016-E 1.023 1.093 0.877 0.851 0.895 0.812 0.925 E5 11.77

---- Linear regr., Force(0,0) ---- Coefficient = 0.9968

Initial Calibration Summary

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICC891
Lab FileID: MM46545.D

Response Ratio = 0.00000 + 83728.31721 *A												
7)	L1	AR1016-F	1.036	1.107	0.916	0.879	0.939	0.852	0.955	E5	10.22	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9967				Response Ratio = 0.00000 + 87702.89309 *A					
8)	L2	AR1221-A	5.157	4.089	3.035	2.814	2.574	2.442	3.352	E4	31.65	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9975				Response Ratio = 0.00000 + 25292.19744 *A					
9)	L2	AR1221-B	2.053	1.483	1.053	0.969	0.865	0.793	1.203	E4	40.07	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9942				Response Ratio = 0.00000 + 8353.68223 *A					
10)	L2	AR1221-C	5.472	5.272	4.519	4.493	4.177	4.017	4.658	E4	12.62	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9981				Response Ratio = 0.00000 + 41175.99824 *A					
11)	L2	AR1221-D	4.024	3.621	3.090	2.985	2.745	2.619	3.181	E4	16.97	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9973				Response Ratio = 0.00000 + 26994.87039 *A					
12)	L2	AR1221-E	1.323	1.251	1.099	1.039	0.954	0.910	1.096	E5	14.92	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9970				Response Ratio = 0.00000 + 93911.46333 *A					
13)	L3	AR1232-A	1.129	0.953	0.911	0.835	0.796	0.748	0.895	E5	15.26	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9973				Response Ratio = 0.00000 + 77273.54794 *A					
14)	L3	AR1232-B	6.491	5.340	5.175	4.847	4.762	4.561	5.196	E4	13.37	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9991				Response Ratio = 0.00000 + 46536.19855 *A					
15)	L3	AR1232-C	1.114	0.949	0.995	0.959	0.950	0.896	0.977	E5	7.61	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9984				Response Ratio = 0.00000 + 91742.74014 *A					
16)	L3	AR1232-D	5.583	4.935	5.001	4.720	4.730	4.584	4.926	E4	7.24	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9995				Response Ratio = 0.00000 + 46431.37061 *A					
17)	L3	AR1232-E	5.225	4.385	4.272	4.109	4.121	3.736	4.308	E4	11.61	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9961				Response Ratio = 0.00000 + 38779.24578 *A					
18)	L3	AR1232-F	5.667	4.418	4.542	4.450	4.408	4.181	4.611	E4	11.51	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9988				Response Ratio = 0.00000 + 42708.30381 *A					
19)	L4	AR1242-A	8.194	7.156	6.874	6.243	5.917	5.710	6.683	E4	13.83	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9982				Response Ratio = 0.00000 + 58452.73826 *A					
20)	L4	AR1242-B	9.966	8.771	8.718	8.124	7.582	7.294	8.409	E4	11.48	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9977				Response Ratio = 0.00000 + 74845.78491 *A					
21)	L4	AR1242-C	1.010	0.886	0.925	0.849	0.796	0.793	0.877	E5	9.46	
---- Linear regr., Force(0,0) ----			Coefficient = 0.9987									

Initial Calibration Summary

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICC891
Lab FileID: MM46545.D

Response Ratio = 0.00000 + 80326.73548 *A											
22)	L4	AR1242-D	9.369	8.166	8.299	7.427	7.319	7.377	7.993	E4	9.96
---- Linear regr., Force(0,0) ----			Coefficient = 0.9994								
			Response Ratio = 0.00000 + 73941.19474 *A								
23)	L4	AR1242-E	1.254	1.120	1.169	1.059	1.034	1.051	1.114	E5	7.61
---- Linear regr., Force(0,0) ----			Coefficient = 0.9994								
			Response Ratio = 0.00000 + 105120.70623 *A								
24)	L4	AR1242-F	5.302	4.919	5.016	4.587	4.636	4.841	4.884	E4	5.38
---- Linear regr., Force(0,0) ----			Coefficient = 0.9988								
			Response Ratio = 0.00000 + 47727.94716 *A								
25)	L5	AR1248-A	6.410	5.869	5.423	5.285	5.035	4.749	5.462	E4	10.95
---- Linear regr., Force(0,0) ----			Coefficient = 0.9977								
			Response Ratio = 0.00000 + 48892.13571 *A								
26)	L5	AR1248-B	1.063	1.084	1.079	1.099	1.070	1.018	1.069	E5	2.59
---- Linear regr., Force(0,0) ----			Coefficient = 0.9985								
			Response Ratio = 0.00000 + 104022.65268 *A								
27)	L5	AR1248-C	1.309	1.326	1.279	1.287	1.236	1.211	1.275	E5	3.42
---- Linear regr., Force(0,0) ----			Coefficient = 0.9994								
			Response Ratio = 0.00000 + 122673.94120 *A								
28)	L5	AR1248-D	9.228	9.135	9.160	9.404	9.219	9.056	9.200	E4	1.28
---- Linear regr., Force(0,0) ----			Coefficient = 0.9997								
			Response Ratio = 0.00000 + 91318.04387 *A								
29)	L5	AR1248-E	1.685	1.730	1.715	1.785	1.733	1.679	1.721	E5	2.23
---- Linear regr., Force(0,0) ----			Coefficient = 0.9992								
			Response Ratio = 0.00000 + 170353.24961 *A								
30)	L5	AR1248-F	7.334	7.547	7.264	7.444	7.521	7.461	7.429	E4	1.47
---- Linear regr., Force(0,0) ----			Coefficient = 0.9999								
			Response Ratio = 0.00000 + 74682.64879 *A								
31)	L6	AR1254-A	9.593	8.987	7.920	8.076	7.286	7.475	8.223	E4	10.89
---- Linear regr., Force(0,0) ----			Coefficient = 0.9984								
			Response Ratio = 0.00000 + 75076.44307 *A								
32)	L6	AR1254-B	2.060	1.912	1.852	1.803	1.730	1.740	1.849	E5	6.70
---- Linear regr., Force(0,0) ----			Coefficient = 0.9997								
			Response Ratio = 0.00000 + 174748.16734 *A								
33)	L6	AR1254-C	2.331	2.273	2.184	2.227	2.150	2.146	2.219	E5	3.30
---- Linear regr., Force(0,0) ----			Coefficient = 0.9998								
			Response Ratio = 0.00000 + 215663.25850 *A								
34)	L6	AR1254-D	1.368	1.377	1.316	1.422	1.351	1.399	1.372	E5	2.71
---- Linear regr., Force(0,0) ----			Coefficient = 0.9993								
			Response Ratio = 0.00000 + 138838.87458 *A								
35)	L6	AR1254-E	1.040	1.019	0.950	0.970	0.924	0.955	0.976	E5	4.52
---- Linear regr., Force(0,0) ----			Coefficient = 0.9995								
			Response Ratio = 0.00000 + 94915.18916 *A								
36)	L6	AR1254-F	1.791	1.805	1.727	1.815	1.675	1.734	1.758	E5	3.11
---- Linear regr., Force(0,0) ----			Coefficient = 0.9989								

Initial Calibration Summary

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Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICC891
Lab FileID: MM46545.D

Response Ratio = 0.00000 + 172887.29022 *A

37) L7 AR1260-A 1.902 2.007 1.590 1.587 1.758 1.571 1.736 E5 10.71
---- Linear regr., Force(0,0) ---- Coefficient = 0.9949
Response Ratio = 0.00000 + 161698.40494 *A

38) L7 AR1260-B 2.229 2.320 1.933 1.879 2.101 1.859 2.054 E5 9.41
---- Linear regr., Force(0,0) ---- Coefficient = 0.9941
Response Ratio = 0.00000 + 191951.14486 *A

39) L7 AR1260-C 1.558 1.637 1.344 1.290 1.419 1.258 1.418 E5 10.69
---- Linear regr., Force(0,0) ---- Coefficient = 0.9946
Response Ratio = 0.00000 + 130143.17668 *A

40) L7 AR1260-D 1.549 1.665 1.313 1.293 1.437 1.308 1.428 E5 10.73
---- Linear regr., Force(0,0) ---- Coefficient = 0.9961
Response Ratio = 0.00000 + 133680.91837 *A

41) L7 AR1260-E 3.230 3.564 2.969 2.946 3.248 2.945 3.150 E5 7.83
---- Linear regr., Force(0,0) ---- Coefficient = 0.9961
Response Ratio = 0.00000 + 301639.36868 *A

42) L7 AR1260-F 2.396 2.610 2.180 2.175 2.331 2.175 2.311 E5 7.53
---- Linear regr., Force(0,0) ---- Coefficient = 0.9980
Response Ratio = 0.00000 + 221161.15614 *A

43) L9 AR1262-A 1.639 1.437 1.473 1.330 1.273 1.294 1.408 E5 9.84
44) L9 AR1262-B 1.712 1.485 1.572 1.418 1.361 1.417 1.494 E5 8.61
45) L9 AR1262-C 2.343 2.183 2.176 1.976 1.912 1.939 2.088 E5 8.23
46) L9 AR1262-D 2.090 1.982 2.031 1.827 1.744 1.799 1.912 E5 7.36
47) L9 AR1262-E 3.849 3.613 3.705 3.376 3.344 3.486 3.562 E5 5.52
48) L9 AR1262-F 2.842 2.711 2.719 2.483 2.445 2.468 2.611 E5 6.39
49) L8 AR1268-A 1.297 1.106 1.101 1.078 1.056 0.992 1.105 E5 9.31
50) L8 AR1268-B 1.574 1.253 1.273 1.220 1.208 1.119 1.274 E5 12.25
51) L8 AR1268-C 5.141 4.236 4.487 4.510 4.438 4.218 4.505 E5 7.45
52) L8 AR1268-D 5.385 4.473 4.648 4.602 4.624 4.359 4.682 E5 7.72
53) L8 AR1268-E 1.849 1.484 1.562 1.496 1.516 1.465 1.562 E5 9.25
54) L8 AR1268-F 9.572 8.037 8.254 8.091 8.124 7.767 8.307 E5 7.70
55) S Decachlorobiphenyl 2.512 2.824 2.256 2.170 2.328 2.209 2.383 E6 10.38
---- Linear regr., Force(0,0) ---- Coefficient = 0.9986
Response Ratio = 0.00000 + 2234397.92024 *A

(#) = Out of Range

8082dod1103.m

Sun Nov 05 14:27:19 2017

Initial Calibration Verification

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Job Number: FA48865

Sample: GMM891-ICV891

Account: TCMAW Tantara Corporation

Lab FileID: MM46548.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46548.D\ECD1A.ch Vial: 37
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46548.D\ECD2B.ch
Acq On : 4 Nov 2017 1:12 am Operator: nareshj
Sample : icv891-400 1016/1260 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A	400.000	418.922	-4.7	102	-0.01	3.65-	3.75
3 L1	AR1016-B	400.000	420.045	-5.0	104	0.00	3.87-	3.97
4 L1	AR1016-C	400.000	391.679	2.1	101	-0.02	4.21-	4.31
5 L1	AR1016-D	400.000	397.120	0.7	102	-0.02	4.25-	4.35
6 L1	AR1016-E	400.000	393.715	1.6	102	-0.02	4.31-	4.41
7 L1	AR1016-F	400.000	387.375	3.2	100	0.00	4.49-	4.59
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A	400.000	366.281	8.4	99	-0.02	5.27-	5.37

Initial Calibration Verification

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Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46548.D

38	L7	AR1260-B	400.000	359.731	10.1	96	0.00	5.43-	5.53
39	L7	AR1260-C	400.000	331.608	17.1	87	-0.02	5.64-	5.74
40	L7	AR1260-D	400.000	418.264	-4.6	116	0.00	5.83-	5.93
41	L7	AR1260-E	400.000	436.666	-9.2	116	0.00	6.06-	6.16
42	L7	AR1260-F	400.000	412.127	-3.0	112	0.00	6.25-	6.36
43	L9	AR1262-A						-----NA-----	
44	L9	AR1262-B						-----NA-----	
45	L9	AR1262-C						-----NA-----	
46	L9	AR1262-D						-----NA-----	
47	L9	AR1262-E						-----NA-----	
48	L9	AR1262-F						-----NA-----	
49	L8	AR1268-A						-----NA-----	
50	L8	AR1268-B						-----NA-----	
51	L8	AR1268-C						-----NA-----	
52	L8	AR1268-D						-----NA-----	
53	L8	AR1268-E						-----NA-----	
54	L8	AR1268-F						-----NA-----	

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl			-----NA-----

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2			-----NA-----

		Amount	Calc.	%Drift					
58	L1	AR1016-A #2	400.000	434.176	-8.5	103	0.00	3.56-	3.66
59	L1	AR1016-B #2	400.000	431.048	-7.8	102	0.00	3.79-	3.89
60	L1	AR1016-C #2	400.000	409.255	-2.3	100	0.00	4.11-	4.21
61	L1	AR1016-D #2	400.000	414.211	-3.6	101	0.00	4.15-	4.25
62	L1	AR1016-E #2	400.000	414.159	-3.5	102	0.00	4.30-	4.40
63	L1	AR1016-F #2	400.000	408.475	-2.1	102	0.00	4.42-	4.52
64	L2	AR1221-A #2						-----NA-----	
65	L2	AR1221-B #2						-----NA-----	
66	L2	AR1221-C #2						-----NA-----	
67	L2	AR1221-D #2						-----NA-----	
68	L2	AR1221-E #2						-----NA-----	
69	L3	AR1232-A #2						-----NA-----	
70	L3	AR1232-B #2						-----NA-----	
71	L3	AR1232-C #2						-----NA-----	
72	L3	AR1232-D #2						-----NA-----	
73	L3	AR1232-E #2						-----NA-----	
74	L3	AR1232-F #2						-----NA-----	
75	L4	AR1242-A #2						-----NA-----	
76	L4	AR1242-B #2						-----NA-----	
77	L4	AR1242-C #2						-----NA-----	
78	L4	AR1242-D #2						-----NA-----	
79	L4	AR1242-E #2						-----NA-----	
80	L4	AR1242-F #2						-----NA-----	
81	L5	AR1248-A #2						-----NA-----	
82	L5	AR1248-B #2						-----NA-----	
83	L5	AR1248-C #2						-----NA-----	
84	L5	AR1248-D #2						-----NA-----	
85	L5	AR1248-E #2						-----NA-----	
86	L5	AR1248-F #2						-----NA-----	
87	L6	AR1254-A #2						-----NA-----	
88	L6	AR1254-B #2						-----NA-----	
89	L6	AR1254-C #2						-----NA-----	

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Sample: GMM891-ICV891
Lab FileID: MM46548.D

	Amount	Calc.	%Drift
111 S Decachlorobiphenyl #2			NA

```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46545.D  8082dod1103.m   Sun Nov 05 14:27:59 2017
```

Initial Calibration Verification

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46558.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46558.D\ECD1A.ch Vial: 8
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46558.D\ECD2B.ch
Acq On : 6 Nov 2017 10:29 am Operator: nareshj
Sample : icv891-400 1248 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				
		-----	Amount	Calc.	%Drift	-----		
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
25 L5	AR1248-A	400.000	373.096	6.7	88	0.00	3.87-	3.97
26 L5	AR1248-B	400.000	350.093	12.5	88	0.00	4.19-	4.29
27 L5	AR1248-C	400.000	360.644	9.8	87	0.00	4.37-	4.47
28 L5	AR1248-D	400.000	352.560	11.9	88	0.00	4.50-	4.59
29 L5	AR1248-E	400.000	344.758	13.8	87	0.00	4.76-	4.87
30 L5	AR1248-F	400.000	346.697	13.3	86	0.00	4.89-	4.99
		-----	Amount	Calc.	%Drift	-----		
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A			-----NA-----				

Initial Calibration Verification

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Job Number: FA48865

Sample: GMM891-ICV891

Account: TCMAW Tantara Corporation

Lab FileID: MM46558.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

	Amount	Calc.	%Drift
55 S	Decachlorobiphenyl		-----NA-----

***** Signal #2 *****

	Amount	Calc.	%Drift
57 S	Tetrachloro-m-xylene #2		-----NA-----

	Amount	Calc.	%Drift
58 L1	AR1016-A #2	-----NA-----	
59 L1	AR1016-B #2	-----NA-----	
60 L1	AR1016-C #2	-----NA-----	
61 L1	AR1016-D #2	-----NA-----	
62 L1	AR1016-E #2	-----NA-----	
63 L1	AR1016-F #2	-----NA-----	
64 L2	AR1221-A #2	-----NA-----	
65 L2	AR1221-B #2	-----NA-----	
66 L2	AR1221-C #2	-----NA-----	
67 L2	AR1221-D #2	-----NA-----	
68 L2	AR1221-E #2	-----NA-----	
69 L3	AR1232-A #2	-----NA-----	
70 L3	AR1232-B #2	-----NA-----	
71 L3	AR1232-C #2	-----NA-----	
72 L3	AR1232-D #2	-----NA-----	
73 L3	AR1232-E #2	-----NA-----	
74 L3	AR1232-F #2	-----NA-----	
75 L4	AR1242-A #2	-----NA-----	
76 L4	AR1242-B #2	-----NA-----	
77 L4	AR1242-C #2	-----NA-----	
78 L4	AR1242-D #2	-----NA-----	
79 L4	AR1242-E #2	-----NA-----	
80 L4	AR1242-F #2	-----NA-----	
81 L5	AR1248-A #2	400.000 393.293	1.7 91 0.00 3.79- 3.89
82 L5	AR1248-B #2	400.000 375.620	6.1 89 0.00 4.11- 4.21
83 L5	AR1248-C #2	400.000 363.619	9.1 87 0.00 4.41- 4.51
84 L5	AR1248-D #2	400.000 359.524	10.1 87 0.00 4.52- 4.62
85 L5	AR1248-E #2	400.000 362.081	9.5 86 0.00 4.66- 4.76
86 L5	AR1248-F #2	400.000 369.108	7.7 93 0.00 5.05- 5.15
87 L6	AR1254-A #2	-----NA-----	
88 L6	AR1254-B #2	-----NA-----	
89 L6	AR1254-C #2	-----NA-----	

Initial Calibration Verification

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46558.D

90	L6	AR1254-D #2	-----NA-----
91	L6	AR1254-E #2	-----NA-----
92	L6	AR1254-F #2	-----NA-----
93	L7	AR1260-A #2	-----NA-----
94	L7	AR1260-B #2	-----NA-----
95	L7	AR1260-C #2	-----NA-----
96	L7	AR1260-D #2	-----NA-----
97	L7	AR1260-E #2	-----NA-----
98	L7	AR1260-F #2	-----NA-----
----- Amount Calc. %Drift -----			
99	L9	AR1262-A #2	-----NA-----
100	L9	AR1262-B #2	-----NA-----
101	L9	AR1262-C #2	-----NA-----
102	L9	AR1262-D #2	-----NA-----
103	L9	AR1262-E #2	-----NA-----
104	L9	AR1262-F #2	-----NA-----
105	L8	AR1268-A #2	-----NA-----
106	L8	AR1268-B #2	-----NA-----
107	L8	AR1268-C #2	-----NA-----
108	L8	AR1268-D #2	-----NA-----
109	L8	AR1268-E #2	-----NA-----
110	L8	AR1268-F #2	-----NA-----
----- Amount Calc. %Drift -----			
111	S	Decachlorobiphenyl #2	-----NA-----

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46545.D 8082dod1103.m Tue Nov 07 10:02:02 2017

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Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46593.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46593.D\ECD1A.ch Vial: 2
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46593.D\ECD2B.ch
Acq On : 6 Nov 2017 5:23 pm Operator: nareshj
Sample : cc891-400 1016/1260 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	S	Tetrachloro-m-xylene	40.000	38.477	3.8	98	-0.02	3.37-	3.47
----- Amount Calc. %Drift -----									
2	L1	AR1016-A	400.000	416.259	-4.1	101	0.00	3.65-	3.75
3	L1	AR1016-B	400.000	415.359	-3.8	103	0.00	3.87-	3.97
4	L1	AR1016-C	400.000	402.173	-0.5	104	-0.02	4.21-	4.31
5	L1	AR1016-D	400.000	399.391	0.2	102	-0.02	4.25-	4.35
6	L1	AR1016-E	400.000	399.541	0.1	104	-0.02	4.31-	4.41
7	L1	AR1016-F	400.000	404.400	-1.1	104	0.00	4.49-	4.59
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
----- Amount Calc. %Drift -----									
31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				
34	L6	AR1254-D			-----NA-----				
35	L6	AR1254-E			-----NA-----				
36	L6	AR1254-F			-----NA-----				
37	L7	AR1260-A	400.000	398.068	0.5	107	-0.02	5.27-	5.37

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46593.D

38	L7	AR1260-B	400.000	398.848	0.3	106	0.00	5.43-	5.53
39	L7	AR1260-C	400.000	411.903	-3.0	108	-0.02	5.64-	5.74
40	L7	AR1260-D	400.000	398.130	0.5	110	0.00	5.83-	5.93
41	L7	AR1260-E	400.000	429.885	-7.5	114	0.00	6.06-	6.16
42	L7	AR1260-F	400.000	416.592	-4.1	113	0.00	6.25-	6.36
43	L9	AR1262-A						-----NA-----	
44	L9	AR1262-B						-----NA-----	
45	L9	AR1262-C						-----NA-----	
46	L9	AR1262-D						-----NA-----	
47	L9	AR1262-E						-----NA-----	
48	L9	AR1262-F						-----NA-----	
49	L8	AR1268-A						-----NA-----	
50	L8	AR1268-B						-----NA-----	
51	L8	AR1268-C						-----NA-----	
52	L8	AR1268-D						-----NA-----	
53	L8	AR1268-E						-----NA-----	
54	L8	AR1268-F						-----NA-----	

			-----	Amount	Calc.	%Drift	-----		
55	S	Decachlorobiphenyl	40.000	43.464	-8.7	115	0.00	7.10-	7.20

***** Signal #2 *****

			-----	Amount	Calc.	%Drift	-----		
57	S	Tetrachloro-m-xylene #	40.000	38.940	2.7	102	-0.02	3.26-	3.36

			-----	Amount	Calc.	%Drift	-----		
58	L1	AR1016-A #2	400.000	427.258	-6.8	102	0.00	3.56-	3.66
59	L1	AR1016-B #2	400.000	437.199	-9.3	104	0.00	3.79-	3.89
60	L1	AR1016-C #2	400.000	411.653	-2.9	101	0.00	4.11-	4.21
61	L1	AR1016-D #2	400.000	415.928	-4.0	102	0.00	4.15-	4.25
62	L1	AR1016-E #2	400.000	432.538	-8.1	106	0.00	4.30-	4.40
63	L1	AR1016-F #2	400.000	409.636	-2.4	102	0.00	4.42-	4.52
64	L2	AR1221-A #2						-----NA-----	
65	L2	AR1221-B #2						-----NA-----	
66	L2	AR1221-C #2						-----NA-----	
67	L2	AR1221-D #2						-----NA-----	
68	L2	AR1221-E #2						-----NA-----	
69	L3	AR1232-A #2						-----NA-----	
70	L3	AR1232-B #2						-----NA-----	
71	L3	AR1232-C #2						-----NA-----	
72	L3	AR1232-D #2						-----NA-----	
73	L3	AR1232-E #2						-----NA-----	
74	L3	AR1232-F #2						-----NA-----	
75	L4	AR1242-A #2						-----NA-----	
76	L4	AR1242-B #2						-----NA-----	
77	L4	AR1242-C #2						-----NA-----	
78	L4	AR1242-D #2						-----NA-----	
79	L4	AR1242-E #2						-----NA-----	
80	L4	AR1242-F #2						-----NA-----	
81	L5	AR1248-A #2						-----NA-----	
82	L5	AR1248-B #2						-----NA-----	
83	L5	AR1248-C #2						-----NA-----	
84	L5	AR1248-D #2						-----NA-----	
85	L5	AR1248-E #2						-----NA-----	
86	L5	AR1248-F #2						-----NA-----	
87	L6	AR1254-A #2						-----NA-----	
88	L6	AR1254-B #2						-----NA-----	
89	L6	AR1254-C #2						-----NA-----	

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46593.D

90	L6	AR1254-D #2							
91	L6	AR1254-E #2							
92	L6	AR1254-F #2							
93	L7	AR1260-A #2	400.000	422.202	-5.6	108	0.00	5.15-	5.25
94	L7	AR1260-B #2	400.000	420.324	-5.1	107	0.00	5.29-	5.39
95	L7	AR1260-C #2	400.000	433.470	-8.4	109	0.00	5.55-	5.65
96	L7	AR1260-D #2	400.000	419.112	-4.8	108	-0.01	5.74-	5.84
97	L7	AR1260-E #2	400.000	433.626	-8.4	111	0.00	5.91-	6.00
98	L7	AR1260-F #2	400.000	436.668	-9.2	111	0.00	6.16-	6.26

			Amount	Calc.	%Drift				
99	L9	AR1262-A #2							
100	L9	AR1262-B #2							
101	L9	AR1262-C #2							
102	L9	AR1262-D #2							
103	L9	AR1262-E #2							
104	L9	AR1262-F #2							
105	L8	AR1268-A #2							
106	L8	AR1268-B #2							
107	L8	AR1268-C #2							
108	L8	AR1268-D #2							
109	L8	AR1268-E #2							
110	L8	AR1268-F #2							

			Amount	Calc.	%Drift				
111	S	Decachlorobiphenyl	40.000	44.112	-10.3	114	0.00	6.95-	7.04

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 10:02:18 2017

8.6.8

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Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46594.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46594.D\ECD1A.ch Vial: 3
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46594.D\ECD2B.ch
Acq On : 6 Nov 2017 5:35 pm Operator: nareshj
Sample : cc891-400 1248 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1	S	Tetrachloro-m-xylene			-----NA-----				

			Amount	Calc.	%Drift				

2	L1	AR1016-A			-----NA-----				
3	L1	AR1016-B			-----NA-----				
4	L1	AR1016-C			-----NA-----				
5	L1	AR1016-D			-----NA-----				
6	L1	AR1016-E			-----NA-----				
7	L1	AR1016-F			-----NA-----				
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A		400.000	423.381	-5.8	100	0.00	3.87- 3.97
26	L5	AR1248-B		400.000	388.708	2.8	98	0.00	4.19- 4.29
27	L5	AR1248-C		400.000	403.898	-1.0	98	0.00	4.37- 4.47
28	L5	AR1248-D		400.000	396.720	0.8	99	0.00	4.50- 4.59
29	L5	AR1248-E		400.000	382.314	4.4	97	0.00	4.76- 4.87
30	L5	AR1248-F		400.000	392.238	1.9	98	0.00	4.89- 4.99

			Amount	Calc.	%Drift				

31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				
34	L6	AR1254-D			-----NA-----				
35	L6	AR1254-E			-----NA-----				
36	L6	AR1254-F			-----NA-----				
37	L7	AR1260-A			-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46594.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2	-----NA-----		
59	L1	AR1016-B #2	-----NA-----		
60	L1	AR1016-C #2	-----NA-----		
61	L1	AR1016-D #2	-----NA-----		
62	L1	AR1016-E #2	-----NA-----		
63	L1	AR1016-F #2	-----NA-----		
64	L2	AR1221-A #2	-----NA-----		
65	L2	AR1221-B #2	-----NA-----		
66	L2	AR1221-C #2	-----NA-----		
67	L2	AR1221-D #2	-----NA-----		
68	L2	AR1221-E #2	-----NA-----		
69	L3	AR1232-A #2	-----NA-----		
70	L3	AR1232-B #2	-----NA-----		
71	L3	AR1232-C #2	-----NA-----		
72	L3	AR1232-D #2	-----NA-----		
73	L3	AR1232-E #2	-----NA-----		
74	L3	AR1232-F #2	-----NA-----		
75	L4	AR1242-A #2	-----NA-----		
76	L4	AR1242-B #2	-----NA-----		
77	L4	AR1242-C #2	-----NA-----		
78	L4	AR1242-D #2	-----NA-----		
79	L4	AR1242-E #2	-----NA-----		
80	L4	AR1242-F #2	-----NA-----		
81	L5	AR1248-A #2	400.000 438.994	-9.7 102 0.00	3.79- 3.89
82	L5	AR1248-B #2	400.000 407.179	-1.8 96 0.00	4.11- 4.21
83	L5	AR1248-C #2	400.000 412.952	-3.2 98 0.00	4.41- 4.51
84	L5	AR1248-D #2	400.000 402.951	-0.7 98 0.00	4.52- 4.62
85	L5	AR1248-E #2	400.000 401.492	-0.4 96 0.00	4.66- 4.76
86	L5	AR1248-F #2	400.000 396.518	0.9 99 0.00	5.05- 5.15
87	L6	AR1254-A #2	-----NA-----		
88	L6	AR1254-B #2	-----NA-----		
89	L6	AR1254-C #2	-----NA-----		

Continuing Calibration Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46594.D

90	L6	AR1254-D #2	-----NA-----
91	L6	AR1254-E #2	-----NA-----
92	L6	AR1254-F #2	-----NA-----
93	L7	AR1260-A #2	-----NA-----
94	L7	AR1260-B #2	-----NA-----
95	L7	AR1260-C #2	-----NA-----
96	L7	AR1260-D #2	-----NA-----
97	L7	AR1260-E #2	-----NA-----
98	L7	AR1260-F #2	-----NA-----
----- Amount Calc. %Drift -----			
99	L9	AR1262-A #2	-----NA-----
100	L9	AR1262-B #2	-----NA-----
101	L9	AR1262-C #2	-----NA-----
102	L9	AR1262-D #2	-----NA-----
103	L9	AR1262-E #2	-----NA-----
104	L9	AR1262-F #2	-----NA-----
105	L8	AR1268-A #2	-----NA-----
106	L8	AR1268-B #2	-----NA-----
107	L8	AR1268-C #2	-----NA-----
108	L8	AR1268-D #2	-----NA-----
109	L8	AR1268-E #2	-----NA-----
110	L8	AR1268-F #2	-----NA-----
----- Amount Calc. %Drift -----			
111	S	Decachlorobiphenyl #2	-----NA-----

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46545.D 8082dod1103.m Tue Nov 07 10:02:20 2017

8.6.9
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46595.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46595.D\ECD1A.ch Vial: 4
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46595.D\ECD2B.ch
Acq On : 6 Nov 2017 5:46 pm Operator: nareshj
Sample : cc891-400 1242/1262 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A	400.000	438.970	-9.7	107	0.00	3.64-	3.74
20 L4	AR1242-B	400.000	440.643	-10.2	109	0.00	4.00-	4.10
21 L4	AR1242-C	400.000	414.837	-3.7	106	0.00	4.19-	4.29
22 L4	AR1242-D	400.000	427.234	-6.8	107	0.00	4.23-	4.33
23 L4	AR1242-E	400.000	435.389	-8.8	106	0.00	4.37-	4.47
24 L4	AR1242-F	400.000	430.364	-7.6	112	0.00	4.59-	4.69
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A			-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46595.D

38	L7	AR1260-B								-----NA-----
39	L7	AR1260-C								-----NA-----
40	L7	AR1260-D								-----NA-----
41	L7	AR1260-E								-----NA-----
42	L7	AR1260-F								-----NA-----
43	L9	AR1262-A	400.000	420.703	-5.2	108	0.00	5.25-	5.35	
44	L9	AR1262-B	400.000	435.341	-8.8	114	0.00	5.43-	5.54	
45	L9	AR1262-C	400.000	443.104	-10.8	116	0.00	5.23-	5.78	
46	L9	AR1262-D	400.000	438.116	-9.5	115	0.00	5.83-	5.93	
47	L9	AR1262-E	400.000	475.238	-18.8	122	0.00	6.06-	6.16	
48	L9	AR1262-F	400.000	455.959	-14.0	118	0.00	6.25-	6.35	
49	L8	AR1268-A								-----NA-----
50	L8	AR1268-B								-----NA-----
51	L8	AR1268-C								-----NA-----
52	L8	AR1268-D								-----NA-----
53	L8	AR1268-E								-----NA-----
54	L8	AR1268-F								-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl			-----NA-----

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2			-----NA-----

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2			-----NA-----
59	L1	AR1016-B #2			-----NA-----
60	L1	AR1016-C #2			-----NA-----
61	L1	AR1016-D #2			-----NA-----
62	L1	AR1016-E #2			-----NA-----
63	L1	AR1016-F #2			-----NA-----
64	L2	AR1221-A #2			-----NA-----
65	L2	AR1221-B #2			-----NA-----
66	L2	AR1221-C #2			-----NA-----
67	L2	AR1221-D #2			-----NA-----
68	L2	AR1221-E #2			-----NA-----
69	L3	AR1232-A #2			-----NA-----
70	L3	AR1232-B #2			-----NA-----
71	L3	AR1232-C #2			-----NA-----
72	L3	AR1232-D #2			-----NA-----
73	L3	AR1232-E #2			-----NA-----
74	L3	AR1232-F #2			-----NA-----
75	L4	AR1242-A #2	400.000	447.548	-11.9 105 0.00 3.56- 3.66
76	L4	AR1242-B #2	400.000	446.437	-11.6 103 0.00 3.93- 4.03
77	L4	AR1242-C #2	400.000	450.777	-12.7 107 0.00 4.15- 4.25
78	L4	AR1242-D #2	400.000	445.046	-11.3 111 0.00 4.41- 4.51
79	L4	AR1242-E #2	400.000	443.083	-10.8 110 0.00 4.66- 4.76
80	L4	AR1242-F #2	400.000	437.650	-9.4 114 0.00 4.81- 4.91
81	L5	AR1248-A #2			-----NA-----
82	L5	AR1248-B #2			-----NA-----
83	L5	AR1248-C #2			-----NA-----
84	L5	AR1248-D #2			-----NA-----
85	L5	AR1248-E #2			-----NA-----
86	L5	AR1248-F #2			-----NA-----
87	L6	AR1254-A #2			-----NA-----
88	L6	AR1254-B #2			-----NA-----
89	L6	AR1254-C #2			-----NA-----

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46595.D

90	L6		AR1254-D #2			-NA-		
91	L6		AR1254-E #2			-NA-		
92	L6		AR1254-F #2			-NA-		
93	L7		AR1260-A #2			-NA-		
94	L7		AR1260-B #2			-NA-		
95	L7		AR1260-C #2			-NA-		
96	L7		AR1260-D #2			-NA-		
97	L7		AR1260-E #2			-NA-		
98	L7		AR1260-F #2			-NA-		
----- Amount Calc. %Drift -----								
99	L9		AR1262-A #2	400.000	423.363	-5.8	112	0.00 5.14- 5.24
100	L9		AR1262-B #2	400.000	436.144	-9.0	115	0.00 5.28- 5.38
101	L9		AR1262-C #2	400.000	430.522	-7.6	114	0.00 5.54- 5.64
102	L9		AR1262-D #2	400.000	445.125	-11.3	116	0.00 5.72- 5.82
103	L9		AR1262-E #2	400.000	457.540	-14.4	121	0.00 5.91- 6.00
104	L9		AR1262-F #2	400.000	455.860	-14.0	120	0.00 6.16- 6.26
105	L8		AR1268-A #2			-NA-		
106	L8		AR1268-B #2			-NA-		
107	L8		AR1268-C #2			-NA-		
108	L8		AR1268-D #2			-NA-		
109	L8		AR1268-E #2			-NA-		
110	L8		AR1268-F #2			-NA-		
----- Amount Calc. %Drift -----								
111	S		Decachlorobiphenyl #2			-NA-		

```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46545.D  8082dod1103.m   Tue Nov 07 10:02:22 2017
```

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46596.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46596.D\ECD1A.ch Vial: 5
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46596.D\ECD2B.ch
Acq On : 6 Nov 2017 5:58 pm Operator: nareshj
Sample : cc891-400 1232/1268 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----					
			Amount	Calc.	%Drift	-----			

2 L1	AR1016-A			-----NA-----					
3 L1	AR1016-B			-----NA-----					
4 L1	AR1016-C			-----NA-----					
5 L1	AR1016-D			-----NA-----					
6 L1	AR1016-E			-----NA-----					
7 L1	AR1016-F			-----NA-----					
8 L2	AR1221-A			-----NA-----					
9 L2	AR1221-B			-----NA-----					
10 L2	AR1221-C			-----NA-----					
11 L2	AR1221-D			-----NA-----					
12 L2	AR1221-E			-----NA-----					
13 L3	AR1232-A			400.000	420.600	-5.2	99	0.00	3.64- 3.74
14 L3	AR1232-B			400.000	407.722	-1.9	100	0.00	4.00- 4.10
15 L3	AR1232-C			400.000	411.476	-2.9	101	0.00	4.19- 4.29
16 L3	AR1232-D			400.000	415.958	-4.0	104	0.00	4.30- 4.40
17 L3	AR1232-E			400.000	420.043	-5.0	102	0.00	4.50- 4.59
18 L3	AR1232-F			400.000	420.269	-5.1	106	0.00	4.79- 4.89
19 L4	AR1242-A			-----NA-----					
20 L4	AR1242-B			-----NA-----					
21 L4	AR1242-C			-----NA-----					
22 L4	AR1242-D			-----NA-----					
23 L4	AR1242-E			-----NA-----					
24 L4	AR1242-F			-----NA-----					
25 L5	AR1248-A			-----NA-----					
26 L5	AR1248-B			-----NA-----					
27 L5	AR1248-C			-----NA-----					
28 L5	AR1248-D			-----NA-----					
29 L5	AR1248-E			-----NA-----					
30 L5	AR1248-F			-----NA-----					
			Amount	Calc.	%Drift	-----			

31 L6	AR1254-A			-----NA-----					
32 L6	AR1254-B			-----NA-----					
33 L6	AR1254-C			-----NA-----					
34 L6	AR1254-D			-----NA-----					
35 L6	AR1254-E			-----NA-----					
36 L6	AR1254-F			-----NA-----					
37 L7	AR1260-A			-----NA-----					

Page 2 of 3

Sample: GMM892-CC891
Lab FileID: MM46596.D

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***** Signal #2 *****

```

----- Amount Calc. %Drift -----

```

SGS
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ACCUTEST
FA48865

Page 3 of 3

Sample: GMM892-CC891
Lab FileID: MM46596.D

```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46545.D  8082dod1103.m   Tue Nov 07 10:02:24 2017
```

8.6.11

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46597.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46597.D\ECD1A.ch Vial: 6
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46597.D\ECD2B.ch
Acq On : 6 Nov 2017 6:10 pm Operator: nareshj
Sample : cc891-400 1221/1254 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A	400.000	427.767	-6.9	97	0.00	2.96-	3.06
9 L2	AR1221-B	400.000	440.645	-10.2	97	0.00	3.27-	3.37
10 L2	AR1221-C	400.000	408.465	-2.1	97	0.00	3.52-	3.63
11 L2	AR1221-D	400.000	421.167	-5.3	98	0.00	3.59-	3.69
12 L2	AR1221-E	400.000	418.454	-4.6	98	0.00	3.64-	3.74
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A	400.000	383.947	4.0	100	0.00	4.37-	4.47
32 L6	AR1254-B	400.000	404.740	-1.2	102	0.00	4.74-	4.84
33 L6	AR1254-C	400.000	429.678	-7.4	103	0.00	5.14-	5.24
34 L6	AR1254-D	400.000	458.387	-14.6	108	0.00	5.34-	5.43
35 L6	AR1254-E	400.000	466.361	-16.6	110	0.00	5.52-	5.62
36 L6	AR1254-F	400.000	451.465	-12.9	106	0.00	5.62-	5.72
37 L7	AR1260-A			-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46597.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2		-----NA-----	
59	L1	AR1016-B #2		-----NA-----	
60	L1	AR1016-C #2		-----NA-----	
61	L1	AR1016-D #2		-----NA-----	
62	L1	AR1016-E #2		-----NA-----	
63	L1	AR1016-F #2		-----NA-----	
64	L2	AR1221-A #2	400.000 429.137	-7.3 96 0.00	2.87- 2.97
65	L2	AR1221-B #2	400.000 444.561	-11.1 96 0.00	3.19- 3.29
66	L2	AR1221-C #2	400.000 430.145	-7.5 99 0.00	3.43- 3.53
67	L2	AR1221-D #2	400.000 434.320	-8.6 98 0.00	3.50- 3.60
68	L2	AR1221-E #2	400.000 435.019	-8.8 98 0.00	3.56- 3.66
69	L3	AR1232-A #2		-----NA-----	
70	L3	AR1232-B #2		-----NA-----	
71	L3	AR1232-C #2		-----NA-----	
72	L3	AR1232-D #2		-----NA-----	
73	L3	AR1232-E #2		-----NA-----	
74	L3	AR1232-F #2		-----NA-----	
75	L4	AR1242-A #2		-----NA-----	
76	L4	AR1242-B #2		-----NA-----	
77	L4	AR1242-C #2		-----NA-----	
78	L4	AR1242-D #2		-----NA-----	
79	L4	AR1242-E #2		-----NA-----	
80	L4	AR1242-F #2		-----NA-----	
81	L5	AR1248-A #2		-----NA-----	
82	L5	AR1248-B #2		-----NA-----	
83	L5	AR1248-C #2		-----NA-----	
84	L5	AR1248-D #2		-----NA-----	
85	L5	AR1248-E #2		-----NA-----	
86	L5	AR1248-F #2		-----NA-----	
87	L6	AR1254-A #2	400.000 421.510	-5.4 98 0.00	4.27- 4.37
88	L6	AR1254-B #2	400.000 427.023	-6.8 103 0.00	4.66- 4.76
89	L6	AR1254-C #2	400.000 421.909	-5.5 102 0.00	5.05- 5.15

Continuing Calibration Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46597.D

90	L6	AR1254-D #2	400.000	429.920	-7.5	105	0.00	5.21-	5.31
91	L6	AR1254-E #2	400.000	430.587	-7.6	105	0.00	5.38-	5.48
92	L6	AR1254-F #2	400.000	444.705	-11.2	106	0.00	5.51-	5.61
93	L7	AR1260-A #2							
94	L7	AR1260-B #2							
95	L7	AR1260-C #2							
96	L7	AR1260-D #2							
97	L7	AR1260-E #2							
98	L7	AR1260-F #2							

			Amount	Calc.	%Drift	
99	L9	AR1262-A #2				
100	L9	AR1262-B #2				
101	L9	AR1262-C #2				
102	L9	AR1262-D #2				
103	L9	AR1262-E #2				
104	L9	AR1262-F #2				
105	L8	AR1268-A #2				
106	L8	AR1268-B #2				
107	L8	AR1268-C #2				
108	L8	AR1268-D #2				
109	L8	AR1268-E #2				
110	L8	AR1268-F #2				

			Amount	Calc.	%Drift	
111	S	Decachlorobiphenyl #2				

(#) = Out of Range
MM46545.D 8082dod1103.m
SPCC's out = 0 CCC's out = 0
Tue Nov 07 10:02:26 2017

8.6.12
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46608.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46608.D\ECD1A.ch Vial: 2
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46608.D\ECD2B.ch
Acq On : 6 Nov 2017 8:18 pm Operator: nareshj
Sample : cc891-400 1016/1260 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	S	Tetrachloro-m-xylene	40.000	36.935	7.7	94	-0.02	3.37-	3.47
-----			Amount	Calc.	%Drift	-----			
2	L1	AR1016-A	400.000	387.803	3.0	94	0.00	3.65-	3.75
3	L1	AR1016-B	400.000	405.022	-1.3	100	0.00	3.87-	3.97
4	L1	AR1016-C	400.000	402.618	-0.7	104	-0.02	4.21-	4.31
5	L1	AR1016-D	400.000	396.002	1.0	101	-0.02	4.25-	4.35
6	L1	AR1016-E	400.000	394.548	1.4	102	-0.02	4.31-	4.41
7	L1	AR1016-F	400.000	414.836	-3.7	107	0.00	4.49-	4.59
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
-----			Amount	Calc.	%Drift	-----			
31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				
34	L6	AR1254-D			-----NA-----				
35	L6	AR1254-E			-----NA-----				
36	L6	AR1254-F			-----NA-----				
37	L7	AR1260-A	400.000	423.490	-5.9	114	-0.02	5.27-	5.37

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46608.D

38	L7	AR1260-B	400.000	431.680	-7.9	115	0.00	5.43-	5.53
39	L7	AR1260-C	400.000	442.021	-10.5	116	-0.02	5.64-	5.74
40	L7	AR1260-D	400.000	415.895	-4.0	115	0.00	5.83-	5.93
41	L7	AR1260-E	400.000	434.988	-8.7	115	0.00	6.06-	6.16
42	L7	AR1260-F	400.000	424.917	-6.2	115	0.00	6.25-	6.36
43	L9	AR1262-A						-----NA-----	
44	L9	AR1262-B						-----NA-----	
45	L9	AR1262-C						-----NA-----	
46	L9	AR1262-D						-----NA-----	
47	L9	AR1262-E						-----NA-----	
48	L9	AR1262-F						-----NA-----	
49	L8	AR1268-A						-----NA-----	
50	L8	AR1268-B						-----NA-----	
51	L8	AR1268-C						-----NA-----	
52	L8	AR1268-D						-----NA-----	
53	L8	AR1268-E						-----NA-----	
54	L8	AR1268-F						-----NA-----	

			Amount	Calc.	%Drift				
55	S	Decachlorobiphenyl	40.000	41.452	-3.6	110	0.00	7.10-	7.20

***** Signal #2 *****

			Amount	Calc.	%Drift				
57	S	Tetrachloro-m-xylene #	40.000	36.289	9.3	95	-0.02	3.26-	3.36

			Amount	Calc.	%Drift				
58	L1	AR1016-A #2	400.000	404.034	-1.0	96	0.00	3.56-	3.66
59	L1	AR1016-B #2	400.000	421.284	-5.3	100	0.00	3.79-	3.89
60	L1	AR1016-C #2	400.000	415.774	-3.9	102	0.00	4.11-	4.21
61	L1	AR1016-D #2	400.000	409.296	-2.3	100	0.00	4.15-	4.25
62	L1	AR1016-E #2	400.000	430.413	-7.6	106	0.00	4.30-	4.40
63	L1	AR1016-F #2	400.000	426.089	-6.5	106	0.00	4.42-	4.52
64	L2	AR1221-A #2						-----NA-----	
65	L2	AR1221-B #2						-----NA-----	
66	L2	AR1221-C #2						-----NA-----	
67	L2	AR1221-D #2						-----NA-----	
68	L2	AR1221-E #2						-----NA-----	
69	L3	AR1232-A #2						-----NA-----	
70	L3	AR1232-B #2						-----NA-----	
71	L3	AR1232-C #2						-----NA-----	
72	L3	AR1232-D #2						-----NA-----	
73	L3	AR1232-E #2						-----NA-----	
74	L3	AR1232-F #2						-----NA-----	
75	L4	AR1242-A #2						-----NA-----	
76	L4	AR1242-B #2						-----NA-----	
77	L4	AR1242-C #2						-----NA-----	
78	L4	AR1242-D #2						-----NA-----	
79	L4	AR1242-E #2						-----NA-----	
80	L4	AR1242-F #2						-----NA-----	
81	L5	AR1248-A #2						-----NA-----	
82	L5	AR1248-B #2						-----NA-----	
83	L5	AR1248-C #2						-----NA-----	
84	L5	AR1248-D #2						-----NA-----	
85	L5	AR1248-E #2						-----NA-----	
86	L5	AR1248-F #2						-----NA-----	
87	L6	AR1254-A #2						-----NA-----	
88	L6	AR1254-B #2						-----NA-----	
89	L6	AR1254-C #2						-----NA-----	

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46608.D

90	L6	AR1254-D #2								
91	L6	AR1254-E #2								
92	L6	AR1254-F #2								
93	L7	AR1260-A #2	400.000	422.365	-5.6	108	0.00	5.15-	5.25	
94	L7	AR1260-B #2	400.000	431.465	-7.9	110	0.00	5.29-	5.39	
95	L7	AR1260-C #2	400.000	432.865	-8.2	109	0.00	5.55-	5.65	
96	L7	AR1260-D #2	400.000	418.377	-4.6	108	-0.01	5.74-	5.84	
97	L7	AR1260-E #2	400.000	439.420	-9.9	112	0.00	5.91-	6.00	
98	L7	AR1260-F #2	400.000	403.325	-0.8	103	0.00	6.16-	6.26	

			Amount	Calc.	%Drift					
99	L9	AR1262-A #2								
100	L9	AR1262-B #2								
101	L9	AR1262-C #2								
102	L9	AR1262-D #2								
103	L9	AR1262-E #2								
104	L9	AR1262-F #2								
105	L8	AR1268-A #2								
106	L8	AR1268-B #2								
107	L8	AR1268-C #2								
108	L8	AR1268-D #2								
109	L8	AR1268-E #2								
110	L8	AR1268-F #2								

			Amount	Calc.	%Drift					
111	S	Decachlorobiphenyl	40.000	38.584	3.5	99	0.00	6.95-	7.04	

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 10:02:29 2017

8.6.13

8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46609.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46609.D\ECD1A.ch Vial: 3
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46609.D\ECD2B.ch
Acq On : 6 Nov 2017 8:29 pm Operator: nareshj
Sample : cc891-400 1248 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1	S	Tetrachloro-m-xylene			-----NA-----				

			Amount	Calc.	%Drift	-----			

2	L1	AR1016-A			-----NA-----				
3	L1	AR1016-B			-----NA-----				
4	L1	AR1016-C			-----NA-----				
5	L1	AR1016-D			-----NA-----				
6	L1	AR1016-E			-----NA-----				
7	L1	AR1016-F			-----NA-----				
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A		400.000	403.668	-0.9	95	0.00	3.87- 3.97
26	L5	AR1248-B		400.000	403.276	-0.8	101	0.00	4.19- 4.29
27	L5	AR1248-C		400.000	416.110	-4.0	101	0.00	4.37- 4.47
28	L5	AR1248-D		400.000	416.701	-4.2	104	0.00	4.50- 4.59
29	L5	AR1248-E		400.000	405.607	-1.4	103	0.00	4.76- 4.87
30	L5	AR1248-F		400.000	406.226	-1.6	101	0.00	4.89- 4.99

			Amount	Calc.	%Drift	-----			

31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				
34	L6	AR1254-D			-----NA-----				
35	L6	AR1254-E			-----NA-----				
36	L6	AR1254-F			-----NA-----				
37	L7	AR1260-A			-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46609.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2	-----NA-----		
59	L1	AR1016-B #2	-----NA-----		
60	L1	AR1016-C #2	-----NA-----		
61	L1	AR1016-D #2	-----NA-----		
62	L1	AR1016-E #2	-----NA-----		
63	L1	AR1016-F #2	-----NA-----		
64	L2	AR1221-A #2	-----NA-----		
65	L2	AR1221-B #2	-----NA-----		
66	L2	AR1221-C #2	-----NA-----		
67	L2	AR1221-D #2	-----NA-----		
68	L2	AR1221-E #2	-----NA-----		
69	L3	AR1232-A #2	-----NA-----		
70	L3	AR1232-B #2	-----NA-----		
71	L3	AR1232-C #2	-----NA-----		
72	L3	AR1232-D #2	-----NA-----		
73	L3	AR1232-E #2	-----NA-----		
74	L3	AR1232-F #2	-----NA-----		
75	L4	AR1242-A #2	-----NA-----		
76	L4	AR1242-B #2	-----NA-----		
77	L4	AR1242-C #2	-----NA-----		
78	L4	AR1242-D #2	-----NA-----		
79	L4	AR1242-E #2	-----NA-----		
80	L4	AR1242-F #2	-----NA-----		
81	L5	AR1248-A #2	400.000 416.273	-4.1 96	0.00 3.79- 3.89
82	L5	AR1248-B #2	400.000 416.876	-4.2 99	0.00 4.11- 4.21
83	L5	AR1248-C #2	400.000 426.480	-6.6 102	0.00 4.41- 4.51
84	L5	AR1248-D #2	400.000 418.246	-4.6 102	0.00 4.52- 4.62
85	L5	AR1248-E #2	400.000 422.553	-5.6 101	0.00 4.66- 4.76
86	L5	AR1248-F #2	400.000 408.994	-2.2 103	0.00 5.05- 5.15
87	L6	AR1254-A #2	-----NA-----		
88	L6	AR1254-B #2	-----NA-----		
89	L6	AR1254-C #2	-----NA-----		

8.6.14

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Continuing Calibration Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46609.D

90	L6	AR1254-D #2	-----	NA-----
91	L6	AR1254-E #2	-----	NA-----
92	L6	AR1254-F #2	-----	NA-----
93	L7	AR1260-A #2	-----	NA-----
94	L7	AR1260-B #2	-----	NA-----
95	L7	AR1260-C #2	-----	NA-----
96	L7	AR1260-D #2	-----	NA-----
97	L7	AR1260-E #2	-----	NA-----
98	L7	AR1260-F #2	-----	NA-----
----- Amount Calc. %Drift -----				
99	L9	AR1262-A #2	-----	NA-----
100	L9	AR1262-B #2	-----	NA-----
101	L9	AR1262-C #2	-----	NA-----
102	L9	AR1262-D #2	-----	NA-----
103	L9	AR1262-E #2	-----	NA-----
104	L9	AR1262-F #2	-----	NA-----
105	L8	AR1268-A #2	-----	NA-----
106	L8	AR1268-B #2	-----	NA-----
107	L8	AR1268-C #2	-----	NA-----
108	L8	AR1268-D #2	-----	NA-----
109	L8	AR1268-E #2	-----	NA-----
110	L8	AR1268-F #2	-----	NA-----
----- Amount Calc. %Drift -----				
111	S	Decachlorobiphenyl #2	-----	NA-----

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 10:02:31 2017

8.6.14
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46610.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46610.D\ECD1A.ch Vial: 4
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46610.D\ECD2B.ch
Acq On : 6 Nov 2017 8:41 pm Operator: nareshj
Sample : cc891-400 1242/1262 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S		Tetrachloro-m-xylene			-----NA-----				
			Amount	Calc.	%Drift				
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A	400.000	402.992	-0.7	98	0.00	3.64-	3.74	
20 L4	AR1242-B	400.000	402.242	-0.6	99	0.00	4.00-	4.10	
21 L4	AR1242-C	400.000	412.941	-3.2	105	0.00	4.19-	4.29	
22 L4	AR1242-D	400.000	413.840	-3.5	104	0.00	4.23-	4.33	
23 L4	AR1242-E	400.000	438.757	-9.7	107	0.00	4.37-	4.47	
24 L4	AR1242-F	400.000	423.459	-5.9	110	0.00	4.59-	4.69	
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				
			Amount	Calc.	%Drift				
31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				
34 L6	AR1254-D				-----NA-----				
35 L6	AR1254-E				-----NA-----				
36 L6	AR1254-F				-----NA-----				
37 L7	AR1260-A				-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46610.D

38	L7	AR1260-B							-----NA-----
39	L7	AR1260-C							-----NA-----
40	L7	AR1260-D							-----NA-----
41	L7	AR1260-E							-----NA-----
42	L7	AR1260-F							-----NA-----
43	L9	AR1262-A	400.000	452.826	-13.2	116	0.00	5.25- 5.35	
44	L9	AR1262-B	400.000	476.814	-19.2	125	0.00	5.43- 5.54	
45	L9	AR1262-C	400.000	473.786	-18.4	124	0.00	5.23- 5.78	
46	L9	AR1262-D	400.000	476.742	-19.2	125	0.00	5.83- 5.93	
47	L9	AR1262-E	400.000	522.108	-30.5#	134	0.00	6.06- 6.16	
48	L9	AR1262-F	400.000	489.373	-22.3#	126	0.00	6.25- 6.35	
49	L8	AR1268-A							-----NA-----
50	L8	AR1268-B							-----NA-----
51	L8	AR1268-C							-----NA-----
52	L8	AR1268-D							-----NA-----
53	L8	AR1268-E							-----NA-----
54	L8	AR1268-F							-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl			-----NA-----

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2			-----NA-----

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2			-----NA-----
59	L1	AR1016-B #2			-----NA-----
60	L1	AR1016-C #2			-----NA-----
61	L1	AR1016-D #2			-----NA-----
62	L1	AR1016-E #2			-----NA-----
63	L1	AR1016-F #2			-----NA-----
64	L2	AR1221-A #2			-----NA-----
65	L2	AR1221-B #2			-----NA-----
66	L2	AR1221-C #2			-----NA-----
67	L2	AR1221-D #2			-----NA-----
68	L2	AR1221-E #2			-----NA-----
69	L3	AR1232-A #2			-----NA-----
70	L3	AR1232-B #2			-----NA-----
71	L3	AR1232-C #2			-----NA-----
72	L3	AR1232-D #2			-----NA-----
73	L3	AR1232-E #2			-----NA-----
74	L3	AR1232-F #2			-----NA-----
75	L4	AR1242-A #2	400.000	417.615	-4.4 98 0.00 3.56- 3.66
76	L4	AR1242-B #2	400.000	424.693	-6.2 98 0.00 3.93- 4.03
77	L4	AR1242-C #2	400.000	437.734	-9.4 104 0.00 4.15- 4.25
78	L4	AR1242-D #2	400.000	445.820	-11.5 111 0.00 4.41- 4.51
79	L4	AR1242-E #2	400.000	452.171	-13.0 112 0.00 4.66- 4.76
80	L4	AR1242-F #2	400.000	452.980	-13.2 118 0.00 4.81- 4.91
81	L5	AR1248-A #2			-----NA-----
82	L5	AR1248-B #2			-----NA-----
83	L5	AR1248-C #2			-----NA-----
84	L5	AR1248-D #2			-----NA-----
85	L5	AR1248-E #2			-----NA-----
86	L5	AR1248-F #2			-----NA-----
87	L6	AR1254-A #2			-----NA-----
88	L6	AR1254-B #2			-----NA-----
89	L6	AR1254-C #2			-----NA-----

Page 3 of 3

Sample: GMM892-CC891
Lab FileID: MM46610.D

```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46545.D  8082dod1103.m    Tue Nov 07 10:02:33 2017
```


Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46611.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46611.D\ECD1A.ch Vial: 5
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46611.D\ECD2B.ch
Acq On : 6 Nov 2017 8:53 pm Operator: nareshj
Sample : cc891-400 1232/1268 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				
13 L3	AR1232-A			400.000	410.737	-2.7	97	0.00	3.64- 3.74
14 L3	AR1232-B			400.000	378.738	5.3	93	0.00	4.00- 4.10
15 L3	AR1232-C			400.000	410.032	-2.5	100	0.00	4.19- 4.29
16 L3	AR1232-D			400.000	387.243	3.2	97	0.00	4.30- 4.40
17 L3	AR1232-E			400.000	431.420	-7.9	105	0.00	4.50- 4.59
18 L3	AR1232-F			400.000	429.814	-7.5	109	0.00	4.79- 4.89
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				
34 L6	AR1254-D				-----NA-----				
35 L6	AR1254-E				-----NA-----				
36 L6	AR1254-F				-----NA-----				
37 L7	AR1260-A				-----NA-----				

Page 2 of 3

Sample: GMM892-CC891
Lab FileID: MM46611.D

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***** Signal #2 *****

```

----- Amount Calc. %Drift -----

```

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ACCUTEST
FA48865

Page 3 of 3

Sample: GMM892-CC891
Lab FileID: MM46611.D

```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46545.D  8082dod1103.m   Tue Nov 07 10:02:35 2017
```


Continuing Calibration Summary

Page 1 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46612.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46612.D\ECD1A.ch Vial: 6
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46612.D\ECD2B.ch
Acq On : 6 Nov 2017 9:05 pm Operator: nareshj
Sample : cc891-400 1221/1254 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S		Tetrachloro-m-xylene			-----NA-----				
			Amount	Calc.	%Drift				
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A	400.000	423.515	-5.9	96	0.00	2.96-	3.06	
9 L2	AR1221-B	400.000	430.833	-7.7	95	0.00	3.27-	3.37	
10 L2	AR1221-C	400.000	398.167	0.5	94	0.00	3.52-	3.63	
11 L2	AR1221-D	400.000	412.227	-3.1	96	0.00	3.59-	3.69	
12 L2	AR1221-E	400.000	401.105	-0.3	94	0.00	3.64-	3.74	
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				
			Amount	Calc.	%Drift				
31 L6	AR1254-A	400.000	391.800	2.0	102	0.00	4.37-	4.47	
32 L6	AR1254-B	400.000	425.463	-6.4	107	0.00	4.74-	4.84	
33 L6	AR1254-C	400.000	474.789	-18.7	114	0.00	5.14-	5.24	
34 L6	AR1254-D	400.000	511.533	-27.9#	120	0.00	5.34-	5.43	
35 L6	AR1254-E	400.000	513.428	-28.4#	121	0.00	5.52-	5.62	
36 L6	AR1254-F	400.000	493.711	-23.4#	116	0.00	5.62-	5.72	
37 L7	AR1260-A				-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46612.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2		-----NA-----	
59	L1	AR1016-B #2		-----NA-----	
60	L1	AR1016-C #2		-----NA-----	
61	L1	AR1016-D #2		-----NA-----	
62	L1	AR1016-E #2		-----NA-----	
63	L1	AR1016-F #2		-----NA-----	
64	L2	AR1221-A #2	400.000 429.206	-7.3 96 0.00	2.87- 2.97
65	L2	AR1221-B #2	400.000 432.976	-8.2 93 0.00	3.19- 3.29
66	L2	AR1221-C #2	400.000 418.401	-4.6 96 0.00	3.43- 3.53
67	L2	AR1221-D #2	400.000 421.990	-5.5 95 0.00	3.50- 3.60
68	L2	AR1221-E #2	400.000 420.992	-5.2 95 0.00	3.56- 3.66
69	L3	AR1232-A #2		-----NA-----	
70	L3	AR1232-B #2		-----NA-----	
71	L3	AR1232-C #2		-----NA-----	
72	L3	AR1232-D #2		-----NA-----	
73	L3	AR1232-E #2		-----NA-----	
74	L3	AR1232-F #2		-----NA-----	
75	L4	AR1242-A #2		-----NA-----	
76	L4	AR1242-B #2		-----NA-----	
77	L4	AR1242-C #2		-----NA-----	
78	L4	AR1242-D #2		-----NA-----	
79	L4	AR1242-E #2		-----NA-----	
80	L4	AR1242-F #2		-----NA-----	
81	L5	AR1248-A #2		-----NA-----	
82	L5	AR1248-B #2		-----NA-----	
83	L5	AR1248-C #2		-----NA-----	
84	L5	AR1248-D #2		-----NA-----	
85	L5	AR1248-E #2		-----NA-----	
86	L5	AR1248-F #2		-----NA-----	
87	L6	AR1254-A #2	400.000 416.368	-4.1 97 0.00	4.27- 4.37
88	L6	AR1254-B #2	400.000 451.629	-12.9 109 0.00	4.66- 4.76
89	L6	AR1254-C #2	400.000 452.589	-13.1 110 0.00	5.05- 5.15

8.6.17

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Continuing Calibration Summary

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46612.D

90	L6	AR1254-D #2	400.000	473.897	-18.5	116	0.00	5.21-	5.31
91	L6	AR1254-E #2	400.000	455.080	-13.8	111	0.00	5.38-	5.48
92	L6	AR1254-F #2	400.000	456.437	-14.1	109	0.00	5.51-	5.61
93	L7	AR1260-A #2							
94	L7	AR1260-B #2							
95	L7	AR1260-C #2							
96	L7	AR1260-D #2							
97	L7	AR1260-E #2							
98	L7	AR1260-F #2							

			Amount	Calc.	%Drift	
99	L9	AR1262-A #2				
100	L9	AR1262-B #2				
101	L9	AR1262-C #2				
102	L9	AR1262-D #2				
103	L9	AR1262-E #2				
104	L9	AR1262-F #2				
105	L8	AR1268-A #2				
106	L8	AR1268-B #2				
107	L8	AR1268-C #2				
108	L8	AR1268-D #2				
109	L8	AR1268-E #2				
110	L8	AR1268-F #2				

			Amount	Calc.	%Drift	
111	S	Decachlorobiphenyl #2				

(#) = Out of Range
MM46545.D 8082dod1103.m
SPCC's out = 0 CCC's out = 0
Tue Nov 07 10:02:37 2017

8.6.17
8

Metals Analysis

QC Data Summaries

6

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14481
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:50	MA14481-STD1	1		STDA
09:53	MA14481-STD2	1		STDB
09:56	MA14481-STD3	1		STDC
10:00	MA14481-STD4	1		STDD
10:03	MA14481-HSTD1	1		
10:11	MA14481-ICV1	1		
10:19	MA14481-ICB1	1		
10:22	MA14481-CRIA1	1		
10:26	MA14481-CRIA2	1		
10:32	MA14481-ICSA1	1		
10:40	MA14481-ICSAB1	1		
10:48	MA14481-CCV1	1		
10:56	MA14481-CCB1	1		
11:35	MA14481-CCV2	1		
11:55	MA14481-CCB2	1		
12:08	MP32958-MB1	1		
12:13	MP32958-B1	1		
12:17	FA48648-2	1		(sample used for QC only; not part of login FA48865)
12:21	MP32958-D1	1		
12:25	MP32958-SD1	5		
12:29	MP32958-S1	1		
12:33	MP32958-S2	1		
12:37	FA48648-1	1		(sample used for QC only; not part of login FA48865)
12:41	ZZZZZZ	1		
12:46	ZZZZZZ	1		
12:50	MA14481-CCV3	1		
12:54	MA14481-CCB3	1		
12:58	ZZZZZZ	1		
13:02	ZZZZZZ	1		
13:07	ZZZZZZ	1		
13:11	FA48818-8	1		(sample used for QC only; not part of login FA48865)
13:15	MP32958-D2	1		
13:19	MP32958-D3	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14481
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:24	MP32958-MB2	1		
13:28	MP32958-B2	1		
13:32	MP32958-MB3	1		
13:36	MP32958-B3	1		
13:40	MA14481-CCV4	1		
13:44	MA14481-CCB4	1		
13:49	MP32960-MB1	1		
13:53	MP32960-B1	1		
13:57	FA48843-9	1		(sample used for QC only; not part of login FA48865)
14:02	MP32960-D1	1		
14:06	MP32960-SD1	5		
14:10	MP32960-PS1	1		
14:15	MP32960-S1	1		
14:19	MP32960-S2	1		
----->	Last reportable sample/prep for job FA48865			
14:24	ZZZZZZ	1		
14:28	ZZZZZZ	1		
14:32	MA14481-CCV5	1		
14:36	MA14481-CCB5	1		
14:41	ZZZZZZ	5		
14:49	ZZZZZZ	1		
14:57	ZZZZZZ	1		
15:02	ZZZZZZ	1		
15:06	ZZZZZZ	1		
15:10	ZZZZZZ	5		
15:19	ZZZZZZ	5		
15:23	MA14481-CCV6	1		
15:27	MA14481-CCB6	1		
15:31	ZZZZZZ	1		
15:40	ZZZZZZ	1		
15:52	ZZZZZZ	1		
16:00	MA14481-CRIA3	1		
16:04	MA14481-ICSA2	1		
16:08	MA14481-ICSAB2	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14481
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments

16:21 MA14481-CCV7 1

16:25 MA14481-CCB7 1

-----> Last reportable CCB for job FA48865
Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: FA48865
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
 Analyst: LM Run ID: MA14481
 Parameters: As, Ba, Cd, Cr, Pb, Se, Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:50	MA14481-STD1	6187	34813	3252	1967
09:53	MA14481-STD2	6178	34435	3280	1861
09:56	MA14481-STD3	5950	33097	3268	1677
10:00	MA14481-STD4	5731	32419	3200	1520
10:03	MA14481-HSTD1	5742	32261	3205	1515
10:11	MA14481-ICV1	5969	32768	3209	1656
10:19	MA14481-ICB1	6258 R	34675 R	3220 R	1960 R
10:22	MA14481-CRIA1	6194	34178	3231	1884
10:26	MA14481-CRIA2	6197			
10:32	MA14481-ICSA1	5574	29977	3115	1469
10:40	MA14481-ICSAB1	5545	29827	3081	1435
10:48	MA14481-CCV1	5965	33213	3179	1654
10:56	MA14481-CCB1	6188	34626	3172	1937
11:35	MA14481-CCV2	5981	32767	3114	1628
11:55	MA14481-CCB2	6240	33592	3087	1903
12:08	MP32958-MB1	6303	34772	3203	1927
12:13	MP32958-B1	6125	33060	3150	1729
12:17	FA48648-2	5798	31484	3107	1657
12:21	MP32958-D1	5790	31540	3085	1657
12:25	MP32958-SD1	6086	33057	3109	1804
12:29	MP32958-S1	5863	31823	3096	1582
12:33	MP32958-S2	5851	31891	3115	1586
12:37	FA48648-1	5783	31751	3096	1665
12:41	ZZZZZZ	5895	31592	3134	1688
12:46	ZZZZZZ	5803	31309	3125	1649
12:50	MA14481-CCV3	6044	32736	3194	1638
12:54	MA14481-CCB3	6184	33670	3164	1904
12:58	ZZZZZZ	5929	32469	3148	1715
13:02	ZZZZZZ	5874	32036	3150	1684
13:07	ZZZZZZ	5831	32008	3136	1670
13:11	FA48818-8	5903	32477	3164	1698
13:15	MP32958-D2	5775	32015	3098	1671
13:19	MP32958-D3	5895	31979	3131	1703

INTERNAL STANDARD SUMMARY

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14481
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:24	MP32958-MB2	6226	34206	3174	1918
13:28	MP32958-B2	6004	33184	3171	1732
13:32	MP32958-MB3	6178	34619	3186	1927
13:36	MP32958-B3	5854	32522	3156	1636
13:40	MA14481-CCV4	5898	33222	3168	1628
13:44	MA14481-CCB4	6121	33765	3147	1900
13:49	MP32960-MB1	6246	34830	3220	1947
13:53	MP32960-B1	6048	33486	3148	1737
13:57	FA48843-9	6999	39225	3871	1551
14:02	MP32960-D1	7667	42275	4323 !	1437
14:06	MP32960-SD1	6265	33905	3253	1732
14:10	MP32960-PS1	6900	37935	3785	1521
14:15	MP32960-S1	7902 !	43406 !	4429 !	1431
14:19	MP32960-S2	7173	39650	3994	1447
14:24	ZZZZZZ	7277	39683	4040 !	1339
14:28	ZZZZZZ	6505	35697	3726	1288
14:32	MA14481-CCV5	5816	32276	3044	1614
14:36	MA14481-CCB5	6079	33902	3044	1903
14:41	ZZZZZZ	6512	35703	3357	1659
14:49	ZZZZZZ	7829 !	42923	4081 !	1654
14:57	ZZZZZZ	8846 !	48902 !	4716 !	1435
15:02	ZZZZZZ	8781 !	47803 !	4613 !	1516
15:06	ZZZZZZ	8463 !	46636 !	4353 !	1546
15:10	ZZZZZZ	6554	36139	3268	1687
15:19	ZZZZZZ	6695	36059	3248	1750
15:23	MA14481-CCV6	5868	31945	2911	1615
15:27	MA14481-CCB6	6075	33268	2910	1900
15:31	ZZZZZZ	8200 !	45315 !	4305 !	1463
15:40	ZZZZZZ	6344	34594	3094	1811
15:52	ZZZZZZ	7528	41406	3849	1612
16:00	MA14481-CRIA3	6060	32988	2955	1841
16:04	MA14481-ICSA2	5411	28736	2791	1422
16:08	MA14481-ICSAB2	5378	29130	2773	1399

INTERNAL STANDARD SUMMARY

Login Number: FA48865
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
 Analyst: LM Run ID: MA14481
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Sample					
Time	Description	Istd#1	Istd#2	Istd#3	Istd#4
16:21	MA14481-CCV7	5801	32064	2864	1604
16:25	MA14481-CCB7	6024	33233	2872	1888

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

9.1.1

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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14481 Units: ug/l

Time: Sample ID:			10:19 ICB1			10:56 CCB1			11:55 CCB2			12:54 CCB3		
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final	raw	final		
Aluminum	200	14												
Antimony	20	1	anr											
Arsenic	10	1.3	-0.40	<10	0.30	<10	-1.4	<10	-0.30	<10				
Barium	200	1	0.10	<200	-0.10	<200	0.20	<200	0.10	<200				
Beryllium	5.0	.2	anr											
Cadmium	4.0	.2	0.0	<4.0	0.0	<4.0	0.0	<4.0	0.0	<4.0				
Calcium	5000	50												
Chromium	10	1	0.20	<10	-0.20	<10	-0.10	<10	0.0	<10				
Cobalt	50	.2	anr											
Copper	25	1	anr											
Iron	300	17												
Lead	20	1	-0.40	<20	-0.40	<20	-0.50	<20	-0.80	<20				
Magnesium	5000	35												
Manganese	15	.5												
Molybdenum	50	.3	anr											
Nickel	40	.4	anr											
Potassium	10000	200												
Selenium	20	2.4	1.2	<20	-0.20	<20	0.0	<20	1.7	<20				
Silver	10	.7	0.40	<10	0.30	<10	0.40	<10	0.30	<10				
Sodium	10000	500												
Strontium	10	.5												
Thallium	10	1.1	anr											
Tin	50	.9												
Titanium	10	.5												
Vanadium	50	.5	anr											
Zinc	20	3	anr											

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14481 Units: ug/l

Time: Sample ID:	RL	IDL	13:44 CCB4	14:36 CCB5	15:27 CCB6	16:25 CCB7				
Metal			raw	final	raw	final	raw	final	raw	final
Aluminum	200	14								
Antimony	20	1	anr							
Arsenic	10	1.3	-0.40	<10	-0.20	<10	0.0	<10	0.10	<10
Barium	200	1	0.10	<200	-0.10	<200	0.20	<200	0.30	<200
Beryllium	5.0	.2	anr							
Cadmium	4.0	.2	0.10	<4.0	0.0	<4.0	0.0	<4.0	0.0	<4.0
Calcium	5000	50								
Chromium	10	1	-0.10	<10	0.20	<10	-0.10	<10	0.10	<10
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	17								
Lead	20	1	-1.3	<20	0.10	<20	-0.10	<20	-1.3	<20
Magnesium	5000	35								
Manganese	15	.5								
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	200								
Selenium	20	2.4	1.7	<20	1.1	<20	1.9	<20	0.20	<20
Silver	10	.7	0.50	<10	0.20	<10	0.30	<10	0.20	<10
Sodium	10000	500								
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14481 Units: ug/l

Time: Sample ID:	ICV	10:11 ICV1		CCV	10:48 CCV1		CCV	11:35 CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	2000	1980	99.0	2000	1960	98.0	2000	1940	97.0
Barium	2000	2040	102.0	2000	2020	101.0	2000	2030	101.5
Beryllium	anr								
Cadmium	2000	2020	101.0	2000	2020	101.0	2000	2040	102.0
Calcium									
Chromium	2000	2020	101.0	2000	2020	101.0	2000	2070	103.5
Cobalt	anr								
Copper	anr								
Iron									
Lead	2000	1990	99.5	2000	2020	101.0	2000	2100	105.0
Magnesium									
Manganese									
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	2000	1970	98.5	2000	1970	98.5	2000	1950	97.5
Silver	250	249	99.6	250	248	99.2	250	251	100.4
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14481 Units: ug/l

Time: Sample ID:	CCV	12:50 CCV3		CCV	13:40 CCV4		CCV	14:32 CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	2000	1910	95.5	2000	1960	98.0	2000	2000	100.0
Barium	2000	2040	102.0	2000	2030	101.5	2000	2110	105.5
Beryllium	anr								
Cadmium	2000	2000	100.0	2000	2050	102.5	2000	2050	102.5
Calcium									
Chromium	2000	2030	101.5	2000	2030	101.5	2000	2050	102.5
Cobalt	anr								
Copper	anr								
Iron									
Lead	2000	2070	103.5	2000	2050	102.5	2000	2050	102.5
Magnesium									
Manganese									
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	2000	1930	96.5	2000	1970	98.5	2000	2010	100.5
Silver	250	250	100.0	250	247	98.8	250	255	102.0
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14481 Units: ug/l

Time: Sample ID:		15:23 CCV6		16:21 CCV7		
Metal	CCV True	Results	% Rec	CCV True	Results	% Rec
Aluminum						
Antimony	anr					
Arsenic	2000	1980	99.0	2000	1990	99.5
Barium	2000	2160	108.0	2000	2150	107.5
Beryllium	anr					
Cadmium	2000	2030	101.5	2000	2050	102.5
Calcium						
Chromium	2000	2060	103.0	2000	2060	103.0
Cobalt	anr					
Copper	anr					
Iron						
Lead	2000	2070	103.5	2000	2070	103.5
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	2000	1990	99.5	2000	1990	99.5
Silver	250	259	103.6	250	256	102.4
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
 QC Limits: 95 to 105 % Recovery Run ID: MA14481 Units: ug/l

Time:		10:03	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Aluminum			
Antimony	anr		
Arsenic	4000	4020	100.5
Barium	4000	4040	101.0
Beryllium	anr		
Cadmium	4000	4000	100.0
Calcium			
Chromium	4000	4010	100.3
Cobalt	anr		
Copper	anr		
Iron			
Lead	4000	4110	102.8
Magnesium			
Manganese			
Molybdenum	anr		
Nickel	anr		
Potassium			
Selenium	4000	4010	100.3
Silver	500	500	100.0
Sodium			
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
 (anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA14481 Units: ug/l

Time: Sample ID:	CRI	CRIA	10:22 CRIA1	% Rec	10:26 CRIA2	% Rec	16:00 CRIA3	% Rec
Metal	True	True	Results		Results		Results	
Aluminum	400	200						
Antimony	10	5.0						
Arsenic	20	10	9.2	92.0			9.2	92.0
Barium	400	200	200	100.0			216	108.0
Beryllium	10	5.0	anr					
Cadmium	10	5.0	5.1	102.0			5.2	104.0
Calcium	2000	1000						
Chromium	20	10	10.4	104.0			10.8	108.0
Cobalt	100	50	anr					
Copper	50	25	anr					
Iron	600	300						
Lead	10	5.0	4.1	82.0			3.8	76.0
Magnesium	10000	5000						
Manganese	30	15						
Molybdenum	100	50	anr					
Nickel	80	40	anr					
Potassium	20000	10000						
Selenium	20	10	10.7	107.0			10.7	107.0
Silver	20	10	8.2	82.0			8.2	82.0
Sodium	20000	10000						
Strontium	20	10						
Thallium	20	10	anr					
Tin	100	50						
Titanium	20	10						
Vanadium	100	50	anr					
Zinc	40	20	anr					

(*) Outside of QC limits
 (anr) Analyte not requested

9.1.5
 9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110617M1.ICP Date Analyzed: 11/06/17 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA14481 Units: ug/l

Time: Sample ID:	ICSA True	ICSAB True	10:32 ICSA1 Results	% Rec	10:40 ICSAB1 Results	% Rec	16:04 ICSA2 Results	% Rec	16:08 ICSAB2 Results	% Rec
Metal										
Aluminum	500000	500000	509000	101.8	515000	103.0	515000	103.0	528000	105.6
Antimony		1000	-0.20		967	96.7	-0.40		999	99.9
Arsenic		1000	0.10		1040	104.0	0.50		1070	107.0
Barium		500	-0.10		497	99.4	0.70		534	106.8
Beryllium		500	0.0		470	94.0	0.0		472	94.4
Cadmium		1000	0.0		914	91.4	0.10		931	93.1
Calcium	500000	500000	471000	94.2	476000	95.2	466000	93.2	479000	95.8
Chromium		500	0.50		490	98.0	0.70		499	99.8
Cobalt		500	0.20		454	90.8	0.20		465	93.0
Copper		500	0.0		505	101.0	-0.20		520	104.0
Iron	200000	200000	179000	89.5	178000	89.0	179000	89.5	180000	90.0
Lead		1000	0.10		935	93.5	-1.1		944	94.4
Magnesium	500000	500000	493000	98.6	491000	98.2	483000	96.6	489000	97.8
Manganese		500	0.50		474	94.8	0.70		486	97.2
Molybdenum		1000	0.0		947	94.7	-0.70		980	98.0
Nickel		1000	-0.80		914	91.4	-0.80		940	94.0
Potassium			360		219		322		142	
Selenium		1000	0.10		977	97.7	0.20		1010	101.0
Silver		1000	-0.30		957	95.7	-0.30		984	98.4
Sodium			309		232		148		140	
Strontium		1000	0.50		1050	105.0	2.5		1100	110.0
Thallium		1000	1.6		969	96.9	1.0		982	98.2
Tin		1000	3.5		939	93.9	3.8		958	95.8
Titanium		1000	1.0		996	99.6	0.80		1030	103.0
Vanadium		500	0.0		462	92.4	0.0		473	94.6
Zinc		1000	0.0		909	90.9	0.10		918	91.8

(*) Outside of QC limits
(anr) Analyte not requested

9.1.6
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SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14484
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:01	MA14484-STD1	1		STDA
10:05	MA14484-STD2	1		STDB
10:10	MA14484-STD3	1		STDC
10:13	MA14484-STD4	1		STDD
10:18	MA14484-HSTD1	1		
10:25	MA14484-ICV1	1		
10:34	MA14484-ICB1	1		
10:38	MA14484-CRIA1	1		
10:44	MA14484-ICSA1	1		
10:54	MA14484-ICSAB1	1		
10:59	MA14484-CCV1	1		
11:06	MA14484-CCB1	1		
11:15	ZZZZZZ	2		
11:19	ZZZZZZ	2		
11:23	MP32961-D1	100		
11:27	FA48843-9	5		(sample used for QC only; not part of login FA48865)
11:32	MP32960-D1	5		
11:36	MP32960-S1	5		
11:40	MP32960-S2	5		
11:44	MP32960-PS1	5		
11:48	MP32960-SD1	25		
11:52	ZZZZZZ	4		
11:57	MA14484-CCV2	1		
12:01	MA14484-CCB2	1		
12:05	ZZZZZZ	5		
12:09	ZZZZZZ	1		
12:14	ZZZZZZ	4		
12:19	ZZZZZZ	5		
12:23	ZZZZZZ	5		
12:27	ZZZZZZ	5		
12:31	ZZZZZZ	5		
12:35	ZZZZZZ	5		
12:39	FA48865-1	5		
----->	Last reportable sample/prep for job FA48865			

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14484
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:43	ZZZZZZ	1		
12:47	MA14484-CCV3	1		
12:51	MA14484-CCB3	1		
12:55	ZZZZZZ	1		
12:59	ZZZZZZ	2		
13:03	ZZZZZZ	10		
13:08	MA14484-CCV4	1		
13:12	MA14484-CCB4	1		
13:17	MP32967-MB1	1		
13:22	MP32967-B1	1		
13:26	FA49016-1	5		(sample used for QC only; not part of login FA48865)
13:34	MP32967-D1	5		
13:39	MP32967-SD1	25		
13:43	MP32967-PS1	5		
13:47	MP32967-S1	5		
13:55	MP32967-S2	5		
13:59	ZZZZZZ	5		
14:03	MA14484-CCV5	1		
14:07	MA14484-CCB5	1		
14:36	MA14484-CCV6	1		
14:44	MA14484-CCB6	1		
14:48	ZZZZZZ	5		
14:53	ZZZZZZ	5		
14:57	ZZZZZZ	5		
15:01	ZZZZZZ	5		
15:05	ZZZZZZ	5		
15:09	ZZZZZZ	5		
15:14	ZZZZZZ	5		
15:18	ZZZZZZ	5		
15:22	ZZZZZZ	5		
15:26	ZZZZZZ	5		
15:31	MA14484-CCV7	1		
15:34	MA14484-CCB7	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14484
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:39	ZZZZZZ	5		
15:43	ZZZZZZ	5		
15:47	ZZZZZZ	5		
15:51	ZZZZZZ	5		
15:55	ZZZZZZ	5		
15:59	ZZZZZZ	5		
16:04	ZZZZZZ	5		
16:08	ZZZZZZ	5		
16:12	MP32968-MB1	1		
16:16	MP32968-B1	1		
16:20	MA14484-CCV8	1		
16:24	MA14484-CCB8	1		
16:28	FA48355-1	5		(sample used for QC only; not part of login FA48865)
16:33	MP32968-D1	5		
16:37	MP32968-SD1	25		
16:41	MP32968-PS1	5		
16:45	MP32968-S1	5		
16:49	MP32968-S2	5		
16:53	ZZZZZZ	5		
16:58	ZZZZZZ	5		
17:02	ZZZZZZ	5		
17:06	ZZZZZZ	5		
17:10	MA14484-CCV9	1		
17:14	MA14484-CCB9	1		
17:19	ZZZZZZ	5		
17:23	ZZZZZZ	5		
17:27	ZZZZZZ	5		
17:35	ZZZZZZ	5		
17:40	ZZZZZZ	5		
17:44	ZZZZZZ	5		
18:01	MA14484-CCV10	1		
18:05	MA14484-CCB10	1		
18:13	ZZZZZZ	5		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14484
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments

18:26 ZZZZZZ 5

18:30 MA14484-CRIA2 1

18:38 MA14484-ICSAB2 1

18:43 MA14484-CCV11 1

18:47 MA14484-CCB11 1

-----> Last reportable CCB for job FA48865
Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: FA48865
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
 Analyst: LM Run ID: MA14484
 Parameters: As, Ba, Cd, Cr, Pb, Se, Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:01	MA14484-STD1	5019	31781	4617	1773
10:05	MA14484-STD2	5022	31904	4658	1716
10:10	MA14484-STD3	4854	31160	4650	1567
10:13	MA14484-STD4	4665	30410	4621	1453
10:18	MA14484-HSTD1	4629	30511	4616	1449
10:25	MA14484-ICV1	4793	30787	4628	1558
10:34	MA14484-ICB1	5084 R	31950 R	4628 R	1776 R
10:38	MA14484-CRIA1	5065	31859	4620	1744
10:44	MA14484-ICSA1	4538	28183	4462	1378
10:54	MA14484-ICSAB1	4564	28194	4456	1357
10:59	MA14484-CCV1	4913	30560	4594	1547
11:06	MA14484-CCB1	5099	32560	4587	1761
11:15	ZZZZZZ	4049	24764	4230	1216
11:19	ZZZZZZ	4027	25186	4225	1214
11:23	MP32961-D1	5074	31805	4564	1763
11:27	FA48843-9	5172	32411	4839	1645
11:32	MP32960-D1	5310	33453	5008	1603
11:36	MP32960-S1	5298	33545	5003	1591
11:40	MP32960-S2	5230	32946	4878	1611
11:44	MP32960-PS1	5161	32021	4755	1626
11:48	MP32960-SD1	5146	32093	4628	1738
11:52	ZZZZZZ	5113	32103	4787	1478
11:57	MA14484-CCV2	4925	31356	4607	1562
12:01	MA14484-CCB2	5012	31235	4458	1738
12:05	ZZZZZZ	4928	30911	4730	1473
12:09	ZZZZZZ	5658	35278	5314	1580
12:14	ZZZZZZ	5593	35084	5217	1560
12:19	ZZZZZZ	5418	33700	5050	1608
12:23	ZZZZZZ	5497	34073	5083	1629
12:27	ZZZZZZ	5351	33333	4887	1626
12:31	ZZZZZZ	5291	33921	5000	1605
12:35	ZZZZZZ	5327	33682	4973	1612
12:39	FA48865-1	5816	37012	5356	1651

INTERNAL STANDARD SUMMARY

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14484
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:43	ZZZZZZ	5749	37108	5541	1510
12:47	MA14484-CCV3	4850	30599	4513	1542
12:51	MA14484-CCB3	4986	30878	4480	1734
12:55	ZZZZZZ	6767 !	42655 !	6588 !	1514
12:59	ZZZZZZ	5536	35088	5290	1504
13:03	ZZZZZZ	4834	30097	4537	1529
13:08	MA14484-CCV4	4792	30290	4533	1533
13:12	MA14484-CCB4	4955	31243	4451	1734
13:17	MP32967-MB1	4985	31557	4510	1735
13:22	MP32967-B1	4873	30476	4496	1604
13:26	FA49016-1	5349	32730	4855	1636
13:34	MP32967-D1	5331	33059	4818	1634
13:39	MP32967-SD1	5150	31895	4553	1710
13:43	MP32967-PS1	5402	32656	4854	1626
13:47	MP32967-S1	5317	32715	4785	1615
13:55	MP32967-S2	5367	32701	4791	1602
13:59	ZZZZZZ	5856	35222	5223	1559
14:03	MA14484-CCV5	4840	29764	4459	1512
14:07	MA14484-CCB5	5007	30590	4432	1711
14:36	MA14484-CCV6	4858	29686	4455	1496
14:44	MA14484-CCB6	5075	31170	4467	1721
14:48	ZZZZZZ	5568	33683	5048	1576
14:53	ZZZZZZ	5172	31354	4571	1626
14:57	ZZZZZZ	5878	35286	5236	1615
15:01	ZZZZZZ	5563	32766	5119	1579
15:05	ZZZZZZ	5102	30709	4546	1650
15:09	ZZZZZZ	5170	31135	4592	1637
15:14	ZZZZZZ	5300	31530	4786	1615
15:18	ZZZZZZ	5150	30842	4511	1654
15:22	ZZZZZZ	5333	31702	4745	1670
15:26	ZZZZZZ	5383	31670	4822	1626
15:31	MA14484-CCV7	4798	30140	4398	1548
15:34	MA14484-CCB7	4959	30989	4302	1746

INTERNAL STANDARD SUMMARY

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14484
Parameters: As, Ba, Cd, Cr, Pb, Se, Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
15:39	ZZZZZZ	5354	31360	4783	1585
15:43	ZZZZZZ	5518	33376	4890	1695
15:47	ZZZZZZ	5339	31434	4793	1616
15:51	ZZZZZZ	5365	32390	4738	1692
15:55	ZZZZZZ	5057	30155	4490	1634
15:59	ZZZZZZ	5027	30120	4488	1638
16:04	ZZZZZZ	5308	31584	4746	1629
16:08	ZZZZZZ	5186	30696	4631	1637
16:12	MP32968-MB1	4908	30183	4361	1745
16:16	MP32968-B1	4816	29217	4308	1605
16:20	MA14484-CCV8	4815	29294	4347	1538
16:24	MA14484-CCB8	4967	30077	4345	1744
16:28	FA48355-1	5065	30609	4537	1624
16:33	MP32968-D1	5046	30652	4510	1641
16:37	MP32968-SD1	4948	30351	4355	1719
16:41	MP32968-PS1	4979	30610	4430	1622
16:45	MP32968-S1	5124	31499	4614	1609
16:49	MP32968-S2	4961	30741	4417	1629
16:53	ZZZZZZ	4997	31260	4547	1645
16:58	ZZZZZZ	5016	31481	4565	1631
17:02	ZZZZZZ	5013	31136	4521	1629
17:06	ZZZZZZ	4640	30146	4466	1519
17:10	MA14484-CCV9	4706	29555	4336	1548
17:14	MA14484-CCB9	4912	30295	4333	1755
17:19	ZZZZZZ	4938	30896	4474	1633
17:23	ZZZZZZ	5033	31002	4579	1640
17:27	ZZZZZZ	4987	30853	4469	1675
17:35	ZZZZZZ	4942	30841	4471	1637
17:40	ZZZZZZ	4973	30824	4492	1610
17:44	ZZZZZZ	4972	30498	4387	1665
18:01	MA14484-CCV10	4652	29285	4231	1529
18:05	MA14484-CCB10	4850	30165	4244	1740
18:13	ZZZZZZ	5010	30970	4474	1628

INTERNAL STANDARD SUMMARY

Login Number: FA48865
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
 Analyst: LM Run ID: MA14484
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
18:26	ZZZZZZ	5048	30027	4456	1633
18:30	MA14484-CRIA2	4843	30178	4294	1710
18:38	MA14484-ICSAB2	4300	26740	4093	1340
18:43	MA14484-CCV11	4664	29102	4232	1533
18:47	MA14484-CCB11	4852	30022	4237	1739

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

9.2.1
9

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14484 Units: ug/l

Time: Sample ID:			10:34 ICB1		11:06 CCB1		12:01 CCB2		12:51 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14								
Antimony	20	1	anr							
Arsenic	10	1.3	0.40	<10	-0.10	<10	0.10	<10	-0.10	<10
Barium	200	1	-0.20	<200	0.0	<200	0.20	<200	0.0	<200
Beryllium	5.0	.2	anr							
Cadmium	4.0	.2	0.10	<4.0	0.0	<4.0	0.0	<4.0	0.0	<4.0
Calcium	5000	50								
Chromium	10	1	-0.20	<10	-0.20	<10	-0.30	<10	0.20	<10
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	17								
Lead	20	1	0.0	<20	-0.50	<20	0.40	<20	0.80	<20
Magnesium	5000	35								
Manganese	15	.5	anr							
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	200								
Selenium	20	2.4	0.80	<20	0.10	<20	0.10	<20	1.0	<20
Silver	10	.7	0.40	<10	0.0	<10	-0.20	<10	-0.10	<10
Sodium	10000	500								
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14484 Units: ug/l

Time: Sample ID:			13:12 CCB4		14:07 CCB5		14:44 CCB6		15:34 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14								
Antimony	20	1	anr							
Arsenic	10	1.3	0.30	<10	-0.60	<10	-0.30	<10	0.30	<10
Barium	200	1	0.0	<200	0.10	<200	-0.20	<200	0.30	<200
Beryllium	5.0	.2	anr							
Cadmium	4.0	.2	0.0	<4.0	0.0	<4.0	-0.10	<4.0	0.50	<4.0
Calcium	5000	50								
Chromium	10	1	0.20	<10	-0.40	<10	-0.30	<10	0.10	<10
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	17								
Lead	20	1	-0.10	<20	0.50	<20	-0.40	<20	0.60	<20
Magnesium	5000	35								
Manganese	15	.5	anr							
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	200								
Selenium	20	2.4	1.3	<20	1.0	<20	0.50	<20	0.30	<20
Silver	10	.7	0.10	<10	0.0	<10	0.0	<10	-0.30	<10
Sodium	10000	500								
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14484 Units: ug/l

Time: Sample ID:	RL	IDL	16:24 CCB8 raw	final	17:14 CCB9 raw	final	18:05 CCB10 raw	final	18:47 CCB11 raw	final
Metal										
Aluminum	200	14								
Antimony	20	1	anr							
Arsenic	10	1.3	-0.10	<10	2.8	<10	-0.80	<10	-0.70	<10
Barium	200	1	0.10	<200	0.50	<200	0.0	<200	-0.10	<200
Beryllium	5.0	.2	anr							
Cadmium	4.0	.2	0.0	<4.0	2.8	<4.0*(a)	0.10	<4.0	-0.10	<4.0
Calcium	5000	50								
Chromium	10	1	-0.30	<10	0.20	<10	-0.30	<10	-0.30	<10
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	17								
Lead	20	1	0.20	<20	3.2	<20	0.40	<20	0.20	<20
Magnesium	5000	35								
Manganese	15	.5	anr							
Molybdenum	50	.3	anr							
Nickel	40	.4	anr							
Potassium	10000	200								
Selenium	20	2.4	1.4	<20	2.2	<20	-0.60	<20	-0.60	<20
Silver	10	.7	0.0	<10	-0.30	<10	0.10	<10	-0.10	<10
Sodium	10000	500								
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested
(a) All associated samples with results >MDL "B" coded.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14484 Units: ug/l

Time: Sample ID:	ICV	10:25 ICV1		CCV	10:59 CCV1		CCV	11:57 CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	2000	2020	101.0	2000	1940	97.0	2000	1940	97.0
Barium	2000	2050	102.5	2000	2050	102.5	2000	2000	100.0
Beryllium	anr								
Cadmium	2000	2030	101.5	2000	2010	100.5	2000	2000	100.0
Calcium									
Chromium	2000	2010	100.5	2000	2060	103.0	2000	2020	101.0
Cobalt	anr								
Copper	anr								
Iron									
Lead	2000	1990	99.5	2000	1980	99.0	2000	1970	98.5
Magnesium									
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	2000	2020	101.0	2000	1960	98.0	2000	1950	97.5
Silver	250	251	100.4	250	257	102.8	250	247	98.8
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14484 Units: ug/l

Time: Sample ID:	CCV	12:47 CCV3	% Rec	CCV	13:08 CCV4	% Rec	CCV	14:03 CCV5	% Rec
Metal	True	Results		True	Results		True	Results	
Aluminum									
Antimony	anr								
Arsenic	2000	1970	98.5	2000	1990	99.5	2000	1950	97.5
Barium	2000	2060	103.0	2000	2070	103.5	2000	2110	105.5
Beryllium	anr								
Cadmium	2000	2010	100.5	2000	2020	101.0	2000	2030	101.5
Calcium									
Chromium	2000	2040	102.0	2000	2050	102.5	2000	2090	104.5
Cobalt	anr								
Copper	anr								
Iron									
Lead	2000	1990	99.5	2000	2010	100.5	2000	2000	100.0
Magnesium									
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	2000	1990	99.5	2000	2010	100.5	2000	1990	99.5
Silver	250	255	102.0	250	259	103.6	250	264	105.6
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14484 Units: ug/l

Time: Sample ID:	CCV	14:36 CCV6	% Rec	CCV	15:31 CCV7	% Rec	CCV	16:20 CCV8	% Rec
Metal	True	Results		True	Results		True	Results	
Aluminum									
Antimony	anr								
Arsenic	2000	1960	98.0	2000	2010	100.5	2000	1980	99.0
Barium	2000	2010	100.5	2000	1960	98.0	2000	2010	100.5
Beryllium	anr								
Cadmium	2000	1990	99.5	2000	2010	100.5	2000	1990	99.5
Calcium									
Chromium	2000	2010	100.5	2000	1990	99.5	2000	2010	100.5
Cobalt	anr								
Copper	anr								
Iron									
Lead	2000	1980	99.0	2000	1940	97.0	2000	1940	97.0
Magnesium									
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	2000	1980	99.0	2000	2000	100.0	2000	2000	100.0
Silver	250	252	100.8	250	246	98.4	250	255	102.0
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14484 Units: ug/l

Time: Sample ID:	CCV	17:10 CCV9		CCV	18:01 CCV10		CCV	18:43 CCV11	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	anr								
Arsenic	2000	2050	102.5	2000	2080	104.0	2000	2070	103.5
Barium	2000	2000	100.0	2000	2010	100.5	2000	2030	101.5
Beryllium	anr								
Cadmium	2000	2010	100.5	2000	2050	102.5	2000	2030	101.5
Calcium									
Chromium	2000	2000	100.0	2000	2030	101.5	2000	2020	101.0
Cobalt	anr								
Copper	anr								
Iron									
Lead	2000	1970	98.5	2000	2010	100.5	2000	2000	100.0
Magnesium									
Manganese	anr								
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	2000	2060	103.0	2000	2090	104.5	2000	2090	104.5
Silver	250	253	101.2	250	254	101.6	250	257	102.8
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
 QC Limits: 95 to 105 % Recovery Run ID: MA14484 Units: ug/l

Time: Sample ID:	HSTD	10:18 HSTD1	
Metal	True	Results	% Rec
Aluminum			
Antimony	anr		
Arsenic	4000	4100	102.5
Barium	4000	4020	100.5
Beryllium	anr		
Cadmium	4000	4020	100.5
Calcium			
Chromium	4000	3990	99.8
Cobalt	anr		
Copper	anr		
Iron			
Lead	4000	4080	102.0
Magnesium			
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Potassium			
Selenium	4000	4080	102.0
Silver	500	498	99.6
Sodium			
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
 (anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA14484 Units: ug/l

Time: Sample ID:	CRI	CRIA	10:38 CRIA1	% Rec	18:30 CRIA2	% Rec
Metal	True	True	Results		Results	
Aluminum	400	200				
Antimony	10	5.0	anr			
Arsenic	20	10	10.1	101.0	10.0	100.0
Barium	400	200	201	100.5	201	100.5
Beryllium	10	5.0	anr			
Cadmium	10	5.0	5.1	102.0	5.1	102.0
Calcium	2000	1000				
Chromium	20	10	10.5	105.0	10.1	101.0
Cobalt	100	50	anr			
Copper	50	25	anr			
Iron	600	300				
Lead	10	5.0	4.8	96.0	4.6	92.0
Magnesium	10000	5000				
Manganese	30	15	anr			
Molybdenum	100	50	anr			
Nickel	80	40	anr			
Potassium	20000	10000				
Selenium	20	10	9.5	95.0	9.6	96.0
Silver	20	10	8.2	82.0	8.2	82.0
Sodium	20000	10000				
Strontium	20	10				
Thallium	20	10	anr			
Tin	100	50				
Titanium	20	10				
Vanadium	100	50	anr			
Zinc	40	20	anr			

(*) Outside of QC limits
 (anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110717M1.ICP Date Analyzed: 11/07/17 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA14484 Units: ug/l

Time: Sample ID:	ICSA	ICSAB	10:44 ICSA1	% Rec	10:54 ICSAB1	% Rec	18:38 ICSAB2	% Rec
Metal	True	True	Results		Results		Results	
Aluminum	500000	500000	509000	101.8	518000	103.6	516000	103.2
Antimony		1000	-2.0		972	97.2	1050	105.0
Arsenic		1000	0.0		1040	104.0	1120	112.0
Barium		500	0.10		496	99.2	488	97.6
Beryllium		500	0.0		471	94.2	494	98.8
Cadmium		1000	0.0		913	91.3	934	93.4
Calcium	500000	500000	475000	95.0	476000	95.2	480000	96.0
Chromium		500	0.60		494	98.8	490	98.0
Cobalt		500	-0.10		454	90.8	466	93.2
Copper		500	0.0		513	102.6	531	106.2
Iron	200000	200000	183000	91.5	181000	90.5	187000	93.5
Lead		1000	0.50		909	90.9	922	92.2
Magnesium	500000	500000	503000	100.6	497000	99.4	511000	102.2
Manganese		500	0.0		482	96.4	484	96.8
Molybdenum		1000	-0.50		953	95.3	1040	104.0
Nickel		1000	1.0		922	92.2	984	98.4
Potassium			75.0		45.5		45.9	
Selenium		1000	0.0		982	98.2	1050	105.0
Silver		1000	-0.20		996	99.6	987	98.7
Sodium			139		127		143	
Strontium		1000	-0.70		1000	100.0	1070	107.0
Thallium		1000	0.20		947	94.7	949	94.9
Tin		1000	5.2		948	94.8	999	99.9
Titanium		1000	1.4		1020	102.0	1040	104.0
Vanadium		500	-0.10		468	93.6	474	94.8
Zinc		1000	0.40		870	87.0	969	96.9

(*) Outside of QC limits
(anr) Analyte not requested

9.2.6
9

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV
Analyst: DM
Parameters: Hg

Date Analyzed: 11/08/17
Run ID: MA14485
Methods: SW846 7471B

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:38	MA14485-STD1	1		STD1
09:39	MA14485-STD2	1		STD2
09:41	MA14485-STD3	1		STD3
09:42	MA14485-STD4	1		STD4
09:44	MA14485-STD5	1		STD5
09:46	MA14485-STD6	1		STD6
09:48	MA14485-HSTD1	1		
09:50	MA14485-ICV1	1		
09:53	MA14485-ICB1	1		
09:55	MA14485-CRI1	1		
09:56	MA14485-CCV1	1		
09:58	MA14485-CCB1	1		
10:00	MP32970-MB1	1		
10:01	MP32970-B1	1		
10:02	FA48865-1	1		
10:04	MP32970-D1	1		
10:06	MP32970-SD1	1		
10:07	MP32970-S1	1		
10:09	MP32970-S2	1		
----->	Last reportable sample/prep for job FA48865			
10:11	ZZZZZZ	1		
10:13	ZZZZZZ	1		
10:14	ZZZZZZ	1		
10:15	MA14485-CCV2	1		
10:17	MA14485-CCB2	1		
10:19	ZZZZZZ	1		
10:20	ZZZZZZ	1		
10:22	ZZZZZZ	1		
10:24	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:27	ZZZZZZ	1		
10:29	ZZZZZZ	1		
10:31	ZZZZZZ	1		
10:32	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV
Analyst: DM
Parameters: Hg

Date Analyzed: 11/08/17 Methods: SW846 7471B
Run ID: MA14485

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:33	ZZZZZZ	1		
10:35	MA14485-CCV3	1		
10:36	MA14485-CCB3	1		
10:39	ZZZZZZ	1		
10:40	ZZZZZZ	1		
10:41	ZZZZZZ	1		
10:43	ZZZZZZ	1		
10:45	ZZZZZZ	1		
10:46	ZZZZZZ	1		
10:48	MP32971-MB1	1		
10:50	MP32971-B1	1		
10:51	FA49016-30	1		(sample used for QC only; not part of login FA48865)
10:53	MP32971-D1	1		
10:55	MA14485-CCV4	1		
10:57	MA14485-CCB4	1		
10:59	MP32971-SD1	1		
11:00	MP32971-S1	1		
11:02	MP32971-S2	1		
11:04	ZZZZZZ	1		
11:06	ZZZZZZ	1		
11:08	ZZZZZZ	1		
11:09	ZZZZZZ	1		
11:11	ZZZZZZ	1		
11:12	ZZZZZZ	1		
11:14	ZZZZZZ	1		
11:15	MA14485-CCV5	1		
11:17	MA14485-CCB5	1		
11:19	ZZZZZZ	1		
11:20	ZZZZZZ	1		
11:21	ZZZZZZ	1		
11:23	ZZZZZZ	1		
11:24	ZZZZZZ	1		
11:26	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV Date Analyzed: 11/08/17 Methods: SW846 7471B
Analyst: DM Run ID: MA14485
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:27	ZZZZZZ	1		
11:29	ZZZZZZ	1		
11:30	ZZZZZZ	1		
11:31	ZZZZZZ	1		
11:33	MA14485-CCV6	1		
11:35	MA14485-CCB6	1		
11:37	ZZZZZZ	1		
11:38	ZZZZZZ	1		
11:40	MA14485-CRI2	1		
11:41	MA14485-CCV7	1		
11:42	MA14485-CCB7	1		
----->	Last reportable CCB for job FA48865 Refer to raw data for calibration curve and standards.			

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV Date Analyzed: 11/08/17 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA14485 Units: ug/l

Time: Sample ID:			09:53 ICB1		09:58 CCB1		10:17 CCB2		10:36 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.0013	<0.50	0.010	<0.50	0.023	<0.50	-0.0068	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV Date Analyzed: 11/08/17 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA14485 Units: ug/l

Time: Sample ID:			10:57 CCB4		11:17 CCB5		11:35 CCB6		11:42 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.012	<0.50	-0.014	<0.50	-0.017	<0.50	-0.019	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV Date Analyzed: 11/08/17 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA14485 Units: ug/l

Time:		09:50		09:56		10:15	
Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True
Mercury	3	2.9	96.7	3.0	3.0	100.0	3
							3.1
							103.3

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV Date Analyzed: 11/08/17 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA14485 Units: ug/l

Time:		10:35		10:55		11:15	
Sample ID:	CCV	CCV3	CCV	CCV4	CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3
							2.9
							96.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV Date Analyzed: 11/08/17 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA14485 Units: ug/l

Time:		11:33			11:41		
Sample ID:	CCV	CCV6		CCV	CCV7		
Metal	True	Results	% Rec	True	Results	% Rec	
Mercury	3	2.9	96.7	3	2.9	96.7	

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA48865
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV Date Analyzed: 11/08/17 Methods: SW846 7471B
 QC Limits: 95 to 105 % Recovery Run ID: MA14485 Units: ug/l

Time:	09:48
Sample ID: HSTD	HSTD1
Metal True	Results % Rec

Mercury 6 6.1 101.7

(*) Outside of QC limits
 (anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA48865
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51108S1.CSV Date Analyzed: 11/08/17 Methods: SW846 7471B
 QC Limits: 80 to 120 % Recovery Run ID: MA14485 Units: ug/l

Time:				09:55		11:40	
Sample ID:	CRI	CRIA	CRI1		CRI2		
Metal	True	True	Results	% Rec	Results	% Rec	
Mercury	0.20		0.22	110.0	0.18	90.0	

(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA48865
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32960
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 11/06/17

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	1.8		
Antimony	1.0	.05	.065		
Arsenic	0.50	.065	.1	-0.025	<0.50
Barium	10	.05	.05	-0.0050	<10
Beryllium	0.25	.01	.025		
Cadmium	0.20	.01	.025	-0.0050	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.020	<0.50
Cobalt	2.5	.01	.025		
Copper	1.3	.05	.05		
Iron	15	.85	.85		
Lead	1.0	.05	.05	-0.035	<1.0
Magnesium	250	1.8	1.8		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.015	.025		
Nickel	2.0	.02	.025		
Potassium	500	10	10		
Selenium	1.0	.12	.12	0.075	<1.0
Silver	0.50	.035	.041	0.010	<0.50
Sodium	500	25	25		
Strontium	0.50	.025	.025		
Thallium	0.50	.055	.055		
Tin	2.5	.045	.045		
Titanium	0.50	.025	.025		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15		

Associated samples MP32960: FA48865-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32960
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/06/17 11/06/17

Metal	FA48843-9 Original DUP		RPD	QC Limits	FA48843-9 Original MS		Spikelot MPFLICP2	% Rec	QC Limits
Aluminum									
Antimony	anr								
Arsenic	10.9	14.1	25.6*(a)	0-20	10.9	75.8	93.3	69.5N(d)	80-120
Barium	105	151	35.9*(a)	0-20	105	174	93.3	73.9N(d)	80-120
Beryllium	anr								
Cadmium	3.3	3.6	28.6*(a)	0-20	3.3	4.3	2.33	68.6N(d)	80-120
Calcium									
Chromium	69.4	74.5	29.6*(a)	0-20	69.4	70.9	9.33	167.2(e)	80-120
Cobalt	anr								
Copper	anr								
Iron									
Lead	141	587 (b)	123.0*(a)	0-20	141	172 (b)	23.3	137.2(e)	80-120
Magnesium									
Manganese									
Molybdenum	anr								
Nickel	anr								
Potassium									
Selenium	0.44	0.89 (b)	200.0(c)	0-20	0.44	86.8 (b)	93.3	93.0	80-120
Silver	0.96	1.3	30.1 (c)	0-20	0.96	2.5	2.33	66.0N(d)	80-120
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

Associated samples MP32960: FA48865-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) High RPD due to possible sample non-homogeneity.

(b) Elevated reporting limit(s) due to matrix interference.

(c) RPD acceptable due to low duplicate and sample concentrations.

(d) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

(e) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA48865
 Account: TCMW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32960
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/06/17

Metal	FA48843-9 Original MSD		Spikelot MPFLICP2 % Rec		MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	10.9	91.6	107	75.1N(a)	18.9	20
Barium	105	202	107	90.3	14.9	20
Beryllium	anr					
Cadmium	3.3	4.6	2.68	70.8N(a)	6.7	20
Calcium						
Chromium	69.4	67.7	10.7	115.5	4.6	20
Cobalt	anr					
Copper	anr					
Iron						
Lead	141	177 (b)	26.8	137.8(c)	2.9	20
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	0.44	99.3 (b)	107	92.5	13.4	20
Silver	0.96	3.2	2.68	83.4	24.6 (d)	20
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP32960: FA48865-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

(b) Elevated reporting limit(s) due to matrix interference.

(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

(d) High RPD due to possible sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32960
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/06/17

Metal	BSP Result	Spike lot MPFLICP2 % Rec	QC Limits
Aluminum			
Antimony	anr		
Arsenic	97.3	100	97.3 80-120
Barium	106	100	106.0 80-120
Beryllium	anr		
Cadmium	2.6	2.5	104.0 80-120
Calcium			
Chromium	10.5	10	105.0 80-120
Cobalt	anr		
Copper	anr		
Iron			
Lead	24.8	25	99.2 80-120
Magnesium			
Manganese			
Molybdenum	anr		
Nickel	anr		
Potassium			
Selenium	96.8	100	96.8 80-120
Silver	2.6	2.5	104.0 80-120
Sodium			
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

Associated samples MP32960: FA48865-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32960
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/06/17

Metal	FA48843-9 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	186	221	18.7*(a)	0-10
Barium	1780	2160	21.6*(a)	0-10
Beryllium	anr			
Cadmium	55.5	55.9	21.0*(a)	0-10
Calcium				
Chromium	1180	1160	23.9*(a)	0-10
Cobalt	anr			
Copper	anr			
Iron				
Lead	2400	2380	0.2	0-10
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	7.40	0.00	NC	0-10
Silver	16.4	19.9	21.3 (b)	0-10
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP32960: FA48865-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32960
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

11/06/17

Metal	Sample ml	Final ml	FA48843-9 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	9.8	10	186	182.28	275.7	0.2	5	100	93.4	80-120
Barium	9.8	10	1777	1741.46	2038	0.2	12.5	250	118.6	80-120
Beryllium										
Cadmium	9.8	10	55.5	45.276	85.9	0.2	2.5	50	81.2	80-120
Calcium										
Chromium	9.8	10	1179	920.612	974.1	0.2	2.5	50	107.0	80-120
Cobalt										
Copper										
Iron										
Lead	9.8	10	2398	2332.4	2419	0.2	2.5	50	173.2*(a	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium	9.8	10	7.4		116.2	0.2	5	100	116.2	80-120
Silver	9.8	10	16.4	16.072	58.1	0.2	2.5	50	84.1	80-120
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP32960: FA48865-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(**) Corr. sample result = Raw * (sample volume / final volume)

(anr) Analyte not requested

(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA48865
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32970
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 11/08/17

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	0.0017	<0.042

Associated samples MP32970: FA48865-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32970
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/08/17 11/08/17

Metal	FA48865-1 Original DUP		RPD	QC Limits	FA48865-1 Original MS		Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.024	0.023	4.3	0-20	0.024	0.31	0.265	108.0	80-120

Associated samples MP32970: FA48865-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA48865
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32970
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/08/17

Metal	FA48865-1 Original MSD	Spike lot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.024	0.37	0.313	110.4	17.6

Associated samples MP32970: FA48865-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32970
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/08/17

Metal	BSP Result	Spike lot HGFLWS1	% Rec	QC Limits
Mercury	0.24	0.25	96.0	80-120

Associated samples MP32970: FA48865-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA48865
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32970
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: ug/l

Prep Date: 11/08/17

Metal	FA48865-1			QC Limits
	Original	SDL 1:1	%DIF	
Mercury	0.227	0.00	100.0(a)	0-10

Associated samples MP32970: FA48865-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

9.5.4

9

Instrument Detection Limits

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: LEEMANHG5	Effective Date: 10/01/12

Analyte	IDL ug/l
Mercury	.03

The above applies to the following instrument runs:
MA14485

Instrument Detection Limits

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: SSTRACE2	Effective Date: 01/27/15

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	1
Beryllium	.2
Cadmium	.2
Calcium	50
Chromium	1
Cobalt	.2
Copper	1
Iron	17
Lead	1
Magnesium	35
Manganese	.5
Molybdenum	.3
Nickel	.4
Potassium	200
Selenium	2.4
Silicon	5
Silver	.7
Sodium	500
Strontium	.5
Sulfur	5
Thallium	1.1
Tin	.9
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA14481,MA14484

Instrument Linear Ranges

Job Number: FA48865
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: SSTRACE2	Effective Date: 10/22/10

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA14481,MA14484

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Page 1 of 1

Job Number: FA48865
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: FA48865-1 **Analyzed:** 03-NOV-17 by JK **Method:** SM19 2540G
ClientID: NIKE SIDEWALL NORTH3 EXT

Wet Weight (Total)	14.75	g
Tare Weight	2.55	g
Dry Weight (Total)	12.28	g
Solids, Percent	79.8	%

Sample: FA48865-2 **Analyzed:** 03-NOV-17 by JK **Method:** SM19 2540G
ClientID: NIKE BOT NW1

Wet Weight (Total)	14.41	g
Tare Weight	2.53	g
Dry Weight (Total)	12.42	g
Solids, Percent	83.2	%

Sample: FA48865-3 **Analyzed:** 03-NOV-17 by JK **Method:** SM19 2540G
ClientID: NIKE SW2 WEST SIDEWALL

Wet Weight (Total)	16.25	g
Tare Weight	2.55	g
Dry Weight (Total)	14.69	g
Solids, Percent	88.6	%

Sample: FA48865-4 **Analyzed:** 03-NOV-17 by JK **Method:** SM19 2540G
ClientID: NIKE SIDEWALL NW1

Wet Weight (Total)	16.13	g
Tare Weight	2.55	g
Dry Weight (Total)	13.43	g
Solids, Percent	80.1	%

10.1
10

Technical Report for

Tantara Corporation

USACE Buffalo Nike Missile UST; E Aurora, NY

16-299

SGS Accutest Job Number: FA48965

Sampling Date: 11/01/17

Report to:

mlovejoy@tantaracorp.com
andrea.colby@sgs.com

ATTN: Distribution3

Total number of pages in report: 254



Test results contained within this data package meet the requirements
of the National Environmental Laboratory Accreditation Program
and/or state specific certification programs as applicable.



Caitlin Brice, M.S.
General Manager

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)
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AK, AR, GA, IA, KY, MA, NV, OK, OR, UT, WA

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Test results relate only to samples analyzed.

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Sample Summary

Tantara Corporation

Job No: FA48965

USACE Buffalo Nike Missile UST; E Aurora, NY
Project No: 16-299

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA48965-1	11/01/17	00:00 RF	11/02/17	SO	Soil	NIKE SWN EXT4
FA48965-2	11/01/17	00:00 RF	11/02/17	SO	Soil	NIKE BOT N3
FA48965-3	11/01/17	00:00 RF	11/02/17	SO	Soil	NIKE SWW2

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

2

Client: Tantara Corporation

Job No: FA48965

Site: USACE Buffalo Nike Missile UST; E Aurora, NY

Report Date 11/14/2017 4:14:25 PM

3 Sample(s) were collected on 11/01/2017 and were received at SGS Accutest Southeast (SASE) on 11/02/2017 properly preserved, at 3.4 Deg. C and intact. These Samples received an SASE job number of FA48965. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260C

Matrix: SO

Batch ID: V2B219

All samples were analyzed within the recommended method holding time.

Sample(s) FA48865-1MS, FA48865-1MSD were used as the QC samples indicated.

Sample(s) FA48965-2 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank. Blank Spike Recovery(s) for 1,2,3-Trichlorobenzene are outside control limits. Sporadic marginal failure.

Matrix Spike Recovery(s) for 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethylene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromo-3-chloropropane, 1,3,5-Trimethylbenzene, 2,2-Dichloropropane, Bromobenzene, Carbon Tetrachloride, Chloroethane, Dichlorodifluoromethane, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, m,p-Xylene, Methyl Chloride, n-Butylbenzene, n-Propylbenzene, o-Xylene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Tetrachloroethylene, Trichlorofluoromethane, Vinyl Chloride, Xylene (total) are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethylene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromo-3-chloropropane, 1,2-Dichlorobenzene, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2,2-Dichloropropane, Carbon Tetrachloride, Dichlorodifluoromethane, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, m,p-Xylene, n-Butylbenzene, n-Propylbenzene, o-Chlorotoluene, o-Xylene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Tetrachloroethylene, Trichlorofluoromethane, Vinyl Chloride, Xylene (total) are outside control limits. Probable cause is due to matrix interference. RPD(s) for MSD for 1,2,4-Trichlorobenzene are outside control limits for sample FA48865-1MSD. Probable cause is due to sample non-homogeneity.

Sample(s) FA48865-1MS, FA48965-2 have surrogates outside control limits.

V2B219-BS for 1,2,3-Trichlorobenzene: Sporadic marginal failure.

FA48965-2: Confirmation run for surrogate recoveries.

FA48965-2: Confirmation run for surrogate recoveries.

FA48965-2 for Methylene Chloride: Suspected laboratory contaminant.

FA48965-2 for 1,2,3-Trichlorobenzene: Associated BS recovery outside control limits.

MS Semi-volatiles By Method SW846 8270D

Matrix: SO

Batch ID: OP67546

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA49016-32MS, FA49016-32MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Pyridine are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Pyridine are outside control limits. Probable cause is due to matrix interference.

RPD(s) for MSD for Indeno(1,2,3-cd)pyrene are outside control limits for sample OP67546-MSD. Probable cause is due to sample non-homogeneity.

FA48965-2 for 3,3'-Dichlorobenzidine: Associated ICV outside DoD control limits.

FA48965-2 for Benzidine: Associated ICV outside DoD control limits.

FA48965-2 for 2,4-Dinitrophenol: Associated CCV outside of control limits high, sample was ND.

FA48965-2 for Hexachlorocyclopentadiene: Associated CCV outside of DoD control limits low.

MS Semi-volatiles By Method SW846 8270D BY SIM

Matrix: SO

Batch ID: OP67513

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48976-2MS, FA48976-2MSD were used as the QC samples indicated.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO

Batch ID: OP67491

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48936-1MS, FA48936-1MSD were used as the QC samples indicated.

FA48965-2 for Aroclor 1254: Associated CCV outside of DoD control limits high, sample was ND.

Metals Analysis By Method SW846 6010C

Matrix: SO

Batch ID: MP32972

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48995-1DUP, FA48995-1MS, FA48995-1MSD, FA48995-1PS, FA48995-1SDL were used as the QC samples.

Matrix Spike/Matrix Spike Duplicate Recovery(s) for Barium, Chromium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Matrix Spike Recovery(s) for Silver are outside control limits. Probable cause is due to matrix interference.

RPD(s) for Duplicate for Barium, Cadmium are outside control limits for sample MP32972-D1. High RPD due to possible sample non-homogeneity.

RPD(s) for MSD for Barium, Silver are outside control limits for sample MP32972-S2. High RPD due to possible sample non-homogeneity.

RPD(s) for Serial Dilution for Arsenic, Cadmium, Lead, Silver are outside control limits for sample MP32972-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

MP32972-S1 for Silver: Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MP32972-PS1 for Lead: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP32972-PS1 for Chromium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP32972-PS1 for Barium: Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

MP32972-D1 for Cadmium: RPD acceptable due to low duplicate and sample concentrations.

FA48965-2 for Arsenic: Sample dilution required due to difficult matrix.

FA48965-2 for Barium: Sample dilution required due to difficult matrix.

FA48965-2 for Silver: Sample dilution required due to difficult matrix.

FA48965-2 for Selenium: Sample dilution required due to difficult matrix.

FA48965-2 for Lead: Sample dilution required due to difficult matrix.

FA48965-2 for Cadmium: Sample dilution required due to difficult matrix.

FA48965-2 for Chromium: Sample dilution required due to difficult matrix.

Metals Analysis By Method SW846 7471B

Matrix: SO

Batch ID: MP32977

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48949-1DUP, FA48949-1MS, FA48949-1MSD, FA48949-1SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP32977-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

General Chemistry By Method SM19 2540G

Matrix: SO

Batch ID: GN76806

Sample(s) FA48965-1DUP were used as the QC samples for Solids, Percent.

Matrix: SO

Batch ID: GN76824

Sample(s) FA48962-1DUP were used as the QC samples for Solids, Percent.

SGS Accutest (SASE) certifies that this report meets the project requirements for analytical data produced for the samples as received at SASE and as stated on the COC. SASE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SASE Quality Manual except as noted above. This report is to be used in its entirety. SASE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Kim Benham, Client Services (signature on file)

Summary of Hits

Page 1 of 1

Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method

FA48965-1 **NIKE SWN EXT4**

No hits reported in this sample.

FA48965-2 **NIKE BOT N3**

Acetone	695 JB	2200	1100	ug/kg	SW846 8260C
Methylene Chloride ^a	354 J	430	220	ug/kg	SW846 8260C
Chrysene	28.7 J	200	40	ug/kg	SW846 8270D
Arsenic ^b	6.3	2.9	1.4	mg/kg	SW846 6010C
Barium ^b	22.0 J	57	0.57	mg/kg	SW846 6010C
Cadmium ^b	0.17 J	1.1	0.29	mg/kg	SW846 6010C
Chromium ^b	10.8	2.9	0.57	mg/kg	SW846 6010C
Lead ^b	8.7	5.7	1.1	mg/kg	SW846 6010C
Mercury	0.011 J	0.048	0.019	mg/kg	SW846 7471B

FA48965-3 **NIKE SWW2**

Toluene	2.5 J	3.4	1.4	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene	0.89 J	3.4	1.4	ug/kg	SW846 8260C

(a) Suspected laboratory contaminant.

(b) Sample dilution required due to difficult matrix.

Sample Results

Report of Analysis

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SWN EXT4		
Lab Sample ID:	FA48965-1	Date Sampled:	11/01/17
Matrix:	SO - Soil	Date Received:	11/02/17
Method:	SW846 8260C	Percent Solids:	83.8
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5918.D	1	11/02/17 12:19	EP	n/a	n/a	V2B219
Run #2							

	Initial Weight	Final Volume
Run #1	6.71 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.8 U	4.4	1.8	1.1	ug/kg	
104-51-8	n-Butylbenzene	1.8 U	4.4	1.8	0.89	ug/kg	
135-98-8	sec-Butylbenzene	1.8 U	4.4	1.8	0.89	ug/kg	
98-06-6	tert-Butylbenzene	1.8 U	4.4	1.8	0.89	ug/kg	
100-41-4	Ethylbenzene	1.8 U	4.4	1.8	0.89	ug/kg	
98-82-8	Isopropylbenzene	1.8 U	4.4	1.8	0.89	ug/kg	
99-87-6	p-Isopropyltoluene	1.8 U	4.4	1.8	0.89	ug/kg	
103-65-1	n-Propylbenzene	1.8 U	4.4	1.8	0.89	ug/kg	
108-88-3	Toluene	1.8 U	4.4	1.8	0.89	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.8 U	4.4	1.8	0.89	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	1.8 U	4.4	1.8	0.89	ug/kg	
1330-20-7	Xylene (total)	5.3 U	13	5.3	1.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		75-124%
17060-07-0	1,2-Dichloroethane-D4	103%		72-135%
2037-26-5	Toluene-D8	95%		75-126%
460-00-4	4-Bromofluorobenzene	113%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SWN EXT4				
Lab Sample ID:	FA48965-1			Date Sampled:	11/01/17
Matrix:	SO - Soil			Date Received:	11/02/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	83.8
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103917.D	1	11/08/17 13:42	FS	11/04/17 14:15	OP67513	SW4517
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	38 U	77	38	31	ug/kg	
208-96-8	Acenaphthylene	38 U	77	38	31	ug/kg	
120-12-7	Anthracene	38 U	77	38	19	ug/kg	
56-55-3	Benzo(a)anthracene	7.7 U	15	7.7	3.8	ug/kg	
50-32-8	Benzo(a)pyrene	7.7 U	15	7.7	3.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	7.7 U	15	7.7	3.8	ug/kg	
191-24-2	Benzo(g,h,i)perylene	7.7 U	15	7.7	3.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.7 U	15	7.7	3.8	ug/kg	
218-01-9	Chrysene	7.7 U	15	7.7	3.8	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	7.7 U	15	7.7	3.8	ug/kg	
206-44-0	Fluoranthene	38 U	77	38	19	ug/kg	
86-73-7	Fluorene	38 U	77	38	31	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	7.7 U	15	7.7	3.8	ug/kg	
91-20-3	Naphthalene	38 U	77	38	31	ug/kg	
85-01-8	Phenanthrene	38 U	77	38	19	ug/kg	
129-00-0	Pyrene	38 U	77	38	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		40-105%
321-60-8	2-Fluorobiphenyl	71%		43-107%
1718-51-0	Terphenyl-d14	87%		45-119%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 3

Client Sample ID:	NIKE BOT N3		
Lab Sample ID:	FA48965-2	Date Sampled:	11/01/17
Matrix:	SO - Soil	Date Received:	11/02/17
Method:	SW846 8260C	Percent Solids:	83.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5922.D	1	11/02/17 14:45	EP	n/a	n/a	V2B219
Run #2 ^a	2B5919.D	1	11/02/17 12:43	EP	n/a	n/a	V2B219
Run #3 ^a	2B5921.D	1	11/02/17 14:21	EP	n/a	n/a	V2B219

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.05 g	5.0 ml	100 ul
Run #2	9.09 g	5.0 ml	
Run #3	10.6 g	5.0 ml	

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone	695	2200	1100	430	ug/kg	JB
71-43-2	Benzene	86 U	220	86	53	ug/kg	
108-86-1	Bromobenzene	86 U	220	86	43	ug/kg	
74-97-5	Bromochloromethane	86 U	220	86	64	ug/kg	
75-27-4	Bromodichloromethane	86 U	220	86	43	ug/kg	
75-25-2	Bromoform	86 U	220	86	43	ug/kg	
78-93-3	2-Butanone (MEK)	650 U	1100	650	310	ug/kg	
104-51-8	n-Butylbenzene	86 U	220	86	43	ug/kg	
135-98-8	sec-Butylbenzene	86 U	220	86	43	ug/kg	
98-06-6	tert-Butylbenzene	86 U	220	86	43	ug/kg	
75-15-0	Carbon Disulfide	86 U	220	86	43	ug/kg	
56-23-5	Carbon Tetrachloride	86 U	220	86	44	ug/kg	
108-90-7	Chlorobenzene	86 U	220	86	43	ug/kg	
75-00-3	Chloroethane	150 U	220	150	86	ug/kg	
67-66-3	Chloroform	86 U	220	86	57	ug/kg	
95-49-8	o-Chlorotoluene	86 U	220	86	43	ug/kg	
106-43-4	p-Chlorotoluene	86 U	220	86	43	ug/kg	
124-48-1	Dibromochloromethane	86 U	220	86	43	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	150 U	220	150	83	ug/kg	
106-93-4	1,2-Dibromoethane	86 U	220	86	43	ug/kg	
75-71-8	Dichlorodifluoromethane	150 U	220	150	86	ug/kg	
95-50-1	1,2-Dichlorobenzene	86 U	220	86	43	ug/kg	
541-73-1	1,3-Dichlorobenzene	86 U	220	86	43	ug/kg	
106-46-7	1,4-Dichlorobenzene	86 U	220	86	50	ug/kg	
75-34-3	1,1-Dichloroethane	86 U	220	86	76	ug/kg	
107-06-2	1,2-Dichloroethane	86 U	220	86	43	ug/kg	
75-35-4	1,1-Dichloroethylene	86 U	220	86	43	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	86 U	220	86	59	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	86 U	220	86	43	ug/kg	
78-87-5	1,2-Dichloropropane	86 U	220	86	43	ug/kg	

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 3

Client Sample ID:	NIKE BOT N3		
Lab Sample ID:	FA48965-2	Date Sampled:	11/01/17
Matrix:	SO - Soil	Date Received:	11/02/17
Method:	SW846 8260C	Percent Solids:	83.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
142-28-9	1,3-Dichloropropane	86 U	220	86	43	ug/kg	
594-20-7	2,2-Dichloropropane	86 U	220	86	43	ug/kg	
563-58-6	1,1-Dichloropropene	86 U	220	86	44	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	86 U	220	86	43	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	86 U	220	86	43	ug/kg	
100-41-4	Ethylbenzene	86 U	220	86	43	ug/kg	
87-68-3	Hexachlorobutadiene	86 U	220	86	56	ug/kg	
591-78-6	2-Hexanone	650 U	1100	650	320	ug/kg	
98-82-8	Isopropylbenzene	86 U	220	86	43	ug/kg	
99-87-6	p-Isopropyltoluene	86 U	220	86	43	ug/kg	
74-83-9	Methyl Bromide	150 U	220	150	86	ug/kg	
74-87-3	Methyl Chloride	150 U	220	150	86	ug/kg	
74-95-3	Methylene Bromide	86 U	220	86	43	ug/kg	
75-09-2	Methylene Chloride ^b	354	430	220	170	ug/kg	J
108-10-1	4-Methyl-2-pentanone (MIBK)	650 U	1100	650	320	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	86 U	220	86	43	ug/kg	
91-20-3	Naphthalene	150 U	220	150	86	ug/kg	
103-65-1	n-Propylbenzene	86 U	220	86	43	ug/kg	
100-42-5	Styrene	86 U	220	86	43	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	86 U	220	86	44	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	86 U	220	86	43	ug/kg	
127-18-4	Tetrachloroethylene	86 U	220	86	55	ug/kg	
108-88-3	Toluene	86 U	220	86	43	ug/kg	
87-61-6	1,2,3-Trichlorobenzene ^C	150 U	220	150	60	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	150 U	220	150	43	ug/kg	
71-55-6	1,1,1-Trichloroethane	86 U	220	86	43	ug/kg	
79-00-5	1,1,2-Trichloroethane	86 U	220	86	43	ug/kg	
79-01-6	Trichloroethylene	86 U	220	86	43	ug/kg	
75-69-4	Trichlorofluoromethane	150 U	220	150	86	ug/kg	
96-18-4	1,2,3-Trichloropropane	150 U	220	150	54	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	86 U	220	86	43	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	86 U	220	86	43	ug/kg	
108-05-4	Vinyl Acetate	860 U	1100	860	710	ug/kg	
75-01-4	Vinyl Chloride	86 U	220	86	43	ug/kg	
	m,p-Xylene	170 U	430	170	47	ug/kg	
95-47-6	o-Xylene	86 U	220	86	43	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	96%	98%	107%	75-124%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 3 of 3

Client Sample ID:	NIKE BOT N3	Date Sampled:	11/01/17
Lab Sample ID:	FA48965-2	Date Received:	11/02/17
Matrix:	SO - Soil	Percent Solids:	83.4
Method:	SW846 8260C		
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
17060-07-0	1,2-Dichloroethane-D4	99%	98%	102%	72-135%
2037-26-5	Toluene-D8	100%	129% ^d	124%	75-126%
460-00-4	4-Bromofluorobenzene	105%	155% ^e	163% ^e	71-133%

- (a) Confirmation run for surrogate recoveries.
 (b) Suspected laboratory contaminant.
 (c) Associated BS recovery outside control limits.
 (d) Outside control limits due to matrix interference.
 (e) Outside control limits due to matrix interference. Confirmed by reanalysis.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
 LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 3

Client Sample ID:	NIKE BOT N3			Date Sampled:	11/01/17
Lab Sample ID:	FA48965-2			Date Received:	11/02/17
Matrix:	SO - Soil			Percent Solids:	83.4
Method:	SW846 8270D SW846 3550C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X057138.D	1	11/13/17 17:01	MV	11/07/17 09:00	OP67546	SX2400
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
65-85-0	Benzoic Acid	400 U	990	400	200	ug/kg	
59-50-7	4-Chloro-3-methyl Phenol	40 U	200	40	22	ug/kg	
95-57-8	2-Chlorophenol	40 U	200	40	24	ug/kg	
120-83-2	2,4-Dichlorophenol	40 U	200	40	23	ug/kg	
105-67-9	2,4-Dimethylphenol	79 U	200	79	53	ug/kg	
51-28-5	2,4-Dinitrophenol ^a	600 U	990	600	200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	160 U	400	160	79	ug/kg	
95-48-7	2-Methylphenol	40 U	200	40	24	ug/kg	
	3&4-Methylphenol	79 U	200	79	33	ug/kg	
88-75-5	2-Nitrophenol	40 U	200	40	22	ug/kg	
100-02-7	4-Nitrophenol	400 U	990	400	200	ug/kg	
87-86-5	Pentachlorophenol	400 U	990	400	200	ug/kg	
108-95-2	Phenol	40 U	200	40	20	ug/kg	
95-95-4	2,4,5-Trichlorophenol	40 U	200	40	32	ug/kg	
88-06-2	2,4,6-Trichlorophenol	40 U	200	40	23	ug/kg	
83-32-9	Acenaphthene	40 U	200	40	21	ug/kg	
208-96-8	Acenaphthylene	40 U	200	40	20	ug/kg	
62-53-3	Aniline	79 U	200	79	42	ug/kg	
120-12-7	Anthracene	40 U	200	40	22	ug/kg	
92-87-5	Benzidine ^b	990 U	2000	990	400	ug/kg	
56-55-3	Benzo(a)anthracene	40 U	200	40	20	ug/kg	
50-32-8	Benzo(a)pyrene	40 U	200	40	23	ug/kg	
205-99-2	Benzo(b)fluoranthene	40 U	200	40	22	ug/kg	
191-24-2	Benzo(g,h,i)perylene	40 U	200	40	21	ug/kg	
207-08-9	Benzo(k)fluoranthene	40 U	200	40	26	ug/kg	
100-51-6	Benzyl Alcohol	40 U	200	40	20	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	40 U	200	40	21	ug/kg	
85-68-7	Butyl benzyl phthalate	79 U	200	79	40	ug/kg	
86-74-8	Carbazole	40 U	200	40	28	ug/kg	
106-47-8	4-Chloroaniline	79 U	200	79	50	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	40 U	200	40	20	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	40 U	200	40	23	ug/kg	

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 3

Client Sample ID:	NIKE BOT N3		
Lab Sample ID:	FA48965-2	Date Sampled:	11/01/17
Matrix:	SO - Soil	Date Received:	11/02/17
Method:	SW846 8270D SW846 3550C	Percent Solids:	83.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

ABN Full List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	40 U	200	40	25	ug/kg	
91-58-7	2-Chloronaphthalene	40 U	200	40	20	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	40 U	200	40	20	ug/kg	
218-01-9	Chrysene	28.7	200	40	20	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	40 U	200	40	25	ug/kg	
132-64-9	Dibenzofuran	40 U	200	40	20	ug/kg	
95-50-1	1,2-Dichlorobenzene	79 U	200	79	20	ug/kg	
541-73-1	1,3-Dichlorobenzene	79 U	200	79	21	ug/kg	
106-46-7	1,4-Dichlorobenzene	79 U	200	79	26	ug/kg	
91-94-1	3,3'-Dichlorobenzidine ^b	79 U	200	79	47	ug/kg	
84-66-2	Diethyl Phthalate	140 U	400	140	40	ug/kg	
131-11-3	Dimethyl Phthalate	79 U	200	79	40	ug/kg	
117-84-0	Di-n-octyl Phthalate	79 U	200	79	40	ug/kg	
84-74-2	Di-n-butyl Phthalate	140 U	400	140	79	ug/kg	
121-14-2	2,4-Dinitrotoluene	40 U	200	40	20	ug/kg	
606-20-2	2,6-Dinitrotoluene	40 U	200	40	26	ug/kg	
122-66-7	1,2-Diphenylhydrazine	40 U	200	40	20	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	140 U	400	140	40	ug/kg	
206-44-0	Fluoranthene	40 U	200	40	20	ug/kg	
86-73-7	Fluorene	40 U	200	40	21	ug/kg	
118-74-1	Hexachlorobenzene	40 U	200	40	20	ug/kg	
87-68-3	Hexachlorobutadiene	79 U	200	79	20	ug/kg	
77-47-4	Hexachlorocyclopentadiene ^c	79 U	200	79	40	ug/kg	
67-72-1	Hexachloroethane	79 U	200	79	23	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	40 U	200	40	24	ug/kg	
78-59-1	Isophorone	40 U	200	40	20	ug/kg	
90-12-0	1-Methylnaphthalene	40 U	200	40	20	ug/kg	
91-57-6	2-Methylnaphthalene	40 U	200	40	20	ug/kg	
91-20-3	Naphthalene	40 U	200	40	20	ug/kg	
88-74-4	2-Nitroaniline	79 U	200	79	46	ug/kg	
99-09-2	3-Nitroaniline	79 U	200	79	23	ug/kg	
100-01-6	4-Nitroaniline	79 U	200	79	57	ug/kg	
98-95-3	Nitrobenzene	40 U	200	40	20	ug/kg	
62-75-9	N-Nitrosodimethylamine	79 U	200	79	33	ug/kg	
621-64-7	N-Nitrosodi-n-propylamine	40 U	200	40	20	ug/kg	
86-30-6	N-Nitrosodiphenylamine	79 U	200	79	21	ug/kg	
85-01-8	Phenanthrene	40 U	200	40	20	ug/kg	
129-00-0	Pyrene	40 U	200	40	23	ug/kg	
110-86-1	Pyridine	140 U	400	140	79	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	40 U	200	40	23	ug/kg	

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 3 of 3

Client Sample ID:	NIKE BOT N3		
Lab Sample ID:	FA48965-2	Date Sampled:	11/01/17
Matrix:	SO - Soil	Date Received:	11/02/17
Method:	SW846 8270D SW846 3550C	Percent Solids:	83.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	67%		40-102%
4165-62-2	Phenol-d5	66%		41-100%
118-79-6	2,4,6-Tribromophenol	83%		42-108%
4165-60-0	Nitrobenzene-d5	68%		40-105%
321-60-8	2-Fluorobiphenyl	74%		43-107%
1718-51-0	Terphenyl-d14	85%		45-119%

(a) Associated CCV outside of control limits high, sample was ND.

(b) Associated ICV outside DoD control limits.

(c) Associated CCV outside of DoD control limits low.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE BOT N3				
Lab Sample ID:	FA48965-2			Date Sampled:	11/01/17
Matrix:	SO - Soil			Date Received:	11/02/17
Method:	SW846 8082A SW846 8011 M			Percent Solids:	83.4
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM46636.D	1	11/07/17 01:44	NJ	11/03/17 10:10	OP67491	GMM892
Run #2							

	Initial Weight	Final Volume
Run #1	15.2 g	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
12674-11-2	Aroclor 1016	14 U	20	14	7.9	ug/kg	
11104-28-2	Aroclor 1221	14 U	20	14	9.9	ug/kg	
11141-16-5	Aroclor 1232	14 U	20	14	9.9	ug/kg	
53469-21-9	Aroclor 1242	14 U	20	14	7.9	ug/kg	
12672-29-6	Aroclor 1248	14 U	20	14	7.9	ug/kg	
11097-69-1	Aroclor 1254 ^a	14 U	20	14	7.9	ug/kg	
11096-82-5	Aroclor 1260	14 U	20	14	7.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	74%		44-126%
2051-24-3	Decachlorobiphenyl	86%		41-145%

(a) Associated CCV outside of DoD control limits high, sample was ND.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: NIKE BOT N3

Lab Sample ID: FA48965-2

Matrix: SO - Soil

Date Sampled: 11/01/17

Date Received: 11/02/17

Percent Solids: 83.4

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic ^a	6.3	2.9	1.4	0.57	mg/kg	5	11/08/17	11/08/17 LM	SW846 6010C ¹	SW846 3050B ³
Barium ^a	22.0 J	57	0.57	0.29	mg/kg	5	11/08/17	11/08/17 LM	SW846 6010C ¹	SW846 3050B ³
Cadmium ^a	0.17 J	1.1	0.29	0.14	mg/kg	5	11/08/17	11/08/17 LM	SW846 6010C ¹	SW846 3050B ³
Chromium ^a	10.8	2.9	0.57	0.29	mg/kg	5	11/08/17	11/08/17 LM	SW846 6010C ¹	SW846 3050B ³
Lead ^a	8.7	5.7	1.1	0.29	mg/kg	5	11/08/17	11/08/17 LM	SW846 6010C ¹	SW846 3050B ³
Mercury	0.011 J	0.048	0.019	0.0048	mg/kg	1	11/09/17	11/09/17 DM	SW846 7471B ²	SW846 7471B ⁴
Selenium ^a	1.4 U	5.7	1.4	0.69	mg/kg	5	11/08/17	11/08/17 LM	SW846 6010C ¹	SW846 3050B ³
Silver ^a	0.57 U	2.9	0.57	0.23	mg/kg	5	11/08/17	11/08/17 LM	SW846 6010C ¹	SW846 3050B ³

(1) Instrument QC Batch: MA14487

(2) Instrument QC Batch: MA14488

(3) Prep QC Batch: MP32972

(4) Prep QC Batch: MP32977

(a) Sample dilution required due to difficult matrix.

LOQ = Limit of Quantitation

DL = Detection Limit

U = Indicates a result < LOD

LOD = Limit of Detection

B = Analyte found in associated blank

J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SWW2		
Lab Sample ID:	FA48965-3	Date Sampled:	11/01/17
Matrix:	SO - Soil	Date Received:	11/02/17
Method:	SW846 8260C	Percent Solids:	80.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2B5920.D	1	11/02/17 13:07	EP	n/a	n/a	V2B219
Run #2							

	Initial Weight	Final Volume
Run #1	9.10 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
71-43-2	Benzene	1.4 U	3.4	1.4	0.84	ug/kg	
104-51-8	n-Butylbenzene	1.4 U	3.4	1.4	0.69	ug/kg	
135-98-8	sec-Butylbenzene	1.4 U	3.4	1.4	0.69	ug/kg	
98-06-6	tert-Butylbenzene	1.4 U	3.4	1.4	0.69	ug/kg	
100-41-4	Ethylbenzene	1.4 U	3.4	1.4	0.69	ug/kg	
98-82-8	Isopropylbenzene	1.4 U	3.4	1.4	0.69	ug/kg	
99-87-6	p-Isopropyltoluene	1.4 U	3.4	1.4	0.69	ug/kg	
103-65-1	n-Propylbenzene	1.4 U	3.4	1.4	0.69	ug/kg	
108-88-3	Toluene	2.5	3.4	1.4	0.69	ug/kg	J
95-63-6	1,2,4-Trimethylbenzene	0.89	3.4	1.4	0.69	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	1.4 U	3.4	1.4	0.69	ug/kg	
1330-20-7	Xylene (total)	4.1 U	10	4.1	1.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		75-124%
17060-07-0	1,2-Dichloroethane-D4	96%		72-135%
2037-26-5	Toluene-D8	108%		75-126%
460-00-4	4-Bromofluorobenzene	122%		71-133%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	NIKE SWW2				
Lab Sample ID:	FA48965-3			Date Sampled:	11/01/17
Matrix:	SO - Soil			Date Received:	11/02/17
Method:	SW846 8270D BY SIM SW846 3546			Percent Solids:	80.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W103918.D	1	11/08/17 14:08	FS	11/04/17 14:15	OP67513	SW4517
Run #2							

	Initial Weight	Final Volume
Run #1	15.5 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
83-32-9	Acenaphthene	40 U	81	40	32	ug/kg	
208-96-8	Acenaphthylene	40 U	81	40	32	ug/kg	
120-12-7	Anthracene	40 U	81	40	20	ug/kg	
56-55-3	Benzo(a)anthracene	8.1 U	16	8.1	4.0	ug/kg	
50-32-8	Benzo(a)pyrene	8.1 U	16	8.1	4.0	ug/kg	
205-99-2	Benzo(b)fluoranthene	8.1 U	16	8.1	4.0	ug/kg	
191-24-2	Benzo(g,h,i)perylene	8.1 U	16	8.1	4.0	ug/kg	
207-08-9	Benzo(k)fluoranthene	8.1 U	16	8.1	4.0	ug/kg	
218-01-9	Chrysene	8.1 U	16	8.1	4.0	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	8.1 U	16	8.1	4.0	ug/kg	
206-44-0	Fluoranthene	40 U	81	40	20	ug/kg	
86-73-7	Fluorene	40 U	81	40	32	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	8.1 U	16	8.1	4.0	ug/kg	
91-20-3	Naphthalene	40 U	81	40	32	ug/kg	
85-01-8	Phenanthrene	40 U	81	40	20	ug/kg	
129-00-0	Pyrene	40 U	81	40	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	83%		40-105%
321-60-8	2-Fluorobiphenyl	74%		43-107%
1718-51-0	Terphenyl-d14	99%		45-119%

U = Not detected

LOD = Limit of Detection

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LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

Client / Reporting Information		Project Information		SGS Accutest Quote #		SKIFF #																																																																																																																																																																																																																																																																																																																																																																				
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Project Contact: Mark Lovejoy Email:		Project # 16299																																																																																																																																																																																																																																																																																																																																																																								
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Sampler(s) Name(s) (Printed)		Client Purchase Order #																																																																																																																																																																																																																																																																																																																																																																								
Sampler 1: ~		Sampler 2:																																																																																																																																																																																																																																																																																																																																																																								
SGS Accutest Sample #		COLLECTION		CONTAINER INFORMATION												Matrix Codes																																																																																																																																																																																																																																																																																																																																																										
Field ID / Point of Collection		DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	PC11	PC12	PC13	PC14	PC15	PC16	PC17	PC18	PC19	PC20	PC21	PC22	PC23	PC24	PC25	PC26	PC27	PC28	PC29	PC30	PC31	PC32	PC33	PC34	PC35	PC36	PC37	PC38	PC39	PC40	PC41	PC42	PC43	PC44	PC45	PC46	PC47	PC48	PC49	PC50	PC51	PC52	PC53	PC54	PC55	PC56	PC57	PC58	PC59	PC60	PC61	PC62	PC63	PC64	PC65	PC66	PC67	PC68	PC69	PC70	PC71	PC72	PC73	PC74	PC75	PC76	PC77	PC78	PC79	PC80	PC81	PC82	PC83	PC84	PC85	PC86	PC87	PC88	PC89	PC90	PC91	PC92	PC93	PC94	PC95	PC96	PC97	PC98	PC99	PC100	PC101	PC102	PC103	PC104	PC105	PC106	PC107	PC108	PC109	PC110	PC111	PC112	PC113	PC114	PC115	PC116	PC117	PC118	PC119	PC120	PC121	PC122	PC123	PC124	PC125	PC126	PC127	PC128	PC129	PC130	PC131	PC132	PC133	PC134	PC135	PC136	PC137	PC138	PC139	PC140	PC141	PC142	PC143	PC144	PC145	PC146	PC147	PC148	PC149	PC150	PC151	PC152	PC153	PC154	PC155	PC156	PC157	PC158	PC159	PC160	PC161	PC162	PC163	PC164	PC165	PC166	PC167	PC168	PC169	PC170	PC171	PC172	PC173	PC174	PC175	PC176	PC177	PC178	PC179	PC180	PC181	PC182	PC183	PC184	PC185	PC186	PC187	PC188	PC189	PC190	PC191	PC192	PC193	PC194	PC195	PC196	PC197	PC198	PC199	PC200	PC201	PC202	PC203	PC204	PC205	PC206	PC207	PC208	PC209	PC210	PC211	PC212	PC213	PC214	PC215	PC216	PC217	PC218	PC219	PC220	PC221	PC222	PC223	PC224	PC225	PC226	PC227	PC228	PC229	PC230	PC231	PC232	PC233	PC234	PC235	PC236	PC237	PC238	PC239	PC240	PC241	PC242	PC243	PC244	PC245	PC246	PC247	PC248	PC249	PC250	PC251	PC252	PC253	PC254	PC255	PC256	PC257	PC258	PC259	PC260	PC261	PC262	PC263	PC264	PC265	PC266	PC267	PC268	PC269	PC270	PC271	PC272	PC273	PC274	PC275	PC276	PC277	PC278	PC279	PC280	PC281	PC282	PC283	PC284	PC285	PC286	PC287	PC288	PC289	PC290	PC291	PC292	PC293	PC294	PC295	PC296	PC297	PC298	PC299	PC300	PC301	PC302	PC303	PC304	PC305	PC306	PC307	PC308	PC309	PC310	PC311	PC312	PC313	PC314	PC315	PC316	PC317	PC318	PC319	PC320	PC321	PC322	PC323	PC324	PC325	PC326	PC327	PC328	PC329	PC330	PC331	PC332	PC333	PC334	PC335	PC336	PC337	PC338	PC339	PC340	PC341	PC342	PC343	PC344	PC345	PC346	PC347	PC348	PC349	PC350	PC351	PC352	PC353	PC354

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FA48965: Chain of Custody

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SGS Accutest Sample Receipt Summary

Job Number: FA48965

Client: TANTARA CORP

Project: 16-299

Date / Time Received: 11/2/2017 7:00:00 AM

Delivery Method: FX

Airbill #'s: 1002261920160003281100811162167551

Therm ID: IR 1;

Therm CF: 0.4;

of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (3.0);

Cooler Temps (Corrected) °C: Cooler 1: (3.4);

Cooler Information

Y or N

1. Custody Seals Present ☒ ☐
2. Custody Seals Intact ☒ ☐
3. Temp criteria achieved ☒ ☐
4. Cooler temp verification IR Gun
5. Cooler media Ice (Bag)

Trip Blank Information

Y or N N/A

1. Trip Blank present / cooler ☐ ☐ ☒
2. Trip Blank listed on COC ☐ ☐ ☒

W or S N/A

3. Type Of TB Received ☐ ☐ ☒

Sample Information

Y or N N/A

1. Sample labels present on bottles ☒ ☐
2. Samples preserved properly ☒ ☐
3. Sufficient volume/containers recvd for analysis: ☒ ☐
4. Condition of sample Intact
5. Sample recvd within HT ☒ ☐
6. Dates/Times/IDs on COC match Sample Label ☒ ☐
7. VOCs have headspace ☐ ☐ ☒
8. Bottles received for unspecified tests ☐ ☒ ☐
9. Compositing instructions clear ☐ ☐ ☒
10. Voa Soil Kits/Jars received past 48hrs? ☐ ☐ ☒
11. % Solids Jar received? ☐ ☐ ☒
12. Residual Chlorine Present? ☐ ☐ ☒

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____

Test Strip Lot #s: pH 0-3 230315

Residual Chlorine Test Strip Lot #: _____

Number of 5035 Field Kits: 3

pH 10-12 219813A

Number of Lab Filtered Metals: _____

Other: (Specify) _____

Comments NO TIMES ON COC o LABELS

SM001
Rev. Date 05/24/17

Technician: JORGE C

Date: 11/2/2017 7:00:00 AM

Reviewer: P.H

Date: 11/2/2017

FA48965: Chain of Custody

Page 2 of 3

Job Change Order: FA48965

Requested Date:	11/2/2017	Received Date:	11/2/2017
Account Name:	Tantara Corporation	Due Date:	11/9/2017
Project Description:	USACE Buffalo Nike Missile UST; E Aurora, NY	Deliverable:	FULT1
CSR:	andreac	TAT (Days):	7

=====

Sample #:	FA48965-1,3	Change:	
Dept:			Please report V8260SL and B8270SIMPASL for 8260 and 8270.
TAT:	7		

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Sample #:	FA48965-2	Change:	
Dept:			Please report V8260STD and AB8270STD for 8260 and 8270.
TAT:	7		

NIKE BOT N3

=====

FA48965: Chain of Custody

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Above Changes Per: Mark Lovejoy

Date/Time: 11/2/2017 3:04:18 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

Page 1 of 1

QC Evaluation: DOD QSM5 Limits

Page 1 of 19

Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V2B219	SW846 8260C						
V2B219-BS	67-64-1	Acetone	BSP	REC	106	%	36-164
V2B219-BS	71-43-2	Benzene	BSP	REC	101	%	77-121
V2B219-BS	108-86-1	Bromobenzene	BSP	REC	102	%	78-121
V2B219-BS	74-97-5	Bromochloromethane	BSP	REC	89	%	78-125
V2B219-BS	75-27-4	Bromodichloromethane	BSP	REC	95	%	75-127
V2B219-BS	75-25-2	Bromoform	BSP	REC	96	%	67-132
V2B219-BS	78-93-3	2-Butanone (MEK)	BSP	REC	101	%	51-148
V2B219-BS	104-51-8	n-Butylbenzene	BSP	REC	91	%	70-128
V2B219-BS	135-98-8	sec-Butylbenzene	BSP	REC	88	%	73-126
V2B219-BS	98-06-6	tert-Butylbenzene	BSP	REC	88	%	73-125
V2B219-BS	75-15-0	Carbon Disulfide	BSP	REC	84	%	63-132
V2B219-BS	56-23-5	Carbon Tetrachloride	BSP	REC	86	%	70-135
V2B219-BS	108-90-7	Chlorobenzene	BSP	REC	92	%	79-120
V2B219-BS	75-00-3	Chloroethane	BSP	REC	100	%	59-139
V2B219-BS	67-66-3	Chloroform	BSP	REC	90	%	78-123
V2B219-BS	95-49-8	o-Chlorotoluene	BSP	REC	90	%	75-122
V2B219-BS	106-43-4	p-Chlorotoluene	BSP	REC	89	%	72-124
V2B219-BS	124-48-1	Dibromochloromethane	BSP	REC	96	%	74-126
V2B219-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	85	%	61-132
V2B219-BS	106-93-4	1,2-Dibromoethane	BSP	REC	96	%	78-122
V2B219-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	84	%	29-149
V2B219-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	88	%	78-121
V2B219-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	90	%	77-121
V2B219-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	88	%	75-120
V2B219-BS	75-34-3	1,1-Dichloroethane	BSP	REC	94	%	76-125
V2B219-BS	107-06-2	1,2-Dichloroethane	BSP	REC	92	%	73-128
V2B219-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	86	%	70-131
V2B219-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	92	%	77-123
V2B219-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	90	%	74-125
V2B219-BS	78-87-5	1,2-Dichloropropane	BSP	REC	94	%	76-123
V2B219-BS	142-28-9	1,3-Dichloropropane	BSP	REC	91	%	77-121
V2B219-BS	594-20-7	2,2-Dichloropropane	BSP	REC	89	%	67-133
V2B219-BS	563-58-6	1,1-Dichloropropene	BSP	REC	87	%	76-125
V2B219-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	97	%	74-126
V2B219-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	102	%	71-130
V2B219-BS	100-41-4	Ethylbenzene	BSP	REC	97	%	76-122
V2B219-BS	87-68-3	Hexachlorobutadiene	BSP	REC	78	%	61-135
V2B219-BS	591-78-6	2-Hexanone	BSP	REC	100	%	53-145
V2B219-BS	98-82-8	Isopropylbenzene	BSP	REC	89	%	68-134
V2B219-BS	99-87-6	p-Isopropyltoluene	BSP	REC	96	%	73-127
V2B219-BS	74-83-9	Methyl Bromide	BSP	REC	92	%	53-143
V2B219-BS	74-87-3	Methyl Chloride	BSP	REC	86	%	50-136

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
V2B219-BS	74-95-3	Methylene Bromide	BSP	REC	95	%	78-125
V2B219-BS	75-09-2	Methylene Chloride	BSP	REC	90	%	70-128
V2B219-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	96	%	65-135
V2B219-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	89	%	73-125
V2B219-BS	91-20-3	Naphthalene	BSP	REC	83	%	62-129
V2B219-BS	103-65-1	n-Propylbenzene	BSP	REC	90	%	73-125
V2B219-BS	100-42-5	Styrene	BSP	REC	96	%	76-124
V2B219-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	94	%	78-125
V2B219-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	94	%	70-124
V2B219-BS	127-18-4	Tetrachloroethylene	BSP	REC	89	%	73-128
V2B219-BS	108-88-3	Toluene	BSP	REC	98	%	77-121
V2B219-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	76 ^a	%	66-130
V2B219-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	83	%	67-129
V2B219-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	88	%	73-130
V2B219-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	95	%	78-121
V2B219-BS	79-01-6	Trichloroethylene	BSP	REC	93	%	77-123
V2B219-BS	75-69-4	Trichlorofluoromethane	BSP	REC	90	%	62-140
V2B219-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	95	%	73-125
V2B219-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	97	%	75-123
V2B219-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	95	%	73-124
V2B219-BS	108-05-4	Vinyl Acetate	BSP	REC	90	%	50-151
V2B219-BS	75-01-4	Vinyl Chloride	BSP	REC	87	%	56-135
V2B219-BS		m,p-Xylene	BSP	REC	94	%	77-124
V2B219-BS	95-47-6	o-Xylene	BSP	REC	88	%	77-123
V2B219-BS	1330-20-7	Xylene (total)	BSP	REC	92	%	78-124
V2B219-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	99	%	78-119
V2B219-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	96	%	71-136
V2B219-BS	2037-26-5	Toluene-D8	BSP	SURR	98	%	85-116
V2B219-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	103	%	79-119
FA48865-1MS*	67-64-1	Acetone	MS	REC	76	%	36-164
FA48865-1MS*	71-43-2	Benzene	MS	REC	88	%	77-121
FA48865-1MS*	108-86-1	Bromobenzene	MS	REC	128	%	78-121
FA48865-1MS*	74-97-5	Bromochloromethane	MS	REC	84	%	78-125
FA48865-1MS*	75-27-4	Bromodichloromethane	MS	REC	87	%	75-127
FA48865-1MS*	75-25-2	Bromoform	MS	REC	90	%	67-132
FA48865-1MS*	78-93-3	2-Butanone (MEK)	MS	REC	89	%	51-148
FA48865-1MS*	104-51-8	n-Butylbenzene	MS	REC	40	%	70-128
FA48865-1MS*	135-98-8	sec-Butylbenzene	MS	REC	207	%	73-126
FA48865-1MS*	98-06-6	tert-Butylbenzene	MS	REC	61	%	73-125
FA48865-1MS*	75-15-0	Carbon Disulfide	MS	REC	75	%	63-132
FA48865-1MS*	56-23-5	Carbon Tetrachloride	MS	REC	71	%	70-135
FA48865-1MS*	108-90-7	Chlorobenzene	MS	REC	90	%	79-120
FA48865-1MS*	75-00-3	Chloroethane	MS	REC	61	%	59-139
FA48865-1MS*	67-66-3	Chloroform	MS	REC	82	%	78-123
FA48865-1MS*	95-49-8	o-Chlorotoluene	MS	REC	85	%	75-122

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MS*	106-43-4	p-Chlorotoluene	MS	REC	106	%	72-124
FA48865-1MS*	124-48-1	Dibromochloromethane	MS	REC	97	%	74-126
FA48865-1MS*	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	164	%	61-132
FA48865-1MS*	106-93-4	1,2-Dibromoethane	MS	REC	96	%	78-122
FA48865-1MS*	75-71-8	Dichlorodifluoromethane	MS	REC	63	%	29-149
FA48865-1MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	83	%	78-121
FA48865-1MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	81	%	77-121
FA48865-1MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	80	%	75-120
FA48865-1MS*	75-34-3	1,1-Dichloroethane	MS	REC	82	%	76-125
FA48865-1MS*	107-06-2	1,2-Dichloroethane	MS	REC	85	%	73-128
FA48865-1MS*	75-35-4	1,1-Dichloroethylene	MS	REC	75	%	70-131
FA48865-1MS*	156-59-2	cis-1,2-Dichloroethylene	MS	REC	85	%	77-123
FA48865-1MS*	156-60-5	trans-1,2-Dichloroethylene	MS	REC	80	%	74-125
FA48865-1MS*	78-87-5	1,2-Dichloropropane	MS	REC	88	%	76-123
FA48865-1MS*	142-28-9	1,3-Dichloropropane	MS	REC	96	%	77-121
FA48865-1MS*	594-20-7	2,2-Dichloropropane	MS	REC	71	%	67-133
FA48865-1MS*	563-58-6	1,1-Dichloropropene	MS	REC	77	%	76-125
FA48865-1MS*	10061-01-5	cis-1,3-Dichloropropene	MS	REC	90	%	74-126
FA48865-1MS*	10061-02-6	trans-1,3-Dichloropropene	MS	REC	102	%	71-130
FA48865-1MS*	100-41-4	Ethylbenzene	MS	REC	76	%	76-122
FA48865-1MS*	87-68-3	Hexachlorobutadiene	MS	REC	9	%	61-135
FA48865-1MS*	591-78-6	2-Hexanone	MS	REC	109	%	53-145
FA48865-1MS*	98-82-8	Isopropylbenzene	MS	REC	59	%	68-134
FA48865-1MS*	99-87-6	p-Isopropyltoluene	MS	REC	41	%	73-127
FA48865-1MS*	74-83-9	Methyl Bromide	MS	REC	76	%	53-143
FA48865-1MS*	74-87-3	Methyl Chloride	MS	REC	68	%	50-136
FA48865-1MS*	74-95-3	Methylene Bromide	MS	REC	89	%	78-125
FA48865-1MS*	75-09-2	Methylene Chloride	MS	REC	81	%	70-128
FA48865-1MS*	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	117	%	65-135
FA48865-1MS*	1634-04-4	Methyl Tert Butyl Ether	MS	REC	84	%	73-125
FA48865-1MS*	91-20-3	Naphthalene	MS	REC	104	%	62-129
FA48865-1MS*	103-65-1	n-Propylbenzene	MS	REC	74	%	73-125
FA48865-1MS*	100-42-5	Styrene	MS	REC	84	%	76-124
FA48865-1MS*	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	86	%	78-125
FA48865-1MS*	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	831	%	70-124
FA48865-1MS*	127-18-4	Tetrachloroethylene	MS	REC	72	%	73-128
FA48865-1MS*	108-88-3	Toluene	MS	REC	98	%	77-121
FA48865-1MS*	87-61-6	1,2,3-Trichlorobenzene	MS	REC	50	%	66-130
FA48865-1MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	50	%	67-129
FA48865-1MS*	71-55-6	1,1,1-Trichloroethane	MS	REC	76	%	73-130
FA48865-1MS*	79-00-5	1,1,2-Trichloroethane	MS	REC	250	%	78-121
FA48865-1MS*	79-01-6	Trichloroethylene	MS	REC	85	%	77-123
FA48865-1MS*	75-69-4	Trichlorofluoromethane	MS	REC	70	%	62-140
FA48865-1MS*	96-18-4	1,2,3-Trichloropropane	MS	REC	326	%	73-125
FA48865-1MS*	95-63-6	1,2,4-Trimethylbenzene	MS	REC	72	%	75-123

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

Page 4 of 19

Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MS*	108-67-8	1,3,5-Trimethylbenzene	MS	REC	65	%	73-124
FA48865-1MS*	108-05-4	Vinyl Acetate	MS	REC	79	%	50-151
FA48865-1MS*	75-01-4	Vinyl Chloride	MS	REC	69	%	56-135
FA48865-1MS*		m,p-Xylene	MS	REC	76	%	77-124
FA48865-1MS*	95-47-6	o-Xylene	MS	REC	79	%	77-123
FA48865-1MS*	1330-20-7	Xylene (total)	MS	REC	77	%	78-124
FA48865-1MS*	1868-53-7	Dibromofluoromethane	MS	SURR	99	%	78-119
FA48865-1MS*	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	96	%	71-136
FA48865-1MS*	2037-26-5	Toluene-D8	MS	SURR	112	%	85-116
FA48865-1MS*	460-00-4	4-Bromofluorobenzene	MS	SURR	134	%	79-119
FA48865-1MSD*	67-64-1	Acetone	MSD	REC	81	%	36-164
FA48865-1MSD*	67-64-1	Acetone	MSD	RPD	3	%	20
FA48865-1MSD*	71-43-2	Benzene	MSD	REC	87	%	77-121
FA48865-1MSD*	71-43-2	Benzene	MSD	RPD	4	%	20
FA48865-1MSD*	108-86-1	Bromobenzene	MSD	REC	111	%	78-121
FA48865-1MSD*	108-86-1	Bromobenzene	MSD	RPD	17	%	20
FA48865-1MSD*	74-97-5	Bromochloromethane	MSD	REC	84	%	78-125
FA48865-1MSD*	74-97-5	Bromochloromethane	MSD	RPD	3	%	20
FA48865-1MSD*	75-27-4	Bromodichloromethane	MSD	REC	87	%	75-127
FA48865-1MSD*	75-27-4	Bromodichloromethane	MSD	RPD	3	%	20
FA48865-1MSD*	75-25-2	Bromoform	MSD	REC	93	%	67-132
FA48865-1MSD*	75-25-2	Bromoform	MSD	RPD	0	%	20
FA48865-1MSD*	78-93-3	2-Butanone (MEK)	MSD	REC	94	%	51-148
FA48865-1MSD*	78-93-3	2-Butanone (MEK)	MSD	RPD	2	%	20
FA48865-1MSD*	104-51-8	n-Butylbenzene	MSD	REC	33	%	70-128
FA48865-1MSD*	104-51-8	n-Butylbenzene	MSD	RPD	23	%	20
FA48865-1MSD*	135-98-8	sec-Butylbenzene	MSD	REC	187	%	73-126
FA48865-1MSD*	135-98-8	sec-Butylbenzene	MSD	RPD	12	%	20
FA48865-1MSD*	98-06-6	tert-Butylbenzene	MSD	REC	53	%	73-125
FA48865-1MSD*	98-06-6	tert-Butylbenzene	MSD	RPD	17	%	20
FA48865-1MSD*	75-15-0	Carbon Disulfide	MSD	REC	74	%	63-132
FA48865-1MSD*	75-15-0	Carbon Disulfide	MSD	RPD	4	%	20
FA48865-1MSD*	56-23-5	Carbon Tetrachloride	MSD	REC	70	%	70-135
FA48865-1MSD*	56-23-5	Carbon Tetrachloride	MSD	RPD	5	%	20
FA48865-1MSD*	108-90-7	Chlorobenzene	MSD	REC	89	%	79-120
FA48865-1MSD*	108-90-7	Chlorobenzene	MSD	RPD	4	%	20
FA48865-1MSD*	75-00-3	Chloroethane	MSD	REC	78	%	59-139
FA48865-1MSD*	75-00-3	Chloroethane	MSD	RPD	22	%	20
FA48865-1MSD*	67-66-3	Chloroform	MSD	REC	81	%	78-123
FA48865-1MSD*	67-66-3	Chloroform	MSD	RPD	4	%	20
FA48865-1MSD*	95-49-8	o-Chlorotoluene	MSD	REC	71	%	75-122
FA48865-1MSD*	95-49-8	o-Chlorotoluene	MSD	RPD	21	%	20
FA48865-1MSD*	106-43-4	p-Chlorotoluene	MSD	REC	88	%	72-124
FA48865-1MSD*	106-43-4	p-Chlorotoluene	MSD	RPD	21	%	20
FA48865-1MSD*	124-48-1	Dibromochloromethane	MSD	REC	96	%	74-126

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MSD*	124-48-1	Dibromochloromethane	MSD	RPD	4	%	20
FA48865-1MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	144	%	61-132
FA48865-1MSD*	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	16	%	20
FA48865-1MSD*	106-93-4	1,2-Dibromoethane	MSD	REC	98	%	78-122
FA48865-1MSD*	106-93-4	1,2-Dibromoethane	MSD	RPD	2	%	20
FA48865-1MSD*	75-71-8	Dichlorodifluoromethane	MSD	REC	64	%	29-149
FA48865-1MSD*	75-71-8	Dichlorodifluoromethane	MSD	RPD	1	%	20
FA48865-1MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	69	%	78-121
FA48865-1MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	20	%	20
FA48865-1MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	68	%	77-121
FA48865-1MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	21	%	20
FA48865-1MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	67	%	75-120
FA48865-1MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	21	%	20
FA48865-1MSD*	75-34-3	1,1-Dichloroethane	MSD	REC	81	%	76-125
FA48865-1MSD*	75-34-3	1,1-Dichloroethane	MSD	RPD	4	%	20
FA48865-1MSD*	107-06-2	1,2-Dichloroethane	MSD	REC	86	%	73-128
FA48865-1MSD*	107-06-2	1,2-Dichloroethane	MSD	RPD	3	%	20
FA48865-1MSD*	75-35-4	1,1-Dichloroethylene	MSD	REC	73	%	70-131
FA48865-1MSD*	75-35-4	1,1-Dichloroethylene	MSD	RPD	5	%	20
FA48865-1MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	84	%	77-123
FA48865-1MSD*	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	3	%	20
FA48865-1MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	80	%	74-125
FA48865-1MSD*	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA48865-1MSD*	78-87-5	1,2-Dichloropropane	MSD	REC	88	%	76-123
FA48865-1MSD*	78-87-5	1,2-Dichloropropane	MSD	RPD	3	%	20
FA48865-1MSD*	142-28-9	1,3-Dichloropropane	MSD	REC	96	%	77-121
FA48865-1MSD*	142-28-9	1,3-Dichloropropane	MSD	RPD	3	%	20
FA48865-1MSD*	594-20-7	2,2-Dichloropropane	MSD	REC	73	%	67-133
FA48865-1MSD*	594-20-7	2,2-Dichloropropane	MSD	RPD	0	%	20
FA48865-1MSD*	563-58-6	1,1-Dichloropropene	MSD	REC	75	%	76-125
FA48865-1MSD*	563-58-6	1,1-Dichloropropene	MSD	RPD	6	%	20
FA48865-1MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	90	%	74-126
FA48865-1MSD*	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	4	%	20
FA48865-1MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	100	%	71-130
FA48865-1MSD*	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	5	%	20
FA48865-1MSD*	100-41-4	Ethylbenzene	MSD	REC	74	%	76-122
FA48865-1MSD*	100-41-4	Ethylbenzene	MSD	RPD	6	%	20
FA48865-1MSD*	87-68-3	Hexachlorobutadiene	MSD	REC	8	%	61-135
FA48865-1MSD*	87-68-3	Hexachlorobutadiene	MSD	RPD	15	%	20
FA48865-1MSD*	591-78-6	2-Hexanone	MSD	REC	115	%	53-145
FA48865-1MSD*	591-78-6	2-Hexanone	MSD	RPD	2	%	20
FA48865-1MSD*	98-82-8	Isopropylbenzene	MSD	REC	56	%	68-134
FA48865-1MSD*	98-82-8	Isopropylbenzene	MSD	RPD	8	%	20
FA48865-1MSD*	99-87-6	p-Isopropyltoluene	MSD	REC	34	%	73-127
FA48865-1MSD*	99-87-6	p-Isopropyltoluene	MSD	RPD	21	%	20

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MSD*	74-83-9	Methyl Bromide	MSD	REC	78	%	53-143
FA48865-1MSD*	74-83-9	Methyl Bromide	MSD	RPD	1	%	20
FA48865-1MSD*	74-87-3	Methyl Chloride	MSD	REC	71	%	50-136
FA48865-1MSD*	74-87-3	Methyl Chloride	MSD	RPD	1	%	20
FA48865-1MSD*	74-95-3	Methylene Bromide	MSD	REC	89	%	78-125
FA48865-1MSD*	74-95-3	Methylene Bromide	MSD	RPD	3	%	20
FA48865-1MSD*	75-09-2	Methylene Chloride	MSD	REC	79	%	70-128
FA48865-1MSD*	75-09-2	Methylene Chloride	MSD	RPD	5	%	20
FA48865-1MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	126	%	65-135
FA48865-1MSD*	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	4	%	20
FA48865-1MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	87	%	73-125
FA48865-1MSD*	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	0	%	20
FA48865-1MSD*	91-20-3	Naphthalene	MSD	REC	88	%	62-129
FA48865-1MSD*	91-20-3	Naphthalene	MSD	RPD	16	%	20
FA48865-1MSD*	103-65-1	n-Propylbenzene	MSD	REC	62	%	73-125
FA48865-1MSD*	103-65-1	n-Propylbenzene	MSD	RPD	21	%	20
FA48865-1MSD*	100-42-5	Styrene	MSD	REC	84	%	76-124
FA48865-1MSD*	100-42-5	Styrene	MSD	RPD	4	%	20
FA48865-1MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	85	%	78-125
FA48865-1MSD*	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	4	%	20
FA48865-1MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	760	%	70-124
FA48865-1MSD*	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	12	%	20
FA48865-1MSD*	127-18-4	Tetrachloroethylene	MSD	REC	69	%	73-128
FA48865-1MSD*	127-18-4	Tetrachloroethylene	MSD	RPD	7	%	20
FA48865-1MSD*	108-88-3	Toluene	MSD	REC	95	%	77-121
FA48865-1MSD*	108-88-3	Toluene	MSD	RPD	6	%	20
FA48865-1MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	45	%	66-130
FA48865-1MSD*	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	15	%	20
FA48865-1MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	24	%	67-129
FA48865-1MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	72	%	20
FA48865-1MSD*	71-55-6	1,1,1-Trichloroethane	MSD	REC	76	%	73-130
FA48865-1MSD*	71-55-6	1,1,1-Trichloroethane	MSD	RPD	3	%	20
FA48865-1MSD*	79-00-5	1,1,2-Trichloroethane	MSD	REC	245	%	78-121
FA48865-1MSD*	79-00-5	1,1,2-Trichloroethane	MSD	RPD	5	%	20
FA48865-1MSD*	79-01-6	Trichloroethylene	MSD	REC	82	%	77-123
FA48865-1MSD*	79-01-6	Trichloroethylene	MSD	RPD	6	%	20
FA48865-1MSD*	75-69-4	Trichlorofluoromethane	MSD	REC	71	%	62-140
FA48865-1MSD*	75-69-4	Trichlorofluoromethane	MSD	RPD	2	%	20
FA48865-1MSD*	96-18-4	1,2,3-Trichloropropane	MSD	REC	297	%	73-125
FA48865-1MSD*	96-18-4	1,2,3-Trichloropropane	MSD	RPD	12	%	20
FA48865-1MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	59	%	75-123
FA48865-1MSD*	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	23	%	20
FA48865-1MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	53	%	73-124
FA48865-1MSD*	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	23	%	20
FA48865-1MSD*	108-05-4	Vinyl Acetate	MSD	REC	79	%	50-151

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA48865-1MSD*	108-05-4	Vinyl Acetate	MSD	RPD	4	%	20
FA48865-1MSD*	75-01-4	Vinyl Chloride	MSD	REC	71	%	56-135
FA48865-1MSD*	75-01-4	Vinyl Chloride	MSD	RPD	1	%	20
FA48865-1MSD*		m,p-Xylene	MSD	REC	72	%	77-124
FA48865-1MSD*		m,p-Xylene	MSD	RPD	8	%	20
FA48865-1MSD*	95-47-6	o-Xylene	MSD	REC	77	%	77-123
FA48865-1MSD*	95-47-6	o-Xylene	MSD	RPD	6	%	20
FA48865-1MSD*	1330-20-7	Xylene (total)	MSD	REC	74	%	78-124
FA48865-1MSD*	1330-20-7	Xylene (total)	MSD	RPD	7	%	20
FA48865-1MSD*	1868-53-7	Dibromofluoromethane	MSD	SURR	99	%	78-119
FA48865-1MSD*	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	97	%	71-136
FA48865-1MSD*	2037-26-5	Toluene-D8	MSD	SURR	110	%	85-116
FA48865-1MSD*	460-00-4	4-Bromofluorobenzene	MSD	SURR	115	%	79-119
V2B219-MB	1868-53-7	Dibromofluoromethane	MB	SURR	93	%	78-119
V2B219-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	100	%	71-136
V2B219-MB	2037-26-5	Toluene-D8	MB	SURR	100	%	85-116
V2B219-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	105	%	79-119
FA48965-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	106	%	78-119
FA48965-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	103	%	71-136
FA48965-1	2037-26-5	Toluene-D8	SAMP	SURR	95	%	85-116
FA48965-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	113	%	79-119
FA48965-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	107	%	78-119
FA48965-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	98	%	78-119
FA48965-2	1868-53-7	Dibromofluoromethane	SAMP	SURR	96	%	78-119
FA48965-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	99	%	71-136
FA48965-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	102	%	71-136
FA48965-2	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	98	%	71-136
FA48965-2	2037-26-5	Toluene-D8	SAMP	SURR	100	%	85-116
FA48965-2	2037-26-5	Toluene-D8	SAMP	SURR	129 ^b	%	85-116
FA48965-2	2037-26-5	Toluene-D8	SAMP	SURR	124	%	85-116
FA48965-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	163 ^c	%	79-119
FA48965-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	105	%	79-119
FA48965-2	460-00-4	4-Bromofluorobenzene	SAMP	SURR	155 ^c	%	79-119
FA48965-3	1868-53-7	Dibromofluoromethane	SAMP	SURR	94	%	78-119
FA48965-3	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	96	%	71-136
FA48965-3	2037-26-5	Toluene-D8	SAMP	SURR	108	%	85-116
FA48965-3	460-00-4	4-Bromofluorobenzene	SAMP	SURR	122	%	79-119
OP67513	SW846 8270D BY SIM						
OP67513-BS	83-32-9	Acenaphthene	BSP	REC	86	%	44-111
OP67513-BS	208-96-8	Acenaphthylene	BSP	REC	80	%	39-116
OP67513-BS	120-12-7	Anthracene	BSP	REC	81	%	50-114
OP67513-BS	56-55-3	Benzo(a)anthracene	BSP	REC	85	%	54-122
OP67513-BS	50-32-8	Benzo(a)pyrene	BSP	REC	82	%	50-125

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67513-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	88	%	53-128
OP67513-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	100	%	49-127
OP67513-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	81	%	56-123
OP67513-BS	218-01-9	Chrysene	BSP	REC	90	%	57-118
OP67513-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	97	%	50-129
OP67513-BS	206-44-0	Fluoranthene	BSP	REC	87	%	55-119
OP67513-BS	86-73-7	Fluorene	BSP	REC	82	%	47-114
OP67513-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	96	%	49-130
OP67513-BS	91-20-3	Naphthalene	BSP	REC	77	%	38-111
OP67513-BS	85-01-8	Phenanthrene	BSP	REC	88	%	49-113
OP67513-BS	129-00-0	Pyrene	BSP	REC	88	%	55-117
OP67513-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	79	%	44-125
OP67513-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	80	%	46-115
OP67513-BS	1718-51-0	Terphenyl-d14	BSP	SURR	79	%	58-133
OP67513-MS*	83-32-9	Acenaphthene	MS	REC	81	%	44-111
OP67513-MS*	208-96-8	Acenaphthylene	MS	REC	78	%	39-116
OP67513-MS*	120-12-7	Anthracene	MS	REC	81	%	50-114
OP67513-MS*	56-55-3	Benzo(a)anthracene	MS	REC	84	%	54-122
OP67513-MS*	50-32-8	Benzo(a)pyrene	MS	REC	83	%	50-125
OP67513-MS*	205-99-2	Benzo(b)fluoranthene	MS	REC	81	%	53-128
OP67513-MS*	191-24-2	Benzo(g,h,i)perylene	MS	REC	85	%	49-127
OP67513-MS*	207-08-9	Benzo(k)fluoranthene	MS	REC	76	%	56-123
OP67513-MS*	218-01-9	Chrysene	MS	REC	90	%	57-118
OP67513-MS*	53-70-3	Dibenzo(a,h)anthracene	MS	REC	89	%	50-129
OP67513-MS*	206-44-0	Fluoranthene	MS	REC	86	%	55-119
OP67513-MS*	86-73-7	Fluorene	MS	REC	78	%	47-114
OP67513-MS*	193-39-5	Indeno(1,2,3-cd)pyrene	MS	REC	87	%	49-130
OP67513-MS*	91-20-3	Naphthalene	MS	REC	76	%	38-111
OP67513-MS*	85-01-8	Phenanthrene	MS	REC	86	%	49-113
OP67513-MS*	129-00-0	Pyrene	MS	REC	95	%	55-117
OP67513-MS*	4165-60-0	Nitrobenzene-d5	MS	SURR	72	%	44-125
OP67513-MS*	321-60-8	2-Fluorobiphenyl	MS	SURR	75	%	46-115
OP67513-MS*	1718-51-0	Terphenyl-d14	MS	SURR	81	%	58-133
OP67513-MSD*	83-32-9	Acenaphthene	MSD	REC	82	%	44-111
OP67513-MSD*	83-32-9	Acenaphthene	MSD	RPD	1	%	20
OP67513-MSD*	208-96-8	Acenaphthylene	MSD	REC	80	%	39-116
OP67513-MSD*	208-96-8	Acenaphthylene	MSD	RPD	3	%	20
OP67513-MSD*	120-12-7	Anthracene	MSD	REC	83	%	50-114
OP67513-MSD*	120-12-7	Anthracene	MSD	RPD	3	%	20
OP67513-MSD*	56-55-3	Benzo(a)anthracene	MSD	REC	86	%	54-122
OP67513-MSD*	56-55-3	Benzo(a)anthracene	MSD	RPD	3	%	20
OP67513-MSD*	50-32-8	Benzo(a)pyrene	MSD	REC	85	%	50-125
OP67513-MSD*	50-32-8	Benzo(a)pyrene	MSD	RPD	4	%	20
OP67513-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	REC	88	%	53-128
OP67513-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	RPD	9	%	20

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67513-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	REC	87	%	49-127
OP67513-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	RPD	4	%	20
OP67513-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	REC	87	%	56-123
OP67513-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	RPD	14	%	20
OP67513-MSD*	218-01-9	Chrysene	MSD	REC	90	%	57-118
OP67513-MSD*	218-01-9	Chrysene	MSD	RPD	0	%	20
OP67513-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	REC	90	%	50-129
OP67513-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	RPD	2	%	20
OP67513-MSD*	206-44-0	Fluoranthene	MSD	REC	86	%	55-119
OP67513-MSD*	206-44-0	Fluoranthene	MSD	RPD	1	%	20
OP67513-MSD*	86-73-7	Fluorene	MSD	REC	80	%	47-114
OP67513-MSD*	86-73-7	Fluorene	MSD	RPD	2	%	20
OP67513-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	REC	90	%	49-130
OP67513-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	RPD	4	%	20
OP67513-MSD*	91-20-3	Naphthalene	MSD	REC	78	%	38-111
OP67513-MSD*	91-20-3	Naphthalene	MSD	RPD	4	%	20
OP67513-MSD*	85-01-8	Phenanthrene	MSD	REC	88	%	49-113
OP67513-MSD*	85-01-8	Phenanthrene	MSD	RPD	2	%	20
OP67513-MSD*	129-00-0	Pyrene	MSD	REC	97	%	55-117
OP67513-MSD*	129-00-0	Pyrene	MSD	RPD	3	%	20
OP67513-MSD*	4165-60-0	Nitrobenzene-d5	MSD	SURR	80	%	44-125
OP67513-MSD*	321-60-8	2-Fluorobiphenyl	MSD	SURR	76	%	46-115
OP67513-MSD*	1718-51-0	Terphenyl-d14	MSD	SURR	85	%	58-133
OP67513-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	71	%	44-125
OP67513-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	67	%	46-115
OP67513-MB	1718-51-0	Terphenyl-d14	MB	SURR	78	%	58-133
FA48965-1	4165-60-0	Nitrobenzene-d5	SAMP	SURR	76	%	44-125
FA48965-1	321-60-8	2-Fluorobiphenyl	SAMP	SURR	71	%	46-115
FA48965-1	1718-51-0	Terphenyl-d14	SAMP	SURR	87	%	58-133
FA48965-3	4165-60-0	Nitrobenzene-d5	SAMP	SURR	83	%	44-125
FA48965-3	321-60-8	2-Fluorobiphenyl	SAMP	SURR	74	%	46-115
FA48965-3	1718-51-0	Terphenyl-d14	SAMP	SURR	99	%	58-133
OP67546	SW846 8270D						
OP67546-BS	59-50-7	4-Chloro-3-methyl Phenol	BSP	REC	69	%	45-122
OP67546-BS	59-50-7	4-Chloro-3-methyl Phenol	BSP	REC	76	%	45-122
OP67546-BS	95-57-8	2-Chlorophenol	BSP	REC	76	%	34-121
OP67546-BS	95-57-8	2-Chlorophenol	BSP	REC	68	%	34-121
OP67546-BS	120-83-2	2,4-Dichlorophenol	BSP	REC	69	%	40-122
OP67546-BS	120-83-2	2,4-Dichlorophenol	BSP	REC	74	%	40-122
OP67546-BS	105-67-9	2,4-Dimethylphenol	BSP	REC	66	%	30-127
OP67546-BS	105-67-9	2,4-Dimethylphenol	BSP	REC	58	%	30-127
OP67546-BS	534-52-1	4,6-Dinitro-o-cresol	BSP	REC	79	%	29-132
OP67546-BS	534-52-1	4,6-Dinitro-o-cresol	BSP	REC	94	%	29-132

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67546-BS	95-48-7	2-Methylphenol	BSP	REC	66	%	32-122
OP67546-BS	95-48-7	2-Methylphenol	BSP	REC	76	%	32-122
OP67546-BS		3&4-Methylphenol	BSP	REC	67	%	34-119
OP67546-BS		3&4-Methylphenol	BSP	REC	77	%	34-119
OP67546-BS	88-75-5	2-Nitrophenol	BSP	REC	78	%	36-123
OP67546-BS	88-75-5	2-Nitrophenol	BSP	REC	80	%	36-123
OP67546-BS	100-02-7	4-Nitrophenol	BSP	REC	82	%	30-132
OP67546-BS	100-02-7	4-Nitrophenol	BSP	REC	90	%	30-132
OP67546-BS	87-86-5	Pentachlorophenol	BSP	REC	95	%	25-133
OP67546-BS	87-86-5	Pentachlorophenol	BSP	REC	106	%	25-133
OP67546-BS	108-95-2	Phenol	BSP	REC	79	%	34-121
OP67546-BS	108-95-2	Phenol	BSP	REC	66	%	34-121
OP67546-BS	95-95-4	2,4,5-Trichlorophenol	BSP	REC	94	%	41-124
OP67546-BS	95-95-4	2,4,5-Trichlorophenol	BSP	REC	88	%	41-124
OP67546-BS	88-06-2	2,4,6-Trichlorophenol	BSP	REC	86	%	39-126
OP67546-BS	88-06-2	2,4,6-Trichlorophenol	BSP	REC	93	%	39-126
OP67546-BS	83-32-9	Acenaphthene	BSP	REC	74	%	40-123
OP67546-BS	83-32-9	Acenaphthene	BSP	REC	85	%	40-123
OP67546-BS	208-96-8	Acenaphthylene	BSP	REC	77	%	32-132
OP67546-BS	208-96-8	Acenaphthylene	BSP	REC	90	%	32-132
OP67546-BS	120-12-7	Anthracene	BSP	REC	77	%	47-123
OP67546-BS	120-12-7	Anthracene	BSP	REC	89	%	47-123
OP67546-BS	56-55-3	Benzo(a)anthracene	BSP	REC	96	%	49-126
OP67546-BS	56-55-3	Benzo(a)anthracene	BSP	REC	84	%	49-126
OP67546-BS	50-32-8	Benzo(a)pyrene	BSP	REC	95	%	45-129
OP67546-BS	50-32-8	Benzo(a)pyrene	BSP	REC	83	%	45-129
OP67546-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	100	%	45-132
OP67546-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	86	%	45-132
OP67546-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	100	%	43-134
OP67546-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	88	%	43-134
OP67546-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	98	%	47-132
OP67546-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	86	%	47-132
OP67546-BS	100-51-6	Benzyl Alcohol	BSP	REC	77	%	29-122
OP67546-BS	100-51-6	Benzyl Alcohol	BSP	REC	68	%	29-122
OP67546-BS	101-55-3	4-Bromophenyl phenyl ether	BSP	REC	82	%	46-124
OP67546-BS	101-55-3	4-Bromophenyl phenyl ether	BSP	REC	92	%	46-124
OP67546-BS	85-68-7	Butyl benzyl phthalate	BSP	REC	103	%	48-132
OP67546-BS	85-68-7	Butyl benzyl phthalate	BSP	REC	86	%	48-132
OP67546-BS	86-74-8	Carbazole	BSP	REC	93	%	50-123
OP67546-BS	86-74-8	Carbazole	BSP	REC	81	%	50-123
OP67546-BS	106-47-8	4-Chloroaniline	BSP	REC	79	%	17-106
OP67546-BS	106-47-8	4-Chloroaniline	BSP	REC	85	%	17-106
OP67546-BS	111-91-1	bis(2-Chloroethoxy)methane	BSP	REC	65	%	36-121
OP67546-BS	111-91-1	bis(2-Chloroethoxy)methane	BSP	REC	55	%	36-121
OP67546-BS	111-44-4	bis(2-Chloroethyl)ether	BSP	REC	74	%	31-120

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67546-BS	111-44-4	bis(2-Chloroethyl)ether	BSP	REC	61	%	31-120
OP67546-BS	108-60-1	bis(2-Chloroisopropyl)ether	BSP	REC	75	%	33-131
OP67546-BS	108-60-1	bis(2-Chloroisopropyl)ether	BSP	REC	56	%	33-131
OP67546-BS	91-58-7	2-Chloronaphthalene	BSP	REC	73	%	41-114
OP67546-BS	91-58-7	2-Chloronaphthalene	BSP	REC	84	%	41-114
OP67546-BS	7005-72-3	4-Chlorophenyl phenyl ether	BSP	REC	78	%	45-121
OP67546-BS	7005-72-3	4-Chlorophenyl phenyl ether	BSP	REC	88	%	45-121
OP67546-BS	218-01-9	Chrysene	BSP	REC	84	%	50-124
OP67546-BS	218-01-9	Chrysene	BSP	REC	96	%	50-124
OP67546-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	89	%	45-134
OP67546-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	98	%	45-134
OP67546-BS	132-64-9	Dibenzofuran	BSP	REC	76	%	44-120
OP67546-BS	132-64-9	Dibenzofuran	BSP	REC	88	%	44-120
OP67546-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	65	%	33-117
OP67546-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	73	%	33-117
OP67546-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	70	%	30-115
OP67546-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	62	%	30-115
OP67546-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	73	%	31-115
OP67546-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	63	%	31-115
OP67546-BS	91-94-1	3,3'-Dichlorobenzidine	BSP	REC	103	%	22-121
OP67546-BS	91-94-1	3,3'-Dichlorobenzidine	BSP	REC	114	%	22-121
OP67546-BS	84-66-2	Diethyl Phthalate	BSP	REC	89	%	50-124
OP67546-BS	84-66-2	Diethyl Phthalate	BSP	REC	79	%	50-124
OP67546-BS	131-11-3	Dimethyl Phthalate	BSP	REC	89	%	48-124
OP67546-BS	131-11-3	Dimethyl Phthalate	BSP	REC	79	%	48-124
OP67546-BS	117-84-0	Di-n-octyl Phthalate	BSP	REC	95	%	45-140
OP67546-BS	117-84-0	Di-n-octyl Phthalate	BSP	REC	113	%	45-140
OP67546-BS	84-74-2	Di-n-butyl Phthalate	BSP	REC	82	%	51-128
OP67546-BS	84-74-2	Di-n-butyl Phthalate	BSP	REC	97	%	51-128
OP67546-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	92	%	48-126
OP67546-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	96	%	48-126
OP67546-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	84	%	46-124
OP67546-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	93	%	46-124
OP67546-BS	122-66-7	1,2-Diphenylhydrazine	BSP	REC	95	%	41-125
OP67546-BS	122-66-7	1,2-Diphenylhydrazine	BSP	REC	73	%	41-125
OP67546-BS	117-81-7	bis(2-Ethylhexyl)phthalate	BSP	REC	88	%	51-133
OP67546-BS	117-81-7	bis(2-Ethylhexyl)phthalate	BSP	REC	105	%	51-133
OP67546-BS	206-44-0	Fluoranthene	BSP	REC	82	%	50-127
OP67546-BS	206-44-0	Fluoranthene	BSP	REC	92	%	50-127
OP67546-BS	86-73-7	Fluorene	BSP	REC	79	%	43-125
OP67546-BS	86-73-7	Fluorene	BSP	REC	90	%	43-125
OP67546-BS	118-74-1	Hexachlorobenzene	BSP	REC	83	%	45-122
OP67546-BS	118-74-1	Hexachlorobenzene	BSP	REC	91	%	45-122
OP67546-BS	87-68-3	Hexachlorobutadiene	BSP	REC	62	%	32-123
OP67546-BS	87-68-3	Hexachlorobutadiene	BSP	REC	67	%	32-123

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67546-BS	67-72-1	Hexachloroethane	BSP	REC	71	%	28-117
OP67546-BS	67-72-1	Hexachloroethane	BSP	REC	61	%	28-117
OP67546-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	95	%	45-133
OP67546-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	100	%	45-133
OP67546-BS	78-59-1	Isophorone	BSP	REC	61	%	30-122
OP67546-BS	78-59-1	Isophorone	BSP	REC	73	%	30-122
OP67546-BS	90-12-0	1-Methylnaphthalene	BSP	REC	63	%	40-119
OP67546-BS	90-12-0	1-Methylnaphthalene	BSP	REC	70	%	40-119
OP67546-BS	91-57-6	2-Methylnaphthalene	BSP	REC	63	%	38-122
OP67546-BS	91-57-6	2-Methylnaphthalene	BSP	REC	70	%	38-122
OP67546-BS	91-20-3	Naphthalene	BSP	REC	67	%	35-123
OP67546-BS	91-20-3	Naphthalene	BSP	REC	58	%	35-123
OP67546-BS	88-74-4	2-Nitroaniline	BSP	REC	98	%	44-127
OP67546-BS	88-74-4	2-Nitroaniline	BSP	REC	83	%	44-127
OP67546-BS	99-09-2	3-Nitroaniline	BSP	REC	91	%	33-119
OP67546-BS	99-09-2	3-Nitroaniline	BSP	REC	98	%	33-119
OP67546-BS	98-95-3	Nitrobenzene	BSP	REC	59	%	34-122
OP67546-BS	98-95-3	Nitrobenzene	BSP	REC	70	%	34-122
OP67546-BS	62-75-9	N-Nitrosodimethylamine	BSP	REC	55	%	23-120
OP67546-BS	62-75-9	N-Nitrosodimethylamine	BSP	REC	73	%	23-120
OP67546-BS	621-64-7	N-Nitrosodi-n-propylamine	BSP	REC	62	%	36-120
OP67546-BS	621-64-7	N-Nitrosodi-n-propylamine	BSP	REC	77	%	36-120
OP67546-BS	86-30-6	N-Nitrosodiphenylamine	BSP	REC	95	%	38-127
OP67546-BS	86-30-6	N-Nitrosodiphenylamine	BSP	REC	82	%	38-127
OP67546-BS	85-01-8	Phenanthrene	BSP	REC	92	%	50-121
OP67546-BS	85-01-8	Phenanthrene	BSP	REC	80	%	50-121
OP67546-BS	129-00-0	Pyrene	BSP	REC	101	%	47-127
OP67546-BS	129-00-0	Pyrene	BSP	REC	85	%	47-127
OP67546-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	68	%	34-118
OP67546-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	62	%	34-118
OP67546-BS	367-12-4	2-Fluorophenol	BSP	SURR	76	%	35-115
OP67546-BS	367-12-4	2-Fluorophenol	BSP	SURR	65	%	35-115
OP67546-BS	4165-62-2	Phenol-d5	BSP	SURR	77	%	33-122
OP67546-BS	4165-62-2	Phenol-d5	BSP	SURR	64	%	33-122
OP67546-BS	118-79-6	2,4,6-Tribromophenol	BSP	SURR	96	%	39-132
OP67546-BS	118-79-6	2,4,6-Tribromophenol	BSP	SURR	90	%	39-132
OP67546-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	60	%	37-122
OP67546-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	70	%	37-122
OP67546-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	82	%	44-115
OP67546-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	71	%	44-115
OP67546-BS	1718-51-0	Terphenyl-d14	BSP	SURR	86	%	54-127
OP67546-BS	1718-51-0	Terphenyl-d14	BSP	SURR	100	%	54-127
OP67546-MS*	59-50-7	4-Chloro-3-methyl Phenol	MS	REC	67	%	45-122
OP67546-MS*	95-57-8	2-Chlorophenol	MS	REC	63	%	34-121
OP67546-MS*	120-83-2	2,4-Dichlorophenol	MS	REC	62	%	40-122

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67546-MS*	105-67-9	2,4-Dimethylphenol	MS	REC	55	%	30-127
OP67546-MS*	534-52-1	4,6-Dinitro-o-cresol	MS	REC	76	%	29-132
OP67546-MS*	95-48-7	2-Methylphenol	MS	REC	64	%	32-122
OP67546-MS*		3&4-Methylphenol	MS	REC	67	%	34-119
OP67546-MS*	88-75-5	2-Nitrophenol	MS	REC	64	%	36-123
OP67546-MS*	100-02-7	4-Nitrophenol	MS	REC	84	%	30-132
OP67546-MS*	87-86-5	Pentachlorophenol	MS	REC	95	%	25-133
OP67546-MS*	108-95-2	Phenol	MS	REC	67	%	34-121
OP67546-MS*	95-95-4	2,4,5-Trichlorophenol	MS	REC	82	%	41-124
OP67546-MS*	88-06-2	2,4,6-Trichlorophenol	MS	REC	78	%	39-126
OP67546-MS*	83-32-9	Acenaphthene	MS	REC	71	%	40-123
OP67546-MS*	208-96-8	Acenaphthylene	MS	REC	75	%	32-132
OP67546-MS*	120-12-7	Anthracene	MS	REC	78	%	47-123
OP67546-MS*	56-55-3	Benzo(a)anthracene	MS	REC	82	%	49-126
OP67546-MS*	50-32-8	Benzo(a)pyrene	MS	REC	82	%	45-129
OP67546-MS*	205-99-2	Benzo(b)fluoranthene	MS	REC	84	%	45-132
OP67546-MS*	191-24-2	Benzo(g,h,i)perylene	MS	REC	86	%	43-134
OP67546-MS*	207-08-9	Benzo(k)fluoranthene	MS	REC	86	%	47-132
OP67546-MS*	100-51-6	Benzyl Alcohol	MS	REC	71	%	29-122
OP67546-MS*	101-55-3	4-Bromophenyl phenyl ether	MS	REC	77	%	46-124
OP67546-MS*	85-68-7	Butyl benzyl phthalate	MS	REC	89	%	48-132
OP67546-MS*	86-74-8	Carbazole	MS	REC	85	%	50-123
OP67546-MS*	106-47-8	4-Chloroaniline	MS	REC	77	%	17-106
OP67546-MS*	111-91-1	bis(2-Chloroethoxy)methane	MS	REC	53	%	36-121
OP67546-MS*	111-44-4	bis(2-Chloroethyl)ether	MS	REC	58	%	31-120
OP67546-MS*	108-60-1	bis(2-Chloroisopropyl)ether	MS	REC	58	%	33-131
OP67546-MS*	91-58-7	2-Chloronaphthalene	MS	REC	67	%	41-114
OP67546-MS*	7005-72-3	4-Chlorophenyl phenyl ether	MS	REC	74	%	45-121
OP67546-MS*	218-01-9	Chrysene	MS	REC	82	%	50-124
OP67546-MS*	53-70-3	Dibenzo(a,h)anthracene	MS	REC	84	%	45-134
OP67546-MS*	132-64-9	Dibenzofuran	MS	REC	79	%	44-120
OP67546-MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	55	%	33-117
OP67546-MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	51	%	30-115
OP67546-MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	53	%	31-115
OP67546-MS*	91-94-1	3,3'-Dichlorobenzidine	MS	REC	95	%	22-121
OP67546-MS*	84-66-2	Diethyl Phthalate	MS	REC	78	%	50-124
OP67546-MS*	131-11-3	Dimethyl Phthalate	MS	REC	77	%	48-124
OP67546-MS*	117-84-0	Di-n-octyl Phthalate	MS	REC	97	%	45-140
OP67546-MS*	84-74-2	Di-n-butyl Phthalate	MS	REC	84	%	51-128
OP67546-MS*	121-14-2	2,4-Dinitrotoluene	MS	REC	87	%	48-126
OP67546-MS*	606-20-2	2,6-Dinitrotoluene	MS	REC	81	%	46-124
OP67546-MS*	122-66-7	1,2-Diphenylhydrazine	MS	REC	79	%	41-125
OP67546-MS*	117-81-7	bis(2-Ethylhexyl)phthalate	MS	REC	90	%	51-133
OP67546-MS*	206-44-0	Fluoranthene	MS	REC	81	%	50-127
OP67546-MS*	86-73-7	Fluorene	MS	REC	78	%	43-125

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67546-MS*	118-74-1	Hexachlorobenzene	MS	REC	76	%	45-122
OP67546-MS*	87-68-3	Hexachlorobutadiene	MS	REC	50	%	32-123
OP67546-MS*	67-72-1	Hexachloroethane	MS	REC	52	%	28-117
OP67546-MS*	193-39-5	Indeno(1,2,3-cd)pyrene	MS	REC	84	%	45-133
OP67546-MS*	78-59-1	Isophorone	MS	REC	61	%	30-122
OP67546-MS*	90-12-0	1-Methylnaphthalene	MS	REC	57	%	40-119
OP67546-MS*	91-57-6	2-Methylnaphthalene	MS	REC	64	%	38-122
OP67546-MS*	91-20-3	Naphthalene	MS	REC	54	%	35-123
OP67546-MS*	88-74-4	2-Nitroaniline	MS	REC	90	%	44-127
OP67546-MS*	99-09-2	3-Nitroaniline	MS	REC	91	%	33-119
OP67546-MS*	98-95-3	Nitrobenzene	MS	REC	57	%	34-122
OP67546-MS*	62-75-9	N-Nitrosodimethylamine	MS	REC	59	%	23-120
OP67546-MS*	621-64-7	N-Nitrosodi-n-propylamine	MS	REC	63	%	36-120
OP67546-MS*	86-30-6	N-Nitrosodiphenylamine	MS	REC	81	%	38-127
OP67546-MS*	85-01-8	Phenanthrene	MS	REC	80	%	50-121
OP67546-MS*	129-00-0	Pyrene	MS	REC	87	%	47-127
OP67546-MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	52	%	34-118
OP67546-MS*	367-12-4	2-Fluorophenol	MS	SURR	68	%	35-115
OP67546-MS*	4165-62-2	Phenol-d5	MS	SURR	68	%	33-122
OP67546-MS*	118-79-6	2,4,6-Tribromophenol	MS	SURR	88	%	39-132
OP67546-MS*	4165-60-0	Nitrobenzene-d5	MS	SURR	61	%	37-122
OP67546-MS*	321-60-8	2-Fluorobiphenyl	MS	SURR	72	%	44-115
OP67546-MS*	1718-51-0	Terphenyl-d14	MS	SURR	87	%	54-127
OP67546-MSD*	59-50-7	4-Chloro-3-methyl Phenol	MSD	REC	70	%	45-122
OP67546-MSD*	59-50-7	4-Chloro-3-methyl Phenol	MSD	RPD	5	%	20
OP67546-MSD*	95-57-8	2-Chlorophenol	MSD	REC	69	%	34-121
OP67546-MSD*	95-57-8	2-Chlorophenol	MSD	RPD	11	%	20
OP67546-MSD*	120-83-2	2,4-Dichlorophenol	MSD	REC	70	%	40-122
OP67546-MSD*	120-83-2	2,4-Dichlorophenol	MSD	RPD	13	%	20
OP67546-MSD*	105-67-9	2,4-Dimethylphenol	MSD	REC	61	%	30-127
OP67546-MSD*	105-67-9	2,4-Dimethylphenol	MSD	RPD	12	%	20
OP67546-MSD*	534-52-1	4,6-Dinitro-o-cresol	MSD	REC	81	%	29-132
OP67546-MSD*	534-52-1	4,6-Dinitro-o-cresol	MSD	RPD	7	%	20
OP67546-MSD*	95-48-7	2-Methylphenol	MSD	REC	71	%	32-122
OP67546-MSD*	95-48-7	2-Methylphenol	MSD	RPD	11	%	20
OP67546-MSD*		3&4-Methylphenol	MSD	REC	72	%	34-119
OP67546-MSD*		3&4-Methylphenol	MSD	RPD	8	%	20
OP67546-MSD*	88-75-5	2-Nitrophenol	MSD	REC	73	%	36-123
OP67546-MSD*	88-75-5	2-Nitrophenol	MSD	RPD	15	%	20
OP67546-MSD*	100-02-7	4-Nitrophenol	MSD	REC	81	%	30-132
OP67546-MSD*	100-02-7	4-Nitrophenol	MSD	RPD	2	%	20
OP67546-MSD*	87-86-5	Pentachlorophenol	MSD	REC	95	%	25-133
OP67546-MSD*	87-86-5	Pentachlorophenol	MSD	RPD	1	%	20
OP67546-MSD*	108-95-2	Phenol	MSD	REC	71	%	34-121
OP67546-MSD*	108-95-2	Phenol	MSD	RPD	8	%	20

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67546-MSD*	95-95-4	2,4,5-Trichlorophenol	MSD	REC	87	%	41-124
OP67546-MSD*	95-95-4	2,4,5-Trichlorophenol	MSD	RPD	6	%	20
OP67546-MSD*	88-06-2	2,4,6-Trichlorophenol	MSD	REC	85	%	39-126
OP67546-MSD*	88-06-2	2,4,6-Trichlorophenol	MSD	RPD	8	%	20
OP67546-MSD*	83-32-9	Acenaphthene	MSD	REC	79	%	40-123
OP67546-MSD*	83-32-9	Acenaphthene	MSD	RPD	12	%	20
OP67546-MSD*	208-96-8	Acenaphthylene	MSD	REC	83	%	32-132
OP67546-MSD*	208-96-8	Acenaphthylene	MSD	RPD	11	%	20
OP67546-MSD*	120-12-7	Anthracene	MSD	REC	80	%	47-123
OP67546-MSD*	120-12-7	Anthracene	MSD	RPD	4	%	20
OP67546-MSD*	56-55-3	Benzo(a)anthracene	MSD	REC	83	%	49-126
OP67546-MSD*	56-55-3	Benzo(a)anthracene	MSD	RPD	2	%	20
OP67546-MSD*	50-32-8	Benzo(a)pyrene	MSD	REC	83	%	45-129
OP67546-MSD*	50-32-8	Benzo(a)pyrene	MSD	RPD	1	%	20
OP67546-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	REC	86	%	45-132
OP67546-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	RPD	2	%	20
OP67546-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	REC	86	%	43-134
OP67546-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	RPD	0	%	20
OP67546-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	REC	88	%	47-132
OP67546-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	RPD	3	%	20
OP67546-MSD*	100-51-6	Benzyl Alcohol	MSD	REC	72	%	29-122
OP67546-MSD*	100-51-6	Benzyl Alcohol	MSD	RPD	3	%	20
OP67546-MSD*	101-55-3	4-Bromophenyl phenyl ether	MSD	REC	83	%	46-124
OP67546-MSD*	101-55-3	4-Bromophenyl phenyl ether	MSD	RPD	9	%	20
OP67546-MSD*	85-68-7	Butyl benzyl phthalate	MSD	REC	91	%	48-132
OP67546-MSD*	85-68-7	Butyl benzyl phthalate	MSD	RPD	3	%	20
OP67546-MSD*	86-74-8	Carbazole	MSD	REC	83	%	50-123
OP67546-MSD*	86-74-8	Carbazole	MSD	RPD	2	%	20
OP67546-MSD*	106-47-8	4-Chloroaniline	MSD	REC	78	%	17-106
OP67546-MSD*	106-47-8	4-Chloroaniline	MSD	RPD	2	%	20
OP67546-MSD*	111-91-1	bis(2-Chloroethoxy)methane	MSD	REC	60	%	36-121
OP67546-MSD*	111-91-1	bis(2-Chloroethoxy)methane	MSD	RPD	13	%	20
OP67546-MSD*	111-44-4	bis(2-Chloroethyl)ether	MSD	REC	65	%	31-120
OP67546-MSD*	111-44-4	bis(2-Chloroethyl)ether	MSD	RPD	12	%	20
OP67546-MSD*	108-60-1	bis(2-Chloroisopropyl)ether	MSD	REC	65	%	33-131
OP67546-MSD*	108-60-1	bis(2-Chloroisopropyl)ether	MSD	RPD	13	%	20
OP67546-MSD*	91-58-7	2-Chloronaphthalene	MSD	REC	78	%	41-114
OP67546-MSD*	91-58-7	2-Chloronaphthalene	MSD	RPD	16	%	20
OP67546-MSD*	7005-72-3	4-Chlorophenyl phenyl ether	MSD	REC	80	%	45-121
OP67546-MSD*	7005-72-3	4-Chlorophenyl phenyl ether	MSD	RPD	9	%	20
OP67546-MSD*	218-01-9	Chrysene	MSD	REC	84	%	50-124
OP67546-MSD*	218-01-9	Chrysene	MSD	RPD	2	%	20
OP67546-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	REC	84	%	45-134
OP67546-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	RPD	0	%	20
OP67546-MSD*	132-64-9	Dibenzofuran	MSD	REC	80	%	44-120

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67546-MSD*	132-64-9	Dibenzofuran	MSD	RPD	2	%	20
OP67546-MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	63	%	33-117
OP67546-MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	15	%	20
OP67546-MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	60	%	30-115
OP67546-MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	17	%	20
OP67546-MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	62	%	31-115
OP67546-MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	16	%	20
OP67546-MSD*	91-94-1	3,3'-Dichlorobenzidine	MSD	REC	94	%	22-121
OP67546-MSD*	91-94-1	3,3'-Dichlorobenzidine	MSD	RPD	0	%	20
OP67546-MSD*	84-66-2	Diethyl Phthalate	MSD	REC	80	%	50-124
OP67546-MSD*	84-66-2	Diethyl Phthalate	MSD	RPD	3	%	20
OP67546-MSD*	131-11-3	Dimethyl Phthalate	MSD	REC	81	%	48-124
OP67546-MSD*	131-11-3	Dimethyl Phthalate	MSD	RPD	6	%	20
OP67546-MSD*	117-84-0	Di-n-octyl Phthalate	MSD	REC	100	%	45-140
OP67546-MSD*	117-84-0	Di-n-octyl Phthalate	MSD	RPD	4	%	20
OP67546-MSD*	84-74-2	Di-n-butyl Phthalate	MSD	REC	85	%	51-128
OP67546-MSD*	84-74-2	Di-n-butyl Phthalate	MSD	RPD	2	%	20
OP67546-MSD*	121-14-2	2,4-Dinitrotoluene	MSD	REC	89	%	48-126
OP67546-MSD*	121-14-2	2,4-Dinitrotoluene	MSD	RPD	3	%	20
OP67546-MSD*	606-20-2	2,6-Dinitrotoluene	MSD	REC	86	%	46-124
OP67546-MSD*	606-20-2	2,6-Dinitrotoluene	MSD	RPD	7	%	20
OP67546-MSD*	122-66-7	1,2-Diphenylhydrazine	MSD	REC	85	%	41-125
OP67546-MSD*	122-66-7	1,2-Diphenylhydrazine	MSD	RPD	8	%	20
OP67546-MSD*	117-81-7	bis(2-Ethylhexyl)phthalate	MSD	REC	90	%	51-133
OP67546-MSD*	117-81-7	bis(2-Ethylhexyl)phthalate	MSD	RPD	2	%	20
OP67546-MSD*	206-44-0	Fluoranthene	MSD	REC	81	%	50-127
OP67546-MSD*	206-44-0	Fluoranthene	MSD	RPD	1	%	20
OP67546-MSD*	86-73-7	Fluorene	MSD	REC	83	%	43-125
OP67546-MSD*	86-73-7	Fluorene	MSD	RPD	7	%	20
OP67546-MSD*	118-74-1	Hexachlorobenzene	MSD	REC	82	%	45-122
OP67546-MSD*	118-74-1	Hexachlorobenzene	MSD	RPD	9	%	20
OP67546-MSD*	87-68-3	Hexachlorobutadiene	MSD	REC	59	%	32-123
OP67546-MSD*	87-68-3	Hexachlorobutadiene	MSD	RPD	17	%	20
OP67546-MSD*	67-72-1	Hexachloroethane	MSD	REC	60	%	28-117
OP67546-MSD*	67-72-1	Hexachloroethane	MSD	RPD	17	%	20
OP67546-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	REC	112	%	45-133
OP67546-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	RPD	29	%	20
OP67546-MSD*	78-59-1	Isophorone	MSD	REC	66	%	30-122
OP67546-MSD*	78-59-1	Isophorone	MSD	RPD	10	%	20
OP67546-MSD*	90-12-0	1-Methylnaphthalene	MSD	REC	64	%	40-119
OP67546-MSD*	90-12-0	1-Methylnaphthalene	MSD	RPD	13	%	20
OP67546-MSD*	91-57-6	2-Methylnaphthalene	MSD	REC	64	%	38-122
OP67546-MSD*	91-57-6	2-Methylnaphthalene	MSD	RPD	2	%	20
OP67546-MSD*	91-20-3	Naphthalene	MSD	REC	60	%	35-123
OP67546-MSD*	91-20-3	Naphthalene	MSD	RPD	13	%	20

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

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Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67546-MSD*	88-74-4	2-Nitroaniline	MSD	REC	90	%	44-127
OP67546-MSD*	88-74-4	2-Nitroaniline	MSD	RPD	1	%	20
OP67546-MSD*	99-09-2	3-Nitroaniline	MSD	REC	90	%	33-119
OP67546-MSD*	99-09-2	3-Nitroaniline	MSD	RPD	1	%	20
OP67546-MSD*	98-95-3	Nitrobenzene	MSD	REC	64	%	34-122
OP67546-MSD*	98-95-3	Nitrobenzene	MSD	RPD	13	%	20
OP67546-MSD*	62-75-9	N-Nitrosodimethylamine	MSD	REC	64	%	23-120
OP67546-MSD*	62-75-9	N-Nitrosodimethylamine	MSD	RPD	10	%	20
OP67546-MSD*	621-64-7	N-Nitrosodi-n-propylamine	MSD	REC	69	%	36-120
OP67546-MSD*	621-64-7	N-Nitrosodi-n-propylamine	MSD	RPD	11	%	20
OP67546-MSD*	86-30-6	N-Nitrosodiphenylamine	MSD	REC	84	%	38-127
OP67546-MSD*	86-30-6	N-Nitrosodiphenylamine	MSD	RPD	4	%	20
OP67546-MSD*	85-01-8	Phenanthrene	MSD	REC	82	%	50-121
OP67546-MSD*	85-01-8	Phenanthrene	MSD	RPD	4	%	20
OP67546-MSD*	129-00-0	Pyrene	MSD	REC	88	%	47-127
OP67546-MSD*	129-00-0	Pyrene	MSD	RPD	1	%	20
OP67546-MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	60	%	34-118
OP67546-MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	16	%	20
OP67546-MSD*	367-12-4	2-Fluorophenol	MSD	SURR	67	%	35-115
OP67546-MSD*	4165-62-2	Phenol-d5	MSD	SURR	69	%	33-122
OP67546-MSD*	118-79-6	2,4,6-Tribromophenol	MSD	SURR	87	%	39-132
OP67546-MSD*	4165-60-0	Nitrobenzene-d5	MSD	SURR	62	%	37-122
OP67546-MSD*	321-60-8	2-Fluorobiphenyl	MSD	SURR	75	%	44-115
OP67546-MSD*	1718-51-0	Terphenyl-d14	MSD	SURR	86	%	54-127
OP67546-MB	367-12-4	2-Fluorophenol	MB	SURR	82	%	35-115
OP67546-MB	367-12-4	2-Fluorophenol	MB	SURR	75	%	35-115
OP67546-MB	4165-62-2	Phenol-d5	MB	SURR	83	%	33-122
OP67546-MB	4165-62-2	Phenol-d5	MB	SURR	73	%	33-122
OP67546-MB	118-79-6	2,4,6-Tribromophenol	MB	SURR	96	%	39-132
OP67546-MB	118-79-6	2,4,6-Tribromophenol	MB	SURR	89	%	39-132
OP67546-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	83	%	37-122
OP67546-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	77	%	37-122
OP67546-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	81	%	44-115
OP67546-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	85	%	44-115
OP67546-MB	1718-51-0	Terphenyl-d14	MB	SURR	90	%	54-127
OP67546-MB	1718-51-0	Terphenyl-d14	MB	SURR	97	%	54-127
FA48965-2	367-12-4	2-Fluorophenol	SAMP	SURR	67	%	35-115
FA48965-2	4165-62-2	Phenol-d5	SAMP	SURR	66	%	33-122
FA48965-2	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	83	%	39-132
FA48965-2	4165-60-0	Nitrobenzene-d5	SAMP	SURR	68	%	37-122
FA48965-2	321-60-8	2-Fluorobiphenyl	SAMP	SURR	74	%	44-115
FA48965-2	1718-51-0	Terphenyl-d14	SAMP	SURR	85	%	54-127
OP67491	SW846 8082A						

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67491-BS	12674-11-2	Aroclor 1016	BSP	REC	106	%	47-134
OP67491-BS	11096-82-5	Aroclor 1260	BSP	REC	118	%	53-140
OP67491-BS	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	80	%	44-130
OP67491-MS*	12674-11-2	Aroclor 1016	MS	REC	100	%	47-134
OP67491-MS*	11096-82-5	Aroclor 1260	MS	REC	99	%	53-140
OP67491-MS*	877-09-8	Tetrachloro-m-xylene (sig#1)	MS	SURR	74	%	44-130
OP67491-MSD*	12674-11-2	Aroclor 1016	MSD	REC	105	%	47-134
OP67491-MSD*	12674-11-2	Aroclor 1016	MSD	RPD	5	%	30
OP67491-MSD*	11096-82-5	Aroclor 1260	MSD	REC	106	%	53-140
OP67491-MSD*	11096-82-5	Aroclor 1260	MSD	RPD	6	%	30
OP67491-MSD*	877-09-8	Tetrachloro-m-xylene (sig#1)	MSD	SURR	76	%	44-130
OP67491-MB	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	85	%	44-130
FA48965-2	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	74	%	44-130

MP32972 SW846 6010C

MP32972-B1	7440-38-2	Arsenic	BSP	REC	96.9	%	82-111
MP32972-B1	7440-39-3	Barium	BSP	REC	101	%	83-113
MP32972-B1	7440-43-9	Cadmium	BSP	REC	100	%	82-113
MP32972-B1	7440-47-3	Chromium	BSP	REC	103	%	85-113
MP32972-B1	7439-92-1	Lead	BSP	REC	95.2	%	81-112
MP32972-B1	7782-49-2	Selenium	BSP	REC	95.5	%	78-111
MP32972-B1	7440-22-4	Silver	BSP	REC	96	%	82-112
MP32972-S1*	7440-38-2	Arsenic	MS	REC	81.7	%	82-111
MP32972-S1*	7440-39-3	Barium	MS	REC	1000.8 ^d	%	83-113
MP32972-S1*	7440-43-9	Cadmium	MS	REC	82.4	%	82-113
MP32972-S1*	7440-47-3	Chromium	MS	REC	261.4 ^d	%	85-113
MP32972-S1*	7439-92-1	Lead	MS	REC	114.5	%	81-112
MP32972-S1*	7782-49-2	Selenium	MS	REC	83.5	%	78-111
MP32972-S1*	7440-22-4	Silver	MS	REC	59.6 ^e	%	82-112
MP32972-S2*	7440-38-2	Arsenic	MSD	REC	95.9	%	82-111
MP32972-S2*	7440-38-2	Arsenic	MSD	RPD	11.1	%	20
MP32972-S2*	7440-39-3	Barium	MSD	REC	380.9 ^d	%	83-113
MP32972-S2*	7440-39-3	Barium	MSD	RPD	26.8 ^f	%	20
MP32972-S2*	7440-43-9	Cadmium	MSD	REC	93.2	%	82-113
MP32972-S2*	7440-43-9	Cadmium	MSD	RPD	6.5	%	20
MP32972-S2*	7440-47-3	Chromium	MSD	REC	178.3 ^d	%	85-113
MP32972-S2*	7440-47-3	Chromium	MSD	RPD	10	%	20
MP32972-S2*	7439-92-1	Lead	MSD	REC	101.1	%	81-112
MP32972-S2*	7439-92-1	Lead	MSD	RPD	13.6	%	20
MP32972-S2*	7782-49-2	Selenium	MSD	REC	97.8	%	78-111
MP32972-S2*	7782-49-2	Selenium	MSD	RPD	11.2	%	20
MP32972-S2*	7440-22-4	Silver	MSD	REC	93.5	%	82-112
MP32972-S2*	7440-22-4	Silver	MSD	RPD	21.7 ^f	%	20
MP32972-D1*	7440-38-2	Arsenic	DUP	RPD	6.1	%	20

* Sample used for QC is not from job FA48965

QC Evaluation: DOD QSM5 Limits

Job Number: FA48965
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/01/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP32972-D1*	7440-39-3	Barium	DUP	RPD	23.4 ^f	%	20
MP32972-D1*	7440-43-9	Cadmium	DUP	RPD	64.9 ^g	%	20
MP32972-D1*	7440-47-3	Chromium	DUP	RPD	6.1	%	20
MP32972-D1*	7439-92-1	Lead	DUP	RPD	9.9	%	20
MP32972-D1*	7782-49-2	Selenium	DUP	RPD	0	%	20
MP32972-D1*	7440-22-4	Silver	DUP	RPD	5.4	%	20
MP32977	SW846 7471B						
MP32977-B1	7439-97-6	Mercury	BSP	REC	96	%	80-124
MP32977-S1*	7439-97-6	Mercury	MS	REC	100.2	%	80-124
MP32977-S2*	7439-97-6	Mercury	MSD	REC	101.8	%	80-124
MP32977-S2*	7439-97-6	Mercury	MSD	RPD	3.1	%	20
MP32977-D1*	7439-97-6	Mercury	DUP	RPD	8.7	%	20

- (a) Sporadic marginal failure.
- (b) Outside control limits due to matrix interference.
- (c) Outside control limits due to matrix interference. Confirmed by reanalysis.
- (d) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (e) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.
- (f) High RPD due to possible sample non-homogeneity.
- (g) RPD acceptable due to low duplicate and sample concentrations.

* Sample used for QC is not from job FA48965

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

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Job Number: FA48965

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-MB	2B5913.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48965-1, FA48965-2, FA48965-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	18.1	50	10	ug/kg	J
71-43-2	Benzene	ND	5.0	1.2	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.0	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	25	7.3	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
75-15-0	Carbon Disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon Tetrachloride	ND	5.0	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.3	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.0	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.9	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.0	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.8	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.4	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-MB	2B5913.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48965-1, FA48965-2, FA48965-3

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/kg	
591-78-6	2-Hexanone	ND	25	7.5	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl Chloride	ND	5.0	2.0	ug/kg	
74-95-3	Methylene Bromide	ND	5.0	1.0	ug/kg	
75-09-2	Methylene Chloride	ND	10	4.0	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.0	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.4	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.3	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	16	ug/kg	
75-01-4	Vinyl Chloride	ND	5.0	1.0	ug/kg	
	m,p-Xylene	ND	10	1.1	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	93% 75-124%

Method Blank Summary

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-MB	2B5913.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48965-1, FA48965-2, FA48965-3

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	100% 72-135%
2037-26-5	Toluene-D8	100% 75-126%
460-00-4	4-Bromofluorobenzene	105% 71-133%

Blank Spike Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-BS	2B5914.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48965-1, FA48965-2, FA48965-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	265	106	61-152
71-43-2	Benzene	50	50.7	101	76-126
108-86-1	Bromobenzene	50	50.8	102	76-122
74-97-5	Bromochloromethane	50	44.6	89	77-120
75-27-4	Bromodichloromethane	50	47.4	95	74-130
75-25-2	Bromoform	50	48.1	96	76-127
78-93-3	2-Butanone (MEK)	250	252	101	75-137
104-51-8	n-Butylbenzene	50	45.3	91	71-128
135-98-8	sec-Butylbenzene	50	44.2	88	79-135
98-06-6	tert-Butylbenzene	50	43.8	88	77-133
75-15-0	Carbon Disulfide	50	42.2	84	72-122
56-23-5	Carbon Tetrachloride	50	43.2	86	78-133
108-90-7	Chlorobenzene	50	45.8	92	81-129
75-00-3	Chloroethane	50	49.8	100	68-133
67-66-3	Chloroform	50	44.9	90	72-123
95-49-8	o-Chlorotoluene	50	45.2	90	77-129
106-43-4	p-Chlorotoluene	50	44.7	89	80-134
124-48-1	Dibromochloromethane	50	47.8	96	76-127
96-12-8	1,2-Dibromo-3-chloropropane	50	42.6	85	70-137
106-93-4	1,2-Dibromoethane	50	48.2	96	77-126
75-71-8	Dichlorodifluoromethane	50	41.8	84	68-168
95-50-1	1,2-Dichlorobenzene	50	44.2	88	80-129
541-73-1	1,3-Dichlorobenzene	50	45.0	90	81-129
106-46-7	1,4-Dichlorobenzene	50	44.1	88	76-130
75-34-3	1,1-Dichloroethane	50	47.1	94	73-125
107-06-2	1,2-Dichloroethane	50	46.0	92	74-128
75-35-4	1,1-Dichloroethylene	50	43.1	86	81-136
156-59-2	cis-1,2-Dichloroethylene	50	46.2	92	74-126
156-60-5	trans-1,2-Dichloroethylene	50	44.8	90	70-127
78-87-5	1,2-Dichloropropane	50	46.8	94	74-125
142-28-9	1,3-Dichloropropane	50	45.3	91	76-122
594-20-7	2,2-Dichloropropane	50	44.6	89	77-133
563-58-6	1,1-Dichloropropene	50	43.4	87	75-130
10061-01-5	cis-1,3-Dichloropropene	50	48.7	97	80-123
10061-02-6	trans-1,3-Dichloropropene	50	50.8	102	75-131
100-41-4	Ethylbenzene	50	48.3	97	77-123

* = Outside of Control Limits.

Blank Spike Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-BS	2B5914.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48965-1, FA48965-2, FA48965-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	50	39.0	78	74-136
591-78-6	2-Hexanone	250	250	100	72-133
98-82-8	Isopropylbenzene	50	44.3	89	80-136
99-87-6	p-Isopropyltoluene	50	48.0	96	77-131
74-83-9	Methyl Bromide	50	46.0	92	65-139
74-87-3	Methyl Chloride	50	42.8	86	71-144
74-95-3	Methylene Bromide	50	47.4	95	74-124
75-09-2	Methylene Chloride	50	44.8	90	74-137
108-10-1	4-Methyl-2-pentanone (MIBK)	250	240	96	76-132
1634-04-4	Methyl Tert Butyl Ether	50	44.5	89	77-120
91-20-3	Naphthalene	50	41.5	83	79-129
103-65-1	n-Propylbenzene	50	45.1	90	80-135
100-42-5	Styrene	50	48.0	96	78-125
630-20-6	1,1,1,2-Tetrachloroethane	50	47.0	94	78-126
79-34-5	1,1,2,2-Tetrachloroethane	50	47.0	94	71-126
127-18-4	Tetrachloroethylene	50	44.5	89	79-130
108-88-3	Toluene	50	49.2	98	76-124
87-61-6	1,2,3-Trichlorobenzene	50	37.9	76* a	77-128
120-82-1	1,2,4-Trichlorobenzene	50	41.6	83	78-130
71-55-6	1,1,1-Trichloroethane	50	43.9	88	70-129
79-00-5	1,1,2-Trichloroethane	50	47.4	95	74-124
79-01-6	Trichloroethylene	50	46.5	93	75-128
75-69-4	Trichlorofluoromethane	50	44.8	90	73-145
96-18-4	1,2,3-Trichloropropane	50	47.3	95	74-127
95-63-6	1,2,4-Trimethylbenzene	50	48.4	97	74-123
108-67-8	1,3,5-Trimethylbenzene	50	47.6	95	73-122
108-05-4	Vinyl Acetate	250	224	90	48-164
75-01-4	Vinyl Chloride	50	43.3	87	76-141
	m,p-Xylene	100	93.9	94	80-128
95-47-6	o-Xylene	50	44.0	88	80-132
1330-20-7	Xylene (total)	150	138	92	80-129

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	75-124%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2B219-BS	2B5914.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples: Method: SW846 8260C
FA48965-1, FA48965-2, FA48965-3

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	96%	72-135%
2037-26-5	Toluene-D8	98%	75-126%
460-00-4	4-Bromofluorobenzene	103%	71-133%

(a) Sporadic marginal failure.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA48865-1MS	2B5916.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1MSD	2B5917.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1	2B5915.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48965-1, FA48965-2, FA48965-3

CAS No.	Compound	FA48865-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	61.6	B	347	326	76	336	335	81	3	61-152/27
71-43-2	Benzene	4.1 U		69.3	60.8	88	67.2	58.6	87	4	76-126/26
108-86-1	Bromobenzene	4.1 U		69.3	88.5	128*	67.2	74.3	111	17	76-122/32
74-97-5	Bromochloromethane	4.1 U		69.3	58.1	84	67.2	56.3	84	3	77-120/24
75-27-4	Bromodichloromethane	4.1 U		69.3	60.5	87	67.2	58.5	87	3	74-130/25
75-25-2	Bromoform	4.1 U		69.3	62.4	90	67.2	62.6	93	0	76-127/26
78-93-3	2-Butanone (MEK)	7.0	J	347	316	89	336	322	94	2	75-137/25
104-51-8	n-Butylbenzene	4.1 U		69.3	27.9	40*	67.2	22.2	33*	23	71-128/35
135-98-8	sec-Butylbenzene	18.3		69.3	162	207*	67.2	144	187*	12	79-135/34
98-06-6	tert-Butylbenzene	1.8	J	69.3	44.2	61*	67.2	37.4	53*	17	77-133/34
75-15-0	Carbon Disulfide	4.1 U		69.3	52.3	75	67.2	50.0	74	4	72-122/29
56-23-5	Carbon Tetrachloride	4.1 U		69.3	49.4	71*	67.2	47.2	70*	5	78-133/29
108-90-7	Chlorobenzene	4.1 U		69.3	62.3	90	67.2	59.9	89	4	81-129/29
75-00-3	Chloroethane	4.1 U		69.3	42.1	61*	67.2	52.4	78	22	68-133/29
67-66-3	Chloroform	4.1 U		69.3	56.8	82	67.2	54.6	81	4	72-123/26
95-49-8	o-Chlorotoluene	4.1 U		69.3	58.6	85	67.2	47.5	71*	21	77-129/33
106-43-4	p-Chlorotoluene	4.1 U		69.3	73.2	106	67.2	59.3	88	21	80-134/33
124-48-1	Dibromochloromethane	4.1 U		69.3	67.3	97	67.2	64.5	96	4	76-127/27
96-12-8	1,2-Dibromo-3-chloropropane	4.1 U		69.3	114	164*	67.2	96.9	144*	16	70-137/29
106-93-4	1,2-Dibromoethane	4.1 U		69.3	66.8	96	67.2	65.8	98	2	77-126/26
75-71-8	Dichlorodifluoromethane	4.1 U		69.3	43.6	63*	67.2	43.2	64*	1	68-168/29
95-50-1	1,2-Dichlorobenzene	4.1 U		69.3	57.2	83	67.2	46.6	69*	20	80-129/32
541-73-1	1,3-Dichlorobenzene	4.1 U		69.3	55.9	81	67.2	45.4	68*	21	81-129/33
106-46-7	1,4-Dichlorobenzene	4.1 U		69.3	55.3	80	67.2	44.9	67*	21	76-130/32
75-34-3	1,1-Dichloroethane	4.1 U		69.3	56.5	82	67.2	54.2	81	4	73-125/27
107-06-2	1,2-Dichloroethane	4.1 U		69.3	59.2	85	67.2	57.6	86	3	74-128/23
75-35-4	1,1-Dichloroethylene	4.1 U		69.3	51.9	75*	67.2	49.2	73*	5	81-136/28
156-59-2	cis-1,2-Dichloroethylene	4.1 U		69.3	58.7	85	67.2	56.7	84	3	74-126/26
156-60-5	trans-1,2-Dichloroethylene	4.1 U		69.3	55.7	80	67.2	53.7	80	4	70-127/27
78-87-5	1,2-Dichloropropane	4.1 U		69.3	61.0	88	67.2	59.1	88	3	74-125/25
142-28-9	1,3-Dichloropropane	4.1 U		69.3	66.5	96	67.2	64.3	96	3	76-122/26
594-20-7	2,2-Dichloropropane	4.1 U		69.3	49.1	71*	67.2	49.2	73*	0	77-133/28
563-58-6	1,1-Dichloropropene	4.1 U		69.3	53.5	77	67.2	50.5	75	6	75-130/28
10061-01-5	cis-1,3-Dichloropropene	4.1 U		69.3	62.7	90	67.2	60.3	90	4	80-123/26
10061-02-6	trans-1,3-Dichloropropene	4.1 U		69.3	70.6	102	67.2	67.4	100	5	75-131/28
100-41-4	Ethylbenzene	4.1 U		69.3	52.9	76*	67.2	49.7	74*	6	77-123/31

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 2 of 3

Job Number: FA48965

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA48865-1MS	2B5916.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1MSD	2B5917.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1	2B5915.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48965-1, FA48965-2, FA48965-3

CAS No.	Compound	FA48865-1 ug/kg	Spike Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	4.1 U		69.3	5.9	9*	67.2	5.1	8*	15	74-136/38
591-78-6	2-Hexanone	21 U		347	379	109	336	388	115	2	72-133/26
98-82-8	Isopropylbenzene	0.85	J	69.3	41.8	59*	67.2	38.7	56*	8	80-136/32
99-87-6	p-Isopropyltoluene	4.1 U		69.3	28.4	41*	67.2	23.1	34*	21	77-131/34
74-83-9	Methyl Bromide	4.1 U		69.3	52.8	76	67.2	52.5	78	1	65-139/31
74-87-3	Methyl Chloride	4.1 U		69.3	47.4	68*	67.2	47.9	71	1	71-144/27
74-95-3	Methylene Bromide	4.1 U		69.3	62.0	89	67.2	59.9	89	3	74-124/24
75-09-2	Methylene Chloride	8.2 U		69.3	56.1	81	67.2	53.3	79	5	74-137/28
108-10-1	4-Methyl-2-pentanone (MIBK)	21 U		347	406	117	336	422	126	4	76-132/26
1634-04-4	Methyl Tert Butyl Ether	4.1 U		69.3	58.4	84	67.2	58.2	87	0	77-120/24
91-20-3	Naphthalene	12.3		69.3	84.4	104	67.2	71.6	88	16	79-129/33
103-65-1	n-Propylbenzene	4.1 U		69.3	51.5	74*	67.2	41.7	62*	21	80-135/33
100-42-5	Styrene	4.1 U		69.3	58.4	84	67.2	56.2	84	4	78-125/30
630-20-6	1,1,1,2-Tetrachloroethane	4.1 U		69.3	59.4	86	67.2	57.2	85	4	78-126/27
79-34-5	1,1,2,2-Tetrachloroethane	4.1 U		69.3	576	831*	67.2	511	760*	12	71-126/30
127-18-4	Tetrachloroethylene	4.1 U		69.3	50.1	72*	67.2	46.5	69*	7	79-130/31
108-88-3	Toluene	4.1 U		69.3	67.7	98	67.2	63.8	95	6	76-124/30
87-61-6	1,2,3-Trichlorobenzene	4.1 U		69.3	34.7	50*	67.2	30.0	45*	15	77-128/35
120-82-1	1,2,4-Trichlorobenzene	4.1 U		69.3	35.0	50*	67.2	16.4	24*	72*	78-130/34
71-55-6	1,1,1-Trichloroethane	4.1 U		69.3	52.5	76	67.2	50.8	76	3	70-129/27
79-00-5	1,1,2-Trichloroethane	4.1 U		69.3	173	250*	67.2	165	245*	5	74-124/28
79-01-6	Trichloroethylene	4.1 U		69.3	58.7	85	67.2	55.3	82	6	75-128/27
75-69-4	Trichlorofluoromethane	4.1 U		69.3	48.5	70*	67.2	47.4	71*	2	73-145/31
96-18-4	1,2,3-Trichloropropane	4.1 U		69.3	226	326*	67.2	200	297*	12	74-127/27
95-63-6	1,2,4-Trimethylbenzene	4.1 U		69.3	49.7	72*	67.2	39.5	59*	23	74-123/34
108-67-8	1,3,5-Trimethylbenzene	4.1 U		69.3	44.8	65*	67.2	35.6	53*	23	73-122/33
108-05-4	Vinyl Acetate	21 U		347	275	79	336	265	79	4	48-164/37
75-01-4	Vinyl Chloride	4.1 U		69.3	48.0	69*	67.2	47.5	71*	1	76-141/27
	m,p-Xylene	8.2 U		139	105	76*	134	97.3	72*	8	80-128/30
95-47-6	o-Xylene	4.1 U		69.3	55.1	79*	67.2	52.1	77*	6	80-132/30
1330-20-7	Xylene (total)	12 U		208	160	77*	202	149	74*	7	80-129/30

CAS No.	Surrogate Recoveries	MS	MSD	FA48865-1	Limits
1868-53-7	Dibromofluoromethane	99%	99%	95%	75-124%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 3 of 3

Job Number: FA48965

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA48865-1MS	2B5916.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1MSD	2B5917.D	1	11/02/17	EP	n/a	n/a	V2B219
FA48865-1	2B5915.D	1	11/02/17	EP	n/a	n/a	V2B219

The QC reported here applies to the following samples:

Method: SW846 8260C

FA48965-1, FA48965-2, FA48965-3

CAS No.	Surrogate Recoveries	MS	MSD	FA48865-1	Limits
17060-07-0	1,2-Dichloroethane-D4	96%	97%	99%	72-135%
2037-26-5	Toluene-D8	112%	110%	107%	75-126%
460-00-4	4-Bromofluorobenzene	134%*	115%	116%	71-133%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-BFB
Lab File ID: 2B5774.D
Instrument ID: GCMS2B
Injection Date: 10/24/17
Injection Time: 09:49

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	85885	21.1	Pass
75	30.0 - 60.0% of mass 95	205504	50.4	Pass
95	Base peak, 100% relative abundance	407872	100.0	Pass
96	5.0 - 9.0% of mass 95	27469	6.73	Pass
173	Less than 2.0% of mass 174	2160	0.53 (0.80) ^a	Pass
174	50.0 - 100.0% of mass 95	268352	65.8	Pass
175	5.0 - 9.0% of mass 174	19983	4.90 (7.45) ^a	Pass
176	95.0 - 101.0% of mass 174	259328	63.6 (96.6) ^a	Pass
177	5.0 - 9.0% of mass 176	17309	4.24 (6.67) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B212-IC0212	2B5775.D	10/24/17	10:20	00:31	Initial cal 1
V2B212-IC0212	2B5776.D	10/24/17	10:45	00:56	Initial cal 2
V2B212-IC0212	2B5777.D	10/24/17	11:09	01:20	Initial cal 3
V2B212-IC0212	2B5778.D	10/24/17	11:33	01:44	Initial cal 4
V2B212-IC0212	2B5779.D	10/24/17	11:57	02:08	Initial cal 5
V2B212-IC0212	2B5780.D	10/24/17	12:21	02:32	Initial cal 6
V2B212-IC0212	2B5781.D	10/24/17	12:45	02:56	Initial cal 7
V2B212-ICV0212	2B5788.D	10/24/17	15:36	05:47	Initial cal verification 5
V2B212-BS	2B5788.D	10/24/17	15:36	05:47	Blank Spike
V2B212-MB	2B5789.D	10/24/17	16:00	06:11	Method Blank
ZZZZZZ	2B5790.D	10/24/17	16:28	06:39	(unrelated sample)
ZZZZZZ	2B5791.D	10/24/17	16:52	07:03	(unrelated sample)
ZZZZZZ	2B5792.D	10/24/17	17:16	07:27	(unrelated sample)
FA48590-4	2B5793.D	10/24/17	17:41	07:52	(used for QC only; not part of job FA48965)
ZZZZZZ	2B5794.D	10/24/17	18:05	08:16	(unrelated sample)
ZZZZZZ	2B5795.D	10/24/17	18:29	08:40	(unrelated sample)
ZZZZZZ	2B5796.D	10/24/17	18:53	09:04	(unrelated sample)
ZZZZZZ	2B5797.D	10/24/17	19:17	09:28	(unrelated sample)
FA48590-4MS	2B5798.D	10/24/17	19:41	09:52	Matrix Spike
FA48590-4MSD	2B5799.D	10/24/17	20:06	10:17	Matrix Spike Duplicate
V2B212-ECC0212	2B5800.D	10/24/17	20:30	10:41	Ending cal 5

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-BFB
Lab File ID: 2B5911.D
Instrument ID: GCMS2B
Injection Date: 11/02/17
Injection Time: 09:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	76885	20.0	Pass
75	30.0 - 60.0% of mass 95	187264	48.7	Pass
95	Base peak, 100% relative abundance	384597	100.0	Pass
96	5.0 - 9.0% of mass 95	26123	6.79	Pass
173	Less than 2.0% of mass 174	1358	0.35 (0.52) ^a	Pass
174	50.0 - 100.0% of mass 95	259648	67.5	Pass
175	5.0 - 9.0% of mass 174	19114	4.97 (7.36) ^a	Pass
176	95.0 - 101.0% of mass 174	251264	65.3 (96.8) ^a	Pass
177	5.0 - 9.0% of mass 176	16407	4.27 (6.53) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2B219-CC0212	2B5912.D	11/02/17	09:41	00:24	Continuing cal 5
V2B219-MB	2B5913.D	11/02/17	10:05	00:48	Method Blank
V2B219-BS	2B5914.D	11/02/17	10:30	01:13	Blank Spike
FA48865-1	2B5915.D	11/02/17	10:53	01:36	(used for QC only; not part of job FA48965)
FA48865-1MS	2B5916.D	11/02/17	11:17	02:00	Matrix Spike
FA48865-1MSD	2B5917.D	11/02/17	11:42	02:25	Matrix Spike Duplicate
FA48965-1	2B5918.D	11/02/17	12:19	03:02	NIKE SWN EXT4
FA48965-2	2B5919.D	11/02/17	12:43	03:26	NIKE BOT N3
FA48965-3	2B5920.D	11/02/17	13:07	03:50	NIKE SWW2
FA48965-2	2B5921.D	11/02/17	14:21	05:04	NIKE BOT N3
FA48965-2	2B5922.D	11/02/17	14:45	05:28	NIKE BOT N3
V2B219-ECC0212	2B5923.D	11/02/17	15:09	05:52	Ending cal 5

Internal Standard Area Summary

Page 1 of 1

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: V2B219-CC0212	Injection Date: 11/02/17
Lab File ID: 2B5912.D	Injection Time: 09:41
Instrument ID: GCMS2B	Method: SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal ^a	1164392	9.97	815217	12.83	400604	14.48	138415	6.38
Check Std ^b	1293166	9.97	926788	12.83	432132	14.48	155942	6.38
Upper Limit ^c	2586332	10.14	1853576	13.00	864264	14.65	311884	6.55
Lower Limit ^d	646583	9.80	463394	12.66	216066	14.31	77971	6.21

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
V2B219-MB	1278395	9.97	948398	12.82	433978	14.48	149906	6.45
V2B219-BS	1235488	9.97	909891	12.83	434469	14.48	156589	6.39
FA48865-1	1168891	9.97	797315	12.83	329982	14.48	86488	6.37
FA48865-1MS	1216086	9.97	806846	12.83	272504	14.48	117972	6.39
FA48865-1MSD	1230433	9.97	827272	12.83	322732	14.48	125659	6.38
FA48965-1	984188	9.97	789202	12.83	336451	14.48	46366*	6.37
FA48965-2 ^e	1095675	9.97	553661	12.83	133753*	14.48	96911	6.38
FA48965-3	1224234	9.97	814729	12.83	293228	14.48	71205*	6.37
FA48965-2 ^e	884627	9.97	492845	12.82	107854*	14.48	94874	6.37
FA48965-2	1293060	9.97	974690	12.83	455110	14.48	151161	6.44
V2B219-ECC0212	1265403	9.97	897264	12.83	436632	14.48	170102	6.38

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

- (a) Initial Cal is: V2B212-ICC0212 2B5779.D 10/24/17 11:57
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.
(e) Confirmation run for surrogate recoveries.

Surrogate Recovery Summary

Page 1 of 1

Job Number: FA48965

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8260C

Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA48965-1	2B5918.D	106	103	95	113
FA48965-2	2B5922.D	96	99	100	105
FA48965-2	2B5921.D	107	102	124	163* ^a
FA48965-2	2B5919.D	98	98	129* ^b	155* ^a
FA48965-3	2B5920.D	94	96	108	122
FA48865-1MS	2B5916.D	99	96	112	134*
FA48865-1MSD	2B5917.D	99	97	110	115
V2B219-BS	2B5914.D	99	96	98	103
V2B219-MB	2B5913.D	93	100	100	105

Surrogate Compounds

Recovery Limits

S1 = Dibromofluoromethane

75-124%

S2 = 1,2-Dichloroethane-D4

72-135%

S3 = Toluene-D8

75-126%

S4 = 4-Bromofluorobenzene

71-133%

(a) Outside control limits due to matrix interference. Confirmed by reanalysis.

(b) Outside control limits due to matrix interference.

6.6.1

6

Initial Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICC0212
Lab FileID: 2B5779.D

Response Factor Report MSVOA18

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Oct 24 16:02:23 2017
Response via : Initial Calibration

Calibration Files

1 =2B5775.D 2 =2B5776.D 3 =2B5777.D 4 =2B5778.D
5 =2B5779.D 6 =2B5780.D 7 =2B5781.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) I Fluorobenzene	-----ISTD-----								
2) Dichlorodifluorom	0.457	0.411	0.409	0.414	0.408	0.386	0.365	0.407	6.95
3)P Chloromethane	0.645	0.602	0.603	0.593	0.601	0.570	0.527	0.592	6.12
4)C Vinyl Chloride	0.618	0.569	0.569	0.572	0.579	0.539	0.501	0.564	6.42
5) Bromomethane	0.296	0.269	0.275	0.269	0.276	0.262	0.244	0.270	5.80
6) Chloroethane	0.341	0.306	0.309	0.304	0.302	0.207		0.295	15.39
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9964									
Response Ratio = 0.00000 + 0.36389 *A + -0.07780 *A^2									
7) Trichlorofluorome	0.547	0.510	0.506	0.512	0.509	0.482	0.434	0.500	7.00
8) Ethyl Ether	0.322	0.323	0.331	0.324	0.324	0.310	0.303	0.319	3.02
9) 1,2-Dichlorotrifl	0.498	0.457	0.471	0.468	0.468	0.441	0.413	0.460	5.84
10)C 1,1-Dichloroethen	0.636	0.586	0.598	0.602	0.600	0.575	0.536	0.590	5.18
11) Freon 113	0.371	0.333	0.353	0.361	0.351	0.331	0.313	0.345	5.80
12) Carbon Disulfide	1.320	1.186	1.243	1.257	1.261	1.210	1.131	1.230	4.93
13) Iodomethane	0.499	0.464	0.507	0.501	0.504	0.483	0.437	0.485	5.35
14) Allyl chloride	0.743	0.702	0.722	0.732	0.737	0.703	0.659	0.714	4.07
15) Methylene Chlorid	1.063	0.754	0.618	0.568	0.568	0.502	0.470	0.649	31.47
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9987									
Response Ratio = 0.00000 + 0.57380 *A + -0.02648 *A^2									
16) Acetone	0.127	0.134	0.115	0.102	0.096	0.090	0.087	0.107	16.86
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991									
Response Ratio = 0.00000 + 0.09925 *A + -0.00060 *A^2									
17) Methyl acetate	0.258	0.274	0.288	0.273	0.261	0.267	0.259	0.269	4.03
18) trans-1,2-Dichlor	0.580	0.545	0.553	0.552	0.547	0.518	0.476	0.539	6.12
19) Hexane	0.397	0.342	0.332	0.347	0.336	0.311	0.299	0.338	9.20
20) Methyl Tert Butyl	0.913	0.884	0.940	0.908	0.909	0.885	0.872	0.902	2.55
21) Acetonitrile	0.063	0.053	0.053	0.049	0.045	0.045	0.043	0.050	13.68
22) Di-isopropyl ethe	1.267	1.300	1.361	1.351	1.375	1.316	1.289	1.323	3.07
23) Chloroprene	0.523	0.535	0.566	0.590	0.596	0.572	0.539	0.560	5.04
24)P 1,1-Dichloroethan	0.670	0.664	0.674	0.669	0.668	0.633	0.602	0.654	4.11
25) Acrylonitrile	0.123	0.123	0.130	0.121	0.118	0.116	0.114	0.121	4.35
26) ETBE	1.043	1.055	1.113	1.089	1.099	1.061	1.049	1.073	2.54
27) Vinyl acetate	0.618	0.700	0.766	0.736	0.752	0.693	0.702	0.709	6.95
28) cis-1,2-Dichloroe	0.350	0.342	0.344	0.344	0.346	0.329	0.317	0.339	3.38
29) 2,2-Dichloropropa	0.443	0.406	0.395	0.389	0.385	0.358	0.319	0.385	10.07
30) Bromochloromethan	0.143	0.142	0.146	0.143	0.144	0.140	0.139	0.142	1.71
31) Cyclohexane	0.812	0.771	0.801	0.813	0.813	0.778	0.748	0.791	3.21
32)C Chloroform	0.540	0.547	0.559	0.559	0.560	0.530	0.516	0.545	3.10
33) Ethyl acetate	0.243	0.298	0.321	0.303	0.302	0.296	0.311	0.296	8.46
34) Tetrahydrofuran	0.179	0.207	0.222	0.206	0.205	0.195	0.201	0.202	6.43
35)S Dibromofluorometh	0.237	0.220	0.225	0.225	0.226	0.224	0.227	0.226	2.26
36) Carbon Tetrachlor	0.364	0.346	0.362	0.366	0.369	0.359	0.345	0.359	2.67
37) 1,1,1-Trichloroet	0.508	0.489	0.495	0.495	0.495	0.474	0.453	0.487	3.74

Initial Calibration Summary

Job Number: FA48965
 Account: TCMaw Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICC0212
 Lab FileID: 2B5779.D

38)	2-Butanone	0.130	0.148	0.161	0.151	0.148	0.147	0.152	0.148	6.29
39)	1,1-Dichloroprope	0.440	0.457	0.474	0.485	0.484	0.461	0.438	0.463	4.20
40)	tert-Butyl Format	0.240	0.253	0.280	0.278	0.290	0.288	0.300	0.275	7.73
41)	Propionitrile	0.043	0.046	0.050	0.046	0.044	0.044	0.044	0.045	4.84
42)	Methacrylonitrile	0.178	0.206	0.220	0.207	0.204	0.201	0.199	0.202	6.22
43)	Benzene	1.185	1.261	1.265	1.273	1.280	1.223	1.202	1.241	3.02
44)	TAME	0.931	0.939	0.989	0.966	0.981	0.954	0.966	0.961	2.17
45)S	1,2-Dichloroethan	0.284	0.273	0.281	0.274	0.271	0.271	0.276	0.276	1.85
46)	1,2-Dichloroethan	0.357	0.389	0.403	0.394	0.391	0.373	0.369	0.382	4.27
47)	Trichloroethene	0.281	0.304	0.307	0.308	0.309	0.296	0.285	0.298	3.90
48)	Methylcyclohexane	0.696	0.666	0.689	0.721	0.715	0.682	0.673	0.692	2.94
49)	Dibromomethane	0.138	0.154	0.159	0.155	0.155	0.150	0.152	0.152	4.33
50)C	1,2-Dichloropropa	0.301	0.342	0.350	0.343	0.350	0.336	0.339	0.337	4.99
51)	Bromodichlorometh	0.289	0.335	0.350	0.353	0.364	0.353	0.364	0.344	7.60
52)	Methyl methacryla	0.194	0.246	0.271	0.262	0.263	0.261	0.277	0.253	10.98
53)	2-Chloroethyl vin	0.139	0.173	0.192	0.181	0.180	0.172	0.183	0.174	9.70
54)	cis-1,3-Dichlorop	0.381	0.464	0.479	0.470	0.474	0.459	0.479	0.458	7.53
55) I	Chlorobenzene-d5	-----ISTD-----								
56)S	Toluene-d8	1.298	1.386	1.354	1.360	1.362	1.367	1.384	1.359	2.16
57)C	Toluene	1.529	1.745	1.708	1.731	1.728	1.661	1.632	1.676	4.58
58)	2-Nitropropane	0.060	0.079	0.088	0.086	0.090	0.096	0.102	0.086	15.89
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999										
Response Ratio = 0.00000 + 0.08689 *A + 0.00075 *A^2										
59)	4-Methyl-2-pentan	0.373	0.464	0.500	0.472	0.471	0.469	0.457	0.458	8.69
60)	trans-1,3-Dichlor	0.438	0.539	0.554	0.548	0.551	0.529	0.550	0.530	7.79
61)	Tetrachloroethene	0.340	0.387	0.386	0.394	0.387	0.389	0.376	0.380	4.89
62)	Ethyl methacrylat	0.369	0.475	0.536	0.526	0.535	0.526	0.541	0.501	12.44
63)	1,1,2-Trichloroet	0.245	0.284	0.291	0.281	0.280	0.271	0.278	0.276	5.32
64)	Dibromochlorometh	0.234	0.282	0.303	0.306	0.315	0.312	0.326	0.297	10.31
65)	1,3-Dichloropropa	0.550	0.651	0.655	0.638	0.638	0.609	0.626	0.624	5.77
66)	1,2-Dibromoethane	0.255	0.302	0.311	0.307	0.312	0.301	0.301	0.298	6.61
67)	2-hexanone	0.256	0.322	0.356	0.334	0.329	0.322	0.315	0.319	9.64
68)	1-Chlorohexane	0.577	0.627	0.644	0.665	0.638	0.599	0.549	0.614	6.66
69)C	Ethylbenzene	1.851	2.024	2.026	2.062	2.022	1.958	1.861	1.972	4.31
70)P	Chlorobenzene	1.051	1.156	1.148	1.150	1.142	1.082	1.053	1.112	4.28
71)	1,1,1,2-Tetrachlo	0.298	0.335	0.351	0.356	0.368	0.368	0.371	0.350	7.45
72)	m,p-Xylene	1.430	1.574	1.594	1.622	1.594	1.538	1.372	1.532	6.18
73)	o-Xylene	1.498	1.649	1.689	1.711	1.723	1.667	1.603	1.649	4.72
74)	Styrene	0.881	1.042	1.111	1.145	1.140	1.119	1.052	1.070	8.66
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999										
Response Ratio = 0.00000 + 1.16893 *A + -0.02909 *A^2										
75)P	Bromoform	0.126	0.151	0.172	0.176	0.183	0.190	0.198	0.171	14.61
76)	Isopropylbenzene	1.816	2.023	2.052	2.113	2.095	2.047	1.942	2.013	5.10
77) I	1,4-Dichlorobenzene-d	-----ISTD-----								
78)S	4-Bromofluorobenz	0.736	0.733	0.725	0.721	0.728	0.705	0.702	0.721	1.85
79)	cis-1,4-Dichloro-	0.179	0.226	0.247	0.247	0.253	0.251	0.261	0.238	11.83
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999										
Response Ratio = 0.00000 + 0.24402 *A + 0.00415 *A^2										
80)	n-Propylbenzene	4.775	5.151	5.113	5.199	5.043	4.688	4.335	4.901	6.44
81)	Bromobenzene	0.734	0.802	0.797	0.795	0.796	0.746	0.745	0.773	3.92
82)P	1,1,2,2-Tetrachlo	0.880	0.966	0.998	0.971	0.962	0.927	0.964	0.952	4.01
83)	1,3,5-Trimethylbe	2.962	3.241	3.261	3.326	3.292	3.107	3.051	3.177	4.33
84)	2-Chlorotoluene	3.200	3.397	3.363	3.379	3.347	3.139	3.038	3.266	4.30
85)	trans-1,4-Dichlor	0.219	0.284	0.297	0.296	0.300	0.301	0.315	0.287	11.02
86)	1,2,3-Trichloropr	0.245	0.266	0.267	0.259	0.261	0.252	0.256	0.258	2.98

Initial Calibration Summary

Page 3 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICC0212
Lab FileID: 2B5779.D

87)	Cyclohexanone	0.055	0.060	0.067	0.064	0.064	0.063	0.065	0.062	6.25
88)	4-Chlorotoluene	2.841	3.086	3.053	3.042	2.939	2.717	2.489	2.881	7.54
89)	tert-Butylbenzene	1.636	1.979	1.976	2.052	2.071	1.978	2.017	1.958	7.51
90)	1,2,4-Trimethylbe	2.959	3.206	3.238	3.265	3.221	3.028	2.934	3.121	4.56
91)	Pentachloroethane	0.361	0.429	0.437	0.458	0.474	0.451	0.497	0.444	9.70
92)	sec-Butylbenzene	4.246	4.620	4.628	4.740	4.663	4.387	4.237	4.503	4.63
93)	4-Isopropyltoluen	3.158	3.402	3.424	3.496	3.354	3.153	2.971	3.280	5.76
94)	1,3-Dichlorobenze	1.578	1.681	1.671	1.654	1.583	1.467	1.359	1.571	7.57
95)	1,4-Dichlorobenze	1.616	1.723	1.695	1.673	1.592	1.473	1.355	1.590	8.33
96)	n-Butylbenzene	1.794	1.975	1.985	2.000	1.876	1.734	1.567	1.847	8.66
97)	Benzyl Chloride	0.266	0.326	0.348	0.362	0.363	0.362	0.386	0.345	11.41
98)	1,2-Dichlorobenze	1.500	1.618	1.615	1.614	1.569	1.480	1.418	1.545	5.14
99)	1,2-Dibromo-3-Chl	0.154	0.168	0.181	0.172	0.176	0.179	0.188	0.174	6.19
100)	Hexachlorobutadie	0.544	0.554	0.555	0.567	0.504	0.477	0.420	0.517	10.36
101)	1,2,4-Trichlorobe	0.966	0.959	0.947	0.923	0.852	0.767	0.680	0.871	12.65
102)	Naphthalene	2.235	2.326	2.464	2.408	2.375	2.318	2.286	2.345	3.29
103)	1,2,3-Trichlorobe	0.917	0.894	0.904	0.889	0.839	0.778	0.720	0.849	8.75
104)	I Tert Butyl Alcohol-d1	-----ISTD-----								
105)	Ethanol	0.228	0.225	0.220	0.210	0.202	0.188	0.187	0.209	8.12
106)	Acrolein	2.065	2.280	2.192	2.317	2.389	2.279	2.269	2.256	4.55
107)	Tert butyl alcoho	1.504	1.662	1.613	1.647	1.646	1.592	1.608	1.610	3.29
108)	Isobutyl alcohol	0.326	0.406	0.413	0.428	0.440	0.426	0.451	0.413	10.02
109)	Tert Amyl Alcohol	0.926	1.177	1.206	1.247	1.285	1.239	1.314	1.199	10.74
110)	1,4-Dioxane	0.106	0.130	0.126	0.137	0.135	0.127	0.130	0.127	7.95

(#) = Out of Range

102417APP9-2B.m

Tue Oct 24 16:05:30 2017

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Initial Calibration Verification

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICV0212
Lab FileID: 2B5788.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\102417\2B5788.D Vial: 19
Acq On : 24 Oct 2017 3:36 pm Operator: seanp
Sample : ICV0212-5, BS Inst : MSVOA18
Misc : MS38601,V2B212,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Tue Oct 24 16:02:23 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	103	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.416	-2.2	105	0.00	2.64
3 P	Chloromethane	0.592	0.573	3.2	98	0.00	2.93
4 C	Vinyl Chloride	0.564	0.550	2.5	98	0.00	3.09
5	Bromomethane	0.270	0.271	-0.4	101	0.00	3.61
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	59.881	-19.8	111	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.532	-6.4	108	0.00	4.05
8	Ethyl Ether	0.319	0.315	1.3	100	0.00	4.57
9	1,2-Dichlorotrifluoroetha	0.460	0.468	-1.7	103	0.00	4.90
10 C	1,1-Dichloroethene	0.590	0.596	-1.0	102	0.00	4.86
11	Freon 113	0.345	0.303	12.2	89	0.00	4.97
12	Carbon Disulfide	1.230	1.097	10.8	90	0.00	4.89
13	Iodomethane	0.485	0.458	5.6	94	0.00	5.08
14	Allyl chloride	0.714	0.668	6.4	93	0.00	5.66
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	50.417	-0.8	100	0.00	5.83
16	Acetone	250.000	267.335	-6.9	110	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.276	-2.6	109	0.00	6.16
18	trans-1,2-Dichloroethene	0.539	0.555	-3.0	105	0.00	6.10
19	Hexane	0.338	0.324	4.1	99	0.00	6.24
20	Methyl Tert Butyl Ether	0.902	0.914	-1.3	104	0.00	6.31
21	Acetonitrile	0.050	0.046	8.0	105	0.00	6.72
22	Di-isopropyl ether	1.323	1.342	-1.4	101	0.00	6.97
23	Chloroprene	0.560	0.594	-6.1	103	0.00	7.12
24 P	1,1-Dichloroethane	0.654	0.699	-6.9	108	0.00	7.16
25	Acrylonitrile	0.121	0.120	0.8	105	0.00	7.27
26	ETBE	1.073	1.093	-1.9	103	0.00	7.62
27	Vinyl acetate	0.709	0.746	-5.2	102	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.354	-4.4	105	0.00	8.13
29	2,2-Dichloropropane	0.385	0.392	-1.8	105	0.00	8.33
30	Bromochloromethane	0.142	0.141	0.7	101	0.00	8.48
31	Cyclohexane	0.791	0.764	3.4	97	0.00	8.47
32 C	Chloroform	0.545	0.557	-2.2	102	0.00	8.61
33	Ethyl acetate	0.296	0.312	-5.4	107	0.00	8.85
34	Tetrahydrofuran	0.202	0.210	-4.0	105	0.00	8.88

Initial Calibration Verification

Job Number: FA48965
 Account: TCMaw Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICV0212
 Lab FileID: 2B5788.D

35	S	Dibromofluoromethane	0.226	0.226	0.0	103	0.00	8.90
36		Carbon Tetrachloride	0.359	0.366	-1.9	102	0.00	8.81
37		1,1,1-Trichloroethane	0.487	0.486	0.2	101	0.00	8.93
38		2-Butanone	0.148	0.162	-9.5	113	0.00	9.11
39		1,1-Dichloropropene	0.463	0.467	-0.9	100	0.00	9.11
40		tert-Butyl Formate	0.275	0.282	-2.5	100	0.00	9.30
41		Propionitrile	0.045	0.046	-2.2	108	0.00	9.51
42		Methacrylonitrile	0.202	0.209	-3.5	105	0.00	9.53
43		Benzene	1.241	1.394	-12.3	112	0.00	9.45
44		TAME	0.961	0.969	-0.8	102	0.00	9.62
45	S	1,2-Dichloroethane-d4	0.276	0.277	-0.4	106	0.00	9.63
46		1,2-Dichloroethane	0.382	0.407	-6.5	107	0.00	9.72
47		Trichloroethene	0.298	0.314	-5.4	105	0.00	10.16
48		Methylcyclohexane	0.692	0.702	-1.4	101	0.00	10.14
49		Dibromomethane	0.152	0.162	-6.6	108	0.00	10.62
50	C	1,2-Dichloropropane	0.337	0.357	-5.9	105	0.00	10.72
51		Bromodichloromethane	0.344	0.374	-8.7	106	0.00	10.78
52		Methyl methacrylate	0.253	0.277	-9.5	108	0.00	10.95
53		2-Chloroethyl vinyl ether	0.174	0.178	-2.3	102	0.00	11.33
54		cis-1,3-Dichloropropene	0.458	0.497	-8.5	108	0.00	11.39
55	I	Chlorobenzene-d5	1.000	1.000	0.0	105	0.00	12.83
56	S	Toluene-d8	1.359	1.356	0.2	105	0.00	11.56
57	C	Toluene	1.676	1.866	-11.3	114	0.00	11.60
----- Amount Calc. %Drift -----								
58		2-Nitropropane	250.000	232.229	7.1	99	0.00	11.81
----- AvgRF CCRF %Dev -----								
59		4-Methyl-2-pentanone	0.458	0.502	-9.6	112	0.00	11.92
60		trans-1,3-Dichloropropene	0.530	0.609	-14.9	116	0.00	11.95
61		Tetrachloroethene	0.380	0.383	-0.8	104	0.00	11.93
62		Ethyl methacrylate	0.501	0.535	-6.8	105	0.00	12.08
63		1,1,2-Trichloroethane	0.276	0.292	-5.8	110	0.00	12.09
64		Dibromochloromethane	0.297	0.324	-9.1	108	0.00	12.24
65		1,3-Dichloropropane	0.624	0.638	-2.2	105	0.00	12.31
66		1,2-Dibromoethane	0.298	0.319	-7.0	108	0.00	12.44
67		2-hexanone	0.319	0.349	-9.4	112	0.00	12.59
68		1-Chlorohexane	0.614	0.607	1.1	100	0.00	12.80
69	C	Ethylbenzene	1.972	2.170	-10.0	113	0.00	12.84
70	P	Chlorobenzene	1.112	1.143	-2.8	106	0.00	12.84
71		1,1,1,2-Tetrachloroethane	0.350	0.381	-8.9	109	0.00	12.88
72		m,p-Xylene	1.532	1.655	-8.0	109	0.00	12.95
73		o-Xylene	1.649	1.700	-3.1	104	0.00	13.27
----- Amount Calc. %Drift -----								
74		Styrene	50.000	54.729	-9.5	115	0.00	13.31
----- AvgRF CCRF %Dev -----								
75	P	Bromoform	0.171	0.187	-9.4	107	0.00	13.34
76		Isopropylbenzene	2.013	2.102	-4.4	106	0.00	13.49
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	14.48
78	S	4-Bromofluorobenzene	0.721	0.720	0.1	105	0.00	13.70
----- Amount Calc. %Drift -----								
79		cis-1,4-Dichloro-2-butene	50.000	60.670	-21.3#	127	0.00	13.74
----- AvgRF CCRF %Dev -----								
80		n-Propylbenzene	4.901	5.037	-2.8	106	0.00	13.78

Initial Calibration Verification

Page 3 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B212-ICV0212
Lab FileID: 2B5788.D

81	Bromobenzene	0.773	0.860	-11.3	115	0.00	13.80
82 P	1,1,2,2-Tetrachloroethane	0.952	0.989	-3.9	110	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	3.477	-9.4	113	0.00	13.90
84	2-Chlorotoluene	3.266	3.343	-2.4	106	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.285	0.7	101	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.270	-4.7	110	0.00	13.94
87	Cyclohexanone	0.062	0.063	-1.6	105	0.00	13.99
88	4-Chlorotoluene	2.881	2.886	-0.2	105	0.00	14.02
89	tert-Butylbenzene	1.958	2.018	-3.1	104	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	3.466	-11.1	115	0.00	14.18
91	Pentachloroethane	0.444	0.469	-5.6	105	0.00	14.17
92	sec-Butylbenzene	4.503	4.651	-3.3	106	0.00	14.25
93	4-Isopropyltoluene	3.280	3.673	-12.0	117	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.599	-1.8	108	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.589	0.1	106	0.00	14.49
96	n-Butylbenzene	1.847	1.977	-7.0	112	0.00	14.63
97	Benzyl Chloride	0.345	0.349	-1.2	102	0.00	14.66
98	1,2-Dichlorobenzene	1.545	1.565	-1.3	106	0.00	14.79
99	1,2-Dibromo-3-Chloropropa	0.174	0.176	-1.1	107	0.00	15.32
100	Hexachlorobutadiene	0.517	0.501	3.1	106	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	0.884	-1.5	111	0.00	15.77
102	Naphthalene	2.345	2.603	-11.0	117	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.845	0.5	107	0.00	16.15

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	111	0.00	6.38
105	Ethanol	0.209	0.200	4.3	109	0.00	4.84
106	Acrolein	2.256	2.482	-10.0	115	0.00	5.44
107	Tert butyl alcohol	1.610	1.573	2.3	106	0.00	6.50
108	Isobutyl alcohol	0.413	0.422	-2.2	106	0.00	9.77
109	Tert Amyl Alcohol	1.199	1.226	-2.3	106	0.00	9.88
110	1,4-Dioxane	0.127	0.129	-1.6	106	0.00	10.99

(#) = Out of Range
 2B5779.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 0
 Tue Oct 24 16:04:15 2017

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Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-CC0212
Lab FileID: 2B5912.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\110217\2B5912.D Vial: 6
Acq On : 2 Nov 2017 9:41 am Operator: ericp
Sample : CC0212-5 Inst : MSVOA18
Misc : MS38691,V2B219,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Mon Oct 30 13:59:15 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	111	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.338	17.0	92	0.00	2.64
3 P	Chloromethane	0.592	0.481	18.8	89	0.00	2.93
4 C	Vinyl Chloride	0.564	0.466	17.4	89	0.00	3.09
5	Bromomethane	0.270	0.228	15.6	92	0.00	3.62
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	40.369	19.3	89	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.413	17.4	90	0.00	4.05
8	Ethyl Ether	0.319	0.271	15.0	93	0.00	4.57
9	1,2-Dichlorotrifluoroetha	0.460	0.384	16.5	91	0.00	4.89
10 C	1,1-Dichloroethene	0.590	0.499	15.4	92	0.00	4.86
11	Freon 113	0.345	0.293	15.1	93	0.00	4.97
12	Carbon Disulfide	1.230	1.031	16.2	91	0.00	4.89
13	Iodomethane	0.485	0.428	11.8	94	0.00	5.08
14	Allyl chloride	0.714	0.598	16.2	90	0.00	5.65
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	41.769	16.5	90	0.00	5.83
16	Acetone	250.000	221.278	11.5	99	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.239	11.2	102	0.00	6.15
18	trans-1,2-Dichloroethene	0.539	0.452	16.1	92	0.00	6.10
19	Hexane	0.338	0.265	21.6#	88	0.00	6.24
20	Methyl Tert Butyl Ether	0.902	0.775	14.1	95	0.00	6.31
21	Acetonitrile	0.050	0.039	22.0#	95	0.00	6.72
22	Di-isopropyl ether	1.323	1.119	15.4	90	0.00	6.97
23	Chloroprene	0.560	0.475	15.2	88	0.00	7.12
24 P	1,1-Dichloroethane	0.654	0.547	16.4	91	0.00	7.16
25	Acrylonitrile	0.121	0.102	15.7	97	0.00	7.27
26	ETBE	1.073	0.904	15.8	91	0.00	7.62
27	Vinyl acetate	0.709	0.607	14.4	90	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.290	14.5	93	0.00	8.13
29	2,2-Dichloropropane	0.385	0.325	15.6	94	0.00	8.33
30	Bromochloromethane	0.142	0.122	14.1	95	0.00	8.48
31	Cyclohexane	0.791	0.664	16.1	91	0.00	8.47
32 C	Chloroform	0.545	0.459	15.8	91	0.00	8.61
33	Ethyl acetate	0.296	0.277	6.4	102	0.00	8.85
34	Tetrahydrofuran	0.202	0.184	8.9	100	0.00	8.87

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-CC0212
Lab FileID: 2B5912.D

35	S	Dibromofluoromethane	0.226	0.217	4.0	107	0.00	8.90
36		Carbon Tetrachloride	0.359	0.301	16.2	91	0.00	8.81
37		1,1,1-Trichloroethane	0.487	0.414	15.0	93	0.00	8.93
38		2-Butanone	0.148	0.137	7.4	103	0.00	9.11
39		1,1-Dichloropropene	0.463	0.402	13.2	92	0.00	9.11
40		tert-Butyl Formate	0.275	0.238	13.5	91	0.00	9.30
41		Propionitrile	0.045	0.040	11.1	99	0.00	9.51
42		Methacrylonitrile	0.202	0.180	10.9	98	0.00	9.53
43		Benzene	1.241	1.104	11.0	96	0.00	9.45
44		TAME	0.961	0.810	15.7	92	0.00	9.62
45	S	1,2-Dichloroethane-d4	0.276	0.261	5.4	107	0.00	9.63
46		1,2-Dichloroethane	0.382	0.331	13.4	94	0.00	9.72
47		Trichloroethene	0.298	0.269	9.7	97	0.00	10.16
48		Methylcyclohexane	0.692	0.580	16.2	90	0.00	10.14
49		Dibromomethane	0.152	0.138	9.2	99	0.00	10.61
50	C	1,2-Dichloropropane	0.337	0.309	8.3	98	0.00	10.72
51		Bromodichloromethane	0.344	0.314	8.7	96	0.00	10.78
52		Methyl methacrylate	0.253	0.256	-1.2	108	0.00	10.94
53		2-Chloroethyl vinyl ether	0.174	0.152	12.6	94	0.00	11.33
54		cis-1,3-Dichloropropene	0.458	0.447	2.4	105	0.00	11.39
55	I	Chlorobenzene-d5	1.000	1.000	0.0	114	0.00	12.83
56	S	Toluene-d8	1.359	1.394	-2.6	116	0.00	11.55
57	C	Toluene	1.676	1.566	6.6	103	0.00	11.60
----- Amount Calc. %Drift -----								
58		2-Nitropropane	250.000	204.117	18.4	93	0.00	11.81
----- AvgRF CCRF %Dev -----								
59		4-Methyl-2-pentanone	0.458	0.428	6.6	103	0.00	11.92
60		trans-1,3-Dichloropropene	0.530	0.502	5.3	104	0.00	11.95
61		Tetrachloroethene	0.380	0.352	7.4	104	0.00	11.93
62		Ethyl methacrylate	0.501	0.481	4.0	102	0.00	12.07
63		1,1,2-Trichloroethane	0.276	0.256	7.2	104	0.00	12.09
64		Dibromochloromethane	0.297	0.278	6.4	100	0.00	12.24
65		1,3-Dichloropropane	0.624	0.579	7.2	103	0.00	12.31
66		1,2-Dibromoethane	0.298	0.274	8.1	100	0.00	12.44
67		2-hexanone	0.319	0.298	6.6	103	0.00	12.59
68		1-Chlorohexane	0.614	0.554	9.8	99	0.00	12.80
69	C	Ethylbenzene	1.972	1.770	10.2	100	0.00	12.84
70	P	Chlorobenzene	1.112	1.019	8.4	102	0.00	12.84
71		1,1,1,2-Tetrachloroethane	0.350	0.308	12.0	95	0.00	12.88
72		m,p-Xylene	1.532	1.400	8.6	100	0.00	12.95
73		o-Xylene	1.649	1.467	11.0	97	0.00	13.27
----- Amount Calc. %Drift -----								
74		Styrene	50.000	43.001	14.0	98	0.00	13.31
----- AvgRF CCRF %Dev -----								
75	P	Bromoform	0.171	0.154	9.9	96	0.00	13.34
76		Isopropylbenzene	2.013	1.793	10.9	97	0.00	13.49
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	14.48
78	S	4-Bromofluorobenzene	0.721	0.744	-3.2	110	0.00	13.70
----- Amount Calc. %Drift -----								
79		cis-1,4-Dichloro-2-butene	50.000	46.437	7.1	98	0.00	13.74
----- AvgRF CCRF %Dev -----								
80		n-Propylbenzene	4.901	4.513	7.9	97	0.00	13.78

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-CC0212
Lab FileID: 2B5912.D

81	Bromobenzene	0.773	0.730	5.6	99	0.00	13.79
82 P	1,1,2,2-Tetrachloroethane	0.952	0.876	8.0	98	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	2.980	6.2	98	0.00	13.90
84	2-Chlorotoluene	3.266	3.003	8.1	97	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.269	6.3	97	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.235	8.9	97	0.00	13.94
87	Cyclohexanone	0.062	0.069	-11.3	116	0.00	13.99
88	4-Chlorotoluene	2.881	2.686	6.8	99	0.00	14.02
89	tert-Butylbenzene	1.958	1.841	6.0	96	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	2.905	6.9	97	0.00	14.18
91	Pentachloroethane	0.444	0.436	1.8	99	0.00	14.17
92	sec-Butylbenzene	4.503	4.172	7.4	97	0.00	14.25
93	4-Isopropyltoluene	3.280	3.077	6.2	99	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.469	6.5	100	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.490	6.3	101	0.00	14.49
96	n-Butylbenzene	1.847	1.710	7.4	98	0.00	14.63
97	Benzyl Chloride	0.345	0.320	7.2	95	0.00	14.65
98	1,2-Dichlorobenzene	1.545	1.410	8.7	97	0.00	14.79
99	1,2-Dibromo-3-Chloropropa	0.174	0.148	14.9	91	0.00	15.32
100	Hexachlorobutadiene	0.517	0.474	8.3	101	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	0.797	8.5	101	0.00	15.77
102	Naphthalene	2.345	2.077	11.4	94	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.755	11.1	97	0.00	16.14

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	112	0.00	6.38
105	Ethanol	0.209	0.174	16.7	97	0.00	4.83
106	Acrolein	2.256	2.111	6.4	99	0.00	5.44
107	Tert butyl alcohol	1.610	1.419	11.9	97	0.00	6.50
108	Isobutyl alcohol	0.413	0.389	5.8	100	0.00	9.76
109	Tert Amyl Alcohol	1.199	1.112	7.3	97	0.00	9.88
110	1,4-Dioxane	0.127	0.121	4.7	101	0.00	10.99

(#) = Out of Range
 2B5779.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 0
 Thu Nov 02 10:57:48 2017

6.7.3
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Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-ECC0212
Lab FileID: 2B5923.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\110217\2B5923.D Vial: 17
Acq On : 2 Nov 2017 3:09 pm Operator: ericp
Sample : ECC0212-5 Inst : MSVOA18
Misc : MS38724,V2B219,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\MET...\102417APP9-2B.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Nov 02 10:58:34 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	109	0.00	9.97
2	Dichlorodifluoromethane	0.407	0.331	18.7	88	0.00	2.64
3 P	Chloromethane	0.592	0.494	16.6	89	0.00	2.93
4 C	Vinyl Chloride	0.564	0.477	15.4	90	0.00	3.09
5	Bromomethane	0.270	0.233	13.7	92	0.00	3.61
----- Amount Calc. %Drift -----							
6	Chloroethane	50.000	40.448	19.1	88	0.00	3.83
----- AvgRF CCRF %Dev -----							
7	Trichlorofluoromethane	0.500	0.407	18.6	87	0.00	4.06
8	Ethyl Ether	0.319	0.280	12.2	94	0.00	4.57
9	1,2-Dichlorotrifluoroetha	0.460	0.390	15.2	91	0.00	4.90
10 C	1,1-Dichloroethene	0.590	0.506	14.2	92	0.00	4.86
11	Freon 113	0.345	0.290	15.9	90	0.00	4.97
12	Carbon Disulfide	1.230	1.056	14.1	91	0.00	4.88
13	Iodomethane	0.485	0.439	9.5	95	0.00	5.08
14	Allyl chloride	0.714	0.615	13.9	91	0.00	5.65
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	42.167	15.7	89	0.00	5.82
16	Acetone	250.000	230.027	8.0	100	0.00	5.94
----- AvgRF CCRF %Dev -----							
17	Methyl acetate	0.269	0.287	-6.7	119	0.00	6.15
18	trans-1,2-Dichloroethene	0.539	0.461	14.5	92	0.00	6.10
19	Hexane	0.338	0.267	21.0	86	0.00	6.24
20	Methyl Tert Butyl Ether	0.902	0.793	12.1	95	0.00	6.31
21	Acetonitrile	0.050	0.042	16.0	100	0.00	6.72
22	Di-isopropyl ether	1.323	1.145	13.5	90	0.00	6.97
23	Chloroprene	0.560	0.494	11.8	90	0.00	7.11
24 P	1,1-Dichloroethane	0.654	0.565	13.6	92	0.00	7.16
25	Acrylonitrile	0.121	0.108	10.7	100	0.00	7.27
26	ETBE	1.073	0.926	13.7	92	0.00	7.62
27	Vinyl acetate	0.709	0.532	25.0	77	0.00	7.64
28	cis-1,2-Dichloroethene	0.339	0.298	12.1	93	0.00	8.13
29	2,2-Dichloropropane	0.385	0.328	14.8	93	0.00	8.33
30	Bromochloromethane	0.142	0.125	12.0	95	0.00	8.48
31	Cyclohexane	0.791	0.668	15.5	89	0.00	8.47
32 C	Chloroform	0.545	0.473	13.2	92	0.00	8.61
33	Ethyl acetate	0.296	0.269	9.1	97	0.00	8.85
34	Tetrahydrofuran	0.202	0.186	7.9	99	0.00	8.87

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-ECC0212
Lab FileID: 2B5923.D

35	S	Dibromofluoromethane	0.226	0.220	2.7	106	0.00	8.90
36		Carbon Tetrachloride	0.359	0.305	15.0	90	0.00	8.81
37		1,1,1-Trichloroethane	0.487	0.421	13.6	92	0.00	8.93
38		2-Butanone	0.148	0.144	2.7	106	0.00	9.11
39		1,1-Dichloropropene	0.463	0.414	10.6	93	0.00	9.11
40		tert-Butyl Formate	0.275	0.250	9.1	94	0.00	9.30
41		Propionitrile	0.045	0.042	6.7	104	0.00	9.51
42		Methacrylonitrile	0.202	0.188	6.9	100	0.00	9.53
43		Benzene	1.241	1.130	8.9	96	0.00	9.46
44		TAME	0.961	0.833	13.3	92	0.00	9.62
45	S	1,2-Dichloroethane-d4	0.276	0.259	6.2	104	0.00	9.63
46		1,2-Dichloroethane	0.382	0.333	12.8	92	0.00	9.72
47		Trichloroethene	0.298	0.265	11.1	93	0.00	10.16
48		Methylcyclohexane	0.692	0.591	14.6	90	0.00	10.14
49		Dibromomethane	0.152	0.139	8.6	98	0.00	10.61
50	C	1,2-Dichloropropane	0.337	0.310	8.0	96	0.00	10.72
51		Bromodichloromethane	0.344	0.312	9.3	93	0.00	10.78
52		Methyl methacrylate	0.253	0.259	-2.4	107	0.00	10.94
53		2-Chloroethyl vinyl ether	0.174	0.149	14.4	90	0.00	11.33
54		cis-1,3-Dichloropropene	0.458	0.429	6.3	98	0.00	11.39
55	I	Chlorobenzene-d5	1.000	1.000	0.0	110	0.00	12.83
56	S	Toluene-d8	1.359	1.374	-1.1	111	0.00	11.55
57	C	Toluene	1.676	1.528	8.8	97	0.00	11.60
----- Amount Calc. %Drift -----								
58		2-Nitropropane	250.000	210.825	15.7	93	0.00	11.81
----- AvgRF CCRF %Dev -----								
59		4-Methyl-2-pentanone	0.458	0.442	3.5	103	0.00	11.92
60		trans-1,3-Dichloropropene	0.530	0.491	7.4	98	0.00	11.95
61		Tetrachloroethene	0.380	0.335	11.8	95	0.00	11.93
62		Ethyl methacrylate	0.501	0.478	4.6	98	0.00	12.07
63		1,1,2-Trichloroethane	0.276	0.254	8.0	100	0.00	12.09
64		Dibromochloromethane	0.297	0.279	6.1	97	0.00	12.24
65		1,3-Dichloropropane	0.624	0.577	7.5	99	0.00	12.31
66		1,2-Dibromoethane	0.298	0.280	6.0	99	0.00	12.44
67		2-hexanone	0.319	0.319	0.0	107	0.00	12.59
68		1-Chlorohexane	0.614	0.544	11.4	94	0.00	12.80
69	C	Ethylbenzene	1.972	1.744	11.6	95	0.00	12.84
70	P	Chlorobenzene	1.112	0.998	10.3	96	0.00	12.84
71		1,1,1,2-Tetrachloroethane	0.350	0.313	10.6	94	0.00	12.88
72		m,p-Xylene	1.532	1.359	11.3	94	0.00	12.95
73		o-Xylene	1.649	1.453	11.9	93	0.00	13.27
----- Amount Calc. %Drift -----								
74		Styrene	50.000	43.372	13.3	96	0.00	13.31
----- AvgRF CCRF %Dev -----								
75	P	Bromoform	0.171	0.163	4.7	98	0.00	13.34
76		Isopropylbenzene	2.013	1.766	12.3	93	0.00	13.49
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	109	0.00	14.48
78	S	4-Bromofluorobenzene	0.721	0.738	-2.4	111	0.00	13.70
----- Amount Calc. %Drift -----								
79		cis-1,4-Dichloro-2-butene	50.000	48.080	3.8	103	0.00	13.74
----- AvgRF CCRF %Dev -----								
80		n-Propylbenzene	4.901	4.207	14.2	91	0.00	13.78

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: V2B219-ECC0212
Lab FileID: 2B5923.D

81	Bromobenzene	0.773	0.694	10.2	95	0.00	13.79
82 P	1,1,2,2-Tetrachloroethane	0.952	0.884	7.1	100	0.00	13.83
83	1,3,5-Trimethylbenzene	3.177	2.769	12.8	92	0.00	13.90
84	2-Chlorotoluene	3.266	2.799	14.3	91	0.00	13.91
85	trans-1,4-Dichloro-2-Bute	0.287	0.276	3.8	100	0.00	13.95
86	1,2,3-Trichloropropane	0.258	0.239	7.4	100	0.00	13.94
87	Cyclohexanone	0.062	0.072	-16.1	122	0.00	13.99
88	4-Chlorotoluene	2.881	2.461	14.6	91	0.00	14.02
89	tert-Butylbenzene	1.958	1.758	10.2	93	0.00	14.14
90	1,2,4-Trimethylbenzene	3.121	2.675	14.3	91	0.00	14.17
91	Pentachloroethane	0.444	0.411	7.4	95	0.00	14.17
92	sec-Butylbenzene	4.503	3.899	13.4	91	0.00	14.25
93	4-Isopropyltoluene	3.280	2.784	15.1	90	0.00	14.34
94	1,3-Dichlorobenzene	1.571	1.330	15.3	92	0.00	14.44
95	1,4-Dichlorobenzene	1.590	1.337	15.9	92	0.00	14.49
96	n-Butylbenzene	1.847	1.486	19.5	86	0.00	14.63
97	Benzyl Chloride	0.345	0.313	9.3	94	0.00	14.65
98	1,2-Dichlorobenzene	1.545	1.327	14.1	92	0.00	14.79
99	1,2-Dibromo-3-Chloropropa	0.174	0.155	10.9	96	0.00	15.32
100	Hexachlorobutadiene	0.517	0.425	17.8	92	0.00	15.72
101	1,2,4-Trichlorobenzene	0.871	0.662	24.0	85	0.00	15.77
102	Naphthalene	2.345	2.034	13.3	93	0.00	16.01
103	1,2,3-Trichlorobenzene	0.849	0.680	19.9	88	0.00	16.14

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	123	0.00	6.38
105	Ethanol	0.209	0.172	17.7	105	0.00	4.83
106	Acrolein	2.256	1.861	17.5	96	0.00	5.44
107	Tert butyl alcohol	1.610	1.389	13.7	104	0.00	6.50
108	Isobutyl alcohol	0.413	0.383	7.3	107	0.00	9.76
109	Tert Amyl Alcohol	1.199	1.110	7.4	106	0.00	9.88
110	1,4-Dioxane	0.127	0.117	7.9	106	0.00	10.99

(#) = Out of Range
 2B5912.D 102417APP9-2B.m

SPCC's out = 0 CCC's out = 0
 Thu Nov 02 16:40:52 2017

6.7.4
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MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-MB	X057002.D	1	11/07/17	MV	11/07/17	OP67546	SX2395

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
59-50-7	4-Chloro-3-methyl Phenol	ND	170	19	ug/kg	
95-57-8	2-Chlorophenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	44	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	20	ug/kg	
	3&4-Methylphenol	ND	170	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	18	ug/kg	
100-02-7	4-Nitrophenol	ND	830	170	ug/kg	
87-86-5	Pentachlorophenol	ND	830	170	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	27	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	19	ug/kg	
83-32-9	Acenaphthene	ND	170	18	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
62-53-3	Aniline	ND	170	36	ug/kg	
120-12-7	Anthracene	ND	170	19	ug/kg	
92-87-5	Benzidine	ND	1700	330	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	22	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	23	ug/kg	
106-47-8	4-Chloroaniline	ND	170	42	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	19	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	21	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	

Method Blank Summary

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-MB	X057002.D	1	11/07/17	MV	11/07/17	OP67546	SX2395

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	170	21	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	22	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	40	ug/kg	
84-66-2	Diethyl Phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl Phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl Phthalate	ND	170	33	ug/kg	
84-74-2	Di-n-butyl Phthalate	ND	330	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	21	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	17	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	20	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	39	ug/kg	
99-09-2	3-Nitroaniline	ND	170	19	ug/kg	
100-01-6	4-Nitroaniline	ND	170	48	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	28	ug/kg	
621-64-7	N-Nitrosodi-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	18	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	19	ug/kg	
110-86-1	Pyridine	ND	330	67	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	20	ug/kg	

Method Blank Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-MB	X057002.D	1	11/07/17	MV	11/07/17	OP67546	SX2395

The QC reported here applies to the following samples: Method: SW846 8270D

FA48965-2

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	82% 40-102%
4165-62-2	Phenol-d5	83% 41-100%
118-79-6	2,4,6-Tribromophenol	89% 42-108%
4165-60-0	Nitrobenzene-d5	83% 40-105%
321-60-8	2-Fluorobiphenyl	85% 43-107%
1718-51-0	Terphenyl-d14	97% 45-119%

Method Blank Summary

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-MB	X057137.D	1	11/13/17	MV	11/07/17	OP67546	SX2400

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
59-50-7	4-Chloro-3-methyl Phenol	ND	170	19	ug/kg	
95-57-8	2-Chlorophenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	44	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	20	ug/kg	
	3&4-Methylphenol	ND	170	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	18	ug/kg	
100-02-7	4-Nitrophenol	ND	830	170	ug/kg	
87-86-5	Pentachlorophenol	ND	830	170	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	27	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	19	ug/kg	
83-32-9	Acenaphthene	ND	170	18	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
62-53-3	Aniline	ND	170	36	ug/kg	
120-12-7	Anthracene	ND	170	19	ug/kg	
92-87-5	Benzidine	ND	1700	330	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	22	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	23	ug/kg	
106-47-8	4-Chloroaniline	ND	170	42	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	19	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	21	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	

Method Blank Summary

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-MB	X057137.D	1	11/13/17	MV	11/07/17	OP67546	SX2400

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	170	21	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	22	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	40	ug/kg	
84-66-2	Diethyl Phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl Phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl Phthalate	ND	170	33	ug/kg	
84-74-2	Di-n-butyl Phthalate	ND	330	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	21	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	17	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	20	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	39	ug/kg	
99-09-2	3-Nitroaniline	ND	170	19	ug/kg	
100-01-6	4-Nitroaniline	ND	170	48	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	28	ug/kg	
621-64-7	N-Nitrosodi-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	18	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	19	ug/kg	
110-86-1	Pyridine	ND	330	67	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	20	ug/kg	

Method Blank Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-MB	X057137.D	1	11/13/17	MV	11/07/17	OP67546	SX2400

The QC reported here applies to the following samples: Method: SW846 8270D

FA48965-2

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	75% 40-102%
4165-62-2	Phenol-d5	73% 41-100%
118-79-6	2,4,6-Tribromophenol	96% 42-108%
4165-60-0	Nitrobenzene-d5	77% 40-105%
321-60-8	2-Fluorobiphenyl	81% 43-107%
1718-51-0	Terphenyl-d14	90% 45-119%

Method Blank Summary

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67513-MB	W103890.D	1	11/07/17	FS	11/04/17	OP67513	SW4516

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

FA48965-1, FA48965-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	67	27	ug/kg	
208-96-8	Acenaphthylene	ND	67	27	ug/kg	
120-12-7	Anthracene	ND	67	17	ug/kg	
56-55-3	Benzo(a)anthracene	ND	13	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	13	3.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	13	3.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	13	3.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	13	3.3	ug/kg	
218-01-9	Chrysene	ND	13	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	13	3.3	ug/kg	
206-44-0	Fluoranthene	ND	67	17	ug/kg	
86-73-7	Fluorene	ND	67	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	3.3	ug/kg	
91-20-3	Naphthalene	ND	67	27	ug/kg	
85-01-8	Phenanthrene	ND	67	17	ug/kg	
129-00-0	Pyrene	ND	67	17	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	71% 40-105%
321-60-8	2-Fluorobiphenyl	67% 43-107%
1718-51-0	Terphenyl-d14	78% 45-119%

Blank Spike Summary

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-BS	X057001.D	1	11/07/17	MV	11/07/17	OP67546	SX2395

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2530	76	36-118
59-50-7	4-Chloro-3-methyl Phenol	1670	1270	76	52-108
95-57-8	2-Chlorophenol	1670	1270	76	48-104
120-83-2	2,4-Dichlorophenol	1670	1230	74	51-105
105-67-9	2,4-Dimethylphenol	1670	1100	66	43-96
51-28-5	2,4-Dinitrophenol	3330	2120	64	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	2640	79	64-121
95-48-7	2-Methylphenol	1670	1270	76	46-107
	3&4-Methylphenol	3330	2570	77	44-111
88-75-5	2-Nitrophenol	1670	1330	80	49-104
100-02-7	4-Nitrophenol	3330	3000	90	56-116
87-86-5	Pentachlorophenol	3330	3520	106	61-114
108-95-2	Phenol	1670	1320	79	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1570	94	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1550	93	56-109
83-32-9	Acenaphthene	1670	1420	85	56-109
208-96-8	Acenaphthylene	1670	1500	90	56-106
62-53-3	Aniline	1670	1240	74	42-108
120-12-7	Anthracene	1670	1490	89	61-110
92-87-5	Benzidine	1670	1060	64	10-109
56-55-3	Benzo(a)anthracene	1670	1600	96	66-111
50-32-8	Benzo(a)pyrene	1670	1590	95	59-104
205-99-2	Benzo(b)fluoranthene	1670	1660	100	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1670	100	67-113
207-08-9	Benzo(k)fluoranthene	1670	1640	98	67-114
100-51-6	Benzyl Alcohol	1670	1290	77	53-108
101-55-3	4-Bromophenyl phenyl ether	1670	1540	92	62-110
85-68-7	Butyl benzyl phthalate	1670	1720	103	65-113
86-74-8	Carbazole	1670	1550	93	60-111
106-47-8	4-Chloroaniline	1670	1420	85	30-115
111-91-1	bis(2-Chloroethoxy)methane	1670	1090	65	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1230	74	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1250	75	40-110
91-58-7	2-Chloronaphthalene	1670	1400	84	53-106
7005-72-3	4-Chlorophenyl phenyl ether	1670	1470	88	58-106
218-01-9	Chrysene	1670	1600	96	65-112

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-BS	X057001.D	1	11/07/17	MV	11/07/17	OP67546	SX2395

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
53-70-3	Dibenzo(a,h)anthracene	1670	1640	98	68-115
132-64-9	Dibenzofuran	1670	1460	88	57-108
95-50-1	1,2-Dichlorobenzene	1670	1210	73	44-102
541-73-1	1,3-Dichlorobenzene	1670	1170	70	42-100
106-46-7	1,4-Dichlorobenzene	1670	1210	73	40-106
91-94-1	3,3'-Dichlorobenzidine	1670	1900	114	36-114
84-66-2	Diethyl Phthalate	1670	1480	89	61-109
131-11-3	Dimethyl Phthalate	1670	1480	89	59-108
117-84-0	Di-n-octyl Phthalate	1670	1880	113	64-119
84-74-2	Di-n-butyl Phthalate	1670	1620	97	63-108
121-14-2	2,4-Dinitrotoluene	1670	1600	96	59-109
606-20-2	2,6-Dinitrotoluene	1670	1550	93	61-107
122-66-7	1,2-Diphenylhydrazine	1670	1580	95	58-112
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1750	105	64-115
206-44-0	Fluoranthene	1670	1530	92	60-108
86-73-7	Fluorene	1670	1500	90	58-109
118-74-1	Hexachlorobenzene	1670	1520	91	59-111
87-68-3	Hexachlorobutadiene	1670	1120	67	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1220	73	49-110
67-72-1	Hexachloroethane	1670	1190	71	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1660	100	66-116
78-59-1	Isophorone	1670	1210	73	42-89
90-12-0	1-Methylnaphthalene	1670	1160	70	49-106
91-57-6	2-Methylnaphthalene	1670	1170	70	47-106
91-20-3	Naphthalene	1670	1120	67	44-104
88-74-4	2-Nitroaniline	1670	1640	98	56-123
99-09-2	3-Nitroaniline	1670	1630	98	41-111
100-01-6	4-Nitroaniline	1670	1450	87	54-113
98-95-3	Nitrobenzene	1670	1170	70	43-108
62-75-9	N-Nitrosodimethylamine	1670	1210	73	40-106
621-64-7	N-Nitrosodi-n-propylamine	1670	1280	77	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1590	95	62-110
85-01-8	Phenanthrene	1670	1530	92	63-111
129-00-0	Pyrene	1670	1690	101	65-115
110-86-1	Pyridine	1670	967	58	31-102
120-82-1	1,2,4-Trichlorobenzene	1670	1130	68	45-100

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-BS	X057001.D	1	11/07/17	MV	11/07/17	OP67546	SX2395

The QC reported here applies to the following samples: Method: SW846 8270D

FA48965-2

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	76%	40-102%
4165-62-2	Phenol-d5	77%	41-100%
118-79-6	2,4,6-Tribromophenol	96%	42-108%
4165-60-0	Nitrobenzene-d5	70%	40-105%
321-60-8	2-Fluorobiphenyl	82%	43-107%
1718-51-0	Terphenyl-d14	100%	45-119%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-BS	X057136.D	1	11/13/17	MV	11/07/17	OP67546	SX2400

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	2180	65	36-118
59-50-7	4-Chloro-3-methyl Phenol	1670	1150	69	52-108
95-57-8	2-Chlorophenol	1670	1130	68	48-104
120-83-2	2,4-Dichlorophenol	1670	1150	69	51-105
105-67-9	2,4-Dimethylphenol	1670	969	58	43-96
51-28-5	2,4-Dinitrophenol	3330	2880	86	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	3120	94	64-121
95-48-7	2-Methylphenol	1670	1100	66	46-107
	3&4-Methylphenol	3330	2220	67	44-111
88-75-5	2-Nitrophenol	1670	1300	78	49-104
100-02-7	4-Nitrophenol	3330	2720	82	56-116
87-86-5	Pentachlorophenol	3330	3180	95	61-114
108-95-2	Phenol	1670	1100	66	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1470	88	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1440	86	56-109
83-32-9	Acenaphthene	1670	1230	74	56-109
208-96-8	Acenaphthylene	1670	1290	77	56-106
62-53-3	Aniline	1670	1020	61	42-108
120-12-7	Anthracene	1670	1290	77	61-110
92-87-5	Benzidine	1670	750	45	10-109
56-55-3	Benzo(a)anthracene	1670	1400	84	66-111
50-32-8	Benzo(a)pyrene	1670	1390	83	59-104
205-99-2	Benzo(b)fluoranthene	1670	1430	86	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1460	88	67-113
207-08-9	Benzo(k)fluoranthene	1670	1430	86	67-114
100-51-6	Benzyl Alcohol	1670	1130	68	53-108
101-55-3	4-Bromophenyl phenyl ether	1670	1360	82	62-110
85-68-7	Butyl benzyl phthalate	1670	1430	86	65-113
86-74-8	Carbazole	1670	1350	81	60-111
106-47-8	4-Chloroaniline	1670	1320	79	30-115
111-91-1	bis(2-Chloroethoxy)methane	1670	918	55	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1020	61	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	928	56	40-110
91-58-7	2-Chloronaphthalene	1670	1210	73	53-106
7005-72-3	4-Chlorophenyl phenyl ether	1670	1300	78	58-106
218-01-9	Chrysene	1670	1400	84	65-112

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-BS	X057136.D	1	11/13/17	MV	11/07/17	OP67546	SX2400

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
53-70-3	Dibenzo(a,h)anthracene	1670	1480	89	68-115
132-64-9	Dibenzofuran	1670	1270	76	57-108
95-50-1	1,2-Dichlorobenzene	1670	1080	65	44-102
541-73-1	1,3-Dichlorobenzene	1670	1030	62	42-100
106-46-7	1,4-Dichlorobenzene	1670	1050	63	40-106
91-94-1	3,3'-Dichlorobenzidine	1670	1710	103	36-114
84-66-2	Diethyl Phthalate	1670	1310	79	61-109
131-11-3	Dimethyl Phthalate	1670	1310	79	59-108
117-84-0	Di-n-octyl Phthalate	1670	1580	95	64-119
84-74-2	Di-n-butyl Phthalate	1670	1370	82	63-108
121-14-2	2,4-Dinitrotoluene	1670	1530	92	59-109
606-20-2	2,6-Dinitrotoluene	1670	1400	84	61-107
122-66-7	1,2-Diphenylhydrazine	1670	1210	73	58-112
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1460	88	64-115
206-44-0	Fluoranthene	1670	1360	82	60-108
86-73-7	Fluorene	1670	1310	79	58-109
118-74-1	Hexachlorobenzene	1670	1380	83	59-111
87-68-3	Hexachlorobutadiene	1670	1040	62	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1240	74	49-110
67-72-1	Hexachloroethane	1670	1020	61	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1590	95	66-116
78-59-1	Isophorone	1670	1020	61	42-89
90-12-0	1-Methylnaphthalene	1670	1050	63	49-106
91-57-6	2-Methylnaphthalene	1670	1050	63	47-106
91-20-3	Naphthalene	1670	973	58	44-104
88-74-4	2-Nitroaniline	1670	1380	83	56-123
99-09-2	3-Nitroaniline	1670	1520	91	41-111
100-01-6	4-Nitroaniline	1670	1400	84	54-113
98-95-3	Nitrobenzene	1670	986	59	43-108
62-75-9	N-Nitrosodimethylamine	1670	911	55	40-106
621-64-7	N-Nitrosodi-n-propylamine	1670	1040	62	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1360	82	62-110
85-01-8	Phenanthrene	1670	1330	80	63-111
129-00-0	Pyrene	1670	1410	85	65-115
110-86-1	Pyridine	1670	807	48	31-102
120-82-1	1,2,4-Trichlorobenzene	1670	1040	62	45-100

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-BS	X057136.D	1	11/13/17	MV	11/07/17	OP67546	SX2400

The QC reported here applies to the following samples: Method: SW846 8270D

FA48965-2

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	65%	40-102%
4165-62-2	Phenol-d5	64%	41-100%
118-79-6	2,4,6-Tribromophenol	90%	42-108%
4165-60-0	Nitrobenzene-d5	60%	40-105%
321-60-8	2-Fluorobiphenyl	71%	43-107%
1718-51-0	Terphenyl-d14	86%	45-119%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: FA48965

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67513-BS	W103891.D	1	11/07/17	FS	11/04/17	OP67513	SW4516

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

FA48965-1, FA48965-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	667	571	86	53-100
208-96-8	Acenaphthylene	667	536	80	51-100
120-12-7	Anthracene	333	271	81	60-102
56-55-3	Benzo(a)anthracene	333	285	85	60-106
50-32-8	Benzo(a)pyrene	333	272	82	58-105
205-99-2	Benzo(b)fluoranthene	333	294	88	59-112
191-24-2	Benzo(g,h,i)perylene	333	332	100	56-109
207-08-9	Benzo(k)fluoranthene	333	271	81	58-109
218-01-9	Chrysene	333	299	90	62-104
53-70-3	Dibenzo(a,h)anthracene	333	324	97	55-110
206-44-0	Fluoranthene	667	579	87	59-109
86-73-7	Fluorene	667	550	82	56-104
193-39-5	Indeno(1,2,3-cd)pyrene	333	321	96	54-110
91-20-3	Naphthalene	667	512	77	49-101
85-01-8	Phenanthrene	667	585	88	57-104
129-00-0	Pyrene	667	587	88	58-106

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	79%	40-105%
321-60-8	2-Fluorobiphenyl	80%	43-107%
1718-51-0	Terphenyl-d14	79%	45-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-MS	X057004.D	1	11/07/17	MV	11/07/17	OP67546	SX2395
OP67546-MSD	X057005.D	1	11/07/17	MV	11/07/17	OP67546	SX2395
FA49016-32	X057003.D	1	11/07/17	MV	11/07/17	OP67546	SX2395

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	FA49016-32 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND	4030	3050	76	4070	3160	78	4	36-118/41
59-50-7	4-Chloro-3-methyl Phenol	ND	2010	1350	67	2030	1420	70	5	52-108/21
95-57-8	2-Chlorophenol	ND	2010	1260	63	2030	1400	69	11	48-104/26
120-83-2	2,4-Dichlorophenol	ND	2010	1250	62	2030	1420	70	13	51-105/27
105-67-9	2,4-Dimethylphenol	ND	2010	1100	55	2030	1240	61	12	43-96/23
51-28-5	2,4-Dinitrophenol	ND	4030	2660	66	4070	2920	72	9	40-119/32
534-52-1	4,6-Dinitro-o-cresol	ND	4030	3060	76	4070	3290	81	7	64-121/29
95-48-7	2-Methylphenol	ND	2010	1290	64	2030	1440	71	11	46-107/24
	3&4-Methylphenol	ND	4030	2680	67	4070	2910	72	8	44-111/24
88-75-5	2-Nitrophenol	ND	2010	1280	64	2030	1490	73	15	49-104/27
100-02-7	4-Nitrophenol	ND	4030	3380	84	4070	3310	81	2	56-116/23
87-86-5	Pentachlorophenol	ND	4030	3820	95	4070	3860	95	1	61-114/23
108-95-2	Phenol	ND	2010	1340	67	2030	1450	71	8	45-110/24
95-95-4	2,4,5-Trichlorophenol	ND	2010	1650	82	2030	1760	87	6	58-112/22
88-06-2	2,4,6-Trichlorophenol	ND	2010	1580	78	2030	1720	85	8	56-109/25
83-32-9	Acenaphthene	ND	2010	1420	71	2030	1600	79	12	56-109/23
208-96-8	Acenaphthylene	ND	2010	1520	75	2030	1690	83	11	56-106/23
62-53-3	Aniline	ND	2010	1180	59	2030	1260	62	7	42-108/28
120-12-7	Anthracene	ND	2010	1570	78	2030	1630	80	4	61-110/21
56-55-3	Benzo(a)anthracene	ND	2010	1650	82	2030	1690	83	2	66-111/23
50-32-8	Benzo(a)pyrene	ND	2010	1660	82	2030	1680	83	1	59-104/23
205-99-2	Benzo(b)fluoranthene	ND	2010	1700	84	2030	1740	86	2	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND	2010	1740	86	2030	1740	86	0	67-113/21
207-08-9	Benzo(k)fluoranthene	ND	2010	1740	86	2030	1800	88	3	67-114/22
100-51-6	Benzyl Alcohol	ND	2010	1420	71	2030	1460	72	3	53-108/24
101-55-3	4-Bromophenyl phenyl ether	ND	2010	1550	77	2030	1690	83	9	62-110/21
85-68-7	Butyl benzyl phthalate	ND	2010	1790	89	2030	1850	91	3	65-113/20
86-74-8	Carbazole	ND	2010	1710	85	2030	1680	83	2	60-111/19
106-47-8	4-Chloroaniline	ND	2010	1560	77	2030	1590	78	2	30-115/30
111-91-1	bis(2-Chloroethoxy)methane	ND	2010	1070	53	2030	1220	60	13	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND	2010	1170	58	2030	1320	65	12	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND	2010	1160	58	2030	1320	65	13	40-110/25
91-58-7	2-Chloronaphthalene	ND	2010	1340	67	2030	1580	78	16	53-106/23
7005-72-3	4-Chlorophenyl phenyl ether	ND	2010	1490	74	2030	1630	80	9	58-106/21
218-01-9	Chrysene	ND	2010	1660	82	2030	1700	84	2	65-112/25
53-70-3	Dibenzo(a,h)anthracene	ND	2010	1700	84	2030	1700	84	0	68-115/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 2 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-MS	X057004.D	1	11/07/17	MV	11/07/17	OP67546	SX2395
OP67546-MSD	X057005.D	1	11/07/17	MV	11/07/17	OP67546	SX2395
FA49016-32	X057003.D	1	11/07/17	MV	11/07/17	OP67546	SX2395

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Compound	FA49016-32 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
132-64-9	Dibenzofuran	ND	2010	1600	79	2030	1630	80	2	57-108/22
95-50-1	1,2-Dichlorobenzene	ND	2010	1100	55	2030	1280	63	15	44-102/28
541-73-1	1,3-Dichlorobenzene	ND	2010	1030	51	2030	1220	60	17	42-100/30
106-46-7	1,4-Dichlorobenzene	ND	2010	1070	53	2030	1260	62	16	40-106/29
91-94-1	3,3'-Dichlorobenzidine	ND	2010	1920	95	2030	1920	94	0	36-114/28
84-66-2	Diethyl Phthalate	ND	2010	1580	78	2030	1630	80	3	61-109/20
131-11-3	Dimethyl Phthalate	ND	2010	1560	77	2030	1650	81	6	59-108/20
117-84-0	Di-n-octyl Phthalate	ND	2010	1950	97	2030	2030	100	4	64-119/21
84-74-2	Di-n-butyl Phthalate	ND	2010	1690	84	2030	1730	85	2	63-108/19
121-14-2	2,4-Dinitrotoluene	ND	2010	1760	87	2030	1810	89	3	59-109/20
606-20-2	2,6-Dinitrotoluene	ND	2010	1630	81	2030	1750	86	7	61-107/22
122-66-7	1,2-Diphenylhydrazine	ND	2010	1590	79	2030	1730	85	8	58-112/22
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2010	1810	90	2030	1840	90	2	64-115/23
206-44-0	Fluoranthene	ND	2010	1630	81	2030	1650	81	1	60-108/25
86-73-7	Fluorene	ND	2010	1570	78	2030	1680	83	7	58-109/21
118-74-1	Hexachlorobenzene	ND	2010	1530	76	2030	1670	82	9	59-111/21
87-68-3	Hexachlorobutadiene	ND	2010	999	50	2030	1190	59	17	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND	2010	1120	56	2030	1400	69	22	49-110/31
67-72-1	Hexachloroethane	ND	2010	1040	52	2030	1230	60	17	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND	2010	1700	84	2030	2280	112	29*	66-116/22
78-59-1	Isophorone	ND	2010	1220	61	2030	1350	66	10	42-89/22
90-12-0	1-Methylnaphthalene	ND	2010	1140	57	2030	1300	64	13	49-106/26
91-57-6	2-Methylnaphthalene	ND	2010	1280	64	2030	1300	64	2	47-106/27
91-20-3	Naphthalene	ND	2010	1080	54	2030	1230	60	13	44-104/27
88-74-4	2-Nitroaniline	ND	2010	1820	90	2030	1840	90	1	56-123/24
99-09-2	3-Nitroaniline	ND	2010	1830	91	2030	1840	90	1	41-111/25
100-01-6	4-Nitroaniline	ND	2010	1640	81	2030	1620	80	1	54-113/22
98-95-3	Nitrobenzene	ND	2010	1140	57	2030	1300	64	13	43-108/25
62-75-9	N-Nitrosodimethylamine	ND	2010	1180	59	2030	1300	64	10	40-106/27
621-64-7	N-Nitrosodi-n-propylamine	ND	2010	1260	63	2030	1400	69	11	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND	2010	1640	81	2030	1710	84	4	62-110/21
85-01-8	Phenanthrene	ND	2010	1610	80	2030	1670	82	4	63-111/22
129-00-0	Pyrene	ND	2010	1760	87	2030	1780	88	1	65-115/25
110-86-1	Pyridine	ND	2010	322	16*	2030	382	19*	17	31-102/38
120-82-1	1,2,4-Trichlorobenzene	ND	2010	1040	52	2030	1220	60	16	45-100/26

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: FA48965

Account: TCMAW Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67546-MS	X057004.D	1	11/07/17	MV	11/07/17	OP67546	SX2395
OP67546-MSD	X057005.D	1	11/07/17	MV	11/07/17	OP67546	SX2395
FA49016-32	X057003.D	1	11/07/17	MV	11/07/17	OP67546	SX2395

The QC reported here applies to the following samples:

Method: SW846 8270D

FA48965-2

CAS No.	Surrogate Recoveries	MS	MSD	FA49016-32	Limits
367-12-4	2-Fluorophenol	68%	67%	66%	40-102%
4165-62-2	Phenol-d5	68%	69%	66%	41-100%
118-79-6	2,4,6-Tribromophenol	88%	87%	73%	42-108%
4165-60-0	Nitrobenzene-d5	61%	62%	65%	40-105%
321-60-8	2-Fluorobiphenyl	72%	75%	69%	43-107%
1718-51-0	Terphenyl-d14	87%	86%	81%	45-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67513-MS	W103894.D	1	11/07/17	FS	11/04/17	OP67513	SW4516
OP67513-MSD	W103895.D	1	11/07/17	FS	11/04/17	OP67513	SW4516
FA48976-2	W103893.D	1	11/07/17	FS	11/04/17	OP67513	SW4516

The QC reported here applies to the following samples:

Method: SW846 8270D BY SIM

FA48965-1, FA48965-3

CAS No.	Compound	FA48976-2 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	835	678	81	841	688	82	1	53-100/28
208-96-8	Acenaphthylene	ND	835	649	78	841	670	80	3	51-100/25
120-12-7	Anthracene	ND	418	337	81	420	348	83	3	60-102/29
56-55-3	Benzo(a)anthracene	ND	418	352	84	420	362	86	3	60-106/30
50-32-8	Benzo(a)pyrene	ND	418	345	83	420	359	85	4	58-105/30
205-99-2	Benzo(b)fluoranthene	ND	418	340	81	420	372	88	9	59-112/33
191-24-2	Benzo(g,h,i)perylene	ND	418	353	85	420	366	87	4	56-109/31
207-08-9	Benzo(k)fluoranthene	ND	418	318	76	420	366	87	14	58-109/33
218-01-9	Chrysene	ND	418	377	90	420	378	90	0	62-104/30
53-70-3	Dibenzo(a,h)anthracene	ND	418	370	89	420	377	90	2	55-110/31
206-44-0	Fluoranthene	ND	835	719	86	841	724	86	1	59-109/29
86-73-7	Fluorene	ND	835	654	78	841	669	80	2	56-104/27
193-39-5	Indeno(1,2,3-cd)pyrene	ND	418	363	87	420	377	90	4	54-110/32
91-20-3	Naphthalene	ND	835	631	76	841	657	78	4	49-101/28
85-01-8	Phenanthrene	ND	835	721	86	841	737	88	2	57-104/27
129-00-0	Pyrene	ND	835	790	95	841	814	97	3	58-106/29

CAS No.	Surrogate Recoveries	MS	MSD	FA48976-2	Limits
4165-60-0	Nitrobenzene-d5	72%	80%	80%	40-105%
321-60-8	2-Fluorobiphenyl	75%	76%	76%	43-107%
1718-51-0	Terphenyl-d14	81%	85%	84%	45-119%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

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Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4504-DFTPP
Lab File ID: W103557.D
Instrument ID: GCMSW
Injection Date: 10/24/17
Injection Time: 08:35

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	86099	33.6	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	102423	40.0	Pass
70	Less than 2.0% of mass 69	555	0.22 (0.54) ^a	Pass
127	40.0 - 60.0% of mass 198	117248	45.8	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	256170	100.0	Pass
199	5.0 - 9.0% of mass 198	17849	6.97	Pass
275	10.0 - 30.0% of mass 198	66776	26.1	Pass
365	1.0 - 100.0% of mass 198	8521	3.33	Pass
441	Present, but less than mass 443	31109	12.1 (80.8) ^b	Pass
442	40.0 - 100.0% of mass 198	191722	74.8	Pass
443	17.0 - 23.0% of mass 442	38490	15.0 (20.1) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW4504-IC4504	W103559.D	10/24/17	10:55	02:20	Initial cal 1
SW4504-IC4504	W103560.D	10/24/17	11:20	02:45	Initial cal 2
SW4504-IC4504	W103561.D	10/24/17	11:46	03:11	Initial cal 3
SW4504-ICC4504	W103562.D	10/24/17	12:12	03:37	Initial cal 4
SW4504-IC4504	W103563.D	10/24/17	12:37	04:02	Initial cal 5
SW4504-IC4504	W103564.D	10/24/17	13:03	04:28	Initial cal 6
SW4504-IC4504	W103565.D	10/24/17	13:29	04:54	Initial cal 7
SW4504-ICV4504	W103566.D	10/24/17	13:54	05:19	Initial cal verification 4

Instrument Performance Check (DFTPP)

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Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4516-DFTPP
Lab File ID: W103883.D
Instrument ID: GCMSW
Injection Date: 11/07/17
Injection Time: 10:30

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	86914	32.2	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	107008	39.6	Pass
70	Less than 2.0% of mass 69	739	0.27 (0.69) ^a	Pass
127	40.0 - 60.0% of mass 198	116138	43.0	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	270113	100.0	Pass
199	5.0 - 9.0% of mass 198	19112	7.08	Pass
275	10.0 - 30.0% of mass 198	67344	24.9	Pass
365	1.0 - 100.0% of mass 198	7291	2.70	Pass
441	Present, but less than mass 443	31349	11.6 (81.1) ^b	Pass
442	40.0 - 100.0% of mass 198	192810	71.4	Pass
443	17.0 - 23.0% of mass 442	38653	14.3 (20.0) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW4516-CC4504	W103884.D	11/07/17	10:43	00:13	Continuing cal 4
OP67505-MB	W103885.D	11/07/17	11:12	00:42	Method Blank
OP67505-BS	W103886.D	11/07/17	11:37	01:07	Blank Spike
FA48976-8	W103887.D	11/07/17	12:03	01:33	(used for QC only; not part of job FA48965)
OP67505-MS	W103888.D	11/07/17	12:28	01:58	Matrix Spike
OP67505-MSD	W103889.D	11/07/17	12:54	02:24	Matrix Spike Duplicate
OP67513-MB	W103890.D	11/07/17	13:20	02:50	Method Blank
OP67513-BS	W103891.D	11/07/17	13:45	03:15	Blank Spike
ZZZZZZ	W103892.D	11/07/17	14:11	03:41	(unrelated sample)
FA48976-2	W103893.D	11/07/17	14:37	04:07	(used for QC only; not part of job FA48965)
OP67513-MS	W103894.D	11/07/17	15:03	04:33	Matrix Spike
OP67513-MSD	W103895.D	11/07/17	15:29	04:59	Matrix Spike Duplicate
ZZZZZZ	W103896.D	11/07/17	16:50	06:20	(unrelated sample)
ZZZZZZ	W103899.D	11/07/17	18:07	07:37	(unrelated sample)
ZZZZZZ	W103900.D	11/07/17	18:32	08:02	(unrelated sample)
ZZZZZZ	W103901.D	11/07/17	18:58	08:28	(unrelated sample)
ZZZZZZ	W103902.D	11/07/17	19:24	08:54	(unrelated sample)
ZZZZZZ	W103903.D	11/07/17	19:49	09:19	(unrelated sample)
ZZZZZZ	W103904.D	11/07/17	20:15	09:45	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample:	SW4516-DFTPP	Injection Date:	11/07/17
Lab File ID:	W103883.D	Injection Time:	10:30
Instrument ID:	GCMSW		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	W103905.D	11/07/17	20:41	10:11	(unrelated sample)
ZZZZZZ	W103906.D	11/07/17	21:06	10:36	(unrelated sample)
FA48971-4	W103907.D	11/07/17	21:32	11:02	(used for QC only; not part of job FA48965)

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Instrument Performance Check (DFTPP)

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Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4517-DFTPP
Lab File ID: W103911.D
Instrument ID: GCMSW
Injection Date: 11/08/17
Injection Time: 11:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	59981	33.7	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	74440	41.8	Pass
70	Less than 2.0% of mass 69	151	0.08 (0.20) ^a	Pass
127	40.0 - 60.0% of mass 198	83741	47.0	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	178240	100.0	Pass
199	5.0 - 9.0% of mass 198	12604	7.07	Pass
275	10.0 - 30.0% of mass 198	42304	23.7	Pass
365	1.0 - 100.0% of mass 198	5318	2.98	Pass
441	Present, but less than mass 443	20442	11.5 (90.1) ^b	Pass
442	40.0 - 100.0% of mass 198	113709	63.8	Pass
443	17.0 - 23.0% of mass 442	22690	12.7 (20.0) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW4517-CC4504	W103912.D	11/08/17	11:30	00:13	Continuing cal 4
OP67529-MB	W103913.D	11/08/17	11:59	00:42	Method Blank
OP67529-BS	W103914.D	11/08/17	12:25	01:08	Blank Spike
OP67489-MS	W103915.D	11/08/17	12:51	01:34	Matrix Spike
OP67489-MSD	W103916.D	11/08/17	13:16	01:59	Matrix Spike Duplicate
FA48965-1	W103917.D	11/08/17	13:42	02:25	NIKE SWN EXT4
FA48965-3	W103918.D	11/08/17	14:08	02:51	NIKE SWW2
ZZZZZZ	W103919.D	11/08/17	15:21	04:04	(unrelated sample)
FA48946-2	W103920.D	11/08/17	15:47	04:30	(used for QC only; not part of job FA48965)
OP67529-MS	W103921.D	11/08/17	16:12	04:55	Matrix Spike
OP67529-MSD	W103922.D	11/08/17	16:38	05:21	Matrix Spike Duplicate
ZZZZZZ	W103923.D	11/08/17	17:04	05:47	(unrelated sample)
SW4517-ECC4504	W103924.D	11/08/17	17:30	06:13	Ending cal 4

Instrument Performance Check (DFTPP)

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Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-DFTPP **Injection Date:** 11/07/17
Lab File ID: X056978.D **Injection Time:** 08:34
Instrument ID: GCMSX

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	26567	35.0	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	30793	40.5	Pass
70	Less than 2.0% of mass 69	111	0.15 (0.36) ^a	Pass
127	40.0 - 60.0% of mass 198	37203	49.0	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	75965	100.0	Pass
199	5.0 - 9.0% of mass 198	5257	6.92	Pass
275	10.0 - 30.0% of mass 198	19037	25.1	Pass
365	1.0 - 100.0% of mass 198	1975	2.60	Pass
441	Present, but less than mass 443	8101	10.7 (74.3) ^b	Pass
442	40.0 - 100.0% of mass 198	55256	72.7	Pass
443	17.0 - 23.0% of mass 442	10899	14.3 (19.7) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2395-IC2395	X056979.D	11/07/17	08:54	00:20	Initial cal 5
SX2395-IC2395	X056980.D	11/07/17	09:20	00:46	Initial cal 10
SX2395-IC2395	X056981.D	11/07/17	09:45	01:11	Initial cal 25
SX2395-ICC2395	X056982.D	11/07/17	10:10	01:36	Initial cal 50
SX2395-IC2395	X056983.D	11/07/17	10:35	02:01	Initial cal 60
SX2395-IC2395	X056984.D	11/07/17	11:01	02:27	Initial cal 75
SX2395-IC2395	X056985.D	11/07/17	11:26	02:52	Initial cal 100
SX2395-ICV2395	X056986.D	11/07/17	11:51	03:17	Initial cal verification 50
SX2395-ICV2395	X056987.D	11/07/17	12:17	03:43	Initial cal verification 50

Instrument Performance Check (DFTPP)

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-DFTPP
Lab File ID: X056988.D
Instrument ID: GCMSX
Injection Date: 11/07/17
Injection Time: 12:40

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	21955	35.1	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	26127	41.8	Pass
70	Less than 2.0% of mass 69	117	0.19 (0.45) ^a	Pass
127	40.0 - 60.0% of mass 198	29643	47.4	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	62533	100.0	Pass
199	5.0 - 9.0% of mass 198	4128	6.60	Pass
275	10.0 - 30.0% of mass 198	16171	25.9	Pass
365	1.0 - 100.0% of mass 198	1657	2.65	Pass
441	Present, but less than mass 443	6754	10.8 (75.2) ^b	Pass
442	40.0 - 100.0% of mass 198	45037	72.0	Pass
443	17.0 - 23.0% of mass 442	8984	14.4 (19.9) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2395-CC2395	X056989.D	11/07/17	12:57	00:17	Continuing cal 50
OP67449-BS	X056990.D	11/07/17	13:22	00:42	Blank Spike
OP67449-MB	X056991.D	11/07/17	13:47	01:07	Method Blank
OP67542-BS	X056994.D	11/07/17	15:04	02:24	Blank Spike
OP67542-MB	X056995.D	11/07/17	15:29	02:49	Method Blank
ZZZZZZ	X056996.D	11/07/17	15:55	03:15	(unrelated sample)
ZZZZZZ	X056997.D	11/07/17	16:20	03:40	(unrelated sample)
ZZZZZZ	X056998.D	11/07/17	16:46	04:06	(unrelated sample)
ZZZZZZ	X056999.D	11/07/17	17:11	04:31	(unrelated sample)
ZZZZZZ	X057000.D	11/07/17	17:36	04:56	(unrelated sample)
OP67546-BS	X057001.D	11/07/17	18:02	05:22	Blank Spike
OP67546-MB	X057002.D	11/07/17	18:27	05:47	Method Blank
FA49016-32	X057003.D	11/07/17	18:52	06:12	(used for QC only; not part of job FA48965)
OP67546-MS	X057004.D	11/07/17	19:18	06:38	Matrix Spike
OP67546-MSD	X057005.D	11/07/17	19:43	07:03	Matrix Spike Duplicate
OP67479-BS	X057006.D	11/07/17	20:08	07:28	Blank Spike
OP67479-MB	X057007.D	11/07/17	20:34	07:54	Method Blank
ZZZZZZ	X057008.D	11/07/17	20:59	08:19	(unrelated sample)
ZZZZZZ	X057009.D	11/07/17	21:25	08:45	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample:	SX2395-DFTPP	Injection Date:	11/07/17
Lab File ID:	X056988.D	Injection Time:	12:40
Instrument ID:	GCMSX		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	X057010.D	11/07/17	21:50	09:10	(unrelated sample)
ZZZZZZ	X057011.D	11/07/17	22:15	09:35	(unrelated sample)
ZZZZZZ	X057012.D	11/07/17	22:40	10:00	(unrelated sample)
ZZZZZZ	X057013.D	11/07/17	23:06	10:26	(unrelated sample)
ZZZZZZ	X057014.D	11/07/17	23:31	10:51	(unrelated sample)
SX2395-ECC2395	X057015.D	11/07/17	23:56	11:16	Ending cal 50

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Instrument Performance Check (DFTPP)

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Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2400-DFTPP
Lab File ID: X057134.D
Instrument ID: GCMSX
Injection Date: 11/13/17
Injection Time: 15:28

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	23049	33.6	Pass
68	Less than 2.0% of mass 69	104	0.15 (0.38) ^a	Pass
69	Mass 69 relative abundance	27088	39.5	Pass
70	Less than 2.0% of mass 69	126	0.18 (0.47) ^a	Pass
127	40.0 - 60.0% of mass 198	32819	47.9	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	68563	100.0	Pass
199	5.0 - 9.0% of mass 198	4835	7.05	Pass
275	10.0 - 30.0% of mass 198	17247	25.2	Pass
365	1.0 - 100.0% of mass 198	1584	2.31	Pass
441	Present, but less than mass 443	7593	11.1 (78.9) ^b	Pass
442	40.0 - 100.0% of mass 198	49517	72.2	Pass
443	17.0 - 23.0% of mass 442	9624	14.0 (19.4) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2400-CC2395	X057135.D	11/13/17	15:45	00:17	Continuing cal 50
OP67546-BS	X057136.D	11/13/17	16:10	00:42	Blank Spike
OP67546-MB	X057137.D	11/13/17	16:36	01:08	Method Blank
FA48965-2	X057138.D	11/13/17	17:01	01:33	NIKE BOT N3
OP67522-BS	X057139.D	11/13/17	17:27	01:59	Blank Spike
OP67522-MB	X057140.D	11/13/17	17:52	02:24	Method Blank
ZZZZZZ	X057141.D	11/13/17	18:17	02:49	(unrelated sample)
ZZZZZZ	X057142.D	11/13/17	18:43	03:15	(unrelated sample)
OP67526-BS	X057143.D	11/13/17	19:08	03:40	Blank Spike
OP67526-MB	X057144.D	11/13/17	19:33	04:05	Method Blank
ZZZZZZ	X057145.D	11/13/17	19:58	04:30	(unrelated sample)
ZZZZZZ	X057146.D	11/13/17	20:24	04:56	(unrelated sample)
ZZZZZZ	X057147.D	11/13/17	20:49	05:21	(unrelated sample)
ZZZZZZ	X057148.D	11/13/17	21:14	05:46	(unrelated sample)
ZZZZZZ	X057149.D	11/13/17	21:40	06:12	(unrelated sample)
FA49091-5	X057150.D	11/13/17	22:05	06:37	(used for QC only; not part of job FA48965)
OP67526-MS2	X057151.D	11/13/17	22:30	07:02	Matrix Spike
OP67526-MSD2	X057152.D	11/13/17	22:56	07:28	Matrix Spike Duplicate
ZZZZZZ	X057153.D	11/13/17	23:21	07:53	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample:	SX2400-DFTPP	Injection Date:	11/13/17
Lab File ID:	X057134.D	Injection Time:	15:28
Instrument ID:	GCMSX		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	X057154.D	11/13/17	23:46	08:18	(unrelated sample)
ZZZZZZ	X057155.D	11/14/17	00:11	08:43	(unrelated sample)
ZZZZZZ	X057158.D	11/14/17	01:28	10:00	(unrelated sample)
ZZZZZZ	X057159.D	11/14/17	01:53	10:25	(unrelated sample)
ZZZZZZ	X057160.D	11/14/17	02:18	10:50	(unrelated sample)
SX2400-ECC2395	X057161.D	11/14/17	02:44	11:16	Ending cal 50

Internal Standard Area Summary

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: SW4516-CC4504	Injection Date: 11/07/17
Lab File ID: W103884.D	Injection Time: 10:43
Instrument ID: GCMSW	Method: SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Initial Cal ^a	124319	5.46	61385	7.13	124395	8.59	86230	12.26	78867	15.91
Check Std ^b	160405	5.39	77628	7.06	142979	8.52	90202	12.14	73626	15.77
Upper Limit ^c	320810	5.56	155256	7.23	285958	8.69	180404	12.31	147252	15.94
Lower Limit ^d	80203	5.22	38814	6.89	71490	8.35	45101	11.97	36813	15.60

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
OP67505-MB	145020	5.39	70752	7.06	129538	8.52	90396	12.14	81441	15.77
OP67505-BS	155328	5.39	74673	7.06	133340	8.52	97450	12.14	82976	15.78
FA48976-8	153982	5.39	82195	7.06	139399	8.52	103463	12.14	94840	15.77
OP67505-MS	130287	5.39	64312	7.06	113794	8.52	77914	12.14	72443	15.77
OP67505-MSD	131723	5.39	70686	7.06	128706	8.52	87030	12.14	81781	15.77
OP67513-MB	131250	5.39	70270	7.06	116482	8.52	85562	12.13	77690	15.77
OP67513-BS	129172	5.39	60807	7.06	110553	8.52	86687	12.14	83270	15.77
ZZZZZZ	134404	5.38	67445	7.06	110463	8.52	74571	12.14	74769	15.77
FA48976-2	118130	5.39	64608	7.06	110269	8.52	81538	12.13	80579	15.76
OP67513-MS	133723	5.38	65894	7.06	115586	8.52	84871	12.14	89573	15.77
OP67513-MSD	120969	5.39	60352	7.06	107120	8.52	75253	12.13	70879	15.77
ZZZZZZ	128455	5.39	66863	7.06	111648	8.52	86588	12.14	83294	15.77
ZZZZZZ	95036	5.39	52216	7.06	101078	8.53	81770	12.18	42996	15.81
ZZZZZZ	122651	5.39	67238	7.06	116941	8.52	93909	12.17	74617	15.80
ZZZZZZ	115255	5.39	63986	7.06	117819	8.53	96128	12.17	59159	15.80
ZZZZZZ	117168	5.39	63289	7.06	123732	8.52	102443	12.18	59332	15.81
ZZZZZZ	176214	5.39	92135	7.06	144537	8.52	97393	12.14	75892	15.77
ZZZZZZ	158925	5.39	83955	7.06	143371	8.52	92861	12.14	64862	15.78
ZZZZZZ	163144	5.39	86444	7.06	146083	8.52	94842	12.14	58287	15.78
ZZZZZZ	127292	5.39	67003	7.06	112675	8.52	73722	12.14	40678	15.78
FA48971-4	131552	5.39	69660	7.06	120523	8.52	80098	12.14	47225	15.77

IS 1 = Naphthalene-d8
IS 2 = Acenaphthene-D10
IS 3 = Phenanthrene-d10
IS 4 = Chrysene-d12
IS 5 = Perylene-d12

(a) Initial Cal is: SW4504-ICC4504 W103562.D 10/24/17 12:12
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: SW4517-CC4504	Injection Date: 11/08/17
Lab File ID: W103912.D	Injection Time: 11:30
Instrument ID: GCMSW	Method: SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Initial Cal ^a	124319	5.46	61385	7.13	124395	8.59	86230	12.26	78867	15.91
Check Std ^b	123868	5.38	62261	7.06	107910	8.52	72419	12.14	49094	15.78
Upper Limit ^c	247736	5.55	124522	7.23	215820	8.69	144838	12.31	98188	15.95
Lower Limit ^d	61934	5.21	31131	6.89	53955	8.35	36210	11.97	24547	15.61

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
OP67529-MB	116610	5.39	66431	7.06	116532	8.52	74136	12.14	55399	15.78
OP67529-BS	111937	5.38	58486	7.05	115635	8.52	82596	12.13	59999	15.77
OP67489-MS	124821	5.38	63338	7.05	117200	8.52	67475	12.13	51551	15.77
OP67489-MSD	128780	5.38	66423	7.05	120561	8.52	60685	12.13	48485	15.77
FA48965-1	125978	5.38	69156	7.05	120828	8.52	86767	12.13	63306	15.77
FA48965-3	123413	5.38	70857	7.05	121837	8.52	75850	12.13	49795	15.77
ZZZZZZ	138359	5.39	73533	7.06	129493	8.52	85868	12.14	66789	15.78
FA48946-2	128243	5.38	80054	7.05	139784	8.52	76872	12.13	61045	15.77
OP67529-MS	135102	5.38	70651	7.05	129164	8.52	91303	12.13	76125	15.76
OP67529-MSD	118648	5.38	59934	7.05	110701	8.51	64360	12.13	53953	15.77
ZZZZZZ	126421	5.38	72789	7.05	148337	8.52	88825	12.13	72035	15.77
SW4517-ECC4504	120708	5.38	61265	7.05	113213	8.51	71356	12.13	57487	15.77

IS 1 = Naphthalene-d8
IS 2 = Acenaphthene-D10
IS 3 = Phenanthrene-d10
IS 4 = Chrysene-d12
IS 5 = Perylene-d12

- (a) Initial Cal is: SW4504-ICC4504 W103562.D 10/24/17 12:12
(b) Check Std Limit = -50 to +100% of initial cal area.
(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Internal Standard Area Summary

Page 1 of 2

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: SX2395-CC2395	Injection Date: 11/07/17
Lab File ID: X056989.D	Injection Time: 12:57
Instrument ID: GCMSX	Method: SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Initial Cal ^a	127093	6.23	496689	7.66	284627	9.72	482690	11.45	493623	14.77	506910	17.15
Check Std ^b	130784	6.23	507292	7.66	292420	9.72	492723	11.44	501938	14.77	516132	17.15
Upper Limit ^c	261568	6.40	1014584	7.83	584840	9.89	985446	11.61	1003876	14.94	1032264	17.32
Lower Limit ^d	65392	6.06	253646	7.49	146210	9.55	246362	11.27	250969	14.60	258066	16.98

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP67449-BS	177147	6.23	751913	7.66	388734	9.72	649539	11.44	676358	14.77	691102	17.15
OP67449-MB	168898	6.23	647895	7.66	380465	9.71	631656	11.44	665106	14.76	686355	17.15
OP67542-BS	146631	6.23	617035	7.66	305160	9.71	483647	11.44	455177	14.76	450241	17.14
OP67542-MB	135960	6.23	509661	7.66	282658	9.71	464337	11.44	454169	14.76	443257	17.14
ZZZZZZ	145684	6.23	532008	7.66	291079	9.71	454584	11.44	425365	14.76	416808	17.14
ZZZZZZ	145187	6.23	547355	7.66	298863	9.71	481973	11.44	452070	14.76	437027	17.14
ZZZZZZ	155888	6.23	576684	7.66	313354	9.71	487447	11.44	446970	14.76	430097	17.14
ZZZZZZ	136329	6.23	502827	7.66	275794	9.71	437414	11.44	442249	14.76	445030	17.14
ZZZZZZ	138776	6.23	520638	7.66	284137	9.71	457821	11.44	455082	14.76	438777	17.14
OP67546-BS	135013	6.23	565709	7.66	275901	9.71	433863	11.44	399378	14.76	386623	17.14
OP67546-MB	139090	6.23	519917	7.66	287840	9.71	463625	11.44	436477	14.76	413050	17.14
FA49016-32	146043	6.23	547278	7.66	296799	9.71	475859	11.44	443690	14.76	421006	17.14
OP67546-MS	139922	6.23	597755	7.66	302983	9.71	492728	11.44	470489	14.76	450389	17.14
OP67546-MSD	157361	6.23	653040	7.66	321956	9.72	515575	11.44	485853	14.76	459695	17.14
OP67479-BS	115209	6.23	442556	7.66	253748	9.71	418987	11.44	427764	14.76	415208	17.14
OP67479-MB	119424	6.23	457349	7.66	266785	9.71	446266	11.44	441415	14.76	423960	17.14
ZZZZZZ	156446	6.23	594022	7.66	349324	9.71	574889	11.44	559367	14.76	546331	17.14
ZZZZZZ	169717	6.23	645084	7.66	373368	9.71	610706	11.44	621733	14.76	605810	17.14
ZZZZZZ	169487	6.23	638910	7.66	369965	9.71	611556	11.44	615274	14.76	594108	17.14
ZZZZZZ	171583	6.23	647498	7.66	368913	9.71	607134	11.44	604893	14.76	585417	17.14
ZZZZZZ	170739	6.23	648129	7.66	371185	9.71	610948	11.44	619068	14.76	604440	17.14
ZZZZZZ	150398	6.23	572331	7.66	329396	9.71	542183	11.44	555875	14.76	539555	17.14
ZZZZZZ	148651	6.22	572219	7.66	328715	9.71	549442	11.44	558355	14.76	541861	17.14
SX2395-ECC2395	162882	6.23	619912	7.66	358679	9.72	587797	11.44	571972	14.77	552375	17.14

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX2395-ICC2395 X056982.D 11/07/17 10:10

Internal Standard Area Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std:	SX2395-CC2395	Injection Date:	11/07/17
Lab File ID:	X056989.D	Injection Time:	12:57
Instrument ID:	GCMSX	Method:	SW846 8270D

Lab	IS 1	IS 2	IS 3	IS 4	IS 5	IS 6
Sample ID	AREA RT	AREA RT	AREA RT	AREA RT	AREA RT	AREA RT

- (b) Check Std Limit = -50 to +100% of initial cal area.
- (c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
- (d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

7.5.3
7

Internal Standard Area Summary

Page 1 of 2

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: SX2400-CC2395	Injection Date: 11/13/17
Lab File ID: X057135.D	Injection Time: 15:45
Instrument ID: GCMSX	Method: SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Initial Cal ^a	127093	6.23	496689	7.66	284627	9.72	482690	11.45	493623	14.77	506910	17.15
Check Std ^b	135668	6.17	521873	7.61	301573	9.67	513757	11.39	522231	14.71	549028	17.08
Upper Limit ^c	271336	6.34	1043746	7.78	603146	9.84	1027514	11.56	1044462	14.88	1098056	17.25
Lower Limit ^d	67834	6.00	260937	7.44	150787	9.50	256879	11.22	261116	14.54	274514	16.91

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP67546-BS	148035	6.17	604640	7.61	314120	9.67	521426	11.39	511756	14.71	509350	17.08
OP67546-MB	162010	6.17	584229	7.61	323847	9.66	530595	11.39	525876	14.70	520425	17.07
FA48965-2	171469	6.17	621284	7.61	345675	9.67	568198	11.39	556625	14.70	545117	17.08
OP67522-BS	139788	6.17	560815	7.61	289437	9.67	466859	11.39	448497	14.71	450288	17.08
OP67522-MB	129893	6.17	484436	7.61	276133	9.66	465244	11.39	491660	14.70	510808	17.08
ZZZZZZ	129399	6.17	469382	7.61	277345	9.67	455124	11.39	450900	14.70	454286	17.09
ZZZZZZ	134207	6.17	492547	7.61	279708	9.67	461070	11.39	464919	14.71	468201	17.09
OP67526-BS	134578	6.17	570874	7.61	287361	9.67	486482	11.39	471466	14.72	473664	17.09
OP67526-MB	134145	6.17	493958	7.61	280382	9.67	463773	11.39	474678	14.71	473806	17.09
ZZZZZZ	131373	6.17	479552	7.61	275676	9.67	452441	11.39	444014	14.71	448954	17.10
ZZZZZZ	134922	6.17	501253	7.61	284275	9.67	468241	11.40	465675	14.72	476477	17.10
ZZZZZZ	129165	6.17	477683	7.61	271206	9.67	452574	11.40	448084	14.72	457000	17.10
ZZZZZZ	130898	6.17	482853	7.61	276147	9.67	450681	11.40	446816	14.72	454063	17.10
ZZZZZZ	124903	6.17	462619	7.61	260708	9.67	436676	11.40	438985	14.72	450317	17.10
FA49091-5	124356	6.17	463391	7.61	261963	9.67	433540	11.40	440200	14.72	445403	17.10
OP67526-MS2	131595	6.17	544011	7.61	276141	9.67	452728	11.40	436126	14.72	445397	17.10
OP67526-MSD2	122589	6.17	507620	7.61	260047	9.67	436983	11.40	429601	14.72	434737	17.10
ZZZZZZ	123687	6.17	457510	7.61	262411	9.67	433452	11.40	443559	14.72	443869	17.10
ZZZZZZ	122293	6.17	453156	7.61	259592	9.67	430019	11.39	430953	14.72	434956	17.10
ZZZZZZ	125863	6.17	466941	7.61	263623	9.67	437897	11.39	441246	14.72	442323	17.10
ZZZZZZ	118023	6.17	439235	7.61	249953	9.67	422727	11.40	429296	14.72	442477	17.10
ZZZZZZ	121698	6.17	451132	7.61	253287	9.67	418349	11.39	416775	14.72	426959	17.10
ZZZZZZ	121733	6.17	451032	7.61	252442	9.67	413192	11.39	406930	14.72	409515	17.10
SX2400-ECC2395	122975	6.17	464818	7.61	264040	9.67	436506	11.40	433584	14.72	435639	17.10

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX2395-ICC2395 X056982.D 11/07/17 10:10

Internal Standard Area Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std:	SX2400-CC2395	Injection Date:	11/13/17
Lab File ID:	X057135.D	Injection Time:	15:45
Instrument ID:	GCMSX	Method:	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

- (b) Check Std Limit = -50 to +100% of initial cal area.
- (c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
- (d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

7.5.4
7

Surrogate Recovery Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8270D	Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
FA48965-2	X057138.D	67	66	83	68	74	85
OP67546-BS	X057001.D	76	77	96	70	82	100
OP67546-BS	X057136.D	65	64	90	60	71	86
OP67546-MB	X057002.D	82	83	89	83	85	97
OP67546-MB	X057137.D	75	73	96	77	81	90
OP67546-MS	X057004.D	68	68	88	61	72	87
OP67546-MSD	X057005.D	67	69	87	62	75	86

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	40-102%
S2 = Phenol-d5	41-100%
S3 = 2,4,6-Tribromophenol	42-108%
S4 = Nitrobenzene-d5	40-105%
S5 = 2-Fluorobiphenyl	43-107%
S6 = Terphenyl-d14	45-119%

7.6.1
7

Surrogate Recovery Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8270D BY SIM	Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
FA48965-1	W103917.D	76	71	87
FA48965-3	W103918.D	83	74	99
OP67513-BS	W103891.D	79	80	79
OP67513-MB	W103890.D	71	67	78
OP67513-MS	W103894.D	72	75	81
OP67513-MSD	W103895.D	80	76	85

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	40-105%
S2 = 2-Fluorobiphenyl	43-107%
S3 = Terphenyl-d14	45-119%

7.6.2
7

Initial Calibration Summary

Page 1 of 2

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4504-ICC4504
Lab FileID: W103562.D

Response Factor Report MSBNA01

Method : C:\msdchem\1\METHODS\simpahf1024.m (RTE Integrator)
Title : PAH's by 8270 SIM
Last Update : Tue Oct 24 14:16:52 2017
Response via : Initial Calibration

Calibration Files

L1 =W103559.D L2 =W103560.D L3 =W103561.D L4 =W103562.D
L5 =W103563.D L6 =W103564.D L7 =W103565.D

Compound	L1	L2	L3	L4	L5	L6	L7	Avg	%RSD
-----ISTD-----									
1) I Naphthalene-d8									
2)S Nitrobenzene-d5	0.426	0.376	0.363	0.334	0.322	0.323	0.341	0.355	10.47
3)P Naphthalene	1.000	0.894	0.831	0.769	0.773	0.747	0.816	0.833	10.60
4)P 2-Methylnaphthale	0.834	0.720	0.686	0.625	0.598	0.584	0.640	0.670	12.97
5)P 1-Methylnaphthale	0.751	0.635	0.579	0.531	0.529	0.521	0.565	0.587	14.01
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9995									
Response Ratio = 0.00000 + 0.50711 *A + 0.00561 *A^2									
-----ISTD-----									
6) I Acenaphthene-d10									
7)S 2-Fluorobiphenyl	1.746	1.481	1.381	1.299	1.213	1.179	1.395	1.385	13.81
8)P Acenaphthylene	2.385	2.079	1.953	1.819	1.662	1.608	1.847	1.908	13.89
9)P Acenaphthene	1.182	1.077	1.045	0.995	0.939	0.927	1.100	1.038	8.79
10) Dibenzofuran	2.106	1.798	1.713	1.570	1.495	1.465	1.630	1.682	13.10
11)P Fluorene	1.769	1.479	1.410	1.303	1.240	1.218	1.378	1.400	13.41
-----ISTD-----									
12) I Phenanthrene-d10									
13)S 2,4,6-Tribromophe	0.026	0.027	0.027	0.033	0.038	0.044	0.067	0.037#	39.28
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000									
Response Ratio = 0.00000 + 0.02057 *A + 0.00234 *A^2									
0.004 0.009 0.025 0.013# 85.52									
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000									
Response Ratio = 0.00000 + -0.00765 *A + 0.00129 *A^2									
15)P Phenanthrene	1.137	0.963	0.902	0.847	0.813	0.807	0.936	0.915	12.54
16)P Anthracene	1.290	1.068	0.989	0.925	0.893	0.876	0.999	1.006	14.11
17) Carbazole	1.255	1.068	0.995	0.939	0.891	0.871	0.957	0.997	13.21
18)P Fluoranthene	1.922	1.548	1.293	1.185	1.104	1.085	1.245	1.340	22.35
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9981									
Response Ratio = 0.00000 + 1.04692 *A + 0.01915 *A^2									
-----ISTD-----									
19) I Chrysene-d12									
20)P Pyrene	2.152	1.634	1.476	1.382	1.361	1.358	1.622	1.569	17.98
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9991									
Response Ratio = 0.00000 + 1.21208 *A + 0.04040 *A^2									
21)S Terphenyl-d14	0.956	0.763	0.689	0.643	0.628	0.612	0.714	0.715	16.57
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9976									
Response Ratio = 0.00000 + 0.61987 *A + 0.00803 *A^2									
22)P Benzo[a]anthracen	1.881	1.623	1.529	1.416	1.365	1.316	1.444	1.511	12.74
23)P Chrysene	1.415	1.226	1.196	1.158	1.121	1.114	1.243	1.210	8.51
-----ISTD-----									
24) I Perylene-d12									

Initial Calibration Summary

Page 2 of 2

Job Number: FA48965

Sample: SW4504-ICC4504

Account: TCMAW Tantara Corporation

Lab FileID: W103562.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

25)P	Benzo[b]fluoranth	1.736	1.514	1.448	1.353	1.299	1.275	1.406	1.433	10.97
26)P	Benzo[k]fluoranth	1.709	1.467	1.335	1.251	1.210	1.171	1.259	1.343	14.00
27)P	Benzo[a]pyrene	1.644	1.442	1.357	1.288	1.242	1.230	1.330	1.362	10.57
28)P	Indeno[1,2,3-cd]p	1.262	1.183	1.158	1.116	1.091	1.098	1.250	1.166	6.00
29)P	Dibenz[a,h]anthra	1.008	0.933	0.934	0.901	0.894	0.896	1.018	0.941	5.55
30)P	Benzo[g,h,i]peryl	1.173	1.119	1.094	1.071	1.042	1.035	1.161	1.099	4.97

(#) = Out of Range

simpahf1024.m

Wed Oct 25 11:22:36 2017

7.7.1

7

Initial Calibration Verification

Page 1 of 2

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4504-ICV4504
Lab FileID: W103566.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4504\W103566.D Vial: 10
Acq On : 24 Oct 2017 1:54 pm Operator: fouads
Sample : icv4504-4 Inst : MSBNA01
Misc : op67226,sw4504,15.0,,,1,1,soil Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf1024.m (RTE Integrator)
Title : PAH's by 8270 SIM
Last Update : Tue Oct 24 14:16:52 2017
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	4.000	4.000	0.0	82	0.00	5.46
2 S	Nitrobenzene-d5		-----NA-----				
3 P	Naphthalene	10.000	9.160	8.4	81	0.00	5.48
4 P	2-Methylnaphthalene	10.000	8.594	14.1	75	0.02	6.06
	-----	Amount	Calc.	%Drift	-----		
5 P	1-Methylnaphthalene	10.000	8.841	11.6	71	0.02	6.19
	-----	Amount	Calc.	%Drift	-----		
6 I	Acenaphthene-d10	4.000	4.000	0.0	80	0.00	7.13
7 S	2-Fluorobiphenyl		-----NA-----				
8 P	Acenaphthylene	10.000	9.121	8.8	76	0.00	7.03
9 P	Acenaphthene	10.000	9.225	7.8	77	0.00	7.16
10	Dibenzofuran	10.000	8.987	10.1	77	0.00	7.29
11 P	Fluorene	10.000	9.181	8.2	79	0.02	7.62
12 I	Phenanthrene-d10	4.000	4.000	0.0	80	0.00	8.59
	-----	Amount	Calc.	%Drift	-----		
13 S	2,4,6-Tribromophenol		-----NA-----				
14 P	Pentachlorophenol		-----NA-----				
	-----	Amount	Calc.	%Drift	-----		
15 P	Phenanthrene	10.000	8.990	10.1	78	0.00	8.62
16 P	Anthracene	5.000	4.106	17.9	71	0.00	8.65
17	Carbazole	5.000	4.581	8.4	78	0.01	8.97
	-----	Amount	Calc.	%Drift	-----		
18 P	Fluoranthene	10.000	10.551	-5.5	78	0.00	9.87
	-----	Amount	Calc.	%Drift	-----		
19 I	Chrysene-d12	4.000	4.000	0.0	78	0.00	12.27
	-----	Amount	Calc.	%Drift	-----		
20 P	Pyrene	10.000	10.814	-8.1	80	0.03	10.22
21 S	Terphenyl-d14		-----NA-----				
	-----	Amount	Calc.	%Drift	-----		
22 P	Benzo[a]anthracene	5.000	4.594	8.1	76	0.00	12.18
23 P	Chrysene	5.000	4.847	3.1	79	0.00	12.33

Initial Calibration Verification

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4504-ICV4504
Lab FileID: W103566.D

24	I	Perylene-d12	4.000	4.000	0.0	79	0.00	15.92
25	P	Benzo[b]fluoranthene	5.000	4.725	5.5	79	0.00	14.74
26	P	Benzo[k]fluoranthene	5.000	4.458	10.8	76	0.00	14.80
27	P	Benzo[a]pyrene	5.000	4.452	11.0	74	-0.01	15.74
28	P	Indeno[1,2,3-cd]pyrene	5.000	4.692	6.2	78	-0.04	18.25
29	P	Dibenz[a,h]anthracene	5.000	4.629	7.4	76	-0.04	18.24
30	P	Benzo[g,h,i]perylene	5.000	4.701	6.0	76	0.00	19.13

(#) = Out of Range
W103562.D simpahf1024.m

SPCC's out = 0 CCC's out = 0
Wed Oct 25 11:23:49 2017

7.7.2
7

Continuing Calibration Summary

Page 1 of 2

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4516-CC4504
Lab FileID: W103884.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4516\W103884.D Vial: 2
Acq On : 7 Nov 2017 10:43 am Operator: fouads
Sample : cc4504-4 Inst : MSBNA01
Misc : op67475,sw4516,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf1024.m (RTE Integrator)
Title : PAH's by 8270 SIM
Last Update : Tue Nov 07 14:31:12 2017
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	129	0.00	5.39
2 S	Nitrobenzene-d5	0.355	0.322	9.3	124	-0.01	4.93
3 P	Naphthalene	0.833	0.722	13.3	121	0.00	5.41
4 P	2-Methylnaphthalene	0.670	0.572	14.6	118	0.00	6.00
----- Amount Calc. %Drift -----							
5 P	1-Methylnaphthalene	10.000	9.477	5.2	120	0.00	6.12
----- AvgRF CCRF %Dev -----							
6 I	Acenaphthene-d10	1.000	1.000	0.0	126	0.00	7.06
7 S	2-Fluorobiphenyl	1.385	1.184	14.5	115	-0.02	6.33
8 P	Acenaphthylene	1.908	1.649	13.6	115	0.00	6.97
9 P	Acenaphthene	1.038	0.920	11.4	117	0.00	7.10
10	Dibenzofuran	1.682	1.436	14.6	116	0.00	7.22
11 P	Fluorene	1.400	1.185	15.4	115	0.00	7.56
12 I	Phenanthrene-d10	1.000	1.000	0.0	115	0.00	8.52
----- Amount Calc. %Drift -----							
13 S	2,4,6-Tribromophenol	20.000	35.009	-75.0#	249	-0.01	7.86
14 P	Pentachlorophenol	25.000	99.091	-296.4#	0	0.00	8.28
----- AvgRF CCRF %Dev -----							
15 P	Phenanthrene	0.915	0.809	11.6	110	0.00	8.55
16 P	Anthracene	1.006	0.891	11.4	111	0.00	8.59
17	Carbazole	0.997	0.876	12.1	107	0.00	8.89
----- Amount Calc. %Drift -----							
18 P	Fluoranthene	10.000	8.151	18.5	86	0.00	9.78
----- AvgRF CCRF %Dev -----							
19 I	Chrysene-d12	1.000	1.000	0.0	105	0.00	12.14
----- Amount Calc. %Drift -----							
20 P	Pyrene	10.000	10.864	-8.6	109	0.00	10.13
21 S	Terphenyl-d14	10.000	9.682	3.2	101	0.01	10.12
----- AvgRF CCRF %Dev -----							
22 P	Benzo[a]anthracene	1.511	1.357	10.2	100	0.00	12.05
23 P	Chrysene	1.210	1.070	11.6	97	0.00	12.20

Continuing Calibration Summary

Page 2 of 2

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4516-CC4504
Lab FileID: W103884.D

24	I	Perylene-d12	1.000	1.000	0.0	93	0.00	15.77
25	P	Benzo[b]fluoranthene	1.433	1.281	10.6	88	0.00	14.58
26	P	Benzo[k]fluoranthene	1.343	1.164	13.3	87	0.00	14.64
27	P	Benzo[a]pyrene	1.362	1.237	9.2	90	0.00	15.59
28	P	Indeno[1,2,3-cd]pyrene	1.166	1.099	5.7	92	0.00	18.06
29	P	Dibenz[a,h]anthracene	0.941	0.889	5.5	92	0.00	18.05
30	P	Benzo[g,h,i]perylene	1.099	1.050	4.5	92	0.00	18.91

(#) = Out of Range
W103562.D simpahf1024.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 14:31:32 2017

7.7.3

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Continuing Calibration Summary

Page 1 of 2

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4517-CC4504
Lab FileID: W103912.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4517\W103912.D Vial: 2
Acq On : 8 Nov 2017 11:30 am Operator: fouads
Sample : cc4504-4 Inst : MSBNA01
Misc : op67475,sw4517,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf1024.m (RTE Integrator)
Title : PAH's by 8270 SIM
Last Update : Tue Nov 07 14:31:12 2017
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	100	-0.01	5.38
2 S	Nitrobenzene-d5	0.355	0.337	5.1	101	-0.01	4.92
3 P	Naphthalene	0.833	0.750	10.0	97	0.00	5.41
4 P	2-Methylnaphthalene	0.670	0.577	13.9	92	0.00	5.99
----- Amount Calc. %Drift -----							
5 P	1-Methylnaphthalene	10.000	9.997	0.0	98	0.00	6.12
----- AvgRF CCRF %Dev -----							
6 I	Acenaphthene-d10	1.000	1.000	0.0	101	0.00	7.06
7 S	2-Fluorobiphenyl	1.385	1.203	13.1	94	-0.02	6.33
8 P	Acenaphthylene	1.908	1.676	12.2	93	-0.01	6.96
9 P	Acenaphthene	1.038	0.930	10.4	95	-0.01	7.09
10	Dibenzofuran	1.682	1.424	15.3	92	-0.01	7.22
11 P	Fluorene	1.400	1.164	16.9	91	0.00	7.56
12 I	Phenanthrene-d10	1.000	1.000	0.0	87	0.00	8.52
----- Amount Calc. %Drift -----							
13 S	2,4,6-Tribromophenol	20.000	37.720	-88.6#	210	-0.01	7.86
14 P	Pentachlorophenol	25.000	115.208	-360.8#	0	0.00	8.27
----- AvgRF CCRF %Dev -----							
15 P	Phenanthrene	0.915	0.826	9.7	85	0.00	8.54
16 P	Anthracene	1.006	0.947	5.9	89	0.00	8.59
17	Carbazole	0.997	0.913	8.4	84	0.00	8.90
----- Amount Calc. %Drift -----							
18 P	Fluoranthene	10.000	8.782	12.2	70	0.00	9.78
----- AvgRF CCRF %Dev -----							
19 I	Chrysene-d12	1.000	1.000	0.0	84	0.00	12.14
----- Amount Calc. %Drift -----							
20 P	Pyrene	10.000	10.472	-4.7	84	0.00	10.13
21 S	Terphenyl-d14	10.000	9.219	7.8	77	0.00	10.12
----- AvgRF CCRF %Dev -----							
22 P	Benzo[a]anthracene	1.511	1.313	13.1	78	0.00	12.05
23 P	Chrysene	1.210	1.094	9.6	79	0.00	12.20

Continuing Calibration Summary

Page 2 of 2

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4517-CC4504
Lab FileID: W103912.D

24	I	Perylene-d12	1.000	1.000	0.0	62	0.00	15.78
25	P	Benzo[b]fluoranthene	1.433	1.241	13.4	57	0.00	14.59
26	P	Benzo[k]fluoranthene	1.343	1.274	5.1	63	0.00	14.64
27	P	Benzo[a]pyrene	1.362	1.193	12.4	58	0.00	15.60
28	P	Indeno[1,2,3-cd]pyrene	1.166	1.084	7.0	60	0.01	18.07
29	P	Dibenz[a,h]anthracene	0.941	0.891	5.3	62	0.00	18.07
30	P	Benzo[g,h,i]perylene	1.099	1.026	6.6	60	0.02	18.94

(#) = Out of Range
W103562.D simpahf1024.m

SPCC's out = 0 CCC's out = 0
Wed Nov 08 16:18:13 2017

7.7.4

7

Continuing Calibration Summary

Page 1 of 2

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4517-ECC4504
Lab FileID: W103924.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\SW4517\W103924.D Vial: 2
Acq On : 8 Nov 2017 5:30 pm Operator: fouads
Sample : ecc4504-4 Inst : MSBNA01
Misc : op67513,sw4517,525,,,1,1,water Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\simpahf1024.m (RTE Integrator)
Title : PAH's by 8270 SIM
Last Update : Tue Nov 07 14:31:12 2017
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	97	0.00	5.38
2 S	Nitrobenzene-d5	0.355	0.335	5.6	97	-0.02	4.92
3 P	Naphthalene	0.833	0.753	9.6	95	0.00	5.40
4 P	2-Methylnaphthalene	0.670	0.587	12.4	91	0.00	5.99
----- Amount Calc. %Drift -----							
5 P	1-Methylnaphthalene	10.000	10.001	-0.0	95	0.00	6.12
----- AvgRF CCRF %Dev -----							
6 I	Acenaphthene-d10	1.000	1.000	0.0	100	0.00	7.05
7 S	2-Fluorobiphenyl	1.385	1.203	13.1	92	-0.03	6.32
8 P	Acenaphthylene	1.908	1.683	11.8	92	0.00	6.96
9 P	Acenaphthene	1.038	0.914	11.9	92	0.00	7.09
10	Dibenzofuran	1.682	1.478	12.1	94	0.00	7.22
11 P	Fluorene	1.400	1.403	-0.2	108	0.00	7.55
12 I	Phenanthrene-d10	1.000	1.000	0.0	91	-0.01	8.51
----- Amount Calc. %Drift -----							
13 S	2,4,6-Tribromophenol	20.000	36.518	-82.6#	210	-0.02	7.86
14 P	Pentachlorophenol	25.000	111.001	-344.0#	0	0.00	8.27
----- AvgRF CCRF %Dev -----							
15 P	Phenanthrene	0.915	0.807	11.8	87	0.00	8.54
16 P	Anthracene	1.006	0.927	7.9	91	0.00	8.58
17	Carbazole	0.997	0.935	6.2	91	0.00	8.89
----- Amount Calc. %Drift -----							
18 P	Fluoranthene	10.000	8.795	12.1	74	0.00	9.77
----- AvgRF CCRF %Dev -----							
19 I	Chrysene-d12	1.000	1.000	0.0	83	0.00	12.13
----- Amount Calc. %Drift -----							
20 P	Pyrene	10.000	10.955	-9.6	87	0.00	10.12
21 S	Terphenyl-d14	10.000	9.991	0.1	82	0.00	10.11
----- AvgRF CCRF %Dev -----							
22 P	Benzo[a]anthracene	1.511	1.308	13.4	76	-0.01	12.05
23 P	Chrysene	1.210	1.073	11.3	77	-0.01	12.19

Continuing Calibration Summary

Page 2 of 2

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SW4517-ECC4504
Lab FileID: W103924.D

24	I	Perylene-d12	1.000	1.000	0.0	73	0.00	15.77
25	P	Benzo[b]fluoranthene	1.433	1.236	13.7	67	-0.02	14.57
26	P	Benzo[k]fluoranthene	1.343	1.190	11.4	69	-0.01	14.63
27	P	Benzo[a]pyrene	1.362	1.206	11.5	68	-0.01	15.58
28	P	Indeno[1,2,3-cd]pyrene	1.166	1.007	13.6	66	0.00	18.05
29	P	Dibenz[a,h]anthracene	0.941	0.840	10.7	68	-0.01	18.05
30	P	Benzo[g,h,i]perylene	1.099	0.928	15.6	63	0.00	18.91

(#) = Out of Range
W103562.D simpahf1024.m

SPCC's out = 0 CCC's out = 0
Fri Nov 10 08:37:17 2017

7.7.5

7

Initial Calibration Summary

Page 1 of 3

Job Number: FA48965
 Account: TCMaw Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICC2395
 Lab FileID: X056982.D

Response Factor Report MSBNA05

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
 Title : SW846 8270D OR EPA 625
 Last Update : Tue Nov 07 12:26:42 2017
 Response via : Initial Calibration

Calibration Files

5 =x056979.D 10 =x056980.D 25 =x056981.D 50 =x056982.D
 60 =x056983.D 75 =x056984.D 100 =x056985.D

Compound	5	10	25	50	60	75	100	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	-----ISTD-----								
2) 1,4-Dioxane	0.769	0.734	0.721	0.726	0.727	0.722	0.714	0.731	2.48
3) N-nitrosodimethyl	0.754	0.789	0.765	0.757	0.764	0.736	0.718	0.755	3.00
4) Pyridine	1.989	1.936	1.997	1.952	1.985	1.946	1.919	1.960	1.52
5)P Benzaldehyde	1.140	1.284	1.272	1.260	1.234	1.192	0.930	1.187	10.43
6) Aniline	1.856	1.819	1.984	2.275	2.347	2.271	2.196	2.107	10.28
7)S 2-Fluorophenol	1.560	1.534	1.541	1.517	1.538	1.479	1.429	1.514	2.99
8)P bis(2-Chloroethyl	1.565	1.531	1.514	1.496	1.527	1.489	1.465	1.512	2.16
9)S Phenol-d5	1.977	1.905	1.901	1.854	1.866	1.778	1.724	1.858	4.53
10)P Phenol	2.151	2.095	2.133	2.079	2.098	1.981	1.902	2.063	4.33
11)P 2-Chlorophenol	1.585	1.545	1.551	1.572	1.597	1.567	1.563	1.569	1.18
12) 1,3-Dichlorobenze	1.723	1.651	1.657	1.661	1.662	1.624	1.608	1.655	2.20
13) 1,4-Dichlorobenze	1.736	1.678	1.663	1.643	1.681	1.630	1.596	1.661	2.67
14) 1,2-Dichlorobenze	1.640	1.563	1.594	1.569	1.594	1.565	1.533	1.580	2.14
15) Benzyl alcohol	1.049	1.021	1.018	1.022	1.058	1.024	1.015	1.030	1.62
16)P bis(2-chloroisopr	2.102	2.065	2.018	1.973	1.970	1.912	1.828	1.981	4.69
17)P 2-Methylphenol	1.427	1.396	1.435	1.409	1.432	1.387	1.359	1.407	1.99
18)P Acetophenone	1.812	2.048	2.019	1.992	2.006	1.933	1.862	1.953	4.50
19)P Hexachloroethane	0.612	0.609	0.615	0.630	0.643	0.633	0.623	0.624	2.01
20)P N-Nitroso-di-n-pr	1.037	1.023	1.029	1.019	1.029	1.012	0.992	1.020	1.45
21)P 3&4-Methylphenol	1.503	1.484	1.499	1.445	1.470	1.403	1.362	1.452	3.63
22) I Naphthalene-d8	-----ISTD-----								
23)S Nitrobenzene-d5	0.391	0.378	0.390	0.395	0.403	0.397	0.391	0.392	1.97
24)P Nitrobenzene	0.401	0.395	0.393	0.394	0.399	0.388	0.378	0.393	1.89
25)P Isophorone	0.775	0.759	0.740	0.714	0.724	0.697	0.675	0.726	4.82
26)P 2-Nitrophenol	0.154	0.156	0.178	0.191	0.204	0.205	0.206	0.185	12.36
27)P 2,4-Dimethylpheno	0.391	0.385	0.381	0.371	0.376	0.369	0.356	0.375	3.08
28) 0,0,0-Triethylpho	0.161	0.179	0.181	0.182	0.183	0.185	0.180	0.179	4.48
29)P bis(2-Chloroethox	0.507	0.510	0.491	0.491	0.495	0.465	0.475	0.491	3.32
30) Benzoic Acid	0.128	0.150	0.203	0.249	0.272	0.283	0.297	0.226	29.53
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9982									
Response Ratio = 0.00000 + 0.20343 *A + 0.03892 *A^2									
31)P 2,4-Dichloropheno	0.321	0.313	0.323	0.324	0.332	0.325	0.319	0.322	1.74
32) 1,2,4-Trichlorobe	0.357	0.352	0.348	0.343	0.349	0.343	0.337	0.347	1.94
33) alpha-Terpineol								0.000	-1.00
34)P Naphthalene	1.189	1.159	1.116	1.059	1.059	1.019	0.971	1.082	7.16
35)P 4-Chloroaniline	0.358	0.348	0.336	0.393	0.433	0.405	0.373	0.378	9.09
36) 2,6-Dichloropheno	0.326	0.322	0.324	0.322	0.330	0.322	0.316	0.323	1.29
37)P Hexachlorobutadie	0.206	0.201	0.200	0.200	0.205	0.204	0.201	0.202	1.26
38)P Caprolactam	0.106	0.118	0.121	0.129	0.131	0.129	0.129	0.123	7.26
39)P 4-Chloro-3-methyl	0.314	0.316	0.318	0.319	0.323	0.318	0.309	0.317	1.43
40)P 2-Methylnaphthale	0.676	0.663	0.640	0.608	0.623	0.600	0.572	0.626	5.82
41) 1-Methylnaphthale	0.769	0.733	0.704	0.683	0.690	0.666	0.644	0.699	6.04
42)P 1,2,4,5-Tetrachlo	0.378	0.363	0.363	0.359	0.369	0.362	0.353	0.364	2.19

Initial Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E. Aurora, NY

Sample: SX2395-ICC2395
Lab FileID: X056982.D

43) I	Acenaphthene-d10	-----ISTD-----								
44)P	Hexachlorocyclope	0.343	0.351	0.399	0.417	0.438	0.446	0.436	0.404	10.40
45)P	2,4,6-Trichloroph	0.352	0.360	0.383	0.393	0.406	0.405	0.405	0.386	5.80
46)P	2,4,5-Trichloroph	0.382	0.379	0.414	0.429	0.432	0.437	0.430	0.414	5.91
47)S	2-Fluorobiphenyl	1.430	1.434	1.432	1.362	1.368	1.345	1.282	1.379	4.14
48)P	1,1'-Biphenyl	1.346	1.554	1.536	1.451	1.454	1.415	1.325	1.440	6.03
49)P	2-Chloronaphthale	1.221	1.212	1.214	1.139	1.143	1.129	1.063	1.160	5.04
50)P	2-Nitroaniline	0.263	0.283	0.316	0.333	0.342	0.345	0.336	0.317	10.08
51)	p-Dinitrobenzene	0.139	0.150	0.192	0.216	0.227	0.230	0.231	0.198	19.71
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9985										
Response Ratio = 0.00000 + 0.20056 *A + 0.01334 *A^2										
52)P	Acenaphthylene	1.889	1.898	1.844	1.757	1.743	1.679	1.591	1.772	6.41
53)P	Dimethylphthalate	1.386	1.399	1.385	1.342	1.334	1.303	1.241	1.341	4.20
54)	m-Dinitrobenzene	0.160	0.173	0.210	0.225	0.235	0.235	0.234	0.210	14.96
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990										
Response Ratio = 0.00000 + 0.21787 *A + 0.00725 *A^2										
55)P	2,6-Dinitrotoluen	0.275	0.280	0.317	0.316	0.319	0.320	0.307	0.305	6.36
56)	o-Dinitrobenzene	0.128	0.130	0.149	0.158	0.157	0.157	0.154	0.147	8.82
57)P	Acenaphthene	1.238	1.215	1.207	1.167	1.160	1.143	1.090	1.174	4.27
58)P	3-Nitroaniline	0.281	0.289	0.298	0.332	0.354	0.336	0.312	0.314	8.54
59)P	2,4-Dinitrophenol	0.050	0.060	0.098	0.130	0.149	0.164	0.178	0.118	42.59
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9976										
Response Ratio = 0.00000 + 0.08826 *A + 0.03696 *A^2										
60)P	Dibenzofuran	1.735	1.738	1.733	1.658	1.663	1.617	1.533	1.668	4.55
61)P	2,4-Dinitrotoluen	0.332	0.349	0.411	0.428	0.440	0.442	0.434	0.405	11.25
62)P	4-Nitrophenol	0.123	0.131	0.157	0.158	0.165	0.167	0.166	0.152	11.65
63)	2,3,5,6-Tetrachlo	0.292	0.300	0.336	0.356	0.372	0.378	0.375	0.344	10.46
64)P	2,3,4,6-Tetrachlo	0.311	0.333	0.352	0.379	0.385	0.390	0.387	0.363	8.59
65)P	Fluorene	1.398	1.378	1.351	1.299	1.299	1.269	1.192	1.312	5.39
66)P	4-Chlorophenyl-ph	0.701	0.683	0.696	0.672	0.682	0.667	0.635	0.677	3.25
67)P	Diethylphthalate	1.343	1.343	1.362	1.321	1.333	1.322	1.277	1.329	2.03
68)	Thionazin	0.239	0.286	0.295	0.291	0.291	0.291	0.282	0.282	6.85
69)P	4-Nitroaniline	0.309	0.324	0.363	0.380	0.394	0.391	0.394	0.365	9.65
70) I	Phenanthrene-d10	-----ISTD-----								
71)P	4,6-Dinitro-2-met	0.053	0.067	0.097	0.123	0.137	0.146	0.151	0.110	35.15
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9971										
Response Ratio = 0.00000 + 0.09816 *A + 0.02225 *A^2										
72)P	n-Nitrosodiphenyl	0.589	0.596	0.590	0.575	0.581	0.574	0.544	0.578	2.99
73)	Diphenylamine	0.707	0.715	0.708	0.690	0.697	0.689	0.652	0.694	2.99
74)	1,2-Diphenylhydra	0.788	0.795	0.789	0.757	0.759	0.744	0.685	0.760	5.00
75)S	2,4,6-Tribromophe	0.158	0.165	0.179	0.187	0.197	0.197	0.192	0.182	8.47
76)	Sulfotep	0.107	0.127	0.127	0.126	0.128	0.126	0.118	0.123	6.38
77)	Phorate	0.412	0.482	0.500	0.483	0.492	0.483	0.443	0.471	6.70
78)P	4-Bromophenyl-phe	0.262	0.271	0.271	0.269	0.276	0.273	0.267	0.270	1.72
79)P	Hexachlorobenzene	0.314	0.319	0.328	0.325	0.334	0.331	0.324	0.325	2.13
80)	Dimethoate	0.249	0.308	0.324	0.324	0.332	0.326	0.311	0.311	9.21
81)	Simazine	0.155	0.156	0.159	0.153	0.157	0.155	0.149	0.155	2.11
82)P	Atrazine	0.201	0.243	0.244	0.245	0.243	0.247	0.234	0.237	6.81
83)P	Pentachlorophenol			0.155	0.176	0.188	0.192	0.194	0.181	8.84
84)P	Phenanthrene	1.204	1.215	1.184	1.132	1.132	1.116	1.042	1.146	5.24
85)P	Anthracene	1.229	1.251	1.221	1.158	1.168	1.128	1.058	1.173	5.74
86)	Disulfoton	0.404	0.466	0.469	0.442	0.446	0.433	0.403	0.438	6.11
87)P	Carbazole	1.149	1.162	1.130	1.082	1.096	1.063	1.005	1.098	4.98
88)	Methyl Parathion	0.128	0.171	0.231	0.254	0.263	0.263	0.249	0.223	23.62

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Initial Calibration Summary

Page 3 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICC2395
Lab FileID: X056982.D

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      ---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9973
      Response Ratio = 0.00000 + 0.25587 *A + -0.00086 *A^2

89)P Di-n-butylphthala 1.297 1.322 1.320 1.264 1.264 1.217 1.140 1.261 5.14
90) Ethyl Parathion 0.079 0.104 0.139 0.152 0.155 0.155 0.149 0.133 22.53
      ---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9981
      Response Ratio = 0.00000 + 0.15157 *A + -0.00018 *A^2

91)P Fluoranthene 1.299 1.333 1.304 1.238 1.235 1.199 1.142 1.250 5.36

92) I Chrysene-d12 -----ISTD-----
93) Benzidine 0.290 0.348 0.508 0.636 0.672 0.634 0.515 31.53
      ---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9929
      Response Ratio = 0.00000 + 0.52304 *A + 0.07225 *A^2

94)P Pyrene 1.259 1.298 1.295 1.257 1.248 1.229 1.169 1.251 3.49
95)S Terphenyl-d14 0.919 0.958 0.968 0.953 0.973 0.953 0.909 0.948 2.58
96) Famphur 0.350 0.421 0.400 0.354 0.361 0.321 0.277 0.355 13.47
97)P Butylbenzylphthal 0.485 0.514 0.541 0.546 0.551 0.536 0.518 0.527 4.36
98)P 3,3'-Dichlorobenz 0.301 0.277 0.295 0.373 0.429 0.413 0.395 0.355 17.57
      ---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9911
      Response Ratio = 0.00000 + 0.37478 *A + 0.01218 *A^2

99)P Benzo[a]anthracen 1.159 1.207 1.200 1.172 1.192 1.162 1.111 1.172 2.80
100)P Chrysene 1.098 1.161 1.145 1.125 1.131 1.104 1.072 1.119 2.71
101)P bis(2-Ethylhexyl) 0.639 0.678 0.702 0.713 0.726 0.715 0.686 0.694 4.25

102) I Perylene-d12 -----ISTD-----
103)P Di-n-octylphthala 0.836 0.898 0.994 1.059 1.079 1.078 1.042 0.998 9.58
104)P Benzo[b]fluoranth 0.982 1.097 1.134 1.135 1.135 1.116 1.074 1.096 5.04
105)P Benzo[k]fluoranth 1.089 1.136 1.119 1.115 1.149 1.154 1.124 1.127 1.99
106)P Benzo[a]pyrene 1.000 1.089 1.104 1.115 1.158 1.143 1.112 1.103 4.64
107)P Indeno[1,2,3-cd]p 0.883 0.995 1.065 1.107 1.124 1.151 1.134 1.066 9.02
108)P Dibenz[a,h]anthra 1.048 1.142 1.181 1.206 1.237 1.219 1.195 1.175 5.42
109)P Benzo[g,h,i]peryl 1.106 1.202 1.217 1.234 1.246 1.232 1.205 1.206 3.89
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(# ) = Out of Range

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8270d110717.m

Wed Nov 08 10:16:16 2017

7.7.6
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Initial Calibration Verification

Page 1 of 3

Job Number: FA48965
 Account: TCMAW Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056986.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2395_1107\x056986.D Vial: 10
 Acq On : 7 Nov 2017 11:51 am Operator: marthav
 Sample : icv2395-50 Inst : MSBNA05
 Misc : op67449,sx2395,1000,,,1,1,water Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
 Title : SW846 8270D OR EPA 625
 Last Update : Tue Nov 07 12:26:42 2017
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	107	0.00	6.23
2	1,4-Dioxane	50.000	44.869	10.3	96	0.01	3.14
3	N-nitrosodimethylamine	50.000	46.212	7.6	98	0.00	3.50
4	Pyridine		-----NA-----				
5 P	Benzaldehyde	50.000	43.032	13.9	87	0.00	5.76
6	Aniline		-----NA-----				
7 S	2-Fluorophenol		-----NA-----				
8 P	bis(2-Chloroethyl)ether	50.000	44.541	10.9	96	0.00	5.98
9 S	Phenol-d5		-----NA-----				
10 P	Phenol	50.000	44.254	11.5	94	0.00	5.89
11 P	2-Chlorophenol	50.000	46.427	7.1	99	0.00	6.03
12	1,3-Dichlorobenzene	50.000	46.146	7.7	98	0.00	6.19
13	1,4-Dichlorobenzene	50.000	47.186	5.6	102	0.00	6.24
14	1,2-Dichlorobenzene	50.000	46.757	6.5	100	0.00	6.45
15	Benzyl alcohol		-----NA-----				
16 P	bis(2-chloroisopropyl)eth	50.000	45.004	10.0	96	0.00	6.58
17 P	2-Methylphenol	50.000	44.920	10.2	96	0.00	6.54
18 P	Acetophenone	50.000	46.271	7.5	97	0.00	6.70
19 P	Hexachloroethane	50.000	47.278	5.4	100	0.00	6.79
20 P	N-Nitroso-di-n-propylamin	50.000	45.528	8.9	97	0.00	6.73
21 P	3&4-Methylphenol	100.000	87.040	13.0	98	0.00	6.71
22 I	Naphthalene-d8	40.000	40.000	0.0	104	0.00	7.66
23 S	Nitrobenzene-d5		-----NA-----				
24 P	Nitrobenzene	50.000	47.191	5.6	97	0.00	6.89
25 P	Isophorone	50.000	46.306	7.4	98	0.00	7.15
26 P	2-Nitrophenol	50.000	52.520	-5.0	105	0.00	7.25
27 P	2,4-Dimethylphenol	50.000	40.779	18.4	86	0.00	7.30
28	0,0,0-Triethylphosphoroth		-----NA-----				
29 P	bis(2-Chloroethoxy)methan	50.000	41.933	16.1	87	0.00	7.41
30	Benzoic Acid	100.000	91.295	8.7	92	0.04	7.47
31 P	2,4-Dichlorophenol	50.000	47.148	5.7	97	0.00	7.51
32	1,2,4-Trichlorobenzene	50.000	46.519	7.0	98	0.00	7.62
33	alpha-Terpineol		-----NA-----				
34 P	Naphthalene	50.000	46.076	7.8	98	0.00	7.68
35 P	4-Chloroaniline		-----NA-----				
36	2,6-Dichlorophenol	50.000	45.466	9.1	95	0.00	7.78
37 P	Hexachlorobutadiene	50.000	41.510	17.0	87	0.00	7.90

Initial Calibration Verification

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
Lab FileID: X056986.D

38 P	Caprolactam	50.000	45.615	8.8	90	0.00	8.15
39 P	4-Chloro-3-methylphenol	50.000	45.046	9.9	93	0.00	8.33
40 P	2-Methylnaphthalene		-----NA-----				
41	1-Methylnaphthalene	50.000	44.800	10.4	95	0.00	8.61
42 P	1,2,4,5-Tetrachlorobenzen	50.000	44.333	11.3	93	0.00	8.73
43 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00	9.72
44 P	Hexachlorocyclopentadiene	50.000	50.747	-1.5	98	0.00	8.75
45 P	2,4,6-Trichlorophenol	50.000	50.410	-0.8	99	0.00	8.84
46 P	2,4,5-Trichlorophenol	50.000	49.824	0.4	96	0.00	8.88
47 S	2-Fluorobiphenyl		-----NA-----				
48 P	1,1'-Biphenyl	50.000	47.958	4.1	95	0.00	9.04
49 P	2-Chloronaphthalene	50.000	47.335	5.3	96	0.00	9.05
50 P	2-Nitroaniline		-----NA-----				
	----- Amount		Calc.	%Drift			
51	p-Dinitrobenzene		-----NA-----				
	----- Amount		Calc.	%Drift			
52 P	Acenaphthylene	50.000	49.987	0.0	100	0.00	9.54
53 P	Dimethylphthalate	50.000	46.562	6.9	93	0.00	9.46
	----- Amount		Calc.	%Drift			
54	m-Dinitrobenzene		-----NA-----				
	----- Amount		Calc.	%Drift			
55 P	2,6-Dinitrotoluene	50.000	45.982	8.0	88	0.00	9.53
56	o-Dinitrobenzene		-----NA-----				
57 P	Acenaphthene	50.000	47.150	5.7	94	0.00	9.76
58 P	3-Nitroaniline		-----NA-----				
	----- Amount		Calc.	%Drift			
59 P	2,4-Dinitrophenol	100.000	87.539	12.5	81	0.00	9.81
	----- Amount		Calc.	%Drift			
60 P	Dibenzofuran		-----NA-----				
61 P	2,4-Dinitrotoluene	50.000	50.979	-2.0	96	0.00	9.99
62 P	4-Nitrophenol	100.000	99.353	0.6	89	0.00	9.89
63	2,3,5,6-Tetrachlorophenol		-----NA-----				
64 P	2,3,4,6-Tetrachlorophenol	50.000	47.009	6.0	89	0.00	10.14
65 P	Fluorene	50.000	46.998	6.0	95	0.00	10.35
66 P	4-Chlorophenyl-phenylethe	50.000	46.988	6.0	94	0.00	10.35
67 P	Diethylphthalate	50.000	45.965	8.1	92	0.00	10.29
68	Thionazin		-----NA-----				
69 P	4-Nitroaniline		-----NA-----				
70 I	Phenanthrene-d10	40.000	40.000	0.0	97	0.00	11.44
	----- Amount		Calc.	%Drift			
71 P	4,6-Dinitro-2-methylpheno	100.000	95.791	4.2	91	0.00	10.46
	----- Amount		Calc.	%Drift			
72 P	n-Nitrosodiphenylamine	50.000	46.054	7.9	75	0.00	10.50
73	Diphenylamine		-----NA-----				
74	1,2-Diphenylhydrazine	50.000	48.173	3.7	94	0.00	10.53
75 S	2,4,6-Tribromophenol		-----NA-----				
76	Sulfotep		-----NA-----				
77	Phorate		-----NA-----				
78 P	4-Bromophenyl-phenylether	50.000	46.832	6.3	91	0.00	10.92
79 P	Hexachlorobenzene	50.000	47.618	4.8	92	0.00	11.09

Initial Calibration Verification

Page 3 of 3

Job Number: FA48965
 Account: TCMAW Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056986.D

80	Dimethoate							-----NA-----
81	Simazine							-----NA-----
82 P	Atrazine	50.000	45.892	8.2	86	-0.01	11.17	
83 P	Pentachlorophenol	100.000	102.884	-2.9	91	0.00	11.30	
84 P	Phenanthrene	50.000	46.222	7.6	91	0.00	11.47	
85 P	Anthracene	50.000	45.022	10.0	89	0.00	11.52	
86	Disulfoton							-----NA-----
87 P	Carbazole							-----NA-----

		Amount	Calc.	%Drift				-----
88	Methyl Parathion							-----NA-----

		Amount	Calc.	%Drift				-----
89 P	Di-n-butylphthalate	50.000	46.864	6.3	91	0.00	12.21	

90	Ethyl Parathion							-----NA-----

		Amount	Calc.	%Drift				-----
91 P	Fluoranthene	50.000	45.986	8.0	90	0.00	12.88	
92 I	Chrysene-d12	40.000	40.000	0.0	93	0.00	14.76	

93	Benzidine							-----NA-----

		Amount	Calc.	%Drift				-----
94 P	Pyrene	50.000	48.152	3.7	89	0.00	13.14	
95 S	Terphenyl-d14							-----NA-----
96	Famphur							-----NA-----
97 P	Butylbenzylphthalate	50.000	47.726	4.5	85	0.00	14.05	

		Amount	Calc.	%Drift				-----
98 P	3,3'-Dichlorobenzidine							-----NA-----

		Amount	Calc.	%Drift				-----
99 P	Benzo[a]anthracene	50.000	46.150	7.7	85	0.00	14.74	
100 P	Chrysene	50.000	46.965	6.1	87	-0.01	14.80	
101 P	bis(2-Ethylhexyl)phthalat	50.000	48.491	3.0	87	0.00	14.93	
102 I	Perylene-d12	40.000	40.000	0.0	91	0.00	17.15	
103 P	Di-n-octylphthalate	50.000	49.172	1.7	84	0.00	15.95	
104 P	Benzo[b]fluoranthene	50.000	49.126	1.7	86	0.00	16.51	
105 P	Benzo[k]fluoranthene	50.000	46.774	6.5	86	0.00	16.56	
106 P	Benzo[a]pyrene	50.000	46.665	6.7	84	0.00	17.05	
107 P	Indeno[1,2,3-cd]pyrene	50.000	46.445	7.1	81	0.00	18.79	
108 P	Dibenz[a,h]anthracene	50.000	47.654	4.7	84	0.00	18.83	
109 P	Benzo[g,h,i]perylene	50.000	48.481	3.0	86	0.00	19.17	

(#) = Out of Range
 x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
 Tue Nov 07 12:30:21 2017

Initial Calibration Verification

Page 1 of 3

Job Number: FA48965

Sample: SX2395-ICV2395

Account: TCMAW Tantara Corporation

Lab FileID: X056987.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2395_1107\X056987.D Vial: 11
Acq On : 7 Nov 2017 12:17 pm Operator: marthav
Sample : icv2395-50 Inst : MSBNA05
Misc : op67449,sx2395,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	99	0.00	6.23
2	1,4-Dioxane		-----NA-----				
3	N-nitrosodimethylamine		-----NA-----				
4	Pyridine	50.000	49.084	1.8	97	0.00	3.49
5 P	Benzaldehyde		-----NA-----				
6	Aniline	50.000	54.885	-9.8	100	0.00	5.91
7 S	2-Fluorophenol		-----NA-----				
8 P	bis(2-Chloroethyl)ether		-----NA-----				
9 S	Phenol-d5		-----NA-----				
10 P	Phenol		-----NA-----				
11 P	2-Chlorophenol		-----NA-----				
12	1,3-Dichlorobenzene		-----NA-----				
13	1,4-Dichlorobenzene		-----NA-----				
14	1,2-Dichlorobenzene		-----NA-----				
15	Benzyl alcohol	50.000	50.550	-1.1	101	0.00	6.40
16 P	bis(2-chloroisopropyl)eth		-----NA-----				
17 P	2-Methylphenol		-----NA-----				
18 P	Acetophenone		-----NA-----				
19 P	Hexachloroethane		-----NA-----				
20 P	N-Nitroso-di-n-propylamin		-----NA-----				
21 P	3&4-Methylphenol		-----NA-----				
22 I	Naphthalene-d8	40.000	40.000	0.0	112	0.00	7.66
23 S	Nitrobenzene-d5		-----NA-----				
24 P	Nitrobenzene		-----NA-----				
25 P	Isophorone		-----NA-----				
26 P	2-Nitrophenol		-----NA-----				
27 P	2,4-Dimethylphenol		-----NA-----				
28	0,0,0-Triethylphosphoroth		-----NA-----				
29 P	bis(2-Chloroethoxy)methan		-----NA-----				
30	Benzoic Acid		-----NA-----				
31 P	2,4-Dichlorophenol		-----NA-----				
32	1,2,4-Trichlorobenzene		-----NA-----				
33	alpha-Terpineol		-----NA-----				
34 P	Naphthalene		-----NA-----				
35 P	4-Chloroaniline	50.000	56.484	-13.0	122	0.00	7.77
36	2,6-Dichlorophenol		-----NA-----				
37 P	Hexachlorobutadiene		-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA48965
 Account: TCMaw Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056987.D

38 P	Caprolactam		-----NA-----					
39 P	4-Chloro-3-methylphenol		-----NA-----					
40 P	2-Methylnaphthalene	50.000	41.960	16.1	97	0.00	8.48	
41	1-Methylnaphthalene		-----NA-----					
42 P	1,2,4,5-Tetrachlorobenzen		-----NA-----					
43 I	Acenaphthene-d10	40.000	40.000	0.0	97	0.00	9.71	
44 P	Hexachlorocyclopentadiene		-----NA-----					
45 P	2,4,6-Trichlorophenol		-----NA-----					
46 P	2,4,5-Trichlorophenol		-----NA-----					
47 S	2-Fluorobiphenyl		-----NA-----					
48 P	1,1'-Biphenyl		-----NA-----					
49 P	2-Chloronaphthalene		-----NA-----					
50 P	2-Nitroaniline	50.000	53.832	-7.7	99	0.00	9.20	
	----- Amount		Calc.	%Drift				
51	p-Dinitrobenzene		-----NA-----					
	----- Amount		Calc.	%Drift				
52 P	Acenaphthylene		-----NA-----					
53 P	Dimethylphthalate		-----NA-----					
	----- Amount		Calc.	%Drift				
54	m-Dinitrobenzene	50.000	48.871	2.3	96	0.00	9.46	
	----- Amount		Calc.	%Drift				
55 P	2,6-Dinitrotoluene		-----NA-----					
56	o-Dinitrobenzene		-----NA-----					
57 P	Acenaphthene		-----NA-----					
58 P	3-Nitroaniline	50.000	59.834	-19.7	110	0.00	9.69	
	----- Amount		Calc.	%Drift				
59 P	2,4-Dinitrophenol		-----NA-----					
	----- Amount		Calc.	%Drift				
60 P	Dibenzofuran	50.000	49.867	0.3	97	0.00	9.94	
61 P	2,4-Dinitrotoluene		-----NA-----					
62 P	4-Nitrophenol		-----NA-----					
63	2,3,5,6-Tetrachlorophenol		-----NA-----					
64 P	2,3,4,6-Tetrachlorophenol		-----NA-----					
65 P	Fluorene		-----NA-----					
66 P	4-Chlorophenyl-phenylethe		-----NA-----					
67 P	Diethylphthalate		-----NA-----					
68	Thionazin		-----NA-----					
69 P	4-Nitroaniline	50.000	51.319	-2.6	96	-0.02	10.40	
70 I	Phenanthrene-d10	40.000	40.000	0.0	96	-0.01	11.44	
	----- Amount		Calc.	%Drift				
71 P	4,6-Dinitro-2-methylpheno		-----NA-----					
	----- Amount		Calc.	%Drift				
72 P	n-Nitrosodiphenylamine	60.000	59.991	0.0	97	-0.01	10.50	
73	Diphenylamine	50.000	49.992	0.0	97	-0.01	10.50	
74	1,2-Diphenylhydrazine		-----NA-----					
75 S	2,4,6-Tribromophenol		-----NA-----					
76	Sulfotep		-----NA-----					
77	Phorate		-----NA-----					
78 P	4-Bromophenyl-phenylether		-----NA-----					
79 P	Hexachlorobenzene		-----NA-----					

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Initial Calibration Verification

Page 3 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
Lab FileID: X056987.D

80	Dimethoate				-----NA-----			
81	Simazine				-----NA-----			
82 P	Atrazine				-----NA-----			
83 P	Pentachlorophenol				-----NA-----			
84 P	Phenanthrene				-----NA-----			
85 P	Anthracene				-----NA-----			
86	Disulfoton				-----NA-----			
87 P	Carbazole	50.000	49.387	1.2	97	0.00	11.72	
		----- Amount	Calc.	%Drift	-----			
88	Methyl Parathion				-----NA-----			
		----- Amount	Calc.	%Drift	-----			
89 P	Di-n-butylphthalate				-----NA-----			
		----- Amount	Calc.	%Drift	-----			
90	Ethyl Parathion				-----NA-----			
		----- Amount	Calc.	%Drift	-----			
91 P	Fluoranthene				-----NA-----			
92 I	Chrysene-d12	40.000	40.000	0.0	99	0.00	14.76	
		----- Amount	Calc.	%Drift	-----			
93	Benzidine	50.000	61.830	-23.7#	123	0.00	13.05	
		----- Amount	Calc.	%Drift	-----			
94 P	Pyrene				-----NA-----			
95 S	Terphenyl-d14				-----NA-----			
96	Famphur				-----NA-----			
97 P	Butylbenzylphthalate				-----NA-----			
		----- Amount	Calc.	%Drift	-----			
98 P	3,3'-Dichlorobenzidine	50.000	62.150	-24.3#	130	0.00	14.74	
		----- Amount	Calc.	%Drift	-----			
99 P	Benzo[a]anthracene				-----NA-----			
100 P	Chrysene				-----NA-----			
101 P	bis(2-Ethylhexyl)phthalat				-----NA-----			
102 I	Perylene-d12	40.000	40.000	0.0	98	-0.01	17.14	
103 P	Di-n-octylphthalate				-----NA-----			
104 P	Benzo[b]fluoranthene				-----NA-----			
105 P	Benzo[k]fluoranthene				-----NA-----			
106 P	Benzo[a]pyrene				-----NA-----			
107 P	Indeno[1,2,3-cd]pyrene				-----NA-----			
108 P	Dibenz[a,h]anthracene				-----NA-----			
109 P	Benzo[g,h,i]perylene				-----NA-----			

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 12:43:56 2017

7.7.8
7

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-CC2395
Lab FileID: X056989.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2395_1107\x056989.D Vial: 2
Acq On : 7 Nov 2017 12:57 pm Operator: marthav
Sample : cc2395-50 Inst : MSBNA05
Misc : op67449,sx2395,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	6.23
2	1,4-Dioxane	0.731	0.715	2.2	101	0.00	3.12
3	N-nitrosodimethylamine	0.755	0.750	0.7	102	0.00	3.49
4	Pyridine	1.960	1.955	0.3	103	0.00	3.49
5 P	Benzaldehyde	1.187	1.246	-5.0	102	0.00	5.76
6	Aniline	2.107	2.306	-9.4	104	0.00	5.91
7 S	2-Fluorophenol	1.514	1.516	-0.1	103	0.00	4.91
8 P	bis(2-Chloroethyl)ether	1.512	1.493	1.3	103	0.00	5.98
9 S	Phenol-d5	1.858	1.847	0.6	103	0.00	5.88
10 P	Phenol	2.063	2.091	-1.4	104	0.00	5.90
11 P	2-Chlorophenol	1.569	1.551	1.1	102	0.00	6.03
12	1,3-Dichlorobenzene	1.655	1.624	1.9	101	0.00	6.19
13	1,4-Dichlorobenzene	1.661	1.643	1.1	103	0.00	6.24
14	1,2-Dichlorobenzene	1.580	1.560	1.3	102	0.00	6.45
15	Benzyl alcohol	1.030	1.021	0.9	103	0.00	6.40
16 P	bis(2-chloroisopropyl)eth	1.981	1.979	0.1	103	0.00	6.57
17 P	2-Methylphenol	1.407	1.415	-0.6	103	0.00	6.54
18 P	Acetophenone	1.953	1.990	-1.9	103	0.00	6.70
19 P	Hexachloroethane	0.624	0.627	-0.5	102	0.00	6.79
20 P	N-Nitroso-di-n-propylamin	1.020	1.009	1.1	102	0.00	6.73
21 P	3&4-Methylphenol	1.452	1.460	-0.6	104	0.00	6.70
22 I	Naphthalene-d8	1.000	1.000	0.0	102	0.00	7.66
23 S	Nitrobenzene-d5	0.392	0.398	-1.5	103	0.00	6.87
24 P	Nitrobenzene	0.393	0.397	-1.0	103	0.00	6.89
25 P	Isophorone	0.726	0.720	0.8	103	0.00	7.15
26 P	2-Nitrophenol	0.185	0.203	-9.7	108	0.00	7.25
27 P	2,4-Dimethylphenol	0.375	0.374	0.3	103	0.00	7.30
28	0,0,0-Triethylphosphoroth	0.179	0.181	-1.1	102	0.00	7.43
29 P	bis(2-Chloroethoxy)methan	0.491	0.464	5.5	96	0.00	7.41
30	Benzoic Acid	50.000	53.889	-7.8	113	0.00	7.42
31 P	2,4-Dichlorophenol	0.322	0.323	-0.3	102	0.00	7.51
32	1,2,4-Trichlorobenzene	0.347	0.342	1.4	102	0.00	7.62
33	alpha-Terpineol			NA			
34 P	Naphthalene	1.082	1.060	2.0	102	0.00	7.68
35 P	4-Chloroaniline	0.378	0.428	-13.2	111	0.00	7.77
36	2,6-Dichlorophenol	0.323	0.324	-0.3	103	0.00	7.78
37 P	Hexachlorobutadiene	0.202	0.199	1.5	102	0.00	7.90

Continuing Calibration Summary

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Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-CC2395
Lab FileID: X056989.D

38	P	Caprolactam	0.123	0.129	-4.9	102	0.00	8.15
39	P	4-Chloro-3-methylphenol	0.317	0.321	-1.3	103	0.00	8.33
40	P	2-Methylnaphthalene	0.626	0.618	1.3	104	0.00	8.48
41		1-Methylnaphthalene	0.699	0.682	2.4	102	0.00	8.61
42	P	1,2,4,5-Tetrachlorobenzen	0.364	0.359	1.4	102	0.00	8.72
43	I	Acenaphthene-d10	1.000	1.000	0.0	103	0.00	9.72
44	P	Hexachlorocyclopentadiene	0.404	0.418	-3.5	103	0.00	8.75
45	P	2,4,6-Trichlorophenol	0.386	0.398	-3.1	104	0.00	8.84
46	P	2,4,5-Trichlorophenol	0.414	0.421	-1.7	101	0.00	8.89
47	S	2-Fluorobiphenyl	1.379	1.352	2.0	102	0.00	8.93
48	P	1,1'-Biphenyl	1.440	1.437	0.2	102	0.00	9.04
49	P	2-Chloronaphthalene	1.160	1.141	1.6	103	0.00	9.05
50	P	2-Nitroaniline	0.317	0.344	-8.5	106	0.00	9.20
----- Amount Calc. %Drift -----								
51		p-Dinitrobenzene	50.000	52.071	-4.1	108	0.00	9.33
----- AvgRF CCRF %Dev -----								
52	P	Acenaphthylene	1.772	1.749	1.3	102	0.00	9.54
53	P	Dimethylphthalate	1.341	1.325	1.2	101	0.00	9.46
----- Amount Calc. %Drift -----								
54		m-Dinitrobenzene	50.000	50.439	-0.9	105	0.00	9.47
----- AvgRF CCRF %Dev -----								
55	P	2,6-Dinitrotoluene	0.305	0.320	-4.9	104	0.00	9.53
56		o-Dinitrobenzene	0.147	0.158	-7.5	103	0.00	9.61
57	P	Acenaphthene	1.174	1.148	2.2	101	0.00	9.76
58	P	3-Nitroaniline	0.314	0.350	-11.5	109	0.00	9.69
----- Amount Calc. %Drift -----								
59	P	2,4-Dinitrophenol	50.000	53.541	-7.1	116	0.00	9.81
----- AvgRF CCRF %Dev -----								
60	P	Dibenzofuran	1.668	1.651	1.0	102	0.00	9.94
61	P	2,4-Dinitrotoluene	0.405	0.438	-8.1	105	0.00	9.99
62	P	4-Nitrophenol	0.152	0.160	-5.3	104	0.00	9.89
63		2,3,5,6-Tetrachlorophenol	0.344	0.372	-8.1	107	0.00	10.08
64	P	2,3,4,6-Tetrachlorophenol	0.363	0.378	-4.1	102	0.00	10.14
65	P	Fluorene	1.312	1.308	0.3	103	0.00	10.35
66	P	4-Chlorophenyl-phenylethe	0.677	0.672	0.7	103	0.00	10.35
67	P	Diethylphthalate	1.329	1.321	0.6	103	0.00	10.30
68		Thionazin	0.282	0.290	-2.8	102	0.00	10.39
69	P	4-Nitroaniline	0.365	0.386	-5.8	104	0.00	10.42
70	I	Phenanthrene-d10	1.000	1.000	0.0	102	0.00	11.44
----- Amount Calc. %Drift -----								
71	P	4,6-Dinitro-2-methylpheno	50.000	52.322	-4.6	111	0.00	10.46
----- AvgRF CCRF %Dev -----								
72	P	n-Nitrosodiphenylamine	0.578	0.572	1.0	102	0.00	10.50
73		Diphenylamine	0.694	0.686	1.2	102	0.00	10.50
74		1,2-Diphenylhydrazine	0.760	0.758	0.3	102	0.00	10.54
75	S	2,4,6-Tribromophenol	0.182	0.190	-4.4	104	0.00	10.66
76		Sulfotep	0.123	0.126	-2.4	102	0.00	10.81
77		Phorate	0.471	0.490	-4.0	104	0.00	10.90
78	P	4-Bromophenyl-phenylether	0.270	0.271	-0.4	103	0.00	10.92
79	P	Hexachlorobenzene	0.325	0.327	-0.6	103	0.00	11.09

Continuing Calibration Summary

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Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-CC2395
Lab FileID: X056989.D

80	Dimethoate	0.311	0.330	-6.1	104	0.00	11.11
81	Simazine	0.155	0.155	0.0	104	0.00	11.13
82 P	Atrazine	0.237	0.242	-2.1	101	0.00	11.17
83 P	Pentachlorophenol	0.181	0.185	-2.2	108	0.00	11.30
84 P	Phenanthrene	1.146	1.142	0.3	103	0.00	11.47
85 P	Anthracene	1.173	1.161	1.0	102	0.00	11.52
86	Disulfoton	0.438	0.448	-2.3	103	0.00	11.51
87 P	Carbazole	1.098	1.080	1.6	102	0.00	11.72

88	Methyl Parathion	Amount 50.000	Calc. 50.970	%Drift -1.9	104	0.00	11.96

89 P	Di-n-butylphthalate	AvgRF 1.261	CCRF 1.260	%Dev 0.1	102	0.00	12.22

90	Ethyl Parathion	Amount 50.000	Calc. 50.933	%Drift -1.9	103	0.00	12.43

91 P	Fluoranthene	AvgRF 1.250	CCRF 1.236	%Dev 1.1	102	0.00	12.88
92 I	Chrysene-d12	1.000	1.000	0.0	102	0.00	14.77

93	Benzidine	Amount 50.000	Calc. 53.146	%Drift -6.3	105	0.00	13.05

94 P	Pyrene	AvgRF 1.251	CCRF 1.265	%Dev -1.1	102	0.00	13.15
95 S	Terphenyl-d14	0.948	0.959	-1.2	102	0.00	13.37
96	Famphur	0.355	0.365	-2.8	105	0.00	13.99
97 P	Butylbenzylphthalate	0.527	0.541	-2.7	101	0.00	14.05

98 P	3,3'-Dichlorobenzidine	Amount 50.000	Calc. 53.411	%Drift -6.8	114	0.00	14.74

99 P	Benzo[a]anthracene	AvgRF 1.172	CCRF 1.180	%Dev -0.7	102	0.00	14.74
100 P	Chrysene	1.119	1.122	-0.3	101	0.00	14.81
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.715	-3.0	102	0.00	14.93
102 I	Perylene-d12	1.000	1.000	0.0	102	0.00	17.15
103 P	Di-n-octylphthalate	0.998	1.038	-4.0	100	0.00	15.95
104 P	Benzo[b]fluoranthene	1.096	1.090	0.5	98	0.00	16.51
105 P	Benzo[k]fluoranthene	1.127	1.153	-2.3	105	0.00	16.56
106 P	Benzo[a]pyrene	1.103	1.105	-0.2	101	0.00	17.05
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.069	-0.3	98	0.00	18.79
108 P	Dibenz[a,h]anthracene	1.175	1.185	-0.9	100	0.00	18.83
109 P	Benzo[g,h,i]perylene	1.206	1.217	-0.9	100	0.00	19.18

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Wed Nov 08 10:17:25 2017

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Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ECC2395
Lab FileID: X057015.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2395_1107\x057015.D Vial: 28
Acq On : 7 Nov 2017 11:56 pm Operator: marthav
Sample : ecc2395-50 Inst : MSBNA05
Misc : op67449,sx2395,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	128	0.00	6.23
2	1,4-Dioxane	0.731	0.731	0.0	129	0.00	3.12
3	N-nitrosodimethylamine	0.755	0.744	1.5	126	0.00	3.49
4	Pyridine	1.960	1.949	0.6	128	0.00	3.49
5 P	Benzaldehyde	1.187	1.059	10.8	108	0.00	5.76
6	Aniline	2.107	2.333	-10.7	131	0.00	5.91
7 S	2-Fluorophenol	1.514	1.535	-1.4	130	0.00	4.91
8 P	bis(2-Chloroethyl)ether	1.512	1.528	-1.1	131	0.00	5.98
9 S	Phenol-d5	1.858	1.861	-0.2	129	0.00	5.88
10 P	Phenol	2.063	2.078	-0.7	128	0.00	5.90
11 P	2-Chlorophenol	1.569	1.611	-2.7	131	0.00	6.03
12	1,3-Dichlorobenzene	1.655	1.694	-2.4	131	0.00	6.19
13	1,4-Dichlorobenzene	1.661	1.694	-2.0	132	0.00	6.24
14	1,2-Dichlorobenzene	1.580	1.614	-2.2	132	0.00	6.45
15	Benzyl alcohol	1.030	1.034	-0.4	130	0.00	6.40
16 P	bis(2-chloroisopropyl)eth	1.981	1.942	2.0	126	0.00	6.57
17 P	2-Methylphenol	1.407	1.444	-2.6	131	0.00	6.55
18 P	Acetophenone	1.953	1.993	-2.0	128	0.00	6.70
19 P	Hexachloroethane	0.624	0.642	-2.9	131	0.00	6.79
20 P	N-Nitroso-di-n-propylamin	1.020	1.014	0.6	128	0.00	6.73
21 P	3&4-Methylphenol	1.452	1.477	-1.7	131	0.00	6.71
22 I	Naphthalene-d8	1.000	1.000	0.0	125	0.00	7.66
23 S	Nitrobenzene-d5	0.392	0.415	-5.9	131	0.00	6.87
24 P	Nitrobenzene	0.393	0.407	-3.6	129	0.00	6.89
25 P	Isophorone	0.726	0.732	-0.8	128	0.00	7.15
26 P	2-Nitrophenol	0.185	0.225	-21.6	147	0.00	7.25
27 P	2,4-Dimethylphenol	0.375	0.380	-1.3	128	0.00	7.30
28	0,0,0-Triethylphosphoroth	0.179	0.188	-5.0	129	0.00	7.43
29 P	bis(2-Chloroethoxy)methan	0.491	0.469	4.5	119	0.00	7.41
30	Benzoic Acid	50.000	61.946	-23.9	164	0.00	7.43
31 P	2,4-Dichlorophenol	0.322	0.343	-6.5	132	0.00	7.52
32	1,2,4-Trichlorobenzene	0.347	0.361	-4.0	132	0.00	7.62
33	alpha-Terpineol			-NA			
34 P	Naphthalene	1.082	1.094	-1.1	129	0.00	7.68
35 P	4-Chloroaniline	0.378	0.449	-18.8	143	0.00	7.77
36	2,6-Dichlorophenol	0.323	0.341	-5.6	132	0.00	7.78
37 P	Hexachlorobutadiene	0.202	0.210	-4.0	131	0.00	7.90

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ECC2395
Lab FileID: X057015.D

38 P	Caprolactam	0.123	0.133	-8.1	129	0.00	8.16
39 P	4-Chloro-3-methylphenol	0.317	0.331	-4.4	130	0.00	8.33
40 P	2-Methylnaphthalene	0.626	0.634	-1.3	130	0.00	8.48
41	1-Methylnaphthalene	0.699	0.705	-0.9	129	0.00	8.61
42 P	1,2,4,5-Tetrachlorobenzen	0.364	0.376	-3.3	131	0.00	8.72
43 I	Acenaphthene-d10	1.000	1.000	0.0	126	0.00	9.72
44 P	Hexachlorocyclopentadiene	0.404	0.326	19.3	98	0.00	8.75
45 P	2,4,6-Trichlorophenol	0.386	0.421	-9.1	135	0.00	8.84
46 P	2,4,5-Trichlorophenol	0.414	0.453	-9.4	133	0.00	8.89
47 S	2-Fluorobiphenyl	1.379	1.392	-0.9	129	0.00	8.93
48 P	1,1'-Biphenyl	1.440	1.463	-1.6	127	0.00	9.04
49 P	2-Chloronaphthalene	1.160	1.172	-1.0	130	0.00	9.05
50 P	2-Nitroaniline	0.317	0.354	-11.7	134	0.00	9.20
----- Amount Calc. %Drift -----							
51	p-Dinitrobenzene	50.000	54.245	-8.5	139	0.00	9.33
----- AvgRF CCRF %Dev -----							
52 P	Acenaphthylene	1.772	1.761	0.6	126	0.00	9.54
53 P	Dimethylphthalate	1.341	1.348	-0.5	127	0.00	9.46
----- Amount Calc. %Drift -----							
54	m-Dinitrobenzene	50.000	53.635	-7.3	137	0.00	9.47
----- AvgRF CCRF %Dev -----							
55 P	2,6-Dinitrotoluene	0.305	0.326	-6.9	130	0.00	9.53
56	o-Dinitrobenzene	0.147	0.157	-6.8	125	0.00	9.61
57 P	Acenaphthene	1.174	1.175	-0.1	127	0.00	9.76
58 P	3-Nitroaniline	0.314	0.370	-17.8	141	0.00	9.69
----- Amount Calc. %Drift -----							
59 P	2,4-Dinitrophenol	50.000	44.386	11.2	111	0.00	9.81
----- AvgRF CCRF %Dev -----							
60 P	Dibenzofuran	1.668	1.674	-0.4	127	0.00	9.94
61 P	2,4-Dinitrotoluene	0.405	0.446	-10.1	132	0.00	9.99
62 P	4-Nitrophenol	0.152	0.165	-8.6	131	0.00	9.89
63	2,3,5,6-Tetrachlorophenol	0.344	0.391	-13.7	138	0.00	10.08
64 P	2,3,4,6-Tetrachlorophenol	0.363	0.399	-9.9	133	0.00	10.14
65 P	Fluorene	1.312	1.303	0.7	126	0.00	10.35
66 P	4-Chlorophenyl-phenylethe	0.677	0.686	-1.3	129	0.00	10.35
67 P	Diethylphthalate	1.329	1.324	0.4	126	0.00	10.29
68	Thionazin	0.282	0.284	-0.7	123	0.00	10.39
69 P	4-Nitroaniline	0.365	0.394	-7.9	131	0.00	10.42
70 I	Phenanthrene-d10	1.000	1.000	0.0	122	0.00	11.44
----- Amount Calc. %Drift -----							
71 P	4,6-Dinitro-2-methylpheno	50.000	47.390	5.2	117	0.00	10.47
----- AvgRF CCRF %Dev -----							
72 P	n-Nitrosodiphenylamine	0.578	0.598	-3.5	127	0.00	10.50
73	Diphenylamine	0.694	0.717	-3.3	127	0.00	10.50
74	1,2-Diphenylhydrazine	0.760	0.768	-1.1	124	0.00	10.53
75 S	2,4,6-Tribromophenol	0.182	0.209	-14.8	136	0.00	10.66
76	Sulfotep	0.123	0.128	-4.1	124	0.00	10.81
77	Phorate	0.471	0.489	-3.8	123	0.00	10.90
78 P	4-Bromophenyl-phenylether	0.270	0.282	-4.4	128	0.00	10.92
79 P	Hexachlorobenzene	0.325	0.345	-6.2	129	0.00	11.09

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ECC2395
Lab FileID: X057015.D

80	Dimethoate	0.311	0.327	-5.1	123	0.00	11.11
81	Simazine	0.155	0.156	-0.6	124	0.00	11.13
82 P	Atrazine	0.237	0.244	-3.0	121	0.00	11.17
83 P	Pentachlorophenol	0.181	0.193	-6.6	134	0.00	11.30
84 P	Phenanthrene	1.146	1.157	-1.0	124	0.00	11.47
85 P	Anthracene	1.173	1.181	-0.7	124	0.00	11.52
86	Disulfoton	0.438	0.433	1.1	119	0.00	11.51
87 P	Carbazole	1.098	1.106	-0.7	124	0.00	11.72

88	Methyl Parathion	50.000	53.055	-6.1	130	0.00	11.95

89 P	Di-n-butylphthalate	1.261	1.279	-1.4	123	0.00	12.21

90	Ethyl Parathion	50.000	53.368	-6.7	129	0.00	12.43

91 P	Fluoranthene	1.250	1.252	-0.2	123	0.00	12.88
92 I	Chrysene-d12	1.000	1.000	0.0	116	0.00	14.77

93	Benzidine	50.000	43.228	13.5	95	0.00	13.05

94 P	Pyrene	1.251	1.318	-5.4	122	0.00	13.14
95 S	Terphenyl-d14	0.948	1.014	-7.0	123	0.00	13.36
96	Famphur	0.355	0.386	-8.7	126	0.00	13.99
97 P	Butylbenzylphthalate	0.527	0.581	-10.2	124	0.00	14.05

98 P	3,3'-Dichlorobenzidine	50.000	60.780	-21.6	148	0.00	14.74

99 P	Benzo[a]anthracene	1.172	1.215	-3.7	120	0.00	14.74
100 P	Chrysene	1.119	1.161	-3.8	120	0.00	14.81
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.760	-9.5	123	-0.01	14.92
102 I	Perylene-d12	1.000	1.000	0.0	109	-0.01	17.14
103 P	Di-n-octylphthalate	0.998	1.214	-21.6	125	-0.01	15.95
104 P	Benzo[b]fluoranthene	1.096	1.191	-8.7	114	0.00	16.51
105 P	Benzo[k]fluoranthene	1.127	1.186	-5.2	116	0.00	16.56
106 P	Benzo[a]pyrene	1.103	1.185	-7.4	116	0.00	17.05
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.165	-9.3	115	-0.01	18.79
108 P	Dibenz[a,h]anthracene	1.175	1.236	-5.2	112	-0.01	18.82
109 P	Benzo[g,h,i]perylene	1.206	1.261	-4.6	111	-0.01	19.17

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Wed Nov 08 10:16:56 2017

7.7.10
7

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2400-CC2395
Lab FileID: X057135.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2400_1113\x057135.D Vial: 2
Acq On : 13 Nov 2017 3:45 pm Operator: marthav
Sample : cc2395-50 Inst : MSBNA05
Misc : op67546,sx2400,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	6.17
2	1,4-Dioxane	0.731	0.679	7.1	100	-0.02	3.06
3	N-nitrosodimethylamine	0.755	0.630	16.6	89	-0.01	3.44
4	Pyridine	1.960	1.772	9.6	97	-0.01	3.44
5 P	Benzaldehyde	1.187	1.133	4.5	96	0.00	5.71
6	Aniline	2.107	2.034	3.5	95	0.00	5.86
7 S	2-Fluorophenol	1.514	1.413	6.7	99	0.00	4.85
8 P	bis(2-Chloroethyl)ether	1.512	1.345	11.0	96	0.00	5.93
9 S	Phenol-d5	1.858	1.673	10.0	96	0.00	5.84
10 P	Phenol	2.063	1.814	12.1	93	0.00	5.85
11 P	2-Chlorophenol	1.569	1.494	4.8	101	0.00	5.98
12	1,3-Dichlorobenzene	1.655	1.558	5.9	100	0.00	6.14
13	1,4-Dichlorobenzene	1.661	1.563	5.9	102	0.00	6.19
14	1,2-Dichlorobenzene	1.580	1.505	4.7	102	0.00	6.40
15	Benzyl alcohol	1.030	0.944	8.3	99	0.00	6.35
16 P	bis(2-chloroisopropyl)eth	1.981	1.615	18.5	87	0.00	6.52
17 P	2-Methylphenol	1.407	1.288	8.5	98	0.00	6.49
18 P	Acetophenone	1.953	1.758	10.0	94	0.00	6.64
19 P	Hexachloroethane	0.624	0.586	6.1	99	0.00	6.74
20 P	N-Nitroso-di-n-propylamin	1.020	0.893	12.5	94	0.00	6.68
21 P	3&4-Methylphenol	1.452	1.348	7.2	100	0.00	6.66
22 I	Naphthalene-d8	1.000	1.000	0.0	105	0.00	7.61
23 S	Nitrobenzene-d5	0.392	0.361	7.9	96	0.00	6.82
24 P	Nitrobenzene	0.393	0.351	10.7	94	0.00	6.84
25 P	Isophorone	0.726	0.636	12.4	94	0.00	7.10
26 P	2-Nitrophenol	0.185	0.212	-14.6	117	0.00	7.20
27 P	2,4-Dimethylphenol	0.375	0.338	9.9	96	0.00	7.25
28	0,0,0-Triethylphosphoroth	0.179	0.167	6.7	96	0.00	7.38
29 P	bis(2-Chloroethoxy)methan	0.491	0.445	9.4	95	0.00	7.36
30	Benzoic Acid	50.000	49.148	1.7	104	0.00	7.38
31 P	2,4-Dichlorophenol	0.322	0.314	2.5	102	0.00	7.46
32	1,2,4-Trichlorobenzene	0.347	0.333	4.0	102	0.00	7.56
33	alpha-Terpineol	-----NA-----					
34 P	Naphthalene	1.082	0.980	9.4	97	0.00	7.63
35 P	4-Chloroaniline	0.378	0.410	-8.5	109	0.00	7.72
36	2,6-Dichlorophenol	0.323	0.308	4.6	101	0.00	7.73
37 P	Hexachlorobutadiene	0.202	0.195	3.5	103	0.00	7.84

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2400-CC2395
Lab FileID: X057135.D

38 P	Caprolactam	0.123	0.116	5.7	95	0.00	8.10
39 P	4-Chloro-3-methylphenol	0.317	0.295	6.9	97	0.00	8.29
40 P	2-Methylnaphthalene	0.626	0.574	8.3	99	0.00	8.43
41	1-Methylnaphthalene	0.699	0.639	8.6	98	0.00	8.55
42 P	1,2,4,5-Tetrachlorobenzen	0.364	0.353	3.0	103	0.00	8.67
43 I	Acenaphthene-d10	1.000	1.000	0.0	106	0.00	9.67
44 P	Hexachlorocyclopentadiene	0.404	0.432	-6.9	110	0.00	8.70
45 P	2,4,6-Trichlorophenol	0.386	0.403	-4.4	109	0.00	8.79
46 P	2,4,5-Trichlorophenol	0.414	0.424	-2.4	105	0.00	8.84
47 S	2-Fluorobiphenyl	1.379	1.291	6.4	100	0.00	8.89
48 P	1,1'-Biphenyl	1.440	1.300	9.7	95	0.00	8.98
49 P	2-Chloronaphthalene	1.160	1.068	7.9	99	0.00	8.99
50 P	2-Nitroaniline	0.317	0.307	3.2	98	0.00	9.15
----- Amount Calc. %Drift -----							
51	p-Dinitrobenzene	50.000	49.274	1.5	105	0.00	9.28
----- AvgRF CCRF %Dev -----							
52 P	Acenaphthylene	1.772	1.598	9.8	96	0.00	9.48
53 P	Dimethylphthalate	1.341	1.234	8.0	97	0.00	9.41
----- Amount Calc. %Drift -----							
54	m-Dinitrobenzene	50.000	51.716	-3.4	111	0.00	9.42
----- AvgRF CCRF %Dev -----							
55 P	2,6-Dinitrotoluene	0.305	0.304	0.3	102	0.00	9.48
56	o-Dinitrobenzene	0.147	0.135	8.2	91	0.00	9.56
57 P	Acenaphthene	1.174	1.075	8.4	98	0.00	9.70
58 P	3-Nitroaniline	0.314	0.338	-7.6	108	0.00	9.64
----- Amount Calc. %Drift -----							
59 P	2,4-Dinitrophenol	50.000	62.639	-25.3#	149	0.00	9.76
----- AvgRF CCRF %Dev -----							
60 P	Dibenzofuran	1.668	1.550	7.1	99	0.00	9.89
61 P	2,4-Dinitrotoluene	0.405	0.422	-4.2	105	0.00	9.94
62 P	4-Nitrophenol	0.152	0.148	2.6	99	0.00	9.85
63	2,3,5,6-Tetrachlorophenol	0.344	0.375	-9.0	112	0.00	10.04
64 P	2,3,4,6-Tetrachlorophenol	0.363	0.369	-1.7	103	0.00	10.09
65 P	Fluorene	1.312	1.209	7.9	99	0.00	10.30
66 P	4-Chlorophenyl-phenylethe	0.677	0.629	7.1	99	0.00	10.30
67 P	Diethylphthalate	1.329	1.220	8.2	98	0.00	10.24
68	Thionazin	0.282	0.249	11.7	90	0.00	10.35
69 P	4-Nitroaniline	0.365	0.367	-0.5	102	0.00	10.37
70 I	Phenanthrene-d10	1.000	1.000	0.0	106	0.00	11.39
----- Amount Calc. %Drift -----							
71 P	4,6-Dinitro-2-methylpheno	50.000	58.385	-16.8	132	0.00	10.42
----- AvgRF CCRF %Dev -----							
72 P	n-Nitrosodiphenylamine	0.578	0.535	7.4	99	0.00	10.45
73	Diphenylamine	0.694	0.642	7.5	99	0.00	10.45
74	1,2-Diphenylhydrazine	0.760	0.636	16.3	89	0.00	10.48
75 S	2,4,6-Tribromophenol	0.182	0.192	-5.5	109	0.00	10.61
76	Sulfotep	0.123	0.105	14.6	89	0.00	10.76
77	Phorate	0.471	0.401	14.9	88	0.00	10.85
78 P	4-Bromophenyl-phenylether	0.270	0.258	4.4	102	0.00	10.88
79 P	Hexachlorobenzene	0.325	0.312	4.0	102	0.00	11.04

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2400-CC2395
Lab FileID: X057135.D

80	Dimethoate	0.311	0.274	11.9	90	0.00	11.06
81	Simazine	0.155	0.142	8.4	99	0.00	11.08
82 P	Atrazine	0.237	0.219	7.6	95	0.00	11.13
83 P	Pentachlorophenol	0.181	0.175	3.3	106	0.00	11.25
84 P	Phenanthrene	1.146	1.046	8.7	98	0.00	11.42
85 P	Anthracene	1.173	1.065	9.2	98	0.00	11.47
86	Disulfoton	0.438	0.378	13.7	91	0.00	11.46
87 P	Carbazole	1.098	0.992	9.7	98	0.00	11.67

88	Methyl Parathion	50.000	47.037	5.9	101	0.00	11.91

89 P	Di-n-butylphthalate	1.261	1.144	9.3	96	0.00	12.17

90	Ethyl Parathion	50.000	45.377	9.2	96	0.00	12.38

91 P	Fluoranthene	1.250	1.154	7.7	99	0.00	12.83
92 I	Chrysene-d12	1.000	1.000	0.0	106	0.00	14.71

93	Benzidine	50.000	46.837	6.3	95	0.00	13.00

94 P	Pyrene	1.251	1.166	6.8	98	0.00	13.10
95 S	Terphenyl-d14	0.948	0.920	3.0	102	0.00	13.31
96	Famphur	0.355	0.341	3.9	102	0.00	13.94
97 P	Butylbenzylphthalate	0.527	0.501	4.9	97	0.00	14.00

98 P	3,3'-Dichlorobenzidine	50.000	53.765	-7.5	119	0.00	14.69

99 P	Benzo[a]anthracene	1.172	1.109	5.4	100	0.00	14.68
100 P	Chrysene	1.119	1.058	5.5	100	0.00	14.75
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.664	4.3	98	0.00	14.87
102 I	Perylene-d12	1.000	1.000	0.0	108	0.00	17.08
103 P	Di-n-octylphthalate	0.998	1.008	-1.0	103	0.00	15.88
104 P	Benzo[b]fluoranthene	1.096	1.043	4.8	100	0.00	16.44
105 P	Benzo[k]fluoranthene	1.127	1.033	8.3	100	0.00	16.49
106 P	Benzo[a]pyrene	1.103	1.045	5.3	102	0.00	16.99
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.143	-7.2	112	0.00	18.73
108 P	Dibenz[a,h]anthracene	1.175	1.168	0.6	105	0.00	18.77
109 P	Benzo[g,h,i]perylene	1.206	1.208	-0.2	106	0.00	19.11

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 08:55:58 2017

7.7.11
7

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2400-ECC2395
Lab FileID: X057161.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2400_1113\x057161.D Vial: 2
Acq On : 14 Nov 2017 2:44 am Operator: marthav
Sample : ecc2395-50 Inst : MSBNA05
Misc : op67546,sx2400,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	6.17
2	1,4-Dioxane	0.731	0.641	12.3	85	-0.02	3.06
3	N-nitrosodimethylamine	0.755	0.618	18.1	79	-0.01	3.44
4	Pyridine	1.960	1.717	12.4	85	-0.01	3.44
5 P	Benzaldehyde	1.187	0.958	19.3	74	0.00	5.71
6	Aniline	2.107	1.986	5.7	84	0.00	5.86
7 S	2-Fluorophenol	1.514	1.397	7.7	89	0.00	4.86
8 P	bis(2-Chloroethyl)ether	1.512	1.327	12.2	86	0.00	5.93
9 S	Phenol-d5	1.858	1.630	12.3	85	0.00	5.84
10 P	Phenol	2.063	1.788	13.3	83	0.00	5.85
11 P	2-Chlorophenol	1.569	1.457	7.1	90	0.00	5.98
12	1,3-Dichlorobenzene	1.655	1.560	5.7	91	0.00	6.14
13	1,4-Dichlorobenzene	1.661	1.566	5.7	92	0.00	6.19
14	1,2-Dichlorobenzene	1.580	1.488	5.8	92	0.00	6.40
15	Benzyl alcohol	1.030	0.891	13.5	84	0.00	6.35
16 P	bis(2-chloroisopropyl)eth	1.981	1.593	19.6	78	0.00	6.52
17 P	2-Methylphenol	1.407	1.259	10.5	86	0.00	6.49
18 P	Acetophenone	1.953	1.711	12.4	83	0.00	6.64
19 P	Hexachloroethane	0.624	0.518	17.0	80	0.00	6.74
20 P	N-Nitroso-di-n-propylamin	1.020	0.867	15.0	82	0.00	6.68
21 P	3&4-Methylphenol	1.452	1.334	8.1	89	0.00	6.66
22 I	Naphthalene-d8	1.000	1.000	0.0	94	0.00	7.61
23 S	Nitrobenzene-d5	0.392	0.361	7.9	85	0.00	6.82
24 P	Nitrobenzene	0.393	0.352	10.4	84	0.00	6.84
25 P	Isophorone	0.726	0.629	13.4	82	0.00	7.10
26 P	2-Nitrophenol	0.185	0.196	-5.9	96	0.00	7.20
27 P	2,4-Dimethylphenol	0.375	0.337	10.1	85	0.00	7.25
28	0,0,0-Triethylphosphoroth	0.179	0.169	5.6	87	0.00	7.38
29 P	bis(2-Chloroethoxy)methan	0.491	0.438	10.8	83	0.00	7.36
30	Benzoic Acid	50.000	48.895	2.2	92	0.00	7.38
31 P	2,4-Dichlorophenol	0.322	0.309	4.0	89	0.00	7.47
32	1,2,4-Trichlorobenzene	0.347	0.333	4.0	91	0.00	7.56
33	alpha-Terpineol	-----NA-----					
34 P	Naphthalene	1.082	0.994	8.1	88	0.00	7.63
35 P	4-Chloroaniline	0.378	0.425	-12.4	101	0.00	7.72
36	2,6-Dichlorophenol	0.323	0.307	5.0	89	0.00	7.73
37 P	Hexachlorobutadiene	0.202	0.193	4.5	91	0.00	7.85

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2400-ECC2395
Lab FileID: X057161.D

38 P	Caprolactam	0.123	0.112	8.9	81	0.00	8.10
39 P	4-Chloro-3-methylphenol	0.317	0.287	9.5	84	0.00	8.29
40 P	2-Methylnaphthalene	0.626	0.579	7.5	89	0.00	8.43
41	1-Methylnaphthalene	0.699	0.639	8.6	88	0.00	8.55
42 P	1,2,4,5-Tetrachlorobenzen	0.364	0.348	4.4	91	0.00	8.68
43 I	Acenaphthene-d10	1.000	1.000	0.0	93	0.00	9.67
44 P	Hexachlorocyclopentadiene	0.404	0.198	51.0#	44#	0.00	8.70
45 P	2,4,6-Trichlorophenol	0.386	0.394	-2.1	93	0.00	8.79
46 P	2,4,5-Trichlorophenol	0.414	0.413	0.2	89	0.00	8.84
47 S	2-Fluorobiphenyl	1.379	1.291	6.4	88	0.00	8.89
48 P	1,1'-Biphenyl	1.440	1.330	7.6	85	0.00	8.99
49 P	2-Chloronaphthalene	1.160	1.094	5.7	89	0.00	9.00
50 P	2-Nitroaniline	0.317	0.307	3.2	85	0.00	9.16
----- Amount Calc. %Drift -----							
51	p-Dinitrobenzene	50.000	45.419	9.2	84	0.00	9.29
----- AvgRF CCRF %Dev -----							
52 P	Acenaphthylene	1.772	1.626	8.2	86	0.00	9.49
53 P	Dimethylphthalate	1.341	1.239	7.6	86	0.00	9.41
----- Amount Calc. %Drift -----							
54	m-Dinitrobenzene	50.000	48.223	3.6	90	0.00	9.43
----- AvgRF CCRF %Dev -----							
55 P	2,6-Dinitrotoluene	0.305	0.293	3.9	86	0.00	9.49
56	o-Dinitrobenzene	0.147	0.127	13.6	75	0.00	9.56
57 P	Acenaphthene	1.174	1.076	8.3	86	0.00	9.71
58 P	3-Nitroaniline	0.314	0.356	-13.4	100	0.00	9.64
----- Amount Calc. %Drift -----							
59 P	2,4-Dinitrophenol	50.000	27.725	44.5	45	0.00	9.76
----- AvgRF CCRF %Dev -----							
60 P	Dibenzofuran	1.668	1.546	7.3	86	0.01	9.90
61 P	2,4-Dinitrotoluene	0.405	0.394	2.7	86	0.01	9.95
62 P	4-Nitrophenol	0.152	0.139	8.6	81	0.01	9.85
63	2,3,5,6-Tetrachlorophenol	0.344	0.370	-7.6	96	0.00	10.04
64 P	2,3,4,6-Tetrachlorophenol	0.363	0.367	-1.1	90	0.00	10.09
65 P	Fluorene	1.312	1.208	7.9	86	0.01	10.30
66 P	4-Chlorophenyl-phenylethe	0.677	0.634	6.4	88	0.01	10.31
67 P	Diethylphthalate	1.329	1.191	10.4	84	0.00	10.25
68	Thionazin	0.282	0.243	13.8	77	0.00	10.35
69 P	4-Nitroaniline	0.365	0.369	-1.1	90	0.01	10.38
70 I	Phenanthrene-d10	1.000	1.000	0.0	90	0.00	11.40
----- Amount Calc. %Drift -----							
71 P	4,6-Dinitro-2-methylpheno	50.000	27.632	44.7	46	0.00	10.43
----- AvgRF CCRF %Dev -----							
72 P	n-Nitrosodiphenylamine	0.578	0.547	5.4	86	0.00	10.46
73	Diphenylamine	0.694	0.657	5.3	86	0.00	10.46
74	1,2-Diphenylhydrazine	0.760	0.655	13.8	78	0.00	10.49
75 S	2,4,6-Tribromophenol	0.182	0.196	-7.7	95	0.00	10.61
76	Sulfotep	0.123	0.105	14.6	76	0.00	10.77
77	Phorate	0.471	0.406	13.8	76	0.00	10.85
78 P	4-Bromophenyl-phenylether	0.270	0.262	3.0	88	0.00	10.88
79 P	Hexachlorobenzene	0.325	0.318	2.2	88	0.00	11.05

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2400-ECC2395
Lab FileID: X057161.D

80	Dimethoate	0.311	0.260	16.4	73	0.00	11.06
81	Simazine	0.155	0.134	13.5	79	0.00	11.09
82 P	Atrazine	0.237	0.214	9.7	79	0.00	11.14
83 P	Pentachlorophenol	0.181	0.173	4.4	89	0.00	11.26
84 P	Phenanthrene	1.146	1.062	7.3	85	0.00	11.43
85 P	Anthracene	1.173	1.085	7.5	85	0.00	11.48
86	Disulfoton	0.438	0.387	11.6	79	0.00	11.47
87 P	Carbazole	1.098	1.006	8.4	84	0.00	11.68

88	Methyl Parathion	50.000	44.420	11.2	81	0.00	11.91

89 P	Di-n-butylphthalate	1.261	1.157	8.2	83	0.00	12.17

90	Ethyl Parathion	50.000	44.254	11.5	80	0.00	12.39

91 P	Fluoranthene	1.250	1.146	8.3	84	0.00	12.84
92 I	Chrysene-d12	1.000	1.000	0.0	88	0.01	14.72

93	Benzidine	50.000	49.207	1.6	83	0.00	13.01

94 P	Pyrene	1.251	1.184	5.4	83	0.00	13.11
95 S	Terphenyl-d14	0.948	0.922	2.7	85	0.00	13.32
96	Famphur	0.355	0.320	9.9	79	0.00	13.95
97 P	Butylbenzylphthalate	0.527	0.504	4.4	81	0.02	14.01

98 P	3,3'-Dichlorobenzidine	50.000	60.467	-20.9	112	0.02	14.70

99 P	Benzo[a]anthracene	1.172	1.096	6.5	82	0.01	14.69
100 P	Chrysene	1.119	1.037	7.3	81	0.01	14.76
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.672	3.2	83	0.02	14.88
102 I	Perylene-d12	1.000	1.000	0.0	86	0.02	17.10
103 P	Di-n-octylphthalate	0.998	1.047	-4.9	85	0.02	15.89
104 P	Benzo[b]fluoranthene	1.096	1.086	0.9	82	0.01	16.46
105 P	Benzo[k]fluoranthene	1.127	1.013	10.1	78	0.01	16.50
106 P	Benzo[a]pyrene	1.103	1.053	4.5	81	0.02	17.00
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.195	-12.1	93	0.01	18.75
108 P	Dibenz[a,h]anthracene	1.175	1.208	-2.8	86	0.02	18.79
109 P	Benzo[g,h,i]perylene	1.206	1.231	-2.1	86	0.02	19.13

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 09:00:47 2017

7.7.12
7

GC/LC Semi-volatiles

QC Data Summaries

∞

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67491-MB	MM46630.D	1	11/07/17	NJ	11/03/17	OP67491	GMM892

The QC reported here applies to the following samples: Method: SW846 8082A

FA48965-2

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	17	8.3	ug/kg	
11141-16-5	Aroclor 1232	ND	17	8.3	ug/kg	
53469-21-9	Aroclor 1242	ND	17	6.7	ug/kg	
12672-29-6	Aroclor 1248	ND	17	6.7	ug/kg	
11097-69-1	Aroclor 1254	ND	17	6.7	ug/kg	
11096-82-5	Aroclor 1260	ND	17	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	85% 44-126%
2051-24-3	Decachlorobiphenyl	97% 41-145%

Blank Spike Summary

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67491-BS	MM46629.D	1	11/07/17	NJ	11/03/17	OP67491	GMM892

The QC reported here applies to the following samples: Method: SW846 8082A

FA48965-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	141	106	58-126
11096-82-5	Aroclor 1260	133	157	118	59-133

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	80%	44-126%
2051-24-3	Decachlorobiphenyl	97%	41-145%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67491-MS	MM46634.D	1	11/07/17	NJ	11/03/17	OP67491	GMM892
OP67491-MSD	MM46635.D	1	11/07/17	NJ	11/03/17	OP67491	GMM892
FA48936-1	MM46633.D	1	11/07/17	NJ	11/03/17	OP67491	GMM892

The QC reported here applies to the following samples: Method: SW846 8082A

FA48965-2

CAS No.	Compound	FA48936-1 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	23 U	186	186	100	186	195	105	5	58-126/25
11096-82-5	Aroclor 1260	23 U	186	185	99	186	197	106	6	59-133/31

CAS No.	Surrogate Recoveries	MS	MSD	FA48936-1	Limits
877-09-8	Tetrachloro-m-xylene	74%	76%	68%	44-126%
2051-24-3	Decachlorobiphenyl	78%	78%	74%	41-145%

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8082A	Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S2 ^a
FA48965-2	MM46636.D	74	86
OP67491-BS	MM46629.D	80	97
OP67491-MB	MM46630.D	85	97
OP67491-MS	MM46634.D	74	78
OP67491-MSD	MM46635.D	76	78

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	44-126%
S2 = Decachlorobiphenyl	41-145%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std:	GMM892-CC891	Injection Date:	11/06/17
Lab File ID:	MM46623.D	Injection Time:	23:13
Instrument ID:	GCMM	Method:	SW846 8082A

S1^a	S2^a
RT	RT

Check Std	3.40	7.15

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S2 ^a RT
OP67491-BS	MM46629.D	11/07/17	00:23	3.40	7.15
OP67491-MB	MM46630.D	11/07/17	00:34	3.40	7.15
ZZZZZZ	MM46631.D	11/07/17	00:46	3.40	7.15
ZZZZZZ	MM46632.D	11/07/17	00:58	3.40	7.15
FA48936-1	MM46633.D	11/07/17	01:09	3.40	7.15
OP67491-MS	MM46634.D	11/07/17	01:21	3.40	7.15
OP67491-MSD	MM46635.D	11/07/17	01:33	3.40	7.15
FA48965-2	MM46636.D	11/07/17	01:44	3.40	7.15
ZZZZZZ	MM46637.D	11/07/17	01:56	3.40	7.15
ZZZZZZ	MM46638.D	11/07/17	02:08	3.40	7.15

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

8.5.1
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Initial Calibration Verification

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46526.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46526.D\ECD1A.ch Vial: 15
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46526.D\ECD2B.ch
Acq On : 3 Nov 2017 8:56 pm Operator: nareshj
Sample : icv891-400 1242/1262 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A	400.000	393.270	1.7	96	0.00	3.64-	3.74
20 L4	AR1242-B	400.000	374.834	6.3	92	0.00	4.00-	4.10
21 L4	AR1242-C	400.000	384.083	4.0	98	0.00	4.19-	4.29
22 L4	AR1242-D	400.000	379.401	5.1	95	0.00	4.23-	4.33
23 L4	AR1242-E	400.000	358.640	10.3	87	0.00	4.37-	4.47
24 L4	AR1242-F	400.000	358.801	10.3	93	0.00	4.59-	4.69
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A			-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46526.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2		-----NA-----	
59	L1	AR1016-B #2		-----NA-----	
60	L1	AR1016-C #2		-----NA-----	
61	L1	AR1016-D #2		-----NA-----	
62	L1	AR1016-E #2		-----NA-----	
63	L1	AR1016-F #2		-----NA-----	
64	L2	AR1221-A #2		-----NA-----	
65	L2	AR1221-B #2		-----NA-----	
66	L2	AR1221-C #2		-----NA-----	
67	L2	AR1221-D #2		-----NA-----	
68	L2	AR1221-E #2		-----NA-----	
69	L3	AR1232-A #2		-----NA-----	
70	L3	AR1232-B #2		-----NA-----	
71	L3	AR1232-C #2		-----NA-----	
72	L3	AR1232-D #2		-----NA-----	
73	L3	AR1232-E #2		-----NA-----	
74	L3	AR1232-F #2		-----NA-----	
75	L4	AR1242-A #2	400.000 397.875	0.5 93	0.00 3.56- 3.66
76	L4	AR1242-B #2	400.000 397.604	0.6 92	0.00 3.93- 4.03
77	L4	AR1242-C #2	400.000 400.288	-0.1 95	0.00 4.15- 4.25
78	L4	AR1242-D #2	400.000 383.987	4.0 96	0.00 4.41- 4.51
79	L4	AR1242-E #2	400.000 301.985	24.5# 75	0.00 4.66- 4.76
80	L4	AR1242-F #2	400.000 359.645	10.1 94	0.00 4.81- 4.91
81	L5	AR1248-A #2		-----NA-----	
82	L5	AR1248-B #2		-----NA-----	
83	L5	AR1248-C #2		-----NA-----	
84	L5	AR1248-D #2		-----NA-----	
85	L5	AR1248-E #2		-----NA-----	
86	L5	AR1248-F #2		-----NA-----	
87	L6	AR1254-A #2		-----NA-----	
88	L6	AR1254-B #2		-----NA-----	
89	L6	AR1254-C #2		-----NA-----	

Initial Calibration Verification

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46526.D

90	L6	AR1254-D #2			-----NA-----
91	L6	AR1254-E #2			-----NA-----
92	L6	AR1254-F #2			-----NA-----
93	L7	AR1260-A #2			-----NA-----
94	L7	AR1260-B #2			-----NA-----
95	L7	AR1260-C #2			-----NA-----
96	L7	AR1260-D #2			-----NA-----
97	L7	AR1260-E #2			-----NA-----
98	L7	AR1260-F #2			-----NA-----

			Amount	Calc.	%Drift
99	L9	AR1262-A #2			-----NA-----
100	L9	AR1262-B #2			-----NA-----
101	L9	AR1262-C #2			-----NA-----
102	L9	AR1262-D #2			-----NA-----
103	L9	AR1262-E #2			-----NA-----
104	L9	AR1262-F #2			-----NA-----
105	L8	AR1268-A #2			-----NA-----
106	L8	AR1268-B #2			-----NA-----
107	L8	AR1268-C #2			-----NA-----
108	L8	AR1268-D #2			-----NA-----
109	L8	AR1268-E #2			-----NA-----
110	L8	AR1268-F #2			-----NA-----

			Amount	Calc.	%Drift
111	S	Decachlorobiphenyl #2			-----NA-----

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Sun Nov 05 14:27:51 2017

Initial Calibration Verification

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46533.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46533.D\ECD1A.ch Vial: 22
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46533.D\ECD2B.ch
Acq On : 3 Nov 2017 10:18 pm Operator: nareshj
Sample : icv891-400 1232/1268 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1	S	Tetrachloro-m-xylene			-----NA-----				

			Amount	Calc.	%Drift				

2	L1	AR1016-A			-----NA-----				
3	L1	AR1016-B			-----NA-----				
4	L1	AR1016-C			-----NA-----				
5	L1	AR1016-D			-----NA-----				
6	L1	AR1016-E			-----NA-----				
7	L1	AR1016-F			-----NA-----				
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A	400.000	413.591	-3.4	97	0.00	3.64-	3.74
14	L3	AR1232-B	400.000	343.940	14.0	84	0.00	4.00-	4.10
15	L3	AR1232-C	400.000	356.773	10.8	87	0.00	4.19-	4.29
16	L3	AR1232-D	400.000	345.016	13.7	86	0.00	4.30-	4.40
17	L3	AR1232-E	400.000	348.436	12.9	85	0.00	4.50-	4.59
18	L3	AR1232-F	400.000	345.175	13.7	87	0.00	4.79-	4.89
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				

			Amount	Calc.	%Drift				

31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				
34	L6	AR1254-D			-----NA-----				
35	L6	AR1254-E			-----NA-----				
36	L6	AR1254-F			-----NA-----				
37	L7	AR1260-A			-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA48965

Sample: GMM891-ICV891

Account: TCMAW Tantara Corporation

Lab FileID: MM46533.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2		-----NA-----	
59	L1	AR1016-B #2		-----NA-----	
60	L1	AR1016-C #2		-----NA-----	
61	L1	AR1016-D #2		-----NA-----	
62	L1	AR1016-E #2		-----NA-----	
63	L1	AR1016-F #2		-----NA-----	
64	L2	AR1221-A #2		-----NA-----	
65	L2	AR1221-B #2		-----NA-----	
66	L2	AR1221-C #2		-----NA-----	
67	L2	AR1221-D #2		-----NA-----	
68	L2	AR1221-E #2		-----NA-----	
69	L3	AR1232-A #2	400.000 426.271	-6.6 99 0.00	3.56- 3.66
70	L3	AR1232-B #2	400.000 359.207	10.2 86 0.00	3.93- 4.03
71	L3	AR1232-C #2	400.000 377.480	5.6 90 0.00	4.11- 4.21
72	L3	AR1232-D #2	400.000 351.884	12.0 87 0.00	4.23- 4.33
73	L3	AR1232-E #2	400.000 355.504	11.1 84 0.00	4.41- 4.51
74	L3	AR1232-F #2	400.000 348.361	12.9 84 0.00	4.66- 4.76
75	L4	AR1242-A #2		-----NA-----	
76	L4	AR1242-B #2		-----NA-----	
77	L4	AR1242-C #2		-----NA-----	
78	L4	AR1242-D #2		-----NA-----	
79	L4	AR1242-E #2		-----NA-----	
80	L4	AR1242-F #2		-----NA-----	
81	L5	AR1248-A #2		-----NA-----	
82	L5	AR1248-B #2		-----NA-----	
83	L5	AR1248-C #2		-----NA-----	
84	L5	AR1248-D #2		-----NA-----	
85	L5	AR1248-E #2		-----NA-----	
86	L5	AR1248-F #2		-----NA-----	
87	L6	AR1254-A #2		-----NA-----	
88	L6	AR1254-B #2		-----NA-----	
89	L6	AR1254-C #2		-----NA-----	

Initial Calibration Verification

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46533.D

90	L6	AR1254-D #2		-----NA-----
91	L6	AR1254-E #2		-----NA-----
92	L6	AR1254-F #2		-----NA-----
93	L7	AR1260-A #2		-----NA-----
94	L7	AR1260-B #2		-----NA-----
95	L7	AR1260-C #2		-----NA-----
96	L7	AR1260-D #2		-----NA-----
97	L7	AR1260-E #2		-----NA-----
98	L7	AR1260-F #2		-----NA-----
----- Amount Calc. %Drift -----				
99	L9	AR1262-A #2		-----NA-----
100	L9	AR1262-B #2		-----NA-----
101	L9	AR1262-C #2		-----NA-----
102	L9	AR1262-D #2		-----NA-----
103	L9	AR1262-E #2		-----NA-----
104	L9	AR1262-F #2		-----NA-----
105	L8	AR1268-A #2		-----NA-----
106	L8	AR1268-B #2		-----NA-----
107	L8	AR1268-C #2		-----NA-----
108	L8	AR1268-D #2		-----NA-----
109	L8	AR1268-E #2		-----NA-----
110	L8	AR1268-F #2		-----NA-----
----- Amount Calc. %Drift -----				
111	S	Decachlorobiphenyl #2		-----NA-----

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46545.D 8082dod1103.m Sun Nov 05 14:27:53 2017

8.6.2
8

Initial Calibration Verification

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46540.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46540.D\ECD1A.ch Vial: 29
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46540.D\ECD2B.ch
Acq On : 3 Nov 2017 11:39 pm Operator: nareshj
Sample : icv891-400 1221 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A	400.000	391.935	2.0	89	0.00	2.96-	3.06
9 L2	AR1221-B	400.000	402.340	-0.6	89	0.00	3.27-	3.37
10 L2	AR1221-C	400.000	366.726	8.3	87	0.00	3.52-	3.63
11 L2	AR1221-D	400.000	377.157	5.7	88	0.00	3.59-	3.69
12 L2	AR1221-E	400.000	372.223	6.9	87	0.00	3.64-	3.74
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A			-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46540.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl			-----NA-----

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2			-----NA-----

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2			-----NA-----
59	L1	AR1016-B #2			-----NA-----
60	L1	AR1016-C #2			-----NA-----
61	L1	AR1016-D #2			-----NA-----
62	L1	AR1016-E #2			-----NA-----
63	L1	AR1016-F #2			-----NA-----
64	L2	AR1221-A #2	400.000	391.349	2.2 88 0.00 2.87- 2.97
65	L2	AR1221-B #2	400.000	408.301	-2.1 88 0.00 3.19- 3.29
66	L2	AR1221-C #2	400.000	384.800	3.8 88 0.00 3.43- 3.53
67	L2	AR1221-D #2	400.000	386.655	3.3 87 0.00 3.50- 3.60
68	L2	AR1221-E #2	400.000	389.867	2.5 88 0.00 3.56- 3.66
69	L3	AR1232-A #2			-----NA-----
70	L3	AR1232-B #2			-----NA-----
71	L3	AR1232-C #2			-----NA-----
72	L3	AR1232-D #2			-----NA-----
73	L3	AR1232-E #2			-----NA-----
74	L3	AR1232-F #2			-----NA-----
75	L4	AR1242-A #2			-----NA-----
76	L4	AR1242-B #2			-----NA-----
77	L4	AR1242-C #2			-----NA-----
78	L4	AR1242-D #2			-----NA-----
79	L4	AR1242-E #2			-----NA-----
80	L4	AR1242-F #2			-----NA-----
81	L5	AR1248-A #2			-----NA-----
82	L5	AR1248-B #2			-----NA-----
83	L5	AR1248-C #2			-----NA-----
84	L5	AR1248-D #2			-----NA-----
85	L5	AR1248-E #2			-----NA-----
86	L5	AR1248-F #2			-----NA-----
87	L6	AR1254-A #2			-----NA-----
88	L6	AR1254-B #2			-----NA-----
89	L6	AR1254-C #2			-----NA-----

Initial Calibration Verification

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46540.D

90	L6	AR1254-D #2			-----NA-----
91	L6	AR1254-E #2			-----NA-----
92	L6	AR1254-F #2			-----NA-----
93	L7	AR1260-A #2			-----NA-----
94	L7	AR1260-B #2			-----NA-----
95	L7	AR1260-C #2			-----NA-----
96	L7	AR1260-D #2			-----NA-----
97	L7	AR1260-E #2			-----NA-----
98	L7	AR1260-F #2			-----NA-----

			Amount	Calc.	%Drift
99	L9	AR1262-A #2			-----NA-----
100	L9	AR1262-B #2			-----NA-----
101	L9	AR1262-C #2			-----NA-----
102	L9	AR1262-D #2			-----NA-----
103	L9	AR1262-E #2			-----NA-----
104	L9	AR1262-F #2			-----NA-----
105	L8	AR1268-A #2			-----NA-----
106	L8	AR1268-B #2			-----NA-----
107	L8	AR1268-C #2			-----NA-----
108	L8	AR1268-D #2			-----NA-----
109	L8	AR1268-E #2			-----NA-----
110	L8	AR1268-F #2			-----NA-----

			Amount	Calc.	%Drift
111	S	Decachlorobiphenyl #2			-----NA-----

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Sun Nov 05 14:27:55 2017

8.6.3
8

Initial Calibration Verification

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46541.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46541.D\ECD1A.ch Vial: 30
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46541.D\ECD2B.ch
Acq On : 3 Nov 2017 11:51 pm Operator: nareshj
Sample : icv891-400 1254 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S		Tetrachloro-m-xylene			-----NA-----				
			Amount	Calc.	%Drift				
2	L1	AR1016-A			-----NA-----				
3	L1	AR1016-B			-----NA-----				
4	L1	AR1016-C			-----NA-----				
5	L1	AR1016-D			-----NA-----				
6	L1	AR1016-E			-----NA-----				
7	L1	AR1016-F			-----NA-----				
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
			Amount	Calc.	%Drift				
31	L6	AR1254-A	400.000	351.057	12.2	92	0.00	4.37-	4.47
32	L6	AR1254-B	400.000	339.106	15.2	86	0.00	4.74-	4.84
33	L6	AR1254-C	400.000	359.500	10.1	86	0.00	5.14-	5.24
34	L6	AR1254-D	400.000	363.639	9.1	86	0.00	5.34-	5.43
35	L6	AR1254-E	400.000	361.194	9.7	85	0.00	5.52-	5.62
36	L6	AR1254-F	400.000	341.434	14.6	80	0.00	5.62-	5.72
37	L7	AR1260-A			-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46541.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl	-----NA-----		

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2	-----NA-----		

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2	-----NA-----		
59	L1	AR1016-B #2	-----NA-----		
60	L1	AR1016-C #2	-----NA-----		
61	L1	AR1016-D #2	-----NA-----		
62	L1	AR1016-E #2	-----NA-----		
63	L1	AR1016-F #2	-----NA-----		
64	L2	AR1221-A #2	-----NA-----		
65	L2	AR1221-B #2	-----NA-----		
66	L2	AR1221-C #2	-----NA-----		
67	L2	AR1221-D #2	-----NA-----		
68	L2	AR1221-E #2	-----NA-----		
69	L3	AR1232-A #2	-----NA-----		
70	L3	AR1232-B #2	-----NA-----		
71	L3	AR1232-C #2	-----NA-----		
72	L3	AR1232-D #2	-----NA-----		
73	L3	AR1232-E #2	-----NA-----		
74	L3	AR1232-F #2	-----NA-----		
75	L4	AR1242-A #2	-----NA-----		
76	L4	AR1242-B #2	-----NA-----		
77	L4	AR1242-C #2	-----NA-----		
78	L4	AR1242-D #2	-----NA-----		
79	L4	AR1242-E #2	-----NA-----		
80	L4	AR1242-F #2	-----NA-----		
81	L5	AR1248-A #2	-----NA-----		
82	L5	AR1248-B #2	-----NA-----		
83	L5	AR1248-C #2	-----NA-----		
84	L5	AR1248-D #2	-----NA-----		
85	L5	AR1248-E #2	-----NA-----		
86	L5	AR1248-F #2	-----NA-----		
87	L6	AR1254-A #2	400.000 384.290	3.9 89 0.00	4.27- 4.37
88	L6	AR1254-B #2	400.000 372.113	7.0 90 0.00	4.66- 4.76
89	L6	AR1254-C #2	400.000 367.863	8.0 89 0.00	5.05- 5.15

Initial Calibration Verification

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90	L6	AR1254-D #2	400.000	354.268	11.4	86	0.00	5.21-	5.31
91	L6	AR1254-E #2	400.000	344.843	13.8	84	0.00	5.38-	5.48
92	L6	AR1254-F #2	400.000	345.419	13.6	82	0.00	5.51-	5.61
93	L7	AR1260-A #2							
94	L7	AR1260-B #2							
95	L7	AR1260-C #2							
96	L7	AR1260-D #2							
97	L7	AR1260-E #2							
98	L7	AR1260-F #2							
			Amount	Calc.	%Drift				
99	L9	AR1262-A #2							
100	L9	AR1262-B #2							
101	L9	AR1262-C #2							
102	L9	AR1262-D #2							
103	L9	AR1262-E #2							
104	L9	AR1262-F #2							
105	L8	AR1268-A #2							
106	L8	AR1268-B #2							
107	L8	AR1268-C #2							
108	L8	AR1268-D #2							
109	L8	AR1268-E #2							
110	L8	AR1268-F #2							
			Amount	Calc.	%Drift				
111	S	Decachlorobiphenyl #2							

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Sun Nov 05 14:27:57 2017

8.6.4
8

Initial Calibration Summary

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Response Factor Report ECD 9

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Initial Calibration

Calibration Files

20 =MM46542.D 50 =MM46543.D 200 =MM46544.D 400 =MM46545.D
600 =MM46546.D 1000 =MM46547.D

	Compound	20	50	200	400	600	1000	Avg	%RSD
1) S	Tetrachloro-m-xylene	1.488	1.644	1.460	1.462	1.492	1.414	1.493	E6 5.29
2) L1	AR1016-A	2.910	2.878	2.294	2.269	2.306	2.149	2.468	E4 13.58
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9984							
	Response Ratio = 0.00000 + 22025.74690 *A								
3) L1	AR1016-B	4.101	3.977	3.213	3.057	3.164	2.950	3.410	E4 14.57
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9985							
	Response Ratio = 0.00000 + 30189.46640 *A								
4) L1	AR1016-C	6.001	6.353	5.684	5.801	6.225	5.925	5.998	E4 4.22
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9987							
	Response Ratio = 0.00000 + 59757.32972 *A								
5) L1	AR1016-D	3.666	3.828	3.183	3.266	3.511	3.296	3.458	E4 7.33
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9981							
	Response Ratio = 0.00000 + 33407.02676 *A								
6) L1	AR1016-E	2.945	3.174	2.637	2.712	3.004	2.766	2.873	E4 7.07
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9967							
	Response Ratio = 0.00000 + 28126.81046 *A								
7) L1	AR1016-F	2.894	3.063	2.515	2.516	2.732	2.550	2.712	E4 8.41
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9978							
	Response Ratio = 0.00000 + 25887.14187 *A								
8) L2	AR1221-A	1.356	1.279	1.036	0.950	0.874	0.840	1.056	E4 20.35
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9975							
	Response Ratio = 0.00000 + 8651.00747 *A								
9) L2	AR1221-B	5.235	3.792	3.359	3.160	2.810	2.691	3.508	E3 26.63
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9959							
	Response Ratio = 0.00000 + 2785.59779 *A								
10) L2	AR1221-C	1.671	1.495	1.304	1.286	1.209	1.204	1.362	E4 13.58
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9994							
	Response Ratio = 0.00000 + 12168.49980 *A								
11) L2	AR1221-D	1.063	1.079	0.932	0.913	0.856	0.830	0.945	E4 11.00
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9986							
	Response Ratio = 0.00000 + 8472.81584 *A								
12) L2	AR1221-E	3.971	3.566	3.252	3.220	3.007	2.960	3.329	E4 11.45
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9990							
	Response Ratio = 0.00000 + 30061.98506 *A								
13) L3	AR1232-A	3.333	2.783	2.728	2.570	2.505	2.349	2.712	E4 12.62
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9979							

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Response Ratio = 0.00000 + 24183.55595 *A											
14)	L3	AR1232-B	1.898	1.587	1.553	1.470	1.452	1.428	1.565	E4	11.14
---- Linear regr., Force(0,0) ----			Coefficient = 0.9998				Response Ratio = 0.00000 + 14415.14844 *A				
15)	L3	AR1232-C	3.102	2.548	2.675	2.754	2.684	2.693	2.743	E4	6.88
---- Linear regr., Force(0,0) ----			Coefficient = 0.9999				Response Ratio = 0.00000 + 26965.07377 *A				
16)	L3	AR1232-D	1.452	1.303	1.314	1.289	1.302	1.286	1.324	E4	4.80
---- Linear regr., Force(0,0) ----			Coefficient = 0.9999				Response Ratio = 0.00000 + 12905.82681 *A				
17)	L3	AR1232-E	1.394	1.209	1.191	1.127	1.136	1.077	1.189	E4	9.32
---- Linear regr., Force(0,0) ----			Coefficient = 0.9989				Response Ratio = 0.00000 + 10991.45427 *A				
18)	L3	AR1232-F	1.172	1.003	1.044	1.038	1.076	1.043	1.063	E4	5.49
---- Linear regr., Force(0,0) ----			Coefficient = 0.9996				Response Ratio = 0.00000 + 10500.79796 *A				
19)	L4	AR1242-A	2.409	2.116	2.035	1.863	1.791	1.811	2.004	E4	11.80
---- Linear regr., Force(0,0) ----			Coefficient = 0.9994				Response Ratio = 0.00000 + 18183.06698 *A				
20)	L4	AR1242-B	2.987	2.614	2.593	2.418	2.374	2.371	2.560	E4	9.19
---- Linear regr., Force(0,0) ----			Coefficient = 0.9998				Response Ratio = 0.00000 + 23828.17190 *A				
21)	L4	AR1242-C	5.154	4.674	5.092	4.814	4.817	4.949	4.917	E4	3.72
---- Linear regr., Force(0,0) ----			Coefficient = 0.9996				Response Ratio = 0.00000 + 49080.25707 *A				
22)	L4	AR1242-D	3.092	2.754	2.847	2.674	2.643	2.701	2.785	E4	5.97
---- Linear regr., Force(0,0) ----			Coefficient = 0.9996				Response Ratio = 0.00000 + 26885.29598 *A				
23)	L4	AR1242-E	2.430	2.086	2.043	1.905	1.840	1.838	2.023	E4	11.08
---- Linear regr., Force(0,0) ----			Coefficient = 0.9996				Response Ratio = 0.00000 + 18510.76437 *A				
24)	L4	AR1242-F	2.046	1.855	1.989	1.833	1.826	1.936	1.914	E4	4.75
---- Linear regr., Force(0,0) ----			Coefficient = 0.9984				Response Ratio = 0.00000 + 19010.14989 *A				
25)	L5	AR1248-A	1.921	1.831	1.695	1.654	1.586	1.535	1.704	E4	8.63
---- Linear regr., Force(0,0) ----			Coefficient = 0.9991				Response Ratio = 0.00000 + 15639.56197 *A				
26)	L5	AR1248-B	3.032	2.942	3.018	3.131	3.151	3.145	3.070	E4	2.79
---- Linear regr., Force(0,0) ----			Coefficient = 0.9999				Response Ratio = 0.00000 + 31412.45672 *A				
27)	L5	AR1248-C	3.506	3.448	3.315	3.375	3.286	3.241	3.362	E4	3.00
---- Linear regr., Force(0,0) ----			Coefficient = 0.9997				Response Ratio = 0.00000 + 32674.79194 *A				
28)	L5	AR1248-D	3.754	3.738	3.708	3.762	3.785	3.744	3.749	E4	0.69
---- Linear regr., Force(0,0) ----			Coefficient = 0.9999								

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Response Ratio = 0.00000 + 37540.84374 *A

29) L5 AR1248-E 3.497 3.573 3.634 3.974 4.001 4.057 3.789 E4 6.53

---- Linear regr., Force(0,0) ---- Coefficient = 0.9997

Response Ratio = 0.00000 + 40235.26765 *A

30) L5 AR1248-F 2.924 3.014 3.064 3.290 3.276 3.289 3.143 E4 5.16

---- Linear regr., Force(0,0) ---- Coefficient = 0.9998

Response Ratio = 0.00000 + 32796.32258 *A

31) L6 AR1254-A 2.837 2.643 2.394 2.365 2.273 2.304 2.469 E4 9.02

32) L6 AR1254-B 4.691 4.373 4.172 4.289 4.181 4.294 4.333 E4 4.40

33) L6 AR1254-C 6.002 6.087 6.013 6.507 6.310 6.593 6.252 E4 4.11

34) L6 AR1254-D 3.604 3.492 3.548 4.026 3.788 4.292 3.792 E4 8.26

35) L6 AR1254-E 2.935 2.860 2.940 3.292 3.097 3.466 3.098 E4 7.66

36) L6 AR1254-F 5.127 4.985 4.857 5.468 5.034 5.457 5.155 E4 4.92

37) L7 AR1260-A 5.606 5.978 4.844 4.939 5.448 5.091 5.318 E4 8.22

38) L7 AR1260-B 6.659 6.958 5.810 5.962 6.642 6.145 6.363 E4 7.15

39) L7 AR1260-C 7.196 7.854 6.600 6.884 7.668 7.231 7.239 E4 6.47

40) L7 AR1260-D 4.706 4.973 4.150 4.035 4.636 4.374 4.479 E4 7.96

41) L7 AR1260-E 0.995 1.049 0.909 0.924 1.020 0.968 0.978 E5 5.57

42) L7 AR1260-F 6.206 6.691 5.587 5.595 6.391 5.915 6.064 E4 7.33

43) L9 AR1262-A 4.637 4.023 4.197 3.993 3.778 3.990 4.103 E4 7.16

44) L9 AR1262-B 4.888 4.523 4.635 4.307 4.254 4.493 4.517 E4 5.10

45) L9 AR1262-C 7.018 6.351 6.563 6.056 5.969 6.236 6.365 E4 6.02

46) L9 AR1262-D 6.089 5.485 5.697 5.309 5.268 5.464 5.552 E4 5.47

47) L9 AR1262-E 1.119 1.086 1.162 1.083 1.073 1.147 1.112 E5 3.30

48) L9 AR1262-F 7.711 7.452 7.584 7.129 6.956 7.304 7.356 E4 3.85

49) L8 AR1268-A 3.982 3.300 3.313 3.261 3.349 3.261 3.411 E4 8.26

50) L8 AR1268-B 4.757 3.840 3.728 3.715 3.714 3.471 3.871 E4 11.64

51) L8 AR1268-C 1.759 1.418 1.521 1.562 1.512 1.467 1.540 E5 7.65

52) L8 AR1268-D 1.506 1.246 1.369 1.380 1.392 1.353 1.374 E5 6.06

53) L8 AR1268-E 5.554 4.282 4.629 4.620 4.771 4.638 4.749 E4 8.98

54) L8 AR1268-F 3.023 2.489 2.730 2.682 2.722 2.690 2.722 E5 6.31

55) S Decachlorobiphenyl 8.565 9.325 7.440 7.112 7.831 7.473 7.958 E5 10.47

---- Linear regr., Force(0,0) ---- Coefficient = 0.9982

Response Ratio = 0.00000 + 752107.05792 *A

Signal #2

1) S Tetrachloro-m-xylene 4.744 5.511 4.717 4.556 4.649 4.397 4.762 E6 8.15

2) L1 AR1016-A 9.685 9.851 7.779 7.384 7.431 6.795 8.154 E4 15.83

---- Linear regr., Force(0,0) ---- Coefficient = 0.9972

Response Ratio = 0.00000 + 70323.80616 *A

3) L1 AR1016-B 1.305 1.328 1.050 0.980 0.985 0.896 1.091 E5 16.66

---- Linear regr., Force(0,0) ---- Coefficient = 0.9968

Response Ratio = 0.00000 + 93001.70862 *A

4) L1 AR1016-C 2.193 2.335 2.030 2.006 2.093 1.904 2.093 E5 7.26

---- Linear regr., Force(0,0) ---- Coefficient = 0.9968

Response Ratio = 0.00000 + 196218.73061 *A

5) L1 AR1016-D 1.178 1.265 1.030 1.022 1.064 0.971 1.088 E5 10.18

---- Linear regr., Force(0,0) ---- Coefficient = 0.9971

Response Ratio = 0.00000 + 99972.33266 *A

6) L1 AR1016-E 1.023 1.093 0.877 0.851 0.895 0.812 0.925 E5 11.77

---- Linear regr., Force(0,0) ---- Coefficient = 0.9968

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Response Ratio = 0.00000 + 83728.31721 *A

7)	L1	AR1016-F	1.036	1.107	0.916	0.879	0.939	0.852	0.955	E5	10.22		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9967					
			Response Ratio = 0.00000 + 87702.89309 *A										
8)	L2	AR1221-A	5.157	4.089	3.035	2.814	2.574	2.442	3.352	E4	31.65		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9975					
			Response Ratio = 0.00000 + 25292.19744 *A										
9)	L2	AR1221-B	2.053	1.483	1.053	0.969	0.865	0.793	1.203	E4	40.07		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9942					
			Response Ratio = 0.00000 + 8353.68223 *A										
10)	L2	AR1221-C	5.472	5.272	4.519	4.493	4.177	4.017	4.658	E4	12.62		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9981					
			Response Ratio = 0.00000 + 41175.99824 *A										
11)	L2	AR1221-D	4.024	3.621	3.090	2.985	2.745	2.619	3.181	E4	16.97		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9973					
			Response Ratio = 0.00000 + 26994.87039 *A										
12)	L2	AR1221-E	1.323	1.251	1.099	1.039	0.954	0.910	1.096	E5	14.92		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9970					
			Response Ratio = 0.00000 + 93911.46333 *A										
13)	L3	AR1232-A	1.129	0.953	0.911	0.835	0.796	0.748	0.895	E5	15.26		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9973					
			Response Ratio = 0.00000 + 77273.54794 *A										
14)	L3	AR1232-B	6.491	5.340	5.175	4.847	4.762	4.561	5.196	E4	13.37		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9991					
			Response Ratio = 0.00000 + 46536.19855 *A										
15)	L3	AR1232-C	1.114	0.949	0.995	0.959	0.950	0.896	0.977	E5	7.61		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9984					
			Response Ratio = 0.00000 + 91742.74014 *A										
16)	L3	AR1232-D	5.583	4.935	5.001	4.720	4.730	4.584	4.926	E4	7.24		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9995					
			Response Ratio = 0.00000 + 46431.37061 *A										
17)	L3	AR1232-E	5.225	4.385	4.272	4.109	4.121	3.736	4.308	E4	11.61		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9961					
			Response Ratio = 0.00000 + 38779.24578 *A										
18)	L3	AR1232-F	5.667	4.418	4.542	4.450	4.408	4.181	4.611	E4	11.51		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9988					
			Response Ratio = 0.00000 + 42708.30381 *A										
19)	L4	AR1242-A	8.194	7.156	6.874	6.243	5.917	5.710	6.683	E4	13.83		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9982					
			Response Ratio = 0.00000 + 58452.73826 *A										
20)	L4	AR1242-B	9.966	8.771	8.718	8.124	7.582	7.294	8.409	E4	11.48		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9977					
			Response Ratio = 0.00000 + 74845.78491 *A										
21)	L4	AR1242-C	1.010	0.886	0.925	0.849	0.796	0.793	0.877	E5	9.46		
		----	Linear regr., Force(0,0)				----	Coefficient = 0.9987					

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Response Ratio = 0.00000 + 80326.73548 *A

22)	L4	AR1242-D	9.369	8.166	8.299	7.427	7.319	7.377	7.993	E4	9.96	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9994				
			Response Ratio = 0.00000 + 73941.19474 *A									
23)	L4	AR1242-E	1.254	1.120	1.169	1.059	1.034	1.051	1.114	E5	7.61	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9994				
			Response Ratio = 0.00000 + 105120.70623 *A									
24)	L4	AR1242-F	5.302	4.919	5.016	4.587	4.636	4.841	4.884	E4	5.38	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9988				
			Response Ratio = 0.00000 + 47727.94716 *A									
25)	L5	AR1248-A	6.410	5.869	5.423	5.285	5.035	4.749	5.462	E4	10.95	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9977				
			Response Ratio = 0.00000 + 48892.13571 *A									
26)	L5	AR1248-B	1.063	1.084	1.079	1.099	1.070	1.018	1.069	E5	2.59	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9985				
			Response Ratio = 0.00000 + 104022.65268 *A									
27)	L5	AR1248-C	1.309	1.326	1.279	1.287	1.236	1.211	1.275	E5	3.42	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9994				
			Response Ratio = 0.00000 + 122673.94120 *A									
28)	L5	AR1248-D	9.228	9.135	9.160	9.404	9.219	9.056	9.200	E4	1.28	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9997				
			Response Ratio = 0.00000 + 91318.04387 *A									
29)	L5	AR1248-E	1.685	1.730	1.715	1.785	1.733	1.679	1.721	E5	2.23	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9992				
			Response Ratio = 0.00000 + 170353.24961 *A									
30)	L5	AR1248-F	7.334	7.547	7.264	7.444	7.521	7.461	7.429	E4	1.47	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9999				
			Response Ratio = 0.00000 + 74682.64879 *A									
31)	L6	AR1254-A	9.593	8.987	7.920	8.076	7.286	7.475	8.223	E4	10.89	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9984				
			Response Ratio = 0.00000 + 75076.44307 *A									
32)	L6	AR1254-B	2.060	1.912	1.852	1.803	1.730	1.740	1.849	E5	6.70	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9997				
			Response Ratio = 0.00000 + 174748.16734 *A									
33)	L6	AR1254-C	2.331	2.273	2.184	2.227	2.150	2.146	2.219	E5	3.30	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9998				
			Response Ratio = 0.00000 + 215663.25850 *A									
34)	L6	AR1254-D	1.368	1.377	1.316	1.422	1.351	1.399	1.372	E5	2.71	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9993				
			Response Ratio = 0.00000 + 138838.87458 *A									
35)	L6	AR1254-E	1.040	1.019	0.950	0.970	0.924	0.955	0.976	E5	4.52	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9995				
			Response Ratio = 0.00000 + 94915.18916 *A									
36)	L6	AR1254-F	1.791	1.805	1.727	1.815	1.675	1.734	1.758	E5	3.11	
			---- Linear regr., Force(0,0) ----					Coefficient = 0.9989				

Initial Calibration Summary

Page 6 of 6

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICC891
Lab FileID: MM46545.D

Response Ratio = 0.00000 + 172887.29022 *A

37) L7 AR1260-A 1.902 2.007 1.590 1.587 1.758 1.571 1.736 E5 10.71
---- Linear regr., Force(0,0) ---- Coefficient = 0.9949
Response Ratio = 0.00000 + 161698.40494 *A

38) L7 AR1260-B 2.229 2.320 1.933 1.879 2.101 1.859 2.054 E5 9.41
---- Linear regr., Force(0,0) ---- Coefficient = 0.9941
Response Ratio = 0.00000 + 191951.14486 *A

39) L7 AR1260-C 1.558 1.637 1.344 1.290 1.419 1.258 1.418 E5 10.69
---- Linear regr., Force(0,0) ---- Coefficient = 0.9946
Response Ratio = 0.00000 + 130143.17668 *A

40) L7 AR1260-D 1.549 1.665 1.313 1.293 1.437 1.308 1.428 E5 10.73
---- Linear regr., Force(0,0) ---- Coefficient = 0.9961
Response Ratio = 0.00000 + 133680.91837 *A

41) L7 AR1260-E 3.230 3.564 2.969 2.946 3.248 2.945 3.150 E5 7.83
---- Linear regr., Force(0,0) ---- Coefficient = 0.9961
Response Ratio = 0.00000 + 301639.36868 *A

42) L7 AR1260-F 2.396 2.610 2.180 2.175 2.331 2.175 2.311 E5 7.53
---- Linear regr., Force(0,0) ---- Coefficient = 0.9980
Response Ratio = 0.00000 + 221161.15614 *A

43) L9 AR1262-A 1.639 1.437 1.473 1.330 1.273 1.294 1.408 E5 9.84
44) L9 AR1262-B 1.712 1.485 1.572 1.418 1.361 1.417 1.494 E5 8.61
45) L9 AR1262-C 2.343 2.183 2.176 1.976 1.912 1.939 2.088 E5 8.23
46) L9 AR1262-D 2.090 1.982 2.031 1.827 1.744 1.799 1.912 E5 7.36
47) L9 AR1262-E 3.849 3.613 3.705 3.376 3.344 3.486 3.562 E5 5.52
48) L9 AR1262-F 2.842 2.711 2.719 2.483 2.445 2.468 2.611 E5 6.39
49) L8 AR1268-A 1.297 1.106 1.101 1.078 1.056 0.992 1.105 E5 9.31
50) L8 AR1268-B 1.574 1.253 1.273 1.220 1.208 1.119 1.274 E5 12.25
51) L8 AR1268-C 5.141 4.236 4.487 4.510 4.438 4.218 4.505 E5 7.45
52) L8 AR1268-D 5.385 4.473 4.648 4.602 4.624 4.359 4.682 E5 7.72
53) L8 AR1268-E 1.849 1.484 1.562 1.496 1.516 1.465 1.562 E5 9.25
54) L8 AR1268-F 9.572 8.037 8.254 8.091 8.124 7.767 8.307 E5 7.70
55) S Decachlorobiphenyl 2.512 2.824 2.256 2.170 2.328 2.209 2.383 E6 10.38
---- Linear regr., Force(0,0) ---- Coefficient = 0.9986
Response Ratio = 0.00000 + 2234397.92024 *A

(#) = Out of Range

8082dod1103.m

Sun Nov 05 14:27:19 2017

Initial Calibration Verification

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46548.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46548.D\ECD1A.ch Vial: 37
Signal #2 : C:\msdchem\2\DATA\gmm891pcb\MM46548.D\ECD2B.ch
Acq On : 4 Nov 2017 1:12 am Operator: nareshj
Sample : icv891-400 1016/1260 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Sun Nov 05 14:22:30 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S		Tetrachloro-m-xylene			-----NA-----				
			Amount	Calc.	%Drift				
2	L1	AR1016-A	400.000	418.922	-4.7	102	-0.01	3.65-	3.75
3	L1	AR1016-B	400.000	420.045	-5.0	104	0.00	3.87-	3.97
4	L1	AR1016-C	400.000	391.679	2.1	101	-0.02	4.21-	4.31
5	L1	AR1016-D	400.000	397.120	0.7	102	-0.02	4.25-	4.35
6	L1	AR1016-E	400.000	393.715	1.6	102	-0.02	4.31-	4.41
7	L1	AR1016-F	400.000	387.375	3.2	100	0.00	4.49-	4.59
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
			Amount	Calc.	%Drift				
31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				
34	L6	AR1254-D			-----NA-----				
35	L6	AR1254-E			-----NA-----				
36	L6	AR1254-F			-----NA-----				
37	L7	AR1260-A	400.000	366.281	8.4	99	-0.02	5.27-	5.37

Initial Calibration Verification

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46548.D

38	L7	AR1260-B	400.000	359.731	10.1	96	0.00	5.43-	5.53
39	L7	AR1260-C	400.000	331.608	17.1	87	-0.02	5.64-	5.74
40	L7	AR1260-D	400.000	418.264	-4.6	116	0.00	5.83-	5.93
41	L7	AR1260-E	400.000	436.666	-9.2	116	0.00	6.06-	6.16
42	L7	AR1260-F	400.000	412.127	-3.0	112	0.00	6.25-	6.36
43	L9	AR1262-A						-----NA-----	
44	L9	AR1262-B						-----NA-----	
45	L9	AR1262-C						-----NA-----	
46	L9	AR1262-D						-----NA-----	
47	L9	AR1262-E						-----NA-----	
48	L9	AR1262-F						-----NA-----	
49	L8	AR1268-A						-----NA-----	
50	L8	AR1268-B						-----NA-----	
51	L8	AR1268-C						-----NA-----	
52	L8	AR1268-D						-----NA-----	
53	L8	AR1268-E						-----NA-----	
54	L8	AR1268-F						-----NA-----	

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl			-----NA-----

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2			-----NA-----

		Amount	Calc.	%Drift					
58	L1	AR1016-A #2	400.000	434.176	-8.5	103	0.00	3.56-	3.66
59	L1	AR1016-B #2	400.000	431.048	-7.8	102	0.00	3.79-	3.89
60	L1	AR1016-C #2	400.000	409.255	-2.3	100	0.00	4.11-	4.21
61	L1	AR1016-D #2	400.000	414.211	-3.6	101	0.00	4.15-	4.25
62	L1	AR1016-E #2	400.000	414.159	-3.5	102	0.00	4.30-	4.40
63	L1	AR1016-F #2	400.000	408.475	-2.1	102	0.00	4.42-	4.52
64	L2	AR1221-A #2						-----NA-----	
65	L2	AR1221-B #2						-----NA-----	
66	L2	AR1221-C #2						-----NA-----	
67	L2	AR1221-D #2						-----NA-----	
68	L2	AR1221-E #2						-----NA-----	
69	L3	AR1232-A #2						-----NA-----	
70	L3	AR1232-B #2						-----NA-----	
71	L3	AR1232-C #2						-----NA-----	
72	L3	AR1232-D #2						-----NA-----	
73	L3	AR1232-E #2						-----NA-----	
74	L3	AR1232-F #2						-----NA-----	
75	L4	AR1242-A #2						-----NA-----	
76	L4	AR1242-B #2						-----NA-----	
77	L4	AR1242-C #2						-----NA-----	
78	L4	AR1242-D #2						-----NA-----	
79	L4	AR1242-E #2						-----NA-----	
80	L4	AR1242-F #2						-----NA-----	
81	L5	AR1248-A #2						-----NA-----	
82	L5	AR1248-B #2						-----NA-----	
83	L5	AR1248-C #2						-----NA-----	
84	L5	AR1248-D #2						-----NA-----	
85	L5	AR1248-E #2						-----NA-----	
86	L5	AR1248-F #2						-----NA-----	
87	L6	AR1254-A #2						-----NA-----	
88	L6	AR1254-B #2						-----NA-----	
89	L6	AR1254-C #2						-----NA-----	

Page 3 of 3

Sample: GMM891-ICV891
Lab FileID: MM46548.D

	-----	Amount	Calc.	%Drift	-----
111 S	Decachlorobiphenyl	#2		-----NA-----	

```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46545.D  8082dod1103.m    Sun Nov 05 14:27:59 2017
```

Initial Calibration Verification

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46558.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46558.D\ECD1A.ch Vial: 8
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46558.D\ECD2B.ch
Acq On : 6 Nov 2017 10:29 am Operator: nareshj
Sample : icv891-400 1248 Inst : ECD 9
Misc : op67458,gmm891,15.0,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift				

2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				
25 L5	AR1248-A			400.000	373.096	6.7	88	0.00	3.87- 3.97
26 L5	AR1248-B			400.000	350.093	12.5	88	0.00	4.19- 4.29
27 L5	AR1248-C			400.000	360.644	9.8	87	0.00	4.37- 4.47
28 L5	AR1248-D			400.000	352.560	11.9	88	0.00	4.50- 4.59
29 L5	AR1248-E			400.000	344.758	13.8	87	0.00	4.76- 4.87
30 L5	AR1248-F			400.000	346.697	13.3	86	0.00	4.89- 4.99

			Amount	Calc.	%Drift				

31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				
34 L6	AR1254-D				-----NA-----				
35 L6	AR1254-E				-----NA-----				
36 L6	AR1254-F				-----NA-----				
37 L7	AR1260-A				-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46558.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl			-----NA-----

***** Signal #2 *****

		Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2			-----NA-----

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2			-----NA-----
59	L1	AR1016-B #2			-----NA-----
60	L1	AR1016-C #2			-----NA-----
61	L1	AR1016-D #2			-----NA-----
62	L1	AR1016-E #2			-----NA-----
63	L1	AR1016-F #2			-----NA-----
64	L2	AR1221-A #2			-----NA-----
65	L2	AR1221-B #2			-----NA-----
66	L2	AR1221-C #2			-----NA-----
67	L2	AR1221-D #2			-----NA-----
68	L2	AR1221-E #2			-----NA-----
69	L3	AR1232-A #2			-----NA-----
70	L3	AR1232-B #2			-----NA-----
71	L3	AR1232-C #2			-----NA-----
72	L3	AR1232-D #2			-----NA-----
73	L3	AR1232-E #2			-----NA-----
74	L3	AR1232-F #2			-----NA-----
75	L4	AR1242-A #2			-----NA-----
76	L4	AR1242-B #2			-----NA-----
77	L4	AR1242-C #2			-----NA-----
78	L4	AR1242-D #2			-----NA-----
79	L4	AR1242-E #2			-----NA-----
80	L4	AR1242-F #2			-----NA-----
81	L5	AR1248-A #2	400.000	393.293	1.7 91 0.00 3.79- 3.89
82	L5	AR1248-B #2	400.000	375.620	6.1 89 0.00 4.11- 4.21
83	L5	AR1248-C #2	400.000	363.619	9.1 87 0.00 4.41- 4.51
84	L5	AR1248-D #2	400.000	359.524	10.1 87 0.00 4.52- 4.62
85	L5	AR1248-E #2	400.000	362.081	9.5 86 0.00 4.66- 4.76
86	L5	AR1248-F #2	400.000	369.108	7.7 93 0.00 5.05- 5.15
87	L6	AR1254-A #2			-----NA-----
88	L6	AR1254-B #2			-----NA-----
89	L6	AR1254-C #2			-----NA-----

Initial Calibration Verification

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM891-ICV891
Lab FileID: MM46558.D

90	L6	AR1254-D #2	-----NA-----
91	L6	AR1254-E #2	-----NA-----
92	L6	AR1254-F #2	-----NA-----
93	L7	AR1260-A #2	-----NA-----
94	L7	AR1260-B #2	-----NA-----
95	L7	AR1260-C #2	-----NA-----
96	L7	AR1260-D #2	-----NA-----
97	L7	AR1260-E #2	-----NA-----
98	L7	AR1260-F #2	-----NA-----
----- Amount Calc. %Drift -----			
99	L9	AR1262-A #2	-----NA-----
100	L9	AR1262-B #2	-----NA-----
101	L9	AR1262-C #2	-----NA-----
102	L9	AR1262-D #2	-----NA-----
103	L9	AR1262-E #2	-----NA-----
104	L9	AR1262-F #2	-----NA-----
105	L8	AR1268-A #2	-----NA-----
106	L8	AR1268-B #2	-----NA-----
107	L8	AR1268-C #2	-----NA-----
108	L8	AR1268-D #2	-----NA-----
109	L8	AR1268-E #2	-----NA-----
110	L8	AR1268-F #2	-----NA-----
----- Amount Calc. %Drift -----			
111	S	Decachlorobiphenyl #2	-----NA-----

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46545.D 8082dod1103.m Tue Nov 07 10:02:02 2017

8.6.7
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46623.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46623.D\ECD1A.ch Vial: 2
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46623.D\ECD2B.ch
Acq On : 6 Nov 2017 11:13 pm Operator: nareshj
Sample : cc891-400 1016/1260 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	S	Tetrachloro-m-xylene	40.000	38.762	3.1	99	-0.02	3.37-	3.47
----- Amount Calc. %Drift -----									
2	L1	AR1016-A	400.000	407.527	-1.9	99	-0.01	3.65-	3.75
3	L1	AR1016-B	400.000	424.554	-6.1	105	0.00	3.87-	3.97
4	L1	AR1016-C	400.000	422.768	-5.7	109	-0.02	4.21-	4.31
5	L1	AR1016-D	400.000	420.177	-5.0	107	-0.02	4.25-	4.35
6	L1	AR1016-E	400.000	416.164	-4.0	108	-0.02	4.31-	4.41
7	L1	AR1016-F	400.000	433.913	-8.5	112	0.00	4.49-	4.59
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
----- Amount Calc. %Drift -----									
31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				
34	L6	AR1254-D			-----NA-----				
35	L6	AR1254-E			-----NA-----				
36	L6	AR1254-F			-----NA-----				
37	L7	AR1260-A	400.000	444.925	-11.2	120	-0.02	5.27-	5.37

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46623.D

38	L7	AR1260-B	400.000	461.827	-15.5	123	0.00	5.43-	5.53
39	L7	AR1260-C	400.000	468.030	-17.0	123	-0.02	5.64-	5.74
40	L7	AR1260-D	400.000	450.765	-12.7	125	0.00	5.83-	5.93
41	L7	AR1260-E	400.000	473.989	-18.5	125	0.00	6.06-	6.16
42	L7	AR1260-F	400.000	456.954	-14.2	124	0.00	6.25-	6.36
43	L9	AR1262-A						-----NA-----	
44	L9	AR1262-B						-----NA-----	
45	L9	AR1262-C						-----NA-----	
46	L9	AR1262-D						-----NA-----	
47	L9	AR1262-E						-----NA-----	
48	L9	AR1262-F						-----NA-----	
49	L8	AR1268-A						-----NA-----	
50	L8	AR1268-B						-----NA-----	
51	L8	AR1268-C						-----NA-----	
52	L8	AR1268-D						-----NA-----	
53	L8	AR1268-E						-----NA-----	
54	L8	AR1268-F						-----NA-----	

			Amount	Calc.	%Drift				
55	S	Decachlorobiphenyl	40.000	42.331	-5.8	112	0.00	7.10-	7.20

***** Signal #2 *****

			Amount	Calc.	%Drift				
57	S	Tetrachloro-m-xylene #	40.000	38.519	3.7	101	-0.02	3.26-	3.36

			Amount	Calc.	%Drift				
58	L1	AR1016-A #2	400.000	415.869	-4.0	99	0.00	3.56-	3.66
59	L1	AR1016-B #2	400.000	432.630	-8.2	103	0.00	3.79-	3.89
60	L1	AR1016-C #2	400.000	431.009	-7.8	105	0.00	4.11-	4.21
61	L1	AR1016-D #2	400.000	433.655	-8.4	106	0.00	4.15-	4.25
62	L1	AR1016-E #2	400.000	437.675	-9.4	108	0.00	4.30-	4.40
63	L1	AR1016-F #2	400.000	433.850	-8.5	108	0.00	4.42-	4.52
64	L2	AR1221-A #2						-----NA-----	
65	L2	AR1221-B #2						-----NA-----	
66	L2	AR1221-C #2						-----NA-----	
67	L2	AR1221-D #2						-----NA-----	
68	L2	AR1221-E #2						-----NA-----	
69	L3	AR1232-A #2						-----NA-----	
70	L3	AR1232-B #2						-----NA-----	
71	L3	AR1232-C #2						-----NA-----	
72	L3	AR1232-D #2						-----NA-----	
73	L3	AR1232-E #2						-----NA-----	
74	L3	AR1232-F #2						-----NA-----	
75	L4	AR1242-A #2						-----NA-----	
76	L4	AR1242-B #2						-----NA-----	
77	L4	AR1242-C #2						-----NA-----	
78	L4	AR1242-D #2						-----NA-----	
79	L4	AR1242-E #2						-----NA-----	
80	L4	AR1242-F #2						-----NA-----	
81	L5	AR1248-A #2						-----NA-----	
82	L5	AR1248-B #2						-----NA-----	
83	L5	AR1248-C #2						-----NA-----	
84	L5	AR1248-D #2						-----NA-----	
85	L5	AR1248-E #2						-----NA-----	
86	L5	AR1248-F #2						-----NA-----	
87	L6	AR1254-A #2						-----NA-----	
88	L6	AR1254-B #2						-----NA-----	
89	L6	AR1254-C #2						-----NA-----	

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Sample: GMM892-CC891
Lab FileID: MM46623.D

111 S	Decachlorobiphenyl	40.000	41.121	-2.8	106	0.00	6.95- 7.04

Tue Nov 07 10:02:39 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46624.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46624.D\ECD1A.ch Vial: 3
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46624.D\ECD2B.ch
Acq On : 6 Nov 2017 11:25 pm Operator: nareshj
Sample : cc891-400 1248 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
25 L5	AR1248-A	400.000	431.740	-7.9	102	0.00	3.87-	3.97
26 L5	AR1248-B	400.000	432.697	-8.2	109	0.00	4.19-	4.29
27 L5	AR1248-C	400.000	436.268	-9.1	106	0.00	4.37-	4.47
28 L5	AR1248-D	400.000	434.073	-8.5	108	0.00	4.50-	4.59
29 L5	AR1248-E	400.000	437.722	-9.4	111	0.00	4.76-	4.87
30 L5	AR1248-F	400.000	437.173	-9.3	109	0.00	4.89-	4.99

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A			-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46624.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2		-----NA-----	
59	L1	AR1016-B #2		-----NA-----	
60	L1	AR1016-C #2		-----NA-----	
61	L1	AR1016-D #2		-----NA-----	
62	L1	AR1016-E #2		-----NA-----	
63	L1	AR1016-F #2		-----NA-----	
64	L2	AR1221-A #2		-----NA-----	
65	L2	AR1221-B #2		-----NA-----	
66	L2	AR1221-C #2		-----NA-----	
67	L2	AR1221-D #2		-----NA-----	
68	L2	AR1221-E #2		-----NA-----	
69	L3	AR1232-A #2		-----NA-----	
70	L3	AR1232-B #2		-----NA-----	
71	L3	AR1232-C #2		-----NA-----	
72	L3	AR1232-D #2		-----NA-----	
73	L3	AR1232-E #2		-----NA-----	
74	L3	AR1232-F #2		-----NA-----	
75	L4	AR1242-A #2		-----NA-----	
76	L4	AR1242-B #2		-----NA-----	
77	L4	AR1242-C #2		-----NA-----	
78	L4	AR1242-D #2		-----NA-----	
79	L4	AR1242-E #2		-----NA-----	
80	L4	AR1242-F #2		-----NA-----	
81	L5	AR1248-A #2	400.000 438.441	-9.6 101 0.00	3.79- 3.89
82	L5	AR1248-B #2	400.000 447.659	-11.9 106 0.00	4.11- 4.21
83	L5	AR1248-C #2	400.000 446.960	-11.7 107 0.00	4.41- 4.51
84	L5	AR1248-D #2	400.000 442.492	-10.6 107 0.00	4.52- 4.62
85	L5	AR1248-E #2	400.000 444.817	-11.2 106 0.00	4.66- 4.76
86	L5	AR1248-F #2	400.000 455.068	-13.8 114 0.00	5.05- 5.15
87	L6	AR1254-A #2		-----NA-----	
88	L6	AR1254-B #2		-----NA-----	
89	L6	AR1254-C #2		-----NA-----	

Continuing Calibration Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46624.D

90	L6	AR1254-D #2	-----	NA-----
91	L6	AR1254-E #2	-----	NA-----
92	L6	AR1254-F #2	-----	NA-----
93	L7	AR1260-A #2	-----	NA-----
94	L7	AR1260-B #2	-----	NA-----
95	L7	AR1260-C #2	-----	NA-----
96	L7	AR1260-D #2	-----	NA-----
97	L7	AR1260-E #2	-----	NA-----
98	L7	AR1260-F #2	-----	NA-----
----- Amount Calc. %Drift -----				
99	L9	AR1262-A #2	-----	NA-----
100	L9	AR1262-B #2	-----	NA-----
101	L9	AR1262-C #2	-----	NA-----
102	L9	AR1262-D #2	-----	NA-----
103	L9	AR1262-E #2	-----	NA-----
104	L9	AR1262-F #2	-----	NA-----
105	L8	AR1268-A #2	-----	NA-----
106	L8	AR1268-B #2	-----	NA-----
107	L8	AR1268-C #2	-----	NA-----
108	L8	AR1268-D #2	-----	NA-----
109	L8	AR1268-E #2	-----	NA-----
110	L8	AR1268-F #2	-----	NA-----
----- Amount Calc. %Drift -----				
111	S	Decachlorobiphenyl #2	-----	NA-----

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 10:02:41 2017

8.6.9
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46625.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46625.D\ECD1A.ch Vial: 4
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46625.D\ECD2B.ch
Acq On : 6 Nov 2017 11:36 pm Operator: nareshj
Sample : cc891-400 1242/1262 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift			
2 L1	AR1016-A			-----NA-----			
3 L1	AR1016-B			-----NA-----			
4 L1	AR1016-C			-----NA-----			
5 L1	AR1016-D			-----NA-----			
6 L1	AR1016-E			-----NA-----			
7 L1	AR1016-F			-----NA-----			
8 L2	AR1221-A			-----NA-----			
9 L2	AR1221-B			-----NA-----			
10 L2	AR1221-C			-----NA-----			
11 L2	AR1221-D			-----NA-----			
12 L2	AR1221-E			-----NA-----			
13 L3	AR1232-A			-----NA-----			
14 L3	AR1232-B			-----NA-----			
15 L3	AR1232-C			-----NA-----			
16 L3	AR1232-D			-----NA-----			
17 L3	AR1232-E			-----NA-----			
18 L3	AR1232-F			-----NA-----			
19 L4	AR1242-A	400.000	422.532	-5.6	103	0.00	3.64- 3.74
20 L4	AR1242-B	400.000	426.612	-6.7	105	0.00	4.00- 4.10
21 L4	AR1242-C	400.000	426.339	-6.6	109	0.00	4.19- 4.29
22 L4	AR1242-D	400.000	431.889	-8.0	109	0.00	4.23- 4.33
23 L4	AR1242-E	400.000	464.311	-16.1	113	0.00	4.37- 4.47
24 L4	AR1242-F	400.000	443.134	-10.8	115	0.00	4.59- 4.69
25 L5	AR1248-A			-----NA-----			
26 L5	AR1248-B			-----NA-----			
27 L5	AR1248-C			-----NA-----			
28 L5	AR1248-D			-----NA-----			
29 L5	AR1248-E			-----NA-----			
30 L5	AR1248-F			-----NA-----			

		Amount	Calc.	%Drift			
31 L6	AR1254-A			-----NA-----			
32 L6	AR1254-B			-----NA-----			
33 L6	AR1254-C			-----NA-----			
34 L6	AR1254-D			-----NA-----			
35 L6	AR1254-E			-----NA-----			
36 L6	AR1254-F			-----NA-----			
37 L7	AR1260-A			-----NA-----			

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Sample: GMM892-CC891
Lab FileID: MM46625.D

8.6.10

100%

Continuing Calibration Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46625.D

90	L6	AR1254-D #2				-----NA-----			
91	L6	AR1254-E #2				-----NA-----			
92	L6	AR1254-F #2				-----NA-----			
93	L7	AR1260-A #2				-----NA-----			
94	L7	AR1260-B #2				-----NA-----			
95	L7	AR1260-C #2				-----NA-----			
96	L7	AR1260-D #2				-----NA-----			
97	L7	AR1260-E #2				-----NA-----			
98	L7	AR1260-F #2				-----NA-----			
			-----	Amount	Calc.	%Drift	-----		
99	L9	AR1262-A #2	400.000	459.009	-14.8	121	0.00	5.14-	5.24
100	L9	AR1262-B #2	400.000	486.251	-21.6#	128	0.00	5.28-	5.38
101	L9	AR1262-C #2	400.000	466.167	-16.5	123	0.00	5.54-	5.64
102	L9	AR1262-D #2	400.000	486.187	-21.5#	127	0.00	5.72-	5.82
103	L9	AR1262-E #2	400.000	483.068	-20.8#	127	0.00	5.91-	6.00
104	L9	AR1262-F #2	400.000	459.658	-14.9	121	0.00	6.16-	6.26
105	L8	AR1268-A #2					-----NA-----		
106	L8	AR1268-B #2					-----NA-----		
107	L8	AR1268-C #2					-----NA-----		
108	L8	AR1268-D #2					-----NA-----		
109	L8	AR1268-E #2					-----NA-----		
110	L8	AR1268-F #2					-----NA-----		
			-----	Amount	Calc.	%Drift	-----		
111	S	Decachlorobiphenyl #2					-----NA-----		

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 10:02:43 2017

8.6.10
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46626.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46626.D\ECD1A.ch Vial: 5
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46626.D\ECD2B.ch
Acq On : 6 Nov 2017 11:48 pm Operator: nareshj
Sample : cc891-400 1232/1268 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S		Tetrachloro-m-xylene			-----NA-----				
			----- Amount	Calc.	%Drift	-----			
2	L1	AR1016-A			-----NA-----				
3	L1	AR1016-B			-----NA-----				
4	L1	AR1016-C			-----NA-----				
5	L1	AR1016-D			-----NA-----				
6	L1	AR1016-E			-----NA-----				
7	L1	AR1016-F			-----NA-----				
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A	400.000	412.454	-3.1	97	0.00	3.64-	3.74
14	L3	AR1232-B	400.000	397.266	0.7	97	0.00	4.00-	4.10
15	L3	AR1232-C	400.000	416.116	-4.0	102	0.00	4.19-	4.29
16	L3	AR1232-D	400.000	409.524	-2.4	103	0.00	4.30-	4.40
17	L3	AR1232-E	400.000	444.211	-11.1	108	0.00	4.50-	4.59
18	L3	AR1232-F	400.000	445.047	-11.3	113	0.00	4.79-	4.89
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
			----- Amount	Calc.	%Drift	-----			
31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				
34	L6	AR1254-D			-----NA-----				
35	L6	AR1254-E			-----NA-----				
36	L6	AR1254-F			-----NA-----				
37	L7	AR1260-A			-----NA-----				

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Sample: GMM892-CC891
Lab FileID: MM46626.D

8.6.11

***** Signal #2 *****

```

----- Amount Calc. %Drift -----

```

SGS 177 of 254
ACCUTEST
FA48965

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Sample: GMM892-CC891
Lab FileID: MM46626.D

```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46545.D  8082dod1103.m    Tue Nov 07 10:02:45 2017
```

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46627.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46627.D\ECD1A.ch Vial: 6
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46627.D\ECD2B.ch
Acq On : 7 Nov 2017 12:00 am Operator: nareshj
Sample : cc891-400 1221/1254 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S		Tetrachloro-m-xylene			-----NA-----				
			Amount	Calc.	%Drift				
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A	400.000	431.516	-7.9	98	0.00	2.96-	3.06	
9 L2	AR1221-B	400.000	448.719	-12.2	99	0.00	3.27-	3.37	
10 L2	AR1221-C	400.000	422.131	-5.5	100	0.00	3.52-	3.63	
11 L2	AR1221-D	400.000	438.672	-9.7	102	0.00	3.59-	3.69	
12 L2	AR1221-E	400.000	430.302	-7.6	100	0.00	3.64-	3.74	
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				
			Amount	Calc.	%Drift				
31 L6	AR1254-A	400.000	428.833	-7.2	112	0.00	4.37-	4.47	
32 L6	AR1254-B	400.000	455.497	-13.9	115	0.00	4.74-	4.84	
33 L6	AR1254-C	400.000	503.945	-26.0#	121	0.00	5.14-	5.24	
34 L6	AR1254-D	400.000	561.191	-40.3#	132	0.00	5.34-	5.43	
35 L6	AR1254-E	400.000	568.999	-42.2#	134	0.00	5.52-	5.62	
36 L6	AR1254-F	400.000	534.313	-33.6#	126	0.00	5.62-	5.72	
37 L7	AR1260-A				-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46627.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2		-----NA-----	
59	L1	AR1016-B #2		-----NA-----	
60	L1	AR1016-C #2		-----NA-----	
61	L1	AR1016-D #2		-----NA-----	
62	L1	AR1016-E #2		-----NA-----	
63	L1	AR1016-F #2		-----NA-----	
64	L2	AR1221-A #2	400.000 427.555	-6.9 96 0.00	2.87- 2.97
65	L2	AR1221-B #2	400.000 450.036	-12.5 97 0.00	3.19- 3.29
66	L2	AR1221-C #2	400.000 437.107	-9.3 100 0.00	3.43- 3.53
67	L2	AR1221-D #2	400.000 442.590	-10.6 100 0.00	3.50- 3.60
68	L2	AR1221-E #2	400.000 452.378	-13.1 102 0.00	3.56- 3.66
69	L3	AR1232-A #2		-----NA-----	
70	L3	AR1232-B #2		-----NA-----	
71	L3	AR1232-C #2		-----NA-----	
72	L3	AR1232-D #2		-----NA-----	
73	L3	AR1232-E #2		-----NA-----	
74	L3	AR1232-F #2		-----NA-----	
75	L4	AR1242-A #2		-----NA-----	
76	L4	AR1242-B #2		-----NA-----	
77	L4	AR1242-C #2		-----NA-----	
78	L4	AR1242-D #2		-----NA-----	
79	L4	AR1242-E #2		-----NA-----	
80	L4	AR1242-F #2		-----NA-----	
81	L5	AR1248-A #2		-----NA-----	
82	L5	AR1248-B #2		-----NA-----	
83	L5	AR1248-C #2		-----NA-----	
84	L5	AR1248-D #2		-----NA-----	
85	L5	AR1248-E #2		-----NA-----	
86	L5	AR1248-F #2		-----NA-----	
87	L6	AR1254-A #2	400.000 452.352	-13.1 105 0.00	4.27- 4.37
88	L6	AR1254-B #2	400.000 474.658	-18.7 115 0.00	4.66- 4.76
89	L6	AR1254-C #2	400.000 485.230	-21.3# 117 0.00	5.05- 5.15

Continuing Calibration Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46627.D

90	L6	AR1254-D #2	400.000	511.507	-27.9#	125	0.00	5.21-	5.31
91	L6	AR1254-E #2	400.000	499.871	-25.0#	122	0.00	5.38-	5.48
92	L6	AR1254-F #2	400.000	508.092	-27.0#	121	0.00	5.51-	5.61
93	L7	AR1260-A #2			-----NA-----				
94	L7	AR1260-B #2			-----NA-----				
95	L7	AR1260-C #2			-----NA-----				
96	L7	AR1260-D #2			-----NA-----				
97	L7	AR1260-E #2			-----NA-----				
98	L7	AR1260-F #2			-----NA-----				
----- Amount Calc. %Drift -----									
99	L9	AR1262-A #2			-----NA-----				
100	L9	AR1262-B #2			-----NA-----				
101	L9	AR1262-C #2			-----NA-----				
102	L9	AR1262-D #2			-----NA-----				
103	L9	AR1262-E #2			-----NA-----				
104	L9	AR1262-F #2			-----NA-----				
105	L8	AR1268-A #2			-----NA-----				
106	L8	AR1268-B #2			-----NA-----				
107	L8	AR1268-C #2			-----NA-----				
108	L8	AR1268-D #2			-----NA-----				
109	L8	AR1268-E #2			-----NA-----				
110	L8	AR1268-F #2			-----NA-----				
----- Amount Calc. %Drift -----									
111	S	Decachlorobiphenyl #2			-----NA-----				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46545.D 8082dod1103.m Tue Nov 07 10:02:47 2017

8.6.12
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Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46639.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46639.D\ECD1A.ch Vial: 2
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46639.D\ECD2B.ch
Acq On : 7 Nov 2017 2:19 am Operator: nareshj
Sample : cc891-400 1016/1260 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	S	Tetrachloro-m-xylene	40.000	40.797	-2.0	104	-0.02	3.37-	3.47
----- Amount Calc. %Drift -----									
2	L1	AR1016-A	400.000	424.521	-6.1	103	-0.01	3.65-	3.75
3	L1	AR1016-B	400.000	445.327	-11.3	110	0.00	3.87-	3.97
4	L1	AR1016-C	400.000	449.371	-12.3	116	-0.02	4.21-	4.31
5	L1	AR1016-D	400.000	437.115	-9.3	112	-0.02	4.25-	4.35
6	L1	AR1016-E	400.000	435.629	-8.9	113	-0.02	4.31-	4.41
7	L1	AR1016-F	400.000	453.547	-13.4	117	0.00	4.49-	4.59
8	L2	AR1221-A			-----NA-----				
9	L2	AR1221-B			-----NA-----				
10	L2	AR1221-C			-----NA-----				
11	L2	AR1221-D			-----NA-----				
12	L2	AR1221-E			-----NA-----				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
----- Amount Calc. %Drift -----									
31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				
34	L6	AR1254-D			-----NA-----				
35	L6	AR1254-E			-----NA-----				
36	L6	AR1254-F			-----NA-----				
37	L7	AR1260-A	400.000	452.963	-13.2	122	-0.02	5.27-	5.37

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46639.D

38	L7	AR1260-B	400.000	477.228	-19.3	127	0.00	5.43-	5.53
39	L7	AR1260-C	400.000	474.869	-18.7	125	-0.02	5.64-	5.74
40	L7	AR1260-D	400.000	449.820	-12.5	125	0.00	5.83-	5.93
41	L7	AR1260-E	400.000	455.618	-13.9	121	0.00	6.06-	6.16
42	L7	AR1260-F	400.000	439.811	-10.0	119	0.00	6.25-	6.36
43	L9	AR1262-A			-----	NA	-----		
44	L9	AR1262-B			-----	NA	-----		
45	L9	AR1262-C			-----	NA	-----		
46	L9	AR1262-D			-----	NA	-----		
47	L9	AR1262-E			-----	NA	-----		
48	L9	AR1262-F			-----	NA	-----		
49	L8	AR1268-A			-----	NA	-----		
50	L8	AR1268-B			-----	NA	-----		
51	L8	AR1268-C			-----	NA	-----		
52	L8	AR1268-D			-----	NA	-----		
53	L8	AR1268-E			-----	NA	-----		
54	L8	AR1268-F			-----	NA	-----		

		-----	Amount	Calc.	%Drift	-----			
55	S	Decachlorobiphenyl	40.000	42.736	-6.8	113	0.00	7.10-	7.20

***** Signal #2 *****

		-----	Amount	Calc.	%Drift	-----			
57	S	Tetrachloro-m-xylene #	40.000	39.983	0.0	104	-0.02	3.26-	3.36

		-----	Amount	Calc.	%Drift	-----			
58	L1	AR1016-A #2	400.000	439.072	-9.8	105	0.00	3.56-	3.66
59	L1	AR1016-B #2	400.000	456.041	-14.0	108	0.00	3.79-	3.89
60	L1	AR1016-C #2	400.000	458.924	-14.7	112	0.00	4.11-	4.21
61	L1	AR1016-D #2	400.000	454.659	-13.7	111	0.00	4.15-	4.25
62	L1	AR1016-E #2	400.000	459.440	-14.9	113	0.00	4.30-	4.40
63	L1	AR1016-F #2	400.000	468.284	-17.1	117	0.00	4.42-	4.52
64	L2	AR1221-A #2			-----	NA	-----		
65	L2	AR1221-B #2			-----	NA	-----		
66	L2	AR1221-C #2			-----	NA	-----		
67	L2	AR1221-D #2			-----	NA	-----		
68	L2	AR1221-E #2			-----	NA	-----		
69	L3	AR1232-A #2			-----	NA	-----		
70	L3	AR1232-B #2			-----	NA	-----		
71	L3	AR1232-C #2			-----	NA	-----		
72	L3	AR1232-D #2			-----	NA	-----		
73	L3	AR1232-E #2			-----	NA	-----		
74	L3	AR1232-F #2			-----	NA	-----		
75	L4	AR1242-A #2			-----	NA	-----		
76	L4	AR1242-B #2			-----	NA	-----		
77	L4	AR1242-C #2			-----	NA	-----		
78	L4	AR1242-D #2			-----	NA	-----		
79	L4	AR1242-E #2			-----	NA	-----		
80	L4	AR1242-F #2			-----	NA	-----		
81	L5	AR1248-A #2			-----	NA	-----		
82	L5	AR1248-B #2			-----	NA	-----		
83	L5	AR1248-C #2			-----	NA	-----		
84	L5	AR1248-D #2			-----	NA	-----		
85	L5	AR1248-E #2			-----	NA	-----		
86	L5	AR1248-F #2			-----	NA	-----		
87	L6	AR1254-A #2			-----	NA	-----		
88	L6	AR1254-B #2			-----	NA	-----		
89	L6	AR1254-C #2			-----	NA	-----		

Continuing Calibration Summary

Page 3 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46639.D

90	L6	AR1254-D #2											
91	L6	AR1254-E #2											
92	L6	AR1254-F #2											
93	L7	AR1260-A #2	400.000	465.156	-16.3	119	-0.01	5.15-	5.25				
94	L7	AR1260-B #2	400.000	465.420	-16.4	119	-0.01	5.29-	5.39				
95	L7	AR1260-C #2	400.000	468.055	-17.0	118	-0.01	5.55-	5.65				
96	L7	AR1260-D #2	400.000	461.209	-15.3	119	-0.01	5.74-	5.84				
97	L7	AR1260-E #2	400.000	459.714	-14.9	118	0.00	5.91-	6.00				
98	L7	AR1260-F #2	400.000	416.798	-4.2	106	0.00	6.16-	6.26				

			Amount	Calc.	%Drift								
99	L9	AR1262-A #2											
100	L9	AR1262-B #2											
101	L9	AR1262-C #2											
102	L9	AR1262-D #2											
103	L9	AR1262-E #2											
104	L9	AR1262-F #2											
105	L8	AR1268-A #2											
106	L8	AR1268-B #2											
107	L8	AR1268-C #2											
108	L8	AR1268-D #2											
109	L8	AR1268-E #2											
110	L8	AR1268-F #2											

			Amount	Calc.	%Drift								
111	S	Decachlorobiphenyl	40.000	38.781	3.0	100	0.00	6.95-	7.04				

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 10:02:49 2017

8.6.13

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Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46640.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46640.D\ECD1A.ch Vial: 3
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46640.D\ECD2B.ch
Acq On : 7 Nov 2017 2:31 am Operator: nareshj
Sample : cc891-400 1248 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
25 L5	AR1248-A	400.000	414.752	-3.7	98	0.00	3.87-	3.97
26 L5	AR1248-B	400.000	422.861	-5.7	106	0.00	4.19-	4.29
27 L5	AR1248-C	400.000	442.242	-10.6	107	0.00	4.37-	4.47
28 L5	AR1248-D	400.000	428.415	-7.1	107	0.00	4.50-	4.59
29 L5	AR1248-E	400.000	436.899	-9.2	111	0.00	4.76-	4.87
30 L5	AR1248-F	400.000	430.779	-7.7	107	0.00	4.89-	4.99

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				
34 L6	AR1254-D			-----NA-----				
35 L6	AR1254-E			-----NA-----				
36 L6	AR1254-F			-----NA-----				
37 L7	AR1260-A			-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
 Account: TCMAW Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
 Lab FileID: MM46640.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

	Amount	Calc.	%Drift
55 S	Decachlorobiphenyl	-----NA-----	

***** Signal #2 *****

	Amount	Calc.	%Drift
57 S	Tetrachloro-m-xylene #2	-----NA-----	

	Amount	Calc.	%Drift	
58	L1	AR1016-A #2	-----NA-----	
59	L1	AR1016-B #2	-----NA-----	
60	L1	AR1016-C #2	-----NA-----	
61	L1	AR1016-D #2	-----NA-----	
62	L1	AR1016-E #2	-----NA-----	
63	L1	AR1016-F #2	-----NA-----	
64	L2	AR1221-A #2	-----NA-----	
65	L2	AR1221-B #2	-----NA-----	
66	L2	AR1221-C #2	-----NA-----	
67	L2	AR1221-D #2	-----NA-----	
68	L2	AR1221-E #2	-----NA-----	
69	L3	AR1232-A #2	-----NA-----	
70	L3	AR1232-B #2	-----NA-----	
71	L3	AR1232-C #2	-----NA-----	
72	L3	AR1232-D #2	-----NA-----	
73	L3	AR1232-E #2	-----NA-----	
74	L3	AR1232-F #2	-----NA-----	
75	L4	AR1242-A #2	-----NA-----	
76	L4	AR1242-B #2	-----NA-----	
77	L4	AR1242-C #2	-----NA-----	
78	L4	AR1242-D #2	-----NA-----	
79	L4	AR1242-E #2	-----NA-----	
80	L4	AR1242-F #2	-----NA-----	
81	L5	AR1248-A #2	400.000 435.565 -8.9 101 0.00	3.79- 3.89
82	L5	AR1248-B #2	400.000 436.520 -9.1 103 0.00	4.11- 4.21
83	L5	AR1248-C #2	400.000 445.330 -11.3 106 0.00	4.41- 4.51
84	L5	AR1248-D #2	400.000 439.314 -9.8 107 0.00	4.52- 4.62
85	L5	AR1248-E #2	400.000 446.806 -11.7 107 0.00	4.66- 4.76
86	L5	AR1248-F #2	400.000 437.193 -9.3 110 0.00	5.05- 5.15
87	L6	AR1254-A #2	-----NA-----	
88	L6	AR1254-B #2	-----NA-----	
89	L6	AR1254-C #2	-----NA-----	

8.6.14

8

Continuing Calibration Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46640.D

90	L6	AR1254-D #2		-----NA-----
91	L6	AR1254-E #2		-----NA-----
92	L6	AR1254-F #2		-----NA-----
93	L7	AR1260-A #2		-----NA-----
94	L7	AR1260-B #2		-----NA-----
95	L7	AR1260-C #2		-----NA-----
96	L7	AR1260-D #2		-----NA-----
97	L7	AR1260-E #2		-----NA-----
98	L7	AR1260-F #2		-----NA-----
----- Amount Calc. %Drift -----				
99	L9	AR1262-A #2		-----NA-----
100	L9	AR1262-B #2		-----NA-----
101	L9	AR1262-C #2		-----NA-----
102	L9	AR1262-D #2		-----NA-----
103	L9	AR1262-E #2		-----NA-----
104	L9	AR1262-F #2		-----NA-----
105	L8	AR1268-A #2		-----NA-----
106	L8	AR1268-B #2		-----NA-----
107	L8	AR1268-C #2		-----NA-----
108	L8	AR1268-D #2		-----NA-----
109	L8	AR1268-E #2		-----NA-----
110	L8	AR1268-F #2		-----NA-----
----- Amount Calc. %Drift -----				
111	S	Decachlorobiphenyl #2		-----NA-----

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46545.D 8082dod1103.m Tue Nov 07 10:02:51 2017

8.6.14
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Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46641.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46641.D\ECD1A.ch Vial: 4
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46641.D\ECD2B.ch
Acq On : 7 Nov 2017 2:43 am Operator: nareshj
Sample : cc891-400 1242/1262 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift			
2 L1	AR1016-A			-----NA-----			
3 L1	AR1016-B			-----NA-----			
4 L1	AR1016-C			-----NA-----			
5 L1	AR1016-D			-----NA-----			
6 L1	AR1016-E			-----NA-----			
7 L1	AR1016-F			-----NA-----			
8 L2	AR1221-A			-----NA-----			
9 L2	AR1221-B			-----NA-----			
10 L2	AR1221-C			-----NA-----			
11 L2	AR1221-D			-----NA-----			
12 L2	AR1221-E			-----NA-----			
13 L3	AR1232-A			-----NA-----			
14 L3	AR1232-B			-----NA-----			
15 L3	AR1232-C			-----NA-----			
16 L3	AR1232-D			-----NA-----			
17 L3	AR1232-E			-----NA-----			
18 L3	AR1232-F			-----NA-----			
19 L4	AR1242-A	400.000	412.374	-3.1	101	0.00	3.64- 3.74
20 L4	AR1242-B	400.000	425.606	-6.4	105	0.00	4.00- 4.10
21 L4	AR1242-C	400.000	429.466	-7.4	109	0.00	4.19- 4.29
22 L4	AR1242-D	400.000	430.688	-7.7	108	0.00	4.23- 4.33
23 L4	AR1242-E	400.000	463.604	-15.9	113	0.00	4.37- 4.47
24 L4	AR1242-F	400.000	450.972	-12.7	117	0.00	4.59- 4.69
25 L5	AR1248-A			-----NA-----			
26 L5	AR1248-B			-----NA-----			
27 L5	AR1248-C			-----NA-----			
28 L5	AR1248-D			-----NA-----			
29 L5	AR1248-E			-----NA-----			
30 L5	AR1248-F			-----NA-----			

		Amount	Calc.	%Drift			
31 L6	AR1254-A			-----NA-----			
32 L6	AR1254-B			-----NA-----			
33 L6	AR1254-C			-----NA-----			
34 L6	AR1254-D			-----NA-----			
35 L6	AR1254-E			-----NA-----			
36 L6	AR1254-F			-----NA-----			
37 L7	AR1260-A			-----NA-----			

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46641.D

38	L7	AR1260-B								-----NA-----
39	L7	AR1260-C								-----NA-----
40	L7	AR1260-D								-----NA-----
41	L7	AR1260-E								-----NA-----
42	L7	AR1260-F								-----NA-----
43	L9	AR1262-A	400.000	467.454	-16.9	120	0.00	5.25-	5.35	
44	L9	AR1262-B	400.000	505.325	-26.3#	132	0.00	5.43-	5.54	
45	L9	AR1262-C	400.000	497.060	-24.3#	131	0.00	5.23-	5.78	
46	L9	AR1262-D	400.000	502.913	-25.7#	131	0.00	5.83-	5.93	
47	L9	AR1262-E	400.000	537.134	-34.3#	138	0.00	6.06-	6.16	
48	L9	AR1262-F	400.000	500.346	-25.1#	129	0.00	6.25-	6.35	
49	L8	AR1268-A								-----NA-----
50	L8	AR1268-B								-----NA-----
51	L8	AR1268-C								-----NA-----
52	L8	AR1268-D								-----NA-----
53	L8	AR1268-E								-----NA-----
54	L8	AR1268-F								-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl			-----NA-----

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2			-----NA-----

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2			-----NA-----
59	L1	AR1016-B #2			-----NA-----
60	L1	AR1016-C #2			-----NA-----
61	L1	AR1016-D #2			-----NA-----
62	L1	AR1016-E #2			-----NA-----
63	L1	AR1016-F #2			-----NA-----
64	L2	AR1221-A #2			-----NA-----
65	L2	AR1221-B #2			-----NA-----
66	L2	AR1221-C #2			-----NA-----
67	L2	AR1221-D #2			-----NA-----
68	L2	AR1221-E #2			-----NA-----
69	L3	AR1232-A #2			-----NA-----
70	L3	AR1232-B #2			-----NA-----
71	L3	AR1232-C #2			-----NA-----
72	L3	AR1232-D #2			-----NA-----
73	L3	AR1232-E #2			-----NA-----
74	L3	AR1232-F #2			-----NA-----
75	L4	AR1242-A #2	400.000	434.428	-8.6 102 0.00 3.56- 3.66
76	L4	AR1242-B #2	400.000	437.198	-9.3 101 0.00 3.93- 4.03
77	L4	AR1242-C #2	400.000	451.847	-13.0 107 0.00 4.15- 4.25
78	L4	AR1242-D #2	400.000	470.941	-17.7 117 0.00 4.41- 4.51
79	L4	AR1242-E #2	400.000	476.146	-19.0 118 0.00 4.66- 4.76
80	L4	AR1242-F #2	400.000	486.594	-21.6# 127 0.00 4.81- 4.91
81	L5	AR1248-A #2			-----NA-----
82	L5	AR1248-B #2			-----NA-----
83	L5	AR1248-C #2			-----NA-----
84	L5	AR1248-D #2			-----NA-----
85	L5	AR1248-E #2			-----NA-----
86	L5	AR1248-F #2			-----NA-----
87	L6	AR1254-A #2			-----NA-----
88	L6	AR1254-B #2			-----NA-----
89	L6	AR1254-C #2			-----NA-----

Page 3 of 3

Sample: GMM892-CC891
Lab FileID: MM46641.D

```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46545.D  8082dod1103.m    Tue Nov 07 10:02:54 2017
```


Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46642.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46642.D\ECD1A.ch Vial: 5
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46642.D\ECD2B.ch
Acq On : 7 Nov 2017 2:54 am Operator: nareshj
Sample : cc891-400 1232/1268 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				
13 L3	AR1232-A	400.000	419.804	-5.0	99	0.00	3.64-	3.74	
14 L3	AR1232-B	400.000	393.761	1.6	97	0.00	4.00-	4.10	
15 L3	AR1232-C	400.000	420.923	-5.2	103	0.00	4.19-	4.29	
16 L3	AR1232-D	400.000	405.179	-1.3	101	0.00	4.30-	4.40	
17 L3	AR1232-E	400.000	441.316	-10.3	108	0.00	4.50-	4.59	
18 L3	AR1232-F	400.000	453.739	-13.4	115	0.00	4.79-	4.89	
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				
34 L6	AR1254-D				-----NA-----				
35 L6	AR1254-E				-----NA-----				
36 L6	AR1254-F				-----NA-----				
37 L7	AR1260-A				-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMawW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46642.D

38	L7	AR1260-B								-----NA-----
39	L7	AR1260-C								-----NA-----
40	L7	AR1260-D								-----NA-----
41	L7	AR1260-E								-----NA-----
42	L7	AR1260-F								-----NA-----
43	L9	AR1262-A								-----NA-----
44	L9	AR1262-B								-----NA-----
45	L9	AR1262-C								-----NA-----
46	L9	AR1262-D								-----NA-----
47	L9	AR1262-E								-----NA-----
48	L9	AR1262-F								-----NA-----
49	L8	AR1268-A	400.000	470.523	-17.6	123	0.00	5.68-	5.78	
50	L8	AR1268-B	400.000	446.401	-11.6	116	0.00	5.85-	5.95	
51	L8	AR1268-C	400.000	480.683	-20.2#	118	0.00	6.25-	6.35	
52	L8	AR1268-D	400.000	477.813	-19.5	119	0.00	6.31-	6.41	
53	L8	AR1268-E	400.000	446.535	-11.6	115	0.00	6.69-	6.79	
54	L8	AR1268-F	400.000	469.349	-17.3	119	0.00	6.92-	7.02	

			Amount	Calc.	%Drift	
55	S	Decachlorobiphenyl			-----NA-----	

***** Signal #2 *****

			Amount	Calc.	%Drift	
57	S	Tetrachloro-m-xylene #2			-----NA-----	

			Amount	Calc.	%Drift	
58	L1	AR1016-A #2			-----NA-----	
59	L1	AR1016-B #2			-----NA-----	
60	L1	AR1016-C #2			-----NA-----	
61	L1	AR1016-D #2			-----NA-----	
62	L1	AR1016-E #2			-----NA-----	
63	L1	AR1016-F #2			-----NA-----	
64	L2	AR1221-A #2			-----NA-----	
65	L2	AR1221-B #2			-----NA-----	
66	L2	AR1221-C #2			-----NA-----	
67	L2	AR1221-D #2			-----NA-----	
68	L2	AR1221-E #2			-----NA-----	
69	L3	AR1232-A #2	400.000	435.812	-9.0	101 0.00 3.56- 3.66
70	L3	AR1232-B #2	400.000	409.605	-2.4	98 0.00 3.93- 4.03
71	L3	AR1232-C #2	400.000	440.163	-10.0	105 0.00 4.11- 4.21
72	L3	AR1232-D #2	400.000	415.673	-3.9	102 0.00 4.23- 4.33
73	L3	AR1232-E #2	400.000	447.601	-11.9	106 0.00 4.41- 4.51
74	L3	AR1232-F #2	400.000	451.565	-12.9	108 0.00 4.66- 4.76
75	L4	AR1242-A #2			-----NA-----	
76	L4	AR1242-B #2			-----NA-----	
77	L4	AR1242-C #2			-----NA-----	
78	L4	AR1242-D #2			-----NA-----	
79	L4	AR1242-E #2			-----NA-----	
80	L4	AR1242-F #2			-----NA-----	
81	L5	AR1248-A #2			-----NA-----	
82	L5	AR1248-B #2			-----NA-----	
83	L5	AR1248-C #2			-----NA-----	
84	L5	AR1248-D #2			-----NA-----	
85	L5	AR1248-E #2			-----NA-----	
86	L5	AR1248-F #2			-----NA-----	
87	L6	AR1254-A #2			-----NA-----	
88	L6	AR1254-B #2			-----NA-----	
89	L6	AR1254-C #2			-----NA-----	

Page 3 of 3

Sample: GMM892-CC891
Lab FileID: MM46642.D

8
8.6.16

```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46545.D  8082dod1103.m    Tue Nov 07 10:02:56 2017
```

Continuing Calibration Summary

Page 1 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46643.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46643.D\ECD1A.ch Vial: 6
Signal #2 : C:\msdchem\2\DATA\gmm892pcb\MM46643.D\ECD2B.ch
Acq On : 7 Nov 2017 3:06 am Operator: nareshj
Sample : cc891-400 1221/1254 Inst : ECD 9
Misc : op67478,gmm892,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1103.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Mon Nov 06 10:25:07 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S		Tetrachloro-m-xylene			-----NA-----				
			Amount	Calc.	%Drift				
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A	400.000	429.237	-7.3	98	0.00	2.96-	3.06	
9 L2	AR1221-B	400.000	440.273	-10.1	97	0.00	3.27-	3.37	
10 L2	AR1221-C	400.000	414.093	-3.5	98	0.00	3.52-	3.63	
11 L2	AR1221-D	400.000	425.093	-6.3	99	0.00	3.59-	3.69	
12 L2	AR1221-E	400.000	421.126	-5.3	98	0.00	3.64-	3.74	
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				
			Amount	Calc.	%Drift				
31 L6	AR1254-A	400.000	416.635	-4.2	109	0.00	4.37-	4.47	
32 L6	AR1254-B	400.000	450.075	-12.5	114	0.00	4.74-	4.84	
33 L6	AR1254-C	400.000	499.847	-25.0#	120	0.00	5.14-	5.24	
34 L6	AR1254-D	400.000	548.902	-37.2#	129	0.00	5.34-	5.43	
35 L6	AR1254-E	400.000	550.720	-37.7#	130	0.00	5.52-	5.62	
36 L6	AR1254-F	400.000	524.416	-31.1#	124	0.00	5.62-	5.72	
37 L7	AR1260-A				-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46643.D

38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----

		----- Amount	Calc.	%Drift	-----
55	S	Decachlorobiphenyl		-----NA-----	

***** Signal #2 *****

		----- Amount	Calc.	%Drift	-----
57	S	Tetrachloro-m-xylene #2		-----NA-----	

		----- Amount	Calc.	%Drift	-----
58	L1	AR1016-A #2		-----NA-----	
59	L1	AR1016-B #2		-----NA-----	
60	L1	AR1016-C #2		-----NA-----	
61	L1	AR1016-D #2		-----NA-----	
62	L1	AR1016-E #2		-----NA-----	
63	L1	AR1016-F #2		-----NA-----	
64	L2	AR1221-A #2	400.000 432.185	-8.0 97 0.00	2.87- 2.97
65	L2	AR1221-B #2	400.000 443.638	-10.9 96 0.00	3.19- 3.29
66	L2	AR1221-C #2	400.000 423.580	-5.9 97 0.00	3.43- 3.53
67	L2	AR1221-D #2	400.000 428.628	-7.2 97 0.00	3.50- 3.60
68	L2	AR1221-E #2	400.000 441.676	-10.4 100 0.00	3.56- 3.66
69	L3	AR1232-A #2		-----NA-----	
70	L3	AR1232-B #2		-----NA-----	
71	L3	AR1232-C #2		-----NA-----	
72	L3	AR1232-D #2		-----NA-----	
73	L3	AR1232-E #2		-----NA-----	
74	L3	AR1232-F #2		-----NA-----	
75	L4	AR1242-A #2		-----NA-----	
76	L4	AR1242-B #2		-----NA-----	
77	L4	AR1242-C #2		-----NA-----	
78	L4	AR1242-D #2		-----NA-----	
79	L4	AR1242-E #2		-----NA-----	
80	L4	AR1242-F #2		-----NA-----	
81	L5	AR1248-A #2		-----NA-----	
82	L5	AR1248-B #2		-----NA-----	
83	L5	AR1248-C #2		-----NA-----	
84	L5	AR1248-D #2		-----NA-----	
85	L5	AR1248-E #2		-----NA-----	
86	L5	AR1248-F #2		-----NA-----	
87	L6	AR1254-A #2	400.000 439.194	-9.8 102 0.00	4.27- 4.37
88	L6	AR1254-B #2	400.000 458.430	-14.6 111 0.00	4.66- 4.76
89	L6	AR1254-C #2	400.000 480.406	-20.1# 116 0.00	5.05- 5.15

8.6.17

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Continuing Calibration Summary

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM892-CC891
Lab FileID: MM46643.D

90	L6	AR1254-D #2	400.000	495.972	-24.0#	121	0.00	5.21-	5.31
91	L6	AR1254-E #2	400.000	483.727	-20.9#	118	0.00	5.38-	5.48
92	L6	AR1254-F #2	400.000	493.612	-23.4#	118	0.00	5.51-	5.61
93	L7	AR1260-A #2			-----NA-----				
94	L7	AR1260-B #2			-----NA-----				
95	L7	AR1260-C #2			-----NA-----				
96	L7	AR1260-D #2			-----NA-----				
97	L7	AR1260-E #2			-----NA-----				
98	L7	AR1260-F #2			-----NA-----				
----- Amount Calc. %Drift -----									
99	L9	AR1262-A #2			-----NA-----				
100	L9	AR1262-B #2			-----NA-----				
101	L9	AR1262-C #2			-----NA-----				
102	L9	AR1262-D #2			-----NA-----				
103	L9	AR1262-E #2			-----NA-----				
104	L9	AR1262-F #2			-----NA-----				
105	L8	AR1268-A #2			-----NA-----				
106	L8	AR1268-B #2			-----NA-----				
107	L8	AR1268-C #2			-----NA-----				
108	L8	AR1268-D #2			-----NA-----				
109	L8	AR1268-E #2			-----NA-----				
110	L8	AR1268-F #2			-----NA-----				
----- Amount Calc. %Drift -----									
111	S	Decachlorobiphenyl #2			-----NA-----				

(#) = Out of Range
MM46545.D 8082dod1103.m

SPCC's out = 0 CCC's out = 0
Tue Nov 07 10:02:58 2017

8.6.17
8

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14487
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:42	MA14487-STD1	1		STDA
09:46	MA14487-STD2	1		STDB
09:50	MA14487-STD3	1		STDC
09:57	MA14487-STD4	1		STDD
10:01	MA14487-HSTD1	1		
10:07	MA14487-ICV1	1		
10:15	MA14487-ICB1	1		
10:21	MA14487-CRIA1	1		
10:30	MA14487-ICSA1	1		
10:37	MA14487-ICSAB1	1		
10:47	MA14487-CCV1	1		
10:58	MA14487-CCB1	1		
11:03	ZZZZZZ	20		
11:07	ZZZZZZ	20		
11:11	ZZZZZZ	20		
11:16	ZZZZZZ	2		
11:20	ZZZZZZ	2		
11:25	FA48403-4	50		(sample used for QC only; not part of login FA48965)
11:29	MP32969-D1	50		
11:34	MP32969-S1	50		
11:38	MP32969-S2	50		
11:43	MP32969-PS1	50		
11:47	MA14487-CCV2	1		
11:51	MA14487-CCB2	1		
11:56	MP32969-SD1	250		
12:00	ZZZZZZ	25		
12:05	ZZZZZZ	10		
12:09	ZZZZZZ	50		
12:14	ZZZZZZ	50		
12:18	ZZZZZZ	10		
12:23	ZZZZZZ	25		
12:27	ZZZZZZ	50		
12:32	ZZZZZZ	20		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14487
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:36	ZZZZZZ	20		
12:40	MA14487-CCV3	1		
12:45	MA14487-CCB3	1		
14:12	MA14487-CCV4	1		
14:25	MA14487-CCB4	1		
14:30	ZZZZZZ	50		
14:34	ZZZZZZ	50		
14:39	ZZZZZZ	50		
14:43	ZZZZZZ	10		
14:48	MP32969-S2	10		
14:53	MP32974-MB1	1		
14:57	MP32974-B1	1		
15:01	FA48786-1	1		(sample used for QC only; not part of login FA48965)
15:06	MP32974-D1	1		
15:10	MP32974-SD1	5		
15:15	MA14487-CCV5	1		
15:19	MA14487-CCB5	1		
15:23	MP32974-PS1	1		
15:28	MP32974-S1	1		
15:32	MP32974-S2	1		
15:36	ZZZZZZ	1		
15:40	ZZZZZZ	1		
15:45	ZZZZZZ	1		
15:49	ZZZZZZ	1		
15:54	ZZZZZZ	1		
16:08	MA14487-CCV6	1		
16:12	MA14487-CCB6	1		
16:16	ZZZZZZ	1		
16:21	ZZZZZZ	1		
16:25	ZZZZZZ	1		
16:30	ZZZZZZ	1		
16:34	ZZZZZZ	1		
16:39	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14487
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:43	ZZZZZZ	1		
16:47	ZZZZZZ	1		
16:52	ZZZZZZ	1		
16:56	ZZZZZZ	1		
17:01	MA14487-CCV7	1		
17:05	MA14487-CCB7	1		
17:09	MP32972-MB1	1		
17:14	MP32972-B1	1		
17:46	ZZZZZZ	5		
17:50	ZZZZZZ	1		
17:54	MA14487-CCV8	1		
17:59	MA14487-CCB8	1		
18:03	ZZZZZZ	1		
18:07	ZZZZZZ	1		
18:12	ZZZZZZ	5		
18:16	ZZZZZZ	5		
18:21	ZZZZZZ	5		
18:25	ZZZZZZ	5		
18:29	ZZZZZZ	5		
18:34	ZZZZZZ	5		
18:38	FA48965-2	5		
----->	Last reportable sample/prep for job FA48965			
18:43	ZZZZZZ	1		
18:47	MA14487-CCV9	1		
18:51	MA14487-CCB9	1		
18:56	ZZZZZZ	1		
19:00	MA14487-CRIA2	1		
19:05	MA14487-ICSA2	1		
19:09	MA14487-ICSAB2	1		
19:14	MA14487-CCV10	1		
19:18	MA14487-CCB10	1		
----->	Last reportable CCB for job FA48965 Refer to raw data for calibration curve and standards.			

INTERNAL STANDARD SUMMARY

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14487
Parameters: As, Ba, Cd, Cr, Pb, Se, Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
09:42	MA14487-STD1	5945	40523	4665	2351
09:46	MA14487-STD2	5915	40327	4676	2216
09:50	MA14487-STD3	5723	39261	4634	2019
09:57	MA14487-STD4	5446	38046	4522	1847
10:01	MA14487-HSTD1	5440	38197	4543	1852
10:07	MA14487-ICV1	5647	38839	4566	1999
10:15	MA14487-ICB1	5892 R	40102 R	4598 R	2335 R
10:21	MA14487-CRIA1	5807	39856	4618	2247
10:30	MA14487-ICSA1	5227	35789	4311	1737
10:37	MA14487-ICSAB1	5251	36203	4356	1726
10:47	MA14487-CCV1	5594	38833	4500	1987
10:58	MA14487-CCB1	5829	40066	4506	2328
11:03	ZZZZZZ	5930	40747	4581	2337
11:07	ZZZZZZ	5883	40700	4604	2320
11:11	ZZZZZZ	5902	40647	4581	2325
11:16	ZZZZZZ	4616	31532	4292	1536
11:20	ZZZZZZ	4642	31517	4263	1540
11:25	FA48403-4	5729	39380	4499	2165
11:29	MP32969-D1	5752	39428	4506	2176
11:34	MP32969-S1	5751	39420	4525	2171
11:38	MP32969-S2	5678	39292	4497	2147
11:43	MP32969-PS1	5736	39353	4531	2162
11:47	MA14487-CCV2	5616	38582	4469	1993
11:51	MA14487-CCB2	5854	39967	4511	2317
11:56	MP32969-SD1	5850	39993	4551	2279
12:00	ZZZZZZ	5727	39389	4541	2082
12:05	ZZZZZZ	5804	39670	4583	2113
12:09	ZZZZZZ	5726	39290	4502	2149
12:14	ZZZZZZ	5717	39213	4523	2144
12:18	ZZZZZZ	5349	37887	4474	1900
12:23	ZZZZZZ	5739	39402	4553	2147
12:27	ZZZZZZ	5690	39217	4497	2133
12:32	ZZZZZZ	5734	39306	4519	2136

INTERNAL STANDARD SUMMARY

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14487
Parameters: As, Ba, Cd, Cr, Pb, Se, Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
12:36	ZZZZZZ	5768	39618	4533	2137
12:40	MA14487-CCV3	5595	38486	4411	1981
12:45	MA14487-CCB3	5806	39628	4493	2312
14:12	MA14487-CCV4	5550	37852	4360	1959
14:25	MA14487-CCB4	5799	39231	4393	2301
14:30	ZZZZZZ	5694	38929	4395	2162
14:34	ZZZZZZ	5713	39089	4487	2174
14:39	ZZZZZZ	5742	38998	4445	2169
14:43	ZZZZZZ	5311	37416	4373	1883
14:48	MP32969-S2	5271	37406	4384	1888
14:53	MP32974-MB1	5868	40366	4478	2322
14:57	MP32974-B1	5736	39287	4460	2099
15:01	FA48786-1	5815	39619	4489	2220
15:06	MP32974-D1	5830	39766	4480	2221
15:10	MP32974-SD1	5852	39682	4434	2289
15:15	MA14487-CCV5	5585	38154	4362	1971
15:19	MA14487-CCB5	5825	39503	4418	2303
15:23	MP32974-PS1	5769	39299	4485	2150
15:28	MP32974-S1	5745	38874	4455	2055
15:32	MP32974-S2	5747	39057	4461	2062
15:36	ZZZZZZ	5882	40575	4485	2334
15:40	ZZZZZZ	5845	39797	4448	2315
15:45	ZZZZZZ	5862	40113	4456	2282
15:49	ZZZZZZ	5700	39264	4468	2210
15:54	ZZZZZZ	5714	39513	4484	2187
16:08	MA14487-CCV6	5648	38617	4397	1996
16:12	MA14487-CCB6	5807	39573	4374	2300
16:16	ZZZZZZ	5794	39556	4430	2237
16:21	ZZZZZZ	5784	39738	4438	2222
16:25	ZZZZZZ	5688	39101	4481	2105
16:30	ZZZZZZ	5643	38857	4408	2131
16:34	ZZZZZZ	5820	40106	4524	2155
16:39	ZZZZZZ	5771	39508	4469	2163

INTERNAL STANDARD SUMMARY

Login Number: FA48965
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
 Analyst: LM Run ID: MA14487
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:43	ZZZZZZ	5629	38910	4425	2113
16:47	ZZZZZZ	5865	40187	4494	2199
16:52	ZZZZZZ	5702	39105	4410	2138
16:56	ZZZZZZ	5733	39329	4482	2167
17:01	MA14487-CCV7	5617	38566	4352	1993
17:05	MA14487-CCB7	5868	39850	4406	2319
17:09	MP32972-MB1	5910	40419	4448	2347
17:14	MP32972-B1	5727	38999	4385	2097
17:46	ZZZZZZ	6352	43141	4832	2154
17:50	ZZZZZZ	6542	44782	5035	2091
17:54	MA14487-CCV8	5697	39073	4445	2014
17:59	MA14487-CCB8	5908	40364	4479	2346
18:03	ZZZZZZ	6419	43944	4941	2044
18:07	ZZZZZZ	6695	45381	5112	2029
18:12	ZZZZZZ	6735	45707	5209	2047
18:16	ZZZZZZ	6900	46699	5315	2014
18:21	ZZZZZZ	6599	44675	5035	2066
18:25	ZZZZZZ	6681	45786	5123	2071
18:29	ZZZZZZ	6764	46207	5204	2092
18:34	ZZZZZZ	6362	43576	4880	2121
18:38	FA48965-2	6115	42132	4754	2032
18:43	ZZZZZZ	6313	43479	4843	2248
18:47	MA14487-CCV9	5696	39254	4425	2021
18:51	MA14487-CCB9	5936	41080	4491	2375
18:56	ZZZZZZ	6034	41826	4562	2339
19:00	MA14487-CRIA2	5898	40946	4548	2301
19:05	MA14487-ICSA2	5244	36092	4152	1756
19:09	MA14487-ICSAB2	5275	36590	4215	1750
19:14	MA14487-CCV10	5684	39337	4358	2024
19:18	MA14487-CCB10	5934	40966	4467	2372

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %

INTERNAL STANDARD SUMMARY

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14487
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Sample					
Time	Description	Istd#1	Istd#2	Istd#3	Istd#4
Istd#4	Indium		60-125 %		

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14487 Units: ug/l

Time: Sample ID:			10:15 ICB1		10:58 CCB1		11:51 CCB2		12:45 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	6.0	1	anr							
Arsenic	10	1.3	0.10	<10	0.10	<10	0.50	<10	0.40	<10
Barium	200	1	0.0	<200	0.30	<200	0.20	<200	0.30	<200
Beryllium	4.0	.2	anr							
Cadmium	5.0	.2	0.10	<5.0	0.20	<5.0	0.20	<5.0	0.10	<5.0
Calcium	1000	50	anr							
Chromium	10	1	0.20	<10	0.40	<10	0.30	<10	0.20	<10
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	17	anr							
Lead	5.0	1	0.20	<5.0	0.20	<5.0	0.0	<5.0	0.60	<5.0
Magnesium	5000	35	anr							
Manganese	15	.5	anr							
Molybdenum	50	.3								
Nickel	40	.4	anr							
Potassium	10000	200	anr							
Selenium	10	2.4	0.50	<10	-1.5	<10	-0.50	<10	-0.90	<10
Silver	10	.7	0.0	<10	0.20	<10	0.20	<10	0.0	<10
Sodium	10000	500	anr							
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14487 Units: ug/l

Time: Sample ID:			14:25 CCB4		15:19 CCB5		16:12 CCB6		17:05 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	6.0	1	anr							
Arsenic	10	1.3	0.0	<10	0.30	<10	0.0	<10	0.10	<10
Barium	200	1	0.10	<200	0.20	<200	0.20	<200	0.30	<200
Beryllium	4.0	.2	anr							
Cadmium	5.0	.2	0.10	<5.0	0.20	<5.0	0.0	<5.0	0.10	<5.0
Calcium	1000	50	anr							
Chromium	10	1	0.10	<10	0.0	<10	0.0	<10	0.10	<10
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	17	anr							
Lead	5.0	1	0.70	<5.0	0.40	<5.0	0.10	<5.0	-0.20	<5.0
Magnesium	5000	35	anr							
Manganese	15	.5	anr							
Molybdenum	50	.3								
Nickel	40	.4	anr							
Potassium	10000	200	anr							
Selenium	10	2.4	1.1	<10	0.50	<10	0.20	<10	1.1	<10
Silver	10	.7	0.10	<10	0.10	<10	0.0	<10	0.10	<10
Sodium	10000	500	anr							
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

9.1.2
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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14487 Units: ug/l

Time: Sample ID:			17:59 CCB8		18:51 CCB9		19:18 CCB10	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	14	anr					
Antimony	6.0	1	anr					
Arsenic	10	1.3	0.60	<10	-0.30	<10	-0.70	<10
Barium	200	1	0.20	<200	0.20	<200	0.10	<200
Beryllium	4.0	.2	anr					
Cadmium	5.0	.2	0.20	<5.0	0.10	<5.0	0.0	<5.0
Calcium	1000	50	anr					
Chromium	10	1	0.30	<10	0.30	<10	0.10	<10
Cobalt	50	.2	anr					
Copper	25	1	anr					
Iron	300	17	anr					
Lead	5.0	1	-0.30	<5.0	0.30	<5.0	0.0	<5.0
Magnesium	5000	35	anr					
Manganese	15	.5	anr					
Molybdenum	50	.3						
Nickel	40	.4	anr					
Potassium	10000	200	anr					
Selenium	10	2.4	1.8	<10	1.5	<10	1.8	<10
Silver	10	.7	0.60	<10	0.20	<10	0.30	<10
Sodium	10000	500	anr					
Strontium	10	.5						
Thallium	10	1.1	anr					
Tin	50	.9						
Titanium	10	.5						
Vanadium	50	.5	anr					
Zinc	20	3	anr					

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14487 Units: ug/l

Time: Sample ID:	ICV	10:07 ICV1	% Rec	CCV	10:47 CCV1	% Rec	CCV	11:47 CCV2	% Rec
Metal	True	Results		True	Results		True	Results	
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2030	101.5	2000	2040	102.0	2000	2030	101.5
Barium	2000	2030	101.5	2000	2040	102.0	2000	2040	102.0
Beryllium	anr								
Cadmium	2000	2050	102.5	2000	2060	103.0	2000	2050	102.5
Calcium	anr								
Chromium	2000	2030	101.5	2000	2030	101.5	2000	2020	101.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2000	100.0	2000	2040	102.0	2000	2030	101.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2000	100.0	2000	2030	101.5	2000	2020	101.0
Silver	250	247	98.8	250	250	100.0	250	250	100.0
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14487 Units: ug/l

Time: Sample ID:	CCV	12:40 CCV3	% Rec	CCV	14:12 CCV4	% Rec	CCV	15:15 CCV5	% Rec
Metal	True	Results		True	Results		True	Results	
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2040	102.0	2000	2000	100.0	2000	2000	100.0
Barium	2000	2060	103.0	2000	2010	100.5	2000	2020	101.0
Beryllium	anr								
Cadmium	2000	2060	103.0	2000	2030	101.5	2000	2030	101.5
Calcium	anr								
Chromium	2000	2040	102.0	2000	2010	100.5	2000	2020	101.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2050	102.5	2000	2020	101.0	2000	2020	101.0
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2030	101.5	2000	2010	100.5	2000	2010	100.5
Silver	250	252	100.8	250	253	101.2	250	253	101.2
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14487 Units: ug/l

Time: Sample ID:	CCV	16:08 CCV6	% Rec	CCV	17:01 CCV7	% Rec	CCV	17:54 CCV8	% Rec
Metal	True	Results		True	Results		True	Results	
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1980	99.0	2000	2010	100.5	2000	1980	99.0
Barium	2000	2010	100.5	2000	2030	101.5	2000	2000	100.0
Beryllium	anr								
Cadmium	2000	2010	100.5	2000	2030	101.5	2000	2000	100.0
Calcium	anr								
Chromium	2000	2020	101.0	2000	2050	102.5	2000	2010	100.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2010	100.5	2000	2030	101.5	2000	2000	100.0
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	1990	99.5	2000	2010	100.5	2000	1990	99.5
Silver	250	251	100.4	250	253	101.2	250	252	100.8
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14487 Units: ug/l

Time: Sample ID:	CCV	18:47 CCV9	% Rec	CCV	19:14 CCV10	% Rec
Metal	True	Results		True	Results	
Aluminum	anr					
Antimony	anr					
Arsenic	2000	2000	100.0	2000	2000	100.0
Barium	2000	2030	101.5	2000	2040	102.0
Beryllium	anr					
Cadmium	2000	2010	100.5	2000	2000	100.0
Calcium	anr					
Chromium	2000	2010	100.5	2000	2020	101.0
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	2000	2010	100.5	2000	2000	100.0
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	2000	2020	101.0	2000	2020	101.0
Silver	250	254	101.6	250	253	101.2
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
 QC Limits: 95 to 105 % Recovery Run ID: MA14487 Units: ug/l

Time: Sample ID:	HSTD	10:01 HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	4000	4090	102.3
Barium	4000	4050	101.3
Beryllium	anr		
Cadmium	4000	4030	100.8
Calcium	anr		
Chromium	4000	3970	99.3
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	4000	4050	101.3
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	4000	4060	101.5
Silver	500	500	100.0
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
 (anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA14487 Units: ug/l

Time: Sample ID:	CRI	CRIA	10:21 CRIA1	% Rec	19:00 CRIA2	% Rec
Metal	True	True	Results		Results	
Aluminum	400	200	anr			
Antimony	10	5.0	anr			
Arsenic	20	10	10.3	103.0	10.5	105.0
Barium	400	200	202	101.0	201	100.5
Beryllium	10	5.0	anr			
Cadmium	10	5.0	5.3	106.0	5.1	102.0
Calcium	2000	1000	anr			
Chromium	20	10	10.7	107.0	10.4	104.0
Cobalt	100	50	anr			
Copper	50	25	anr			
Iron	600	300	anr			
Lead	10	5.0	4.9	98.0	4.6	92.0
Magnesium	10000	5000	anr			
Manganese	30	15	anr			
Molybdenum	100	50				
Nickel	80	40	anr			
Potassium	20000	10000	anr			
Selenium	20	10	9.7	97.0	9.4	94.0
Silver	20	10	8.3	83.0	8.7	87.0
Sodium	20000	10000	anr			
Strontium	20	10				
Thallium	20	10	anr			
Tin	100	50				
Titanium	20	10				
Vanadium	100	50	anr			
Zinc	40	20	anr			

(*) Outside of QC limits
 (anr) Analyte not requested

9.1.5
 9

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA110817M1.ICP Date Analyzed: 11/08/17 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA14487 Units: ug/l

Time: Sample ID:	ICSA True	ICSAB True	10:30 ICSA1 Results	% Rec	10:37 ICSAB1 Results	% Rec	19:05 ICSA2 Results	% Rec	19:09 ICSAB2 Results	% Rec
Metal										
Aluminum	500000	500000	506000	101.2	516000	103.2	531000	106.2	530000	106.0
Antimony		1000	-1.0		991	99.1	-3.1		993	99.3
Arsenic		1000	0.40		1070	107.0	0.50		1060	106.0
Barium		500	0.50		500	100.0	0.30		505	101.0
Beryllium		500	-0.10		477	95.4	-0.10		483	96.6
Cadmium		1000	0.0		915	91.5	0.20		899	89.9
Calcium	500000	500000	473000	94.6	475000	95.0	474000	94.8	474000	94.8
Chromium		500	-0.90		474	94.8	0.0		475	95.0
Cobalt		500	0.40		452	90.4	0.0		449	89.8
Copper		500	0.0		502	100.4	-5.2		509	101.8
Iron	200000	200000	187000	93.5	186000	93.0	188000	94.0	186000	93.0
Lead		1000	0.0		932	93.2	2.2		916	91.6
Magnesium	500000	500000	523000	104.6	519000	103.8	516000	103.2	509000	101.8
Manganese		500	-0.40		464	92.8	-0.50		466	93.2
Molybdenum		1000	0.20		979	97.9	-0.40		975	97.5
Nickel		1000	0.0		923	92.3	0.50		925	92.5
Potassium			8.3		-7.3		93.2		28.7	
Selenium		1000	0.0		991	99.1	1.6		990	99.0
Silver		1000	-0.50		992	99.2	-0.10		1070	107.0
Sodium			157		145		149		141	
Strontium		1000	0.50		1040	104.0	1.0		1050	105.0
Thallium		1000	-0.60		928	92.8	-1.3		939	93.9
Tin		1000	3.4		944	94.4	2.4		939	93.9
Titanium		1000	0.90		992	99.2	0.50		1000	100.0
Vanadium		500	-0.80		453	90.6	-0.40		453	90.6
Zinc		1000	-0.90		897	89.7	-1.2		887	88.7

(*) Outside of QC limits
(anr) Analyte not requested

9.1.6
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SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV
Analyst: DM
Parameters: Hg

Date Analyzed: 11/09/17 Methods: SW846 7471B
Run ID: MA14488

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:38	MA14488-STD1	1		STD1
09:39	MA14488-STD2	1		STD2
09:41	MA14488-STD3	1		STD3
09:42	MA14488-STD4	1		STD4
09:44	MA14488-STD5	1		STD5
09:46	MA14488-STD6	1		STD6
09:48	MA14488-HSTD1	1		
09:50	MA14488-ICV1	1		
09:52	MA14488-ICB1	1		
09:54	MA14488-CRI1	1		
09:56	MA14488-CCV1	1		
09:57	MA14488-CCB1	1		
09:59	MP32976-MB1	1		
10:00	MP32976-B1	1		
10:02	FA48403-7	1		(sample used for QC only; not part of login FA48965)
10:04	MP32976-D1	1		
10:05	MP32976-SD1	1		
10:07	MP32976-S1	1		
10:08	MP32976-S2	1		
10:10	ZZZZZZ	1		
10:12	ZZZZZZ	1		
10:14	ZZZZZZ	1		
10:16	MA14488-CCV2	1		
10:17	MA14488-CCB2	1		
10:19	ZZZZZZ	1		
10:20	ZZZZZZ	1		
10:22	ZZZZZZ	1		
10:23	ZZZZZZ	1		
10:25	ZZZZZZ	1		
10:26	ZZZZZZ	1		
10:28	ZZZZZZ	1		
10:30	ZZZZZZ	1		
10:31	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV
Analyst: DM
Parameters: Hg

Date Analyzed: 11/09/17 Methods: SW846 7471B
Run ID: MA14488

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:32	ZZZZZZ	1		
10:34	MA14488-CCV3	1		
10:35	MA14488-CCB3	1		
10:37	ZZZZZZ	1		
10:38	ZZZZZZ	1		
10:40	ZZZZZZ	1		
10:41	ZZZZZZ	1		
10:43	ZZZZZZ	1		
10:44	ZZZZZZ	1		
10:46	MP32977-MB1	1		
10:47	MP32977-B1	1		
10:48	FA48949-1	1		(sample used for QC only; not part of login FA48965)
10:50	MP32977-D1	1		
10:52	MA14488-CCV4	1		
10:53	MA14488-CCB4	1		
10:55	MP32977-SD1	1		
10:56	MP32977-S1	1		
10:58	MP32977-S2	1		
11:00	ZZZZZZ	1		
11:02	ZZZZZZ	1		
11:03	ZZZZZZ	1		
11:05	ZZZZZZ	1		
11:07	ZZZZZZ	1		
11:08	FA48965-2	1		
----->	Last reportable sample/prep for job FA48965			
11:10	ZZZZZZ	1		
11:11	MA14488-CCV5	1		
11:12	MA14488-CCB5	1		
11:14	ZZZZZZ	1		
11:16	ZZZZZZ	1		
11:17	ZZZZZZ	1		
11:18	ZZZZZZ	1		
11:20	ZZZZZZ	1		
11:22	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV Date Analyzed: 11/09/17 Methods: SW846 7471B
Analyst: DM Run ID: MA14488
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:23	ZZZZZZ	1		
11:25	ZZZZZZ	1		
11:26	ZZZZZZ	1		
11:27	MA14488-CRI2	1		
11:29	MA14488-CCV6	1		
11:30	MA14488-CCB6	1		
----->	Last reportable CCB for job FA48965			
11:32	MA14488-CCV7	1		
11:34	MA14488-CCB7	1		

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
 Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48965
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV Date Analyzed: 11/09/17 Methods: SW846 7471B
 QC Limits: result < RL Run ID: MA14488 Units: ug/l

Time: Sample ID:			09:52 ICB1		09:57 CCB1		10:17 CCB2		10:35 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.042	<0.50	-0.041	<0.50	-0.034	<0.50	-0.043	<0.50

(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV Date Analyzed: 11/09/17 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA14488 Units: ug/l

Time: Sample ID:			10:53 CCB4		11:12 CCB5		11:30 CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.035	<0.50	-0.040	<0.50	-0.039	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV Date Analyzed: 11/09/17 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA14488 Units: ug/l

Time:		09:50		09:56		10:16	
Sample ID:	ICV	ICV1	CCV	CCV1	CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True
Mercury	3.0	3.0	100.0	3	2.9	96.7	3.0
							3.0
							100.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV Date Analyzed: 11/09/17 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA14488 Units: ug/l

Time:		10:34		10:52		11:11	
Sample ID:	CCV	CCV3	CCV	CCV4	CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3
							2.9
							96.7

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV Date Analyzed: 11/09/17 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA14488 Units: ug/l

Time:	11:29
Sample ID: CCV	CCV6
Metal	True
Results	% Rec
Mercury	3 2.9 96.7

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV Date Analyzed: 11/09/17 Methods: SW846 7471B
 QC Limits: 95 to 105 % Recovery Run ID: MA14488 Units: ug/l

Time:	09:48		
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6.0	6.0	100.0

(*) Outside of QC limits
 (anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA48965
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51109S1.CSV Date Analyzed: 11/09/17 Methods: SW846 7471B
 QC Limits: 80 to 120 % Recovery Run ID: MA14488 Units: ug/l

Time:				09:54		11:27	
Sample ID:	CRI	CRIA	CRI1			CRI2	
Metal	True	True	Results	% Rec		Results	% Rec
Mercury	0.20		0.20	100.0		0.14	70.0*(a)

(*) Outside of QC limits
 (anr) Analyte not requested
 (a) Possible instrument baseline drift.

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14490
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:20	MA14490-STD1	1		STDA
10:24	MA14490-STD2	1		STDB
10:28	MA14490-STD3	1		STDC
10:31	MA14490-STD4	1		STDD
10:35	MA14490-HSTD1	1		
10:46	MA14490-ICV1	1		
11:01	MA14490-ICB1	1		
11:35	MA14490-CRIA1	1		
11:41	MA14490-ICSA1	1		
11:47	MA14490-ICSAB1	1		
11:57	MA14490-CCV1	1		
12:08	MA14490-CCB1	1		
12:20	MP32982-MB1	1		
12:25	MP32982-B1	1		
12:29	FA48934-1	1		(sample used for QC only; not part of login FA48965)
12:33	MP32982-D1	1		
12:37	MP32982-SD1	5		
12:41	MP32982-PS1	1		
12:45	MP32982-S1	1		
12:49	MP32982-S2	1		
12:53	ZZZZZZ	1		
12:57	ZZZZZZ	1		
13:01	MA14490-CCV2	1		
13:05	MA14490-CCB2	1		
13:09	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:17	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:26	ZZZZZZ	1		
13:30	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:38	ZZZZZZ	1		
13:42	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14490
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:47	ZZZZZZ	1		
13:51	MA14490-CCV3	1		
13:55	MA14490-CCB3	1		
13:59	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:24	ZZZZZZ	1		
14:58	MA14490-CCV4	1		
15:04	MA14490-CCB4	1		
15:09	FA48995-1	10		(sample used for QC only; not part of login FA48965)
15:13	MP32972-D1	10		
15:17	MP32972-S1	10		
15:21	MP32972-S2	10		
15:25	MP32972-PS1	10		
15:29	MP32972-SD1	50		
----->	Last reportable sample/prep for job FA48965			
15:33	ZZZZZZ	4		
15:38	ZZZZZZ	50		
15:42	ZZZZZZ	4		
15:47	ZZZZZZ	25		
15:51	MA14490-CCV5	1		
15:55	MA14490-CCB5	1		
15:59	ZZZZZZ	4		
16:03	MA14490-CRIA2	1		
16:07	MA14490-ICSA2	1		
16:12	MA14490-ICSAB2	1		
16:15	MA14490-CCV6	1		
16:19	MA14490-CCB6	1		
----->	Last reportable CCB for job FA48965 Refer to raw data for calibration curve and standards.			

INTERNAL STANDARD SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
 Analyst: LM Run ID: MA14490
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:20	MA14490-STD1	5251	32112	1319	1963
10:24	MA14490-STD2	5200	31623	1309	1857
10:28	MA14490-STD3	5057	30803	1328	1716
10:31	MA14490-STD4	4879	30245	1300	1589
10:35	MA14490-HSTD1	4875	30330	1310	1588
10:46	MA14490-ICV1	5072	31202	1308	1704
11:01	MA14490-ICB1	5275 R	32516 R	1314 R	1956 R
11:35	MA14490-CRIA1	5269	31973	1311	1910
11:41	MA14490-ICSA1	4681	28195	1252	1504
11:47	MA14490-ICSAB1	4657	28245	1274	1484
11:57	MA14490-CCV1	5087	30940	1303	1689
12:08	MA14490-CCB1	5259	32145	1304	1941
12:20	MP32982-MB1	5258	32696	1327	1954
12:25	MP32982-B1	5086	31420	1289	1778
12:29	FA48934-1	6314	38309	1600	1860
12:33	MP32982-D1	6332	38562	1626	1853
12:37	MP32982-SD1	5432	33197	1363	1914
12:41	MP32982-PS1	6227	38044	1586	1815
12:45	MP32982-S1	6158	37486	1591	1734
12:49	MP32982-S2	6140	37095	1576	1735
12:53	ZZZZZZ	6664 !	40161	1668 !	1809
12:57	ZZZZZZ	5853	35301	1472	1795
13:01	MA14490-CCV2	5035	30776	1285	1686
13:05	MA14490-CCB2	5201	31929	1295	1935
13:09	ZZZZZZ	6628 !	40269	1677 !	1835
13:13	ZZZZZZ	5254	32010	1320	1915
13:17	ZZZZZZ	5222	32101	1326	1836
13:22	ZZZZZZ	5169	31322	1317	1771
13:26	ZZZZZZ	5258	31949	1327	1908
13:30	ZZZZZZ	5219	31835	1308	1878
13:34	ZZZZZZ	5328	32170	1334	1845
13:38	ZZZZZZ	5355	32233	1320	1875
13:42	ZZZZZZ	5288	31784	1319	1848

INTERNAL STANDARD SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
 Analyst: LM Run ID: MA14490
 Parameters: As, Ba, Cd, Cr, Pb, Se, Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:47	ZZZZZZ	5549	33211	1477	1455
13:51	MA14490-CCV3	5013	30674	1288	1684
13:55	MA14490-CCB3	5163	31506	1280	1917
13:59	ZZZZZZ	5437	32597	1427	1536
14:03	ZZZZZZ	5322	32434	1325	1883
14:07	ZZZZZZ	5505	32873	1401	1715
14:24	ZZZZZZ	5132	31829	1439	1361
14:58	MA14490-CCV4	4951	29888	1262	1645
15:04	MA14490-CCB4	5114	31119	1264	1895
15:09	FA48995-1	5874	35604	1449	1872
15:13	MP32972-D1	5816	35384	1451	1878
15:17	MP32972-S1	6992 !	42901 !	1772 !	1837
15:21	MP32972-S2	5749	35185	1453	1845
15:25	MP32972-PS1	5814	35710	1481	1864
15:29	MP32972-SD1	5258	32445	1333	1920
15:33	ZZZZZZ	4915	30825	1279	1814
15:38	ZZZZZZ	4836	29625	1258	1707
15:42	ZZZZZZ	4280	25634	1213	1422
15:47	ZZZZZZ	4911	30138	1259	1786
15:51	MA14490-CCV5	4857	30274	1258	1651
15:55	MA14490-CCB5	5031	31259	1266	1899
15:59	ZZZZZZ	4952	30555	1272	1801
16:03	MA14490-CRIA2	5036	30974	1271	1850
16:07	MA14490-ICSA2	4549	27363	1225	1477
16:12	MA14490-ICSAB2	4509	27419	1231	1453
16:15	MA14490-CCV6	4868	29969	1254	1655
16:19	MA14490-CCB6	5077	31328	1264	1905

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14490 Units: ug/l

Time: Sample ID:			11:01 ICB1		12:08 CCB1		13:05 CCB2		13:55 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	6.0	1	anr							
Arsenic	10	1.3	-0.80	<10	-0.10	<10	-0.30	<10	-0.50	<10
Barium	200	1	-0.20	<200	-0.10	<200	0.40	<200	0.10	<200
Beryllium	4.0	.2	anr							
Cadmium	5.0	.2	-0.10	<5.0	0.10	<5.0	0.10	<5.0	0.10	<5.0
Calcium	1000	50	anr							
Chromium	10	1	-0.40	<10	0.10	<10	-0.10	<10	-0.30	<10
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	17	anr							
Lead	5.0	1	0.60	<5.0	-0.10	<5.0	0.20	<5.0	0.10	<5.0
Magnesium	5000	35	anr							
Manganese	15	.5	anr							
Molybdenum	50	.3								
Nickel	40	.4	anr							
Potassium	10000	200	anr							
Selenium	10	2.4	-0.10	<10	1.1	<10	1.6	<10	-1.2	<10
Silver	10	.7	0.10	<10	0.40	<10	0.30	<10	0.50	<10
Sodium	10000	500	anr							
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14490 Units: ug/l

Time: Sample ID:			15:04 CCB4		15:55 CCB5		16:19 CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	200	14	anr					
Antimony	6.0	1	anr					
Arsenic	10	1.3	-0.80	<10	0.10	<10	-1.0	<10
Barium	200	1	0.30	<200	0.40	<200	0.10	<200
Beryllium	4.0	.2	anr					
Cadmium	5.0	.2	0.10	<5.0	0.10	<5.0	0.10	<5.0
Calcium	1000	50	anr					
Chromium	10	1	-0.10	<10	0.20	<10	-0.20	<10
Cobalt	50	.2	anr					
Copper	25	1	anr					
Iron	300	17	anr					
Lead	5.0	1	-0.30	<5.0	0.20	<5.0	-0.20	<5.0
Magnesium	5000	35	anr					
Manganese	15	.5	anr					
Molybdenum	50	.3						
Nickel	40	.4	anr					
Potassium	10000	200	anr					
Selenium	10	2.4	-0.10	<10	1.1	<10	0.70	<10
Silver	10	.7	0.10	<10	0.40	<10	0.30	<10
Sodium	10000	500	anr					
Strontium	10	.5						
Thallium	10	1.1	anr					
Tin	50	.9						
Titanium	10	.5						
Vanadium	50	.5	anr					
Zinc	20	3	anr					

(*) Outside of QC limits
(anr) Analyte not requested

9.3.2
9

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14490 Units: ug/l

Time: Sample ID:	ICV	10:46 ICV1	% Rec	CCV	11:57 CCV1	% Rec	CCV	13:01 CCV2	% Rec
Metal	True	Results		True	Results		True	Results	
Aluminum	anr								
Antimony	anr								
Arsenic	2000	1990	99.5	2000	1980	99.0	2000	2010	100.5
Barium	2000	2020	101.0	2000	2010	100.5	2000	2020	101.0
Beryllium	anr								
Cadmium	2000	2030	101.5	2000	2020	101.0	2000	2030	101.5
Calcium	anr								
Chromium	2000	2010	100.5	2000	2030	101.5	2000	2030	101.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	1950	97.5	2000	1990	99.5	2000	2010	100.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	1960	98.0	2000	1990	99.5	2000	2010	100.5
Silver	250	243	97.2	250	252	100.8	250	252	100.8
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14490 Units: ug/l

Time: Sample ID:	CCV	13:51 CCV3	% Rec	CCV	14:58 CCV4	% Rec	CCV	15:51 CCV5	% Rec
Metal	True	Results		True	Results		True	Results	
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2000	100.0	2000	2050	102.5	2000	2090	104.5
Barium	2000	2020	101.0	2000	2100	105.0	2000	2070	103.5
Beryllium	anr								
Cadmium	2000	2020	101.0	2000	2080	104.0	2000	2080	104.0
Calcium	anr								
Chromium	2000	2030	101.5	2000	2100	105.0	2000	2050	102.5
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2020	101.0	2000	2060	103.0	2000	2090	104.5
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2020	101.0	2000	2070	103.5	2000	2100	105.0
Silver	250	253	101.2	250	264	105.6	250	259	103.6
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

9.3.3
6

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14490 Units: ug/l

Time: Sample ID:	CCV	16:15 CCV6	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	2000	2100	105.0
Barium	2000	2080	104.0
Beryllium	anr		
Cadmium	2000	2070	103.5
Calcium	anr		
Chromium	2000	2070	103.5
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	2000	2090	104.5
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	2000	2110	105.5
Silver	250	262	104.8
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA48965
 Account: TCMW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
 QC Limits: 95 to 105 % Recovery Run ID: MA14490 Units: ug/l

Time: Sample ID:	HSTD	10:35 HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	4000	4040	101.0
Barium	4000	3950	98.8
Beryllium	anr		
Cadmium	4000	3990	99.8
Calcium	anr		
Chromium	4000	3970	99.3
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	4000	4030	100.8
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	4000	4010	100.3
Silver	500	493	98.6
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
 (anr) Analyte not requested

9.3.4
 9

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA14490 Units: ug/l

Time: Sample ID:	CRI	CRIA	11:35 CRIA1	% Rec	16:03 CRIA2	% Rec
Metal	True	True	Results		Results	
Aluminum	400	200	anr			
Antimony	10	5.0	anr			
Arsenic	20	10	9.2	92.0	9.3	93.0
Barium	400	200	199	99.5	206	103.0
Beryllium	10	5.0	anr			
Cadmium	10	5.0	5.2	104.0	5.3	106.0
Calcium	2000	1000	anr			
Chromium	20	10	10.2	102.0	10.5	105.0
Cobalt	100	50	anr			
Copper	50	25	anr			
Iron	600	300	anr			
Lead	10	5.0	4.4	88.0	5.0	100.0
Magnesium	10000	5000	anr			
Manganese	30	15	anr			
Molybdenum	100	50				
Nickel	80	40	anr			
Potassium	20000	10000	anr			
Selenium	20	10	11.2	112.0	10.1	101.0
Silver	20	10	8.4	84.0	8.7	87.0
Sodium	20000	10000	anr			
Strontium	20	10				
Thallium	20	10	anr			
Tin	100	50				
Titanium	20	10				
Vanadium	100	50	anr			
Zinc	40	20	anr			

(*) Outside of QC limits
 (anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA48965
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SB110917M1.ICP Date Analyzed: 11/09/17 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA14490 Units: ug/l

Time: Sample ID:	ICSA True	ICSAB True	11:41 ICSA1 Results	% Rec	11:47 ICSAB1 Results	% Rec	16:07 ICSA2 Results	% Rec	16:12 ICSAB2 Results	% Rec
Metal										
Aluminum	500000	500000	503000	100.6	505000	101.0	504000	100.8	512000	102.4
Antimony		1000	1.0		1000	100.0	-0.80		1050	105.0
Arsenic		1000	0.10		1070	107.0	1.4		1110	111.0
Barium		500	0.0		485	97.0	0.10		504	100.8
Beryllium		500	0.10		480	96.0	-0.10		493	98.6
Cadmium		1000	-0.70		918	91.8	-0.80		937	93.7
Calcium	500000	500000	472000	94.4	474000	94.8	473000	94.6	481000	96.2
Chromium		500	0.40		486	97.2	0.80		496	99.2
Cobalt		500	-0.10		457	91.4	0.0		469	93.8
Copper		500	-1.8		514	102.8	-1.5		533	106.6
Iron	200000	200000	183000	91.5	181000	90.5	187000	93.5	187000	93.5
Lead		1000	0.30		923	92.3	2.0		957	95.7
Magnesium	500000	500000	500000	100.0	494000	98.8	503000	100.6	505000	101.0
Manganese		500	0.0		474	94.8	0.0		495	99.0
Molybdenum		1000	0.0		989	98.9	-0.50		1040	104.0
Nickel		1000	0.0		942	94.2	0.20		984	98.4
Potassium			152		199		343		292	
Selenium		1000	0.0		1010	101.0	1.9		1050	105.0
Silver		1000	-0.20		976	97.6	0.0		1010	101.0
Sodium			268		301		805		643	
Strontium		1000	0.10		1010	101.0	1.0		1060	106.0
Thallium		1000	-0.90		952	95.2	-0.80		989	98.9
Tin		1000	4.8		967	96.7	5.0		996	99.6
Titanium		1000	0.10		1010	101.0	-0.30		1060	106.0
Vanadium		500	-0.20		469	93.8	-0.20		481	96.2
Zinc		1000	1.5		917	91.7	2.0		963	96.3

(*) Outside of QC limits
(anr) Analyte not requested

9.3.6
9

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32972
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 11/08/17

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	1.8		
Antimony	1.0	.05	.065		
Arsenic	0.50	.065	.1	-0.10	<0.50
Barium	10	.05	.05	0.030	<10
Beryllium	0.25	.01	.025		
Cadmium	0.20	.01	.025	-0.0050	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.035	<0.50
Cobalt	2.5	.01	.025		
Copper	1.3	.05	.05		
Iron	15	.85	.85		
Lead	1.0	.05	.05	0.0050	<1.0
Magnesium	250	1.8	1.8		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.015	.025		
Nickel	2.0	.02	.025		
Potassium	500	10	10		
Selenium	1.0	.12	.12	0.040	<1.0
Silver	0.50	.035	.041	0.0	<0.50
Sodium	500	25	25		
Strontium	0.50	.025	.025		
Thallium	0.50	.055	.055		
Tin	2.5	.045	.045		
Titanium	0.50	.025	.025		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15		

Associated samples MP32972: FA48965-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32972
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date:

11/08/17

11/08/17

Metal	FA48995-1 Original DUP		RPD	QC Limits	FA48995-1 Original MS		Spikelot MPFLICP2 % Rec		QC Limits
Aluminum	anr			0-20	3.2	102 (a)	121	81.7	80-120
Antimony	anr								
Arsenic	3.2	3.4 (a)							
Barium	2050	1620 (a)							
Beryllium	anr								
Cadmium	0.51	0.26 (a)							
Calcium	anr								
Chromium	84.4	89.7 (a)							
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	7.7	8.5 (a)	9.9	0-20	7.7	42.3 (a)	30.2	114.5	80-120
Magnesium	anr			0-20	0.0	101 (a)	121	83.5	80-120
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	0.0	0.0 (a)							
Silver	1.9	1.8 (a)							
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

Associated samples MP32972: FA48965-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Elevated reporting limit(s) due to matrix interference.

(b) High RPD due to possible sample non-homogeneity.

(c) RPD acceptable due to low duplicate and sample concentrations.

(d) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

(e) Spike recovery indicates possible matrix interference and/or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32972
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/08/17

Metal	FA48995-1 Original MSD	Spike lot MPFLICP2 % Rec	MSD RPD	QC Limit
Aluminum	anr			
Antimony	anr			
Arsenic	3.2	114 (a) 116	95.9	11.1 20
Barium	2050	2490 (a) 116	380.9(b)	26.8 (c) 20
Beryllium	anr			
Cadmium	0.51	3.2 (a) 2.89	93.2	6.5 20
Calcium	anr			
Chromium	84.4	105 (a) 11.6	178.3(b)	10.0 20
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	7.7	36.9 (a) 28.9	101.1	13.6 20
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	0.0	113 (a) 116	97.8	11.2 20
Silver	1.9	4.6 (a) 2.89	93.5	21.7 (c) 20
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP32972: FA48965-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Elevated reporting limit(s) due to matrix interference.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

(c) High RPD due to possible sample non-homogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32972
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/08/17

Metal	BSP Result	Spike lot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	96.9	100	96.9	80-120
Barium	101	100	101.0	80-120
Beryllium	anr			
Cadmium	2.5	2.5	100.0	80-120
Calcium	anr			
Chromium	10.3	10	103.0	80-120
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	23.8	25	95.2	80-120
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	95.5	100	95.5	80-120
Silver	2.4	2.5	96.0	80-120
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP32972: FA48965-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32972
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/08/17

Metal	FA48995-1 Original	SDL 10:50%DIF	QC Limits
Aluminum	anr		
Antimony	anr		
Arsenic	54.7	0.00	100.0(a) 0-10
Barium	35400	36300	2.5 0-10
Beryllium	anr		
Cadmium	8.80	0.00	100.0(a) 0-10
Calcium	anr		
Chromium	1460	1490	2.1 0-10
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	133	103	22.3 (a) 0-10
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	0.00	0.00	NC 0-10
Silver	32.5	47.5	46.2 (a) 0-10
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

Associated samples MP32972: FA48965-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

POST DIGESTATE SPIKE SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32972
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

11/08/17

Metal	Sample ml	Final ml	FA48995-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	9.8	10	54.7	53.606	161.4	0.2	5	100	107.8	80-120
Barium	9.8	10	35410	34701.8	36380	0.2	12.5	250	671.3*(a	80-120
Beryllium										
Cadmium	9.8	10	8.8	8.624	61.1	0.2	2.5	50	105.0	80-120
Calcium										
Chromium	9.8	10	1461	1431.78	1534	0.2	2.5	50	204.4*(a	80-120
Cobalt										
Copper										
Iron										
Lead	9.8	10	132.7	130.046	199.4	0.2	2.5	50	138.7*(a	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium	9.8	10			117.3	0.2	5	100	117.3	80-120
Silver	9.8	10	32.5	31.85	78.7	0.2	2.5	50	93.7	80-120
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP32972: FA48965-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(**) Corr. sample result = Raw * (sample volume / final volume)

(anr) Analyte not requested

(a) Spike recovery indicates matrix interference and/or outside control limits due to high level in sample relative to spike amount.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA48965
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32977
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 11/09/17

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	-0.0027	<0.042

Associated samples MP32977: FA48965-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA48965
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32977
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/09/17 11/09/17

Metal	FA48949-1 Original DUP		RPD	QC Limits	FA48949-1 Original MS		Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.024	0.022	8.7	0-20	0.024	0.32	0.296	100.2	80-120

Associated samples MP32977: FA48965-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA48965
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32977
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/09/17

Metal	FA48949-1 Original MSD	Spike lot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.024 0.33	0.3	101.8	3.1	20

Associated samples MP32977: FA48965-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA48965
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32977
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/09/17

Metal	BSP Result	Spike lot HGFLWS1	% Rec	QC Limits
Mercury	0.24	0.25	96.0	80-120

Associated samples MP32977: FA48965-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA48965
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32977
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: ug/l

Prep Date: 11/09/17

Metal	FA48949-1			QC Limits
	Original	SDL 1:1	%DIF	
Mercury	0.290	0.0435	85.0 (a)	0-10

Associated samples MP32977: FA48965-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

9.5.4

9

Instrument Detection Limits

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: LEEMANHG5	Effective Date: 10/01/12

Analyte	IDL ug/l
Mercury	.03

The above applies to the following instrument runs:
MA14488

Instrument Detection Limits

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: SSTRACE1	Effective Date: 01/27/15

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	1
Beryllium	.2
Cadmium	.2
Calcium	50
Chromium	1
Cobalt	.2
Copper	1
Iron	17
Lead	1
Magnesium	35
Manganese	.5
Molybdenum	.3
Nickel	.4
Potassium	200
Selenium	2.4
Silicon	5
Silver	.7
Sodium	500
Strontium	.5
Sulfur	5
Thallium	1.1
Tin	.9
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA14487

Instrument Detection Limits

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: SSTRACE2	Effective Date: 01/27/15

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	1
Beryllium	.2
Cadmium	.2
Calcium	50
Chromium	1
Cobalt	.2
Copper	1
Iron	17
Lead	1
Magnesium	35
Manganese	.5
Molybdenum	.3
Nickel	.4
Potassium	200
Selenium	2.4
Silicon	5
Silver	.7
Sodium	500
Strontium	.5
Sulfur	5
Thallium	1.1
Tin	.9
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA14490

Instrument Linear Ranges

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: SSTRACE1	Effective Date: 08/13/13

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Sulfur	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA14487

Instrument Linear Ranges

Job Number: FA48965
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: SSTRACE2	Effective Date: 10/22/10

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA14490

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: FA48965
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: FA48965-1		Analyzed: 06-NOV-17 by BW		Method: SM19 2540G	
ClientID: NIKE SWN EXT4					
Wet Weight (Total)	17.11	g			
Tare Weight	2.55	g			
Dry Weight (Total)	14.75	g			
Solids, Percent	83.8	%			
Sample: FA48965-2		Analyzed: 07-NOV-17 by BW		Method: SM19 2540G	
ClientID: NIKE BOT N3					
Wet Weight (Total)	25.11	g			
Tare Weight	2.57	g			
Dry Weight (Total)	21.36	g			
Solids, Percent	83.4	%			
Sample: FA48965-3		Analyzed: 07-NOV-17 by BW		Method: SM19 2540G	
ClientID: NIKE SWW2					
Wet Weight (Total)	20.53	g			
Tare Weight	2.54	g			
Dry Weight (Total)	16.95	g			
Solids, Percent	80.1	%			

10.1
10

Technical Report for

Tantara Corporation

USACE Buffalo Nike Missile UST; E Aurora, NY

16-299

SGS Accutest Job Number: FA49143

Sampling Date: 11/07/17

Report to:

mlovejoy@tantaracorp.com
andrea.colby@sgs.com

ATTN: Distribution3

Total number of pages in report: 238



Test results contained within this data package meet the requirements
of the National Environmental Laboratory Accreditation Program
and/or state specific certification programs as applicable.



Caitlin Brice, M.S.
General Manager

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)
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AK, AR, GA, IA, KY, MA, NV, OK, OR, UT, WA

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Test results relate only to samples analyzed.

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Sample Summary

Tantara Corporation

Job No: FA49143

USACE Buffalo Nike Missile UST; E Aurora, NY
Project No: 16-299

Sample Number	Collected		Matrix			Client Sample ID
	Date	Time By	Received	Code	Type	
FA49143-1	11/07/17	13:00 BH	11/08/17	SO	Soil	TANK BOTTOMS

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

2

Client: Tantara Corporation

Job No: FA49143

Site: USACE Buffalo Nike Missile UST; E Aurora, NY

Report Date: 11/26/2017 5:14:22 PM

1 Sample(s) were collected on 11/07/2017 and were received at SGS Accutest Southeast (SASE) on 11/08/2017 properly preserved, at 3.8 Deg. C and intact. These Samples received an SASE job number of FA49143. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

MS Volatiles By Method SW846 8260C

Matrix: SO

Batch ID: VY1461

All samples were analyzed within the recommended method holding time.

Sample(s) FA49143-1MS, FA49143-1MSD were used as the QC samples indicated.

Sample(s) FA49143-1 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.

Matrix Spike Recovery(s) for 1,2,3-Trichlorobenzene, Dichlorodifluoromethane, Hexachlorobutadiene, Methyl Chloride, n-Propylbenzene, Naphthalene, sec-Butylbenzene, tert-Butylbenzene, Trichlorofluoromethane, Vinyl Chloride are outside control limits. Probable cause is due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 1,2,3-Trichlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, Dichlorodifluoromethane, Hexachlorobutadiene, Methyl Chloride, n-Propylbenzene, Naphthalene, o-Chlorotoluene, sec-Butylbenzene, tert-Butylbenzene, Trichlorofluoromethane, Vinyl Chloride are outside control limits. Probable cause is due to matrix interference.

FA49143-1 for Acetone: Suspected laboratory contaminant.

MS Semi-volatiles By Method SW846 8270D

Matrix: SO

Batch ID: OP67608

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JC54582-1MS, JC54582-1MSD were used as the QC samples indicated.

Sample(s) FA49143-1 have surrogates outside control limits.

FA49143-1: Dilution required due to matrix interference (internal standard failure).

FA49143-1 for 2,4,6-Tribromophenol: Outside control limits due to dilution.

FA49143-1 for Hexachlorocyclopentadiene: Associated CCV outside of DoD control limits low.

FA49143-1 for 4,6-Dinitro-o-cresol: Associated CCV outside of DoD control limits low.

FA49143-1 for 2,4-Dinitrophenol: Associated CCV outside of DoD control limits low.

FA49143-1 for Phenol-d5: Outside control limits due to dilution.

FA49143-1 for Terphenyl-d14: Outside control limits due to dilution.

FA49143-1 for Nitrobenzene-d5: Outside control limits due to dilution.

FA49143-1 for 2-Fluorophenol: Outside control limits due to dilution.

FA49143-1 for 2-Fluorobiphenyl: Outside control limits due to dilution.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: SO

Batch ID: OP67616

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA49180-3MS, FA49180-3MSD were used as the QC samples indicated.

FA49143-1: Dilution required due to matrix interference.

Metals Analysis By Method SW846 6010C

Matrix: SO

Batch ID: MP32990

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA48950-1DUP, FA48950-1MS, FA48950-1MSD, FA48950-1PS, FA48950-1SDL were used as the QC samples for metals.

Matrix Spike Recovery(s) for Cadmium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

RPD(s) for Duplicate for Arsenic are outside control limits for sample MP32990-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Barium, Cadmium, Chromium are outside control limits for sample MP32990-SD1. Probable cause is due to sample non-homogeneity.

MP32990-SD1 for Chromium: Serial dilution indicates possible matrix interference.

MP32990-SD1 for Cadmium: Serial dilution indicates possible matrix interference.

MP32990-SD1 for Barium: Serial dilution indicates possible matrix interference.

FA49143-1 for Cadmium: Sample dilution required due to difficult matrix.

FA49143-1 for Barium: Sample dilution required due to difficult matrix.

FA49143-1 for Lead: Sample dilution required due to difficult matrix.

FA49143-1 for Silver: Sample dilution required due to difficult matrix.

FA49143-1 for Arsenic: Sample dilution required due to difficult matrix.

FA49143-1 for Selenium: Sample dilution required due to difficult matrix.

FA49143-1 for Chromium: Sample dilution required due to difficult matrix.

Metals Analysis By Method SW846 7471B

Matrix: SO

Batch ID: MP33002

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA49180-1DUP, FA49180-1MS, FA49180-1MSD, FA49180-1SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP33002-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

General Chemistry By Method SM19 2540G

Matrix: SO

Batch ID: GN76853

Sample(s) FA48989-7DUP were used as the QC samples for Solids, Percent.

General Chemistry By Method SW846 1010

Matrix: SO

Batch ID: GN76930

Sample(s) FA49183-1DUP were used as the QC samples for Ignitability (Flashpoint).

FA49143-1 for Ignitability (Flashpoint): Not ignitable.

General Chemistry By Method SW846 9045D

Matrix: SO

Batch ID: GN76978

Sample(s) FA48950-1DUP were used as the QC samples for pH.

General Chemistry By Method SW846 CHAP7

Matrix: SO

Batch ID: GP30628

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA49143-1DUP were used as the QC samples for Cyanide Reactivity.

RPD(s) for Duplicate for Cyanide Reactivity are outside control limits for sample GP30628-D1. RPD acceptable due to low duplicate and sample concentrations.

General Chemistry By Method SW846 CHAP7

Matrix: SO

Batch ID: GP30629

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA49143-1DUP were used as the QC samples for Sulfide Reactivity.

SGS Accutest (SASE) certifies that this report meets the project requirements for analytical data produced for the samples as received at SASE and as stated on the COC. SASE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SASE Quality Manual except as noted above. This report is to be used in its entirety. SASE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Kim Benham, Client Services (signature on file)

Summary of Hits

Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA49143-1 TANK BOTTOMS						
Acetone ^a		2690 JB	7600	3800	ug/kg	SW846 8260C
Naphthalene		556 J	760	530	ug/kg	SW846 8260C
Acenaphthene ^b		5120 J	5800	1200	ug/kg	SW846 8270D
Anthracene ^b		5200 J	5800	1200	ug/kg	SW846 8270D
Benzo(a)anthracene ^b		5130 J	5800	1200	ug/kg	SW846 8270D
Benzo(a)pyrene ^b		3430 J	5800	1200	ug/kg	SW846 8270D
Benzo(b)fluoranthene ^b		3430 J	5800	1200	ug/kg	SW846 8270D
Benzo(g,h,i)perylene ^b		1450 J	5800	1200	ug/kg	SW846 8270D
Benzo(k)fluoranthene ^b		3090 J	5800	1200	ug/kg	SW846 8270D
Carbazole ^b		1730 J	5800	1200	ug/kg	SW846 8270D
Chrysene ^b		5660 J	5800	1200	ug/kg	SW846 8270D
Fluoranthene ^b		12300	5800	1200	ug/kg	SW846 8270D
Fluorene ^b		8790	5800	1200	ug/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene ^b		1790 J	5800	1200	ug/kg	SW846 8270D
1-Methylnaphthalene ^b		14900	5800	1200	ug/kg	SW846 8270D
N-Nitrosodiphenylamine ^b		11700	5800	2300	ug/kg	SW846 8270D
Phenanthrene ^b		32500	5800	1200	ug/kg	SW846 8270D
Pyrene ^b		10400	5800	1200	ug/kg	SW846 8270D
Arsenic ^c		6.9	4.2	2.1	mg/kg	SW846 6010C
Barium ^c		34.2 J	84	0.84	mg/kg	SW846 6010C
Cadmium ^c		0.81 J	1.7	0.42	mg/kg	SW846 6010C
Chromium ^c		11.5	4.2	0.84	mg/kg	SW846 6010C
Lead ^c		30.6	8.4	1.7	mg/kg	SW846 6010C
Mercury		0.017 J	0.073	0.029	mg/kg	SW846 7471B
Ignitability (Flashpoint) ^d		> 200		^e	Deg. F	SW846 1010
pH		7.04		^e	su	SW846 9045D

(a) Suspected laboratory contaminant.

(b) Dilution required due to matrix interference (internal standard failure).

(c) Sample dilution required due to difficult matrix.

(d) Not ignitable.

(e) Value reported is laboratory DL (MDL).

Sample Results

Report of Analysis

Report of Analysis

Page 1 of 3

Client Sample ID:	TANK BOTTOMS			Date Sampled:	11/07/17
Lab Sample ID:	FA49143-1			Date Received:	11/08/17
Matrix:	SO - Soil			Percent Solids:	57.1
Method:	SW846 8260C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y36776.D	1	11/08/17 14:00	EP	n/a	n/a	VY1461
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	7.68 g	10.0 ml	100 ul
Run #2			

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
67-64-1	Acetone ^a	2690	7600	3800	1500	ug/kg	JB
71-43-2	Benzene	300 U	760	300	180	ug/kg	
108-86-1	Bromobenzene	300 U	760	300	150	ug/kg	
74-97-5	Bromochloromethane	300 U	760	300	220	ug/kg	
75-27-4	Bromodichloromethane	300 U	760	300	150	ug/kg	
75-25-2	Bromoform	300 U	760	300	150	ug/kg	
78-93-3	2-Butanone (MEK)	2300 U	3800	2300	1100	ug/kg	
104-51-8	n-Butylbenzene	300 U	760	300	150	ug/kg	
135-98-8	sec-Butylbenzene	300 U	760	300	150	ug/kg	
98-06-6	tert-Butylbenzene	300 U	760	300	150	ug/kg	
75-15-0	Carbon Disulfide	300 U	760	300	150	ug/kg	
56-23-5	Carbon Tetrachloride	300 U	760	300	150	ug/kg	
108-90-7	Chlorobenzene	300 U	760	300	150	ug/kg	
75-00-3	Chloroethane	530 U	760	530	300	ug/kg	
67-66-3	Chloroform	300 U	760	300	200	ug/kg	
95-49-8	o-Chlorotoluene	300 U	760	300	150	ug/kg	
106-43-4	p-Chlorotoluene	300 U	760	300	150	ug/kg	
124-48-1	Dibromochloromethane	300 U	760	300	150	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	530 U	760	530	290	ug/kg	
106-93-4	1,2-Dibromoethane	300 U	760	300	150	ug/kg	
75-71-8	Dichlorodifluoromethane	530 U	760	530	300	ug/kg	
95-50-1	1,2-Dichlorobenzene	300 U	760	300	150	ug/kg	
541-73-1	1,3-Dichlorobenzene	300 U	760	300	150	ug/kg	
106-46-7	1,4-Dichlorobenzene	300 U	760	300	170	ug/kg	
75-34-3	1,1-Dichloroethane	300 U	760	300	270	ug/kg	
107-06-2	1,2-Dichloroethane	300 U	760	300	150	ug/kg	
75-35-4	1,1-Dichloroethylene	300 U	760	300	150	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	300 U	760	300	210	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	300 U	760	300	150	ug/kg	
78-87-5	1,2-Dichloropropane	300 U	760	300	150	ug/kg	
142-28-9	1,3-Dichloropropane	300 U	760	300	150	ug/kg	
594-20-7	2,2-Dichloropropane	300 U	760	300	150	ug/kg	

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 3

Client Sample ID:	TANK BOTTOMS		
Lab Sample ID:	FA49143-1	Date Sampled:	11/07/17
Matrix:	SO - Soil	Date Received:	11/08/17
Method:	SW846 8260C	Percent Solids:	57.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

VOA 8260 List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
563-58-6	1,1-Dichloropropene	300 U	760	300	150	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	300 U	760	300	150	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	300 U	760	300	150	ug/kg	
100-41-4	Ethylbenzene	300 U	760	300	150	ug/kg	
87-68-3	Hexachlorobutadiene	300 U	760	300	200	ug/kg	
591-78-6	2-Hexanone	2300 U	3800	2300	1100	ug/kg	
98-82-8	Isopropylbenzene	300 U	760	300	150	ug/kg	
99-87-6	p-Isopropyltoluene	300 U	760	300	150	ug/kg	
74-83-9	Methyl Bromide	530 U	760	530	300	ug/kg	
74-87-3	Methyl Chloride	530 U	760	530	300	ug/kg	
74-95-3	Methylene Bromide	300 U	760	300	150	ug/kg	
75-09-2	Methylene Chloride	760 U	1500	760	610	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	2300 U	3800	2300	1100	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	300 U	760	300	150	ug/kg	
91-20-3	Naphthalene	556	760	530	300	ug/kg	J
103-65-1	n-Propylbenzene	300 U	760	300	150	ug/kg	
100-42-5	Styrene	300 U	760	300	150	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	300 U	760	300	160	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	300 U	760	300	150	ug/kg	
127-18-4	Tetrachloroethylene	300 U	760	300	190	ug/kg	
108-88-3	Toluene	300 U	760	300	150	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	530 U	760	530	210	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	530 U	760	530	150	ug/kg	
71-55-6	1,1,1-Trichloroethane	300 U	760	300	150	ug/kg	
79-00-5	1,1,2-Trichloroethane	300 U	760	300	150	ug/kg	
79-01-6	Trichloroethylene	300 U	760	300	150	ug/kg	
75-69-4	Trichlorofluoromethane	530 U	760	530	300	ug/kg	
96-18-4	1,2,3-Trichloropropane	530 U	760	530	190	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	300 U	760	300	150	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	300 U	760	300	150	ug/kg	
108-05-4	Vinyl Acetate	3000 U	3800	3000	2500	ug/kg	
75-01-4	Vinyl Chloride	300 U	760	300	150	ug/kg	
	m,p-Xylene	610 U	1500	610	170	ug/kg	
95-47-6	o-Xylene	300 U	760	300	150	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		75-124%
17060-07-0	1,2-Dichloroethane-D4	109%		72-135%
2037-26-5	Toluene-D8	97%		75-126%

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TANK BOTTOMS	Date Sampled:	11/07/17
Lab Sample ID:	FA49143-1	Date Received:	11/08/17
Matrix:	SO - Soil	Percent Solids:	57.1
Method:	SW846 8260C		
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		71-133%

(a) Suspected laboratory contaminant.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Page 1 of 3

Client Sample ID:	TANK BOTTOMS			Date Sampled:	11/07/17
Lab Sample ID:	FA49143-1			Date Received:	11/08/17
Matrix:	SO - Soil			Percent Solids:	57.1
Method:	SW846 8270D SW846 3550C				
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	X057309.D	20	11/21/17 17:42	MV	11/10/17 12:30	OP67608	SX2406
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

ABN Full List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
65-85-0	Benzoic Acid	12000 U	29000	12000	5800	ug/kg	
59-50-7	4-Chloro-3-methyl Phenol	1200 U	5800	1200	660	ug/kg	
95-57-8	2-Chlorophenol	1200 U	5800	1200	710	ug/kg	
120-83-2	2,4-Dichlorophenol	1200 U	5800	1200	670	ug/kg	
105-67-9	2,4-Dimethylphenol	2300 U	5800	2300	1500	ug/kg	
51-28-5	2,4-Dinitrophenol ^b	17000 U	29000	17000	5800	ug/kg	
534-52-1	4,6-Dinitro-o-cresol ^b	4600 U	12000	4600	2300	ug/kg	
95-48-7	2-Methylphenol	1200 U	5800	1200	700	ug/kg	
	3&4-Methylphenol	2300 U	5800	2300	950	ug/kg	
88-75-5	2-Nitrophenol	1200 U	5800	1200	630	ug/kg	
100-02-7	4-Nitrophenol	12000 U	29000	12000	5800	ug/kg	
87-86-5	Pentachlorophenol	12000 U	29000	12000	5800	ug/kg	
108-95-2	Phenol	1200 U	5800	1200	580	ug/kg	
95-95-4	2,4,5-Trichlorophenol	1200 U	5800	1200	930	ug/kg	
88-06-2	2,4,6-Trichlorophenol	1200 U	5800	1200	670	ug/kg	
83-32-9	Acenaphthene	5120	5800	1200	620	ug/kg	J
208-96-8	Acenaphthylene	1200 U	5800	1200	580	ug/kg	
62-53-3	Aniline	2300 U	5800	2300	1200	ug/kg	
120-12-7	Anthracene	5200	5800	1200	650	ug/kg	J
92-87-5	Benzidine	29000 U	58000	29000	12000	ug/kg	
56-55-3	Benzo(a)anthracene	5130	5800	1200	580	ug/kg	J
50-32-8	Benzo(a)pyrene	3430	5800	1200	680	ug/kg	J
205-99-2	Benzo(b)fluoranthene	3430	5800	1200	640	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	1450	5800	1200	600	ug/kg	J
207-08-9	Benzo(k)fluoranthene	3090	5800	1200	760	ug/kg	J
100-51-6	Benzyl Alcohol	1200 U	5800	1200	580	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	1200 U	5800	1200	600	ug/kg	
85-68-7	Butyl benzyl phthalate	2300 U	5800	2300	1200	ug/kg	
86-74-8	Carbazole	1730	5800	1200	810	ug/kg	J
106-47-8	4-Chloroaniline	2300 U	5800	2300	1500	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	1200 U	5800	1200	580	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	1200 U	5800	1200	670	ug/kg	

U = Not detected

LOD = Limit of Detection

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E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 3

Client Sample ID:	TANK BOTTOMS		
Lab Sample ID:	FA49143-1	Date Sampled:	11/07/17
Matrix:	SO - Soil	Date Received:	11/08/17
Method:	SW846 8270D SW846 3550C	Percent Solids:	57.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

ABN Full List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	1200 U	5800	1200	730	ug/kg	
91-58-7	2-Chloronaphthalene	1200 U	5800	1200	580	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	1200 U	5800	1200	580	ug/kg	
218-01-9	Chrysene	5660	5800	1200	590	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	1200 U	5800	1200	730	ug/kg	
132-64-9	Dibenzofuran	1200 U	5800	1200	580	ug/kg	
95-50-1	1,2-Dichlorobenzene	2300 U	5800	2300	580	ug/kg	
541-73-1	1,3-Dichlorobenzene	2300 U	5800	2300	630	ug/kg	
106-46-7	1,4-Dichlorobenzene	2300 U	5800	2300	770	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	2300 U	5800	2300	1400	ug/kg	
84-66-2	Diethyl Phthalate	4100 U	12000	4100	1200	ug/kg	
131-11-3	Dimethyl Phthalate	2300 U	5800	2300	1200	ug/kg	
117-84-0	Di-n-octyl Phthalate	2300 U	5800	2300	1200	ug/kg	
84-74-2	Di-n-butyl Phthalate	4100 U	12000	4100	2300	ug/kg	
121-14-2	2,4-Dinitrotoluene	1200 U	5800	1200	580	ug/kg	
606-20-2	2,6-Dinitrotoluene	1200 U	5800	1200	750	ug/kg	
122-66-7	1,2-Diphenylhydrazine	1200 U	5800	1200	580	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	4100 U	12000	4100	1200	ug/kg	
206-44-0	Fluoranthene	12300	5800	1200	580	ug/kg	
86-73-7	Fluorene	8790	5800	1200	620	ug/kg	
118-74-1	Hexachlorobenzene	1200 U	5800	1200	590	ug/kg	
87-68-3	Hexachlorobutadiene	2300 U	5800	2300	590	ug/kg	
77-47-4	Hexachlorocyclopentadiene ^b	2300 U	5800	2300	1200	ug/kg	
67-72-1	Hexachloroethane	2300 U	5800	2300	680	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1790	5800	1200	710	ug/kg	J
78-59-1	Isophorone	1200 U	5800	1200	580	ug/kg	
90-12-0	1-Methylnaphthalene	14900	5800	1200	580	ug/kg	
91-57-6	2-Methylnaphthalene	1200 U	5800	1200	580	ug/kg	
91-20-3	Naphthalene	1200 U	5800	1200	580	ug/kg	
88-74-4	2-Nitroaniline	2300 U	5800	2300	1300	ug/kg	
99-09-2	3-Nitroaniline	2300 U	5800	2300	680	ug/kg	
100-01-6	4-Nitroaniline	2300 U	5800	2300	1700	ug/kg	
98-95-3	Nitrobenzene	1200 U	5800	1200	580	ug/kg	
62-75-9	N-Nitrosodimethylamine	2300 U	5800	2300	970	ug/kg	
621-64-7	N-Nitrosodi-n-propylamine	1200 U	5800	1200	580	ug/kg	
86-30-6	N-Nitrosodiphenylamine	11700	5800	2300	620	ug/kg	
85-01-8	Phenanthrene	32500	5800	1200	580	ug/kg	
129-00-0	Pyrene	10400	5800	1200	670	ug/kg	
110-86-1	Pyridine	4100 U	12000	4100	2300	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	1200 U	5800	1200	680	ug/kg	

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 3 of 3

Client Sample ID:	TANK BOTTOMS		
Lab Sample ID:	FA49143-1	Date Sampled:	11/07/17
Matrix:	SO - Soil	Date Received:	11/08/17
Method:	SW846 8270D SW846 3550C	Percent Solids:	57.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

ABN Full List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	0% ^c		40-102%
4165-62-2	Phenol-d5	0% ^c		41-100%
118-79-6	2,4,6-Tribromophenol	0% ^c		42-108%
4165-60-0	Nitrobenzene-d5	0% ^c		40-105%
321-60-8	2-Fluorobiphenyl	0% ^c		43-107%
1718-51-0	Terphenyl-d14	0% ^c		45-119%

(a) Dilution required due to matrix interference (internal standard failure).

(b) Associated CCV outside of DoD control limits low.

(c) Outside control limits due to dilution.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID:	TANK BOTTOMS				
Lab Sample ID:	FA49143-1			Date Sampled:	11/07/17
Matrix:	SO - Soil			Date Received:	11/08/17
Method:	SW846 8082A SW846 3546			Percent Solids:	57.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	MM46772.D	10	11/14/17 00:34	NJ	11/10/17 14:00	OP67616	GMM895
Run #2							

	Initial Weight	Final Volume
Run #1	15.0 g	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
12674-11-2	Aroclor 1016	200 U	290	200	120	ug/kg	
11104-28-2	Aroclor 1221	200 U	290	200	150	ug/kg	
11141-16-5	Aroclor 1232	200 U	290	200	150	ug/kg	
53469-21-9	Aroclor 1242	200 U	290	200	120	ug/kg	
12672-29-6	Aroclor 1248	200 U	290	200	120	ug/kg	
11097-69-1	Aroclor 1254	200 U	290	200	120	ug/kg	
11096-82-5	Aroclor 1260	200 U	290	200	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	59%		44-126%
2051-24-3	Decachlorobiphenyl	76%		41-145%

(a) Dilution required due to matrix interference.

U = Not detected

LOD = Limit of Detection

J = Indicates an estimated value

LOQ = Limit of Quantitation

DL = Detection Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: TANK BOTTOMS

Lab Sample ID: FA49143-1

Matrix: SO - Soil

Date Sampled: 11/07/17

Date Received: 11/08/17

Percent Solids: 57.1

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic ^a	6.9	4.2	2.1	0.84	mg/kg	5	11/10/17	11/10/17 LM	SW846 6010C ¹	SW846 3050B ³
Barium ^a	34.2 J	84	0.84	0.42	mg/kg	5	11/10/17	11/10/17 LM	SW846 6010C ¹	SW846 3050B ³
Cadmium ^a	0.81 J	1.7	0.42	0.21	mg/kg	5	11/10/17	11/10/17 LM	SW846 6010C ¹	SW846 3050B ³
Chromium ^a	11.5	4.2	0.84	0.42	mg/kg	5	11/10/17	11/10/17 LM	SW846 6010C ¹	SW846 3050B ³
Lead ^a	30.6	8.4	1.7	0.42	mg/kg	5	11/10/17	11/10/17 LM	SW846 6010C ¹	SW846 3050B ³
Mercury	0.017 J	0.073	0.029	0.0073	mg/kg	1	11/15/17	11/15/17 DM	SW846 7471B ²	SW846 7471B ⁴
Selenium ^a	20 U	34	20	20	mg/kg	5	11/10/17	11/10/17 LM	SW846 6010C ¹	SW846 3050B ³
Silver ^a	0.84 U	4.2	0.84	0.35	mg/kg	5	11/10/17	11/10/17 LM	SW846 6010C ¹	SW846 3050B ³

(1) Instrument QC Batch: MA14493

(2) Instrument QC Batch: MA14500

(3) Prep QC Batch: MP32990

(4) Prep QC Batch: MP33002

(a) Sample dilution required due to difficult matrix.

LOQ = Limit of Quantitation

DL = Detection Limit

U = Indicates a result < LOD

LOD = Limit of Detection

B = Analyte found in associated blank

J = Indicates a result > = DL (MDL) but < LOQ

Report of Analysis

Page 1 of 1

Client Sample ID:	TANK BOTTOMS		
Lab Sample ID:	FA49143-1	Date Sampled:	11/07/17
Matrix:	SO - Soil	Date Received:	11/08/17
		Percent Solids:	57.1
Project:	USACE Buffalo Nike Missile UST; E Aurora, NY		

General Chemistry

Analyte	Result	LOQ	LOD	DL	Units	DF	Analyzed	By Method
Cyanide Reactivity	1.2 U	2.5	1.2 ^a	1.2	mg/kg	1	11/17/17 18:05	KH SW846 CHAP7
Ignitability (Flashpoint) ^b	> 200				Deg. F	1	11/16/17 12:44	LJ SW846 1010
Solids, Percent	57.1				%	1	11/10/17 09:47	BW SM19 2540G
Sulfide Reactivity	83 U	83	83 ^a	83	mg/kg	1	11/17/17 10:59	CH SW846 CHAP7
pH	7.04				su	1	11/20/17 15:57	JK SW846 9045D

(a) Value reported is laboratory DL (MDL).

(b) Not ignitable.

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD

LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- QC Evaluation: DOD QSM5 Limits

[illegible]

SGS Accutest Sample Receipt Summary

Job Number: FA49143 **Client:** TANTARA CORP **Project:** BUFFALO MIKE MISSLE 16-299
Date / Time Received: 11/8/2017 7:00:00 AM **Delivery Method:** FED EX **Airbill #s:** 1001914121060003281100788369674393

Therm ID: IR 1; **Therm CF:** 0.4; **# of Coolers:** 1
Cooler Temps (Raw Measured) °C: Cooler 1: (3.4);
Cooler Temps (Corrected) °C: Cooler 1: (3.8);

Cooler Information

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present	☒		☐
2. Custody Seals Intact	☒		☐
3. Temp criteria achieved	☒		☐
4. Cooler temp verification	<u>IR Gun</u>		
5. Cooler media	<u>Ice (Bag)</u>		

Trip Blank Information

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler	☐		☐	☒
2. Trip Blank listed on COC	☐		☐	☒
	<u>W</u>	<u>or</u>	<u>S</u>	<u>N/A</u>
3. Type Of TB Received	☐		☐	☒

Sample Information

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Sample labels present on bottles	☒		☐	
2. Samples preserved properly	☒		☐	
3. Sufficient volume/containers recvd for analysis:	☒		☐	
4. Condition of sample	<u>Intact</u>			
5. Sample recvd within HT	☒		☐	
6. Dates/Times/IDs on COC match Sample Label	☒		☐	
7. VOCs have headspace	☐		☐	☒
8. Bottles received for unspecified tests	☐		☒	
9. Compositing instructions clear	☐		☐	☒
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☒
11. % Solids Jar received?	☐		☐	☒
12. Residual Chlorine Present?	☐		☐	☒

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____
 Test Strip Lot #s: pH 0-3 _____ 230315 _____
 Residual Chlorine Test Strip Lot #: _____

Number of 5035 Field Kits: 1
 pH 10-12 219813A

Number of Lab Filtered Metals: _____
 Other: (Specify) _____

Comments

SM001
 Rev. Date 05/24/17

Technician: CORYR Date: 11/8/2017 7:00:00 AM

Reviewer: JC Date: 11/8/2017

FA49143: Chain of Custody

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Job Change Order: FA49143

Requested Date:	11/8/2017	Received Date:	11/8/2017
Account Name:	Tantara Corporation	Due Date:	11/15/2017
Project Description:	USACE Buffalo Nike Missile UST; E Aurora, NY	Deliverable:	FULT1
CSR:	andreac	TAT (Days):	7

=====

Sample #:	FA49143-1	Change:	
Dept:			Please add PH, IGN, CREAC and SREAC.
TAT:	7		

TANK BOTTOMS

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FA49143: Chain of Custody

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Above Changes Per: Mark Lovejoy

Date/Time: 11/8/2017 12:30:14 PM

To Client: This Change Order is confirmation of the revisions, previously discussed with the SGS Accutest Client Service Representative.

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QC Evaluation: DOD QSM5 Limits

Page 1 of 17

Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VY1461	SW846 8260C						
VY1461-BS	67-64-1	Acetone	BSP	REC	113	%	36-164
VY1461-BS	71-43-2	Benzene	BSP	REC	106	%	77-121
VY1461-BS	108-86-1	Bromobenzene	BSP	REC	103	%	78-121
VY1461-BS	74-97-5	Bromochloromethane	BSP	REC	102	%	78-125
VY1461-BS	75-27-4	Bromodichloromethane	BSP	REC	108	%	75-127
VY1461-BS	75-25-2	Bromoform	BSP	REC	117	%	67-132
VY1461-BS	78-93-3	2-Butanone (MEK)	BSP	REC	91	%	51-148
VY1461-BS	104-51-8	n-Butylbenzene	BSP	REC	97	%	70-128
VY1461-BS	135-98-8	sec-Butylbenzene	BSP	REC	97	%	73-126
VY1461-BS	98-06-6	tert-Butylbenzene	BSP	REC	99	%	73-125
VY1461-BS	75-15-0	Carbon Disulfide	BSP	REC	99	%	63-132
VY1461-BS	56-23-5	Carbon Tetrachloride	BSP	REC	113	%	70-135
VY1461-BS	108-90-7	Chlorobenzene	BSP	REC	99	%	79-120
VY1461-BS	75-00-3	Chloroethane	BSP	REC	110	%	59-139
VY1461-BS	67-66-3	Chloroform	BSP	REC	107	%	78-123
VY1461-BS	95-49-8	o-Chlorotoluene	BSP	REC	98	%	75-122
VY1461-BS	106-43-4	p-Chlorotoluene	BSP	REC	94	%	72-124
VY1461-BS	124-48-1	Dibromochloromethane	BSP	REC	112	%	74-126
VY1461-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	101	%	61-132
VY1461-BS	106-93-4	1,2-Dibromoethane	BSP	REC	104	%	78-122
VY1461-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	91	%	29-149
VY1461-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	96	%	78-121
VY1461-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	93	%	77-121
VY1461-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	90	%	75-120
VY1461-BS	75-34-3	1,1-Dichloroethane	BSP	REC	110	%	76-125
VY1461-BS	107-06-2	1,2-Dichloroethane	BSP	REC	114	%	73-128
VY1461-BS	75-35-4	1,1-Dichloroethylene	BSP	REC	108	%	70-131
VY1461-BS	156-59-2	cis-1,2-Dichloroethylene	BSP	REC	104	%	77-123
VY1461-BS	156-60-5	trans-1,2-Dichloroethylene	BSP	REC	117	%	74-125
VY1461-BS	78-87-5	1,2-Dichloropropane	BSP	REC	95	%	76-123
VY1461-BS	142-28-9	1,3-Dichloropropane	BSP	REC	98	%	77-121
VY1461-BS	594-20-7	2,2-Dichloropropane	BSP	REC	103	%	67-133
VY1461-BS	563-58-6	1,1-Dichloropropene	BSP	REC	96	%	76-125
VY1461-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	107	%	74-126
VY1461-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	113	%	71-130
VY1461-BS	100-41-4	Ethylbenzene	BSP	REC	108	%	76-122
VY1461-BS	87-68-3	Hexachlorobutadiene	BSP	REC	84	%	61-135
VY1461-BS	591-78-6	2-Hexanone	BSP	REC	96	%	53-145
VY1461-BS	98-82-8	Isopropylbenzene	BSP	REC	104	%	68-134
VY1461-BS	99-87-6	p-Isopropyltoluene	BSP	REC	105	%	73-127
VY1461-BS	74-83-9	Methyl Bromide	BSP	REC	100	%	53-143
VY1461-BS	74-87-3	Methyl Chloride	BSP	REC	87	%	50-136

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
VY1461-BS	74-95-3	Methylene Bromide	BSP	REC	106	%	78-125
VY1461-BS	75-09-2	Methylene Chloride	BSP	REC	102	%	70-128
VY1461-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	95	%	65-135
VY1461-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	112	%	73-125
VY1461-BS	91-20-3	Naphthalene	BSP	REC	85	%	62-129
VY1461-BS	103-65-1	n-Propylbenzene	BSP	REC	95	%	73-125
VY1461-BS	100-42-5	Styrene	BSP	REC	111	%	76-124
VY1461-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	114	%	78-125
VY1461-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	97	%	70-124
VY1461-BS	127-18-4	Tetrachloroethylene	BSP	REC	84	%	73-128
VY1461-BS	108-88-3	Toluene	BSP	REC	104	%	77-121
VY1461-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	79	%	66-130
VY1461-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	85	%	67-129
VY1461-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	102	%	73-130
VY1461-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	104	%	78-121
VY1461-BS	79-01-6	Trichloroethylene	BSP	REC	100	%	77-123
VY1461-BS	75-69-4	Trichlorofluoromethane	BSP	REC	121	%	62-140
VY1461-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	99	%	73-125
VY1461-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	105	%	75-123
VY1461-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	105	%	73-124
VY1461-BS	108-05-4	Vinyl Acetate	BSP	REC	109	%	50-151
VY1461-BS	75-01-4	Vinyl Chloride	BSP	REC	92	%	56-135
VY1461-BS		m,p-Xylene	BSP	REC	107	%	77-124
VY1461-BS	95-47-6	o-Xylene	BSP	REC	102	%	77-123
VY1461-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	107	%	78-119
VY1461-BS	17060-07-0	1,2-Dichloroethane-D4	BSP	SURR	110	%	71-136
VY1461-BS	2037-26-5	Toluene-D8	BSP	SURR	99	%	85-116
VY1461-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	97	%	79-119
FA49143-1MS	67-64-1	Acetone	MS	REC	108	%	36-164
FA49143-1MS	71-43-2	Benzene	MS	REC	93	%	77-121
FA49143-1MS	108-86-1	Bromobenzene	MS	REC	80	%	78-121
FA49143-1MS	74-97-5	Bromochloromethane	MS	REC	96	%	78-125
FA49143-1MS	75-27-4	Bromodichloromethane	MS	REC	97	%	75-127
FA49143-1MS	75-25-2	Bromoform	MS	REC	107	%	67-132
FA49143-1MS	78-93-3	2-Butanone (MEK)	MS	REC	97	%	51-148
FA49143-1MS	104-51-8	n-Butylbenzene	MS	REC	84	%	70-128
FA49143-1MS	135-98-8	sec-Butylbenzene	MS	REC	73	%	73-126
FA49143-1MS	98-06-6	tert-Butylbenzene	MS	REC	74	%	73-125
FA49143-1MS	75-15-0	Carbon Disulfide	MS	REC	84	%	63-132
FA49143-1MS	56-23-5	Carbon Tetrachloride	MS	REC	82	%	70-135
FA49143-1MS	108-90-7	Chlorobenzene	MS	REC	90	%	79-120
FA49143-1MS	75-00-3	Chloroethane	MS	REC	74	%	59-139
FA49143-1MS	67-66-3	Chloroform	MS	REC	95	%	78-123
FA49143-1MS	95-49-8	o-Chlorotoluene	MS	REC	78	%	75-122
FA49143-1MS	106-43-4	p-Chlorotoluene	MS	REC	82	%	72-124

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA49143-1MS	124-48-1	Dibromochloromethane	MS	REC	101	%	74-126
FA49143-1MS	96-12-8	1,2-Dibromo-3-chloropropane	MS	REC	88	%	61-132
FA49143-1MS	106-93-4	1,2-Dibromoethane	MS	REC	100	%	78-122
FA49143-1MS	75-71-8	Dichlorodifluoromethane	MS	REC	52	%	29-149
FA49143-1MS	95-50-1	1,2-Dichlorobenzene	MS	REC	80	%	78-121
FA49143-1MS	541-73-1	1,3-Dichlorobenzene	MS	REC	82	%	77-121
FA49143-1MS	106-46-7	1,4-Dichlorobenzene	MS	REC	82	%	75-120
FA49143-1MS	75-34-3	1,1-Dichloroethane	MS	REC	97	%	76-125
FA49143-1MS	107-06-2	1,2-Dichloroethane	MS	REC	102	%	73-128
FA49143-1MS	75-35-4	1,1-Dichloroethylene	MS	REC	89	%	70-131
FA49143-1MS	156-59-2	cis-1,2-Dichloroethylene	MS	REC	95	%	77-123
FA49143-1MS	156-60-5	trans-1,2-Dichloroethylene	MS	REC	101	%	74-125
FA49143-1MS	78-87-5	1,2-Dichloropropane	MS	REC	95	%	76-123
FA49143-1MS	142-28-9	1,3-Dichloropropane	MS	REC	93	%	77-121
FA49143-1MS	594-20-7	2,2-Dichloropropane	MS	REC	79	%	67-133
FA49143-1MS	563-58-6	1,1-Dichloropropene	MS	REC	82	%	76-125
FA49143-1MS	10061-01-5	cis-1,3-Dichloropropene	MS	REC	97	%	74-126
FA49143-1MS	10061-02-6	trans-1,3-Dichloropropene	MS	REC	100	%	71-130
FA49143-1MS	100-41-4	Ethylbenzene	MS	REC	95	%	76-122
FA49143-1MS	87-68-3	Hexachlorobutadiene	MS	REC	59	%	61-135
FA49143-1MS	591-78-6	2-Hexanone	MS	REC	102	%	53-145
FA49143-1MS	98-82-8	Isopropylbenzene	MS	REC	92	%	68-134
FA49143-1MS	99-87-6	p-Isopropyltoluene	MS	REC	82	%	73-127
FA49143-1MS	74-83-9	Methyl Bromide	MS	REC	80	%	53-143
FA49143-1MS	74-87-3	Methyl Chloride	MS	REC	70	%	50-136
FA49143-1MS	74-95-3	Methylene Bromide	MS	REC	96	%	78-125
FA49143-1MS	75-09-2	Methylene Chloride	MS	REC	95	%	70-128
FA49143-1MS	108-10-1	4-Methyl-2-pentanone (MIBK)	MS	REC	98	%	65-135
FA49143-1MS	1634-04-4	Methyl Tert Butyl Ether	MS	REC	107	%	73-125
FA49143-1MS	91-20-3	Naphthalene	MS	REC	74	%	62-129
FA49143-1MS	103-65-1	n-Propylbenzene	MS	REC	76	%	73-125
FA49143-1MS	100-42-5	Styrene	MS	REC	104	%	76-124
FA49143-1MS	630-20-6	1,1,1,2-Tetrachloroethane	MS	REC	98	%	78-125
FA49143-1MS	79-34-5	1,1,2,2-Tetrachloroethane	MS	REC	83	%	70-124
FA49143-1MS	127-18-4	Tetrachloroethylene	MS	REC	80	%	73-128
FA49143-1MS	108-88-3	Toluene	MS	REC	92	%	77-121
FA49143-1MS	87-61-6	1,2,3-Trichlorobenzene	MS	REC	68	%	66-130
FA49143-1MS	120-82-1	1,2,4-Trichlorobenzene	MS	REC	82	%	67-129
FA49143-1MS	71-55-6	1,1,1-Trichloroethane	MS	REC	79	%	73-130
FA49143-1MS	79-00-5	1,1,2-Trichloroethane	MS	REC	97	%	78-121
FA49143-1MS	79-01-6	Trichloroethylene	MS	REC	89	%	77-123
FA49143-1MS	75-69-4	Trichlorofluoromethane	MS	REC	42	%	62-140
FA49143-1MS	96-18-4	1,2,3-Trichloropropane	MS	REC	84	%	73-125
FA49143-1MS	95-63-6	1,2,4-Trimethylbenzene	MS	REC	84	%	75-123
FA49143-1MS	108-67-8	1,3,5-Trimethylbenzene	MS	REC	81	%	73-124

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA49143-1MS	108-05-4	Vinyl Acetate	MS	REC	104	%	50-151
FA49143-1MS	75-01-4	Vinyl Chloride	MS	REC	71	%	56-135
FA49143-1MS		m,p-Xylene	MS	REC	98	%	77-124
FA49143-1MS	95-47-6	o-Xylene	MS	REC	95	%	77-123
FA49143-1MS	1868-53-7	Dibromofluoromethane	MS	SURR	102	%	78-119
FA49143-1MS	17060-07-0	1,2-Dichloroethane-D4	MS	SURR	102	%	71-136
FA49143-1MS	2037-26-5	Toluene-D8	MS	SURR	95	%	85-116
FA49143-1MS	460-00-4	4-Bromofluorobenzene	MS	SURR	85	%	79-119
FA49143-1MSD	67-64-1	Acetone	MSD	REC	98	%	36-164
FA49143-1MSD	67-64-1	Acetone	MSD	RPD	9	%	20
FA49143-1MSD	71-43-2	Benzene	MSD	REC	93	%	77-121
FA49143-1MSD	71-43-2	Benzene	MSD	RPD	0	%	20
FA49143-1MSD	108-86-1	Bromobenzene	MSD	REC	79	%	78-121
FA49143-1MSD	108-86-1	Bromobenzene	MSD	RPD	1	%	20
FA49143-1MSD	74-97-5	Bromochloromethane	MSD	REC	95	%	78-125
FA49143-1MSD	74-97-5	Bromochloromethane	MSD	RPD	1	%	20
FA49143-1MSD	75-27-4	Bromodichloromethane	MSD	REC	95	%	75-127
FA49143-1MSD	75-27-4	Bromodichloromethane	MSD	RPD	2	%	20
FA49143-1MSD	75-25-2	Bromoform	MSD	REC	101	%	67-132
FA49143-1MSD	75-25-2	Bromoform	MSD	RPD	5	%	20
FA49143-1MSD	78-93-3	2-Butanone (MEK)	MSD	REC	100	%	51-148
FA49143-1MSD	78-93-3	2-Butanone (MEK)	MSD	RPD	3	%	20
FA49143-1MSD	104-51-8	n-Butylbenzene	MSD	REC	82	%	70-128
FA49143-1MSD	104-51-8	n-Butylbenzene	MSD	RPD	2	%	20
FA49143-1MSD	135-98-8	sec-Butylbenzene	MSD	REC	73	%	73-126
FA49143-1MSD	135-98-8	sec-Butylbenzene	MSD	RPD	1	%	20
FA49143-1MSD	98-06-6	tert-Butylbenzene	MSD	REC	74	%	73-125
FA49143-1MSD	98-06-6	tert-Butylbenzene	MSD	RPD	1	%	20
FA49143-1MSD	75-15-0	Carbon Disulfide	MSD	REC	80	%	63-132
FA49143-1MSD	75-15-0	Carbon Disulfide	MSD	RPD	6	%	20
FA49143-1MSD	56-23-5	Carbon Tetrachloride	MSD	REC	81	%	70-135
FA49143-1MSD	56-23-5	Carbon Tetrachloride	MSD	RPD	1	%	20
FA49143-1MSD	108-90-7	Chlorobenzene	MSD	REC	91	%	79-120
FA49143-1MSD	108-90-7	Chlorobenzene	MSD	RPD	1	%	20
FA49143-1MSD	75-00-3	Chloroethane	MSD	REC	70	%	59-139
FA49143-1MSD	75-00-3	Chloroethane	MSD	RPD	6	%	20
FA49143-1MSD	67-66-3	Chloroform	MSD	REC	94	%	78-123
FA49143-1MSD	67-66-3	Chloroform	MSD	RPD	1	%	20
FA49143-1MSD	95-49-8	o-Chlorotoluene	MSD	REC	76	%	75-122
FA49143-1MSD	95-49-8	o-Chlorotoluene	MSD	RPD	3	%	20
FA49143-1MSD	106-43-4	p-Chlorotoluene	MSD	REC	81	%	72-124
FA49143-1MSD	106-43-4	p-Chlorotoluene	MSD	RPD	1	%	20
FA49143-1MSD	124-48-1	Dibromochloromethane	MSD	REC	97	%	74-126
FA49143-1MSD	124-48-1	Dibromochloromethane	MSD	RPD	3	%	20
FA49143-1MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	REC	89	%	61-132

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA49143-1MSD	96-12-8	1,2-Dibromo-3-chloropropane	MSD	RPD	1	%	20
FA49143-1MSD	106-93-4	1,2-Dibromoethane	MSD	REC	98	%	78-122
FA49143-1MSD	106-93-4	1,2-Dibromoethane	MSD	RPD	2	%	20
FA49143-1MSD	75-71-8	Dichlorodifluoromethane	MSD	REC	49	%	29-149
FA49143-1MSD	75-71-8	Dichlorodifluoromethane	MSD	RPD	6	%	20
FA49143-1MSD	95-50-1	1,2-Dichlorobenzene	MSD	REC	79	%	78-121
FA49143-1MSD	95-50-1	1,2-Dichlorobenzene	MSD	RPD	2	%	20
FA49143-1MSD	541-73-1	1,3-Dichlorobenzene	MSD	REC	80	%	77-121
FA49143-1MSD	541-73-1	1,3-Dichlorobenzene	MSD	RPD	3	%	20
FA49143-1MSD	106-46-7	1,4-Dichlorobenzene	MSD	REC	81	%	75-120
FA49143-1MSD	106-46-7	1,4-Dichlorobenzene	MSD	RPD	2	%	20
FA49143-1MSD	75-34-3	1,1-Dichloroethane	MSD	REC	94	%	76-125
FA49143-1MSD	75-34-3	1,1-Dichloroethane	MSD	RPD	3	%	20
FA49143-1MSD	107-06-2	1,2-Dichloroethane	MSD	REC	98	%	73-128
FA49143-1MSD	107-06-2	1,2-Dichloroethane	MSD	RPD	4	%	20
FA49143-1MSD	75-35-4	1,1-Dichloroethylene	MSD	REC	82	%	70-131
FA49143-1MSD	75-35-4	1,1-Dichloroethylene	MSD	RPD	8	%	20
FA49143-1MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	REC	95	%	77-123
FA49143-1MSD	156-59-2	cis-1,2-Dichloroethylene	MSD	RPD	0	%	20
FA49143-1MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	REC	97	%	74-125
FA49143-1MSD	156-60-5	trans-1,2-Dichloroethylene	MSD	RPD	4	%	20
FA49143-1MSD	78-87-5	1,2-Dichloropropane	MSD	REC	92	%	76-123
FA49143-1MSD	78-87-5	1,2-Dichloropropane	MSD	RPD	3	%	20
FA49143-1MSD	142-28-9	1,3-Dichloropropane	MSD	REC	93	%	77-121
FA49143-1MSD	142-28-9	1,3-Dichloropropane	MSD	RPD	0	%	20
FA49143-1MSD	594-20-7	2,2-Dichloropropane	MSD	REC	82	%	67-133
FA49143-1MSD	594-20-7	2,2-Dichloropropane	MSD	RPD	4	%	20
FA49143-1MSD	563-58-6	1,1-Dichloropropene	MSD	REC	81	%	76-125
FA49143-1MSD	563-58-6	1,1-Dichloropropene	MSD	RPD	1	%	20
FA49143-1MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	REC	93	%	74-126
FA49143-1MSD	10061-01-5	cis-1,3-Dichloropropene	MSD	RPD	4	%	20
FA49143-1MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	REC	102	%	71-130
FA49143-1MSD	10061-02-6	trans-1,3-Dichloropropene	MSD	RPD	2	%	20
FA49143-1MSD	100-41-4	Ethylbenzene	MSD	REC	93	%	76-122
FA49143-1MSD	100-41-4	Ethylbenzene	MSD	RPD	1	%	20
FA49143-1MSD	87-68-3	Hexachlorobutadiene	MSD	REC	60	%	61-135
FA49143-1MSD	87-68-3	Hexachlorobutadiene	MSD	RPD	2	%	20
FA49143-1MSD	591-78-6	2-Hexanone	MSD	REC	102	%	53-145
FA49143-1MSD	591-78-6	2-Hexanone	MSD	RPD	1	%	20
FA49143-1MSD	98-82-8	Isopropylbenzene	MSD	REC	91	%	68-134
FA49143-1MSD	98-82-8	Isopropylbenzene	MSD	RPD	1	%	20
FA49143-1MSD	99-87-6	p-Isopropyltoluene	MSD	REC	80	%	73-127
FA49143-1MSD	99-87-6	p-Isopropyltoluene	MSD	RPD	2	%	20
FA49143-1MSD	74-83-9	Methyl Bromide	MSD	REC	76	%	53-143
FA49143-1MSD	74-83-9	Methyl Bromide	MSD	RPD	5	%	20

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA49143-1MSD	74-87-3	Methyl Chloride	MSD	REC	67	%	50-136
FA49143-1MSD	74-87-3	Methyl Chloride	MSD	RPD	4	%	20
FA49143-1MSD	74-95-3	Methylene Bromide	MSD	REC	95	%	78-125
FA49143-1MSD	74-95-3	Methylene Bromide	MSD	RPD	1	%	20
FA49143-1MSD	75-09-2	Methylene Chloride	MSD	REC	87	%	70-128
FA49143-1MSD	75-09-2	Methylene Chloride	MSD	RPD	8	%	20
FA49143-1MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	REC	97	%	65-135
FA49143-1MSD	108-10-1	4-Methyl-2-pentanone (MIBK)	MSD	RPD	2	%	20
FA49143-1MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	REC	104	%	73-125
FA49143-1MSD	1634-04-4	Methyl Tert Butyl Ether	MSD	RPD	3	%	20
FA49143-1MSD	91-20-3	Naphthalene	MSD	REC	72	%	62-129
FA49143-1MSD	91-20-3	Naphthalene	MSD	RPD	2	%	20
FA49143-1MSD	103-65-1	n-Propylbenzene	MSD	REC	74	%	73-125
FA49143-1MSD	103-65-1	n-Propylbenzene	MSD	RPD	2	%	20
FA49143-1MSD	100-42-5	Styrene	MSD	REC	102	%	76-124
FA49143-1MSD	100-42-5	Styrene	MSD	RPD	2	%	20
FA49143-1MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	REC	95	%	78-125
FA49143-1MSD	630-20-6	1,1,1,2-Tetrachloroethane	MSD	RPD	4	%	20
FA49143-1MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	REC	79	%	70-124
FA49143-1MSD	79-34-5	1,1,2,2-Tetrachloroethane	MSD	RPD	5	%	20
FA49143-1MSD	127-18-4	Tetrachloroethylene	MSD	REC	80	%	73-128
FA49143-1MSD	127-18-4	Tetrachloroethylene	MSD	RPD	0	%	20
FA49143-1MSD	108-88-3	Toluene	MSD	REC	90	%	77-121
FA49143-1MSD	108-88-3	Toluene	MSD	RPD	1	%	20
FA49143-1MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	REC	67	%	66-130
FA49143-1MSD	87-61-6	1,2,3-Trichlorobenzene	MSD	RPD	2	%	20
FA49143-1MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	79	%	67-129
FA49143-1MSD	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	3	%	20
FA49143-1MSD	71-55-6	1,1,1-Trichloroethane	MSD	REC	81	%	73-130
FA49143-1MSD	71-55-6	1,1,1-Trichloroethane	MSD	RPD	2	%	20
FA49143-1MSD	79-00-5	1,1,2-Trichloroethane	MSD	REC	98	%	78-121
FA49143-1MSD	79-00-5	1,1,2-Trichloroethane	MSD	RPD	2	%	20
FA49143-1MSD	79-01-6	Trichloroethylene	MSD	REC	89	%	77-123
FA49143-1MSD	79-01-6	Trichloroethylene	MSD	RPD	0	%	20
FA49143-1MSD	75-69-4	Trichlorofluoromethane	MSD	REC	53	%	62-140
FA49143-1MSD	75-69-4	Trichlorofluoromethane	MSD	RPD	22	%	20
FA49143-1MSD	96-18-4	1,2,3-Trichloropropane	MSD	REC	79	%	73-125
FA49143-1MSD	96-18-4	1,2,3-Trichloropropane	MSD	RPD	6	%	20
FA49143-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	REC	81	%	75-123
FA49143-1MSD	95-63-6	1,2,4-Trimethylbenzene	MSD	RPD	3	%	20
FA49143-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	REC	80	%	73-124
FA49143-1MSD	108-67-8	1,3,5-Trimethylbenzene	MSD	RPD	1	%	20
FA49143-1MSD	108-05-4	Vinyl Acetate	MSD	REC	107	%	50-151
FA49143-1MSD	108-05-4	Vinyl Acetate	MSD	RPD	2	%	20
FA49143-1MSD	75-01-4	Vinyl Chloride	MSD	REC	65	%	56-135

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
FA49143-1MSD	75-01-4	Vinyl Chloride	MSD	RPD	9	%	20
FA49143-1MSD		m,p-Xylene	MSD	REC	96	%	77-124
FA49143-1MSD		m,p-Xylene	MSD	RPD	1	%	20
FA49143-1MSD	95-47-6	o-Xylene	MSD	REC	94	%	77-123
FA49143-1MSD	95-47-6	o-Xylene	MSD	RPD	1	%	20
FA49143-1MSD	1868-53-7	Dibromofluoromethane	MSD	SURR	105	%	78-119
FA49143-1MSD	17060-07-0	1,2-Dichloroethane-D4	MSD	SURR	102	%	71-136
FA49143-1MSD	2037-26-5	Toluene-D8	MSD	SURR	96	%	85-116
FA49143-1MSD	460-00-4	4-Bromofluorobenzene	MSD	SURR	84	%	79-119
VY1461-MB	1868-53-7	Dibromofluoromethane	MB	SURR	104	%	78-119
VY1461-MB	17060-07-0	1,2-Dichloroethane-D4	MB	SURR	110	%	71-136
VY1461-MB	2037-26-5	Toluene-D8	MB	SURR	97	%	85-116
VY1461-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	102	%	79-119
FA49143-1	1868-53-7	Dibromofluoromethane	SAMP	SURR	102	%	78-119
FA49143-1	17060-07-0	1,2-Dichloroethane-D4	SAMP	SURR	109	%	71-136
FA49143-1	2037-26-5	Toluene-D8	SAMP	SURR	97	%	85-116
FA49143-1	460-00-4	4-Bromofluorobenzene	SAMP	SURR	100	%	79-119
OP67608	SW846 8270D						
OP67608-BS	59-50-7	4-Chloro-3-methyl Phenol	BSP	REC	74	%	45-122
OP67608-BS	59-50-7	4-Chloro-3-methyl Phenol	BSP	REC	69	%	45-122
OP67608-BS	95-57-8	2-Chlorophenol	BSP	REC	74	%	34-121
OP67608-BS	95-57-8	2-Chlorophenol	BSP	REC	73	%	34-121
OP67608-BS	120-83-2	2,4-Dichlorophenol	BSP	REC	78	%	40-122
OP67608-BS	120-83-2	2,4-Dichlorophenol	BSP	REC	71	%	40-122
OP67608-BS	105-67-9	2,4-Dimethylphenol	BSP	REC	61	%	30-127
OP67608-BS	105-67-9	2,4-Dimethylphenol	BSP	REC	65	%	30-127
OP67608-BS	534-52-1	4,6-Dinitro-o-cresol	BSP	REC	89	%	29-132
OP67608-BS	534-52-1	4,6-Dinitro-o-cresol	BSP	REC	94	%	29-132
OP67608-BS	95-48-7	2-Methylphenol	BSP	REC	71	%	32-122
OP67608-BS	95-48-7	2-Methylphenol	BSP	REC	73	%	32-122
OP67608-BS		3&4-Methylphenol	BSP	REC	72	%	34-119
OP67608-BS		3&4-Methylphenol	BSP	REC	74	%	34-119
OP67608-BS	88-75-5	2-Nitrophenol	BSP	REC	89	%	36-123
OP67608-BS	88-75-5	2-Nitrophenol	BSP	REC	82	%	36-123
OP67608-BS	100-02-7	4-Nitrophenol	BSP	REC	74	%	30-132
OP67608-BS	100-02-7	4-Nitrophenol	BSP	REC	79	%	30-132
OP67608-BS	87-86-5	Pentachlorophenol	BSP	REC	90	%	25-133
OP67608-BS	87-86-5	Pentachlorophenol	BSP	REC	89	%	25-133
OP67608-BS	108-95-2	Phenol	BSP	REC	72	%	34-121
OP67608-BS	108-95-2	Phenol	BSP	REC	70	%	34-121
OP67608-BS	95-95-4	2,4,5-Trichlorophenol	BSP	REC	84	%	41-124
OP67608-BS	95-95-4	2,4,5-Trichlorophenol	BSP	REC	85	%	41-124
OP67608-BS	88-06-2	2,4,6-Trichlorophenol	BSP	REC	89	%	39-126

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67608-BS	88-06-2	2,4,6-Trichlorophenol	BSP	REC	86	%	39-126
OP67608-BS	83-32-9	Acenaphthene	BSP	REC	78	%	40-123
OP67608-BS	83-32-9	Acenaphthene	BSP	REC	77	%	40-123
OP67608-BS	208-96-8	Acenaphthylene	BSP	REC	83	%	32-132
OP67608-BS	208-96-8	Acenaphthylene	BSP	REC	82	%	32-132
OP67608-BS	120-12-7	Anthracene	BSP	REC	76	%	47-123
OP67608-BS	120-12-7	Anthracene	BSP	REC	76	%	47-123
OP67608-BS	56-55-3	Benzo(a)anthracene	BSP	REC	79	%	49-126
OP67608-BS	56-55-3	Benzo(a)anthracene	BSP	REC	79	%	49-126
OP67608-BS	50-32-8	Benzo(a)pyrene	BSP	REC	80	%	45-129
OP67608-BS	50-32-8	Benzo(a)pyrene	BSP	REC	80	%	45-129
OP67608-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	85	%	45-132
OP67608-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	83	%	45-132
OP67608-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	82	%	43-134
OP67608-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	84	%	43-134
OP67608-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	79	%	47-132
OP67608-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	82	%	47-132
OP67608-BS	100-51-6	Benzyl Alcohol	BSP	REC	70	%	29-122
OP67608-BS	100-51-6	Benzyl Alcohol	BSP	REC	71	%	29-122
OP67608-BS	101-55-3	4-Bromophenyl phenyl ether	BSP	REC	81	%	46-124
OP67608-BS	101-55-3	4-Bromophenyl phenyl ether	BSP	REC	79	%	46-124
OP67608-BS	85-68-7	Butyl benzyl phthalate	BSP	REC	79	%	48-132
OP67608-BS	85-68-7	Butyl benzyl phthalate	BSP	REC	80	%	48-132
OP67608-BS	86-74-8	Carbazole	BSP	REC	76	%	50-123
OP67608-BS	86-74-8	Carbazole	BSP	REC	75	%	50-123
OP67608-BS	106-47-8	4-Chloroaniline	BSP	REC	87	%	17-106
OP67608-BS	106-47-8	4-Chloroaniline	BSP	REC	80	%	17-106
OP67608-BS	111-91-1	bis(2-Chloroethoxy)methane	BSP	REC	60	%	36-121
OP67608-BS	111-91-1	bis(2-Chloroethoxy)methane	BSP	REC	65	%	36-121
OP67608-BS	111-44-4	bis(2-Chloroethyl)ether	BSP	REC	68	%	31-120
OP67608-BS	111-44-4	bis(2-Chloroethyl)ether	BSP	REC	68	%	31-120
OP67608-BS	108-60-1	bis(2-Chloroisopropyl)ether	BSP	REC	65	%	33-131
OP67608-BS	108-60-1	bis(2-Chloroisopropyl)ether	BSP	REC	65	%	33-131
OP67608-BS	91-58-7	2-Chloronaphthalene	BSP	REC	79	%	41-114
OP67608-BS	91-58-7	2-Chloronaphthalene	BSP	REC	77	%	41-114
OP67608-BS	7005-72-3	4-Chlorophenyl phenyl ether	BSP	REC	80	%	45-121
OP67608-BS	7005-72-3	4-Chlorophenyl phenyl ether	BSP	REC	79	%	45-121
OP67608-BS	218-01-9	Chrysene	BSP	REC	79	%	50-124
OP67608-BS	218-01-9	Chrysene	BSP	REC	79	%	50-124
OP67608-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	85	%	45-134
OP67608-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	84	%	45-134
OP67608-BS	132-64-9	Dibenzofuran	BSP	REC	77	%	44-120
OP67608-BS	132-64-9	Dibenzofuran	BSP	REC	77	%	44-120
OP67608-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	73	%	33-117
OP67608-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	74	%	33-117

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67608-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	72	%	30-115
OP67608-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	72	%	30-115
OP67608-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	74	%	31-115
OP67608-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	72	%	31-115
OP67608-BS	91-94-1	3,3'-Dichlorobenzidine	BSP	REC	92	%	22-121
OP67608-BS	91-94-1	3,3'-Dichlorobenzidine	BSP	REC	96	%	22-121
OP67608-BS	84-66-2	Diethyl Phthalate	BSP	REC	77	%	50-124
OP67608-BS	84-66-2	Diethyl Phthalate	BSP	REC	76	%	50-124
OP67608-BS	131-11-3	Dimethyl Phthalate	BSP	REC	77	%	48-124
OP67608-BS	131-11-3	Dimethyl Phthalate	BSP	REC	78	%	48-124
OP67608-BS	117-84-0	Di-n-octyl Phthalate	BSP	REC	91	%	45-140
OP67608-BS	117-84-0	Di-n-octyl Phthalate	BSP	REC	92	%	45-140
OP67608-BS	84-74-2	Di-n-butyl Phthalate	BSP	REC	79	%	51-128
OP67608-BS	84-74-2	Di-n-butyl Phthalate	BSP	REC	79	%	51-128
OP67608-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	86	%	48-126
OP67608-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	87	%	48-126
OP67608-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	83	%	46-124
OP67608-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	82	%	46-124
OP67608-BS	122-66-7	1,2-Diphenylhydrazine	BSP	REC	73	%	41-125
OP67608-BS	122-66-7	1,2-Diphenylhydrazine	BSP	REC	75	%	41-125
OP67608-BS	117-81-7	bis(2-Ethylhexyl)phthalate	BSP	REC	83	%	51-133
OP67608-BS	117-81-7	bis(2-Ethylhexyl)phthalate	BSP	REC	82	%	51-133
OP67608-BS	206-44-0	Fluoranthene	BSP	REC	77	%	50-127
OP67608-BS	206-44-0	Fluoranthene	BSP	REC	80	%	50-127
OP67608-BS	86-73-7	Fluorene	BSP	REC	81	%	43-125
OP67608-BS	86-73-7	Fluorene	BSP	REC	81	%	43-125
OP67608-BS	118-74-1	Hexachlorobenzene	BSP	REC	83	%	45-122
OP67608-BS	118-74-1	Hexachlorobenzene	BSP	REC	79	%	45-122
OP67608-BS	87-68-3	Hexachlorobutadiene	BSP	REC	76	%	32-123
OP67608-BS	87-68-3	Hexachlorobutadiene	BSP	REC	68	%	32-123
OP67608-BS	67-72-1	Hexachloroethane	BSP	REC	71	%	28-117
OP67608-BS	67-72-1	Hexachloroethane	BSP	REC	72	%	28-117
OP67608-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	87	%	45-133
OP67608-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	89	%	45-133
OP67608-BS	78-59-1	Isophorone	BSP	REC	71	%	30-122
OP67608-BS	78-59-1	Isophorone	BSP	REC	65	%	30-122
OP67608-BS	90-12-0	1-Methylnaphthalene	BSP	REC	73	%	40-119
OP67608-BS	90-12-0	1-Methylnaphthalene	BSP	REC	67	%	40-119
OP67608-BS	91-57-6	2-Methylnaphthalene	BSP	REC	72	%	38-122
OP67608-BS	91-57-6	2-Methylnaphthalene	BSP	REC	67	%	38-122
OP67608-BS	91-20-3	Naphthalene	BSP	REC	65	%	35-123
OP67608-BS	91-20-3	Naphthalene	BSP	REC	71	%	35-123
OP67608-BS	88-74-4	2-Nitroaniline	BSP	REC	80	%	44-127
OP67608-BS	88-74-4	2-Nitroaniline	BSP	REC	80	%	44-127
OP67608-BS	99-09-2	3-Nitroaniline	BSP	REC	83	%	33-119

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67608-BS	99-09-2	3-Nitroaniline	BSP	REC	85	%	33-119
OP67608-BS	98-95-3	Nitrobenzene	BSP	REC	71	%	34-122
OP67608-BS	98-95-3	Nitrobenzene	BSP	REC	65	%	34-122
OP67608-BS	62-75-9	N-Nitrosodimethylamine	BSP	REC	63	%	23-120
OP67608-BS	62-75-9	N-Nitrosodimethylamine	BSP	REC	62	%	23-120
OP67608-BS	621-64-7	N-Nitrosodi-n-propylamine	BSP	REC	71	%	36-120
OP67608-BS	621-64-7	N-Nitrosodi-n-propylamine	BSP	REC	68	%	36-120
OP67608-BS	86-30-6	N-Nitrosodiphenylamine	BSP	REC	78	%	38-127
OP67608-BS	86-30-6	N-Nitrosodiphenylamine	BSP	REC	79	%	38-127
OP67608-BS	85-01-8	Phenanthrene	BSP	REC	77	%	50-121
OP67608-BS	85-01-8	Phenanthrene	BSP	REC	78	%	50-121
OP67608-BS	129-00-0	Pyrene	BSP	REC	80	%	47-127
OP67608-BS	129-00-0	Pyrene	BSP	REC	81	%	47-127
OP67608-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	68	%	34-118
OP67608-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	75	%	34-118
OP67608-BS	367-12-4	2-Fluorophenol	BSP	SURR	70	%	35-115
OP67608-BS	367-12-4	2-Fluorophenol	BSP	SURR	69	%	35-115
OP67608-BS	4165-62-2	Phenol-d5	BSP	SURR	70	%	33-122
OP67608-BS	4165-62-2	Phenol-d5	BSP	SURR	70	%	33-122
OP67608-BS	118-79-6	2,4,6-Tribromophenol	BSP	SURR	86	%	39-132
OP67608-BS	118-79-6	2,4,6-Tribromophenol	BSP	SURR	89	%	39-132
OP67608-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	70	%	37-122
OP67608-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	64	%	37-122
OP67608-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	76	%	44-115
OP67608-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	77	%	44-115
OP67608-BS	1718-51-0	Terphenyl-d14	BSP	SURR	81	%	54-127
OP67608-BS	1718-51-0	Terphenyl-d14	BSP	SURR	79	%	54-127
OP67608-MS*	59-50-7	4-Chloro-3-methyl Phenol	MS	REC	71	%	45-122
OP67608-MS*	95-57-8	2-Chlorophenol	MS	REC	76	%	34-121
OP67608-MS*	120-83-2	2,4-Dichlorophenol	MS	REC	74	%	40-122
OP67608-MS*	105-67-9	2,4-Dimethylphenol	MS	REC	65	%	30-127
OP67608-MS*	534-52-1	4,6-Dinitro-o-cresol	MS	REC	94	%	29-132
OP67608-MS*	95-48-7	2-Methylphenol	MS	REC	74	%	32-122
OP67608-MS*		3&4-Methylphenol	MS	REC	76	%	34-119
OP67608-MS*	88-75-5	2-Nitrophenol	MS	REC	86	%	36-123
OP67608-MS*	100-02-7	4-Nitrophenol	MS	REC	82	%	30-132
OP67608-MS*	87-86-5	Pentachlorophenol	MS	REC	97	%	25-133
OP67608-MS*	108-95-2	Phenol	MS	REC	74	%	34-121
OP67608-MS*	95-95-4	2,4,5-Trichlorophenol	MS	REC	90	%	41-124
OP67608-MS*	88-06-2	2,4,6-Trichlorophenol	MS	REC	90	%	39-126
OP67608-MS*	83-32-9	Acenaphthene	MS	REC	81	%	40-123
OP67608-MS*	208-96-8	Acenaphthylene	MS	REC	86	%	32-132
OP67608-MS*	120-12-7	Anthracene	MS	REC	80	%	47-123
OP67608-MS*	56-55-3	Benzo(a)anthracene	MS	REC	84	%	49-126
OP67608-MS*	50-32-8	Benzo(a)pyrene	MS	REC	84	%	45-129

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67608-MS*	205-99-2	Benzo(b)fluoranthene	MS	REC	88	%	45-132
OP67608-MS*	191-24-2	Benzo(g,h,i)perylene	MS	REC	87	%	43-134
OP67608-MS*	207-08-9	Benzo(k)fluoranthene	MS	REC	84	%	47-132
OP67608-MS*	100-51-6	Benzyl Alcohol	MS	REC	76	%	29-122
OP67608-MS*	101-55-3	4-Bromophenyl phenyl ether	MS	REC	83	%	46-124
OP67608-MS*	85-68-7	Butyl benzyl phthalate	MS	REC	84	%	48-132
OP67608-MS*	86-74-8	Carbazole	MS	REC	85	%	50-123
OP67608-MS*	106-47-8	4-Chloroaniline	MS	REC	87	%	17-106
OP67608-MS*	111-91-1	bis(2-Chloroethoxy)methane	MS	REC	62	%	36-121
OP67608-MS*	111-44-4	bis(2-Chloroethyl)ether	MS	REC	71	%	31-120
OP67608-MS*	108-60-1	bis(2-Chloroisopropyl)ether	MS	REC	67	%	33-131
OP67608-MS*	91-58-7	2-Chloronaphthalene	MS	REC	81	%	41-114
OP67608-MS*	7005-72-3	4-Chlorophenyl phenyl ether	MS	REC	84	%	45-121
OP67608-MS*	218-01-9	Chrysene	MS	REC	83	%	50-124
OP67608-MS*	53-70-3	Dibenzo(a,h)anthracene	MS	REC	89	%	45-134
OP67608-MS*	132-64-9	Dibenzofuran	MS	REC	84	%	44-120
OP67608-MS*	95-50-1	1,2-Dichlorobenzene	MS	REC	76	%	33-117
OP67608-MS*	541-73-1	1,3-Dichlorobenzene	MS	REC	74	%	30-115
OP67608-MS*	106-46-7	1,4-Dichlorobenzene	MS	REC	76	%	31-115
OP67608-MS*	91-94-1	3,3'-Dichlorobenzidine	MS	REC	105	%	22-121
OP67608-MS*	84-66-2	Diethyl Phthalate	MS	REC	79	%	50-124
OP67608-MS*	131-11-3	Dimethyl Phthalate	MS	REC	81	%	48-124
OP67608-MS*	117-84-0	Di-n-octyl Phthalate	MS	REC	96	%	45-140
OP67608-MS*	84-74-2	Di-n-butyl Phthalate	MS	REC	83	%	51-128
OP67608-MS*	121-14-2	2,4-Dinitrotoluene	MS	REC	92	%	48-126
OP67608-MS*	606-20-2	2,6-Dinitrotoluene	MS	REC	87	%	46-124
OP67608-MS*	122-66-7	1,2-Diphenylhydrazine	MS	REC	77	%	41-125
OP67608-MS*	117-81-7	bis(2-Ethylhexyl)phthalate	MS	REC	85	%	51-133
OP67608-MS*	206-44-0	Fluoranthene	MS	REC	83	%	50-127
OP67608-MS*	86-73-7	Fluorene	MS	REC	85	%	43-125
OP67608-MS*	118-74-1	Hexachlorobenzene	MS	REC	85	%	45-122
OP67608-MS*	87-68-3	Hexachlorobutadiene	MS	REC	71	%	32-123
OP67608-MS*	67-72-1	Hexachloroethane	MS	REC	73	%	28-117
OP67608-MS*	193-39-5	Indeno(1,2,3-cd)pyrene	MS	REC	97	%	45-133
OP67608-MS*	78-59-1	Isophorone	MS	REC	68	%	30-122
OP67608-MS*	90-12-0	1-Methylnaphthalene	MS	REC	69	%	40-119
OP67608-MS*	91-57-6	2-Methylnaphthalene	MS	REC	72	%	38-122
OP67608-MS*	91-20-3	Naphthalene	MS	REC	68	%	35-123
OP67608-MS*	88-74-4	2-Nitroaniline	MS	REC	89	%	44-127
OP67608-MS*	99-09-2	3-Nitroaniline	MS	REC	94	%	33-119
OP67608-MS*	98-95-3	Nitrobenzene	MS	REC	68	%	34-122
OP67608-MS*	62-75-9	N-Nitrosodimethylamine	MS	REC	65	%	23-120
OP67608-MS*	621-64-7	N-Nitrosodi-n-propylamine	MS	REC	71	%	36-120
OP67608-MS*	86-30-6	N-Nitrosodiphenylamine	MS	REC	83	%	38-127
OP67608-MS*	85-01-8	Phenanthrene	MS	REC	82	%	50-121

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67608-MS*	129-00-0	Pyrene	MS	REC	84	%	47-127
OP67608-MS*	120-82-1	1,2,4-Trichlorobenzene	MS	REC	70	%	34-118
OP67608-MS*	367-12-4	2-Fluorophenol	MS	SURR	74	%	35-115
OP67608-MS*	4165-62-2	Phenol-d5	MS	SURR	74	%	33-122
OP67608-MS*	118-79-6	2,4,6-Tribromophenol	MS	SURR	94	%	39-132
OP67608-MS*	4165-60-0	Nitrobenzene-d5	MS	SURR	69	%	37-122
OP67608-MS*	321-60-8	2-Fluorobiphenyl	MS	SURR	81	%	44-115
OP67608-MS*	1718-51-0	Terphenyl-d14	MS	SURR	86	%	54-127
OP67608-MSD*	59-50-7	4-Chloro-3-methyl Phenol	MSD	REC	80	%	45-122
OP67608-MSD*	59-50-7	4-Chloro-3-methyl Phenol	MSD	RPD	11	%	20
OP67608-MSD*	95-57-8	2-Chlorophenol	MSD	REC	77	%	34-121
OP67608-MSD*	95-57-8	2-Chlorophenol	MSD	RPD	0	%	20
OP67608-MSD*	120-83-2	2,4-Dichlorophenol	MSD	REC	81	%	40-122
OP67608-MSD*	120-83-2	2,4-Dichlorophenol	MSD	RPD	8	%	20
OP67608-MSD*	105-67-9	2,4-Dimethylphenol	MSD	REC	71	%	30-127
OP67608-MSD*	105-67-9	2,4-Dimethylphenol	MSD	RPD	8	%	20
OP67608-MSD*	534-52-1	4,6-Dinitro-o-cresol	MSD	REC	98	%	29-132
OP67608-MSD*	534-52-1	4,6-Dinitro-o-cresol	MSD	RPD	3	%	20
OP67608-MSD*	95-48-7	2-Methylphenol	MSD	REC	75	%	32-122
OP67608-MSD*	95-48-7	2-Methylphenol	MSD	RPD	1	%	20
OP67608-MSD*		3&4-Methylphenol	MSD	REC	76	%	34-119
OP67608-MSD*		3&4-Methylphenol	MSD	RPD	0	%	20
OP67608-MSD*	88-75-5	2-Nitrophenol	MSD	REC	94	%	36-123
OP67608-MSD*	88-75-5	2-Nitrophenol	MSD	RPD	8	%	20
OP67608-MSD*	100-02-7	4-Nitrophenol	MSD	REC	85	%	30-132
OP67608-MSD*	100-02-7	4-Nitrophenol	MSD	RPD	4	%	20
OP67608-MSD*	87-86-5	Pentachlorophenol	MSD	REC	101	%	25-133
OP67608-MSD*	87-86-5	Pentachlorophenol	MSD	RPD	3	%	20
OP67608-MSD*	108-95-2	Phenol	MSD	REC	74	%	34-121
OP67608-MSD*	108-95-2	Phenol	MSD	RPD	1	%	20
OP67608-MSD*	95-95-4	2,4,5-Trichlorophenol	MSD	REC	93	%	41-124
OP67608-MSD*	95-95-4	2,4,5-Trichlorophenol	MSD	RPD	2	%	20
OP67608-MSD*	88-06-2	2,4,6-Trichlorophenol	MSD	REC	91	%	39-126
OP67608-MSD*	88-06-2	2,4,6-Trichlorophenol	MSD	RPD	1	%	20
OP67608-MSD*	83-32-9	Acenaphthene	MSD	REC	79	%	40-123
OP67608-MSD*	83-32-9	Acenaphthene	MSD	RPD	3	%	20
OP67608-MSD*	208-96-8	Acenaphthylene	MSD	REC	85	%	32-132
OP67608-MSD*	208-96-8	Acenaphthylene	MSD	RPD	2	%	20
OP67608-MSD*	120-12-7	Anthracene	MSD	REC	81	%	47-123
OP67608-MSD*	120-12-7	Anthracene	MSD	RPD	0	%	20
OP67608-MSD*	56-55-3	Benzo(a)anthracene	MSD	REC	84	%	49-126
OP67608-MSD*	56-55-3	Benzo(a)anthracene	MSD	RPD	0	%	20
OP67608-MSD*	50-32-8	Benzo(a)pyrene	MSD	REC	84	%	45-129
OP67608-MSD*	50-32-8	Benzo(a)pyrene	MSD	RPD	1	%	20
OP67608-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	REC	88	%	45-132

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67608-MSD*	205-99-2	Benzo(b)fluoranthene	MSD	RPD	0	%	20
OP67608-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	REC	85	%	43-134
OP67608-MSD*	191-24-2	Benzo(g,h,i)perylene	MSD	RPD	3	%	20
OP67608-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	REC	83	%	47-132
OP67608-MSD*	207-08-9	Benzo(k)fluoranthene	MSD	RPD	2	%	20
OP67608-MSD*	100-51-6	Benzyl Alcohol	MSD	REC	77	%	29-122
OP67608-MSD*	100-51-6	Benzyl Alcohol	MSD	RPD	1	%	20
OP67608-MSD*	101-55-3	4-Bromophenyl phenyl ether	MSD	REC	84	%	46-124
OP67608-MSD*	101-55-3	4-Bromophenyl phenyl ether	MSD	RPD	0	%	20
OP67608-MSD*	85-68-7	Butyl benzyl phthalate	MSD	REC	83	%	48-132
OP67608-MSD*	85-68-7	Butyl benzyl phthalate	MSD	RPD	2	%	20
OP67608-MSD*	86-74-8	Carbazole	MSD	REC	87	%	50-123
OP67608-MSD*	86-74-8	Carbazole	MSD	RPD	2	%	20
OP67608-MSD*	106-47-8	4-Chloroaniline	MSD	REC	98	%	17-106
OP67608-MSD*	106-47-8	4-Chloroaniline	MSD	RPD	11	%	20
OP67608-MSD*	111-91-1	bis(2-Chloroethoxy)methane	MSD	REC	68	%	36-121
OP67608-MSD*	111-91-1	bis(2-Chloroethoxy)methane	MSD	RPD	9	%	20
OP67608-MSD*	111-44-4	bis(2-Chloroethyl)ether	MSD	REC	70	%	31-120
OP67608-MSD*	111-44-4	bis(2-Chloroethyl)ether	MSD	RPD	2	%	20
OP67608-MSD*	108-60-1	bis(2-Chloroisopropyl)ether	MSD	REC	67	%	33-131
OP67608-MSD*	108-60-1	bis(2-Chloroisopropyl)ether	MSD	RPD	2	%	20
OP67608-MSD*	91-58-7	2-Chloronaphthalene	MSD	REC	80	%	41-114
OP67608-MSD*	91-58-7	2-Chloronaphthalene	MSD	RPD	3	%	20
OP67608-MSD*	7005-72-3	4-Chlorophenyl phenyl ether	MSD	REC	83	%	45-121
OP67608-MSD*	7005-72-3	4-Chlorophenyl phenyl ether	MSD	RPD	2	%	20
OP67608-MSD*	218-01-9	Chrysene	MSD	REC	82	%	50-124
OP67608-MSD*	218-01-9	Chrysene	MSD	RPD	1	%	20
OP67608-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	REC	87	%	45-134
OP67608-MSD*	53-70-3	Dibenzo(a,h)anthracene	MSD	RPD	3	%	20
OP67608-MSD*	132-64-9	Dibenzofuran	MSD	REC	85	%	44-120
OP67608-MSD*	132-64-9	Dibenzofuran	MSD	RPD	1	%	20
OP67608-MSD*	95-50-1	1,2-Dichlorobenzene	MSD	REC	74	%	33-117
OP67608-MSD*	95-50-1	1,2-Dichlorobenzene	MSD	RPD	4	%	20
OP67608-MSD*	541-73-1	1,3-Dichlorobenzene	MSD	REC	71	%	30-115
OP67608-MSD*	541-73-1	1,3-Dichlorobenzene	MSD	RPD	5	%	20
OP67608-MSD*	106-46-7	1,4-Dichlorobenzene	MSD	REC	72	%	31-115
OP67608-MSD*	106-46-7	1,4-Dichlorobenzene	MSD	RPD	5	%	20
OP67608-MSD*	91-94-1	3,3'-Dichlorobenzidine	MSD	REC	107	%	22-121
OP67608-MSD*	91-94-1	3,3'-Dichlorobenzidine	MSD	RPD	1	%	20
OP67608-MSD*	84-66-2	Diethyl Phthalate	MSD	REC	80	%	50-124
OP67608-MSD*	84-66-2	Diethyl Phthalate	MSD	RPD	1	%	20
OP67608-MSD*	131-11-3	Dimethyl Phthalate	MSD	REC	83	%	48-124
OP67608-MSD*	131-11-3	Dimethyl Phthalate	MSD	RPD	1	%	20
OP67608-MSD*	117-84-0	Di-n-octyl Phthalate	MSD	REC	96	%	45-140
OP67608-MSD*	117-84-0	Di-n-octyl Phthalate	MSD	RPD	1	%	20

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67608-MSD*	84-74-2	Di-n-butyl Phthalate	MSD	REC	84	%	51-128
OP67608-MSD*	84-74-2	Di-n-butyl Phthalate	MSD	RPD	0	%	20
OP67608-MSD*	121-14-2	2,4-Dinitrotoluene	MSD	REC	94	%	48-126
OP67608-MSD*	121-14-2	2,4-Dinitrotoluene	MSD	RPD	1	%	20
OP67608-MSD*	606-20-2	2,6-Dinitrotoluene	MSD	REC	89	%	46-124
OP67608-MSD*	606-20-2	2,6-Dinitrotoluene	MSD	RPD	1	%	20
OP67608-MSD*	122-66-7	1,2-Diphenylhydrazine	MSD	REC	76	%	41-125
OP67608-MSD*	122-66-7	1,2-Diphenylhydrazine	MSD	RPD	3	%	20
OP67608-MSD*	117-81-7	bis(2-Ethylhexyl)phthalate	MSD	REC	86	%	51-133
OP67608-MSD*	117-81-7	bis(2-Ethylhexyl)phthalate	MSD	RPD	1	%	20
OP67608-MSD*	206-44-0	Fluoranthene	MSD	REC	84	%	50-127
OP67608-MSD*	206-44-0	Fluoranthene	MSD	RPD	0	%	20
OP67608-MSD*	86-73-7	Fluorene	MSD	REC	85	%	43-125
OP67608-MSD*	86-73-7	Fluorene	MSD	RPD	1	%	20
OP67608-MSD*	118-74-1	Hexachlorobenzene	MSD	REC	84	%	45-122
OP67608-MSD*	118-74-1	Hexachlorobenzene	MSD	RPD	1	%	20
OP67608-MSD*	87-68-3	Hexachlorobutadiene	MSD	REC	75	%	32-123
OP67608-MSD*	87-68-3	Hexachlorobutadiene	MSD	RPD	4	%	20
OP67608-MSD*	67-72-1	Hexachloroethane	MSD	REC	69	%	28-117
OP67608-MSD*	67-72-1	Hexachloroethane	MSD	RPD	6	%	20
OP67608-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	REC	91	%	45-133
OP67608-MSD*	193-39-5	Indeno(1,2,3-cd)pyrene	MSD	RPD	7	%	20
OP67608-MSD*	78-59-1	Isophorone	MSD	REC	75	%	30-122
OP67608-MSD*	78-59-1	Isophorone	MSD	RPD	9	%	20
OP67608-MSD*	90-12-0	1-Methylnaphthalene	MSD	REC	75	%	40-119
OP67608-MSD*	90-12-0	1-Methylnaphthalene	MSD	RPD	7	%	20
OP67608-MSD*	91-57-6	2-Methylnaphthalene	MSD	REC	79	%	38-122
OP67608-MSD*	91-57-6	2-Methylnaphthalene	MSD	RPD	9	%	20
OP67608-MSD*	91-20-3	Naphthalene	MSD	REC	73	%	35-123
OP67608-MSD*	91-20-3	Naphthalene	MSD	RPD	6	%	20
OP67608-MSD*	88-74-4	2-Nitroaniline	MSD	REC	92	%	44-127
OP67608-MSD*	88-74-4	2-Nitroaniline	MSD	RPD	2	%	20
OP67608-MSD*	99-09-2	3-Nitroaniline	MSD	REC	97	%	33-119
OP67608-MSD*	99-09-2	3-Nitroaniline	MSD	RPD	2	%	20
OP67608-MSD*	98-95-3	Nitrobenzene	MSD	REC	74	%	34-122
OP67608-MSD*	98-95-3	Nitrobenzene	MSD	RPD	8	%	20
OP67608-MSD*	62-75-9	N-Nitrosodimethylamine	MSD	REC	65	%	23-120
OP67608-MSD*	62-75-9	N-Nitrosodimethylamine	MSD	RPD	0	%	20
OP67608-MSD*	621-64-7	N-Nitrosodi-n-propylamine	MSD	REC	71	%	36-120
OP67608-MSD*	621-64-7	N-Nitrosodi-n-propylamine	MSD	RPD	1	%	20
OP67608-MSD*	86-30-6	N-Nitrosodiphenylamine	MSD	REC	83	%	38-127
OP67608-MSD*	86-30-6	N-Nitrosodiphenylamine	MSD	RPD	1	%	20
OP67608-MSD*	85-01-8	Phenanthrene	MSD	REC	82	%	50-121
OP67608-MSD*	85-01-8	Phenanthrene	MSD	RPD	1	%	20
OP67608-MSD*	129-00-0	Pyrene	MSD	REC	82	%	47-127

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP67608-MSD*	129-00-0	Pyrene	MSD	RPD	2	%	20
OP67608-MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	REC	75	%	34-118
OP67608-MSD*	120-82-1	1,2,4-Trichlorobenzene	MSD	RPD	7	%	20
OP67608-MSD*	367-12-4	2-Fluorophenol	MSD	SURR	74	%	35-115
OP67608-MSD*	4165-62-2	Phenol-d5	MSD	SURR	75	%	33-122
OP67608-MSD*	118-79-6	2,4,6-Tribromophenol	MSD	SURR	98	%	39-132
OP67608-MSD*	4165-60-0	Nitrobenzene-d5	MSD	SURR	75	%	37-122
OP67608-MSD*	321-60-8	2-Fluorobiphenyl	MSD	SURR	80	%	44-115
OP67608-MSD*	1718-51-0	Terphenyl-d14	MSD	SURR	88	%	54-127
OP67608-MB	367-12-4	2-Fluorophenol	MB	SURR	57	%	35-115
OP67608-MB	367-12-4	2-Fluorophenol	MB	SURR	57	%	35-115
OP67608-MB	4165-62-2	Phenol-d5	MB	SURR	62	%	33-122
OP67608-MB	4165-62-2	Phenol-d5	MB	SURR	62	%	33-122
OP67608-MB	118-79-6	2,4,6-Tribromophenol	MB	SURR	75	%	39-132
OP67608-MB	118-79-6	2,4,6-Tribromophenol	MB	SURR	75	%	39-132
OP67608-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	65	%	37-122
OP67608-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	65	%	37-122
OP67608-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	69	%	44-115
OP67608-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	70	%	44-115
OP67608-MB	1718-51-0	Terphenyl-d14	MB	SURR	76	%	54-127
OP67608-MB	1718-51-0	Terphenyl-d14	MB	SURR	76	%	54-127
FA49143-1	367-12-4	2-Fluorophenol	SAMP	SURR	0 ^a	%	35-115
FA49143-1	4165-62-2	Phenol-d5	SAMP	SURR	0 ^a	%	33-122
FA49143-1	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	0 ^a	%	39-132
FA49143-1	4165-60-0	Nitrobenzene-d5	SAMP	SURR	0 ^a	%	37-122
FA49143-1	321-60-8	2-Fluorobiphenyl	SAMP	SURR	0 ^a	%	44-115
FA49143-1	1718-51-0	Terphenyl-d14	SAMP	SURR	0 ^a	%	54-127
OP67616	SW846 8082A						
OP67616-BS	12674-11-2	Aroclor 1016	BSP	REC	109	%	47-134
OP67616-BS	11096-82-5	Aroclor 1260	BSP	REC	110	%	53-140
OP67616-BS	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	85	%	44-130
OP67616-MS*	12674-11-2	Aroclor 1016	MS	REC	113	%	47-134
OP67616-MS*	11096-82-5	Aroclor 1260	MS	REC	111	%	53-140
OP67616-MS*	877-09-8	Tetrachloro-m-xylene (sig#1)	MS	SURR	89	%	44-130
OP67616-MSD*	12674-11-2	Aroclor 1016	MSD	REC	117	%	47-134
OP67616-MSD*	12674-11-2	Aroclor 1016	MSD	RPD	3	%	30
OP67616-MSD*	11096-82-5	Aroclor 1260	MSD	REC	112	%	53-140
OP67616-MSD*	11096-82-5	Aroclor 1260	MSD	RPD	1	%	30
OP67616-MSD*	877-09-8	Tetrachloro-m-xylene (sig#1)	MSD	SURR	93	%	44-130
OP67616-MB	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	94	%	44-130
FA49143-1	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	59	%	44-130

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

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Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MP32990	SW846 6010C						
MP32990-B1	7440-38-2	Arsenic	BSP	REC	99.6	%	82-111
MP32990-B1	7440-39-3	Barium	BSP	REC	103	%	83-113
MP32990-B1	7440-43-9	Cadmium	BSP	REC	104	%	82-113
MP32990-B1	7440-47-3	Chromium	BSP	REC	102	%	85-113
MP32990-B1	7439-92-1	Lead	BSP	REC	97.2	%	81-112
MP32990-B1	7782-49-2	Selenium	BSP	REC	99.7	%	78-111
MP32990-B1	7440-22-4	Silver	BSP	REC	100	%	82-112
MP32990-S1*	7440-38-2	Arsenic	MS	REC	87.7	%	82-111
MP32990-S1*	7440-39-3	Barium	MS	REC	95.9	%	83-113
MP32990-S1*	7440-43-9	Cadmium	MS	REC	23.3 ^b	%	82-113
MP32990-S1*	7440-47-3	Chromium	MS	REC	98.3	%	85-113
MP32990-S1*	7439-92-1	Lead	MS	REC	93.9	%	81-112
MP32990-S1*	7782-49-2	Selenium	MS	REC	87.5	%	78-111
MP32990-S1*	7440-22-4	Silver	MS	REC	93.3	%	82-112
MP32990-S2*	7440-38-2	Arsenic	MSD	REC	85.9	%	82-111
MP32990-S2*	7440-38-2	Arsenic	MSD	RPD	10.5	%	20
MP32990-S2*	7440-39-3	Barium	MSD	REC	98.3	%	83-113
MP32990-S2*	7440-39-3	Barium	MSD	RPD	11.5	%	20
MP32990-S2*	7440-43-9	Cadmium	MSD	REC	93.7	%	82-113
MP32990-S2*	7440-43-9	Cadmium	MSD	RPD	15	%	20
MP32990-S2*	7440-47-3	Chromium	MSD	REC	97.4	%	85-113
MP32990-S2*	7440-47-3	Chromium	MSD	RPD	8.2	%	20
MP32990-S2*	7439-92-1	Lead	MSD	REC	94.3	%	81-112
MP32990-S2*	7439-92-1	Lead	MSD	RPD	6.3	%	20
MP32990-S2*	7782-49-2	Selenium	MSD	REC	85.7	%	78-111
MP32990-S2*	7782-49-2	Selenium	MSD	RPD	10.8	%	20
MP32990-S2*	7440-22-4	Silver	MSD	REC	93.7	%	82-112
MP32990-S2*	7440-22-4	Silver	MSD	RPD	13.3	%	20
MP32990-D1*	7440-38-2	Arsenic	DUP	RPD	20.4 ^c	%	20
MP32990-D1*	7440-39-3	Barium	DUP	RPD	5.8	%	20
MP32990-D1*	7440-43-9	Cadmium	DUP	RPD	8.5	%	20
MP32990-D1*	7440-47-3	Chromium	DUP	RPD	1.7	%	20
MP32990-D1*	7439-92-1	Lead	DUP	RPD	7.1	%	20
MP32990-D1*	7782-49-2	Selenium	DUP	RPD	0	%	20
MP32990-D1*	7440-22-4	Silver	DUP	RPD	0	%	20
MP33002	SW846 7471B						
MP33002-B1	7439-97-6	Mercury	BSP	REC	96	%	80-124
MP33002-S1*	7439-97-6	Mercury	MS	REC	109.9	%	80-124
MP33002-S2*	7439-97-6	Mercury	MSD	REC	107.6	%	80-124
MP33002-S2*	7439-97-6	Mercury	MSD	RPD	15.9	%	20

* Sample used for QC is not from job FA49143

QC Evaluation: DOD QSM5 Limits

Job Number: FA49143
Account: Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY
Collected: 11/07/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

MP33002-D1*	7439-97-6	Mercury	DUP	RPD	0	%	20

- (a) Outside control limits due to dilution.
- (b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (c) RPD acceptable due to low duplicate and sample concentrations.

* Sample used for QC is not from job FA49143

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

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Job Number: FA49143

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1461-MB	Y36768.D	1	11/08/17	EP	n/a	n/a	VY1461

The QC reported here applies to the following samples:

Method: SW846 8260C

FA49143-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	19.2	50	10	ug/kg	J
71-43-2	Benzene	ND	5.0	1.2	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.0	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
78-93-3	2-Butanone (MEK)	ND	25	7.3	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
75-15-0	Carbon Disulfide	ND	5.0	1.0	ug/kg	
56-23-5	Carbon Tetrachloride	ND	5.0	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	1.3	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.0	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.9	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.0	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.8	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.4	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.0	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.0	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.0	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	

Method Blank Summary

Page 2 of 3

Job Number: FA49143

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1461-MB	Y36768.D	1	11/08/17	EP	n/a	n/a	VY1461

The QC reported here applies to the following samples:

Method: SW846 8260C

FA49143-1

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/kg	
591-78-6	2-Hexanone	ND	25	7.5	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.0	ug/kg	
74-83-9	Methyl Bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl Chloride	ND	5.0	2.0	ug/kg	
74-95-3	Methylene Bromide	ND	5.0	1.0	ug/kg	
75-09-2	Methylene Chloride	4.3	10	4.0	ug/kg	J
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	25	7.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	2.0	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.0	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.3	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.4	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.3	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.0	ug/kg	
108-05-4	Vinyl Acetate	ND	25	16	ug/kg	
75-01-4	Vinyl Chloride	ND	5.0	1.0	ug/kg	
	m,p-Xylene	ND	10	1.1	ug/kg	
95-47-6	o-Xylene	ND	5.0	1.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	104%
17060-07-0	1,2-Dichloroethane-D4	75-124%
		110%
		72-135%

Method Blank Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1461-MB	Y36768.D	1	11/08/17	EP	n/a	n/a	VY1461

The QC reported here applies to the following samples: Method: SW846 8260C
FA49143-1

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	97% 75-126%
460-00-4	4-Bromofluorobenzene	102% 71-133%

6.1.1
6

Blank Spike Summary

Page 1 of 3

Job Number: FA49143

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1461-BS	Y36769.D	1	11/08/17	EP	n/a	n/a	VY1461

The QC reported here applies to the following samples:

Method: SW846 8260C

FA49143-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	283	113	61-152
71-43-2	Benzene	50	53.2	106	76-126
108-86-1	Bromobenzene	50	51.3	103	76-122
74-97-5	Bromochloromethane	50	50.8	102	77-120
75-27-4	Bromodichloromethane	50	54.0	108	74-130
75-25-2	Bromoform	50	58.3	117	76-127
78-93-3	2-Butanone (MEK)	250	228	91	75-137
104-51-8	n-Butylbenzene	50	48.5	97	71-128
135-98-8	sec-Butylbenzene	50	48.6	97	79-135
98-06-6	tert-Butylbenzene	50	49.7	99	77-133
75-15-0	Carbon Disulfide	50	49.3	99	72-122
56-23-5	Carbon Tetrachloride	50	56.4	113	78-133
108-90-7	Chlorobenzene	50	49.5	99	81-129
75-00-3	Chloroethane	50	55.1	110	68-133
67-66-3	Chloroform	50	53.4	107	72-123
95-49-8	o-Chlorotoluene	50	48.9	98	77-129
106-43-4	p-Chlorotoluene	50	47.2	94	80-134
124-48-1	Dibromochloromethane	50	55.8	112	76-127
96-12-8	1,2-Dibromo-3-chloropropane	50	50.6	101	70-137
106-93-4	1,2-Dibromoethane	50	52.0	104	77-126
75-71-8	Dichlorodifluoromethane	50	45.5	91	68-168
95-50-1	1,2-Dichlorobenzene	50	48.1	96	80-129
541-73-1	1,3-Dichlorobenzene	50	46.5	93	81-129
106-46-7	1,4-Dichlorobenzene	50	45.0	90	76-130
75-34-3	1,1-Dichloroethane	50	55.0	110	73-125
107-06-2	1,2-Dichloroethane	50	56.9	114	74-128
75-35-4	1,1-Dichloroethylene	50	53.8	108	81-136
156-59-2	cis-1,2-Dichloroethylene	50	52.1	104	74-126
156-60-5	trans-1,2-Dichloroethylene	50	58.3	117	70-127
78-87-5	1,2-Dichloropropane	50	47.3	95	74-125
142-28-9	1,3-Dichloropropane	50	49.0	98	76-122
594-20-7	2,2-Dichloropropane	50	51.7	103	77-133
563-58-6	1,1-Dichloropropene	50	48.0	96	75-130
10061-01-5	cis-1,3-Dichloropropene	50	53.6	107	80-123
10061-02-6	trans-1,3-Dichloropropene	50	56.6	113	75-131
100-41-4	Ethylbenzene	50	53.9	108	77-123

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1461-BS	Y36769.D	1	11/08/17	EP	n/a	n/a	VY1461

The QC reported here applies to the following samples:

Method: SW846 8260C

FA49143-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	50	42.2	84	74-136
591-78-6	2-Hexanone	250	239	96	72-133
98-82-8	Isopropylbenzene	50	52.0	104	80-136
99-87-6	p-Isopropyltoluene	50	52.3	105	77-131
74-83-9	Methyl Bromide	50	50.1	100	65-139
74-87-3	Methyl Chloride	50	43.3	87	71-144
74-95-3	Methylene Bromide	50	53.0	106	74-124
75-09-2	Methylene Chloride	50	51.0	102	74-137
108-10-1	4-Methyl-2-pentanone (MIBK)	250	238	95	76-132
1634-04-4	Methyl Tert Butyl Ether	50	56.0	112	77-120
91-20-3	Naphthalene	50	42.3	85	79-129
103-65-1	n-Propylbenzene	50	47.6	95	80-135
100-42-5	Styrene	50	55.3	111	78-125
630-20-6	1,1,1,2-Tetrachloroethane	50	57.2	114	78-126
79-34-5	1,1,2,2-Tetrachloroethane	50	48.7	97	71-126
127-18-4	Tetrachloroethylene	50	42.2	84	79-130
108-88-3	Toluene	50	52.2	104	76-124
87-61-6	1,2,3-Trichlorobenzene	50	39.7	79	77-128
120-82-1	1,2,4-Trichlorobenzene	50	42.4	85	78-130
71-55-6	1,1,1-Trichloroethane	50	50.9	102	70-129
79-00-5	1,1,2-Trichloroethane	50	51.9	104	74-124
79-01-6	Trichloroethylene	50	50.1	100	75-128
75-69-4	Trichlorofluoromethane	50	60.7	121	73-145
96-18-4	1,2,3-Trichloropropane	50	49.7	99	74-127
95-63-6	1,2,4-Trimethylbenzene	50	52.6	105	74-123
108-67-8	1,3,5-Trimethylbenzene	50	52.5	105	73-122
108-05-4	Vinyl Acetate	250	272	109	48-164
75-01-4	Vinyl Chloride	50	46.2	92	76-141
	m,p-Xylene	100	107	107	80-128
95-47-6	o-Xylene	50	50.8	102	80-132

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	75-124%
17060-07-0	1,2-Dichloroethane-D4	110%	72-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1461-BS	Y36769.D	1	11/08/17	EP	n/a	n/a	VY1461

The QC reported here applies to the following samples: Method: SW846 8260C
FA49143-1

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	99%	75-126%
460-00-4	4-Bromofluorobenzene	97%	71-133%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 3

Job Number: FA49143

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA49143-1MS	Y36777.D	1	11/08/17	EP	n/a	n/a	VY1461
FA49143-1MSD	Y36778.D	1	11/08/17	EP	n/a	n/a	VY1461
FA49143-1	Y36776.D	1	11/08/17	EP	n/a	n/a	VY1461

The QC reported here applies to the following samples:

Method: SW846 8260C

FA49143-1

CAS No.	Compound	FA49143-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	2690	JB	37900	43500	108	37900	39800	98	9	61-152/27
71-43-2	Benzene	760 U		7580	7020	93	7580	7040	93	0	76-126/26
108-86-1	Bromobenzene	760 U		7580	6080	80	7580	6020	79	1	76-122/32
74-97-5	Bromochloromethane	760 U		7580	7290	96	7580	7190	95	1	77-120/24
75-27-4	Bromodichloromethane	760 U		7580	7380	97	7580	7200	95	2	74-130/25
75-25-2	Bromoform	760 U		7580	8080	107	7580	7690	101	5	76-127/26
78-93-3	2-Butanone (MEK)	3800 U		37900	36700	97	37900	37900	100	3	75-137/25
104-51-8	n-Butylbenzene	760 U		7580	6350	84	7580	6250	82	2	71-128/35
135-98-8	sec-Butylbenzene	760 U		7580	5540	73*	7580	5500	73*	1	79-135/34
98-06-6	tert-Butylbenzene	760 U		7580	5620	74*	7580	5580	74*	1	77-133/34
75-15-0	Carbon Disulfide	760 U		7580	6390	84	7580	6040	80	6	72-122/29
56-23-5	Carbon Tetrachloride	760 U		7580	6210	82	7580	6160	81	1	78-133/29
108-90-7	Chlorobenzene	760 U		7580	6830	90	7580	6890	91	1	81-129/29
75-00-3	Chloroethane	760 U		7580	5590	74	7580	5290	70	6	68-133/29
67-66-3	Chloroform	760 U		7580	7180	95	7580	7120	94	1	72-123/26
95-49-8	o-Chlorotoluene	760 U		7580	5940	78	7580	5750	76*	3	77-129/33
106-43-4	p-Chlorotoluene	760 U		7580	6190	82	7580	6150	81	1	80-134/33
124-48-1	Dibromochloromethane	760 U		7580	7620	101	7580	7360	97	3	76-127/27
96-12-8	1,2-Dibromo-3-chloropropane	760 U		7580	6690	88	7580	6750	89	1	70-137/29
106-93-4	1,2-Dibromoethane	760 U		7580	7560	100	7580	7410	98	2	77-126/26
75-71-8	Dichlorodifluoromethane	760 U		7580	3970	52*	7580	3740	49*	6	68-168/29
95-50-1	1,2-Dichlorobenzene	760 U		7580	6060	80	7580	5950	79*	2	80-129/32
541-73-1	1,3-Dichlorobenzene	760 U		7580	6230	82	7580	6040	80*	3	81-129/33
106-46-7	1,4-Dichlorobenzene	760 U		7580	6230	82	7580	6110	81	2	76-130/32
75-34-3	1,1-Dichloroethane	760 U		7580	7330	97	7580	7090	94	3	73-125/27
107-06-2	1,2-Dichloroethane	760 U		7580	7760	102	7580	7450	98	4	74-128/23
75-35-4	1,1-Dichloroethylene	760 U		7580	6760	89	7580	6220	82	8	81-136/28
156-59-2	cis-1,2-Dichloroethylene	760 U		7580	7170	95	7580	7190	95	0	74-126/26
156-60-5	trans-1,2-Dichloroethylene	760 U		7580	7670	101	7580	7350	97	4	70-127/27
78-87-5	1,2-Dichloropropane	760 U		7580	7190	95	7580	6970	92	3	74-125/25
142-28-9	1,3-Dichloropropane	760 U		7580	7060	93	7580	7030	93	0	76-122/26
594-20-7	2,2-Dichloropropane	760 U		7580	6000	79	7580	6220	82	4	77-133/28
563-58-6	1,1-Dichloropropene	760 U		7580	6180	82	7580	6140	81	1	75-130/28
10061-01-5	cis-1,3-Dichloropropene	760 U		7580	7330	97	7580	7050	93	4	80-123/26
10061-02-6	trans-1,3-Dichloropropene	760 U		7580	7580	100	7580	7740	102	2	75-131/28
100-41-4	Ethylbenzene	760 U		7580	7170	95	7580	7070	93	1	77-123/31

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA49143-1MS	Y36777.D	1	11/08/17	EP	n/a	n/a	VY1461
FA49143-1MSD	Y36778.D	1	11/08/17	EP	n/a	n/a	VY1461
FA49143-1	Y36776.D	1	11/08/17	EP	n/a	n/a	VY1461

The QC reported here applies to the following samples:

Method: SW846 8260C

FA49143-1

CAS No.	Compound	FA49143-1 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	760 U		7580	4500	59*	7580	4570	60*	2	74-136/38
591-78-6	2-Hexanone	3800 U		37900	38800	102	37900	38500	102	1	72-133/26
98-82-8	Isopropylbenzene	760 U		7580	6990	92	7580	6900	91	1	80-136/32
99-87-6	p-Isopropyltoluene	760 U		7580	6240	82	7580	6100	80	2	77-131/34
74-83-9	Methyl Bromide	760 U		7580	6040	80	7580	5730	76	5	65-139/31
74-87-3	Methyl Chloride	760 U		7580	5320	70*	7580	5100	67*	4	71-144/27
74-95-3	Methylene Bromide	760 U		7580	7300	96	7580	7210	95	1	74-124/24
75-09-2	Methylene Chloride	1500 U		7580	7210	95	7580	6630	87	8	74-137/28
108-10-1	4-Methyl-2-pentanone (MIBK)	3800 U		37900	37300	98	37900	36600	97	2	76-132/26
1634-04-4	Methyl Tert Butyl Ether	760 U		7580	8140	107	7580	7870	104	3	77-120/24
91-20-3	Naphthalene	556	J	7580	6150	74*	7580	6010	72*	2	79-129/33
103-65-1	n-Propylbenzene	760 U		7580	5760	76*	7580	5630	74*	2	80-135/33
100-42-5	Styrene	760 U		7580	7880	104	7580	7710	102	2	78-125/30
630-20-6	1,1,1,2-Tetrachloroethane	760 U		7580	7460	98	7580	7170	95	4	78-126/27
79-34-5	1,1,2,2-Tetrachloroethane	760 U		7580	6310	83	7580	6010	79	5	71-126/30
127-18-4	Tetrachloroethylene	760 U		7580	6030	80	7580	6030	80	0	79-130/31
108-88-3	Toluene	760 U		7580	6940	92	7580	6850	90	1	76-124/30
87-61-6	1,2,3-Trichlorobenzene	760 U		7580	5180	68*	7580	5060	67*	2	77-128/35
120-82-1	1,2,4-Trichlorobenzene	760 U		7580	6200	82	7580	6000	79	3	78-130/34
71-55-6	1,1,1-Trichloroethane	760 U		7580	6000	79	7580	6120	81	2	70-129/27
79-00-5	1,1,2-Trichloroethane	760 U		7580	7320	97	7580	7450	98	2	74-124/28
79-01-6	Trichloroethylene	760 U		7580	6740	89	7580	6710	89	0	75-128/27
75-69-4	Trichlorofluoromethane	760 U		7580	3180	42*	7580	3980	53*	22	73-145/31
96-18-4	1,2,3-Trichloropropane	760 U		7580	6340	84	7580	6000	79	6	74-127/27
95-63-6	1,2,4-Trimethylbenzene	760 U		7580	6340	84	7580	6170	81	3	74-123/34
108-67-8	1,3,5-Trimethylbenzene	760 U		7580	6130	81	7580	6040	80	1	73-122/33
108-05-4	Vinyl Acetate	3800 U		37900	39600	104	37900	40500	107	2	48-164/37
75-01-4	Vinyl Chloride	760 U		7580	5360	71*	7580	4890	65*	9	76-141/27
	m,p-Xylene	1500 U		15200	14800	98	15200	14600	96	1	80-128/30
95-47-6	o-Xylene	760 U		7580	7210	95	7580	7140	94	1	80-132/30

CAS No.	Surrogate Recoveries	MS	MSD	FA49143-1	Limits
1868-53-7	Dibromofluoromethane	102%	105%	102%	75-124%
17060-07-0	1,2-Dichloroethane-D4	102%	102%	109%	72-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA49143-1MS	Y36777.D	1	11/08/17	EP	n/a	n/a	VY1461
FA49143-1MSD	Y36778.D	1	11/08/17	EP	n/a	n/a	VY1461
FA49143-1	Y36776.D	1	11/08/17	EP	n/a	n/a	VY1461

The QC reported here applies to the following samples: Method: SW846 8260C
FA49143-1

CAS No.	Surrogate Recoveries	MS	MSD	FA49143-1	Limits
2037-26-5	Toluene-D8	95%	96%	97%	75-126%
460-00-4	4-Bromofluorobenzene	85%	84%	100%	71-133%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1448-BFB
Lab File ID: Y36473.D
Instrument ID: GCMSY
Injection Date: 10/19/17
Injection Time: 07:48

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	62877	15.7	Pass
75	30.0 - 60.0% of mass 95	189680	47.5	Pass
95	Base peak, 100% relative abundance	399744	100.0	Pass
96	5.0 - 9.0% of mass 95	26014	6.51	Pass
173	Less than 2.0% of mass 174	1376	0.34 (0.48) ^a	Pass
174	50.0 - 100.0% of mass 95	284416	71.1	Pass
175	5.0 - 9.0% of mass 174	22064	5.52 (7.76) ^a	Pass
176	95.0 - 101.0% of mass 174	273749	68.5 (96.2) ^a	Pass
177	5.0 - 9.0% of mass 176	18972	4.75 (6.93) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY1448-IC1448	Y36474.D	10/19/17	08:11	00:23	Initial cal 1
VY1448-IC1448	Y36475.D	10/19/17	08:35	00:47	Initial cal 2
VY1448-IC1448	Y36476.D	10/19/17	08:59	01:11	Initial cal 3
VY1448-IC1448	Y36477.D	10/19/17	09:23	01:35	Initial cal 4
VY1448-ICC1448	Y36478.D	10/19/17	09:47	01:59	Initial cal 5
VY1448-IC1448	Y36479.D	10/19/17	10:11	02:23	Initial cal 6
VY1448-IC1448	Y36480.D	10/19/17	10:34	02:46	Initial cal 7
VY1448-ICV1448	Y36482.D	10/19/17	11:21	03:33	Initial cal verification 5
VY1448-BS	Y36483.D	10/19/17	11:45	03:57	Blank Spike
VY1448-MB	Y36484.D	10/19/17	12:07	04:19	Method Blank

Instrument Performance Check (BFB)

Page 1 of 1

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1460-BFB
Lab File ID: Y36766.D
Instrument ID: GCMSY
Injection Date: 11/08/17
Injection Time: 10:05

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	64317	17.2	Pass
75	30.0 - 60.0% of mass 95	189349	50.5	Pass
95	Base peak, 100% relative abundance	374933	100.0	Pass
96	5.0 - 9.0% of mass 95	23765	6.34	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 100.0% of mass 95	267200	71.3	Pass
175	5.0 - 9.0% of mass 174	21754	5.80 (8.14) ^a	Pass
176	95.0 - 101.0% of mass 174	255573	68.2 (95.6) ^a	Pass
177	5.0 - 9.0% of mass 176	17065	4.55 (6.68) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VY1460-CC1448	Y36767.D	11/08/17	10:29	00:24	Continuing cal 5
VY1460-MB	Y36768.D	11/08/17	10:52	00:47	Method Blank
VY1461-MB	Y36768.D	11/08/17	10:52	00:47	Method Blank
VY1460-BS	Y36769.D	11/08/17	11:16	01:11	Blank Spike
VY1461-BS	Y36769.D	11/08/17	11:16	01:11	Blank Spike
FA49080-10	Y36770.D	11/08/17	11:39	01:34	(used for QC only; not part of job FA49143)
ZZZZZZ	Y36771.D	11/08/17	12:03	01:58	(unrelated sample)
ZZZZZZ	Y36772.D	11/08/17	12:26	02:21	(unrelated sample)
ZZZZZZ	Y36773.D	11/08/17	12:50	02:45	(unrelated sample)
ZZZZZZ	Y36774.D	11/08/17	13:13	03:08	(unrelated sample)
ZZZZZZ	Y36775.D	11/08/17	13:37	03:32	(unrelated sample)
FA49143-1	Y36776.D	11/08/17	14:00	03:55	TANK BOTTOMS
FA49143-1MS	Y36777.D	11/08/17	14:24	04:19	Matrix Spike
FA49143-1MSD	Y36778.D	11/08/17	14:47	04:42	Matrix Spike Duplicate
FA49080-10MS	Y36779.D	11/08/17	15:11	05:06	Matrix Spike
FA49080-10MSD	Y36780.D	11/08/17	15:34	05:29	Matrix Spike Duplicate
ZZZZZZ	Y36781.D	11/08/17	15:58	05:53	(unrelated sample)
ZZZZZZ	Y36782.D	11/08/17	16:21	06:16	(unrelated sample)
ZZZZZZ	Y36783.D	11/08/17	16:45	06:40	(unrelated sample)
ZZZZZZ	Y36784.D	11/08/17	17:08	07:03	(unrelated sample)
ZZZZZZ	Y36785.D	11/08/17	17:32	07:27	(unrelated sample)
VY1460-ECC1448	Y36786.D	11/08/17	17:55	07:50	Ending cal 5

Internal Standard Area Summary

Page 1 of 1

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: VY1460-CC1448	Injection Date: 11/08/17
Lab File ID: Y36767.D	Injection Time: 10:29
Instrument ID: GCMSY	Method: SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal ^a	1099163	9.08	789065	12.45	397545	14.17	130137	5.20
Check Std ^b	1099021	9.08	812814	12.46	433867	14.17	119140	5.20
Upper Limit ^c	2198042	9.25	1625628	12.63	867734	14.34	238280	5.37
Lower Limit ^d	549511	8.91	406407	12.29	216934	14.00	59570	5.03

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VY1460-MB	908861	9.08	665659	12.45	344488	14.17	87530	5.27
VY1461-MB	908861	9.08	665659	12.45	344488	14.17	87530	5.27
VY1460-BS	1111501	9.08	826608	12.45	457586	14.17	143551	5.22
VY1461-BS	1111501	9.08	826608	12.45	457586	14.17	143551	5.22
FA49080-10	1135158	9.08	857444	12.45	475631	14.17	152353	5.31
ZZZZZZ	1168461	9.08	918779	12.45	500123	14.17	132986	5.27
ZZZZZZ	1286624	9.08	940530	12.45	514682	14.17	135196	5.28
ZZZZZZ	1297876	9.09	968592	12.46	503260	14.17	141535	5.28
ZZZZZZ	1338547	9.08	980890	12.46	517112	14.18	168586	5.28
ZZZZZZ	1327047	9.08	960547	12.45	509404	14.17	172795	5.27
FA49143-1	1267209	9.08	944767	12.45	502905	14.17	165908	5.26
FA49143-1MS	1184479	9.08	903001	12.45	586585	14.17	146458	5.25
FA49143-1MSD	1296050	9.08	948477	12.45	618104	14.17	164292	5.28
FA49080-10MS	1320922	9.08	930589	12.45	625963	14.17	145521	5.21
FA49080-10MSD	1258149	9.09	920669	12.46	522461	14.17	155856	5.22
ZZZZZZ	1348937	9.08	986726	12.45	528363	14.17	171308	5.21
ZZZZZZ	1369223	9.08	988482	12.45	528114	14.17	174242	5.21
ZZZZZZ	1278338	9.08	962979	12.45	515471	14.17	182313	5.20
ZZZZZZ	1318835	9.08	970869	12.45	523521	14.17	159061	5.20
ZZZZZZ	1267031	9.08	950576	12.45	505380	14.17	174360	5.20
VY1460-ECC1448	1242224	9.08	914352	12.45	490127	14.17	154659	5.20

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Initial Cal is: VY1448-ICC1448 Y36478.D 10/19/17 09:47

(b) Check Std Limit = -50 to +100% of initial cal area.

(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.

(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Surrogate Recovery Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8260C	Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA49143-1	Y36776.D	102	109	97	100
FA49143-1MS	Y36777.D	102	102	95	85
FA49143-1MSD	Y36778.D	105	102	96	84
VY1461-BS	Y36769.D	107	110	99	97
VY1461-MB	Y36768.D	104	110	97	102

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	75-124%
S2 = 1,2-Dichloroethane-D4	72-135%
S3 = Toluene-D8	75-126%
S4 = 4-Bromofluorobenzene	71-133%

6.6.1
6

Initial Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1448-ICC1448
Lab FileID: Y36478.D

Response Factor Report MSVOA14

Method : C:\msdchem\1\METHODS\101917APP9-Y.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Oct 19 11:17:10 2017
Response via : Initial Calibration

Calibration Files

1 =Y36474.D 2 =Y36475.D 3 =Y36476.D 4 =Y36477.D
5 =Y36478.D 6 =Y36479.D 7 =Y36480.D

Compound	1	2	3	4	5	6	7	Avg	%RSD

1) I Fluorobenzene	-----ISTD-----								
2) Dichlorodifluorom	0.322	0.402	0.386	0.375	0.421	0.417	0.437	0.394	9.68
3)P Chloromethane	0.306	0.360	0.363	0.344	0.369	0.356	0.362	0.352	6.12
4)C Vinyl Chloride	0.300	0.389	0.401	0.381	0.402	0.391	0.421	0.384	10.21
5) Bromomethane	0.223	0.244	0.244	0.242	0.243	0.241	0.243	0.240	3.23
6) Chloroethane	0.176	0.191	0.207	0.194	0.183	0.130		0.180	14.83
7) Trichlorofluorome	0.368	0.494	0.499	0.484	0.521	0.526	0.465	0.479	11.16
8) Ethyl Ether	0.161	0.169	0.188	0.184	0.186	0.183	0.184	0.179	5.81
9) 1,2-Dichlorotrifl	0.297	0.335	0.354	0.326	0.352	0.344	0.357	0.338	6.19
10)C 1,1-Dichloroethen	0.412	0.468	0.485	0.469	0.493	0.471	0.497	0.471	6.03
11) Freon 113	0.301	0.314	0.334	0.328	0.328	0.338	0.355	0.328	5.23
12) Carbon Disulfide	0.692	0.892	0.952	0.912	0.960	0.952	0.999	0.908	11.18
13) Iodomethane	0.446	0.498	0.509	0.492	0.520	0.505	0.509	0.497	4.88
14) Allyl chloride	0.313	0.316	0.352	0.331	0.352	0.339	0.348	0.336	4.90
15) Methylene Chlorid	0.693	0.432	0.430	0.339	0.354	0.320	0.311	0.411	32.51
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9982									
Response Ratio = 0.00000 + 0.35360 *A + -0.01097 *A^2									
16) Acetone	0.058	0.061	0.058	0.058	0.058	0.059	0.064	0.059	3.71
17) Methyl acetate	0.135	0.138	0.134	0.129	0.131	0.132	0.140	0.134	2.85
18) trans-1,2-Dichlor	0.334	0.337	0.384	0.357	0.385	0.368	0.385	0.364	6.05
19) Hexane	0.183	0.154	0.185	0.162	0.165	0.187	0.190	0.175	8.21
20) Methyl Tert Butyl	0.658	0.649	0.711	0.712	0.719	0.707	0.687	0.692	4.04
21) Acetonitrile	0.022	0.021	0.021	0.021	0.022	0.023	0.024	0.022	5.70
22) Di-isopropyl ethe	0.601	0.642	0.672	0.665	0.690	0.682	0.663	0.659	4.55
23) Chloroprene	0.363	0.406	0.426	0.410	0.427	0.420	0.441	0.413	6.08
24)P 1,1-Dichloroethan	0.379	0.419	0.467	0.422	0.471	0.435	0.443	0.434	7.24
25) Acrylonitrile	0.068	0.069	0.065	0.067	0.068	0.068	0.075	0.069	4.67
26) ETBE	0.664	0.708	0.740	0.749	0.750	0.762	0.717	0.727	4.65
27) Vinyl acetate	0.332	0.339	0.324	0.356	0.360	0.393	0.371	0.354	6.78
28) cis-1,2-Dichloroe	0.240	0.268	0.279	0.263	0.285	0.272	0.278	0.269	5.45
29) 2,2-Dichloropropa	0.229	0.266	0.265	0.247	0.261	0.237	0.232	0.248	6.44
30) Bromochloromethan	0.118	0.128	0.138	0.129	0.138	0.130	0.128	0.130	5.25
31) Cyclohexane	0.383	0.425	0.450	0.416	0.462	0.450	0.468	0.436	6.90
32)C Chloroform	0.409	0.464	0.480	0.465	0.473	0.469	0.471	0.462	5.18
33) Ethyl acetate	0.171	0.187	0.162	0.173	0.172	0.177	0.183	0.175	4.78
34) Tetrahydrofuran	0.129	0.133	0.108	0.119	0.119	0.124	0.127	0.123	6.66
35)S Dibromofluorometh	0.234	0.235	0.239	0.237	0.237	0.245	0.234	0.237	1.70
36) Carbon Tetrachlor	0.323	0.362	0.377	0.369	0.400	0.397	0.411	0.377	7.82
37) 1,1,1-Trichloroet	0.374	0.447	0.469	0.454	0.473	0.469	0.482	0.453	8.13
38) 2-Butanone	0.086	0.097	0.084	0.084	0.085	0.089	0.094	0.088	5.96
39) 1,1-Dichloroprope	0.311	0.357	0.365	0.352	0.366	0.360	0.378	0.356	6.03
40) tert-Butyl Format	0.157	0.161	0.148	0.175	0.172	0.199	0.192	0.172	10.80
41) Propionitrile	0.028	0.031	0.028	0.028	0.027	0.028	0.031	0.029	5.62
42) Methacrylonitrile	0.105	0.118	0.107	0.108	0.111	0.109	0.110	0.110	3.81
43) Benzene	0.846	0.964	0.969	0.940	0.970	0.927	0.940	0.937	4.60

Initial Calibration Summary

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1448-ICC1448
Lab FileID: Y36478.D

44)	TAME	0.690	0.697	0.708	0.692	0.709	0.720	0.688	0.701	1.70
45)S	1,2-Dichloroethan	0.296	0.287	0.273	0.285	0.276	0.290	0.283	0.284	2.77
46)	1,2-Dichloroethan	0.327	0.335	0.326	0.329	0.339	0.339	0.333	0.332	1.59
47)	Trichloroethene	0.261	0.282	0.289	0.286	0.280	0.280	0.289	0.281	3.38
48)	Methylcyclohexane	0.413	0.454	0.490	0.486	0.491	0.510	0.550	0.485	8.83
49)	Dibromomethane	0.137	0.142	0.141	0.141	0.146	0.148	0.142	0.143	2.57
50)C	1,2-Dichloropropa	0.211	0.222	0.228	0.233	0.229	0.236	0.227	0.227	3.58
51)	Bromodichlorometh	0.303	0.319	0.321	0.329	0.332	0.341	0.332	0.325	3.76
52)	Methyl methacryla	0.174	0.150	0.145	0.150	0.162	0.172	0.169	0.160	7.31
53)	2-Chloroethyl vin	0.122	0.126	0.122	0.130	0.133	0.136	0.128	0.128	4.06
54)	cis-1,3-Dichlorop	0.329	0.364	0.379	0.391	0.390	0.398	0.390	0.377	6.32
55) I	Chlorobenzene-d5	-----ISTD-----								
56)S	Toluene-d8	1.379	1.378	1.387	1.392	1.374	1.398	1.397	1.386	0.70
57)C	Toluene	1.282	1.466	1.486	1.473	1.476	1.400	1.381	1.423	5.23
58)	2-Nitropropane	0.065	0.067	0.064	0.067	0.072	0.073	0.083	0.070	9.45
59)	4-Methyl-2-pentan	0.235	0.252	0.239	0.248	0.249	0.240	0.240	0.243	2.56
60)	trans-1,3-Dichlor	0.390	0.434	0.438	0.459	0.465	0.451	0.453	0.441	5.69
61)	Tetrachloroethene	0.378	0.459	0.479	0.430	0.418	0.397	0.422	0.426	8.08
62)	Ethyl methacrylat	0.298	0.317	0.337	0.358	0.361	0.372	0.368	0.344	8.13
63)	1,1,2-Trichloroet	0.206	0.233	0.222	0.237	0.226	0.225	0.221	0.224	4.43
64)	Dibromochlorometh	0.291	0.298	0.318	0.324	0.332	0.327	0.334	0.318	5.20
65)	1,3-Dichloropropa	0.445	0.505	0.490	0.481	0.487	0.473	0.469	0.478	3.95
66)	1,2-Dibromoethane	0.253	0.294	0.274	0.286	0.287	0.279	0.285	0.280	4.82
67)	2-hexanone	0.157	0.180	0.165	0.173	0.177	0.172	0.181	0.172	5.06
68)	1-Chlorohexane	0.432	0.476	0.488	0.474	0.462	0.487	0.528	0.478	6.05
69)C	Ethylbenzene	1.424	1.609	1.657	1.609	1.623	1.536	1.491	1.564	5.34
70)P	Chlorobenzene	0.925	0.984	1.031	1.017	0.992	0.955	0.938	0.978	4.09
71)	1,1,1,2-Tetrachlo	0.306	0.319	0.331	0.334	0.343	0.339	0.339	0.330	4.00
72)	m,p-Xylene	1.150	1.289	1.353	1.328	1.296	1.200	1.084	1.243	8.04
73)	o-Xylene	1.238	1.329	1.432	1.434	1.439	1.395	1.343	1.373	5.41
74)	Styrene	0.766	0.919	0.966	0.960	0.959	0.960	0.948	0.925	7.78
75)P	Bromoform	0.150	0.179	0.177	0.177	0.191	0.191	0.202	0.181	9.07
76)	Isopropylbenzene	1.452	1.691	1.724	1.729	1.746	1.664	1.606	1.659	6.21
77) I	1,4-Dichlorobenzene-d	-----ISTD-----								
78)S	4-Bromofluorobenz	0.729	0.741	0.748	0.743	0.741	0.720	0.736	0.737	1.28
79)	cis-1,4-Dichloro-	0.162	0.194	0.171	0.174	0.181	0.164	0.184	0.176	6.63
80)	n-Propylbenzene	3.224	3.659	3.866	3.649	3.613	3.298	3.171	3.497	7.56
81)	Bromobenzene	0.685	0.735	0.752	0.724	0.750	0.680	0.686	0.716	4.43
82)P	1,1,2,2-Tetrachlo	0.608	0.721	0.680	0.693	0.696	0.648	0.669	0.674	5.48
83)	1,3,5-Trimethylbe	2.347	2.726	2.932	2.748	2.779	2.590	2.529	2.665	7.19
84)	2-Chlorotoluene	2.347	2.658	2.738	2.645	2.655	2.478	2.459	2.569	5.50
85)	trans-1,4-Dichlor	0.163	0.230	0.218	0.212	0.218	0.216	0.231	0.213	10.88
86)	1,2,3-Trichloropr	0.206	0.227	0.215	0.212	0.218	0.201	0.217	0.214	3.95
87)	Cyclohexanone	0.040	0.047	0.041	0.043	0.043	0.042	0.046	0.043	6.40
88)	4-Chlorotoluene	2.121	2.518	2.545	2.374	2.365	2.259	2.231	2.345	6.56
89)	tert-Butylbenzene	1.580	1.882	1.936	1.878	1.947	1.794	1.882	1.843	6.84
90)	1,2,4-Trimethylbe	2.298	2.643	2.830	2.707	2.655	2.506	2.455	2.585	6.86
91)	Pentachloroethane	0.307	0.320	0.300	0.373	0.390	0.410	0.418	0.360	13.89
92)	sec-Butylbenzene	3.175	3.631	3.866	3.662	3.724	3.397	3.268	3.532	7.22
93)	4-Isopropyltoluen	2.351	2.805	2.966	2.807	2.775	2.693	2.631	2.718	7.09
94)	1,3-Dichlorobenze	1.414	1.468	1.564	1.460	1.421	1.406	1.408	1.449	3.90
95)	1,4-Dichlorobenze	1.269	1.535	1.575	1.450	1.439	1.398	1.375	1.434	7.11
96)	n-Butylbenzene	1.246	1.418	1.491	1.378	1.363	1.406	1.435	1.391	5.48
97)	Benzyl Chloride	0.205	0.256	0.252	0.265	0.286	0.286	0.294	0.263	11.57
98)	1,2-Dichlorobenze	1.384	1.485	1.459	1.403	1.428	1.361	1.331	1.407	3.86
99)	1,2-Dibromo-3-Chl	0.148	0.149	0.140	0.153	0.166	0.156	0.171	0.155	6.86
100)	Hexachlorobutadie	0.424	0.529	0.567	0.478	0.475	0.486	0.507	0.495	9.19
101)	1,2,4-Trichlorobe	0.816	0.880	0.959	0.859	0.821	0.842	0.829	0.858	5.80

Initial Calibration Summary

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Job Number: FA49143

Sample: VY1448-ICC1448

Account: TCMAW Tantara Corporation

Lab FileID: Y36478.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

102)	Naphthalene	2.068	2.328	2.283	2.300	2.386	2.206	2.083	2.236	5.47
103)	1,2,3-Trichlorobe	0.922	0.894	0.905	0.860	0.860	0.846	0.811	0.871	4.40
104)	I Tert Butyl Alcohol-d1	-----ISTD-----								
105)	Ethanol	0.121	0.128	0.119	0.122	0.125	0.112	0.117	0.121	4.28
106)	Acrolein	1.257	1.241	1.386	1.502	1.464	1.387	1.369	1.372	7.04
107)	Tert butyl alcoho	1.214	1.304	1.338	1.402	1.347	1.293	1.335	1.319	4.39
108)	Isobutyl alcohol	0.204	0.234	0.197	0.248	0.215	0.232	0.244	0.225	8.81
109)	Tert Amyl Alcohol	0.798	0.942	0.764	0.899	0.861	0.914	0.941	0.874	8.01
110)	1,4-Dioxane	0.101	0.119	0.113	0.128	0.125	0.128	0.128	0.120	8.61

(#) = Out of Range

101917APP9-Y.m

Fri Oct 20 06:47:05 2017

6.7.1
6

Initial Calibration Verification

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1448-ICV1448
Lab FileID: Y36482.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\101917\Y36482.D Vial: 14
Acq On : 19 Oct 2017 11:21 am Operator: ericp
Sample : ICV1448-5 Inst : MSVOA14
Misc : MS38558,VY1448,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\101917APP9-Y.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Oct 19 11:17:10 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	103	0.00	9.08
2	Dichlorodifluoromethane	0.394	0.387	1.8	94	0.00	1.97
3 P	Chloromethane	0.352	0.341	3.1	95	0.00	2.20
4 C	Vinyl Chloride	0.384	0.379	1.3	97	0.00	2.33
5	Bromomethane	0.240	0.229	4.6	97	0.00	2.74
6	Chloroethane	0.180	0.161	10.6	90	0.00	2.92
7	Trichlorofluoromethane	0.479	0.469	2.1	93	0.00	3.12
8	Ethyl Ether	0.179	0.180	-0.6	100	0.00	3.54
9	1,2-Dichlorotrifluoroetha	0.338	0.320	5.3	94	0.00	3.84
10 C	1,1-Dichloroethene	0.471	0.434	7.9	90	0.00	3.81
11	Freon 113	0.328	0.302	7.9	95	0.00	3.89
12	Carbon Disulfide	0.908	0.875	3.6	94	0.00	3.83
13	Iodomethane	0.497	0.473	4.8	93	0.00	4.00
14	Allyl chloride	0.336	0.328	2.4	96	0.00	4.49
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	46.247	7.5	92	0.00	4.66
----- AvgRF CCRF %Dev -----							
16	Acetone	0.059	0.062	-5.1	110	0.00	4.76
17	Methyl acetate	0.134	0.145	-8.2	113	0.00	4.96
18	trans-1,2-Dichloroethene	0.364	0.354	2.7	94	0.00	4.89
19	Hexane	0.175	0.157	10.3	97	0.00	5.02
20	Methyl Tert Butyl Ether	0.692	0.708	-2.3	101	0.00	5.10
21	Acetonitrile	0.022	0.024	-9.1	111	0.00	5.46
22	Di-isopropyl ether	0.659	0.662	-0.5	98	0.00	5.72
23	Chloroprene	0.413	0.398	3.6	96	0.00	5.81
24 P	1,1-Dichloroethane	0.434	0.421	3.0	92	0.00	5.85
25	Acrylonitrile	0.069	0.076	-10.1	114	0.00	5.96
26	ETBE	0.727	0.730	-0.4	100	0.00	6.32
27	Vinyl acetate	0.354	0.364	-2.8	104	0.00	6.33
28	cis-1,2-Dichloroethene	0.269	0.268	0.4	97	0.00	6.75
29	2,2-Dichloropropane	0.248	0.231	6.9	91	0.00	6.94
30	Bromochloromethane	0.130	0.131	-0.8	97	0.00	7.09
31	Cyclohexane	0.436	0.420	3.7	93	0.00	7.08
32 C	Chloroform	0.462	0.449	2.8	97	0.00	7.25
33	Ethyl acetate	0.175	0.183	-4.6	110	0.00	7.54
34	Tetrahydrofuran	0.123	0.124	-0.8	107	-0.01	7.54
35 S	Dibromofluoromethane	0.237	0.238	-0.4	103	0.00	7.58
36	Carbon Tetrachloride	0.377	0.368	2.4	94	0.00	7.45
37	1,1,1-Trichloroethane	0.453	0.445	1.8	97	0.00	7.59
38	2-Butanone	0.088	0.090	-2.3	109	0.00	7.85

Initial Calibration Verification

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1448-ICV1448
Lab FileID: Y36482.D

39		1,1-Dichloropropene	0.356	0.343	3.7	96	0.00	7.81
40		tert-Butyl Formate	0.172	0.170	1.2	102	0.00	8.09
41		Propionitrile	0.029	0.029	0.0	110	0.00	8.38
42		Methacrylonitrile	0.110	0.113	-2.7	105	0.00	8.42
43		Benzene	0.937	0.898	4.2	95	0.00	8.27
44		TAME	0.701	0.692	1.3	100	0.00	8.58
45	S	1,2-Dichloroethane-d4	0.284	0.275	3.2	103	0.00	8.55
46		1,2-Dichloroethane	0.332	0.325	2.1	99	0.00	8.68
47		Trichloroethene	0.281	0.265	5.7	97	0.00	9.35
48		Methylcyclohexane	0.485	0.456	6.0	95	0.00	9.31
49		Dibromomethane	0.143	0.137	4.2	96	0.00	9.94
50	C	1,2-Dichloropropane	0.227	0.211	7.0	95	0.00	10.08
51		Bromodichloromethane	0.325	0.325	0.0	100	0.00	10.17
52		Methyl methacrylate	0.160	0.157	1.9	100	0.00	10.41
53		2-Chloroethyl vinyl ether	0.128	0.130	-1.6	101	0.00	10.85
54		cis-1,3-Dichloropropene	0.377	0.368	2.4	97	0.00	10.89
55	I	Chlorobenzene-d5	1.000	1.000	0.0	103	0.00	12.45
56	S	Toluene-d8	1.386	1.390	-0.3	104	0.00	11.08
57	C	Toluene	1.423	1.372	3.6	96	0.00	11.13
58		2-Nitropropane	0.070	0.074	-5.7	105	0.00	11.37
59		4-Methyl-2-pentanone	0.243	0.257	-5.8	106	0.00	11.52
60		trans-1,3-Dichloropropene	0.441	0.442	-0.2	98	0.00	11.54
61		Tetrachloroethene	0.426	0.406	4.7	100	0.00	11.49
62		Ethyl methacrylate	0.344	0.363	-5.5	103	0.00	11.70
63		1,1,2-Trichloroethane	0.224	0.225	-0.4	102	0.00	11.68
64		Dibromochloromethane	0.318	0.321	-0.9	100	0.00	11.83
65		1,3-Dichloropropane	0.478	0.470	1.7	99	0.00	11.92
66		1,2-Dibromoethane	0.280	0.284	-1.4	102	0.00	12.03
67		2-hexanone	0.172	0.188	-9.3	109	0.00	12.24
68		1-Chlorohexane	0.478	0.445	6.9	99	0.00	12.45
69	C	Ethylbenzene	1.564	1.519	2.9	96	0.00	12.49
70	P	Chlorobenzene	0.978	0.954	2.5	99	0.00	12.47
71		1,1,1,2-Tetrachloroethane	0.330	0.327	0.9	98	0.00	12.52
72		m,p-Xylene	1.243	1.243	0.0	99	0.00	12.61
73		o-Xylene	1.373	1.361	0.9	97	0.00	12.94
74		Styrene	0.925	0.909	1.7	97	0.00	12.98
75	P	Bromoform	0.181	0.181	0.0	97	0.00	13.00
76		Isopropylbenzene	1.659	1.616	2.6	95	0.00	13.17
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	14.17
78	S	4-Bromofluorobenzene	0.737	0.741	-0.5	101	0.00	13.38
79		cis-1,4-Dichloro-2-butene	0.176	0.191	-8.5	106	0.00	13.43
80		n-Propylbenzene	3.497	3.535	-1.1	99	0.00	13.47
81		Bromobenzene	0.716	0.719	-0.4	97	0.00	13.46
82	P	1,1,2,2-Tetrachloroethane	0.674	0.711	-5.5	104	0.00	13.52
83		1,3,5-Trimethylbenzene	2.665	2.715	-1.9	99	0.00	13.60
84		2-Chlorotoluene	2.569	2.589	-0.8	99	0.00	13.59
85		trans-1,4-Dichloro-2-Bute	0.213	0.231	-8.5	107	0.00	13.65
86		1,2,3-Trichloropropane	0.214	0.218	-1.9	101	0.00	13.63
87		Cyclohexanone	0.043	0.048	-11.6	112	0.00	13.67
88		4-Chlorotoluene	2.345	2.360	-0.6	101	0.00	13.71
89		tert-Butylbenzene	1.843	1.870	-1.5	97	0.00	13.83
90		1,2,4-Trimethylbenzene	2.585	2.603	-0.7	99	0.00	13.88
91		Pentachloroethane	0.360	0.381	-5.8	99	0.00	13.86
92		sec-Butylbenzene	3.532	3.546	-0.4	96	0.00	13.96
93		4-Isopropyltoluene	2.718	2.704	0.5	99	0.00	14.05
94		1,3-Dichlorobenzene	1.449	1.435	1.0	102	0.00	14.12
95		1,4-Dichlorobenzene	1.434	1.414	1.4	100	0.00	14.18
96		n-Butylbenzene	1.391	1.346	3.2	100	0.00	14.34

Initial Calibration Verification

Page 3 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1448-ICV1448
Lab FileID: Y36482.D

97	Benzyl Chloride	0.263	0.291	-10.6	103	0.00	14.35
98	1,2-Dichlorobenzene	1.407	1.409	-0.1	100	0.00	14.47
99	1,2-Dibromo-3-Chloropropa	0.155	0.173	-11.6	106	0.00	15.02
100	Hexachlorobutadiene	0.495	0.480	3.0	102	0.00	15.43
101	1,2,4-Trichlorobenzene	0.858	0.832	3.0	103	0.00	15.47
102	Naphthalene	2.236	2.373	-6.1	101	0.00	15.68
103	1,2,3-Trichlorobenzene	0.871	0.865	0.7	102	0.00	15.81

104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	111	0.00	5.20
105	Ethanol	0.121	0.115	5.0	102	0.00	3.79
106	Acrolein	1.372	1.365	0.5	103	0.00	4.30
107	Tert butyl alcohol	1.319	1.357	-2.9	112	0.00	5.31
108	Isobutyl alcohol	0.225	0.209	7.1	108	0.00	8.88
109	Tert Amyl Alcohol	0.874	0.874	0.0	112	0.00	9.04
110	1,4-Dioxane	0.120	0.121	-0.8	108	0.00	10.43

(#) = Out of Range
Y36478.D 101917APP9-Y.m

SPCC's out = 0 CCC's out = 0
Fri Oct 20 06:46:44 2017

6.7.2
6

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1460-CC1448
Lab FileID: Y36767.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\110817\Y36767.D
Acq On : 8 Nov 2017 10:29 am
Sample : CC1448-5
Misc : MS38757,VY1460,5.00,,,5,,
MS Integration Params: rteint.p

Vial: 6
Operator: ericp
Inst : MSVOA14
Multiplr: 1.00

Method : C:\msdchem\1\METHODS\101917APP9-Y.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Thu Oct 19 11:17:10 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	100	0.00	9.08
2	Dichlorodifluoromethane	0.394	0.357	9.4	85	0.02	1.98
3 P	Chloromethane	0.352	0.304	13.6	82	0.02	2.21
4 C	Vinyl Chloride	0.384	0.359	6.5	89	0.02	2.34
5	Bromomethane	0.240	0.229	4.6	94	0.02	2.75
6	Chloroethane	0.180	0.195	-8.3	107	0.01	2.93
7	Trichlorofluoromethane	0.479	0.553	-15.4	106	0.03	3.15
8	Ethyl Ether	0.179	0.186	-3.9	100	0.01	3.55
9	1,2-Dichlorotrifluoroetha	0.338	0.359	-6.2	102	0.02	3.86
10 C	1,1-Dichloroethene	0.471	0.520	-10.4	105	0.02	3.83
11	Freon 113	0.328	0.352	-7.3	107	0.01	3.90
12	Carbon Disulfide	0.908	0.952	-4.8	99	0.02	3.86
13	Iodomethane	0.497	0.527	-6.0	101	0.02	4.01
14	Allyl chloride	0.336	0.338	-0.6	96	0.05	4.54
15	Methylene Chloride	50.000	51.866	-3.7	100	0.01	4.68
16	Acetone	0.059	0.059	0.0	101	0.00	4.76
17	Methyl acetate	0.134	0.119	11.2	91	0.00	4.96
18	trans-1,2-Dichloroethene	0.364	0.425	-16.8	110	0.03	4.92
19	Hexane	0.175	0.183	-4.6	110	0.00	5.02
20	Methyl Tert Butyl Ether	0.692	0.728	-5.2	101	0.00	5.10
21	Acetonitrile	0.022	0.020	9.1	91	0.01	5.47
22	Di-isopropyl ether	0.659	0.644	2.3	93	0.00	5.72
23	Chloroprene	0.413	0.432	-4.6	101	0.00	5.82
24 P	1,1-Dichloroethane	0.434	0.462	-6.5	98	0.00	5.86
25	Acrylonitrile	0.069	0.059	14.5	86	0.01	5.97
26	ETBE	0.727	0.727	0.0	97	0.00	6.33
27	Vinyl acetate	0.354	0.380	-7.3	106	0.00	6.34
28	cis-1,2-Dichloroethene	0.269	0.285	-5.9	100	0.00	6.75
29	2,2-Dichloropropane	0.248	0.270	-8.9	103	0.01	6.94
30	Bromochloromethane	0.130	0.129	0.8	93	0.00	7.09
31	Cyclohexane	0.436	0.438	-0.5	95	0.00	7.07
32 C	Chloroform	0.462	0.497	-7.6	105	0.00	7.26
33	Ethyl acetate	0.175	0.148	15.4	86	0.00	7.56
34	Tetrahydrofuran	0.123	0.108	12.2	90	0.00	7.55
35 S	Dibromofluoromethane	0.237	0.257	-8.4	109	0.00	7.57
36	Carbon Tetrachloride	0.377	0.417	-10.6	104	0.00	7.45
37	1,1,1-Trichloroethane	0.453	0.474	-4.6	100	0.01	7.59
38	2-Butanone	0.088	0.071	19.3	83	0.00	7.85

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1460-CC1448
Lab FileID: Y36767.D

39		1,1-Dichloropropene	0.356	0.360	-1.1	98	0.00	7.82
40		tert-Butyl Formate	0.172	0.176	-2.3	102	0.00	8.09
41		Propionitrile	0.029	0.024	17.2	88	0.00	8.39
42		Methacrylonitrile	0.110	0.098	10.9	88	0.00	8.42
43		Benzene	0.937	0.925	1.3	95	0.00	8.28
44		TAME	0.701	0.686	2.1	97	0.00	8.58
45	S	1,2-Dichloroethane-d4	0.284	0.300	-5.6	109	0.00	8.55
46		1,2-Dichloroethane	0.332	0.356	-7.2	105	0.00	8.68
47		Trichloroethene	0.281	0.279	0.7	100	0.00	9.35
48		Methylcyclohexane	0.485	0.477	1.6	97	0.00	9.32
49		Dibromomethane	0.143	0.142	0.7	97	0.00	9.94
50	C	1,2-Dichloropropane	0.227	0.206	9.3	90	0.00	10.07
51		Bromodichloromethane	0.325	0.350	-7.7	105	0.00	10.17
52		Methyl methacrylate	0.160	0.150	6.3	93	0.00	10.41
53		2-Chloroethyl vinyl ether	0.128	0.107	16.4	80	0.00	10.85
54		cis-1,3-Dichloropropene	0.377	0.381	-1.1	98	0.00	10.89
55	I	Chlorobenzene-d5	1.000	1.000	0.0	103	0.00	12.46
56	S	Toluene-d8	1.386	1.366	1.4	102	0.00	11.08
57	C	Toluene	1.423	1.372	3.6	96	0.00	11.13
58		2-Nitropropane	0.070	0.072	-2.9	102	0.00	11.36
59		4-Methyl-2-pentanone	0.243	0.210	13.6	87	0.00	11.52
60		trans-1,3-Dichloropropene	0.441	0.454	-2.9	101	0.00	11.54
61		Tetrachloroethene	0.426	0.368	13.6	91	0.00	11.49
62		Ethyl methacrylate	0.344	0.347	-0.9	99	0.00	11.70
63		1,1,2-Trichloroethane	0.224	0.209	6.7	95	0.00	11.68
64		Dibromochloromethane	0.318	0.328	-3.1	102	0.00	11.83
65		1,3-Dichloropropane	0.478	0.449	6.1	95	0.00	11.92
66		1,2-Dibromoethane	0.280	0.268	4.3	96	0.00	12.03
67		2-hexanone	0.172	0.149	13.4	87	0.00	12.24
68		1-Chlorohexane	0.478	0.457	4.4	102	0.00	12.46
69	C	Ethylbenzene	1.564	1.599	-2.2	102	0.00	12.50
70	P	Chlorobenzene	0.978	0.962	1.6	100	0.00	12.47
71		1,1,1,2-Tetrachloroethane	0.330	0.348	-5.5	105	0.00	12.53
72		m,p-Xylene	1.243	1.303	-4.8	104	0.00	12.61
73		o-Xylene	1.373	1.407	-2.5	101	0.00	12.94
74		Styrene	0.925	0.945	-2.2	102	0.00	12.98
75	P	Bromoform	0.181	0.191	-5.5	103	0.00	13.01
76		Isopropylbenzene	1.659	1.709	-3.0	101	0.00	13.17
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	109	0.00	14.17
78	S	4-Bromofluorobenzene	0.737	0.750	-1.8	110	0.00	13.38
79		cis-1,4-Dichloro-2-butene	0.176	0.163	7.4	98	0.00	13.43
80		n-Propylbenzene	3.497	3.539	-1.2	107	0.00	13.47
81		Bromobenzene	0.716	0.691	3.5	101	0.00	13.46
82	P	1,1,2,2-Tetrachloroethane	0.674	0.626	7.1	98	0.00	13.52
83		1,3,5-Trimethylbenzene	2.665	2.754	-3.3	108	0.00	13.61
84		2-Chlorotoluene	2.569	2.622	-2.1	108	0.00	13.59
85		trans-1,4-Dichloro-2-Bute	0.213	0.206	3.3	103	0.00	13.65
86		1,2,3-Trichloropropane	0.214	0.206	3.7	103	0.00	13.63
87		Cyclohexanone	0.043	0.037	14.0	94	0.00	13.67
88		4-Chlorotoluene	2.345	2.381	-1.5	110	0.00	13.71
89		tert-Butylbenzene	1.843	1.929	-4.7	108	0.00	13.83
90		1,2,4-Trimethylbenzene	2.585	2.666	-3.1	110	0.00	13.88
91		Pentachloroethane	0.360	0.481	-33.6#	135	0.00	13.86
92		sec-Butylbenzene	3.532	3.566	-1.0	105	0.00	13.96
93		4-Isopropyltoluene	2.718	2.772	-2.0	109	0.00	14.05
94		1,3-Dichlorobenzene	1.449	1.426	1.6	109	0.00	14.12
95		1,4-Dichlorobenzene	1.434	1.421	0.9	108	0.00	14.18
96		n-Butylbenzene	1.391	1.405	-1.0	113	0.00	14.34

6.7.3
6

Continuing Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1460-CC1448
Lab FileID: Y36767.D

97	Benzyl Chloride	0.263	0.281	-6.8	107	0.00	14.35
98	1,2-Dichlorobenzene	1.407	1.394	0.9	107	0.00	14.47
99	1,2-Dibromo-3-Chloropropa	0.155	0.143	7.7	94	0.00	15.01
100	Hexachlorobutadiene	0.495	0.455	8.1	105	0.00	15.43
101	1,2,4-Trichlorobenzene	0.858	0.800	6.8	106	0.00	15.46
102	Naphthalene	2.236	2.002	10.5	92	0.00	15.68
103	1,2,3-Trichlorobenzene	0.871	0.763	12.4	97	0.00	15.80
104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	92	0.00	5.20
105	Ethanol	0.121	0.113	6.6	83	0.00	3.79
106	Acrolein	1.372	1.376	-0.3	86	0.00	4.31
107	Tert butyl alcohol	1.319	1.362	-3.3	93	0.00	5.32
108	Isobutyl alcohol	0.225	0.196	12.9	84	0.00	8.89
109	Tert Amyl Alcohol	0.874	0.780	10.8	83	0.00	9.05
110	1,4-Dioxane	0.120	0.112	6.7	82	0.00	10.43

(#) = Out of Range
Y36478.D 101917APP9-Y.m

SPCC's out = 0 CCC's out = 0
Wed Nov 08 12:52:10 2017

6.7.3
6

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1460-ECC1448
Lab FileID: Y36786.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\110817\Y36786.D Vial: 25
Acq On : 8 Nov 2017 5:55 pm Operator: ericp
Sample : ECC1448-5 Inst : MSVOA14
Misc : MS38758,VY1460,5.00,,,5,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\101917APP9-Y.m (RTE Integrator)
Title : SW-846 Method 5035A/8260B
Last Update : Wed Nov 08 12:52:58 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	113	0.00	9.08
2	Dichlorodifluoromethane	0.394	0.346	12.2	93	0.00	1.98
3 P	Chloromethane	0.352	0.297	15.6	91	0.00	2.21
4 C	Vinyl Chloride	0.384	0.351	8.6	99	0.00	2.34
5	Bromomethane	0.240	0.219	8.7	102	0.00	2.75
6	Chloroethane	0.180	0.189	-5.0	117	0.00	2.92
7	Trichlorofluoromethane	0.479	0.495	-3.3	108	-0.01	3.14
8	Ethyl Ether	0.179	0.196	-9.5	119	0.00	3.55
9	1,2-Dichlorotrifluoroetha	0.338	0.349	-3.3	112	-0.01	3.85
10 C	1,1-Dichloroethene	0.471	0.508	-7.9	117	0.00	3.83
11	Freon 113	0.328	0.351	-7.0	121	0.00	3.90
12	Carbon Disulfide	0.908	0.918	-1.1	108	0.00	3.86
13	Iodomethane	0.497	0.506	-1.8	110	0.00	4.01
14	Allyl chloride	0.336	0.348	-3.6	112	0.00	4.53
----- Amount Calc. %Drift -----							
15	Methylene Chloride	50.000	51.767	-3.5	113	0.00	4.68
----- AvgRF CCRF %Dev -----							
16	Acetone	0.059	0.063	-6.8	123	0.00	4.76
17	Methyl acetate	0.134	0.145	-8.2	125	0.00	4.96
18	trans-1,2-Dichloroethene	0.364	0.408	-12.1	120	0.00	4.91
19	Hexane	0.175	0.199	-13.7	136	0.00	5.02
20	Methyl Tert Butyl Ether	0.692	0.770	-11.3	121	0.00	5.10
21	Acetonitrile	0.022	0.022	0.0	111	-0.01	5.46
22	Di-isopropyl ether	0.659	0.700	-6.2	115	0.00	5.72
23	Chloroprene	0.413	0.414	-0.2	110	0.00	5.82
24 P	1,1-Dichloroethane	0.434	0.446	-2.8	107	0.00	5.86
25	Acrylonitrile	0.069	0.063	8.7	105	0.00	5.97
26	ETBE	0.727	0.760	-4.5	114	0.00	6.32
27	Vinyl acetate	0.354	0.347	2.0	109	0.00	6.33
28	cis-1,2-Dichloroethene	0.269	0.273	-1.5	109	0.00	6.75
29	2,2-Dichloropropane	0.248	0.244	1.6	106	0.00	6.94
30	Bromochloromethane	0.130	0.132	-1.5	108	0.00	7.09
31	Cyclohexane	0.436	0.438	-0.5	107	0.00	7.08
32 C	Chloroform	0.462	0.474	-2.6	113	0.00	7.25
33	Ethyl acetate	0.175	0.161	8.0	106	0.00	7.55
34	Tetrahydrofuran	0.123	0.108	12.2	103	0.00	7.54
35 S	Dibromofluoromethane	0.237	0.238	-0.4	114	0.00	7.57
36	Carbon Tetrachloride	0.377	0.383	-1.6	108	0.00	7.45
37	1,1,1-Trichloroethane	0.453	0.432	4.6	103	0.00	7.59
38	2-Butanone	0.088	0.079	10.2	104	0.00	7.85

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1460-ECC1448
Lab FileID: Y36786.D

39		1,1-Dichloropropene	0.356	0.341	4.2	105	0.00	7.81
40		tert-Butyl Formate	0.172	0.181	-5.2	119	0.00	8.09
41		Propionitrile	0.029	0.025	13.8	106	0.00	8.38
42		Methacrylonitrile	0.110	0.104	5.5	106	0.00	8.42
43		Benzene	0.937	0.905	3.4	105	0.00	8.27
44		TAME	0.701	0.718	-2.4	114	0.00	8.59
45	S	1,2-Dichloroethane-d4	0.284	0.286	-0.7	117	0.00	8.55
46		1,2-Dichloroethane	0.332	0.345	-3.9	115	0.00	8.68
47		Trichloroethene	0.281	0.254	9.6	103	0.00	9.35
48		Methylcyclohexane	0.485	0.498	-2.7	115	0.00	9.32
49		Dibromomethane	0.143	0.136	4.9	106	0.00	9.94
50	C	1,2-Dichloropropane	0.227	0.217	4.4	107	0.00	10.08
51		Bromodichloromethane	0.325	0.326	-0.3	111	0.00	10.17
52		Methyl methacrylate	0.160	0.164	-2.5	114	0.00	10.41
53		2-Chloroethyl vinyl ether	0.128	0.115	10.2	98	0.00	10.85
54		cis-1,3-Dichloropropene	0.377	0.375	0.5	109	0.00	10.89
55	I	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00	12.45
56	S	Toluene-d8	1.386	1.364	1.6	115	0.00	11.08
57	C	Toluene	1.423	1.317	7.4	103	0.00	11.13
58		2-Nitropropane	0.070	0.066	5.7	106	0.00	11.37
59		4-Methyl-2-pentanone	0.243	0.228	6.2	106	0.00	11.52
60		trans-1,3-Dichloropropene	0.441	0.439	0.5	109	0.00	11.54
61		Tetrachloroethene	0.426	0.323	24.2	89	0.00	11.49
62		Ethyl methacrylate	0.344	0.359	-4.4	115	0.00	11.70
63		1,1,2-Trichloroethane	0.224	0.218	2.7	112	0.00	11.68
64		Dibromochloromethane	0.318	0.315	0.9	110	0.00	11.83
65		1,3-Dichloropropane	0.478	0.451	5.6	107	0.00	11.92
66		1,2-Dibromoethane	0.280	0.276	1.4	112	0.00	12.03
67		2-hexanone	0.172	0.167	2.9	109	0.00	12.24
68		1-Chlorohexane	0.478	0.416	13.0	104	0.00	12.45
69	C	Ethylbenzene	1.564	1.447	7.5	103	0.00	12.49
70	P	Chlorobenzene	0.978	0.869	11.1	101	0.00	12.47
71		1,1,1,2-Tetrachloroethane	0.330	0.337	-2.1	114	0.00	12.52
72		m,p-Xylene	1.243	1.137	8.5	102	0.00	12.61
73		o-Xylene	1.373	1.310	4.6	106	0.00	12.94
74		Styrene	0.925	0.846	8.5	102	0.00	12.98
75	P	Bromoform	0.181	0.183	-1.1	111	0.00	13.00
76		Isopropylbenzene	1.659	1.555	6.3	103	0.00	13.17
77	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	123	0.00	14.17
78	S	4-Bromofluorobenzene	0.737	0.736	0.1	123	0.00	13.39
79		cis-1,4-Dichloro-2-butene	0.176	0.166	5.7	112	0.00	13.43
80		n-Propylbenzene	3.497	2.962	15.3	101	0.00	13.47
81		Bromobenzene	0.716	0.624	12.8	102	0.00	13.46
82	P	1,1,2,2-Tetrachloroethane	0.674	0.644	4.5	114	0.00	13.53
83		1,3,5-Trimethylbenzene	2.665	2.334	12.4	104	0.00	13.60
84		2-Chlorotoluene	2.569	2.219	13.6	103	0.00	13.59
85		trans-1,4-Dichloro-2-Bute	0.213	0.194	8.9	110	0.00	13.65
86		1,2,3-Trichloropropane	0.214	0.201	6.1	114	0.00	13.63
87		Cyclohexanone	0.043	0.040	7.0	115	0.00	13.66
88		4-Chlorotoluene	2.345	1.902	18.9	99	0.00	13.71
89		tert-Butylbenzene	1.843	1.759	4.6	111	0.00	13.84
90		1,2,4-Trimethylbenzene	2.585	2.194	15.1	102	0.00	13.88
91		Pentachloroethane	0.360	0.407	-13.1	129	0.00	13.86
92		sec-Butylbenzene	3.532	3.154	10.7	104	0.00	13.96
93		4-Isopropyltoluene	2.718	2.285	15.9	102	0.00	14.05
94		1,3-Dichlorobenzene	1.449	1.137	21.5	99	0.00	14.12
95		1,4-Dichlorobenzene	1.434	1.103	23.1	94	0.00	14.18
96		n-Butylbenzene	1.391	1.048	24.7	95	0.00	14.34

6.7.4
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Continuing Calibration Summary

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: VY1460-ECC1448
Lab FileID: Y36786.D

97	Benzyl Chloride	0.263	0.255	3.0	110	0.00	14.35
98	1,2-Dichlorobenzene	1.407	1.195	15.1	103	0.00	14.47
99	1,2-Dibromo-3-Chloropropa	0.155	0.145	6.5	108	0.00	15.02
100	Hexachlorobutadiene	0.495	0.355	28.3	92	0.00	15.43
101	1,2,4-Trichlorobenzene	0.858	0.542	36.8	81	0.00	15.47
102	Naphthalene	2.236	1.878	16.0	97	0.00	15.68
103	1,2,3-Trichlorobenzene	0.871	0.607	30.3	87	0.00	15.81
104 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	119	0.00	5.20
105	Ethanol	0.121	0.108	10.7	102	0.01	3.80
106	Acrolein	1.372	1.213	11.6	98	0.00	4.31
107	Tert butyl alcohol	1.319	1.293	2.0	114	0.00	5.32
108	Isobutyl alcohol	0.225	0.194	13.8	107	0.00	8.90
109	Tert Amyl Alcohol	0.874	0.776	11.2	107	0.00	9.04
110	1,4-Dioxane	0.120	0.103	14.2	98	0.00	10.43

(#) = Out of Range
Y36767.D 101917APP9-Y.m

SPCC's out = 0 CCC's out = 0
Thu Nov 09 09:54:08 2017

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6

MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-MB	X057275.D	1	11/17/17	MV	11/10/17	OP67608	SX2404

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
59-50-7	4-Chloro-3-methyl Phenol	ND	170	19	ug/kg	
95-57-8	2-Chlorophenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	44	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	20	ug/kg	
	3&4-Methylphenol	ND	170	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	18	ug/kg	
100-02-7	4-Nitrophenol	ND	830	170	ug/kg	
87-86-5	Pentachlorophenol	ND	830	170	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	27	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	19	ug/kg	
83-32-9	Acenaphthene	ND	170	18	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
62-53-3	Aniline	ND	170	36	ug/kg	
120-12-7	Anthracene	ND	170	19	ug/kg	
92-87-5	Benzidine	ND	1700	330	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	22	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	23	ug/kg	
106-47-8	4-Chloroaniline	ND	170	42	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	19	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	21	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	

Method Blank Summary

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-MB	X057275.D	1	11/17/17	MV	11/10/17	OP67608	SX2404

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	170	21	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	22	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	40	ug/kg	
84-66-2	Diethyl Phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl Phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl Phthalate	ND	170	33	ug/kg	
84-74-2	Di-n-butyl Phthalate	ND	330	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	21	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	17	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	20	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	39	ug/kg	
99-09-2	3-Nitroaniline	ND	170	19	ug/kg	
100-01-6	4-Nitroaniline	ND	170	48	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	28	ug/kg	
621-64-7	N-Nitrosodi-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	18	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	19	ug/kg	
110-86-1	Pyridine	ND	330	67	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	20	ug/kg	

Method Blank Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-MB	X057275.D	1	11/17/17	MV	11/10/17	OP67608	SX2404

The QC reported here applies to the following samples: Method: SW846 8270D

FA49143-1

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	57% 40-102%
4165-62-2	Phenol-d5	62% 41-100%
118-79-6	2,4,6-Tribromophenol	75% 42-108%
4165-60-0	Nitrobenzene-d5	65% 40-105%
321-60-8	2-Fluorobiphenyl	70% 43-107%
1718-51-0	Terphenyl-d14	76% 45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile ^a		0	ug/kg	

(a) No TICs detected.

Method Blank Summary

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-MB	X057295.D	1	11/21/17	MV	11/10/17	OP67608	SX2405

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	830	170	ug/kg	
59-50-7	4-Chloro-3-methyl Phenol	ND	170	19	ug/kg	
95-57-8	2-Chlorophenol	ND	170	20	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	170	19	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	170	44	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	830	170	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	330	67	ug/kg	
95-48-7	2-Methylphenol	ND	170	20	ug/kg	
	3&4-Methylphenol	ND	170	27	ug/kg	
88-75-5	2-Nitrophenol	ND	170	18	ug/kg	
100-02-7	4-Nitrophenol	ND	830	170	ug/kg	
87-86-5	Pentachlorophenol	ND	830	170	ug/kg	
108-95-2	Phenol	ND	170	17	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	170	27	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	170	19	ug/kg	
83-32-9	Acenaphthene	ND	170	18	ug/kg	
208-96-8	Acenaphthylene	ND	170	17	ug/kg	
62-53-3	Aniline	ND	170	36	ug/kg	
120-12-7	Anthracene	ND	170	19	ug/kg	
92-87-5	Benzidine	ND	1700	330	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	17	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	20	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	18	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	17	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	22	ug/kg	
100-51-6	Benzyl Alcohol	ND	170	17	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	170	17	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	170	33	ug/kg	
86-74-8	Carbazole	ND	170	23	ug/kg	
106-47-8	4-Chloroaniline	ND	170	42	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	170	17	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	170	19	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	170	21	ug/kg	
91-58-7	2-Chloronaphthalene	ND	170	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	170	17	ug/kg	
218-01-9	Chrysene	ND	170	17	ug/kg	

Method Blank Summary

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-MB	X057295.D	1	11/21/17	MV	11/10/17	OP67608	SX2405

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	Result	RL	MDL	Units	Q
53-70-3	Dibenzo(a,h)anthracene	ND	170	21	ug/kg	
132-64-9	Dibenzofuran	ND	170	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	170	17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	170	18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	170	22	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	170	40	ug/kg	
84-66-2	Diethyl Phthalate	ND	330	33	ug/kg	
131-11-3	Dimethyl Phthalate	ND	170	33	ug/kg	
117-84-0	Di-n-octyl Phthalate	ND	170	33	ug/kg	
84-74-2	Di-n-butyl Phthalate	ND	330	67	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	170	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	170	21	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	170	17	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	330	33	ug/kg	
206-44-0	Fluoranthene	ND	170	17	ug/kg	
86-73-7	Fluorene	ND	170	18	ug/kg	
118-74-1	Hexachlorobenzene	ND	170	17	ug/kg	
87-68-3	Hexachlorobutadiene	ND	170	17	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	170	33	ug/kg	
67-72-1	Hexachloroethane	ND	170	20	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	20	ug/kg	
78-59-1	Isophorone	ND	170	17	ug/kg	
90-12-0	1-Methylnaphthalene	ND	170	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	17	ug/kg	
91-20-3	Naphthalene	ND	170	17	ug/kg	
88-74-4	2-Nitroaniline	ND	170	39	ug/kg	
99-09-2	3-Nitroaniline	ND	170	19	ug/kg	
100-01-6	4-Nitroaniline	ND	170	48	ug/kg	
98-95-3	Nitrobenzene	ND	170	17	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	170	28	ug/kg	
621-64-7	N-Nitrosodi-n-propylamine	ND	170	17	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	170	18	ug/kg	
85-01-8	Phenanthrene	ND	170	17	ug/kg	
129-00-0	Pyrene	ND	170	19	ug/kg	
110-86-1	Pyridine	ND	330	67	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	170	20	ug/kg	

Method Blank Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-MB	X057295.D	1	11/21/17	MV	11/10/17	OP67608	SX2405

The QC reported here applies to the following samples: Method: SW846 8270D

FA49143-1

CAS No.	Surrogate Recoveries	Limits
367-12-4	2-Fluorophenol	57% 40-102%
4165-62-2	Phenol-d5	62% 41-100%
118-79-6	2,4,6-Tribromophenol	75% 42-108%
4165-60-0	Nitrobenzene-d5	65% 40-105%
321-60-8	2-Fluorobiphenyl	69% 43-107%
1718-51-0	Terphenyl-d14	76% 45-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile ^a		0	ug/kg	

(a) No TICs detected.

Blank Spike Summary

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-BS	X057274.D	1	11/17/17	MV	11/10/17	OP67608	SX2404

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	1670	50	36-118
59-50-7	4-Chloro-3-methyl Phenol	1670	1150	69	52-108
95-57-8	2-Chlorophenol	1670	1240	74	48-104
120-83-2	2,4-Dichlorophenol	1670	1190	71	51-105
105-67-9	2,4-Dimethylphenol	1670	1010	61	43-96
51-28-5	2,4-Dinitrophenol	3330	2840	85	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	2970	89	64-121
95-48-7	2-Methylphenol	1670	1210	73	46-107
	3&4-Methylphenol	3330	2460	74	44-111
88-75-5	2-Nitrophenol	1670	1360	82	49-104
100-02-7	4-Nitrophenol	3330	2620	79	56-116
87-86-5	Pentachlorophenol	3330	2980	89	61-114
108-95-2	Phenol	1670	1200	72	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1400	84	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1430	86	56-109
83-32-9	Acenaphthene	1670	1280	77	56-109
208-96-8	Acenaphthylene	1670	1370	82	56-106
62-53-3	Aniline	1670	1180	71	42-108
120-12-7	Anthracene	1670	1270	76	61-110
92-87-5	Benzidine	1670	1210	73	10-109
56-55-3	Benzo(a)anthracene	1670	1320	79	66-111
50-32-8	Benzo(a)pyrene	1670	1330	80	59-104
205-99-2	Benzo(b)fluoranthene	1670	1420	85	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1370	82	67-113
207-08-9	Benzo(k)fluoranthene	1670	1310	79	67-114
100-51-6	Benzyl Alcohol	1670	1170	70	53-108
101-55-3	4-Bromophenyl phenyl ether	1670	1310	79	62-110
85-68-7	Butyl benzyl phthalate	1670	1320	79	65-113
86-74-8	Carbazole	1670	1270	76	60-111
106-47-8	4-Chloroaniline	1670	1330	80	30-115
111-91-1	bis(2-Chloroethoxy)methane	1670	999	60	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1130	68	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1080	65	40-110
91-58-7	2-Chloronaphthalene	1670	1280	77	53-106
7005-72-3	4-Chlorophenyl phenyl ether	1670	1310	79	58-106
218-01-9	Chrysene	1670	1310	79	65-112

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-BS	X057274.D	1	11/17/17	MV	11/10/17	OP67608	SX2404

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
53-70-3	Dibenzo(a,h)anthracene	1670	1400	84	68-115
132-64-9	Dibenzofuran	1670	1280	77	57-108
95-50-1	1,2-Dichlorobenzene	1670	1230	74	44-102
541-73-1	1,3-Dichlorobenzene	1670	1200	72	42-100
106-46-7	1,4-Dichlorobenzene	1670	1240	74	40-106
91-94-1	3,3'-Dichlorobenzidine	1670	1600	96	36-114
84-66-2	Diethyl Phthalate	1670	1280	77	61-109
131-11-3	Dimethyl Phthalate	1670	1280	77	59-108
117-84-0	Di-n-octyl Phthalate	1670	1540	92	64-119
84-74-2	Di-n-butyl Phthalate	1670	1310	79	63-108
121-14-2	2,4-Dinitrotoluene	1670	1450	87	59-109
606-20-2	2,6-Dinitrotoluene	1670	1370	82	61-107
122-66-7	1,2-Diphenylhydrazine	1670	1210	73	58-112
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1370	82	64-115
206-44-0	Fluoranthene	1670	1330	80	60-108
86-73-7	Fluorene	1670	1350	81	58-109
118-74-1	Hexachlorobenzene	1670	1320	79	59-111
87-68-3	Hexachlorobutadiene	1670	1140	68	41-108
77-47-4	Hexachlorocyclopentadiene	1670	959	58	49-110
67-72-1	Hexachloroethane	1670	1190	71	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1480	89	66-116
78-59-1	Isophorone	1670	1080	65	42-89
90-12-0	1-Methylnaphthalene	1670	1110	67	49-106
91-57-6	2-Methylnaphthalene	1670	1110	67	47-106
91-20-3	Naphthalene	1670	1090	65	44-104
88-74-4	2-Nitroaniline	1670	1340	80	56-123
99-09-2	3-Nitroaniline	1670	1410	85	41-111
100-01-6	4-Nitroaniline	1670	1230	74	54-113
98-95-3	Nitrobenzene	1670	1080	65	43-108
62-75-9	N-Nitrosodimethylamine	1670	1030	62	40-106
621-64-7	N-Nitrosodi-n-propylamine	1670	1140	68	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1300	78	62-110
85-01-8	Phenanthrene	1670	1290	77	63-111
129-00-0	Pyrene	1670	1330	80	65-115
110-86-1	Pyridine	1670	956	57	31-102
120-82-1	1,2,4-Trichlorobenzene	1670	1140	68	45-100

* = Outside of Control Limits.

Blank Spike Summary

Page 3 of 3

Job Number: FA49143

Account: TCMAW Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-BS	X057274.D	1	11/17/17	MV	11/10/17	OP67608	SX2404

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	70%	40-102%
4165-62-2	Phenol-d5	70%	41-100%
118-79-6	2,4,6-Tribromophenol	86%	42-108%
4165-60-0	Nitrobenzene-d5	64%	40-105%
321-60-8	2-Fluorobiphenyl	76%	43-107%
1718-51-0	Terphenyl-d14	79%	45-119%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 3

Job Number: FA49143

Account: TCMaw Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-BS	X057294.D	1	11/21/17	MV	11/10/17	OP67608	SX2405

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic Acid	3330	1880	56	36-118
59-50-7	4-Chloro-3-methyl Phenol	1670	1230	74	52-108
95-57-8	2-Chlorophenol	1670	1220	73	48-104
120-83-2	2,4-Dichlorophenol	1670	1300	78	51-105
105-67-9	2,4-Dimethylphenol	1670	1080	65	43-96
51-28-5	2,4-Dinitrophenol	3330	3070	92	40-119
534-52-1	4,6-Dinitro-o-cresol	3330	3130	94	64-121
95-48-7	2-Methylphenol	1670	1180	71	46-107
	3&4-Methylphenol	3330	2400	72	44-111
88-75-5	2-Nitrophenol	1670	1490	89	49-104
100-02-7	4-Nitrophenol	3330	2470	74	56-116
87-86-5	Pentachlorophenol	3330	2990	90	61-114
108-95-2	Phenol	1670	1170	70	45-110
95-95-4	2,4,5-Trichlorophenol	1670	1410	85	58-112
88-06-2	2,4,6-Trichlorophenol	1670	1490	89	56-109
83-32-9	Acenaphthene	1670	1300	78	56-109
208-96-8	Acenaphthylene	1670	1390	83	56-106
62-53-3	Aniline	1670	1160	70	42-108
120-12-7	Anthracene	1670	1270	76	61-110
92-87-5	Benzidine	1670	871	52	10-109
56-55-3	Benzo(a)anthracene	1670	1320	79	66-111
50-32-8	Benzo(a)pyrene	1670	1340	80	59-104
205-99-2	Benzo(b)fluoranthene	1670	1390	83	67-113
191-24-2	Benzo(g,h,i)perylene	1670	1400	84	67-113
207-08-9	Benzo(k)fluoranthene	1670	1360	82	67-114
100-51-6	Benzyl Alcohol	1670	1180	71	53-108
101-55-3	4-Bromophenyl phenyl ether	1670	1350	81	62-110
85-68-7	Butyl benzyl phthalate	1670	1340	80	65-113
86-74-8	Carbazole	1670	1250	75	60-111
106-47-8	4-Chloroaniline	1670	1450	87	30-115
111-91-1	bis(2-Chloroethoxy)methane	1670	1080	65	48-105
111-44-4	bis(2-Chloroethyl)ether	1670	1140	68	46-103
108-60-1	bis(2-Chloroisopropyl)ether	1670	1080	65	40-110
91-58-7	2-Chloronaphthalene	1670	1320	79	53-106
7005-72-3	4-Chlorophenyl phenyl ether	1670	1340	80	58-106
218-01-9	Chrysene	1670	1320	79	65-112

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-BS	X057294.D	1	11/21/17	MV	11/10/17	OP67608	SX2405

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
53-70-3	Dibenzo(a,h)anthracene	1670	1410	85	68-115
132-64-9	Dibenzofuran	1670	1290	77	57-108
95-50-1	1,2-Dichlorobenzene	1670	1210	73	44-102
541-73-1	1,3-Dichlorobenzene	1670	1200	72	42-100
106-46-7	1,4-Dichlorobenzene	1670	1200	72	40-106
91-94-1	3,3'-Dichlorobenzidine	1670	1530	92	36-114
84-66-2	Diethyl Phthalate	1670	1260	76	61-109
131-11-3	Dimethyl Phthalate	1670	1300	78	59-108
117-84-0	Di-n-octyl Phthalate	1670	1520	91	64-119
84-74-2	Di-n-butyl Phthalate	1670	1320	79	63-108
121-14-2	2,4-Dinitrotoluene	1670	1440	86	59-109
606-20-2	2,6-Dinitrotoluene	1670	1390	83	61-107
122-66-7	1,2-Diphenylhydrazine	1670	1250	75	58-112
117-81-7	bis(2-Ethylhexyl)phthalate	1670	1380	83	64-115
206-44-0	Fluoranthene	1670	1290	77	60-108
86-73-7	Fluorene	1670	1350	81	58-109
118-74-1	Hexachlorobenzene	1670	1380	83	59-111
87-68-3	Hexachlorobutadiene	1670	1260	76	41-108
77-47-4	Hexachlorocyclopentadiene	1670	1360	82	49-110
67-72-1	Hexachloroethane	1670	1200	72	40-105
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1450	87	66-116
78-59-1	Isophorone	1670	1190	71	42-89
90-12-0	1-Methylnaphthalene	1670	1220	73	49-106
91-57-6	2-Methylnaphthalene	1670	1200	72	47-106
91-20-3	Naphthalene	1670	1180	71	44-104
88-74-4	2-Nitroaniline	1670	1340	80	56-123
99-09-2	3-Nitroaniline	1670	1390	83	41-111
100-01-6	4-Nitroaniline	1670	1230	74	54-113
98-95-3	Nitrobenzene	1670	1180	71	43-108
62-75-9	N-Nitrosodimethylamine	1670	1050	63	40-106
621-64-7	N-Nitrosodi-n-propylamine	1670	1180	71	48-108
86-30-6	N-Nitrosodiphenylamine	1670	1320	79	62-110
85-01-8	Phenanthrene	1670	1300	78	63-111
129-00-0	Pyrene	1670	1350	81	65-115
110-86-1	Pyridine	1670	945	57	31-102
120-82-1	1,2,4-Trichlorobenzene	1670	1250	75	45-100

* = Outside of Control Limits.

Blank Spike Summary

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Job Number: FA49143

Account: TCMAW Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-BS	X057294.D	1	11/21/17	MV	11/10/17	OP67608	SX2405

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	69%	40-102%
4165-62-2	Phenol-d5	70%	41-100%
118-79-6	2,4,6-Tribromophenol	89%	42-108%
4165-60-0	Nitrobenzene-d5	70%	40-105%
321-60-8	2-Fluorobiphenyl	77%	43-107%
1718-51-0	Terphenyl-d14	81%	45-119%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 3

Job Number: FA49143

Account: TCMAW Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-MS	X057277.D	1	11/17/17	MV	11/10/17	OP67608	SX2404
OP67608-MSD	X057278.D	1	11/17/17	MV	11/10/17	OP67608	SX2404
JC54582-1	X057276.D	1	11/17/17	MV	11/10/17	OP67608	SX2404

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	JC54582-1 ug/kg	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND	3960	2130	54	3930	2150	55	1	36-118/41
59-50-7	4-Chloro-3-methyl Phenol	ND	1980	1410	71	1970	1580	80	11	52-108/21
95-57-8	2-Chlorophenol	ND	1980	1510	76	1970	1510	77	0	48-104/26
120-83-2	2,4-Dichlorophenol	ND	1980	1470	74	1970	1600	81	8	51-105/27
105-67-9	2,4-Dimethylphenol	ND	1980	1280	65	1970	1390	71	8	43-96/23
51-28-5	2,4-Dinitrophenol	ND	3960	3650	92	3930	3780	96	3	40-119/32
534-52-1	4,6-Dinitro-o-cresol	ND	3960	3730	94	3930	3860	98	3	64-121/29
95-48-7	2-Methylphenol	ND	1980	1470	74	1970	1480	75	1	46-107/24
	3&4-Methylphenol	ND	3960	3010	76	3930	3010	76	0	44-111/24
88-75-5	2-Nitrophenol	ND	1980	1700	86	1970	1850	94	8	49-104/27
100-02-7	4-Nitrophenol	ND	3960	3240	82	3930	3360	85	4	56-116/23
87-86-5	Pentachlorophenol	ND	3960	3860	97	3930	3990	101	3	61-114/23
108-95-2	Phenol	ND	1980	1470	74	1970	1460	74	1	45-110/24
95-95-4	2,4,5-Trichlorophenol	ND	1980	1780	90	1970	1820	93	2	58-112/22
88-06-2	2,4,6-Trichlorophenol	ND	1980	1790	90	1970	1800	91	1	56-109/25
83-32-9	Acenaphthene	ND	1980	1610	81	1970	1560	79	3	56-109/23
208-96-8	Acenaphthylene	ND	1980	1710	86	1970	1680	85	2	56-106/23
62-53-3	Aniline	ND	1980	1510	76	1970	1510	77	0	42-108/28
120-12-7	Anthracene	ND	1980	1590	80	1970	1590	81	0	61-110/21
92-87-5	Benzidine	ND	1980	1500	76	1970	1520	77	1	10-109/35
56-55-3	Benzo(a)anthracene	ND	1980	1660	84	1970	1660	84	0	66-111/23
50-32-8	Benzo(a)pyrene	ND	1980	1660	84	1970	1650	84	1	59-104/23
205-99-2	Benzo(b)fluoranthene	ND	1980	1740	88	1970	1740	88	0	67-113/24
191-24-2	Benzo(g,h,i)perylene	ND	1980	1720	87	1970	1670	85	3	67-113/21
207-08-9	Benzo(k)fluoranthene	ND	1980	1670	84	1970	1640	83	2	67-114/22
100-51-6	Benzyl Alcohol	ND	1980	1510	76	1970	1520	77	1	53-108/24
101-55-3	4-Bromophenyl phenyl ether	ND	1980	1650	83	1970	1650	84	0	62-110/21
85-68-7	Butyl benzyl phthalate	ND	1980	1670	84	1970	1630	83	2	65-113/20
86-74-8	Carbazole	ND	1980	1680	85	1970	1710	87	2	60-111/19
106-47-8	4-Chloroaniline	ND	1980	1730	87	1970	1930	98	11	30-115/30
111-91-1	bis(2-Chloroethoxy)methane	ND	1980	1220	62	1970	1330	68	9	48-105/24
111-44-4	bis(2-Chloroethyl)ether	ND	1980	1410	71	1970	1380	70	2	46-103/27
108-60-1	bis(2-Chloroisopropyl)ether	ND	1980	1330	67	1970	1310	67	2	40-110/25
91-58-7	2-Chloronaphthalene	ND	1980	1610	81	1970	1570	80	3	53-106/23
7005-72-3	4-Chlorophenyl phenyl ether	ND	1980	1660	84	1970	1630	83	2	58-106/21
218-01-9	Chrysene	ND	1980	1640	83	1970	1620	82	1	65-112/25

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-MS	X057277.D	1	11/17/17	MV	11/10/17	OP67608	SX2404
OP67608-MSD	X057278.D	1	11/17/17	MV	11/10/17	OP67608	SX2404
JC54582-1	X057276.D	1	11/17/17	MV	11/10/17	OP67608	SX2404

The QC reported here applies to the following samples:

Method: SW846 8270D

FA49143-1

CAS No.	Compound	JC54582-1 ug/kg	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
53-70-3	Dibenzo(a,h)anthracene	ND	1980	1760	89	1970	1710	87	3	68-115/23
132-64-9	Dibenzofuran	ND	1980	1660	84	1970	1680	85	1	57-108/22
95-50-1	1,2-Dichlorobenzene	ND	1980	1510	76	1970	1450	74	4	44-102/28
541-73-1	1,3-Dichlorobenzene	ND	1980	1460	74	1970	1390	71	5	42-100/30
106-46-7	1,4-Dichlorobenzene	ND	1980	1500	76	1970	1420	72	5	40-106/29
91-94-1	3,3'-Dichlorobenzidine	ND	1980	2070	105	1970	2100	107	1	36-114/28
84-66-2	Diethyl Phthalate	ND	1980	1570	79	1970	1580	80	1	61-109/20
131-11-3	Dimethyl Phthalate	ND	1980	1610	81	1970	1630	83	1	59-108/20
117-84-0	Di-n-octyl Phthalate	ND	1980	1900	96	1970	1890	96	1	64-119/21
84-74-2	Di-n-butyl Phthalate	ND	1980	1650	83	1970	1650	84	0	63-108/19
121-14-2	2,4-Dinitrotoluene	ND	1980	1830	92	1970	1840	94	1	59-109/20
606-20-2	2,6-Dinitrotoluene	ND	1980	1730	87	1970	1750	89	1	61-107/22
122-66-7	1,2-Diphenylhydrazine	ND	1980	1530	77	1970	1490	76	3	58-112/22
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1980	1690	85	1970	1700	86	1	64-115/23
206-44-0	Fluoranthene	ND	1980	1650	83	1970	1650	84	0	60-108/25
86-73-7	Fluorene	ND	1980	1680	85	1970	1670	85	1	58-109/21
118-74-1	Hexachlorobenzene	ND	1980	1680	85	1970	1660	84	1	59-111/21
87-68-3	Hexachlorobutadiene	ND	1980	1410	71	1970	1470	75	4	41-108/27
77-47-4	Hexachlorocyclopentadiene	ND	1980	1200	61	1970	1240	63	3	49-110/31
67-72-1	Hexachloroethane	ND	1980	1440	73	1970	1360	69	6	40-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1980	1920	97	1970	1790	91	7	66-116/22
78-59-1	Isophorone	ND	1980	1350	68	1970	1470	75	9	42-89/22
90-12-0	1-Methylnaphthalene	ND	1980	1370	69	1970	1470	75	7	49-106/26
91-57-6	2-Methylnaphthalene	ND	1980	1420	72	1970	1560	79	9	47-106/27
91-20-3	Naphthalene	ND	1980	1350	68	1970	1430	73	6	44-104/27
88-74-4	2-Nitroaniline	ND	1980	1770	89	1970	1810	92	2	56-123/24
99-09-2	3-Nitroaniline	ND	1980	1870	94	1970	1900	97	2	41-111/25
100-01-6	4-Nitroaniline	ND	1980	1630	82	1970	1690	86	4	54-113/22
98-95-3	Nitrobenzene	ND	1980	1340	68	1970	1450	74	8	43-108/25
62-75-9	N-Nitrosodimethylamine	ND	1980	1280	65	1970	1280	65	0	40-106/27
621-64-7	N-Nitrosodi-n-propylamine	ND	1980	1410	71	1970	1400	71	1	48-108/27
86-30-6	N-Nitrosodiphenylamine	ND	1980	1650	83	1970	1630	83	1	62-110/21
85-01-8	Phenanthrene	ND	1980	1620	82	1970	1610	82	1	63-111/22
129-00-0	Pyrene	ND	1980	1660	84	1970	1620	82	2	65-115/25
110-86-1	Pyridine	ND	1980	1210	61	1970	1230	63	2	31-102/38
120-82-1	1,2,4-Trichlorobenzene	ND	1980	1380	70	1970	1480	75	7	45-100/26

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67608-MS	X057277.D	1	11/17/17	MV	11/10/17	OP67608	SX2404
OP67608-MSD	X057278.D	1	11/17/17	MV	11/10/17	OP67608	SX2404
JC54582-1	X057276.D	1	11/17/17	MV	11/10/17	OP67608	SX2404

The QC reported here applies to the following samples: Method: SW846 8270D

FA49143-1

CAS No.	Surrogate Recoveries	MS	MSD	JC54582-1	Limits
367-12-4	2-Fluorophenol	74%	74%	57%	40-102%
4165-62-2	Phenol-d5	74%	75%	61%	41-100%
118-79-6	2,4,6-Tribromophenol	94%	98%	81%	42-108%
4165-60-0	Nitrobenzene-d5	69%	75%	62%	40-105%
321-60-8	2-Fluorobiphenyl	81%	80%	66%	43-107%
1718-51-0	Terphenyl-d14	86%	88%	80%	45-119%

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-DFTPP **Injection Date:** 11/07/17
Lab File ID: X056978.D **Injection Time:** 08:34
Instrument ID: GCMSX

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	26567	35.0	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	30793	40.5	Pass
70	Less than 2.0% of mass 69	111	0.15 (0.36) ^a	Pass
127	40.0 - 60.0% of mass 198	37203	49.0	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	75965	100.0	Pass
199	5.0 - 9.0% of mass 198	5257	6.92	Pass
275	10.0 - 30.0% of mass 198	19037	25.1	Pass
365	1.0 - 100.0% of mass 198	1975	2.60	Pass
441	Present, but less than mass 443	8101	10.7 (74.3) ^b	Pass
442	40.0 - 100.0% of mass 198	55256	72.7	Pass
443	17.0 - 23.0% of mass 442	10899	14.3 (19.7) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2395-IC2395	X056979.D	11/07/17	08:54	00:20	Initial cal 5
SX2395-IC2395	X056980.D	11/07/17	09:20	00:46	Initial cal 10
SX2395-IC2395	X056981.D	11/07/17	09:45	01:11	Initial cal 25
SX2395-ICC2395	X056982.D	11/07/17	10:10	01:36	Initial cal 50
SX2395-IC2395	X056983.D	11/07/17	10:35	02:01	Initial cal 60
SX2395-IC2395	X056984.D	11/07/17	11:01	02:27	Initial cal 75
SX2395-IC2395	X056985.D	11/07/17	11:26	02:52	Initial cal 100
SX2395-ICV2395	X056986.D	11/07/17	11:51	03:17	Initial cal verification 50
SX2395-ICV2395	X056987.D	11/07/17	12:17	03:43	Initial cal verification 50

Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2404-DFTPP
Lab File ID: X057262.D
Instrument ID: GCMSX
Injection Date: 11/17/17
Injection Time: 16:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	15017	32.3	Pass
68	Less than 2.0% of mass 69	0	0.00 (0.00) ^a	Pass
69	Mass 69 relative abundance	17881	38.4	Pass
70	Less than 2.0% of mass 69	121	0.26 (0.68) ^a	Pass
127	40.0 - 60.0% of mass 198	21397	46.0	Pass
197	Less than 1.0% of mass 198	75	0.16	Pass
198	Base peak, 100% relative abundance	46528	100.0	Pass
199	5.0 - 9.0% of mass 198	3196	6.87	Pass
275	10.0 - 30.0% of mass 198	12348	26.5	Pass
365	1.0 - 100.0% of mass 198	1255	2.70	Pass
441	Present, but less than mass 443	5953	12.8 (76.8) ^b	Pass
442	40.0 - 100.0% of mass 198	39560	85.0	Pass
443	17.0 - 23.0% of mass 442	7750	16.7 (19.6) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2404-CC2395	X057263.D	11/17/17	16:53	00:17	Continuing cal 50
OP67608-BS	X057274.D	11/17/17	21:31	04:55	Blank Spike
OP67608-MB	X057275.D	11/17/17	21:56	05:20	Method Blank
JC54582-1	X057276.D	11/17/17	22:21	05:45	(used for QC only; not part of job FA49143)
OP67608-MS	X057277.D	11/17/17	22:47	06:11	Matrix Spike
OP67608-MSD	X057278.D	11/17/17	23:12	06:36	Matrix Spike Duplicate
ZZZZZZ	X057279.D	11/17/17	23:37	07:01	(unrelated sample)
ZZZZZZ	X057285.D	11/18/17	02:09	09:33	(unrelated sample)
ZZZZZZ	X057286.D	11/18/17	02:34	09:58	(unrelated sample)
ZZZZZZ	X057287.D	11/18/17	02:59	10:23	(unrelated sample)
ZZZZZZ	X057288.D	11/18/17	03:24	10:48	(unrelated sample)
ZZZZZZ	X057289.D	11/18/17	03:49	11:13	(unrelated sample)

Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-DFTPP
Lab File ID: X057291.D
Instrument ID: GCMSX
Injection Date: 11/21/17
Injection Time: 10:00

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	21824	33.2	Pass
68	Less than 2.0% of mass 69	188	0.29 (0.74) ^a	Pass
69	Mass 69 relative abundance	25405	38.6	Pass
70	Less than 2.0% of mass 69	179	0.27 (0.70) ^a	Pass
127	40.0 - 60.0% of mass 198	29389	44.7	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	65744	100.0	Pass
199	5.0 - 9.0% of mass 198	4437	6.75	Pass
275	10.0 - 30.0% of mass 198	16681	25.4	Pass
365	1.0 - 100.0% of mass 198	1495	2.27	Pass
441	Present, but less than mass 443	7469	11.4 (75.6) ^b	Pass
442	40.0 - 100.0% of mass 198	51744	78.7	Pass
443	17.0 - 23.0% of mass 442	9884	15.0 (19.1) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2405-CC2395	X057292.D	11/21/17	10:16	00:16	Continuing cal 50
SX2405-CC2395	X057293.D	11/21/17	10:44	00:44	Continuing cal 50
OP67608-BS	X057294.D	11/21/17	11:09	01:09	Blank Spike
OP67608-MB	X057295.D	11/21/17	11:34	01:34	Method Blank
ZZZZZZ	X057296.D	11/21/17	12:00	02:00	(unrelated sample)
ZZZZZZ	X057297.D	11/21/17	12:25	02:25	(unrelated sample)
ZZZZZZ	X057298.D	11/21/17	12:50	02:50	(unrelated sample)
ZZZZZZ	X057299.D	11/21/17	13:15	03:15	(unrelated sample)
SX2405-ECC2395	X057300.D	11/21/17	13:44	03:44	Ending cal 50
SX2405-ECC2395	X057301.D	11/21/17	14:09	04:09	Ending cal 50

Instrument Performance Check (DFTPP)

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2406-DFTPP
Lab File ID: X057302.D
Instrument ID: GCMSX
Injection Date: 11/21/17
Injection Time: 14:53

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	17443	35.3	Pass
68	Less than 2.0% of mass 69	215	0.43 (1.07) ^a	Pass
69	Mass 69 relative abundance	20166	40.8	Pass
70	Less than 2.0% of mass 69	85	0.17 (0.42) ^a	Pass
127	40.0 - 60.0% of mass 198	23664	47.8	Pass
197	Less than 1.0% of mass 198	0	0.00	Pass
198	Base peak, 100% relative abundance	49472	100.0	Pass
199	5.0 - 9.0% of mass 198	3354	6.78	Pass
275	10.0 - 30.0% of mass 198	12875	26.0	Pass
365	1.0 - 100.0% of mass 198	1229	2.48	Pass
441	Present, but less than mass 443	5608	11.3 (78.9) ^b	Pass
442	40.0 - 100.0% of mass 198	37047	74.9	Pass
443	17.0 - 23.0% of mass 442	7104	14.4 (19.2) ^c	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2406-CC2395	X057303.D	11/21/17	15:10	00:17	Continuing cal 50
OP67669-BS	X057305.D	11/21/17	16:01	01:08	Blank Spike
OP67669-MB	X057306.D	11/21/17	16:26	01:33	Method Blank
OP67630-BS	X057307.D	11/21/17	16:51	01:58	Blank Spike
OP67630-MB	X057308.D	11/21/17	17:17	02:24	Method Blank
FA49143-1	X057309.D	11/21/17	17:42	02:49	TANK BOTTOMS
ZZZZZZ	X057310.D	11/21/17	18:07	03:14	(unrelated sample)
ZZZZZZ	X057310A.D	11/21/17	18:07	03:14	(unrelated sample)
ZZZZZZ	X057311A.D	11/21/17	18:33	03:40	(unrelated sample)
ZZZZZZ	X057311.D	11/21/17	18:33	03:40	(unrelated sample)
ZZZZZZ	X057312.D	11/21/17	18:58	04:05	(unrelated sample)
ZZZZZZ	X057312A.D	11/21/17	18:58	04:05	(unrelated sample)
ZZZZZZ	X057313.D	11/21/17	19:24	04:31	(unrelated sample)
ZZZZZZ	X057313A.D	11/21/17	19:24	04:31	(unrelated sample)
ZZZZZZ	X057314.D	11/21/17	19:50	04:57	(unrelated sample)
ZZZZZZ	X057314A.D	11/21/17	19:50	04:57	(unrelated sample)
ZZZZZZ	X057315A.D	11/21/17	20:15	05:22	(unrelated sample)
ZZZZZZ	X057315.D	11/21/17	20:15	05:22	(unrelated sample)
ZZZZZZ	X057316.D	11/21/17	20:40	05:47	(unrelated sample)

Instrument Performance Check (DFTPP)

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Job Number: FA49143

Account: TCMAW Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2406-DFTPP

Injection Date: 11/21/17

Lab File ID: X057302.D

Injection Time: 14:53

Instrument ID: GCMSX

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	X057317.D	11/21/17	21:06	06:13	(unrelated sample)
ZZZZZZ	X057318.D	11/21/17	21:31	06:38	(unrelated sample)
ZZZZZZ	X057319.D	11/21/17	21:56	07:03	(unrelated sample)
ZZZZZZ	X057320.D	11/21/17	22:22	07:29	(unrelated sample)
ZZZZZZ	X057321.D	11/21/17	22:47	07:54	(unrelated sample)
ZZZZZZ	X057322.D	11/21/17	23:13	08:20	(unrelated sample)
ZZZZZZ	X057323.D	11/21/17	23:38	08:45	(unrelated sample)
ZZZZZZ	X057324.D	11/22/17	00:03	09:10	(unrelated sample)
ZZZZZZ	X057325.D	11/22/17	00:29	09:36	(unrelated sample)
ZZZZZZ	X057326.D	11/22/17	00:54	10:01	(unrelated sample)
ZZZZZZ	X057327.D	11/22/17	01:20	10:27	(unrelated sample)
ZZZZZZ	X057328.D	11/22/17	01:45	10:52	(unrelated sample)
SX2406-ECC2395	X057329.D	11/22/17	02:10	11:17	Ending cal 50

7.4.4

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Internal Standard Area Summary

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: SX2404-CC2395	Injection Date: 11/17/17
Lab File ID: X057263.D	Injection Time: 16:53
Instrument ID: GCMSX	Method: SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Initial Cal ^a	127093	6.23	496689	7.66	284627	9.72	482690	11.45	493623	14.77	506910	17.15
Check Std ^b	92133	6.10	353630	7.54	210257	9.60	358106	11.32	379349	14.62	396123	16.98
Upper Limit ^c	184266	6.27	707260	7.71	420514	9.77	716212	11.49	758698	14.79	792246	17.15
Lower Limit ^d	46067	5.93	176815	7.37	105129	9.43	179053	11.15	189675	14.45	198062	16.81

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP67608-BS	93835	6.10	395673	7.54	203572	9.60	342040	11.32	348653	14.62	347384	16.98
OP67608-MB	94037	6.10	352003	7.54	201351	9.60	334491	11.32	348417	14.62	347700	16.98
JC54582-1	99727	6.10	375822	7.54	213161	9.59	350890	11.32	360167	14.62	356999	16.98
OP67608-MS	95127	6.10	400739	7.54	205375	9.60	341071	11.32	347373	14.62	346717	16.98
OP67608-MSD	94982	6.10	364844	7.54	205054	9.60	342091	11.32	354382	14.62	352963	16.98
ZZZZZZ	93750	6.10	354963	7.53	201864	9.60	338230	11.32	353767	14.62	359198	16.98
ZZZZZZ	97161	6.10	363108	7.53	206184	9.60	341140	11.32	349055	14.62	348787	16.98
ZZZZZZ	94754	6.10	358354	7.53	205007	9.60	339196	11.32	349108	14.62	347823	16.98
ZZZZZZ	95002	6.10	363511	7.53	209609	9.60	352615	11.32	364697	14.62	351799	16.98
ZZZZZZ	95898	6.10	365527	7.53	207570	9.60	344329	11.32	354917	14.62	348962	16.98
ZZZZZZ	102588	6.10	388152	7.54	221358	9.60	364571	11.32	371475	14.62	366037	16.98

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX2395-ICC2395 X056982.D 11/07/17 10:10

(b) Check Std Limit = -50 to +100% of initial cal area.

(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.

(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: SX2405-CC2395	Injection Date: 11/21/17
Lab File ID: X057292.D	Injection Time: 10:16
Instrument ID: GCMSX	Method: SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Initial Cal ^a	127093	6.23	496689	7.66	284627	9.72	482690	11.45	493623	14.77	506910	17.15
Check Std ^b	120858	6.07	460743	7.51	264933	9.57	447681	11.29	455197	14.59	478964	16.93
Upper Limit ^c	241716	6.24	921486	7.68	529866	9.74	895362	11.46	910394	14.76	957928	17.10
Lower Limit ^d	60429	5.90	230372	7.34	132467	9.40	223841	11.12	227599	14.42	239482	16.76

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP67608-BS	108565	6.07	420123	7.51	230776	9.56	375432	11.29	371827	14.58	367284	16.93
OP67608-MB	97941	6.07	371928	7.51	217029	9.56	365227	11.29	387243	14.58	401108	16.92
ZZZZZZ	96861	6.07	367692	7.51	213186	9.56	357107	11.29	375960	14.58	388266	16.92
ZZZZZZ	100533	6.07	382403	7.51	222175	9.56	370719	11.29	387208	14.58	399748	16.93
ZZZZZZ	102857	6.07	388068	7.51	224438	9.56	366955	11.29	384345	14.58	395558	16.92
ZZZZZZ	99955	6.07	376828	7.51	217400	9.56	372322	11.29	396577	14.58	415060	16.93
SX2405-ECC2395 98577	98577	6.07	381847	7.51	214596	9.57	365761	11.29	380550	14.59	393899	16.93
SX2405-ECC2395 102072	102072	6.07	391085	7.51	225487	9.56	373767	11.29	392138	14.58	398074	16.93

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX2395-ICC2395 X056982.D 11/07/17 10:10

(b) Check Std Limit = -50 to +100% of initial cal area.

(c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.

(d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.

Internal Standard Area Summary

Page 1 of 2

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std: SX2406-CC2395	Injection Date: 11/21/17
Lab File ID: X057303.D	Injection Time: 15:10
Instrument ID: GCMSX	Method: SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Initial Cal ^a	127093	6.23	496689	7.66	284627	9.72	482690	11.45	493623	14.77	506910	17.15
Check Std ^b	104616	6.07	404367	7.51	228780	9.57	384852	11.29	402802	14.59	418257	16.94
Upper Limit ^c	209232	6.24	808734	7.68	457560	9.74	769704	11.46	805604	14.76	836514	17.11
Lower Limit ^d	52308	5.90	202184	7.34	114390	9.40	192426	11.12	201401	14.42	209129	16.77

Lab Sample ID	IS 1 AREA	IS 1 RT	IS 2 AREA	IS 2 RT	IS 3 AREA	IS 3 RT	IS 4 AREA	IS 4 RT	IS 5 AREA	IS 5 RT	IS 6 AREA	IS 6 RT
OP67669-BS	97132	6.07	373251	7.51	215150	9.56	357837	11.29	366276	14.58	372939	16.93
OP67669-MB	93791	6.07	364902	7.51	218818	9.56	377789	11.29	406831	14.58	425267	16.93
OP67630-BS	103714	6.07	398733	7.51	219676	9.56	364231	11.29	364133	14.59	366974	16.93
OP67630-MB	98011	6.07	374052	7.51	214223	9.56	356581	11.29	368914	14.58	373286	16.93
FA49143-1 ^e	113382	6.07	422742	7.51	249880	9.57	436830	11.30	454666	14.59	467398	16.93
ZZZZZZ	107559	6.07	412146	7.51	237104	9.56	389642	11.29	404764	14.58	413883	16.93
ZZZZZZ	107559	6.07	412146	7.51	237104	9.56	389642	11.29	404764	14.58	413883	16.93
ZZZZZZ	109718	6.07	410986	7.51	237196	9.56	398198	11.29	415736	14.58	421411	16.93
ZZZZZZ	109718	6.07	410986	7.51	237196	9.56	398198	11.29	415736	14.58	421411	16.93
ZZZZZZ	111638	6.07	419269	7.51	242041	9.56	403036	11.29	424263	14.58	437065	16.93
ZZZZZZ	111638	6.07	419269	7.51	242041	9.56	403036	11.29	424263	14.58	437065	16.93
ZZZZZZ	107832	6.07	410392	7.51	232242	9.56	388264	11.29	415483	14.59	419334	16.93
ZZZZZZ	107832	6.07	410392	7.51	232242	9.56	388264	11.29	415483	14.59	419334	16.93
ZZZZZZ	112752	6.07	428212	7.51	245087	9.56	411139	11.29	427793	14.59	436939	16.93
ZZZZZZ	112752	6.07	428212	7.51	245087	9.56	411139	11.29	427793	14.59	436939	16.93
ZZZZZZ	110792	6.07	418309	7.51	240516	9.56	401947	11.29	419989	14.58	435466	16.93
ZZZZZZ	110792	6.07	418309	7.51	240516	9.56	401947	11.29	419989	14.58	435466	16.93
ZZZZZZ	99889	6.08	367755	7.51	220787	9.57	362014	11.29	373774	14.59	389700	16.95
ZZZZZZ	100536	6.08	369025	7.51	209590	9.57	349924	11.30	362596	14.60	379397	16.96
ZZZZZZ	99209	6.08	375524	7.52	214858	9.58	357339	11.30	375293	14.60	387789	16.96
ZZZZZZ	101421	6.08	378737	7.52	215472	9.58	359336	11.30	377927	14.61	396692	16.96
ZZZZZZ	102264	6.08	377499	7.52	222317	9.58	363571	11.30	378782	14.60	402490	16.98
ZZZZZZ	105188	6.08	382248	7.52	226587	9.58	363229	11.31	371524	14.61	398119	16.98
ZZZZZZ	104656	6.09	378790	7.52	218090	9.58	352457	11.31	371091	14.62	390906	16.98
ZZZZZZ	101658	6.09	368853	7.52	207010	9.58	332850	11.31	350114	14.62	368249	16.98
ZZZZZZ	98719	6.08	364334	7.52	203149	9.58	331398	11.31	345611	14.62	365463	16.98
ZZZZZZ	98223	6.08	362517	7.52	200816	9.58	324808	11.31	336699	14.61	356827	16.98
ZZZZZZ	94158	6.09	347203	7.52	195175	9.58	320714	11.31	337539	14.62	362896	16.99
ZZZZZZ	96560	6.09	347326	7.52	193794	9.59	314824	11.31	329290	14.62	348357	16.98
ZZZZZZ	97706	6.09	360989	7.52	205184	9.58	330728	11.31	346286	14.62	364649	16.98
SX2406-ECC2395	96056	6.09	354573	7.52	197995	9.59	329332	11.31	340867	14.62	361513	16.99

IS 1 = 1,4-Dichlorobenzene-d4

Internal Standard Area Summary

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std:	SX2406-CC2395	Injection Date:	11/21/17
Lab File ID:	X057303.D	Injection Time:	15:10
Instrument ID:	GCMSX	Method:	SW846 8270D

Lab	IS 1	IS 2	IS 3	IS 4	IS 5	IS 6
Sample ID	AREA	RT	AREA	RT	AREA	RT
IS 2	= Naphthalene-d8					
IS 3	= Acenaphthene-D10					
IS 4	= Phenanthrene-d10					
IS 5	= Chrysene-d12					
IS 6	= Perylene-d12					

- (a) Initial Cal is: SX2395-ICC2395 X056982.D 11/07/17 10:10
- (b) Check Std Limit = -50 to +100% of initial cal area.
- (c) Upper Limit = +100% of check standard area; Retention time +0.167 minutes.
- (d) Lower Limit = -50% of check standard area; Retention time -0.167 minutes.
- (e) Dilution required due to matrix interference (internal standard failure).

7.5.3
7

Surrogate Recovery Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8270D	Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
FA49143-1	X057309.D	0* a	0* a	0* a	0* a	0* a	0* a
OP67608-BS	X057274.D	70	70	86	64	76	79
OP67608-BS	X057294.D	69	70	89	70	77	81
OP67608-MB	X057275.D	57	62	75	65	70	76
OP67608-MB	X057295.D	57	62	75	65	69	76
OP67608-MS	X057277.D	74	74	94	69	81	86
OP67608-MSD	X057278.D	74	75	98	75	80	88

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	40-102%
S2 = Phenol-d5	41-100%
S3 = 2,4,6-Tribromophenol	42-108%
S4 = Nitrobenzene-d5	40-105%
S5 = 2-Fluorobiphenyl	43-107%
S6 = Terphenyl-d14	45-119%

(a) Outside control limits due to dilution.

7.6.1
7

Initial Calibration Summary

Page 1 of 3

Job Number: FA49143
 Account: TCMaw Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICC2395
 Lab FileID: X056982.D

Response Factor Report MSBNA05

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
 Title : SW846 8270D OR EPA 625
 Last Update : Tue Nov 07 12:26:42 2017
 Response via : Initial Calibration

Calibration Files

5 =x056979.D 10 =x056980.D 25 =x056981.D 50 =x056982.D
 60 =x056983.D 75 =x056984.D 100 =x056985.D

Compound	5	10	25	50	60	75	100	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	-----ISTD-----								
2) 1,4-Dioxane	0.769	0.734	0.721	0.726	0.727	0.722	0.714	0.731	2.48
3) N-nitrosodimethyl	0.754	0.789	0.765	0.757	0.764	0.736	0.718	0.755	3.00
4) Pyridine	1.989	1.936	1.997	1.952	1.985	1.946	1.919	1.960	1.52
5)P Benzaldehyde	1.140	1.284	1.272	1.260	1.234	1.192	0.930	1.187	10.43
6) Aniline	1.856	1.819	1.984	2.275	2.347	2.271	2.196	2.107	10.28
7)S 2-Fluorophenol	1.560	1.534	1.541	1.517	1.538	1.479	1.429	1.514	2.99
8)P bis(2-Chloroethyl	1.565	1.531	1.514	1.496	1.527	1.489	1.465	1.512	2.16
9)S Phenol-d5	1.977	1.905	1.901	1.854	1.866	1.778	1.724	1.858	4.53
10)P Phenol	2.151	2.095	2.133	2.079	2.098	1.981	1.902	2.063	4.33
11)P 2-Chlorophenol	1.585	1.545	1.551	1.572	1.597	1.567	1.563	1.569	1.18
12) 1,3-Dichlorobenze	1.723	1.651	1.657	1.661	1.662	1.624	1.608	1.655	2.20
13) 1,4-Dichlorobenze	1.736	1.678	1.663	1.643	1.681	1.630	1.596	1.661	2.67
14) 1,2-Dichlorobenze	1.640	1.563	1.594	1.569	1.594	1.565	1.533	1.580	2.14
15) Benzyl alcohol	1.049	1.021	1.018	1.022	1.058	1.024	1.015	1.030	1.62
16)P bis(2-chloroisopr	2.102	2.065	2.018	1.973	1.970	1.912	1.828	1.981	4.69
17)P 2-Methylphenol	1.427	1.396	1.435	1.409	1.432	1.387	1.359	1.407	1.99
18)P Acetophenone	1.812	2.048	2.019	1.992	2.006	1.933	1.862	1.953	4.50
19)P Hexachloroethane	0.612	0.609	0.615	0.630	0.643	0.633	0.623	0.624	2.01
20)P N-Nitroso-di-n-pr	1.037	1.023	1.029	1.019	1.029	1.012	0.992	1.020	1.45
21)P 3&4-Methylphenol	1.503	1.484	1.499	1.445	1.470	1.403	1.362	1.452	3.63
22) I Naphthalene-d8	-----ISTD-----								
23)S Nitrobenzene-d5	0.391	0.378	0.390	0.395	0.403	0.397	0.391	0.392	1.97
24)P Nitrobenzene	0.401	0.395	0.393	0.394	0.399	0.388	0.378	0.393	1.89
25)P Isophorone	0.775	0.759	0.740	0.714	0.724	0.697	0.675	0.726	4.82
26)P 2-Nitrophenol	0.154	0.156	0.178	0.191	0.204	0.205	0.206	0.185	12.36
27)P 2,4-Dimethylpheno	0.391	0.385	0.381	0.371	0.376	0.369	0.356	0.375	3.08
28) 0,0,0-Triethylpho	0.161	0.179	0.181	0.182	0.183	0.185	0.180	0.179	4.48
29)P bis(2-Chloroethox	0.507	0.510	0.491	0.491	0.495	0.465	0.475	0.491	3.32
30) Benzoic Acid	0.128	0.150	0.203	0.249	0.272	0.283	0.297	0.226	29.53
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9982									
Response Ratio = 0.00000 + 0.20343 *A + 0.03892 *A^2									
31)P 2,4-Dichloropheno	0.321	0.313	0.323	0.324	0.332	0.325	0.319	0.322	1.74
32) 1,2,4-Trichlorobe	0.357	0.352	0.348	0.343	0.349	0.343	0.337	0.347	1.94
33) alpha-Terpineol								0.000	-1.00
34)P Naphthalene	1.189	1.159	1.116	1.059	1.059	1.019	0.971	1.082	7.16
35)P 4-Chloroaniline	0.358	0.348	0.336	0.393	0.433	0.405	0.373	0.378	9.09
36) 2,6-Dichloropheno	0.326	0.322	0.324	0.322	0.330	0.322	0.316	0.323	1.29
37)P Hexachlorobutadie	0.206	0.201	0.200	0.200	0.205	0.204	0.201	0.202	1.26
38)P Caprolactam	0.106	0.118	0.121	0.129	0.131	0.129	0.129	0.123	7.26
39)P 4-Chloro-3-methyl	0.314	0.316	0.318	0.319	0.323	0.318	0.309	0.317	1.43
40)P 2-Methylnaphthale	0.676	0.663	0.640	0.608	0.623	0.600	0.572	0.626	5.82
41) 1-Methylnaphthale	0.769	0.733	0.704	0.683	0.690	0.666	0.644	0.699	6.04
42)P 1,2,4,5-Tetrachlo	0.378	0.363	0.363	0.359	0.369	0.362	0.353	0.364	2.19

Initial Calibration Summary

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E. Aurora, NY

Sample: SX2395-ICC2395
Lab FileID: X056982.D

43) I	Acenaphthene-d10	-----ISTD-----								
44)P	Hexachlorocyclope	0.343	0.351	0.399	0.417	0.438	0.446	0.436	0.404	10.40
45)P	2,4,6-Trichloroph	0.352	0.360	0.383	0.393	0.406	0.405	0.405	0.386	5.80
46)P	2,4,5-Trichloroph	0.382	0.379	0.414	0.429	0.432	0.437	0.430	0.414	5.91
47)S	2-Fluorobiphenyl	1.430	1.434	1.432	1.362	1.368	1.345	1.282	1.379	4.14
48)P	1,1'-Biphenyl	1.346	1.554	1.536	1.451	1.454	1.415	1.325	1.440	6.03
49)P	2-Chloronaphthale	1.221	1.212	1.214	1.139	1.143	1.129	1.063	1.160	5.04
50)P	2-Nitroaniline	0.263	0.283	0.316	0.333	0.342	0.345	0.336	0.317	10.08
51)	p-Dinitrobenzene	0.139	0.150	0.192	0.216	0.227	0.230	0.231	0.198	19.71
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9985										
Response Ratio = 0.00000 + 0.20056 *A + 0.01334 *A^2										
52)P	Acenaphthylene	1.889	1.898	1.844	1.757	1.743	1.679	1.591	1.772	6.41
53)P	Dimethylphthalate	1.386	1.399	1.385	1.342	1.334	1.303	1.241	1.341	4.20
54)	m-Dinitrobenzene	0.160	0.173	0.210	0.225	0.235	0.235	0.234	0.210	14.96
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990										
Response Ratio = 0.00000 + 0.21787 *A + 0.00725 *A^2										
55)P	2,6-Dinitrotoluen	0.275	0.280	0.317	0.316	0.319	0.320	0.307	0.305	6.36
56)	o-Dinitrobenzene	0.128	0.130	0.149	0.158	0.157	0.157	0.154	0.147	8.82
57)P	Acenaphthene	1.238	1.215	1.207	1.167	1.160	1.143	1.090	1.174	4.27
58)P	3-Nitroaniline	0.281	0.289	0.298	0.332	0.354	0.336	0.312	0.314	8.54
59)P	2,4-Dinitrophenol	0.050	0.060	0.098	0.130	0.149	0.164	0.178	0.118	42.59
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9976										
Response Ratio = 0.00000 + 0.08826 *A + 0.03696 *A^2										
60)P	Dibenzofuran	1.735	1.738	1.733	1.658	1.663	1.617	1.533	1.668	4.55
61)P	2,4-Dinitrotoluen	0.332	0.349	0.411	0.428	0.440	0.442	0.434	0.405	11.25
62)P	4-Nitrophenol	0.123	0.131	0.157	0.158	0.165	0.167	0.166	0.152	11.65
63)	2,3,5,6-Tetrachlo	0.292	0.300	0.336	0.356	0.372	0.378	0.375	0.344	10.46
64)P	2,3,4,6-Tetrachlo	0.311	0.333	0.352	0.379	0.385	0.390	0.387	0.363	8.59
65)P	Fluorene	1.398	1.378	1.351	1.299	1.299	1.269	1.192	1.312	5.39
66)P	4-Chlorophenyl-ph	0.701	0.683	0.696	0.672	0.682	0.667	0.635	0.677	3.25
67)P	Diethylphthalate	1.343	1.343	1.362	1.321	1.333	1.322	1.277	1.329	2.03
68)	Thionazin	0.239	0.286	0.295	0.291	0.291	0.291	0.282	0.282	6.85
69)P	4-Nitroaniline	0.309	0.324	0.363	0.380	0.394	0.391	0.394	0.365	9.65
70) I	Phenanthrene-d10	-----ISTD-----								
71)P	4,6-Dinitro-2-met	0.053	0.067	0.097	0.123	0.137	0.146	0.151	0.110	35.15
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9971										
Response Ratio = 0.00000 + 0.09816 *A + 0.02225 *A^2										
72)P	n-Nitrosodiphenyl	0.589	0.596	0.590	0.575	0.581	0.574	0.544	0.578	2.99
73)	Diphenylamine	0.707	0.715	0.708	0.690	0.697	0.689	0.652	0.694	2.99
74)	1,2-Diphenylhydra	0.788	0.795	0.789	0.757	0.759	0.744	0.685	0.760	5.00
75)S	2,4,6-Tribromophe	0.158	0.165	0.179	0.187	0.197	0.197	0.192	0.182	8.47
76)	Sulfotep	0.107	0.127	0.127	0.126	0.128	0.126	0.118	0.123	6.38
77)	Phorate	0.412	0.482	0.500	0.483	0.492	0.483	0.443	0.471	6.70
78)P	4-Bromophenyl-phe	0.262	0.271	0.271	0.269	0.276	0.273	0.267	0.270	1.72
79)P	Hexachlorobenzene	0.314	0.319	0.328	0.325	0.334	0.331	0.324	0.325	2.13
80)	Dimethoate	0.249	0.308	0.324	0.324	0.332	0.326	0.311	0.311	9.21
81)	Simazine	0.155	0.156	0.159	0.153	0.157	0.155	0.149	0.155	2.11
82)P	Atrazine	0.201	0.243	0.244	0.245	0.243	0.247	0.234	0.237	6.81
83)P	Pentachlorophenol			0.155	0.176	0.188	0.192	0.194	0.181	8.84
84)P	Phenanthrene	1.204	1.215	1.184	1.132	1.132	1.116	1.042	1.146	5.24
85)P	Anthracene	1.229	1.251	1.221	1.158	1.168	1.128	1.058	1.173	5.74
86)	Disulfoton	0.404	0.466	0.469	0.442	0.446	0.433	0.403	0.438	6.11
87)P	Carbazole	1.149	1.162	1.130	1.082	1.096	1.063	1.005	1.098	4.98
88)	Methyl Parathion	0.128	0.171	0.231	0.254	0.263	0.263	0.249	0.223	23.62

Initial Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICC2395
Lab FileID: X056982.D

----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9973
Response Ratio = 0.00000 + 0.25587 *A + -0.00086 *A^2

89)P Di-n-butylphthala 1.297 1.322 1.320 1.264 1.264 1.217 1.140 1.261 5.14
90) Ethyl Parathion 0.079 0.104 0.139 0.152 0.155 0.155 0.149 0.133 22.53
----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9981
Response Ratio = 0.00000 + 0.15157 *A + -0.00018 *A^2

91)P Fluoranthene 1.299 1.333 1.304 1.238 1.235 1.199 1.142 1.250 5.36

92) I Chrysene-d12 -----ISTD-----
93) Benzidine 0.290 0.348 0.508 0.636 0.672 0.634 0.515 31.53
----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9929
Response Ratio = 0.00000 + 0.52304 *A + 0.07225 *A^2

94)P Pyrene 1.259 1.298 1.295 1.257 1.248 1.229 1.169 1.251 3.49
95)S Terphenyl-d14 0.919 0.958 0.968 0.953 0.973 0.953 0.909 0.948 2.58
96) Famphur 0.350 0.421 0.400 0.354 0.361 0.321 0.277 0.355 13.47
97)P Butylbenzylphthal 0.485 0.514 0.541 0.546 0.551 0.536 0.518 0.527 4.36
98)P 3,3'-Dichlorobenz 0.301 0.277 0.295 0.373 0.429 0.413 0.395 0.355 17.57
----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9911
Response Ratio = 0.00000 + 0.37478 *A + 0.01218 *A^2

99)P Benzo[a]anthracen 1.159 1.207 1.200 1.172 1.192 1.162 1.111 1.172 2.80
100)P Chrysene 1.098 1.161 1.145 1.125 1.131 1.104 1.072 1.119 2.71
101)P bis(2-Ethylhexyl) 0.639 0.678 0.702 0.713 0.726 0.715 0.686 0.694 4.25

102) I Perylene-d12 -----ISTD-----
103)P Di-n-octylphthala 0.836 0.898 0.994 1.059 1.079 1.078 1.042 0.998 9.58
104)P Benzo[b]fluoranth 0.982 1.097 1.134 1.135 1.135 1.116 1.074 1.096 5.04
105)P Benzo[k]fluoranth 1.089 1.136 1.119 1.115 1.149 1.154 1.124 1.127 1.99
106)P Benzo[a]pyrene 1.000 1.089 1.104 1.115 1.158 1.143 1.112 1.103 4.64
107)P Indeno[1,2,3-cd]p 0.883 0.995 1.065 1.107 1.124 1.151 1.134 1.066 9.02
108)P Dibenz[a,h]anthra 1.048 1.142 1.181 1.206 1.237 1.219 1.195 1.175 5.42
109)P Benzo[g,h,i]peryl 1.106 1.202 1.217 1.234 1.246 1.232 1.205 1.206 3.89

(#) = Out of Range

8270d110717.m

Wed Nov 08 10:16:16 2017

7.7.1
7

Initial Calibration Verification

Page 1 of 3

Job Number: FA49143
 Account: TCMAW Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056986.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2395_1107\x056986.D Vial: 10
 Acq On : 7 Nov 2017 11:51 am Operator: marthav
 Sample : icv2395-50 Inst : MSBNA05
 Misc : op67449,sx2395,1000,,,1,1,water Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
 Title : SW846 8270D OR EPA 625
 Last Update : Tue Nov 07 12:26:42 2017
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	107	0.00	6.23
2	1,4-Dioxane	50.000	44.869	10.3	96	0.01	3.14
3	N-nitrosodimethylamine	50.000	46.212	7.6	98	0.00	3.50
4	Pyridine		-----NA-----				
5 P	Benzaldehyde	50.000	43.032	13.9	87	0.00	5.76
6	Aniline		-----NA-----				
7 S	2-Fluorophenol		-----NA-----				
8 P	bis(2-Chloroethyl)ether	50.000	44.541	10.9	96	0.00	5.98
9 S	Phenol-d5		-----NA-----				
10 P	Phenol	50.000	44.254	11.5	94	0.00	5.89
11 P	2-Chlorophenol	50.000	46.427	7.1	99	0.00	6.03
12	1,3-Dichlorobenzene	50.000	46.146	7.7	98	0.00	6.19
13	1,4-Dichlorobenzene	50.000	47.186	5.6	102	0.00	6.24
14	1,2-Dichlorobenzene	50.000	46.757	6.5	100	0.00	6.45
15	Benzyl alcohol		-----NA-----				
16 P	bis(2-chloroisopropyl)eth	50.000	45.004	10.0	96	0.00	6.58
17 P	2-Methylphenol	50.000	44.920	10.2	96	0.00	6.54
18 P	Acetophenone	50.000	46.271	7.5	97	0.00	6.70
19 P	Hexachloroethane	50.000	47.278	5.4	100	0.00	6.79
20 P	N-Nitroso-di-n-propylamin	50.000	45.528	8.9	97	0.00	6.73
21 P	3&4-Methylphenol	100.000	87.040	13.0	98	0.00	6.71
22 I	Naphthalene-d8	40.000	40.000	0.0	104	0.00	7.66
23 S	Nitrobenzene-d5		-----NA-----				
24 P	Nitrobenzene	50.000	47.191	5.6	97	0.00	6.89
25 P	Isophorone	50.000	46.306	7.4	98	0.00	7.15
26 P	2-Nitrophenol	50.000	52.520	-5.0	105	0.00	7.25
27 P	2,4-Dimethylphenol	50.000	40.779	18.4	86	0.00	7.30
28	0,0,0-Triethylphosphoroth		-----NA-----				
29 P	bis(2-Chloroethoxy)methan	50.000	41.933	16.1	87	0.00	7.41
30	Benzoic Acid	100.000	91.295	8.7	92	0.04	7.47
31 P	2,4-Dichlorophenol	50.000	47.148	5.7	97	0.00	7.51
32	1,2,4-Trichlorobenzene	50.000	46.519	7.0	98	0.00	7.62
33	alpha-Terpineol		-----NA-----				
34 P	Naphthalene	50.000	46.076	7.8	98	0.00	7.68
35 P	4-Chloroaniline		-----NA-----				
36	2,6-Dichlorophenol	50.000	45.466	9.1	95	0.00	7.78
37 P	Hexachlorobutadiene	50.000	41.510	17.0	87	0.00	7.90

Initial Calibration Verification

Page 2 of 3

Job Number: FA49143

Sample: SX2395-ICV2395

Account: TCMaw Tantara Corporation

Lab FileID: X056986.D

Project: USACE Buffalo Nike Missile UST; E. Aurora, NY

38 P	Caprolactam	50.000	45.615	8.8	90	0.00	8.15
39 P	4-Chloro-3-methylphenol	50.000	45.046	9.9	93	0.00	8.33
40 P	2-Methylnaphthalene		-----NA-----				
41	1-Methylnaphthalene	50.000	44.800	10.4	95	0.00	8.61
42 P	1,2,4,5-Tetrachlorobenzen	50.000	44.333	11.3	93	0.00	8.73
43 I	Acenaphthene-d10	40.000	40.000	0.0	100	0.00	9.72
44 P	Hexachlorocyclopentadiene	50.000	50.747	-1.5	98	0.00	8.75
45 P	2,4,6-Trichlorophenol	50.000	50.410	-0.8	99	0.00	8.84
46 P	2,4,5-Trichlorophenol	50.000	49.824	0.4	96	0.00	8.88
47 S	2-Fluorobiphenyl		-----NA-----				
48 P	1,1'-Biphenyl	50.000	47.958	4.1	95	0.00	9.04
49 P	2-Chloronaphthalene	50.000	47.335	5.3	96	0.00	9.05
50 P	2-Nitroaniline		-----NA-----				
	----- Amount		Calc.	%Drift			
51	p-Dinitrobenzene		-----NA-----				
	----- Amount		Calc.	%Drift			
52 P	Acenaphthylene	50.000	49.987	0.0	100	0.00	9.54
53 P	Dimethylphthalate	50.000	46.562	6.9	93	0.00	9.46
	----- Amount		Calc.	%Drift			
54	m-Dinitrobenzene		-----NA-----				
	----- Amount		Calc.	%Drift			
55 P	2,6-Dinitrotoluene	50.000	45.982	8.0	88	0.00	9.53
56	o-Dinitrobenzene		-----NA-----				
57 P	Acenaphthene	50.000	47.150	5.7	94	0.00	9.76
58 P	3-Nitroaniline		-----NA-----				
	----- Amount		Calc.	%Drift			
59 P	2,4-Dinitrophenol	100.000	87.539	12.5	81	0.00	9.81
	----- Amount		Calc.	%Drift			
60 P	Dibenzofuran		-----NA-----				
61 P	2,4-Dinitrotoluene	50.000	50.979	-2.0	96	0.00	9.99
62 P	4-Nitrophenol	100.000	99.353	0.6	89	0.00	9.89
63	2,3,5,6-Tetrachlorophenol		-----NA-----				
64 P	2,3,4,6-Tetrachlorophenol	50.000	47.009	6.0	89	0.00	10.14
65 P	Fluorene	50.000	46.998	6.0	95	0.00	10.35
66 P	4-Chlorophenyl-phenylethe	50.000	46.988	6.0	94	0.00	10.35
67 P	Diethylphthalate	50.000	45.965	8.1	92	0.00	10.29
68	Thionazin		-----NA-----				
69 P	4-Nitroaniline		-----NA-----				
70 I	Phenanthrene-d10	40.000	40.000	0.0	97	0.00	11.44
	----- Amount		Calc.	%Drift			
71 P	4,6-Dinitro-2-methylpheno	100.000	95.791	4.2	91	0.00	10.46
	----- Amount		Calc.	%Drift			
72 P	n-Nitrosodiphenylamine	50.000	46.054	7.9	75	0.00	10.50
73	Diphenylamine		-----NA-----				
74	1,2-Diphenylhydrazine	50.000	48.173	3.7	94	0.00	10.53
75 S	2,4,6-Tribromophenol		-----NA-----				
76	Sulfotep		-----NA-----				
77	Phorate		-----NA-----				
78 P	4-Bromophenyl-phenylether	50.000	46.832	6.3	91	0.00	10.92
79 P	Hexachlorobenzene	50.000	47.618	4.8	92	0.00	11.09

Initial Calibration Verification

Page 3 of 3

Job Number: FA49143
 Account: TCMAW Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056986.D

80	Dimethoate							-----NA-----
81	Simazine							-----NA-----
82 P	Atrazine	50.000	45.892	8.2	86	-0.01	11.17	
83 P	Pentachlorophenol	100.000	102.884	-2.9	91	0.00	11.30	
84 P	Phenanthrene	50.000	46.222	7.6	91	0.00	11.47	
85 P	Anthracene	50.000	45.022	10.0	89	0.00	11.52	
86	Disulfoton							-----NA-----
87 P	Carbazole							-----NA-----

		Amount	Calc.	%Drift				-----
88	Methyl Parathion							-----NA-----

		Amount	Calc.	%Drift				-----
89 P	Di-n-butylphthalate	50.000	46.864	6.3	91	0.00	12.21	

90	Ethyl Parathion							-----NA-----

		Amount	Calc.	%Drift				-----
91 P	Fluoranthene	50.000	45.986	8.0	90	0.00	12.88	
92 I	Chrysene-d12	40.000	40.000	0.0	93	0.00	14.76	

93	Benzidine							-----NA-----

		Amount	Calc.	%Drift				-----
94 P	Pyrene	50.000	48.152	3.7	89	0.00	13.14	
95 S	Terphenyl-d14							-----NA-----
96	Famphur							-----NA-----
97 P	Butylbenzylphthalate	50.000	47.726	4.5	85	0.00	14.05	

		Amount	Calc.	%Drift				-----
98 P	3,3'-Dichlorobenzidine							-----NA-----

		Amount	Calc.	%Drift				-----
99 P	Benzo[a]anthracene	50.000	46.150	7.7	85	0.00	14.74	
100 P	Chrysene	50.000	46.965	6.1	87	-0.01	14.80	
101 P	bis(2-Ethylhexyl)phthalat	50.000	48.491	3.0	87	0.00	14.93	
102 I	Perylene-d12	40.000	40.000	0.0	91	0.00	17.15	
103 P	Di-n-octylphthalate	50.000	49.172	1.7	84	0.00	15.95	
104 P	Benzo[b]fluoranthene	50.000	49.126	1.7	86	0.00	16.51	
105 P	Benzo[k]fluoranthene	50.000	46.774	6.5	86	0.00	16.56	
106 P	Benzo[a]pyrene	50.000	46.665	6.7	84	0.00	17.05	
107 P	Indeno[1,2,3-cd]pyrene	50.000	46.445	7.1	81	0.00	18.79	
108 P	Dibenz[a,h]anthracene	50.000	47.654	4.7	84	0.00	18.83	
109 P	Benzo[g,h,i]perylene	50.000	48.481	3.0	86	0.00	19.17	

(#) = Out of Range
 x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
 Tue Nov 07 12:30:21 2017

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Initial Calibration Verification

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
Lab FileID: X056987.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2395_1107\X056987.D Vial: 11
Acq On : 7 Nov 2017 12:17 pm Operator: marthav
Sample : icv2395-50 Inst : MSBNA05
Misc : op67449,sx2395,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	99	0.00	6.23
2	1,4-Dioxane		-----NA-----				
3	N-nitrosodimethylamine		-----NA-----				
4	Pyridine	50.000	49.084	1.8	97	0.00	3.49
5 P	Benzaldehyde		-----NA-----				
6	Aniline	50.000	54.885	-9.8	100	0.00	5.91
7 S	2-Fluorophenol		-----NA-----				
8 P	bis(2-Chloroethyl)ether		-----NA-----				
9 S	Phenol-d5		-----NA-----				
10 P	Phenol		-----NA-----				
11 P	2-Chlorophenol		-----NA-----				
12	1,3-Dichlorobenzene		-----NA-----				
13	1,4-Dichlorobenzene		-----NA-----				
14	1,2-Dichlorobenzene		-----NA-----				
15	Benzyl alcohol	50.000	50.550	-1.1	101	0.00	6.40
16 P	bis(2-chloroisopropyl)eth		-----NA-----				
17 P	2-Methylphenol		-----NA-----				
18 P	Acetophenone		-----NA-----				
19 P	Hexachloroethane		-----NA-----				
20 P	N-Nitroso-di-n-propylamin		-----NA-----				
21 P	3&4-Methylphenol		-----NA-----				
22 I	Naphthalene-d8	40.000	40.000	0.0	112	0.00	7.66
23 S	Nitrobenzene-d5		-----NA-----				
24 P	Nitrobenzene		-----NA-----				
25 P	Isophorone		-----NA-----				
26 P	2-Nitrophenol		-----NA-----				
27 P	2,4-Dimethylphenol		-----NA-----				
28	0,0,0-Triethylphosphoroth		-----NA-----				
29 P	bis(2-Chloroethoxy)methan		-----NA-----				
30	Benzoic Acid		-----NA-----				
31 P	2,4-Dichlorophenol		-----NA-----				
32	1,2,4-Trichlorobenzene		-----NA-----				
33	alpha-Terpineol		-----NA-----				
34 P	Naphthalene		-----NA-----				
35 P	4-Chloroaniline	50.000	56.484	-13.0	122	0.00	7.77
36	2,6-Dichlorophenol		-----NA-----				
37 P	Hexachlorobutadiene		-----NA-----				

Initial Calibration Verification

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Job Number: FA49143
 Account: TCMaw Tanara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056987.D

38	P	Caprolactam			-----NA-----				
39	P	4-Chloro-3-methylphenol			-----NA-----				
40	P	2-Methylnaphthalene	50.000	41.960	16.1	97	0.00	8.48	
41		1-Methylnaphthalene			-----NA-----				
42	P	1,2,4,5-Tetrachlorobenzen			-----NA-----				
43	I	Acenaphthene-d10	40.000	40.000	0.0	97	0.00	9.71	
44	P	Hexachlorocyclopentadiene			-----NA-----				
45	P	2,4,6-Trichlorophenol			-----NA-----				
46	P	2,4,5-Trichlorophenol			-----NA-----				
47	S	2-Fluorobiphenyl			-----NA-----				
48	P	1,1'-Biphenyl			-----NA-----				
49	P	2-Chloronaphthalene			-----NA-----				
50	P	2-Nitroaniline	50.000	53.832	-7.7	99	0.00	9.20	
----- Amount Calc. %Drift -----									
51		p-Dinitrobenzene			-----NA-----				
----- Amount Calc. %Drift -----									
52	P	Acenaphthylene			-----NA-----				
53	P	Dimethylphthalate			-----NA-----				
----- Amount Calc. %Drift -----									
54		m-Dinitrobenzene	50.000	48.871	2.3	96	0.00	9.46	
----- Amount Calc. %Drift -----									
55	P	2,6-Dinitrotoluene			-----NA-----				
56		o-Dinitrobenzene			-----NA-----				
57	P	Acenaphthene			-----NA-----				
58	P	3-Nitroaniline	50.000	59.834	-19.7	110	0.00	9.69	
----- Amount Calc. %Drift -----									
59	P	2,4-Dinitrophenol			-----NA-----				
----- Amount Calc. %Drift -----									
60	P	Dibenzofuran	50.000	49.867	0.3	97	0.00	9.94	
61	P	2,4-Dinitrotoluene			-----NA-----				
62	P	4-Nitrophenol			-----NA-----				
63		2,3,5,6-Tetrachlorophenol			-----NA-----				
64	P	2,3,4,6-Tetrachlorophenol			-----NA-----				
65	P	Fluorene			-----NA-----				
66	P	4-Chlorophenyl-phenylethe			-----NA-----				
67	P	Diethylphthalate			-----NA-----				
68		Thionazin			-----NA-----				
69	P	4-Nitroaniline	50.000	51.319	-2.6	96	-0.02	10.40	
70	I	Phenanthrene-d10	40.000	40.000	0.0	96	-0.01	11.44	
----- Amount Calc. %Drift -----									
71	P	4,6-Dinitro-2-methylpheno			-----NA-----				
----- Amount Calc. %Drift -----									
72	P	n-Nitrosodiphenylamine	60.000	59.991	0.0	97	-0.01	10.50	
73		Diphenylamine	50.000	49.992	0.0	97	-0.01	10.50	
74		1,2-Diphenylhydrazine			-----NA-----				
75	S	2,4,6-Tribromophenol			-----NA-----				
76		Sulfotep			-----NA-----				
77		Phorate			-----NA-----				
78	P	4-Bromophenyl-phenylether			-----NA-----				
79	P	Hexachlorobenzene			-----NA-----				

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Initial Calibration Verification

Page 3 of 3

Job Number: FA49143
 Account: TCMAW Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2395-ICV2395
 Lab FileID: X056987.D

80	Dimethoate				-----NA-----			
81	Simazine				-----NA-----			
82 P	Atrazine				-----NA-----			
83 P	Pentachlorophenol				-----NA-----			
84 P	Phenanthrene				-----NA-----			
85 P	Anthracene				-----NA-----			
86	Disulfoton				-----NA-----			
87 P	Carbazole	50.000	49.387	1.2	97	0.00	11.72	
		----- Amount	Calc.	%Drift	-----			
88	Methyl Parathion				-----NA-----			
		----- Amount	Calc.	%Drift	-----			
89 P	Di-n-butylphthalate				-----NA-----			
		----- Amount	Calc.	%Drift	-----			
90	Ethyl Parathion				-----NA-----			
		----- Amount	Calc.	%Drift	-----			
91 P	Fluoranthene				-----NA-----			
92 I	Chrysene-d12	40.000	40.000	0.0	99	0.00	14.76	
		----- Amount	Calc.	%Drift	-----			
93	Benzidine	50.000	61.830	-23.7#	123	0.00	13.05	
		----- Amount	Calc.	%Drift	-----			
94 P	Pyrene				-----NA-----			
95 S	Terphenyl-d14				-----NA-----			
96	Famphur				-----NA-----			
97 P	Butylbenzylphthalate				-----NA-----			
		----- Amount	Calc.	%Drift	-----			
98 P	3,3'-Dichlorobenzidine	50.000	62.150	-24.3#	130	0.00	14.74	
		----- Amount	Calc.	%Drift	-----			
99 P	Benzo[a]anthracene				-----NA-----			
100 P	Chrysene				-----NA-----			
101 P	bis(2-Ethylhexyl)phthalat				-----NA-----			
102 I	Perylene-d12	40.000	40.000	0.0	98	-0.01	17.14	
103 P	Di-n-octylphthalate				-----NA-----			
104 P	Benzo[b]fluoranthene				-----NA-----			
105 P	Benzo[k]fluoranthene				-----NA-----			
106 P	Benzo[a]pyrene				-----NA-----			
107 P	Indeno[1,2,3-cd]pyrene				-----NA-----			
108 P	Dibenz[a,h]anthracene				-----NA-----			
109 P	Benzo[g,h,i]perylene				-----NA-----			

(#) = Out of Range
 x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
 Tue Nov 07 12:43:56 2017

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Continuing Calibration Summary

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2404-CC2395
Lab FileID: X057263.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2404_1117\x057263.D Vial: 2
Acq On : 17 Nov 2017 4:53 pm Operator: marthav
Sample : cc2395-50 Inst : MSBNA05
Misc : op67546,sx2404,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	72	0.00	6.10
2	1,4-Dioxane	0.731	0.698	4.5	70	0.00	3.00
3	N-nitrosodimethylamine	0.755	0.674	10.7	65	0.00	3.37
4	Pyridine	1.960	1.869	4.6	69	-0.01	3.37
5 P	Benzaldehyde	1.187	1.168	1.6	67	0.00	5.64
6	Aniline	2.107	2.128	-1.0	68	0.00	5.79
7 S	2-Fluorophenol	1.514	1.528	-0.9	73	0.00	4.79
8 P	bis(2-Chloroethyl)ether	1.512	1.459	3.5	71	0.00	5.86
9 S	Phenol-d5	1.858	1.835	1.2	72	0.00	5.77
10 P	Phenol	2.063	1.991	3.5	69	0.00	5.79
11 P	2-Chlorophenol	1.569	1.613	-2.8	74	0.00	5.91
12	1,3-Dichlorobenzene	1.655	1.689	-2.1	74	0.00	6.06
13	1,4-Dichlorobenzene	1.661	1.706	-2.7	75	0.00	6.12
14	1,2-Dichlorobenzene	1.580	1.608	-1.8	74	0.00	6.32
15	Benzyl alcohol	1.030	1.019	1.1	72	0.00	6.28
16 P	bis(2-chloroisopropyl)eth	1.981	1.783	10.0	66	0.00	6.45
17 P	2-Methylphenol	1.407	1.422	-1.1	73	0.00	6.43
18 P	Acetophenone	1.953	1.905	2.5	69	0.00	6.57
19 P	Hexachloroethane	0.624	0.630	-1.0	73	0.00	6.67
20 P	N-Nitroso-di-n-propylamin	1.020	0.977	4.2	69	0.00	6.61
21 P	3&4-Methylphenol	1.452	1.501	-3.4	75	0.00	6.59
22 I	Naphthalene-d8	1.000	1.000	0.0	71	0.00	7.54
23 S	Nitrobenzene-d5	0.392	0.400	-2.0	72	0.00	6.75
24 P	Nitrobenzene	0.393	0.389	1.0	70	0.00	6.77
25 P	Isophorone	0.726	0.710	2.2	71	0.00	7.02
26 P	2-Nitrophenol	0.185	0.235	-27.0#	87	0.00	7.13
27 P	2,4-Dimethylphenol	0.375	0.383	-2.1	73	0.00	7.18
28	0,0,0-Triethylphosphoroth	0.179	0.185	-3.4	72	0.00	7.31
29 P	bis(2-Chloroethoxy)methan	0.491	0.499	-1.6	72	0.00	7.29
30	Benzoic Acid	50.000	51.392	-2.8	75	-0.01	7.32
31 P	2,4-Dichlorophenol	0.322	0.350	-8.7	77	0.00	7.40
32	1,2,4-Trichlorobenzene	0.347	0.366	-5.5	76	0.00	7.49
33	alpha-Terpineol			NA			
34 P	Naphthalene	1.082	1.115	-3.0	75	0.00	7.56
35 P	4-Chloroaniline	0.378	0.411	-8.7	74	0.00	7.65
36	2,6-Dichlorophenol	0.323	0.347	-7.4	77	0.00	7.66
37 P	Hexachlorobutadiene	0.202	0.213	-5.4	76	0.00	7.77

Continuing Calibration Summary

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2404-CC2395
Lab FileID: X057263.D

38 P	Caprolactam	0.123	0.127	-3.3	70	0.00	8.03
39 P	4-Chloro-3-methylphenol	0.317	0.333	-5.0	74	0.00	8.22
40 P	2-Methylnaphthalene	0.626	0.647	-3.4	76	0.00	8.36
41	1-Methylnaphthalene	0.699	0.725	-3.7	76	0.00	8.48
42 P	1,2,4,5-Tetrachlorobenzen	0.364	0.391	-7.4	78	0.00	8.60
43 I	Acenaphthene-d10	1.000	1.000	0.0	74	0.00	9.60
44 P	Hexachlorocyclopentadiene	0.404	0.448	-10.9	79	0.00	8.63
45 P	2,4,6-Trichlorophenol	0.386	0.437	-13.2	82	0.00	8.72
46 P	2,4,5-Trichlorophenol	0.414	0.468	-13.0	81	0.00	8.77
47 S	2-Fluorobiphenyl	1.379	1.427	-3.5	77	0.00	8.81
48 P	1,1'-Biphenyl	1.440	1.429	0.8	73	0.00	8.91
49 P	2-Chloronaphthalene	1.160	1.190	-2.6	77	0.00	8.92
50 P	2-Nitroaniline	0.317	0.344	-8.5	76	0.00	9.08
----- Amount Calc. %Drift -----							
51	p-Dinitrobenzene	50.000	55.130	-10.3	83	0.00	9.22
----- AvgRF CCRF %Dev -----							
52 P	Acenaphthylene	1.772	1.827	-3.1	77	0.00	9.41
53 P	Dimethylphthalate	1.341	1.387	-3.4	76	0.00	9.34
----- Amount Calc. %Drift -----							
54	m-Dinitrobenzene	50.000	56.339	-12.7	84	0.00	9.35
----- AvgRF CCRF %Dev -----							
55 P	2,6-Dinitrotoluene	0.305	0.345	-13.1	81	0.00	9.41
56	o-Dinitrobenzene	0.147	0.152	-3.4	71	0.00	9.50
57 P	Acenaphthene	1.174	1.196	-1.9	76	0.00	9.63
58 P	3-Nitroaniline	0.314	0.341	-8.6	76	0.00	9.57
----- Amount Calc. %Drift -----							
59 P	2,4-Dinitrophenol	50.000	66.843	-33.7#	114	0.00	9.69
----- AvgRF CCRF %Dev -----							
60 P	Dibenzofuran	1.668	1.712	-2.6	76	0.00	9.82
61 P	2,4-Dinitrotoluene	0.405	0.463	-14.3	80	0.00	9.87
62 P	4-Nitrophenol	0.152	0.164	-7.9	76	0.00	9.78
63	2,3,5,6-Tetrachlorophenol	0.344	0.415	-20.6#	86	0.00	9.97
64 P	2,3,4,6-Tetrachlorophenol	0.363	0.415	-14.3	81	0.00	10.02
65 P	Fluorene	1.312	1.376	-4.9	78	0.00	10.22
66 P	4-Chlorophenyl-phenylethe	0.677	0.710	-4.9	78	0.00	10.23
67 P	Diethylphthalate	1.329	1.348	-1.4	75	0.00	10.17
68	Thionazin	0.282	0.271	3.9	69	0.00	10.28
69 P	4-Nitroaniline	0.365	0.402	-10.1	78	0.00	10.30
70 I	Phenanthrene-d10	1.000	1.000	0.0	74	0.00	11.32
----- Amount Calc. %Drift -----							
71 P	4,6-Dinitro-2-methylpheno	50.000	63.834	-27.7#	103	0.00	10.36
----- AvgRF CCRF %Dev -----							
72 P	n-Nitrosodiphenylamine	0.578	0.593	-2.6	77	0.00	10.38
73	Diphenylamine	0.694	0.712	-2.6	77	0.00	10.38
74	1,2-Diphenylhydrazine	0.760	0.723	4.9	71	0.00	10.42
75 S	2,4,6-Tribromophenol	0.182	0.217	-19.2	86	0.00	10.53
76	Sulfotep	0.123	0.118	4.1	70	0.00	10.69
77	Phorate	0.471	0.449	4.7	69	0.00	10.78
78 P	4-Bromophenyl-phenylether	0.270	0.284	-5.2	78	0.00	10.80
79 P	Hexachlorobenzene	0.325	0.350	-7.7	80	0.00	10.97

7.7.4
7

Continuing Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2404-CC2395
Lab FileID: X057263.D

80	Dimethoate	0.311	0.301	3.2	69	0.00	10.98
81	Simazine	0.155	0.149	3.9	72	0.00	11.01
82 P	Atrazine	0.237	0.236	0.4	71	0.00	11.06
83 P	Pentachlorophenol	0.181	0.202	-11.6	86	0.00	11.19
84 P	Phenanthrene	1.146	1.177	-2.7	77	0.00	11.35
85 P	Anthracene	1.173	1.213	-3.4	78	0.00	11.40
86	Disulfoton	0.438	0.426	2.7	71	0.00	11.39
87 P	Carbazole	1.098	1.118	-1.8	77	0.00	11.60

88	Methyl Parathion	50.000	51.657	-3.3	77	0.00	11.83

89 P	Di-n-butylphthalate	1.261	1.294	-2.6	76	0.00	12.10

90	Ethyl Parathion	50.000	51.074	-2.1	75	0.00	12.31

91 P	Fluoranthene	1.250	1.297	-3.8	78	0.00	12.76
92 I	Chrysene-d12	1.000	1.000	0.0	77	0.00	14.62

93	Benzidine	50.000	44.026	11.9	64	0.00	12.93

94 P	Pyrene	1.251	1.280	-2.3	78	0.00	13.03
95 S	Terphenyl-d14	0.948	0.984	-3.8	79	0.01	13.24
96	Famphur	0.355	0.324	8.7	70	0.01	13.86
97 P	Butylbenzylphthalate	0.527	0.553	-4.9	78	0.01	13.92

98 P	3,3'-Dichlorobenzidine	50.000	54.099	-8.2	87	0.01	14.60

99 P	Benzo[a]anthracene	1.172	1.236	-5.5	81	0.00	14.60
100 P	Chrysene	1.119	1.162	-3.8	79	0.00	14.66
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.733	-5.6	79	0.00	14.78
102 I	Perylene-d12	1.000	1.000	0.0	78	0.00	16.98
103 P	Di-n-octylphthalate	0.998	1.143	-14.5	84	0.00	15.77
104 P	Benzo[b]fluoranthene	1.096	1.188	-8.4	82	0.00	16.34
105 P	Benzo[k]fluoranthene	1.127	1.132	-0.4	79	0.00	16.38
106 P	Benzo[a]pyrene	1.103	1.166	-5.7	82	0.00	16.88
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.237	-16.0	87	0.00	18.63
108 P	Dibenz[a,h]anthracene	1.175	1.330	-13.2	86	0.00	18.67
109 P	Benzo[g,h,i]perylene	1.206	1.345	-11.5	85	0.00	19.00

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Mon Nov 20 15:33:10 2017

7.7.4
7

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-CC2395
Lab FileID: X057292.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2405_1121\x057292.D Vial: 2
Acq On : 21 Nov 2017 10:16 am Operator: marthav
Sample : cc2395-50 Inst : MSBNA05
Misc : op67546,sx2405,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	6.07
2	1,4-Dioxane	0.731	0.621	15.0	81	-0.02	2.96
3	N-nitrosodimethylamine	0.755	0.609	19.3	77	-0.02	3.34
4	Pyridine	1.960	1.651	15.8	80	-0.03	3.33
5 P	Benzaldehyde	1.187	1.033	13.0	78	0.00	5.61
6	Aniline	2.107	1.863	11.6	78	0.00	5.76
7 S	2-Fluorophenol	1.514	1.362	10.0	85	-0.01	4.76
8 P	bis(2-Chloroethyl)ether	1.512	1.289	14.7	82	0.00	5.83
9 S	Phenol-d5	1.858	1.634	12.1	84	0.00	5.75
10 P	Phenol	2.063	1.740	15.7	80	0.00	5.76
11 P	2-Chlorophenol	1.569	1.449	7.6	88	0.00	5.88
12	1,3-Dichlorobenzene	1.655	1.514	8.5	87	0.00	6.03
13	1,4-Dichlorobenzene	1.661	1.517	8.7	88	0.00	6.09
14	1,2-Dichlorobenzene	1.580	1.463	7.4	89	0.00	6.30
15	Benzyl alcohol	1.030	0.904	12.2	84	0.00	6.25
16 P	bis(2-chloroisopropyl)eth	1.981	1.606	18.9	77	0.00	6.42
17 P	2-Methylphenol	1.407	1.265	10.1	85	0.00	6.40
18 P	Acetophenone	1.953	1.666	14.7	80	0.00	6.55
19 P	Hexachloroethane	0.624	0.570	8.7	86	0.01	6.64
20 P	N-Nitroso-di-n-propylamin	1.020	0.902	11.6	84	0.00	6.59
21 P	3&4-Methylphenol	1.452	1.322	9.0	87	0.00	6.56
22 I	Naphthalene-d8	1.000	1.000	0.0	93	0.00	7.51
23 S	Nitrobenzene-d5	0.392	0.359	8.4	84	0.00	6.72
24 P	Nitrobenzene	0.393	0.348	11.5	82	0.00	6.74
25 P	Isophorone	0.726	0.636	12.4	83	0.00	7.00
26 P	2-Nitrophenol	0.185	0.213	-15.1	103	0.00	7.10
27 P	2,4-Dimethylphenol	0.375	0.341	9.1	85	0.00	7.16
28	0,0,0-Triethylphosphoroth	0.179	0.164	8.4	83	0.00	7.28
29 P	bis(2-Chloroethoxy)methan	0.491	0.436	11.2	82	0.00	7.26
30	Benzoic Acid	50.000	49.835	0.3	94	0.00	7.30
	----- Amount	Calc.	%Drift	-----			
	----- AvgRF	CCRF	%Dev	-----			
31 P	2,4-Dichlorophenol	0.322	0.314	2.5	90	0.00	7.37
32	1,2,4-Trichlorobenzene	0.347	0.336	3.2	91	0.00	7.46
33	alpha-Terpineol			-----NA-----			
34 P	Naphthalene	1.082	0.984	9.1	86	0.00	7.53
35 P	4-Chloroaniline	0.378	0.340	10.1	80	0.00	7.62
36	2,6-Dichlorophenol	0.323	0.312	3.4	90	0.00	7.63
37 P	Hexachlorobutadiene	0.202	0.196	3.0	91	0.00	7.75

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-CC2395
Lab FileID: X057292.D

38	P	Caprolactam	0.123	0.107	13.0	77	0.00	8.01
39	P	4-Chloro-3-methylphenol	0.317	0.295	6.9	86	0.00	8.20
40	P	2-Methylnaphthalene	0.626	0.579	7.5	88	0.00	8.33
41		1-Methylnaphthalene	0.699	0.648	7.3	88	0.00	8.46
42	P	1,2,4,5-Tetrachlorobenzen	0.364	0.357	1.9	92	0.00	8.58
43	I	Acenaphthene-d10	1.000	1.000	0.0	93	0.00	9.57
44	P	Hexachlorocyclopentadiene	0.404	0.413	-2.2	92	0.00	8.60
45	P	2,4,6-Trichlorophenol	0.386	0.405	-4.9	96	0.00	8.70
46	P	2,4,5-Trichlorophenol	0.414	0.428	-3.4	93	-0.01	8.74
47	S	2-Fluorobiphenyl	1.379	1.296	6.0	89	0.00	8.79
48	P	1,1'-Biphenyl	1.440	1.278	11.2	82	0.00	8.89
49	P	2-Chloronaphthalene	1.160	1.106	4.7	90	0.00	8.90
50	P	2-Nitroaniline	0.317	0.309	2.5	86	0.00	9.06
----- Amount Calc. %Drift -----								
51		p-Dinitrobenzene	50.000	49.983	0.0	94	0.00	9.19
----- AvgRF CCRF %Dev -----								
52	P	Acenaphthylene	1.772	1.650	6.9	87	0.00	9.39
53	P	Dimethylphthalate	1.341	1.257	6.3	87	0.00	9.32
----- Amount Calc. %Drift -----								
54		m-Dinitrobenzene	50.000	51.502	-3.0	97	0.00	9.32
----- AvgRF CCRF %Dev -----								
55	P	2,6-Dinitrotoluene	0.305	0.307	-0.7	90	0.00	9.39
56		o-Dinitrobenzene	0.147	0.137	6.8	81	0.00	9.47
57	P	Acenaphthene	1.174	1.096	6.6	87	0.00	9.61
58	P	3-Nitroaniline	0.314	0.303	3.5	85	0.00	9.54
----- Amount Calc. %Drift -----								
59	P	2,4-Dinitrophenol	50.000	66.598	-33.2#	143	0.00	9.67
----- AvgRF CCRF %Dev -----								
60	P	Dibenzofuran	1.668	1.554	6.8	87	0.00	9.79
61	P	2,4-Dinitrotoluene	0.405	0.420	-3.7	91	0.00	9.85
62	P	4-Nitrophenol	0.152	0.145	4.6	85	0.00	9.76
63		2,3,5,6-Tetrachlorophenol	0.344	0.382	-11.0	100	0.00	9.94
64	P	2,3,4,6-Tetrachlorophenol	0.363	0.382	-5.2	94	0.00	9.99
65	P	Fluorene	1.312	1.244	5.2	89	0.00	10.20
66	P	4-Chlorophenyl-phenylethe	0.677	0.650	4.0	90	0.00	10.20
67	P	Diethylphthalate	1.329	1.218	8.4	86	0.00	10.15
68		Thionazin	0.282	0.241	14.5	77	0.00	10.25
69	P	4-Nitroaniline	0.365	0.355	2.7	87	0.00	10.28
70	I	Phenanthrene-d10	1.000	1.000	0.0	93	0.00	11.29
----- Amount Calc. %Drift -----								
71	P	4,6-Dinitro-2-methylpheno	50.000	60.748	-21.5#	121	0.00	10.33
----- AvgRF CCRF %Dev -----								
72	P	n-Nitrosodiphenylamine	0.578	0.535	7.4	86	0.00	10.36
73		Diphenylamine	0.694	0.643	7.3	86	0.00	10.36
74		1,2-Diphenylhydrazine	0.760	0.657	13.6	81	0.00	10.39
75	S	2,4,6-Tribromophenol	0.182	0.201	-10.4	99	0.00	10.51
76		Sulfotep	0.123	0.103	16.3	76	0.00	10.67
77		Phorate	0.471	0.395	16.1	76	0.00	10.75
78	P	4-Bromophenyl-phenylether	0.270	0.262	3.0	90	0.00	10.77
79	P	Hexachlorobenzene	0.325	0.321	1.2	92	0.00	10.94

Continuing Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-CC2395
Lab FileID: X057292.D

80	Dimethoate	0.311	0.260	16.4	75	0.00	10.96
81	Simazine	0.155	0.129	16.8	79	0.00	10.99
82 P	Atrazine	0.237	0.206	13.1	78	0.00	11.04
83 P	Pentachlorophenol	0.181	0.186	-2.8	98	0.00	11.16
84 P	Phenanthrene	1.146	1.065	7.1	87	0.00	11.32
85 P	Anthracene	1.173	1.086	7.4	87	0.00	11.37
86	Disulfoton	0.438	0.370	15.5	78	0.00	11.37
87 P	Carbazole	1.098	0.996	9.3	85	0.00	11.58

88	Methyl Parathion	50.000	45.320	9.4	84	0.00	11.81

89 P	Di-n-butylphthalate	1.261	1.156	8.3	85	0.00	12.07

90	Ethyl Parathion	50.000	43.767	12.5	81	0.00	12.28

91 P	Fluoranthene	1.250	1.159	7.3	87	0.00	12.73
92 I	Chrysene-d12	1.000	1.000	0.0	92	0.00	14.59

93	Benzidine			-----NA-----			

94 P	Pyrene	1.251	1.176	6.0	86	0.00	12.99
95 S	Terphenyl-d14	0.948	0.919	3.1	89	0.01	13.21
96	Famphur	0.355	0.278	21.7#	72	0.02	13.83
97 P	Butylbenzylphthalate	0.527	0.500	5.1	84	0.02	13.89

98 P	3,3'-Dichlorobenzidine	50.000	47.583	4.8	92	0.01	14.57

99 P	Benzo[a]anthracene	1.172	1.132	3.4	89	0.00	14.56
100 P	Chrysene	1.119	1.064	4.9	87	0.00	14.62
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.668	3.7	86	0.01	14.75
102 I	Perylene-d12	1.000	1.000	0.0	94	0.00	16.93
103 P	Di-n-octylphthalate	0.998	1.020	-2.2	91	0.00	15.73
104 P	Benzo[b]fluoranthene	1.096	1.040	5.1	87	0.00	16.29
105 P	Benzo[k]fluoranthene	1.127	1.051	6.7	89	0.00	16.34
106 P	Benzo[a]pyrene	1.103	1.065	3.4	90	0.00	16.83
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.125	-5.5	96	0.00	18.59
108 P	Dibenz[a,h]anthracene	1.175	1.188	-1.1	93	0.01	18.63
109 P	Benzo[g,h,i]perylene	1.206	1.234	-2.3	94	0.00	18.95

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Tue Nov 21 14:06:43 2017

7.7.5
7

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-CC2395
Lab FileID: X057293.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2405_1121\x057293.D Vial: 3
Acq On : 21 Nov 2017 10:44 am Operator: marthav
Sample : cc2395-50 Inst : MSBNA05
Misc : op67546,sx2405,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	6.07
2	1,4-Dioxane		-----NA-----				
3	N-nitrosodimethylamine		-----NA-----				
4	Pyridine		-----NA-----				
5 P	Benzaldehyde		-----NA-----				
6	Aniline		-----NA-----				
7 S	2-Fluorophenol		-----NA-----				
8 P	bis(2-Chloroethyl)ether		-----NA-----				
9 S	Phenol-d5		-----NA-----				
10 P	Phenol		-----NA-----				
11 P	2-Chlorophenol		-----NA-----				
12	1,3-Dichlorobenzene		-----NA-----				
13	1,4-Dichlorobenzene		-----NA-----				
14	1,2-Dichlorobenzene		-----NA-----				
15	Benzyl alcohol		-----NA-----				
16 P	bis(2-chloroisopropyl)eth		-----NA-----				
17 P	2-Methylphenol		-----NA-----				
18 P	Acetophenone		-----NA-----				
19 P	Hexachloroethane		-----NA-----				
20 P	N-Nitroso-di-n-propylamin		-----NA-----				
21 P	3&4-Methylphenol		-----NA-----				
22 I	Naphthalene-d8	1.000	1.000	0.0	102	0.00	7.51
23 S	Nitrobenzene-d5		-----NA-----				
24 P	Nitrobenzene		-----NA-----				
25 P	Isophorone		-----NA-----				
26 P	2-Nitrophenol		-----NA-----				
27 P	2,4-Dimethylphenol		-----NA-----				
28	0,0,0-Triethylphosphoroth		-----NA-----				
29 P	bis(2-Chloroethoxy)methan		-----NA-----				
30	Benzoic Acid	Amount	Calc.	%Drift			
				-----NA-----			
31 P	2,4-Dichlorophenol	AvgRF	CCRF	%Dev			
32	1,2,4-Trichlorobenzene		-----NA-----				
33	alpha-Terpineol		-----NA-----				
34 P	Naphthalene		-----NA-----				
35 P	4-Chloroaniline		-----NA-----				
36	2,6-Dichlorophenol		-----NA-----				
37 P	Hexachlorobutadiene		-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-CC2395
Lab FileID: X057293.D

38	P	Caprolactam							-----NA-----
39	P	4-Chloro-3-methylphenol							-----NA-----
40	P	2-Methylnaphthalene							-----NA-----
41		1-Methylnaphthalene							-----NA-----
42	P	1,2,4,5-Tetrachlorobenzen							-----NA-----
43	I	Acenaphthene-d10	1.000	1.000	0.0	103	0.00	9.56	
44	P	Hexachlorocyclopentadiene							-----NA-----
45	P	2,4,6-Trichlorophenol							-----NA-----
46	P	2,4,5-Trichlorophenol							-----NA-----
47	S	2-Fluorobiphenyl							-----NA-----
48	P	1,1'-Biphenyl							-----NA-----
49	P	2-Chloronaphthalene							-----NA-----
50	P	2-Nitroaniline							-----NA-----
51		p-Dinitrobenzene	Amount	Calc.	%Drift				-----NA-----
52	P	Acenaphthylene	AvgRF	CCRF	%Dev				-----NA-----
53	P	Dimethylphthalate							-----NA-----
54		m-Dinitrobenzene	Amount	Calc.	%Drift				-----NA-----
55	P	2,6-Dinitrotoluene	AvgRF	CCRF	%Dev				-----NA-----
56		o-Dinitrobenzene							-----NA-----
57	P	Acenaphthene							-----NA-----
58	P	3-Nitroaniline							-----NA-----
59	P	2,4-Dinitrophenol	Amount	Calc.	%Drift				-----NA-----
60	P	Dibenzofuran	AvgRF	CCRF	%Dev				-----NA-----
61	P	2,4-Dinitrotoluene							-----NA-----
62	P	4-Nitrophenol							-----NA-----
63		2,3,5,6-Tetrachlorophenol							-----NA-----
64	P	2,3,4,6-Tetrachlorophenol							-----NA-----
65	P	Fluorene							-----NA-----
66	P	4-Chlorophenyl-phenylethe							-----NA-----
67	P	Diethylphthalate							-----NA-----
68		Thionazin							-----NA-----
69	P	4-Nitroaniline							-----NA-----
70	I	Phenanthrene-d10	1.000	1.000	0.0	100	0.00	11.29	
71	P	4,6-Dinitro-2-methylpheno	Amount	Calc.	%Drift				-----NA-----
72	P	n-Nitrosodiphenylamine	AvgRF	CCRF	%Dev				-----NA-----
73		Diphenylamine							-----NA-----
74		1,2-Diphenylhydrazine							-----NA-----
75	S	2,4,6-Tribromophenol							-----NA-----
76		Sulfotep							-----NA-----
77		Phorate							-----NA-----
78	P	4-Bromophenyl-phenylether							-----NA-----
79	P	Hexachlorobenzene							-----NA-----

Continuing Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-CC2395
Lab FileID: X057293.D

80	Dimethoate								-----NA-----
81	Simazine								-----NA-----
82 P	Atrazine								-----NA-----
83 P	Pentachlorophenol								-----NA-----
84 P	Phenanthrene								-----NA-----
85 P	Anthracene								-----NA-----
86	Disulfoton								-----NA-----
87 P	Carbazole								-----NA-----

88	Methyl Parathion	Amount	Calc.	%Drift					-----NA-----

89 P	Di-n-butylphthalate	AvgRF	CCRF	%Dev					-----NA-----

90	Ethyl Parathion	Amount	Calc.	%Drift					-----NA-----

91 P	Fluoranthene	AvgRF	CCRF	%Dev					-----NA-----

92 I	Chrysene-d12	1.000	1.000	0.0	102	0.00	14.58		

93	Benzidine	50.000	55.274	-10.5	110	0.02	12.90		

94 P	Pyrene	AvgRF	CCRF	%Dev					-----NA-----

95 S	Terphenyl-d14								-----NA-----

96	Famphur								-----NA-----

97 P	Butylbenzylphthalate								-----NA-----

98 P	3,3'-Dichlorobenzidine	Amount	Calc.	%Drift					-----NA-----

99 P	Benzo[a]anthracene	AvgRF	CCRF	%Dev					-----NA-----

100 P	Chrysene								-----NA-----

101 P	bis(2-Ethylhexyl)phthalat								-----NA-----

102 I	Perylene-d12	1.000	1.000	0.0	103	0.00	16.93		
103 P	Di-n-octylphthalate								-----NA-----

104 P	Benzo[b]fluoranthene								-----NA-----

105 P	Benzo[k]fluoranthene								-----NA-----

106 P	Benzo[a]pyrene								-----NA-----

107 P	Indeno[1,2,3-cd]pyrene								-----NA-----

108 P	Dibenz[a,h]anthracene								-----NA-----

109 P	Benzo[g,h,i]perylene								-----NA-----

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 64 CCC's out = 0
Tue Nov 21 14:07:06 2017

7.7.6
7

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-ECC2395
Lab FileID: X057300.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2405_1121\x057300.D Vial: 2
Acq On : 21 Nov 2017 1:44 pm Operator: marthav
Sample : ecc2395-50 Inst : MSBNA05
Misc : op67546,sx2405,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	78	0.00	6.07
2	1,4-Dioxane	0.731	0.622	14.9	66	0.00	2.96
3	N-nitrosodimethylamine	0.755	0.621	17.7	64	-0.01	3.33
4	Pyridine	1.960	1.676	14.5	67	0.00	3.33
5 P	Benzaldehyde	1.187	0.926	22.0	57	0.00	5.61
6	Aniline	2.107	1.992	5.5	68	0.00	5.76
7 S	2-Fluorophenol	1.514	1.396	7.8	71	0.00	4.76
8 P	bis(2-Chloroethyl)ether	1.512	1.317	12.9	68	0.00	5.83
9 S	Phenol-d5	1.858	1.668	10.2	70	0.00	5.75
10 P	Phenol	2.063	1.802	12.7	67	0.00	5.76
11 P	2-Chlorophenol	1.569	1.468	6.4	72	0.00	5.88
12	1,3-Dichlorobenzene	1.655	1.536	7.2	72	0.00	6.03
13	1,4-Dichlorobenzene	1.661	1.542	7.2	73	0.00	6.09
14	1,2-Dichlorobenzene	1.580	1.468	7.1	73	0.00	6.30
15	Benzyl alcohol	1.030	0.908	11.8	69	0.00	6.25
16 P	bis(2-chloroisopropyl)eth	1.981	1.661	16.2	65	0.00	6.43
17 P	2-Methylphenol	1.407	1.277	9.2	70	0.00	6.40
18 P	Acetophenone	1.953	1.682	13.9	65	0.00	6.55
19 P	Hexachloroethane	0.624	0.583	6.6	72	0.00	6.63
20 P	N-Nitroso-di-n-propylamin	1.020	0.914	10.4	70	0.00	6.58
21 P	3&4-Methylphenol	1.452	1.348	7.2	72	0.00	6.56
22 I	Naphthalene-d8	1.000	1.000	0.0	77	0.00	7.51
23 S	Nitrobenzene-d5	0.392	0.359	8.4	70	0.00	6.72
24 P	Nitrobenzene	0.393	0.346	12.0	68	0.00	6.74
25 P	Isophorone	0.726	0.628	13.5	68	0.00	7.00
26 P	2-Nitrophenol	0.185	0.209	-13.0	84	0.00	7.10
27 P	2,4-Dimethylphenol	0.375	0.340	9.3	70	0.00	7.16
28	0,0,0-Triethylphosphoroth	0.179	0.161	10.1	68	0.00	7.28
29 P	bis(2-Chloroethoxy)methan	0.491	0.434	11.6	68	0.00	7.26
30	Benzoic Acid	50.000	44.637	10.7	68	-0.01	7.29
31 P	2,4-Dichlorophenol	0.322	0.304	5.6	72	0.00	7.37
32	1,2,4-Trichlorobenzene	0.347	0.331	4.6	74	0.00	7.46
33	alpha-Terpineol	-----NA-----					
34 P	Naphthalene	1.082	0.987	8.8	72	0.00	7.53
35 P	4-Chloroaniline	0.378	0.420	-11.1	82	0.00	7.62
36	2,6-Dichlorophenol	0.323	0.310	4.0	74	0.00	7.63
37 P	Hexachlorobutadiene	0.202	0.196	3.0	75	0.00	7.75

Continuing Calibration Summary

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-ECC2395
Lab FileID: X057300.D

38 P	Caprolactam	0.123	0.104	15.4	62	-0.01	8.00
39 P	4-Chloro-3-methylphenol	0.317	0.289	8.8	70	0.00	8.20
40 P	2-Methylnaphthalene	0.626	0.583	6.9	74	0.00	8.33
41	1-Methylnaphthalene	0.699	0.647	7.4	73	0.00	8.45
42 P	1,2,4,5-Tetrachlorobenzen	0.364	0.352	3.3	75	0.00	8.58
43 I	Acenaphthene-d10	1.000	1.000	0.0	75	0.00	9.57
44 P	Hexachlorocyclopentadiene	0.404	0.396	2.0	72	0.00	8.60
45 P	2,4,6-Trichlorophenol	0.386	0.399	-3.4	77	0.00	8.69
46 P	2,4,5-Trichlorophenol	0.414	0.423	-2.2	74	0.00	8.74
47 S	2-Fluorobiphenyl	1.379	1.339	2.9	74	0.00	8.78
48 P	1,1'-Biphenyl	1.440	1.287	10.6	67	0.00	8.89
49 P	2-Chloronaphthalene	1.160	1.124	3.1	74	0.00	8.89
50 P	2-Nitroaniline	0.317	0.313	1.3	71	0.00	9.05
----- Amount Calc. %Drift -----							
51	p-Dinitrobenzene	50.000	49.055	1.9	74	0.00	9.19
----- AvgRF CCRF %Dev -----							
52 P	Acenaphthylene	1.772	1.693	4.5	73	0.00	9.38
53 P	Dimethylphthalate	1.341	1.265	5.7	71	0.00	9.31
----- Amount Calc. %Drift -----							
54	m-Dinitrobenzene	50.000	51.145	-2.3	78	0.00	9.32
----- AvgRF CCRF %Dev -----							
55 P	2,6-Dinitrotoluene	0.305	0.306	-0.3	73	0.00	9.39
56	o-Dinitrobenzene	0.147	0.140	4.8	67	0.00	9.46
57 P	Acenaphthene	1.174	1.105	5.9	71	0.00	9.61
58 P	3-Nitroaniline	0.314	0.341	-8.6	78	0.00	9.54
----- Amount Calc. %Drift -----							
59 P	2,4-Dinitrophenol	50.000	65.879	-31.8	114	0.00	9.66
----- AvgRF CCRF %Dev -----							
60 P	Dibenzofuran	1.668	1.592	4.6	72	0.00	9.79
61 P	2,4-Dinitrotoluene	0.405	0.411	-1.5	72	0.00	9.84
62 P	4-Nitrophenol	0.152	0.143	5.9	68	0.00	9.75
63	2,3,5,6-Tetrachlorophenol	0.344	0.378	-9.9	80	0.00	9.94
64 P	2,3,4,6-Tetrachlorophenol	0.363	0.375	-3.3	75	0.00	9.99
65 P	Fluorene	1.312	1.269	3.3	74	0.00	10.20
66 P	4-Chlorophenyl-phenylethe	0.677	0.654	3.4	73	0.00	10.20
67 P	Diethylphthalate	1.329	1.233	7.2	70	0.00	10.15
68	Thionazin	0.282	0.242	14.2	63	0.00	10.25
69 P	4-Nitroaniline	0.365	0.365	0.0	72	0.00	10.27
70 I	Phenanthrene-d10	1.000	1.000	0.0	76	0.00	11.29
----- Amount Calc. %Drift -----							
71 P	4,6-Dinitro-2-methylpheno	50.000	59.006	-18.0	96	0.00	10.32
----- AvgRF CCRF %Dev -----							
72 P	n-Nitrosodiphenylamine	0.578	0.551	4.7	73	0.00	10.36
73	Diphenylamine	0.694	0.661	4.8	73	0.00	10.36
74	1,2-Diphenylhydrazine	0.760	0.662	12.9	66	0.00	10.39
75 S	2,4,6-Tribromophenol	0.182	0.197	-8.2	80	0.00	10.51
76	Sulfotep	0.123	0.102	17.1	62	0.00	10.67
77	Phorate	0.471	0.395	16.1	62	0.00	10.75
78 P	4-Bromophenyl-phenylether	0.270	0.259	4.1	73	0.00	10.77
79 P	Hexachlorobenzene	0.325	0.315	3.1	73	0.00	10.94

Continuing Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-ECC2395
Lab FileID: X057300.D

80		Dimethoate	0.311	0.257	17.4	60	0.00	10.96
81		Simazine	0.155	0.127	18.1	63	0.00	10.99
82	P	Atrazine	0.237	0.204	13.9	63	0.00	11.03
83	P	Pentachlorophenol	0.181	0.179	1.1	77	0.00	11.16
84	P	Phenanthrene	1.146	1.074	6.3	72	0.00	11.32
85	P	Anthracene	1.173	1.103	6.0	72	0.00	11.37
86		Disulfoton	0.438	0.372	15.1	64	0.00	11.37
87	P	Carbazole	1.098	1.004	8.6	70	0.00	11.58
88		----- Amount	Calc.	%Drift	-----			
		Methyl Parathion	50.000	43.914	12.2	67	0.00	11.81
89	P	----- AvgRF	CCRF	%Dev	-----			
		Di-n-butylphthalate	1.261	1.155	8.4	69	0.00	12.07
90		----- Amount	Calc.	%Drift	-----			
		Ethyl Parathion	50.000	43.427	13.1	65	0.00	12.28
91	P	----- AvgRF	CCRF	%Dev	-----			
		Fluoranthene	1.250	1.166	6.7	71	0.00	12.73
92	I	Chrysene-d12	1.000	1.000	0.0	77	0.00	14.59
93		----- Amount	Calc.	%Drift	-----			
		Benzidine	-----	NA-----	-----			
94	P	----- AvgRF	CCRF	%Dev	-----			
		Pyrene	1.251	1.163	7.0	71	0.00	12.99
95	S	Terphenyl-d14	0.948	0.904	4.6	73	0.00	13.21
96		Famphur	0.355	0.338	4.8	74	0.00	13.83
97	P	Butylbenzylphthalate	0.527	0.495	6.1	70	0.00	13.89
98	P	----- Amount	Calc.	%Drift	-----			
		3,3'-Dichlorobenzidine	50.000	55.996	-12.0	91	0.00	14.57
99	P	----- AvgRF	CCRF	%Dev	-----			
		Benzo[a]anthracene	1.172	1.113	5.0	73	0.00	14.57
100	P	Chrysene	1.119	1.045	6.6	72	0.00	14.62
101	P	bis(2-Ethylhexyl)phthalat	0.694	0.655	5.6	71	0.00	14.75
102	I	Perylene-d12	1.000	1.000	0.0	78	0.00	16.93
103	P	Di-n-octylphthalate	0.998	1.010	-1.2	74	0.00	15.73
104	P	Benzo[b]fluoranthene	1.096	1.044	4.7	71	0.00	16.29
105	P	Benzo[k]fluoranthene	1.127	1.069	5.1	75	0.00	16.34
106	P	Benzo[a]pyrene	1.103	1.052	4.6	73	0.00	16.83
107	P	Indeno[1,2,3-cd]pyrene	1.066	1.106	-3.8	78	0.00	18.59
108	P	Dibenz[a,h]anthracene	1.175	1.178	-0.3	76	0.00	18.63
109	P	Benzo[g,h,i]perylene	1.206	1.216	-0.8	77	0.00	18.95

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Tue Nov 21 14:33:39 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-ECC2395
Lab FileID: X057301.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2405_1121\X057301.D Vial: 3
 Acq On : 21 Nov 2017 2:09 pm Operator: marthav
 Sample : ecc2395-50 Inst : MSBNA05
 Misc : op67546,sx2405,1000,,,1,1,water Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
 Title : SW846 8270D OR EPA 625
 Last Update : Tue Nov 07 12:26:42 2017
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	80	0.00	6.07
2	1,4-Dioxane		-----NA-----				
3	N-nitrosodimethylamine		-----NA-----				
4	Pyridine		-----NA-----				
5 P	Benzaldehyde		-----NA-----				
6	Aniline		-----NA-----				
7 S	2-Fluorophenol		-----NA-----				
8 P	bis(2-Chloroethyl)ether		-----NA-----				
9 S	Phenol-d5		-----NA-----				
10 P	Phenol		-----NA-----				
11 P	2-Chlorophenol		-----NA-----				
12	1,3-Dichlorobenzene		-----NA-----				
13	1,4-Dichlorobenzene		-----NA-----				
14	1,2-Dichlorobenzene		-----NA-----				
15	Benzyl alcohol		-----NA-----				
16 P	bis(2-chloroisopropyl)eth		-----NA-----				
17 P	2-Methylphenol		-----NA-----				
18 P	Acetophenone		-----NA-----				
19 P	Hexachloroethane		-----NA-----				
20 P	N-Nitroso-di-n-propylamin		-----NA-----				
21 P	3&4-Methylphenol		-----NA-----				
22 I	Naphthalene-d8	1.000	1.000	0.0	79	0.00	7.51
23 S	Nitrobenzene-d5		-----NA-----				
24 P	Nitrobenzene		-----NA-----				
25 P	Isophorone		-----NA-----				
26 P	2-Nitrophenol		-----NA-----				
27 P	2,4-Dimethylphenol		-----NA-----				
28	0,0,0-Triethylphosphoroth		-----NA-----				
29 P	bis(2-Chloroethoxy)methan		-----NA-----				
30	Benzoic Acid	Amount	Calc.	%Drift			
				-----NA-----			
		AvgRF	CCRF	%Dev			
31 P	2,4-Dichlorophenol		-----NA-----				
32	1,2,4-Trichlorobenzene		-----NA-----				
33	alpha-Terpineol		-----NA-----				
34 P	Naphthalene		-----NA-----				
35 P	4-Chloroaniline		-----NA-----				
36	2,6-Dichlorophenol		-----NA-----				
37 P	Hexachlorobutadiene		-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-ECC2395
Lab FileID: X057301.D

38	P	Caprolactam			-----NA-----			
39	P	4-Chloro-3-methylphenol			-----NA-----			
40	P	2-Methylnaphthalene			-----NA-----			
41		1-Methylnaphthalene			-----NA-----			
42	P	1,2,4,5-Tetrachlorobenzen			-----NA-----			
43	I	Acenaphthene-d10	1.000	1.000	0.0	79	0.00	9.56
44	P	Hexachlorocyclopentadiene			-----NA-----			
45	P	2,4,6-Trichlorophenol			-----NA-----			
46	P	2,4,5-Trichlorophenol			-----NA-----			
47	S	2-Fluorobiphenyl			-----NA-----			
48	P	1,1'-Biphenyl			-----NA-----			
49	P	2-Chloronaphthalene			-----NA-----			
50	P	2-Nitroaniline			-----NA-----			

			Amount	Calc.	%Drift	-----		
51		p-Dinitrobenzene			-----NA-----			

			AvgRF	CCRF	%Dev	-----		
52	P	Acenaphthylene			-----NA-----			
53	P	Dimethylphthalate			-----NA-----			

			Amount	Calc.	%Drift	-----		
54		m-Dinitrobenzene			-----NA-----			

			AvgRF	CCRF	%Dev	-----		
55	P	2,6-Dinitrotoluene			-----NA-----			
56		o-Dinitrobenzene			-----NA-----			
57	P	Acenaphthene			-----NA-----			
58	P	3-Nitroaniline			-----NA-----			

			Amount	Calc.	%Drift	-----		
59	P	2,4-Dinitrophenol			-----NA-----			

			AvgRF	CCRF	%Dev	-----		
60	P	Dibenzofuran			-----NA-----			
61	P	2,4-Dinitrotoluene			-----NA-----			
62	P	4-Nitrophenol			-----NA-----			
63		2,3,5,6-Tetrachlorophenol			-----NA-----			
64	P	2,3,4,6-Tetrachlorophenol			-----NA-----			
65	P	Fluorene			-----NA-----			
66	P	4-Chlorophenyl-phenylethe			-----NA-----			
67	P	Diethylphthalate			-----NA-----			
68		Thionazin			-----NA-----			
69	P	4-Nitroaniline			-----NA-----			

70	I	Phenanthrene-d10	1.000	1.000	0.0	77	0.00	11.29

			Amount	Calc.	%Drift	-----		
71	P	4,6-Dinitro-2-methylpheno			-----NA-----			

			AvgRF	CCRF	%Dev	-----		
72	P	n-Nitrosodiphenylamine			-----NA-----			
73		Diphenylamine			-----NA-----			
74		1,2-Diphenylhydrazine			-----NA-----			
75	S	2,4,6-Tribromophenol			-----NA-----			
76		Sulfotep			-----NA-----			
77		Phorate			-----NA-----			
78	P	4-Bromophenyl-phenylether			-----NA-----			
79	P	Hexachlorobenzene			-----NA-----			

Continuing Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2405-ECC2395
Lab FileID: X057301.D

80	Dimethoate								-----NA-----
81	Simazine								-----NA-----
82 P	Atrazine								-----NA-----
83 P	Pentachlorophenol								-----NA-----
84 P	Phenanthrene								-----NA-----
85 P	Anthracene								-----NA-----
86	Disulfoton								-----NA-----
87 P	Carbazole								-----NA-----

88	Methyl Parathion	Amount	Calc.	%Drift					-----NA-----

89 P	Di-n-butylphthalate	AvgRF	CCRF	%Dev					-----NA-----

90	Ethyl Parathion	Amount	Calc.	%Drift					-----NA-----

91 P	Fluoranthene	AvgRF	CCRF	%Dev					-----NA-----

92 I	Chrysene-d12	1.000	1.000	0.0	79	0.00	14.58		

93	Benzidine	50.000	60.120	-20.2	95	0.00	12.90		

94 P	Pyrene	AvgRF	CCRF	%Dev					-----NA-----

95 S	Terphenyl-d14								-----NA-----

96	Famphur								-----NA-----

97 P	Butylbenzylphthalate								-----NA-----

98 P	3,3'-Dichlorobenzidine	Amount	Calc.	%Drift					-----NA-----

99 P	Benzo[a]anthracene	AvgRF	CCRF	%Dev					-----NA-----

100 P	Chrysene								-----NA-----

101 P	bis(2-Ethylhexyl)phthalat								-----NA-----

102 I	Perylene-d12	1.000	1.000	0.0	79	0.00	16.93		
103 P	Di-n-octylphthalate								-----NA-----

104 P	Benzo[b]fluoranthene								-----NA-----

105 P	Benzo[k]fluoranthene								-----NA-----

106 P	Benzo[a]pyrene								-----NA-----

107 P	Indeno[1,2,3-cd]pyrene								-----NA-----

108 P	Dibenz[a,h]anthracene								-----NA-----

109 P	Benzo[g,h,i]perylene								-----NA-----

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 64 CCC's out = 0
Tue Nov 21 14:30:27 2017

7.7.8
7

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2406-CC2395
Lab FileID: X057303.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2406_1121\x057303.D Vial: 2
 Acq On : 21 Nov 2017 3:10 pm Operator: marthav
 Sample : cc2395-50 Inst : MSBNA05
 Misc : op67546,sx2406,1000,,,1,1,water Multiplr: 1.00
 MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
 Title : SW846 8270D OR EPA 625
 Last Update : Tue Nov 07 12:26:42 2017
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	82	0.00	6.07
2	1,4-Dioxane	0.731	0.632	13.5	72	0.00	2.96
3	N-nitrosodimethylamine	0.755	0.628	16.8	68	0.00	3.33
4	Pyridine	1.960	1.648	15.9	69	0.00	3.33
5 P	Benzaldehyde	1.187	0.919	22.6#	60	0.00	5.61
6	Aniline	2.107	1.977	6.2	72	0.00	5.76
7 S	2-Fluorophenol	1.514	1.385	8.5	75	0.00	4.76
8 P	bis(2-Chloroethyl)ether	1.512	1.320	12.7	73	0.00	5.83
9 S	Phenol-d5	1.858	1.669	10.2	74	0.00	5.75
10 P	Phenol	2.063	1.772	14.1	70	0.00	5.76
11 P	2-Chlorophenol	1.569	1.452	7.5	76	0.00	5.88
12	1,3-Dichlorobenzene	1.655	1.548	6.5	77	0.00	6.03
13	1,4-Dichlorobenzene	1.661	1.556	6.3	78	0.00	6.09
14	1,2-Dichlorobenzene	1.580	1.469	7.0	77	0.00	6.30
15	Benzyl alcohol	1.030	0.897	12.9	72	0.00	6.25
16 P	bis(2-chloroisopropyl)eth	1.981	1.670	15.7	70	0.00	6.43
17 P	2-Methylphenol	1.407	1.258	10.6	73	0.00	6.40
18 P	Acetophenone	1.953	1.673	14.3	69	0.00	6.55
19 P	Hexachloroethane	0.624	0.578	7.4	75	0.00	6.64
20 P	N-Nitroso-di-n-propylamin	1.020	0.902	11.6	73	0.00	6.58
21 P	3&4-Methylphenol	1.452	1.336	8.0	76	0.00	6.56
22 I	Naphthalene-d8	1.000	1.000	0.0	81	0.00	7.51
23 S	Nitrobenzene-d5	0.392	0.359	8.4	74	0.00	6.72
24 P	Nitrobenzene	0.393	0.349	11.2	72	0.00	6.74
25 P	Isophorone	0.726	0.631	13.1	72	0.00	7.00
26 P	2-Nitrophenol	0.185	0.208	-12.4	88	0.00	7.10
27 P	2,4-Dimethylphenol	0.375	0.340	9.3	75	0.00	7.16
28	0,0,0-Triethylphosphoroth	0.179	0.158	11.7	70	0.00	7.28
29 P	bis(2-Chloroethoxy)methan	0.491	0.431	12.2	71	0.00	7.26
30	Benzoic Acid	50.000	44.705	10.6	72	0.00	7.30
31 P	2,4-Dichlorophenol	0.322	0.307	4.7	77	0.00	7.37
32	1,2,4-Trichlorobenzene	0.347	0.331	4.6	79	0.00	7.47
33	alpha-Terpineol	-----NA-----					
34 P	Naphthalene	1.082	0.984	9.1	76	0.00	7.53
35 P	4-Chloroaniline	0.378	0.414	-9.5	86	0.00	7.62
36	2,6-Dichlorophenol	0.323	0.312	3.4	79	0.00	7.63
37 P	Hexachlorobutadiene	0.202	0.196	3.0	80	0.00	7.75

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2406-CC2395
Lab FileID: X057303.D

38 P	Caprolactam	0.123	0.104	15.4	66	0.00	8.01
39 P	4-Chloro-3-methylphenol	0.317	0.292	7.9	74	0.00	8.20
40 P	2-Methylnaphthalene	0.626	0.585	6.5	78	0.00	8.33
41	1-Methylnaphthalene	0.699	0.648	7.3	77	0.00	8.46
42 P	1,2,4,5-Tetrachlorobenzen	0.364	0.353	3.0	80	0.00	8.58
43 I	Acenaphthene-d10	1.000	1.000	0.0	80	0.00	9.57
44 P	Hexachlorocyclopentadiene	0.404	0.397	1.7	77	0.00	8.60
45 P	2,4,6-Trichlorophenol	0.386	0.401	-3.9	82	0.00	8.69
46 P	2,4,5-Trichlorophenol	0.414	0.422	-1.9	79	0.00	8.74
47 S	2-Fluorobiphenyl	1.379	1.329	3.6	78	0.00	8.79
48 P	1,1'-Biphenyl	1.440	1.292	10.3	72	0.00	8.89
49 P	2-Chloronaphthalene	1.160	1.118	3.6	79	0.00	8.90
50 P	2-Nitroaniline	0.317	0.312	1.6	75	0.00	9.06
----- Amount Calc. %Drift -----							
51	p-Dinitrobenzene	50.000	49.223	1.6	80	0.00	9.19
----- AvgRF CCRF %Dev -----							
52 P	Acenaphthylene	1.772	1.673	5.6	77	0.00	9.39
53 P	Dimethylphthalate	1.341	1.263	5.8	76	0.00	9.31
----- Amount Calc. %Drift -----							
54	m-Dinitrobenzene	50.000	51.050	-2.1	83	0.00	9.32
----- AvgRF CCRF %Dev -----							
55 P	2,6-Dinitrotoluene	0.305	0.309	-1.3	79	0.00	9.39
56	o-Dinitrobenzene	0.147	0.138	6.1	71	0.00	9.47
57 P	Acenaphthene	1.174	1.112	5.3	77	0.00	9.61
58 P	3-Nitroaniline	0.314	0.338	-7.6	82	0.00	9.54
----- Amount Calc. %Drift -----							
59 P	2,4-Dinitrophenol	50.000	66.307	-32.6#	123	0.00	9.67
----- AvgRF CCRF %Dev -----							
60 P	Dibenzofuran	1.668	1.584	5.0	77	0.00	9.79
61 P	2,4-Dinitrotoluene	0.405	0.417	-3.0	78	0.00	9.85
62 P	4-Nitrophenol	0.152	0.145	4.6	73	0.00	9.76
63	2,3,5,6-Tetrachlorophenol	0.344	0.380	-10.5	86	0.00	9.94
64 P	2,3,4,6-Tetrachlorophenol	0.363	0.382	-5.2	81	0.00	9.99
65 P	Fluorene	1.312	1.253	4.5	78	0.00	10.20
66 P	4-Chlorophenyl-phenylethe	0.677	0.657	3.0	79	0.00	10.21
67 P	Diethylphthalate	1.329	1.219	8.3	74	0.00	10.15
68	Thionazin	0.282	0.239	15.2	66	0.00	10.25
69 P	4-Nitroaniline	0.365	0.358	1.9	76	0.00	10.28
70 I	Phenanthrene-d10	1.000	1.000	0.0	80	0.00	11.29
----- Amount Calc. %Drift -----							
71 P	4,6-Dinitro-2-methylpheno	50.000	60.026	-20.1#	103	0.00	10.32
----- AvgRF CCRF %Dev -----							
72 P	n-Nitrosodiphenylamine	0.578	0.549	5.0	76	0.00	10.36
73	Diphenylamine	0.694	0.659	5.0	76	0.00	10.36
74	1,2-Diphenylhydrazine	0.760	0.666	12.4	70	0.00	10.39
75 S	2,4,6-Tribromophenol	0.182	0.198	-8.8	84	0.00	10.51
76	Sulfotep	0.123	0.105	14.6	66	0.00	10.67
77	Phorate	0.471	0.398	15.5	66	0.00	10.75
78 P	4-Bromophenyl-phenylether	0.270	0.262	3.0	78	0.00	10.77
79 P	Hexachlorobenzene	0.325	0.322	0.9	79	0.00	10.94

Continuing Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2406-CC2395
Lab FileID: X057303.D

80	Dimethoate	0.311	0.259	16.7	64	0.00	10.96
81	Simazine	0.155	0.131	15.5	69	0.00	10.99
82 P	Atrazine	0.237	0.203	14.3	66	0.00	11.04
83 P	Pentachlorophenol	0.181	0.186	-2.8	84	0.00	11.16
84 P	Phenanthrene	1.146	1.084	5.4	76	0.00	11.32
85 P	Anthracene	1.173	1.106	5.7	76	0.00	11.37
86	Disulfoton	0.438	0.376	14.2	68	0.00	11.37
87 P	Carbazole	1.098	1.017	7.4	75	0.00	11.58

88	Methyl Parathion	50.000	44.583	10.8	71	0.00	11.81

89 P	Di-n-butylphthalate	1.261	1.175	6.8	74	0.00	12.07

90	Ethyl Parathion	50.000	44.277	11.4	70	0.00	12.29

91 P	Fluoranthene	1.250	1.166	6.7	75	0.00	12.74
92 I	Chrysene-d12	1.000	1.000	0.0	82	0.00	14.59

93	Benzidine	50.000	47.021	6.0	73	0.00	12.91

94 P	Pyrene	1.251	1.159	7.4	75	0.00	13.00
95 S	Terphenyl-d14	0.948	0.906	4.4	78	0.00	13.21
96	Famphur	0.355	0.326	8.2	75	0.00	13.83
97 P	Butylbenzylphthalate	0.527	0.491	6.8	73	0.00	13.90

98 P	3,3'-Dichlorobenzidine	50.000	55.664	-11.3	95	0.00	14.57

99 P	Benzo[a]anthracene	1.172	1.101	6.1	77	0.00	14.57
100 P	Chrysene	1.119	1.058	5.5	77	0.00	14.63
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.651	6.2	74	0.00	14.76
102 I	Perylene-d12	1.000	1.000	0.0	83	0.00	16.94
103 P	Di-n-octylphthalate	0.998	1.006	-0.8	78	0.00	15.74
104 P	Benzo[b]fluoranthene	1.096	1.066	2.7	77	0.00	16.29
105 P	Benzo[k]fluoranthene	1.127	1.040	7.7	77	0.00	16.34
106 P	Benzo[a]pyrene	1.103	1.060	3.9	78	0.00	16.84
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.102	-3.4	82	0.00	18.59
108 P	Dibenz[a,h]anthracene	1.175	1.181	-0.5	81	0.00	18.63
109 P	Benzo[g,h,i]perylene	1.206	1.214	-0.7	81	0.00	18.96

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 0 CCC's out = 0
Wed Nov 22 14:49:51 2017

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Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2406-ECC2395
Lab FileID: X057329.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2406_1121\x057329.D Vial: 2
Acq On : 22 Nov 2017 2:10 am Operator: marthav
Sample : ecc2395-50 Inst : MSBNA05
Misc : op67546,sx2406,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d110717.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Tue Nov 07 12:26:42 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	76	0.02	6.09
2	1,4-Dioxane	0.731	0.626	14.4	65	0.00	2.97
3	N-nitrosodimethylamine	0.755	0.577	23.6	58	0.00	3.34
4	Pyridine	1.960	1.628	16.9	63	0.01	3.34
5 P	Benzaldehyde	1.187	0.866	27.0	52	0.02	5.62
6	Aniline	2.107	1.890	10.3	63	0.01	5.77
7 S	2-Fluorophenol	1.514	1.355	10.5	68	0.01	4.77
8 P	bis(2-Chloroethyl)ether	1.512	1.259	16.7	64	0.01	5.84
9 S	Phenol-d5	1.858	1.567	15.7	64	0.02	5.76
10 P	Phenol	2.063	1.709	17.2	62	0.02	5.78
11 P	2-Chlorophenol	1.569	1.418	9.6	68	0.01	5.90
12	1,3-Dichlorobenzene	1.655	1.543	6.8	70	0.02	6.05
13	1,4-Dichlorobenzene	1.661	1.546	6.9	71	0.01	6.10
14	1,2-Dichlorobenzene	1.580	1.456	7.8	70	0.02	6.31
15	Benzyl alcohol	1.030	0.776	24.7	57	0.01	6.26
16 P	bis(2-chloroisopropyl)eth	1.981	1.512	23.7	58	0.01	6.44
17 P	2-Methylphenol	1.407	1.216	13.6	65	0.02	6.42
18 P	Acetophenone	1.953	1.591	18.5	60	0.01	6.56
19 P	Hexachloroethane	0.624	0.354	43.3	42#	0.01	6.65
20 P	N-Nitroso-di-n-propylamin	1.020	0.831	18.5	62	0.01	6.60
21 P	3&4-Methylphenol	1.452	1.281	11.8	67	0.02	6.58
22 I	Naphthalene-d8	1.000	1.000	0.0	71	0.01	7.52
23 S	Nitrobenzene-d5	0.392	0.344	12.2	62	0.01	6.73
24 P	Nitrobenzene	0.393	0.338	14.0	61	0.01	6.75
25 P	Isophorone	0.726	0.615	15.3	61	0.02	7.01
26 P	2-Nitrophenol	0.185	0.137	25.9	51	0.02	7.12
27 P	2,4-Dimethylphenol	0.375	0.332	11.5	64	0.02	7.17
28	0,0,0-Triethylphosphoroth	0.179	0.165	7.8	65	0.01	7.29
29 P	bis(2-Chloroethoxy)methan	0.491	0.422	14.1	61	0.01	7.28
30	Benzoic Acid	50.000	40.341	19.3	56	0.01	7.31
31 P	2,4-Dichlorophenol	0.322	0.311	3.4	69	0.02	7.39
32	1,2,4-Trichlorobenzene	0.347	0.338	2.6	70	0.02	7.48
33	alpha-Terpineol			NA			
34 P	Naphthalene	1.082	0.999	7.7	67	0.02	7.55
35 P	4-Chloroaniline	0.378	0.441	-16.7	80	0.02	7.64
36	2,6-Dichlorophenol	0.323	0.313	3.1	69	0.02	7.65
37 P	Hexachlorobutadiene	0.202	0.200	1.0	72	0.01	7.76

Continuing Calibration Summary

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2406-ECC2395
Lab FileID: X057329.D

38 P	Caprolactam	0.123	0.099	19.5	55	0.01	8.02
39 P	4-Chloro-3-methylphenol	0.317	0.280	11.7	63	0.02	8.22
40 P	2-Methylnaphthalene	0.626	0.578	7.7	68	0.02	8.35
41	1-Methylnaphthalene	0.699	0.641	8.3	67	0.02	8.47
42 P	1,2,4,5-Tetrachlorobenzen	0.364	0.354	2.7	71	0.02	8.59
43 I	Acenaphthene-d10	1.000	1.000	0.0	70	0.02	9.59
44 P	Hexachlorocyclopentadiene	0.404	0.038#	90.6#	6#	0.02	8.61
45 P	2,4,6-Trichlorophenol	0.386	0.409	-6.0	72	0.02	8.71
46 P	2,4,5-Trichlorophenol	0.414	0.424	-2.4	69	0.02	8.76
47 S	2-Fluorobiphenyl	1.379	1.351	2.0	69	0.01	8.80
48 P	1,1'-Biphenyl	1.440	1.307	9.2	63	0.02	8.90
49 P	2-Chloronaphthalene	1.160	1.123	3.2	69	0.02	8.91
50 P	2-Nitroaniline	0.317	0.328	-3.5	68	0.02	9.07
----- Amount Calc. %Drift -----							
51	p-Dinitrobenzene	50.000	29.554	40.9	40	0.02	9.21
----- AvgRF CCRF %Dev -----							
52 P	Acenaphthylene	1.772	1.672	5.6	66	0.02	9.40
53 P	Dimethylphthalate	1.341	1.270	5.3	66	0.01	9.33
----- Amount Calc. %Drift -----							
54	m-Dinitrobenzene	50.000	34.964	30.1	49	0.03	9.35
----- AvgRF CCRF %Dev -----							
55 P	2,6-Dinitrotoluene	0.305	0.239	21.6	53	0.02	9.40
56	o-Dinitrobenzene	0.147	0.094	36.1	42#	0.01	9.48
57 P	Acenaphthene	1.174	1.095	6.7	65	0.02	9.62
58 P	3-Nitroaniline	0.314	0.408	-29.9	86	0.02	9.56
----- Amount Calc. %Drift -----							
59 P	2,4-Dinitrophenol			-----NA-----			
----- AvgRF CCRF %Dev -----							
60 P	Dibenzofuran	1.668	1.585	5.0	66	0.02	9.81
61 P	2,4-Dinitrotoluene	0.405	0.287	29.1	47#	0.02	9.87
62 P	4-Nitrophenol	0.152	0.131	13.8	58	0.02	9.78
63	2,3,5,6-Tetrachlorophenol	0.344	0.376	-9.3	73	0.02	9.96
64 P	2,3,4,6-Tetrachlorophenol	0.363	0.380	-4.7	70	0.02	10.01
65 P	Fluorene	1.312	1.237	5.7	66	0.02	10.22
66 P	4-Chlorophenyl-phenylethe	0.677	0.649	4.1	67	0.02	10.22
67 P	Diethylphthalate	1.329	1.211	8.9	64	0.01	10.16
68	Thionazin	0.282	0.231	18.1	55	0.01	10.26
69 P	4-Nitroaniline	0.365	0.430	-17.8	79	0.02	10.29
70 I	Phenanthrene-d10	1.000	1.000	0.0	68	0.02	11.31
----- Amount Calc. %Drift -----							
71 P	4,6-Dinitro-2-methylpheno	50.000	3.306	93.4#	4	0.02	10.35
----- AvgRF CCRF %Dev -----							
72 P	n-Nitrosodiphenylamine	0.578	0.542	6.2	64	0.02	10.37
73	Diphenylamine	0.694	0.650	6.3	64	0.02	10.37
74	1,2-Diphenylhydrazine	0.760	0.626	17.6	56	0.02	10.40
75 S	2,4,6-Tribromophenol	0.182	0.202	-11.0	74	0.02	10.53
76	Sulfotep	0.123	0.101	17.9	55	0.02	10.68
77	Phorate	0.471	0.384	18.5	54	0.02	10.77
78 P	4-Bromophenyl-phenylether	0.270	0.268	0.7	68	0.02	10.79
79 P	Hexachlorobenzene	0.325	0.323	0.6	68	0.02	10.97

7.7.10
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Continuing Calibration Summary

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: SX2406-ECC2395
Lab FileID: X057329.D

80	Dimethoate	0.311	0.217	30.2	46#	0.02	10.97
81	Simazine	0.155	0.102	34.2	46#	0.02	11.00
82 P	Atrazine	0.237	0.171	27.8	48#	0.02	11.05
83 P	Pentachlorophenol	0.181	0.166	8.3	65	0.02	11.18
84 P	Phenanthrene	1.146	1.067	6.9	64	0.03	11.35
85 P	Anthracene	1.173	1.101	6.1	65	0.02	11.39
86	Disulfoton	0.438	0.376	14.2	58	0.02	11.38
87 P	Carbazole	1.098	0.996	9.3	63	0.02	11.60

88	Methyl Parathion	50.000	34.096	31.8	47	0.02	11.83

89 P	Di-n-butylphthalate	1.261	1.157	8.2	62	0.02	12.09

90	Ethyl Parathion	50.000	35.371	29.3	48	0.02	12.30

91 P	Fluoranthene	1.250	1.161	7.1	64	0.03	12.76
92 I	Chrysene-d12	1.000	1.000	0.0	69	0.04	14.62

93	Benzidine	50.000	51.878	-3.8	70	0.03	12.93

94 P	Pyrene	1.251	1.159	7.4	64	0.03	13.02
95 S	Terphenyl-d14	0.948	0.904	4.6	66	0.03	13.24
96	Famphur	0.355	0.236	33.5	46#	0.02	13.85
97 P	Butylbenzylphthalate	0.527	0.483	8.3	61	0.02	13.91

98 P	3,3'-Dichlorobenzidine	50.000	63.102	-26.2	92	0.03	14.60

99 P	Benzo[a]anthracene	1.172	1.113	5.0	66	0.04	14.60
100 P	Chrysene	1.119	1.047	6.4	64	0.04	14.66
101 P	bis(2-Ethylhexyl)phthalat	0.694	0.661	4.8	64	0.03	14.78
102 I	Perylene-d12	1.000	1.000	0.0	71	0.05	16.99
103 P	Di-n-octylphthalate	0.998	1.016	-1.8	68	0.03	15.76
104 P	Benzo[b]fluoranthene	1.096	1.056	3.6	66	0.06	16.35
105 P	Benzo[k]fluoranthene	1.127	1.028	8.8	66	0.05	16.39
106 P	Benzo[a]pyrene	1.103	1.051	4.7	67	0.06	16.89
107 P	Indeno[1,2,3-cd]pyrene	1.066	1.170	-9.8	75	0.06	18.65
108 P	Dibenz[a,h]anthracene	1.175	1.204	-2.5	71	0.05	18.68
109 P	Benzo[g,h,i]perylene	1.206	1.158	4.0	67	0.06	19.01

(#) = Out of Range
x056982.D 8270d110717.m

SPCC's out = 1 CCC's out = 0
Wed Nov 22 14:49:16 2017

7.7.10
7

GC/LC Semi-volatiles

QC Data Summaries



Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67616-MB	MM46770.D	1	11/14/17	NJ	11/10/17	OP67616	GMM895

The QC reported here applies to the following samples: Method: SW846 8082A

FA49143-1

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	17	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	17	8.3	ug/kg	
11141-16-5	Aroclor 1232	ND	17	8.3	ug/kg	
53469-21-9	Aroclor 1242	ND	17	6.7	ug/kg	
12672-29-6	Aroclor 1248	ND	17	6.7	ug/kg	
11097-69-1	Aroclor 1254	ND	17	6.7	ug/kg	
11096-82-5	Aroclor 1260	ND	17	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	94% 44-126%
2051-24-3	Decachlorobiphenyl	94% 41-145%

Blank Spike Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67616-BS	MM46769.D	1	11/13/17	NJ	11/10/17	OP67616	GMM895

The QC reported here applies to the following samples: Method: SW846 8082A

FA49143-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
12674-11-2	Aroclor 1016	133	145	109	58-126
11096-82-5	Aroclor 1260	133	147	110	59-133

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	85%	44-126%
2051-24-3	Decachlorobiphenyl	89%	41-145%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP67616-MS	MM46785.D	1	11/14/17	NJ	11/10/17	OP67616	GMM895
OP67616-MSD	MM46786.D	1	11/14/17	NJ	11/10/17	OP67616	GMM895
FA49180-3	MM46777.D	1	11/14/17	NJ	11/10/17	OP67616	GMM895

The QC reported here applies to the following samples: Method: SW846 8082A

FA49143-1

CAS No.	Compound	FA49180-3 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	20 U	164	185	113	162	190	117	3	58-126/25
11096-82-5	Aroclor 1260	20 U	164	182	111	162	181	112	1	59-133/31

CAS No.	Surrogate Recoveries	MS	MSD	FA49180-3	Limits
877-09-8	Tetrachloro-m-xylene	89%	93%	87%	44-126%
2051-24-3	Decachlorobiphenyl	87%	88%	82%	41-145%

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Method: SW846 8082A	Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S2 ^a
FA49143-1	MM46772.D	59	76
OP67616-BS	MM46769.D	85	89
OP67616-MB	MM46770.D	94	94
OP67616-MS	MM46785.D	89	87
OP67616-MSD	MM46786.D	93	88

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	44-126%
S2 = Decachlorobiphenyl	41-145%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std:	GMM895-CC895	Injection Date:	11/13/17
Lab File ID:	MM46764.D	Injection Time:	23:01
Instrument ID:	GCMM	Method:	SW846 8082A

S1^a	S2^a
RT	RT

Check Std	3.40	7.15

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S2 ^a RT
OP67616-BS	MM46769.D	11/13/17	23:59	3.40	7.15
OP67616-MB	MM46770.D	11/14/17	00:11	3.40	7.15
ZZZZZZ	MM46771.D	11/14/17	00:23	3.40	7.15
FA49143-1	MM46772.D	11/14/17	00:34	3.40	7.15
ZZZZZZ	MM46773.D	11/14/17	00:46	3.40	7.15
ZZZZZZ	MM46774.D	11/14/17	00:58	3.40	7.15
ZZZZZZ	MM46775.D	11/14/17	01:09	3.40	7.15
ZZZZZZ	MM46776.D	11/14/17	01:21	3.40	7.15
FA49180-3	MM46777.D	11/14/17	01:33	3.40	7.15
ZZZZZZ	MM46778.D	11/14/17	01:44	3.40	7.15

Surrogate Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

8.5.1
8

GC Surrogate Retention Time Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Check Std:	GMM895-CC895	Injection Date:	11/14/17
Lab File ID:	MM46779.D	Injection Time:	01:56
Instrument ID:	GCMM	Method:	SW846 8082A

S1^a S2^a
RT RT

Check Std	3.40	7.15

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 ^a RT	S2 ^a RT
OP67616-MS	MM46785.D	11/14/17	03:06	3.40	7.15
OP67616-MSD	MM46786.D	11/14/17	03:17	3.40	7.15
ZZZZZZ	MM46787.D	11/14/17	03:29	3.40	7.15

Surrogate
Compounds

S1 = Tetrachloro-m-xylene
S2 = Decachlorobiphenyl

(a) Retention time from GC signal #1

8.5.2
8

Initial Calibration Verification

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46727.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46727.D\ECD1A.ch Vial: 8
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46727.D\ECD2B.ch
Acq On : 13 Nov 2017 3:51 pm Operator: nareshj
Sample : icv895-400 1248 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				

		Amount	Calc.	%Drift				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				

		Amount	Calc.	%Drift				
25 L5	AR1248-A	400.000	352.283	11.9	88	0.00	3.87-	3.97
26 L5	AR1248-B	400.000	349.428	12.6	88	0.00	4.19-	4.29
27 L5	AR1248-C	400.000	349.975	12.5	88	0.00	4.37-	4.47
28 L5	AR1248-D	400.000	358.303	10.4	89	0.00	4.50-	4.59
29 L5	AR1248-E	400.000	351.466	12.1	88	0.00	4.76-	4.87
30 L5	AR1248-F	400.000	342.380	14.4	86	0.00	4.89-	4.99

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA49143

Sample: GMM895-ICV895

Account: TCMAW Tantara Corporation

Lab FileID: MM46727.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

34	L6	AR1254-D	-----NA-----
35	L6	AR1254-E	-----NA-----
36	L6	AR1254-F	-----NA-----
37	L7	AR1260-A	-----NA-----
38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----
55	S	Decachlorobiphenyl	-----NA-----

***** Signal #2 *****

57	S	Tetrachloro-m-xylene #2	-----NA-----

			Amount	Calc.	%Drift	
58	L1	AR1016-A #2			-----NA-----	
59	L1	AR1016-B #2			-----NA-----	
60	L1	AR1016-C #2			-----NA-----	
61	L1	AR1016-D #2			-----NA-----	
62	L1	AR1016-E #2			-----NA-----	
63	L1	AR1016-F #2			-----NA-----	
64	L2	AR1221-A #2			-----NA-----	
65	L2	AR1221-B #2			-----NA-----	
66	L2	AR1221-C #2			-----NA-----	
67	L2	AR1221-D #2			-----NA-----	
68	L2	AR1221-E #2			-----NA-----	

			Amount	Calc.	%Drift	
69	L3	AR1232-A #2			-----NA-----	
70	L3	AR1232-B #2			-----NA-----	
71	L3	AR1232-C #2			-----NA-----	
72	L3	AR1232-D #2			-----NA-----	
73	L3	AR1232-E #2			-----NA-----	
74	L3	AR1232-F #2			-----NA-----	
75	L4	AR1242-A #2			-----NA-----	
76	L4	AR1242-B #2			-----NA-----	
77	L4	AR1242-C #2			-----NA-----	
78	L4	AR1242-D #2			-----NA-----	
79	L4	AR1242-E #2			-----NA-----	
80	L4	AR1242-F #2			-----NA-----	

			Amount	Calc.	%Drift	
81	L5	AR1248-A #2	400.000	356.976	10.8	90 0.00 3.79- 3.89
82	L5	AR1248-B #2	400.000	355.398	11.2	90 0.00 4.11- 4.21
83	L5	AR1248-C #2	400.000	353.916	11.5	89 0.00 4.41- 4.51
84	L5	AR1248-D #2	400.000	355.319	11.2	89 0.00 4.52- 4.62
85	L5	AR1248-E #2	400.000	352.910	11.8	88 0.00 4.66- 4.76

Initial Calibration Verification

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46727.D

86	L5	AR1248-F #2	400.000	356.870	10.8	89	0.00	5.05-	5.15
			----- Amount	Calc.	%Drift	-----			
87	L6	AR1254-A #2			-----NA-----				
88	L6	AR1254-B #2			-----NA-----				
89	L6	AR1254-C #2			-----NA-----				
90	L6	AR1254-D #2			-----NA-----				
91	L6	AR1254-E #2			-----NA-----				
92	L6	AR1254-F #2			-----NA-----				
93	L7	AR1260-A #2			-----NA-----				
94	L7	AR1260-B #2			-----NA-----				
95	L7	AR1260-C #2			-----NA-----				
96	L7	AR1260-D #2			-----NA-----				
97	L7	AR1260-E #2			-----NA-----				
98	L7	AR1260-F #2			-----NA-----				
99	L9	AR1262-A #2			-----NA-----				
100	L9	AR1262-B #2			-----NA-----				
101	L9	AR1262-C #2			-----NA-----				
102	L9	AR1262-D #2			-----NA-----				
103	L9	AR1262-E #2			-----NA-----				
104	L9	AR1262-F #2			-----NA-----				
105	L8	AR1268-A #2			-----NA-----				
106	L8	AR1268-B #2			-----NA-----				
107	L8	AR1268-C #2			-----NA-----				
108	L8	AR1268-D #2			-----NA-----				
109	L8	AR1268-E #2			-----NA-----				
110	L8	AR1268-F #2			-----NA-----				
			----- Amount	Calc.	%Drift	-----			
111	S	Decachlorobiphenyl #2			-----NA-----				

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 14:18:58 2017

8.6.1
8

Initial Calibration Verification

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46734.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\gm...cb\MM46734.D\ECD1A.ch Vial: 15
Acq On : 13 Nov 2017 5:13 pm Operator: nareshj
Sample : icv895-400 1242 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile : EVENTS.E

Data File : C:\msdchem\2\DATA\gmm895pcb\MM46734.D\ECD2B.ch Vial: 15
Acq On : 13 Nov 2017 5:13 pm Operator: nareshj
Sample : icv895-400 1242/1262 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile : EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				

		Amount	Calc.	%Drift				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A	400.000	388.235	2.9	103	0.00	3.64-	3.74
20 L4	AR1242-B	400.000	378.390	5.4	99	0.00	4.00-	4.10
21 L4	AR1242-C	400.000	406.965	-1.7	101	0.00	4.19-	4.29
22 L4	AR1242-D	400.000	387.196	3.2	99	0.00	4.23-	4.33
23 L4	AR1242-E	400.000	348.681	12.8	93	0.00	4.37-	4.47
24 L4	AR1242-F	400.000	371.308	7.2	92	0.00	4.59-	4.69

		Amount	Calc.	%Drift				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46734.D

	Amount	Calc.	%Drift
31 L6 AR1254-A			NA
32 L6 AR1254-B			NA
33 L6 AR1254-C			NA
34 L6 AR1254-D			NA
35 L6 AR1254-E			NA
36 L6 AR1254-F			NA
37 L7 AR1260-A			NA
38 L7 AR1260-B			NA
39 L7 AR1260-C			NA
40 L7 AR1260-D			NA
41 L7 AR1260-E			NA
42 L7 AR1260-F			NA
43 L9 AR1262-A			NA
44 L9 AR1262-B			NA
45 L9 AR1262-C			NA
46 L9 AR1262-D			NA
47 L9 AR1262-E			NA
48 L9 AR1262-F			NA
49 L8 AR1268-A			NA
50 L8 AR1268-B			NA
51 L8 AR1268-C			NA
52 L8 AR1268-D			NA
53 L8 AR1268-E			NA
54 L8 AR1268-F			NA
55 S Decachlorobiphenyl			NA

***** Signal #2 *****

57 S Tetrachloro-m-xylene #2 NA

	Amount	Calc.	%Drift
58 L1 AR1016-A #2			NA
59 L1 AR1016-B #2			NA
60 L1 AR1016-C #2			NA
61 L1 AR1016-D #2			NA
62 L1 AR1016-E #2			NA
63 L1 AR1016-F #2			NA
64 L2 AR1221-A #2			NA
65 L2 AR1221-B #2			NA
66 L2 AR1221-C #2			NA
67 L2 AR1221-D #2			NA
68 L2 AR1221-E #2			NA

	Amount	Calc.	%Drift
69 L3 AR1232-A #2			NA
70 L3 AR1232-B #2			NA
71 L3 AR1232-C #2			NA
72 L3 AR1232-D #2			NA
73 L3 AR1232-E #2			NA
74 L3 AR1232-F #2			NA
75 L4 AR1242-A #2	400.000	371.794	7.1 100 0.00 3.56- 3.66
76 L4 AR1242-B #2	400.000	381.287	4.7 98 0.00 3.93- 4.03
77 L4 AR1242-C #2	400.000	389.085	2.7 100 0.00 4.15- 4.25
78 L4 AR1242-D #2	400.000	365.994	8.5 94 0.00 4.41- 4.51
79 L4 AR1242-E #2	400.000	300.014	25.0# 75 0.00 4.66- 4.76
80 L4 AR1242-F #2	400.000	384.883	3.8 94 0.00 4.81- 4.91

	Amount	Calc.	%Drift

Initial Calibration Verification

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46734.D

81	L5	AR1248-A #2	-----NA-----
82	L5	AR1248-B #2	-----NA-----
83	L5	AR1248-C #2	-----NA-----
84	L5	AR1248-D #2	-----NA-----
85	L5	AR1248-E #2	-----NA-----
86	L5	AR1248-F #2	-----NA-----

		Amount	Calc.	%Drift
87	L6	AR1254-A #2	-----NA-----	
88	L6	AR1254-B #2	-----NA-----	
89	L6	AR1254-C #2	-----NA-----	
90	L6	AR1254-D #2	-----NA-----	
91	L6	AR1254-E #2	-----NA-----	
92	L6	AR1254-F #2	-----NA-----	
93	L7	AR1260-A #2	-----NA-----	
94	L7	AR1260-B #2	-----NA-----	
95	L7	AR1260-C #2	-----NA-----	
96	L7	AR1260-D #2	-----NA-----	
97	L7	AR1260-E #2	-----NA-----	
98	L7	AR1260-F #2	-----NA-----	
99	L9	AR1262-A #2	-----NA-----	
100	L9	AR1262-B #2	-----NA-----	
101	L9	AR1262-C #2	-----NA-----	
102	L9	AR1262-D #2	-----NA-----	
103	L9	AR1262-E #2	-----NA-----	
104	L9	AR1262-F #2	-----NA-----	
105	L8	AR1268-A #2	-----NA-----	
106	L8	AR1268-B #2	-----NA-----	
107	L8	AR1268-C #2	-----NA-----	
108	L8	AR1268-D #2	-----NA-----	
109	L8	AR1268-E #2	-----NA-----	
110	L8	AR1268-F #2	-----NA-----	

		Amount	Calc.	%Drift
111	S	Decachlorobiphenyl #2	-----NA-----	

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 14:19:00 2017

8.6.2
8

Initial Calibration Verification

Page 1 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46741.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\2\DATA\gm...cb\MM46741.D\ECD1A.ch Vial: 22
Acq On : 13 Nov 2017 6:34 pm Operator: nareshj
Sample : icv895-400 1232 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile : EVENTS.E

Data File : C:\msdchem\2\DATA\gmm895pcb\MM46741.D\ECD2B.ch Vial: 22
Acq On : 13 Nov 2017 6:34 pm Operator: nareshj
Sample : icv895-400 1232/1268 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile : EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				

		Amount	Calc.	%Drift				
13 L3	AR1232-A	400.000	384.444	3.9	96	0.00	3.64-	3.74
14 L3	AR1232-B	400.000	341.372	14.7	87	0.00	4.00-	4.10
15 L3	AR1232-C	400.000	355.032	11.2	88	0.00	4.19-	4.29
16 L3	AR1232-D	400.000	340.834	14.8	84	0.00	4.30-	4.40
17 L3	AR1232-E	400.000	318.067	20.5#	80	0.00	4.50-	4.59
18 L3	AR1232-F	400.000	351.201	12.2	85	0.00	4.79-	4.89
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				

		Amount	Calc.	%Drift				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

Initial Calibration Verification

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46741.D

		Amount	Calc.	%Drift	
31	L6	AR1254-A		NA	
32	L6	AR1254-B		NA	
33	L6	AR1254-C		NA	
34	L6	AR1254-D		NA	
35	L6	AR1254-E		NA	
36	L6	AR1254-F		NA	
37	L7	AR1260-A		NA	
38	L7	AR1260-B		NA	
39	L7	AR1260-C		NA	
40	L7	AR1260-D		NA	
41	L7	AR1260-E		NA	
42	L7	AR1260-F		NA	
43	L9	AR1262-A		NA	
44	L9	AR1262-B		NA	
45	L9	AR1262-C		NA	
46	L9	AR1262-D		NA	
47	L9	AR1262-E		NA	
48	L9	AR1262-F		NA	
49	L8	AR1268-A		NA	
50	L8	AR1268-B		NA	
51	L8	AR1268-C		NA	
52	L8	AR1268-D		NA	
53	L8	AR1268-E		NA	
54	L8	AR1268-F		NA	
55	S	Decachlorobiphenyl		NA	

***** Signal #2 *****

57	S	Tetrachloro-m-xylene #2		NA	

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2		NA	
59	L1	AR1016-B #2		NA	
60	L1	AR1016-C #2		NA	
61	L1	AR1016-D #2		NA	
62	L1	AR1016-E #2		NA	
63	L1	AR1016-F #2		NA	
64	L2	AR1221-A #2		NA	
65	L2	AR1221-B #2		NA	
66	L2	AR1221-C #2		NA	
67	L2	AR1221-D #2		NA	
68	L2	AR1221-E #2		NA	

		Amount	Calc.	%Drift				
69	L3	AR1232-A #2	400.000	380.966	4.8	97	0.00	3.56- 3.66
70	L3	AR1232-B #2	400.000	336.386	15.9	86	0.00	3.93- 4.03
71	L3	AR1232-C #2	400.000	360.170	10.0	88	0.00	4.11- 4.21
72	L3	AR1232-D #2	400.000	347.756	13.1	85	0.00	4.23- 4.33
73	L3	AR1232-E #2	400.000	321.328	19.7	80	0.00	4.41- 4.51
74	L3	AR1232-F #2	400.000	319.363	20.2#	81	0.00	4.66- 4.76
75	L4	AR1242-A #2		NA				
76	L4	AR1242-B #2		NA				
77	L4	AR1242-C #2		NA				
78	L4	AR1242-D #2		NA				
79	L4	AR1242-E #2		NA				
80	L4	AR1242-F #2		NA				

		Amount	Calc.	%Drift	

Initial Calibration Verification

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46741.D

81	L5	AR1248-A #2	-----NA-----
82	L5	AR1248-B #2	-----NA-----
83	L5	AR1248-C #2	-----NA-----
84	L5	AR1248-D #2	-----NA-----
85	L5	AR1248-E #2	-----NA-----
86	L5	AR1248-F #2	-----NA-----
----- Amount Calc. %Drift -----			
87	L6	AR1254-A #2	-----NA-----
88	L6	AR1254-B #2	-----NA-----
89	L6	AR1254-C #2	-----NA-----
90	L6	AR1254-D #2	-----NA-----
91	L6	AR1254-E #2	-----NA-----
92	L6	AR1254-F #2	-----NA-----
93	L7	AR1260-A #2	-----NA-----
94	L7	AR1260-B #2	-----NA-----
95	L7	AR1260-C #2	-----NA-----
96	L7	AR1260-D #2	-----NA-----
97	L7	AR1260-E #2	-----NA-----
98	L7	AR1260-F #2	-----NA-----
99	L9	AR1262-A #2	-----NA-----
100	L9	AR1262-B #2	-----NA-----
101	L9	AR1262-C #2	-----NA-----
102	L9	AR1262-D #2	-----NA-----
103	L9	AR1262-E #2	-----NA-----
104	L9	AR1262-F #2	-----NA-----
105	L8	AR1268-A #2	-----NA-----
106	L8	AR1268-B #2	-----NA-----
107	L8	AR1268-C #2	-----NA-----
108	L8	AR1268-D #2	-----NA-----
109	L8	AR1268-E #2	-----NA-----
110	L8	AR1268-F #2	-----NA-----
----- Amount Calc. %Drift -----			
111	S	Decachlorobiphenyl #2	-----NA-----

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 14:19:02 2017

8.6.3

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Initial Calibration Verification

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46748.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46748.D\ECD1A.ch Vial: 29
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46748.D\ECD2B.ch
Acq On : 13 Nov 2017 7:55 pm Operator: nareshj
Sample : icv895-400 1221 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	S	Tetrachloro-m-xylene			-----NA-----				
			Amount	Calc.	%Drift				
2	L1	AR1016-A			-----NA-----				
3	L1	AR1016-B			-----NA-----				
4	L1	AR1016-C			-----NA-----				
5	L1	AR1016-D			-----NA-----				
6	L1	AR1016-E			-----NA-----				
7	L1	AR1016-F			-----NA-----				
8	L2	AR1221-A	400.000	335.180	16.2	85	0.00	2.96-	3.06
9	L2	AR1221-B	400.000	342.186	14.5	86	0.00	3.27-	3.37
10	L2	AR1221-C	400.000	334.855	16.3	85	0.00	3.52-	3.63
11	L2	AR1221-D	400.000	343.370	14.2	86	0.00	3.59-	3.69
12	L2	AR1221-E	400.000	331.995	17.0	84	0.00	3.64-	3.74
			Amount	Calc.	%Drift				
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
			Amount	Calc.	%Drift				
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
			Amount	Calc.	%Drift				
31	L6	AR1254-A			-----NA-----				
32	L6	AR1254-B			-----NA-----				
33	L6	AR1254-C			-----NA-----				

Initial Calibration Verification

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46748.D

34	L6	AR1254-D	-----NA-----
35	L6	AR1254-E	-----NA-----
36	L6	AR1254-F	-----NA-----
37	L7	AR1260-A	-----NA-----
38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----
55	S	Decachlorobiphenyl	-----NA-----

***** Signal #2 *****

57	S	Tetrachloro-m-xylene #2	-----NA-----

		Amount	Calc.	%Drift			
58	L1	AR1016-A #2	-----NA-----				
59	L1	AR1016-B #2	-----NA-----				
60	L1	AR1016-C #2	-----NA-----				
61	L1	AR1016-D #2	-----NA-----				
62	L1	AR1016-E #2	-----NA-----				
63	L1	AR1016-F #2	-----NA-----				
64	L2	AR1221-A #2	400.000	338.193	15.5	86	0.00 2.87- 2.97
65	L2	AR1221-B #2	400.000	340.456	14.9	87	0.00 3.19- 3.29
66	L2	AR1221-C #2	400.000	335.284	16.2	84	0.00 3.43- 3.53
67	L2	AR1221-D #2	400.000	347.452	13.1	88	0.00 3.50- 3.60
68	L2	AR1221-E #2	400.000	342.107	14.5	87	0.00 3.56- 3.66

		Amount	Calc.	%Drift			
69	L3	AR1232-A #2	-----NA-----				
70	L3	AR1232-B #2	-----NA-----				
71	L3	AR1232-C #2	-----NA-----				
72	L3	AR1232-D #2	-----NA-----				
73	L3	AR1232-E #2	-----NA-----				
74	L3	AR1232-F #2	-----NA-----				
75	L4	AR1242-A #2	-----NA-----				
76	L4	AR1242-B #2	-----NA-----				
77	L4	AR1242-C #2	-----NA-----				
78	L4	AR1242-D #2	-----NA-----				
79	L4	AR1242-E #2	-----NA-----				
80	L4	AR1242-F #2	-----NA-----				

		Amount	Calc.	%Drift			
81	L5	AR1248-A #2	-----NA-----				
82	L5	AR1248-B #2	-----NA-----				
83	L5	AR1248-C #2	-----NA-----				
84	L5	AR1248-D #2	-----NA-----				
85	L5	AR1248-E #2	-----NA-----				

8.6.4

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Initial Calibration Verification

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46748.D

86	L5	AR1248-F #2			-----NA-----		
			-----	Amount	Calc.	%Drift	-----
87	L6	AR1254-A #2				-----NA-----	
88	L6	AR1254-B #2				-----NA-----	
89	L6	AR1254-C #2				-----NA-----	
90	L6	AR1254-D #2				-----NA-----	
91	L6	AR1254-E #2				-----NA-----	
92	L6	AR1254-F #2				-----NA-----	
93	L7	AR1260-A #2				-----NA-----	
94	L7	AR1260-B #2				-----NA-----	
95	L7	AR1260-C #2				-----NA-----	
96	L7	AR1260-D #2				-----NA-----	
97	L7	AR1260-E #2				-----NA-----	
98	L7	AR1260-F #2				-----NA-----	
99	L9	AR1262-A #2				-----NA-----	
100	L9	AR1262-B #2				-----NA-----	
101	L9	AR1262-C #2				-----NA-----	
102	L9	AR1262-D #2				-----NA-----	
103	L9	AR1262-E #2				-----NA-----	
104	L9	AR1262-F #2				-----NA-----	
105	L8	AR1268-A #2				-----NA-----	
106	L8	AR1268-B #2				-----NA-----	
107	L8	AR1268-C #2				-----NA-----	
108	L8	AR1268-D #2				-----NA-----	
109	L8	AR1268-E #2				-----NA-----	
110	L8	AR1268-F #2				-----NA-----	
			-----	Amount	Calc.	%Drift	-----
111	S	Decachlorobiphenyl #2				-----NA-----	

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 14:19:04 2017

8.6.4
8

Initial Calibration Verification

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46749.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46749.D\ECD1A.ch Vial: 30
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46749.D\ECD2B.ch
Acq On : 13 Nov 2017 8:07 pm Operator: nareshj
Sample : icv895-400 1254 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				

			Amount	Calc.	%Drift	-----			
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A	400.000	343.774	14.1	87	0.00	4.37-	4.47	
32 L6	AR1254-B	400.000	334.180	16.5	84	0.00	4.74-	4.84	
33 L6	AR1254-C	400.000	369.009	7.7	89	0.00	5.14-	5.24	

Initial Calibration Verification

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Job Number: FA49143

Sample: GMM895-ICV895

Account: TCMaw Tantara Corporation

Lab FileID: MM46749.D

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

34	L6	AR1254-D	400.000	376.900	5.8	93	0.00	5.34-	5.43
35	L6	AR1254-E	400.000	348.767	12.8	91	0.00	5.52-	5.62
36	L6	AR1254-F	400.000	343.035	14.2	86	0.00	5.62-	5.72
37	L7	AR1260-A							
38	L7	AR1260-B							
39	L7	AR1260-C							
40	L7	AR1260-D							
41	L7	AR1260-E							
42	L7	AR1260-F							
43	L9	AR1262-A							
44	L9	AR1262-B							
45	L9	AR1262-C							
46	L9	AR1262-D							
47	L9	AR1262-E							
48	L9	AR1262-F							
49	L8	AR1268-A							
50	L8	AR1268-B							
51	L8	AR1268-C							
52	L8	AR1268-D							
53	L8	AR1268-E							
54	L8	AR1268-F							
55	S	Decachlorobiphenyl							

***** Signal #2 *****

57 S Tetrachloro-m-xylene #2 -----NA-----

			Amount	Calc.	%Drift	
58	L1	AR1016-A #2				
59	L1	AR1016-B #2				
60	L1	AR1016-C #2				
61	L1	AR1016-D #2				
62	L1	AR1016-E #2				
63	L1	AR1016-F #2				
64	L2	AR1221-A #2				
65	L2	AR1221-B #2				
66	L2	AR1221-C #2				
67	L2	AR1221-D #2				
68	L2	AR1221-E #2				

			Amount	Calc.	%Drift	
69	L3	AR1232-A #2				
70	L3	AR1232-B #2				
71	L3	AR1232-C #2				
72	L3	AR1232-D #2				
73	L3	AR1232-E #2				
74	L3	AR1232-F #2				
75	L4	AR1242-A #2				
76	L4	AR1242-B #2				
77	L4	AR1242-C #2				
78	L4	AR1242-D #2				
79	L4	AR1242-E #2				
80	L4	AR1242-F #2				

			Amount	Calc.	%Drift	
81	L5	AR1248-A #2				
82	L5	AR1248-B #2				
83	L5	AR1248-C #2				
84	L5	AR1248-D #2				
85	L5	AR1248-E #2				

8.6.5

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Initial Calibration Verification

Page 3 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46749.D

86	L5	AR1248-F #2	-----NA-----					
			Amount	Calc.	%Drift	-----		
87	L6	AR1254-A #2	400.000	348.544	12.9	92	0.00	4.27- 4.37
88	L6	AR1254-B #2	400.000	352.554	11.9	88	0.00	4.66- 4.76
89	L6	AR1254-C #2	400.000	358.427	10.4	90	0.00	5.05- 5.15
90	L6	AR1254-D #2	400.000	363.476	9.1	91	0.00	5.21- 5.31
91	L6	AR1254-E #2	400.000	329.737	17.6	84	0.00	5.38- 5.48
92	L6	AR1254-F #2	400.000	338.165	15.5	86	0.00	5.51- 5.61
93	L7	AR1260-A #2	-----NA-----					
94	L7	AR1260-B #2	-----NA-----					
95	L7	AR1260-C #2	-----NA-----					
96	L7	AR1260-D #2	-----NA-----					
97	L7	AR1260-E #2	-----NA-----					
98	L7	AR1260-F #2	-----NA-----					
99	L9	AR1262-A #2	-----NA-----					
100	L9	AR1262-B #2	-----NA-----					
101	L9	AR1262-C #2	-----NA-----					
102	L9	AR1262-D #2	-----NA-----					
103	L9	AR1262-E #2	-----NA-----					
104	L9	AR1262-F #2	-----NA-----					
105	L8	AR1268-A #2	-----NA-----					
106	L8	AR1268-B #2	-----NA-----					
107	L8	AR1268-C #2	-----NA-----					
108	L8	AR1268-D #2	-----NA-----					
109	L8	AR1268-E #2	-----NA-----					
110	L8	AR1268-F #2	-----NA-----					
			Amount	Calc.	%Drift	-----		
111	S	Decachlorobiphenyl #2	-----NA-----					

(#) = Out of Range

MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0

Tue Nov 14 14:19:06 2017

8.6.5

8

Initial Calibration Summary

Page 1 of 4

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICC895
Lab FileID: MM46753.D

Response Factor Report ECD 9

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Initial Calibration

Calibration Files

20 =MM46750.D 50 =MM46751.D 200 =MM46752.D 400 =MM46753.D
600 =MM46754.D 1000 =MM46755.D

	Compound	20	50	200	400	600	1000	Avg	%RSD
1) S	Tetrachloro-m-xylene	1.309	1.353	1.500	1.367	1.365	1.277	1.362 E6	5.61
2) L1	AR1016-A	2.546	2.462	2.359	2.099	2.108	1.996	2.262 E4	9.90
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9995							
	Response Ratio =	0.00000 + 22691.34900 *A + -2.74550 *A^2							
3) L1	AR1016-B	3.701	3.419	3.326	2.934	2.941	2.833	3.192 E4	10.73
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9994							
	Response Ratio =	0.00000 + 31357.62850 *A + -3.08173 *A^2							
4) L1	AR1016-C	5.427	5.395	5.696	5.496	5.567	5.475	5.509 E4	1.98
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9999							
	Response Ratio =	0.00000 + 56264.90206 *A + -1.48912 *A^2							
5) L1	AR1016-D	3.388	3.300	3.287	3.080	3.184	3.075	3.219 E4	3.95
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9997							
	Response Ratio =	0.00000 + 32357.00822 *A + -1.56527 *A^2							
6) L1	AR1016-E	2.776	2.804	2.807	2.585	2.696	2.701	2.728 E4	3.13
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9996							
	Response Ratio =	0.00000 + 26433.01996 *A + 0.57722 *A^2							
7) L1	AR1016-F	2.793	2.737	2.600	2.441	2.501	2.507	2.596 E4	5.44
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9998							
	Response Ratio =	0.00000 + 24835.87137 *A + 0.21731 *A^2							
8) L2	AR1221-A	1.454	1.122	1.042	0.945	0.890	0.811	1.044 E4	21.91
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9997							
	Response Ratio =	0.00000 + 10414.32990 *A + -2.32953 *A^2							
9) L2	AR1221-B	3.505	2.998	3.214	3.032	2.836	2.542	3.021 E3	10.84
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9999							
	Response Ratio =	0.00000 + 3328.16380 *A + -0.78883 *A^2							
10) L2	AR1221-C	1.335	1.222	1.232	1.236	1.206	1.116	1.224 E4	5.70
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9999							
	Response Ratio =	0.00000 + 13128.35609 *A + -1.94625 *A^2							
11) L2	AR1221-D	9.578	8.912	8.849	8.761	8.493	7.945	8.756 E3	6.12
	---- Quadratic regr., Force(0,0) ----	Coefficient = 1.0000							
	Response Ratio =	0.00000 + 9259.57631 *A + -1.31026 *A^2							
12) L2	AR1221-E	3.550	3.031	3.053	3.056	2.975	2.765	3.072 E4	8.42
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9999							
	Response Ratio =	0.00000 + 32373.88859 *A + -4.68409 *A^2							
13) L3	AR1232-A	2.755	2.626	2.435	2.479	2.387	2.249	2.488 E4	7.20
14) L3	AR1232-B	1.580	1.523	1.415	1.409	1.403	1.317	1.441 E4	6.56

Initial Calibration Summary

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICC895
Lab FileID: MM46753.D

15)	L3	AR1232-C	2.489	2.395	2.455	2.539	2.656	2.533	2.511	E4	3.53
16)	L3	AR1232-D	1.212	1.222	1.204	1.255	1.274	1.215	1.230	E4	2.25
17)	L3	AR1232-E	1.210	1.174	1.105	1.128	1.163	1.069	1.142	E4	4.47
18)	L3	AR1232-F	0.941	0.954	0.963	1.029	1.092	1.032	1.002	E4	5.87
19)	L4	AR1242-A	2.008	1.886	1.809	1.718	1.787	1.726	1.822	E4	6.02
20)	L4	AR1242-B	2.594	2.486	2.374	2.283	2.340	2.297	2.396	E4	5.06
21)	L4	AR1242-C	4.172	3.881	4.304	4.378	4.710	4.669	4.352	E4	7.16
22)	L4	AR1242-D	2.613	2.494	2.522	2.550	2.711	2.686	2.596	E4	3.42
23)	L4	AR1242-E	2.120	1.996	1.895	1.826	1.929	1.875	1.940	E4	5.40
24)	L4	AR1242-F	1.796	1.730	1.823	1.852	1.933	1.940	1.846	E4	4.39
25)	L5	AR1248-A	1.883	1.710	1.558	1.539	1.506	1.443	1.606	E4	10.07
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000 Response Ratio = 0.00000 + 16017.09148 *A + -1.59117 *A^2											
26)	L5	AR1248-B	2.786	2.633	2.773	2.826	2.939	2.940	2.816	E4	4.11
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998 Response Ratio = 0.00000 + 28138.01787 *A + 1.33105 *A^2											
27)	L5	AR1248-C	3.256	3.116	3.034	3.115	3.131	3.093	3.124	E4	2.34
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999 Response Ratio = 0.00000 + 31301.07795 *A + -0.33704 *A^2											
28)	L5	AR1248-D	3.495	3.326	3.453	3.542	3.563	3.620	3.500	E4	2.93
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000 Response Ratio = 0.00000 + 34672.72891 *A + 1.53869 *A^2											
29)	L5	AR1248-E	3.190	3.154	3.460	3.635	3.828	3.904	3.528	E4	8.98
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997 Response Ratio = 0.00000 + 35243.18419 *A + 3.90701 *A^2											
30)	L5	AR1248-F	2.889	2.852	2.887	3.104	3.241	3.266	3.040	E4	6.19
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996 Response Ratio = 0.00000 + 30301.50485 *A + 2.45927 *A^2											
31)	L6	AR1254-A	2.743	2.319	2.266	2.352	2.333	2.244	2.376	E4	7.76
32)	L6	AR1254-B	4.697	4.090	4.190	4.291	4.428	4.242	4.323	E4	4.97
33)	L6	AR1254-C	6.306	5.790	6.272	6.652	6.711	6.812	6.424	E4	5.92
34)	L6	AR1254-D	3.691	3.471	3.873	3.973	4.207	4.321	3.923	E4	8.08
35)	L6	AR1254-E	3.929	3.145	3.306	3.387	3.690	3.652	3.518	E4	8.22
36)	L6	AR1254-F	5.818	5.361	5.668	5.718	5.900	5.887	5.725	E4	3.50
37)	L7	AR1260-A	5.885	5.737	5.652	5.464	5.579	5.464	5.630	E4	2.91
38)	L7	AR1260-B	6.804	6.862	6.798	6.568	6.837	6.834	6.784	E4	1.59
39)	L7	AR1260-C	7.740	7.838	8.066	7.778	8.013	7.988	7.904	E4	1.72
40)	L7	AR1260-D	5.194	5.144	5.093	4.781	4.956	4.901	5.012	E4	3.17
41)	L7	AR1260-E	1.085	1.081	1.145	1.105	1.111	1.101	1.105	E5	2.10
42)	L7	AR1260-F	7.170	6.921	7.010	6.789	6.983	6.648	6.920	E4	2.63
43)	L9	AR1262-A	4.580	4.313	4.271	4.394	4.566	4.449	4.429	E4	2.89
44)	L9	AR1262-B	5.016	4.945	4.914	5.122	5.191	5.206	5.066	E4	2.47
45)	L9	AR1262-C	7.305	7.046	7.382	7.418	7.328	7.137	7.269	E4	2.01
46)	L9	AR1262-D	6.554	6.329	6.313	6.564	6.660	6.617	6.506	E4	2.28
47)	L9	AR1262-E	1.260	1.254	1.353	1.389	1.366	1.379	1.333	E5	4.53
48)	L9	AR1262-F	8.757	8.767	8.946	8.996	8.860	8.761	8.848	E4	1.18
49)	L8	AR1268-A	4.075	3.817	3.838	3.865	4.023	3.703	3.887	E4	3.55
50)	L8	AR1268-B	4.951	4.566	4.319	4.236	4.484	4.186	4.457	E4	6.33
51)	L8	AR1268-C	1.790	1.731	1.812	1.828	1.888	1.793	1.807	E5	2.85
52)	L8	AR1268-D	1.602	1.574	1.638	1.674	1.776	1.659	1.654	E5	4.25
53)	L8	AR1268-E	5.769	5.483	5.506	5.430	5.736	5.559	5.581	E4	2.51
54)	L8	AR1268-F	3.046	3.048	3.242	3.080	3.293	3.172	3.147	E5	3.35
55)	S	Decachlorobiphenyl	1.007	0.960	0.890	0.856	0.842	0.815	0.895	E6	8.28

8.66
8

Initial Calibration Summary

Page 3 of 4

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICC895
Lab FileID: MM46753.D

Signal #2

1)	S	Tetrachloro-m-xylene	4.297	4.496	4.818	4.331	4.344	4.023	4.385	E6	5.97
2)	L1	AR1016-A	8.978	8.471	7.888	6.969	6.829	6.268	7.567	E4	13.86
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996											
Response Ratio = 0.00000 + 77144.08940 *A + -14.55525 *A^2											
3)	L1	AR1016-B	1.234	1.159	1.083	0.951	0.927	0.831	1.031	E5	14.85
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996											
Response Ratio = 0.00000 + 107067.04643 *A + -24.01731 *A^2											
4)	L1	AR1016-C	1.994	1.979	2.057	1.900	1.910	1.782	1.937	E5	4.93
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997											
Response Ratio = 0.00000 + 205358.08319 *A + -27.02909 *A^2											
5)	L1	AR1016-D	1.143	1.104	1.084	0.978	0.972	0.923	1.034	E5	8.50
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997											
Response Ratio = 0.00000 + 104950.31766 *A + -12.76357 *A^2											
6)	L1	AR1016-E	1.042	1.007	0.956	0.872	0.877	0.825	0.930	E5	9.18
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997											
Response Ratio = 0.00000 + 94103.25580 *A + -11.61506 *A^2											
7)	L1	AR1016-F	1.023	0.987	0.948	0.862	0.878	0.832	0.922	E5	8.23
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996											
Response Ratio = 0.00000 + 92716.69912 *A + -9.50461 *A^2											
8)	L2	AR1221-A	4.123	3.427	2.936	2.701	2.552	2.332	3.012	E4	21.94
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998											
Response Ratio = 0.00000 + 29624.32527 *A + -6.35905 *A^2											
9)	L2	AR1221-B	1.230	1.078	0.999	0.913	0.847	0.749	0.969	E4	17.71
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998											
Response Ratio = 0.00000 + 10215.22345 *A + -2.74278 *A^2											
10)	L2	AR1221-C	5.089	4.414	4.389	4.335	4.142	3.866	4.372	E4	9.30
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999											
Response Ratio = 0.00000 + 45865.59295 *A + -7.21514 *A^2											
11)	L2	AR1221-D	3.499	3.129	2.976	2.816	2.707	2.469	2.933	E4	12.21
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000											
Response Ratio = 0.00000 + 30669.18775 *A + -5.98509 *A^2											
12)	L2	AR1221-E	1.247	1.060	1.030	0.988	0.947	0.853	1.021	E5	12.94
---- Quadratic regr., Force(0,0) ---- Coefficient = 1.0000											
Response Ratio = 0.00000 + 108191.90486 *A + -22.84638 *A^2											
13)	L3	AR1232-A	9.436	8.999	8.348	8.186	7.774	7.127	8.312	E4	9.99
14)	L3	AR1232-B	5.540	5.024	4.740	4.710	4.642	4.173	4.805	E4	9.43
15)	L3	AR1232-C	9.409	8.934	8.813	9.360	9.482	8.587	9.097	E4	4.06
16)	L3	AR1232-D	4.708	4.571	4.507	4.660	4.703	4.303	4.576	E4	3.38
17)	L3	AR1232-E	4.699	4.277	3.920	4.168	4.053	3.831	4.158	E4	7.46
18)	L3	AR1232-F	5.082	4.466	4.319	4.433	4.583	4.206	4.515	E4	6.79
19)	L4	AR1242-A	7.100	6.669	6.263	5.740	5.863	5.446	6.180	E4	10.04
20)	L4	AR1242-B	8.678	7.986	7.903	7.567	7.584	7.006	7.787	E4	7.14
21)	L4	AR1242-C	8.715	8.245	8.374	8.033	8.380	8.020	8.294	E4	3.13
22)	L4	AR1242-D	8.045	7.722	7.659	7.449	7.588	7.330	7.632	E4	3.24
23)	L4	AR1242-E	1.089	1.045	1.090	1.083	1.115	1.095	1.086	E5	2.12
24)	L4	AR1242-F	4.548	4.539	4.873	4.882	4.906	4.882	4.772	E4	3.71
25)	L5	AR1248-A	6.021	5.605	5.167	5.001	4.825	4.560	5.197	E4	10.29

8.66
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Initial Calibration Summary

Page 4 of 4

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICC895
Lab FileID: MM46753.D

----- Quadratic regr., Force(0,0) ----- Coefficient = 1.0000
Response Ratio = 0.00000 + 52817.58562 *A + -7.25719 *A^2

26) L5 AR1248-B 9.988 9.331 9.706 9.718 9.845 9.692 9.713 E4 2.26
----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9999
Response Ratio = 0.00000 + 98496.91616 *A + -1.45402 *A^2

27) L5 AR1248-C 1.248 1.205 1.226 1.195 1.181 1.152 1.201 E5 2.80
----- Quadratic regr., Force(0,0) ----- Coefficient = 1.0000
Response Ratio = 0.00000 + 122846.84622 *A + -7.68786 *A^2

28) L5 AR1248-D 8.854 8.330 8.694 8.757 8.814 8.647 8.683 E4 2.17
----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9999
Response Ratio = 0.00000 + 88851.19924 *A + -2.27915 *A^2

29) L5 AR1248-E 1.608 1.533 1.629 1.655 1.643 1.613 1.614 E5 2.69
----- Quadratic regr., Force(0,0) ----- Coefficient = 1.0000
Response Ratio = 0.00000 + 167293.49434 *A + -5.88281 *A^2

30) L5 AR1248-F 7.144 7.124 7.456 7.613 7.572 7.465 7.396 E4 2.86
----- Quadratic regr., Force(0,0) ----- Coefficient = 1.0000
Response Ratio = 0.00000 + 76578.17647 *A + -1.86980 *A^2

31) L6 AR1254-A 9.510 8.219 7.927 7.648 7.793 7.167 8.044 E4 9.92
32) L6 AR1254-B 2.083 1.771 1.825 1.834 1.821 1.700 1.839 E5 7.05
33) L6 AR1254-C 2.322 2.211 2.307 2.263 2.331 2.222 2.276 E5 2.27
34) L6 AR1254-D 1.435 1.342 1.430 1.432 1.494 1.453 1.431 E5 3.49
35) L6 AR1254-E 1.143 1.075 1.060 1.054 1.078 1.039 1.075 E5 3.36
36) L6 AR1254-F 2.046 1.938 1.975 1.933 2.008 1.901 1.967 E5 2.71
37) L7 AR1260-A 2.008 1.963 1.921 1.800 1.746 1.707 1.858 E5 6.63
38) L7 AR1260-B 2.331 2.289 2.206 2.077 2.133 2.071 2.184 E5 5.01
39) L7 AR1260-C 1.763 1.717 1.656 1.510 1.490 1.456 1.599 E5 8.12
40) L7 AR1260-D 1.708 1.753 1.646 1.554 1.559 1.514 1.622 E5 5.86
41) L7 AR1260-E 3.698 3.740 3.785 3.520 3.513 3.457 3.619 E5 3.82
42) L7 AR1260-F 2.814 2.775 2.736 2.624 2.561 2.474 2.664 E5 4.99
43) L9 AR1262-A 1.599 1.534 1.549 1.518 1.535 1.479 1.536 E5 2.55
44) L9 AR1262-B 1.686 1.667 1.674 1.650 1.650 1.610 1.656 E5 1.63
45) L9 AR1262-C 2.435 2.464 2.395 2.395 2.387 2.267 2.390 E5 2.82
46) L9 AR1262-D 2.225 2.286 2.271 2.233 2.235 2.185 2.239 E5 1.60
47) L9 AR1262-E 4.118 4.225 4.388 4.411 4.265 4.171 4.263 E5 2.75
48) L9 AR1262-F 3.188 3.159 3.188 3.172 3.084 3.062 3.142 E5 1.75
49) L8 AR1268-A 1.323 1.290 1.265 1.226 1.308 1.187 1.266 E5 4.08
50) L8 AR1268-B 1.590 1.484 1.430 1.422 1.431 1.314 1.445 E5 6.25
51) L8 AR1268-C 5.354 5.428 5.341 5.412 5.530 4.965 5.338 E5 3.65
52) L8 AR1268-D 5.672 5.519 5.541 5.586 5.674 5.196 5.532 E5 3.19
53) L8 AR1268-E 1.891 1.795 1.819 1.814 1.858 1.739 1.819 E5 2.89
54) L8 AR1268-F 9.717 9.637 9.809 9.484 9.640 9.046 9.556 E5 2.84
55) S Decachlorobiphenyl 3.116 2.966 2.709 2.584 2.478 2.402 2.709 E6 10.37
----- Quadratic regr., Force(0,0) ----- Coefficient = 0.9998
Response Ratio = 0.00000 + 2685025.68265 *A + -2882.67396 *A^2

(#) = Out of Range

8082dod1113.m

Tue Nov 14 14:18:24 2017

Initial Calibration Verification

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46756.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46756.D\ECD1A.ch Vial: 37
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46756.D\ECD2B.ch
Acq On : 13 Nov 2017 9:28 pm Operator: nareshj
Sample : icv895-400 1016/1260 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A	400.000	430.541	-7.6	110	0.00	3.65-	3.75
3 L1	AR1016-B	400.000	424.053	-6.0	109	0.00	3.87-	3.97
4 L1	AR1016-C	400.000	428.923	-7.2	109	-0.02	4.21-	4.31
5 L1	AR1016-D	400.000	414.315	-3.6	107	-0.02	4.25-	4.35
6 L1	AR1016-E	400.000	412.434	-3.1	106	-0.02	4.31-	4.41
7 L1	AR1016-F	400.000	424.718	-6.2	108	0.00	4.49-	4.59
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				

		Amount	Calc.	%Drift				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				

		Amount	Calc.	%Drift				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				

Initial Calibration Verification

Page 3 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-ICV895
Lab FileID: MM46756.D

86	L5	AR1248-F #2	-----NA-----					
			Amount	Calc.	%Drift	-----		
87	L6	AR1254-A #2	-----NA-----					
88	L6	AR1254-B #2	-----NA-----					
89	L6	AR1254-C #2	-----NA-----					
90	L6	AR1254-D #2	-----NA-----					
91	L6	AR1254-E #2	-----NA-----					
92	L6	AR1254-F #2	-----NA-----					
93	L7	AR1260-A #2	400.000	387.916	3.0	100	0.00	5.15- 5.25
94	L7	AR1260-B #2	400.000	382.209	4.4	100	-0.01	5.29- 5.39
95	L7	AR1260-C #2	400.000	430.487	-7.6	114	0.00	5.55- 5.65
96	L7	AR1260-D #2	400.000	446.539	-11.6	117	-0.01	5.74- 5.84
97	L7	AR1260-E #2	400.000	434.032	-8.5	112	0.00	5.91- 6.00
98	L7	AR1260-F #2	400.000	439.114	-9.8	111	0.00	6.16- 6.26
99	L9	AR1262-A #2	-----NA-----					
100	L9	AR1262-B #2	-----NA-----					
101	L9	AR1262-C #2	-----NA-----					
102	L9	AR1262-D #2	-----NA-----					
103	L9	AR1262-E #2	-----NA-----					
104	L9	AR1262-F #2	-----NA-----					
105	L8	AR1268-A #2	-----NA-----					
106	L8	AR1268-B #2	-----NA-----					
107	L8	AR1268-C #2	-----NA-----					
108	L8	AR1268-D #2	-----NA-----					
109	L8	AR1268-E #2	-----NA-----					
110	L8	AR1268-F #2	-----NA-----					
			Amount	Calc.	%Drift	-----		
111	S	Decachlorobiphenyl #2	-----NA-----					

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 14:19:08 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46764.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46764.D\ECD1A.ch Vial: 34
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46764.D\ECD2B.ch
Acq On : 13 Nov 2017 11:01 pm Operator: nareshj
Sample : cc895-400 1016/1260 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	Tetrachloro-m-xylene	40.000	41.659	-4.1	104	-0.02	3.37-	3.47
----- Amount Calc. %Drift -----								
2 L1	AR1016-A	400.000	408.820	-2.2	105	-0.01	3.65-	3.75
3 L1	AR1016-B	400.000	406.467	-1.6	104	0.00	3.87-	3.97
4 L1	AR1016-C	400.000	409.177	-2.3	104	-0.02	4.21-	4.31
5 L1	AR1016-D	400.000	408.204	-2.1	105	-0.02	4.25-	4.35
6 L1	AR1016-E	400.000	406.969	-1.7	105	-0.02	4.31-	4.41
7 L1	AR1016-F	400.000	406.733	-1.7	104	0.00	4.49-	4.59
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
----- Amount Calc. %Drift -----								
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
----- Amount Calc. %Drift -----								
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				
----- Amount Calc. %Drift -----								
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				

Page 2 of 3

Sample: GMM895-CC895
Lab FileID: MM46764.D

8.6.8

57 S	Tetrachloro-m-xylene #	40.000	40.884	-2.2	103	-0.02	3.26- 3.36

			----- Amount	Calc.	%Drift	-----
69	L3	AR1232-A #2			NA	
70	L3	AR1232-B #2			NA	
71	L3	AR1232-C #2			NA	
72	L3	AR1232-D #2			NA	
73	L3	AR1232-E #2			NA	
74	L3	AR1232-F #2			NA	
75	L4	AR1242-A #2			NA	
76	L4	AR1242-B #2			NA	
77	L4	AR1242-C #2			NA	
78	L4	AR1242-D #2			NA	
79	L4	AR1242-E #2			NA	
80	L4	AR1242-F #2			NA	

			Amount	Calc.	%Drift
81	L5	AR1248-A #2			NA
82	L5	AR1248-B #2			NA
83	L5	AR1248-C #2			NA
84	L5	AR1248-D #2			NA
85	L5	AR1248-E #2			NA

Continuing Calibration Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46764.D

86	L5	AR1248-F #2	-----NA-----						
			Amount	Calc.	%Drift				
87	L6	AR1254-A #2	-----NA-----						
88	L6	AR1254-B #2	-----NA-----						
89	L6	AR1254-C #2	-----NA-----						
90	L6	AR1254-D #2	-----NA-----						
91	L6	AR1254-E #2	-----NA-----						
92	L6	AR1254-F #2	-----NA-----						
93	L7	AR1260-A #2	400.000	385.436	3.6	99	0.00	5.15- 5.25	
94	L7	AR1260-B #2	400.000	402.822	-0.7	106	-0.01	5.29- 5.39	
95	L7	AR1260-C #2	400.000	384.491	3.9	102	-0.01	5.55- 5.65	
96	L7	AR1260-D #2	400.000	389.485	2.6	102	-0.01	5.74- 5.84	
97	L7	AR1260-E #2	400.000	398.611	0.3	102	0.00	5.91- 6.00	
98	L7	AR1260-F #2	400.000	404.995	-1.2	103	0.00	6.16- 6.26	
99	L9	AR1262-A #2	-----NA-----						
100	L9	AR1262-B #2	-----NA-----						
101	L9	AR1262-C #2	-----NA-----						
102	L9	AR1262-D #2	-----NA-----						
103	L9	AR1262-E #2	-----NA-----						
104	L9	AR1262-F #2	-----NA-----						
105	L8	AR1268-A #2	-----NA-----						
106	L8	AR1268-B #2	-----NA-----						
107	L8	AR1268-C #2	-----NA-----						
108	L8	AR1268-D #2	-----NA-----						
109	L8	AR1268-E #2	-----NA-----						
110	L8	AR1268-F #2	-----NA-----						
			Amount	Calc.	%Drift				
111	S	Decachlorobiphenyl	40.000	39.996	0.0	99	0.00	6.95- 7.04	

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 15:34:49 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46765.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46765.D\ECD1A.ch Vial: 5
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46765.D\ECD2B.ch
Acq On : 13 Nov 2017 11:13 pm Operator: nareshj
Sample : cc895-400 1248 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				

			Amount	Calc.	%Drift	-----			
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
25 L5	AR1248-A	400.000	419.291	-4.8	105	0.00	3.87-	3.97	
26 L5	AR1248-B	400.000	416.135	-4.0	106	0.00	4.19-	4.29	
27 L5	AR1248-C	400.000	411.325	-2.8	103	0.00	4.37-	4.47	
28 L5	AR1248-D	400.000	406.932	-1.7	101	0.00	4.50-	4.59	
29 L5	AR1248-E	400.000	400.565	-0.1	101	0.00	4.76-	4.87	
30 L5	AR1248-F	400.000	393.539	1.6	99	0.00	4.89-	4.99	

			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46765.D

34	L6	AR1254-D	-----NA-----
35	L6	AR1254-E	-----NA-----
36	L6	AR1254-F	-----NA-----
37	L7	AR1260-A	-----NA-----
38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----
55	S	Decachlorobiphenyl	-----NA-----

***** Signal #2 *****

57	S	Tetrachloro-m-xylene #2	-----NA-----

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2	-----NA-----		
59	L1	AR1016-B #2	-----NA-----		
60	L1	AR1016-C #2	-----NA-----		
61	L1	AR1016-D #2	-----NA-----		
62	L1	AR1016-E #2	-----NA-----		
63	L1	AR1016-F #2	-----NA-----		
64	L2	AR1221-A #2	-----NA-----		
65	L2	AR1221-B #2	-----NA-----		
66	L2	AR1221-C #2	-----NA-----		
67	L2	AR1221-D #2	-----NA-----		
68	L2	AR1221-E #2	-----NA-----		

		Amount	Calc.	%Drift	
69	L3	AR1232-A #2	-----NA-----		
70	L3	AR1232-B #2	-----NA-----		
71	L3	AR1232-C #2	-----NA-----		
72	L3	AR1232-D #2	-----NA-----		
73	L3	AR1232-E #2	-----NA-----		
74	L3	AR1232-F #2	-----NA-----		
75	L4	AR1242-A #2	-----NA-----		
76	L4	AR1242-B #2	-----NA-----		
77	L4	AR1242-C #2	-----NA-----		
78	L4	AR1242-D #2	-----NA-----		
79	L4	AR1242-E #2	-----NA-----		
80	L4	AR1242-F #2	-----NA-----		

		Amount	Calc.	%Drift	
81	L5	AR1248-A #2	400.000 424.605	-6.2 106	0.00 3.79- 3.89
82	L5	AR1248-B #2	400.000 421.320	-5.3 106	0.00 4.11- 4.21
83	L5	AR1248-C #2	400.000 415.347	-3.8 104	0.00 4.41- 4.51
84	L5	AR1248-D #2	400.000 405.396	-1.3 102	0.00 4.52- 4.62
85	L5	AR1248-E #2	400.000 414.774	-3.7 103	0.00 4.66- 4.76

Continuing Calibration Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46765.D

86	L5	AR1248-F #2	400.000	413.983	-3.5	103	0.00	5.05-	5.15
			----- Amount	Calc.	%Drift	-----			
87	L6	AR1254-A #2			-----NA-----				
88	L6	AR1254-B #2			-----NA-----				
89	L6	AR1254-C #2			-----NA-----				
90	L6	AR1254-D #2			-----NA-----				
91	L6	AR1254-E #2			-----NA-----				
92	L6	AR1254-F #2			-----NA-----				
93	L7	AR1260-A #2			-----NA-----				
94	L7	AR1260-B #2			-----NA-----				
95	L7	AR1260-C #2			-----NA-----				
96	L7	AR1260-D #2			-----NA-----				
97	L7	AR1260-E #2			-----NA-----				
98	L7	AR1260-F #2			-----NA-----				
99	L9	AR1262-A #2			-----NA-----				
100	L9	AR1262-B #2			-----NA-----				
101	L9	AR1262-C #2			-----NA-----				
102	L9	AR1262-D #2			-----NA-----				
103	L9	AR1262-E #2			-----NA-----				
104	L9	AR1262-F #2			-----NA-----				
105	L8	AR1268-A #2			-----NA-----				
106	L8	AR1268-B #2			-----NA-----				
107	L8	AR1268-C #2			-----NA-----				
108	L8	AR1268-D #2			-----NA-----				
109	L8	AR1268-E #2			-----NA-----				
110	L8	AR1268-F #2			-----NA-----				
			----- Amount	Calc.	%Drift	-----			
111	S	Decachlorobiphenyl #2			-----NA-----				

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 15:34:51 2017

8.698
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46766.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46766.D\ECD1A.ch Vial: 12
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46766.D\ECD2B.ch
Acq On : 13 Nov 2017 11:25 pm Operator: nareshj
Sample : cc895-400 1242/1262 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				

			Amount	Calc.	%Drift	-----			
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A			400.000	394.883	1.3	105	0.00	3.64- 3.74
20 L4	AR1242-B			400.000	404.057	-1.0	106	0.00	4.00- 4.10
21 L4	AR1242-C			400.000	418.904	-4.7	104	0.00	4.19- 4.29
22 L4	AR1242-D			400.000	412.843	-3.2	105	0.00	4.23- 4.33
23 L4	AR1242-E			400.000	396.144	1.0	105	0.00	4.37- 4.47
24 L4	AR1242-F			400.000	415.170	-3.8	103	0.00	4.59- 4.69

			Amount	Calc.	%Drift	-----			
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				

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Sample: GMM895-CC895
Lab FileID: MM46766.D

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Continuing Calibration Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46766.D

86	L5	AR1248-F #2	-----NA-----						
			Amount	Calc.	%Drift	-----			
87	L6	AR1254-A #2	-----NA-----						
88	L6	AR1254-B #2	-----NA-----						
89	L6	AR1254-C #2	-----NA-----						
90	L6	AR1254-D #2	-----NA-----						
91	L6	AR1254-E #2	-----NA-----						
92	L6	AR1254-F #2	-----NA-----						
93	L7	AR1260-A #2	-----NA-----						
94	L7	AR1260-B #2	-----NA-----						
95	L7	AR1260-C #2	-----NA-----						
96	L7	AR1260-D #2	-----NA-----						
97	L7	AR1260-E #2	-----NA-----						
98	L7	AR1260-F #2	-----NA-----						
99	L9	AR1262-A #2	400.000	414.078	-3.5	105	0.00	5.14- 5.24	
100	L9	AR1262-B #2	400.000	415.935	-4.0	104	0.00	5.28- 5.38	
101	L9	AR1262-C #2	400.000	413.377	-3.3	103	0.00	5.54- 5.64	
102	L9	AR1262-D #2	400.000	412.585	-3.1	103	0.00	5.72- 5.82	
103	L9	AR1262-E #2	400.000	419.574	-4.9	101	0.00	5.91- 6.00	
104	L9	AR1262-F #2	400.000	424.209	-6.1	105	0.00	6.16- 6.26	
105	L8	AR1268-A #2	-----NA-----						
106	L8	AR1268-B #2	-----NA-----						
107	L8	AR1268-C #2	-----NA-----						
108	L8	AR1268-D #2	-----NA-----						
109	L8	AR1268-E #2	-----NA-----						
110	L8	AR1268-F #2	-----NA-----						
			Amount	Calc.	%Drift	-----			
111	S	Decachlorobiphenyl #2	-----NA-----						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46753.D 8082dod1113.m Tue Nov 14 15:34:53 2017

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Continuing Calibration Summary

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46767.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46767.D\ECD1A.ch Vial: 19
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46767.D\ECD2B.ch
Acq On : 13 Nov 2017 11:36 pm Operator: nareshj
Sample : cc895-400 1232/1268 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				

			Amount	Calc.	%Drift	-----			
13 L3	AR1232-A		400.000	371.975	7.0	93	0.00	3.64-	3.74
14 L3	AR1232-B		400.000	375.002	6.2	96	0.00	4.00-	4.10
15 L3	AR1232-C		400.000	388.566	2.9	96	0.00	4.19-	4.29
16 L3	AR1232-D		400.000	389.169	2.7	95	0.00	4.30-	4.40
17 L3	AR1232-E		400.000	377.168	5.7	95	0.00	4.50-	4.59
18 L3	AR1232-F		400.000	393.908	1.5	96	0.00	4.79-	4.89
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				

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Sample: GMM895-CC895
Lab FileID: MM46767.D

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57 S Tetrachloro-m-xylene #2

			Amount	Calc.	%Drift			
69	L3	AR1232-A #2	400.000	375.366	6.2	95	0.00	3.56- 3.66
70	L3	AR1232-B #2	400.000	380.375	4.9	97	0.00	3.93- 4.03
71	L3	AR1232-C #2	400.000	386.295	3.4	94	0.00	4.11- 4.21
72	L3	AR1232-D #2	400.000	387.690	3.1	95	0.00	4.23- 4.33
73	L3	AR1232-E #2	400.000	374.532	6.4	93	0.00	4.41- 4.51
74	L3	AR1232-F #2	400.000	373.380	6.7	95	0.00	4.66- 4.76
75	L4	AR1242-A #2			-----NA-----			
76	L4	AR1242-B #2			-----NA-----			
77	L4	AR1242-C #2			-----NA-----			
78	L4	AR1242-D #2			-----NA-----			
79	L4	AR1242-E #2			-----NA-----			
80	L4	AR1242-F #2			-----NA-----			

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FA49143

Continuing Calibration Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46767.D

86	L5	AR1248-F #2	-----NA-----					
			Amount	Calc.	%Drift	-----		
87	L6	AR1254-A #2				-----NA-----		
88	L6	AR1254-B #2				-----NA-----		
89	L6	AR1254-C #2				-----NA-----		
90	L6	AR1254-D #2				-----NA-----		
91	L6	AR1254-E #2				-----NA-----		
92	L6	AR1254-F #2				-----NA-----		
93	L7	AR1260-A #2				-----NA-----		
94	L7	AR1260-B #2				-----NA-----		
95	L7	AR1260-C #2				-----NA-----		
96	L7	AR1260-D #2				-----NA-----		
97	L7	AR1260-E #2				-----NA-----		
98	L7	AR1260-F #2				-----NA-----		
99	L9	AR1262-A #2				-----NA-----		
100	L9	AR1262-B #2				-----NA-----		
101	L9	AR1262-C #2				-----NA-----		
102	L9	AR1262-D #2				-----NA-----		
103	L9	AR1262-E #2				-----NA-----		
104	L9	AR1262-F #2				-----NA-----		
105	L8	AR1268-A #2	400.000	385.081	3.7	99	0.00	5.54- 5.64
106	L8	AR1268-B #2	400.000	393.632	1.6	100	0.00	5.72- 5.82
107	L8	AR1268-C #2	400.000	393.544	1.6	97	0.00	6.11- 6.21
108	L8	AR1268-D #2	400.000	387.755	3.1	96	0.00	6.16- 6.26
109	L8	AR1268-E #2	400.000	400.468	-0.1	100	0.00	6.53- 6.63
110	L8	AR1268-F #2	400.000	391.911	2.0	99	0.00	6.75- 6.85
			Amount	Calc.	%Drift	-----		
111	S	Decachlorobiphenyl #2				-----NA-----		

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46753.D 8082dod1113.m Tue Nov 14 15:34:55 2017

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Continuing Calibration Summary

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46768.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46768.D\ECD1A.ch Vial: 26
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46768.D\ECD2B.ch
Acq On : 13 Nov 2017 11:48 pm Operator: nareshj
Sample : cc895-400 1221/1254 Inst : ECD 9
Misc : op67584,gmm895,1000,,,5,1,water Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A		400.000	388.400	2.9	98	0.00	2.96-	3.06
9 L2	AR1221-B		400.000	387.842	3.0	97	0.00	3.27-	3.37
10 L2	AR1221-C		400.000	387.141	3.2	97	0.00	3.52-	3.63
11 L2	AR1221-D		400.000	384.649	3.8	96	0.00	3.59-	3.69
12 L2	AR1221-E		400.000	380.289	4.9	95	0.00	3.64-	3.74

			Amount	Calc.	%Drift	-----			
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A		400.000	375.334	6.2	95	0.00	4.37-	4.47
32 L6	AR1254-B		400.000	380.862	4.8	96	0.00	4.74-	4.84
33 L6	AR1254-C		400.000	405.560	-1.4	98	0.00	5.14-	5.24

Continuing Calibration Summary

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Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46768.D

34	L6	AR1254-D	400.000	391.553	2.1	97	0.00	5.34-	5.43
35	L6	AR1254-E	400.000	382.565	4.4	99	0.00	5.52-	5.62
36	L6	AR1254-F	400.000	404.532	-1.1	101	0.00	5.62-	5.72
37	L7	AR1260-A							
38	L7	AR1260-B							
39	L7	AR1260-C							
40	L7	AR1260-D							
41	L7	AR1260-E							
42	L7	AR1260-F							
43	L9	AR1262-A							
44	L9	AR1262-B							
45	L9	AR1262-C							
46	L9	AR1262-D							
47	L9	AR1262-E							
48	L9	AR1262-F							
49	L8	AR1268-A							
50	L8	AR1268-B							
51	L8	AR1268-C							
52	L8	AR1268-D							
53	L8	AR1268-E							
54	L8	AR1268-F							
55	S	Decachlorobiphenyl							

***** Signal #2 *****

57	S	Tetrachloro-m-xylene #2							
			Amount	Calc.	%Drift				
58	L1	AR1016-A #2							
59	L1	AR1016-B #2							
60	L1	AR1016-C #2							
61	L1	AR1016-D #2							
62	L1	AR1016-E #2							
63	L1	AR1016-F #2							
64	L2	AR1221-A #2	400.000	387.940	3.0	98	0.00	2.87-	2.97
65	L2	AR1221-B #2	400.000	388.930	2.8	97	0.00	3.19-	3.29
66	L2	AR1221-C #2	400.000	379.065	5.2	94	0.00	3.43-	3.53
67	L2	AR1221-D #2	400.000	390.838	2.3	98	0.00	3.50-	3.60
68	L2	AR1221-E #2	400.000	382.169	4.5	96	0.00	3.56-	3.66

			Amount	Calc.	%Drift				
69	L3	AR1232-A #2							
70	L3	AR1232-B #2							
71	L3	AR1232-C #2							
72	L3	AR1232-D #2							
73	L3	AR1232-E #2							
74	L3	AR1232-F #2							
75	L4	AR1242-A #2							
76	L4	AR1242-B #2							
77	L4	AR1242-C #2							
78	L4	AR1242-D #2							
79	L4	AR1242-E #2							
80	L4	AR1242-F #2							

			Amount	Calc.	%Drift				
81	L5	AR1248-A #2							
82	L5	AR1248-B #2							
83	L5	AR1248-C #2							
84	L5	AR1248-D #2							
85	L5	AR1248-E #2							

Continuing Calibration Summary

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46768.D

86	L5	AR1248-F #2	-----NA-----						
			Amount	Calc.	%Drift				
87	L6	AR1254-A #2	400.000	364.218	8.9	96	0.00	4.27- 4.37	
88	L6	AR1254-B #2	400.000	389.370	2.7	98	0.00	4.66- 4.76	
89	L6	AR1254-C #2	400.000	397.918	0.5	100	0.00	5.05- 5.15	
90	L6	AR1254-D #2	400.000	394.825	1.3	99	0.00	5.21- 5.31	
91	L6	AR1254-E #2	400.000	393.659	1.6	100	0.00	5.38- 5.48	
92	L6	AR1254-F #2	400.000	391.560	2.1	100	0.00	5.51- 5.61	
93	L7	AR1260-A #2	-----NA-----						
94	L7	AR1260-B #2	-----NA-----						
95	L7	AR1260-C #2	-----NA-----						
96	L7	AR1260-D #2	-----NA-----						
97	L7	AR1260-E #2	-----NA-----						
98	L7	AR1260-F #2	-----NA-----						
99	L9	AR1262-A #2	-----NA-----						
100	L9	AR1262-B #2	-----NA-----						
101	L9	AR1262-C #2	-----NA-----						
102	L9	AR1262-D #2	-----NA-----						
103	L9	AR1262-E #2	-----NA-----						
104	L9	AR1262-F #2	-----NA-----						
105	L8	AR1268-A #2	-----NA-----						
106	L8	AR1268-B #2	-----NA-----						
107	L8	AR1268-C #2	-----NA-----						
108	L8	AR1268-D #2	-----NA-----						
109	L8	AR1268-E #2	-----NA-----						
110	L8	AR1268-F #2	-----NA-----						
			Amount	Calc.	%Drift				
111	S	Decachlorobiphenyl #2	-----NA-----						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46753.D 8082dod1113.m Tue Nov 14 15:34:57 2017

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Continuing Calibration Summary

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46779.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46779.D\ECD1A.ch Vial: 34
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46779.D\ECD2B.ch
Acq On : 14 Nov 2017 1:56 am Operator: nareshj
Sample : cc895-400 1016/1260 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	Tetrachloro-m-xylene	40.000	39.203	2.0	98	-0.02	3.37-	3.47
		Amount	Calc.	%Drift				
2 L1	AR1016-A	400.000	378.312	5.4	98	-0.01	3.65-	3.75
3 L1	AR1016-B	400.000	385.544	3.6	99	0.00	3.87-	3.97
4 L1	AR1016-C	400.000	391.040	2.2	99	-0.02	4.21-	4.31
5 L1	AR1016-D	400.000	388.601	2.8	100	-0.02	4.25-	4.35
6 L1	AR1016-E	400.000	392.211	1.9	101	-0.02	4.31-	4.41
7 L1	AR1016-F	400.000	392.021	2.0	100	0.00	4.49-	4.59
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
		Amount	Calc.	%Drift				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
		Amount	Calc.	%Drift				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				
		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				

Page 2 of 3

Sample: GMM895-CC895
Lab FileID: MM46779.D

8.6.13

57 S	Tetrachloro-m-xylene #	40.000	38.829	2.9	98	-0.02	3.26-	3.36

			----- Amount	Calc.	%Drift	-----
69	L3	AR1232-A #2			NA	
70	L3	AR1232-B #2			NA	
71	L3	AR1232-C #2			NA	
72	L3	AR1232-D #2			NA	
73	L3	AR1232-E #2			NA	
74	L3	AR1232-F #2			NA	
75	L4	AR1242-A #2			NA	
76	L4	AR1242-B #2			NA	
77	L4	AR1242-C #2			NA	
78	L4	AR1242-D #2			NA	
79	L4	AR1242-E #2			NA	
80	L4	AR1242-F #2			NA	

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Continuing Calibration Summary

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Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46779.D

86	L5	AR1248-F #2	-----NA-----					
			Amount	Calc.	%Drift	-----		
87	L6	AR1254-A #2	-----NA-----					
88	L6	AR1254-B #2	-----NA-----					
89	L6	AR1254-C #2	-----NA-----					
90	L6	AR1254-D #2	-----NA-----					
91	L6	AR1254-E #2	-----NA-----					
92	L6	AR1254-F #2	-----NA-----					
93	L7	AR1260-A #2	400.000	395.477	1.1	102	-0.01	5.15- 5.25
94	L7	AR1260-B #2	400.000	405.367	-1.3	107	-0.01	5.29- 5.39
95	L7	AR1260-C #2	400.000	391.729	2.1	104	-0.01	5.55- 5.65
96	L7	AR1260-D #2	400.000	391.699	2.1	102	-0.01	5.74- 5.84
97	L7	AR1260-E #2	400.000	410.696	-2.7	106	0.00	5.91- 6.00
98	L7	AR1260-F #2	400.000	396.711	0.8	101	0.00	6.16- 6.26
99	L9	AR1262-A #2	-----NA-----					
100	L9	AR1262-B #2	-----NA-----					
101	L9	AR1262-C #2	-----NA-----					
102	L9	AR1262-D #2	-----NA-----					
103	L9	AR1262-E #2	-----NA-----					
104	L9	AR1262-F #2	-----NA-----					
105	L8	AR1268-A #2	-----NA-----					
106	L8	AR1268-B #2	-----NA-----					
107	L8	AR1268-C #2	-----NA-----					
108	L8	AR1268-D #2	-----NA-----					
109	L8	AR1268-E #2	-----NA-----					
110	L8	AR1268-F #2	-----NA-----					
			Amount	Calc.	%Drift	-----		
111	S	Decachlorobiphenyl	40.000	39.446	1.4	98	0.00	6.95- 7.04

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 15:34:59 2017

8.6.13

8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46780.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46780.D\ECD1A.ch Vial: 5
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46780.D\ECD2B.ch
Acq On : 14 Nov 2017 2:08 am Operator: nareshj
Sample : cc895-400 1248 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift				

2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				

			Amount	Calc.	%Drift				

13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				

			Amount	Calc.	%Drift				

25 L5	AR1248-A	400.000	392.366	1.9	98	0.00	3.87-	3.97	
26 L5	AR1248-B	400.000	393.982	1.5	100	0.00	4.19-	4.29	
27 L5	AR1248-C	400.000	396.701	0.8	99	0.00	4.37-	4.47	
28 L5	AR1248-D	400.000	401.733	-0.4	100	0.00	4.50-	4.59	
29 L5	AR1248-E	400.000	399.387	0.2	101	0.00	4.76-	4.87	
30 L5	AR1248-F	400.000	397.751	0.6	100	0.00	4.89-	4.99	

			Amount	Calc.	%Drift				

31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46780.D

34	L6	AR1254-D	-----NA-----
35	L6	AR1254-E	-----NA-----
36	L6	AR1254-F	-----NA-----
37	L7	AR1260-A	-----NA-----
38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----
55	S	Decachlorobiphenyl	-----NA-----

***** Signal #2 *****

57	S	Tetrachloro-m-xylene #2	-----NA-----

			Amount	Calc.	%Drift	
58	L1	AR1016-A #2			-----NA-----	
59	L1	AR1016-B #2			-----NA-----	
60	L1	AR1016-C #2			-----NA-----	
61	L1	AR1016-D #2			-----NA-----	
62	L1	AR1016-E #2			-----NA-----	
63	L1	AR1016-F #2			-----NA-----	
64	L2	AR1221-A #2			-----NA-----	
65	L2	AR1221-B #2			-----NA-----	
66	L2	AR1221-C #2			-----NA-----	
67	L2	AR1221-D #2			-----NA-----	
68	L2	AR1221-E #2			-----NA-----	

			Amount	Calc.	%Drift	
69	L3	AR1232-A #2			-----NA-----	
70	L3	AR1232-B #2			-----NA-----	
71	L3	AR1232-C #2			-----NA-----	
72	L3	AR1232-D #2			-----NA-----	
73	L3	AR1232-E #2			-----NA-----	
74	L3	AR1232-F #2			-----NA-----	
75	L4	AR1242-A #2			-----NA-----	
76	L4	AR1242-B #2			-----NA-----	
77	L4	AR1242-C #2			-----NA-----	
78	L4	AR1242-D #2			-----NA-----	
79	L4	AR1242-E #2			-----NA-----	
80	L4	AR1242-F #2			-----NA-----	

			Amount	Calc.	%Drift	
81	L5	AR1248-A #2	400.000	395.514	1.1	99 0.00 3.79- 3.89
82	L5	AR1248-B #2	400.000	404.911	-1.2	102 0.00 4.11- 4.21
83	L5	AR1248-C #2	400.000	405.060	-1.3	101 0.00 4.41- 4.51
84	L5	AR1248-D #2	400.000	406.420	-1.6	102 0.00 4.52- 4.62
85	L5	AR1248-E #2	400.000	402.069	-0.5	100 0.00 4.66- 4.76

Continuing Calibration Summary

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46780.D

86	L5	AR1248-F #2	400.000	406.386	-1.6	101	0.00	5.05-	5.15
			----- Amount	Calc.	%Drift	-----			
87	L6	AR1254-A #2			-----NA-----				
88	L6	AR1254-B #2			-----NA-----				
89	L6	AR1254-C #2			-----NA-----				
90	L6	AR1254-D #2			-----NA-----				
91	L6	AR1254-E #2			-----NA-----				
92	L6	AR1254-F #2			-----NA-----				
93	L7	AR1260-A #2			-----NA-----				
94	L7	AR1260-B #2			-----NA-----				
95	L7	AR1260-C #2			-----NA-----				
96	L7	AR1260-D #2			-----NA-----				
97	L7	AR1260-E #2			-----NA-----				
98	L7	AR1260-F #2			-----NA-----				
99	L9	AR1262-A #2			-----NA-----				
100	L9	AR1262-B #2			-----NA-----				
101	L9	AR1262-C #2			-----NA-----				
102	L9	AR1262-D #2			-----NA-----				
103	L9	AR1262-E #2			-----NA-----				
104	L9	AR1262-F #2			-----NA-----				
105	L8	AR1268-A #2			-----NA-----				
106	L8	AR1268-B #2			-----NA-----				
107	L8	AR1268-C #2			-----NA-----				
108	L8	AR1268-D #2			-----NA-----				
109	L8	AR1268-E #2			-----NA-----				
110	L8	AR1268-F #2			-----NA-----				
			----- Amount	Calc.	%Drift	-----			
111	S	Decachlorobiphenyl #2			-----NA-----				

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 15:35:01 2017

8.6.14
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46781.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46781.D\ECD1A.ch Vial: 12
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46781.D\ECD2B.ch
Acq On : 14 Nov 2017 2:19 am Operator: nareshj
Sample : cc895-400 1242/1262 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	Tetrachloro-m-xylene				-----NA-----				
-----			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				
-----			Amount	Calc.	%Drift	-----			
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A		400.000	391.257	2.2	104	0.00	3.64-	3.74
20 L4	AR1242-B		400.000	392.767	1.8	103	0.00	4.00-	4.10
21 L4	AR1242-C		400.000	419.043	-4.8	104	0.00	4.19-	4.29
22 L4	AR1242-D		400.000	413.877	-3.5	105	0.00	4.23-	4.33
23 L4	AR1242-E		400.000	391.051	2.2	104	0.00	4.37-	4.47
24 L4	AR1242-F		400.000	414.795	-3.7	103	0.00	4.59-	4.69
-----			Amount	Calc.	%Drift	-----			
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				
-----			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				

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Sample: GMM895-CC895
Lab FileID: MM46781.D

8.6.15

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ACCUTEST
FA49143

Continuing Calibration Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46781.D

86	L5	AR1248-F #2	-----NA-----						
			Amount	Calc.	%Drift	-----			
87	L6	AR1254-A #2	-----NA-----						
88	L6	AR1254-B #2	-----NA-----						
89	L6	AR1254-C #2	-----NA-----						
90	L6	AR1254-D #2	-----NA-----						
91	L6	AR1254-E #2	-----NA-----						
92	L6	AR1254-F #2	-----NA-----						
93	L7	AR1260-A #2	-----NA-----						
94	L7	AR1260-B #2	-----NA-----						
95	L7	AR1260-C #2	-----NA-----						
96	L7	AR1260-D #2	-----NA-----						
97	L7	AR1260-E #2	-----NA-----						
98	L7	AR1260-F #2	-----NA-----						
99	L9	AR1262-A #2	400.000	415.142	-3.8	105	0.00	5.14- 5.24	
100	L9	AR1262-B #2	400.000	419.490	-4.9	105	0.00	5.28- 5.38	
101	L9	AR1262-C #2	400.000	411.515	-2.9	103	0.00	5.54- 5.64	
102	L9	AR1262-D #2	400.000	411.541	-2.9	103	0.00	5.72- 5.82	
103	L9	AR1262-E #2	400.000	421.163	-5.3	102	0.00	5.91- 6.00	
104	L9	AR1262-F #2	400.000	412.421	-3.1	102	0.00	6.16- 6.26	
105	L8	AR1268-A #2	-----NA-----						
106	L8	AR1268-B #2	-----NA-----						
107	L8	AR1268-C #2	-----NA-----						
108	L8	AR1268-D #2	-----NA-----						
109	L8	AR1268-E #2	-----NA-----						
110	L8	AR1268-F #2	-----NA-----						
			Amount	Calc.	%Drift	-----			
111	S	Decachlorobiphenyl #2	-----NA-----						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46753.D 8082dod1113.m Tue Nov 14 15:35:03 2017

8.6.15
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46782.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46782.D\ECD1A.ch Vial: 19
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46782.D\ECD2B.ch
Acq On : 14 Nov 2017 2:31 am Operator: nareshj
Sample : cc895-400 1232/1268 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift				

2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				

			Amount	Calc.	%Drift				

13 L3	AR1232-A	400.000	401.041	-0.3	101	0.00	3.64-	3.74	
14 L3	AR1232-B	400.000	388.165	3.0	99	0.00	4.00-	4.10	
15 L3	AR1232-C	400.000	410.549	-2.6	102	0.00	4.19-	4.29	
16 L3	AR1232-D	400.000	405.072	-1.3	99	0.00	4.30-	4.40	
17 L3	AR1232-E	400.000	395.783	1.1	100	0.00	4.50-	4.59	
18 L3	AR1232-F	400.000	403.829	-1.0	98	0.00	4.79-	4.89	
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				

			Amount	Calc.	%Drift				

25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				

			Amount	Calc.	%Drift				

31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				

Page 2 of 3

Sample: GMM895-CC895
Lab FileID: MM46782.D

8.6.16

57 S Tetrachloro-m-xylene #2

			Amount	Calc.	%Drift				
69	L3	AR1232-A #2	400.000	395.296	1.2	100	0.00	3.56-	3.66
70	L3	AR1232-B #2	400.000	387.566	3.1	99	0.00	3.93-	4.03
71	L3	AR1232-C #2	400.000	414.706	-3.7	101	0.00	4.11-	4.21
72	L3	AR1232-D #2	400.000	393.376	1.7	97	0.00	4.23-	4.33
73	L3	AR1232-E #2	400.000	392.970	1.8	98	0.00	4.41-	4.51
74	L3	AR1232-F #2	400.000	389.511	2.6	99	0.00	4.66-	4.76
75	L4	AR1242-A #2			-----NA-----				
76	L4	AR1242-B #2			-----NA-----				
77	L4	AR1242-C #2			-----NA-----				
78	L4	AR1242-D #2			-----NA-----				
79	L4	AR1242-E #2			-----NA-----				
80	L4	AR1242-F #2			-----NA-----				

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ACCUTEST
FA49143

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Sample: GMM895-CC895
Lab FileID: MM46782.D

8.6.16

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ACCUTEST
FA49143

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46783.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46783.D\ECD1A.ch Vial: 26
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46783.D\ECD2B.ch
Acq On : 14 Nov 2017 2:42 am Operator: nareshj
Sample : cc895-400 1221/1254 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1	S	Tetrachloro-m-xylene			-----NA-----				
-----			Amount	Calc.	%Drift	-----			
2	L1	AR1016-A			-----NA-----				
3	L1	AR1016-B			-----NA-----				
4	L1	AR1016-C			-----NA-----				
5	L1	AR1016-D			-----NA-----				
6	L1	AR1016-E			-----NA-----				
7	L1	AR1016-F			-----NA-----				
8	L2	AR1221-A	400.000	410.120	-2.5	103	0.00	2.96-	3.06
9	L2	AR1221-B	400.000	418.191	-4.5	103	0.00	3.27-	3.37
10	L2	AR1221-C	400.000	424.020	-6.0	106	0.00	3.52-	3.63
11	L2	AR1221-D	400.000	420.328	-5.1	104	0.00	3.59-	3.69
12	L2	AR1221-E	400.000	424.762	-6.2	106	0.00	3.64-	3.74
-----			Amount	Calc.	%Drift	-----			
13	L3	AR1232-A			-----NA-----				
14	L3	AR1232-B			-----NA-----				
15	L3	AR1232-C			-----NA-----				
16	L3	AR1232-D			-----NA-----				
17	L3	AR1232-E			-----NA-----				
18	L3	AR1232-F			-----NA-----				
19	L4	AR1242-A			-----NA-----				
20	L4	AR1242-B			-----NA-----				
21	L4	AR1242-C			-----NA-----				
22	L4	AR1242-D			-----NA-----				
23	L4	AR1242-E			-----NA-----				
24	L4	AR1242-F			-----NA-----				
-----			Amount	Calc.	%Drift	-----			
25	L5	AR1248-A			-----NA-----				
26	L5	AR1248-B			-----NA-----				
27	L5	AR1248-C			-----NA-----				
28	L5	AR1248-D			-----NA-----				
29	L5	AR1248-E			-----NA-----				
30	L5	AR1248-F			-----NA-----				
-----			Amount	Calc.	%Drift	-----			
31	L6	AR1254-A	400.000	416.602	-4.2	105	0.00	4.37-	4.47
32	L6	AR1254-B	400.000	416.341	-4.1	105	0.00	4.74-	4.84
33	L6	AR1254-C	400.000	433.289	-8.3	105	0.00	5.14-	5.24

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46783.D

34	L6	AR1254-D	400.000	427.944	-7.0	106	0.00	5.34-	5.43
35	L6	AR1254-E	400.000	400.841	-0.2	104	0.00	5.52-	5.62
36	L6	AR1254-F	400.000	415.161	-3.8	104	0.00	5.62-	5.72
37	L7	AR1260-A							
38	L7	AR1260-B							
39	L7	AR1260-C							
40	L7	AR1260-D							
41	L7	AR1260-E							
42	L7	AR1260-F							
43	L9	AR1262-A							
44	L9	AR1262-B							
45	L9	AR1262-C							
46	L9	AR1262-D							
47	L9	AR1262-E							
48	L9	AR1262-F							
49	L8	AR1268-A							
50	L8	AR1268-B							
51	L8	AR1268-C							
52	L8	AR1268-D							
53	L8	AR1268-E							
54	L8	AR1268-F							
55	S	Decachlorobiphenyl							

***** Signal #2 *****

57	S	Tetrachloro-m-xylene #2							
			Amount	Calc.	%Drift				
58	L1	AR1016-A #2							
59	L1	AR1016-B #2							
60	L1	AR1016-C #2							
61	L1	AR1016-D #2							
62	L1	AR1016-E #2							
63	L1	AR1016-F #2							
64	L2	AR1221-A #2	400.000	414.527	-3.6	104	0.00	2.87-	2.97
65	L2	AR1221-B #2	400.000	415.120	-3.8	103	0.00	3.19-	3.29
66	L2	AR1221-C #2	400.000	424.989	-6.2	105	0.00	3.43-	3.53
67	L2	AR1221-D #2	400.000	422.027	-5.5	105	0.00	3.50-	3.60
68	L2	AR1221-E #2	400.000	422.856	-5.7	105	0.00	3.56-	3.66

			Amount	Calc.	%Drift				
69	L3	AR1232-A #2							
70	L3	AR1232-B #2							
71	L3	AR1232-C #2							
72	L3	AR1232-D #2							
73	L3	AR1232-E #2							
74	L3	AR1232-F #2							
75	L4	AR1242-A #2							
76	L4	AR1242-B #2							
77	L4	AR1242-C #2							
78	L4	AR1242-D #2							
79	L4	AR1242-E #2							
80	L4	AR1242-F #2							

			Amount	Calc.	%Drift				
81	L5	AR1248-A #2							
82	L5	AR1248-B #2							
83	L5	AR1248-C #2							
84	L5	AR1248-D #2							
85	L5	AR1248-E #2							

Continuing Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46783.D

86	L5	AR1248-F #2	-----NA-----					
			Amount	Calc.	%Drift			
87	L6	AR1254-A #2	400.000	390.024	2.5	103	0.00	4.27- 4.37
88	L6	AR1254-B #2	400.000	425.460	-6.4	107	0.00	4.66- 4.76
89	L6	AR1254-C #2	400.000	426.512	-6.6	107	0.00	5.05- 5.15
90	L6	AR1254-D #2	400.000	424.618	-6.2	106	0.00	5.21- 5.31
91	L6	AR1254-E #2	400.000	410.752	-2.7	105	0.00	5.38- 5.48
92	L6	AR1254-F #2	400.000	414.717	-3.7	106	0.00	5.51- 5.61
93	L7	AR1260-A #2	-----NA-----					
94	L7	AR1260-B #2	-----NA-----					
95	L7	AR1260-C #2	-----NA-----					
96	L7	AR1260-D #2	-----NA-----					
97	L7	AR1260-E #2	-----NA-----					
98	L7	AR1260-F #2	-----NA-----					
99	L9	AR1262-A #2	-----NA-----					
100	L9	AR1262-B #2	-----NA-----					
101	L9	AR1262-C #2	-----NA-----					
102	L9	AR1262-D #2	-----NA-----					
103	L9	AR1262-E #2	-----NA-----					
104	L9	AR1262-F #2	-----NA-----					
105	L8	AR1268-A #2	-----NA-----					
106	L8	AR1268-B #2	-----NA-----					
107	L8	AR1268-C #2	-----NA-----					
108	L8	AR1268-D #2	-----NA-----					
109	L8	AR1268-E #2	-----NA-----					
110	L8	AR1268-F #2	-----NA-----					
			Amount	Calc.	%Drift			
111	S	Decachlorobiphenyl #2	-----NA-----					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46753.D 8082dod1113.m Tue Nov 14 15:35:07 2017

8.6.17

8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46788.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46788.D\ECD1A.ch Vial: 34
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46788.D\ECD2B.ch
Acq On : 14 Nov 2017 3:40 am Operator: nareshj
Sample : cc895-400 1016/1260 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	Tetrachloro-m-xylene	40.000	43.892	-9.7	109	-0.02	3.37-	3.47
		Amount	Calc.	%Drift				
2 L1	AR1016-A	400.000	428.140	-7.0	110	-0.01	3.65-	3.75
3 L1	AR1016-B	400.000	429.053	-7.3	110	0.00	3.87-	3.97
4 L1	AR1016-C	400.000	439.484	-9.9	111	-0.02	4.21-	4.31
5 L1	AR1016-D	400.000	436.213	-9.1	112	-0.02	4.25-	4.35
6 L1	AR1016-E	400.000	423.109	-5.8	109	-0.02	4.31-	4.41
7 L1	AR1016-F	400.000	426.325	-6.6	109	0.00	4.49-	4.59
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				
		Amount	Calc.	%Drift				
13 L3	AR1232-A			-----NA-----				
14 L3	AR1232-B			-----NA-----				
15 L3	AR1232-C			-----NA-----				
16 L3	AR1232-D			-----NA-----				
17 L3	AR1232-E			-----NA-----				
18 L3	AR1232-F			-----NA-----				
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				
		Amount	Calc.	%Drift				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				
		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				

Page 2 of 3

Sample: GMM895-CC895
Lab FileID: MM46788.D

8.6.18

57 S	Tetrachloro-m-xylene #	40.000	43.337	-8.3	110	-0.02	3.26-	3.36

			----- Amount	Calc.	%Drift	-----
69	L3	AR1232-A #2			NA	
70	L3	AR1232-B #2			NA	
71	L3	AR1232-C #2			NA	
72	L3	AR1232-D #2			NA	
73	L3	AR1232-E #2			NA	
74	L3	AR1232-F #2			NA	
75	L4	AR1242-A #2			NA	
76	L4	AR1242-B #2			NA	
77	L4	AR1242-C #2			NA	
78	L4	AR1242-D #2			NA	
79	L4	AR1242-E #2			NA	
80	L4	AR1242-F #2			NA	

			Amount	Calc.	%Drift
81	L5	AR1248-A #2			NA
82	L5	AR1248-B #2			NA
83	L5	AR1248-C #2			NA
84	L5	AR1248-D #2			NA
85	L5	AR1248-E #2			NA

Continuing Calibration Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46788.D

86	L5	AR1248-F #2	-----NA-----						
			Amount	Calc.	%Drift				
87	L6	AR1254-A #2	-----NA-----						
88	L6	AR1254-B #2	-----NA-----						
89	L6	AR1254-C #2	-----NA-----						
90	L6	AR1254-D #2	-----NA-----						
91	L6	AR1254-E #2	-----NA-----						
92	L6	AR1254-F #2	-----NA-----						
93	L7	AR1260-A #2	400.000	390.950	2.3	101	-0.01	5.15- 5.25	
94	L7	AR1260-B #2	400.000	405.094	-1.3	106	-0.01	5.29- 5.39	
95	L7	AR1260-C #2	400.000	379.039	5.2	100	-0.01	5.55- 5.65	
96	L7	AR1260-D #2	400.000	375.906	6.0	98	-0.01	5.74- 5.84	
97	L7	AR1260-E #2	400.000	392.224	1.9	101	0.00	5.91- 6.00	
98	L7	AR1260-F #2	400.000	384.488	3.9	98	0.00	6.16- 6.26	
99	L9	AR1262-A #2	-----NA-----						
100	L9	AR1262-B #2	-----NA-----						
101	L9	AR1262-C #2	-----NA-----						
102	L9	AR1262-D #2	-----NA-----						
103	L9	AR1262-E #2	-----NA-----						
104	L9	AR1262-F #2	-----NA-----						
105	L8	AR1268-A #2	-----NA-----						
106	L8	AR1268-B #2	-----NA-----						
107	L8	AR1268-C #2	-----NA-----						
108	L8	AR1268-D #2	-----NA-----						
109	L8	AR1268-E #2	-----NA-----						
110	L8	AR1268-F #2	-----NA-----						
			Amount	Calc.	%Drift				
111	S	Decachlorobiphenyl	40.000	40.628	-1.6	101	0.00	6.95- 7.04	

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 15:35:09 2017

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46789.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46789.D\ECD1A.ch Vial: 5
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46789.D\ECD2B.ch
Acq On : 14 Nov 2017 3:52 am Operator: nareshj
Sample : cc895-400 1248 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene				-----NA-----				

			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				

			Amount	Calc.	%Drift	-----			
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A				-----NA-----				
20 L4	AR1242-B				-----NA-----				
21 L4	AR1242-C				-----NA-----				
22 L4	AR1242-D				-----NA-----				
23 L4	AR1242-E				-----NA-----				
24 L4	AR1242-F				-----NA-----				

			Amount	Calc.	%Drift	-----			
25 L5	AR1248-A	400.000	415.002	-3.8	104	0.00	3.87-	3.97	
26 L5	AR1248-B	400.000	428.851	-7.2	109	0.00	4.19-	4.29	
27 L5	AR1248-C	400.000	410.449	-2.6	103	0.00	4.37-	4.47	
28 L5	AR1248-D	400.000	420.410	-5.1	105	0.00	4.50-	4.59	
29 L5	AR1248-E	400.000	410.420	-2.6	104	0.00	4.76-	4.87	
30 L5	AR1248-F	400.000	406.204	-1.6	102	0.00	4.89-	4.99	

			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46789.D

34	L6	AR1254-D	-----NA-----
35	L6	AR1254-E	-----NA-----
36	L6	AR1254-F	-----NA-----
37	L7	AR1260-A	-----NA-----
38	L7	AR1260-B	-----NA-----
39	L7	AR1260-C	-----NA-----
40	L7	AR1260-D	-----NA-----
41	L7	AR1260-E	-----NA-----
42	L7	AR1260-F	-----NA-----
43	L9	AR1262-A	-----NA-----
44	L9	AR1262-B	-----NA-----
45	L9	AR1262-C	-----NA-----
46	L9	AR1262-D	-----NA-----
47	L9	AR1262-E	-----NA-----
48	L9	AR1262-F	-----NA-----
49	L8	AR1268-A	-----NA-----
50	L8	AR1268-B	-----NA-----
51	L8	AR1268-C	-----NA-----
52	L8	AR1268-D	-----NA-----
53	L8	AR1268-E	-----NA-----
54	L8	AR1268-F	-----NA-----
55	S	Decachlorobiphenyl	-----NA-----

***** Signal #2 *****

57	S	Tetrachloro-m-xylene #2	-----NA-----

		Amount	Calc.	%Drift	
58	L1	AR1016-A #2	-----NA-----		
59	L1	AR1016-B #2	-----NA-----		
60	L1	AR1016-C #2	-----NA-----		
61	L1	AR1016-D #2	-----NA-----		
62	L1	AR1016-E #2	-----NA-----		
63	L1	AR1016-F #2	-----NA-----		
64	L2	AR1221-A #2	-----NA-----		
65	L2	AR1221-B #2	-----NA-----		
66	L2	AR1221-C #2	-----NA-----		
67	L2	AR1221-D #2	-----NA-----		
68	L2	AR1221-E #2	-----NA-----		

		Amount	Calc.	%Drift	
69	L3	AR1232-A #2	-----NA-----		
70	L3	AR1232-B #2	-----NA-----		
71	L3	AR1232-C #2	-----NA-----		
72	L3	AR1232-D #2	-----NA-----		
73	L3	AR1232-E #2	-----NA-----		
74	L3	AR1232-F #2	-----NA-----		
75	L4	AR1242-A #2	-----NA-----		
76	L4	AR1242-B #2	-----NA-----		
77	L4	AR1242-C #2	-----NA-----		
78	L4	AR1242-D #2	-----NA-----		
79	L4	AR1242-E #2	-----NA-----		
80	L4	AR1242-F #2	-----NA-----		

		Amount	Calc.	%Drift	
81	L5	AR1248-A #2	400.000 425.617	-6.4 106	0.00 3.79- 3.89
82	L5	AR1248-B #2	400.000 426.067	-6.5 107	0.00 4.11- 4.21
83	L5	AR1248-C #2	400.000 430.050	-7.5 108	0.00 4.41- 4.51
84	L5	AR1248-D #2	400.000 420.175	-5.0 105	0.00 4.52- 4.62
85	L5	AR1248-E #2	400.000 423.264	-5.8 105	0.00 4.66- 4.76

Continuing Calibration Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46789.D

86	L5	AR1248-F #2	400.000	418.486	-4.6	104	0.00	5.05- 5.15
			----- Amount	Calc.	%Drift	-----		
87	L6	AR1254-A #2			-----NA-----			
88	L6	AR1254-B #2			-----NA-----			
89	L6	AR1254-C #2			-----NA-----			
90	L6	AR1254-D #2			-----NA-----			
91	L6	AR1254-E #2			-----NA-----			
92	L6	AR1254-F #2			-----NA-----			
93	L7	AR1260-A #2			-----NA-----			
94	L7	AR1260-B #2			-----NA-----			
95	L7	AR1260-C #2			-----NA-----			
96	L7	AR1260-D #2			-----NA-----			
97	L7	AR1260-E #2			-----NA-----			
98	L7	AR1260-F #2			-----NA-----			
99	L9	AR1262-A #2			-----NA-----			
100	L9	AR1262-B #2			-----NA-----			
101	L9	AR1262-C #2			-----NA-----			
102	L9	AR1262-D #2			-----NA-----			
103	L9	AR1262-E #2			-----NA-----			
104	L9	AR1262-F #2			-----NA-----			
105	L8	AR1268-A #2			-----NA-----			
106	L8	AR1268-B #2			-----NA-----			
107	L8	AR1268-C #2			-----NA-----			
108	L8	AR1268-D #2			-----NA-----			
109	L8	AR1268-E #2			-----NA-----			
110	L8	AR1268-F #2			-----NA-----			
			----- Amount	Calc.	%Drift	-----		
111	S	Decachlorobiphenyl #2			-----NA-----			

(#) = Out of Range
MM46753.D 8082dod1113.m

SPCC's out = 0 CCC's out = 0
Tue Nov 14 15:35:11 2017

8.6.19
8

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46790.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46790.D\ECD1A.ch Vial: 12
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46790.D\ECD2B.ch
Acq On : 14 Nov 2017 4:04 am Operator: nareshj
Sample : cc895-400 1242/1262 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	Tetrachloro-m-xylene				-----NA-----				
-----			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A				-----NA-----				
3 L1	AR1016-B				-----NA-----				
4 L1	AR1016-C				-----NA-----				
5 L1	AR1016-D				-----NA-----				
6 L1	AR1016-E				-----NA-----				
7 L1	AR1016-F				-----NA-----				
8 L2	AR1221-A				-----NA-----				
9 L2	AR1221-B				-----NA-----				
10 L2	AR1221-C				-----NA-----				
11 L2	AR1221-D				-----NA-----				
12 L2	AR1221-E				-----NA-----				
-----			Amount	Calc.	%Drift	-----			
13 L3	AR1232-A				-----NA-----				
14 L3	AR1232-B				-----NA-----				
15 L3	AR1232-C				-----NA-----				
16 L3	AR1232-D				-----NA-----				
17 L3	AR1232-E				-----NA-----				
18 L3	AR1232-F				-----NA-----				
19 L4	AR1242-A		400.000	432.829	-8.2	115	0.00	3.64-	3.74
20 L4	AR1242-B		400.000	422.291	-5.6	111	0.00	4.00-	4.10
21 L4	AR1242-C		400.000	454.964	-13.7	113	0.00	4.19-	4.29
22 L4	AR1242-D		400.000	439.239	-9.8	112	0.00	4.23-	4.33
23 L4	AR1242-E		400.000	415.382	-3.8	110	0.00	4.37-	4.47
24 L4	AR1242-F		400.000	427.988	-7.0	107	0.00	4.59-	4.69
-----			Amount	Calc.	%Drift	-----			
25 L5	AR1248-A				-----NA-----				
26 L5	AR1248-B				-----NA-----				
27 L5	AR1248-C				-----NA-----				
28 L5	AR1248-D				-----NA-----				
29 L5	AR1248-E				-----NA-----				
30 L5	AR1248-F				-----NA-----				
-----			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A				-----NA-----				
32 L6	AR1254-B				-----NA-----				
33 L6	AR1254-C				-----NA-----				

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Sample: GMM895-CC895
Lab FileID: MM46790.D

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ACCUTEST
FA49143

Continuing Calibration Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46790.D

86	L5	AR1248-F #2	-----NA-----						
			Amount	Calc.	%Drift	-----			
87	L6	AR1254-A #2	-----NA-----						
88	L6	AR1254-B #2	-----NA-----						
89	L6	AR1254-C #2	-----NA-----						
90	L6	AR1254-D #2	-----NA-----						
91	L6	AR1254-E #2	-----NA-----						
92	L6	AR1254-F #2	-----NA-----						
93	L7	AR1260-A #2	-----NA-----						
94	L7	AR1260-B #2	-----NA-----						
95	L7	AR1260-C #2	-----NA-----						
96	L7	AR1260-D #2	-----NA-----						
97	L7	AR1260-E #2	-----NA-----						
98	L7	AR1260-F #2	-----NA-----						
99	L9	AR1262-A #2	400.000	426.688	-6.7	108	0.00	5.14- 5.24	
100	L9	AR1262-B #2	400.000	421.561	-5.4	106	0.00	5.28- 5.38	
101	L9	AR1262-C #2	400.000	425.453	-6.4	106	0.00	5.54- 5.64	
102	L9	AR1262-D #2	400.000	417.986	-4.5	105	0.00	5.72- 5.82	
103	L9	AR1262-E #2	400.000	433.794	-8.4	105	0.00	5.91- 6.00	
104	L9	AR1262-F #2	400.000	426.103	-6.5	106	0.00	6.16- 6.26	
105	L8	AR1268-A #2	-----NA-----						
106	L8	AR1268-B #2	-----NA-----						
107	L8	AR1268-C #2	-----NA-----						
108	L8	AR1268-D #2	-----NA-----						
109	L8	AR1268-E #2	-----NA-----						
110	L8	AR1268-F #2	-----NA-----						
			Amount	Calc.	%Drift	-----			
111	S	Decachlorobiphenyl #2	-----NA-----						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46753.D 8082dod1113.m Tue Nov 14 15:35:13 2017

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Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46791.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46791.D\ECD1A.ch Vial: 19
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46791.D\ECD2B.ch
Acq On : 14 Nov 2017 4:15 am Operator: nareshj
Sample : cc895-400 1232/1268 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene			-----NA-----				

		Amount	Calc.	%Drift				
2 L1	AR1016-A			-----NA-----				
3 L1	AR1016-B			-----NA-----				
4 L1	AR1016-C			-----NA-----				
5 L1	AR1016-D			-----NA-----				
6 L1	AR1016-E			-----NA-----				
7 L1	AR1016-F			-----NA-----				
8 L2	AR1221-A			-----NA-----				
9 L2	AR1221-B			-----NA-----				
10 L2	AR1221-C			-----NA-----				
11 L2	AR1221-D			-----NA-----				
12 L2	AR1221-E			-----NA-----				

		Amount	Calc.	%Drift				
13 L3	AR1232-A	400.000	415.683	-3.9	104	0.00	3.64-	3.74
14 L3	AR1232-B	400.000	405.179	-1.3	104	0.00	4.00-	4.10
15 L3	AR1232-C	400.000	437.970	-9.5	108	0.00	4.19-	4.29
16 L3	AR1232-D	400.000	420.452	-5.1	103	0.00	4.30-	4.40
17 L3	AR1232-E	400.000	413.926	-3.5	105	0.00	4.50-	4.59
18 L3	AR1232-F	400.000	433.616	-8.4	106	0.00	4.79-	4.89
19 L4	AR1242-A			-----NA-----				
20 L4	AR1242-B			-----NA-----				
21 L4	AR1242-C			-----NA-----				
22 L4	AR1242-D			-----NA-----				
23 L4	AR1242-E			-----NA-----				
24 L4	AR1242-F			-----NA-----				

		Amount	Calc.	%Drift				
25 L5	AR1248-A			-----NA-----				
26 L5	AR1248-B			-----NA-----				
27 L5	AR1248-C			-----NA-----				
28 L5	AR1248-D			-----NA-----				
29 L5	AR1248-E			-----NA-----				
30 L5	AR1248-F			-----NA-----				

		Amount	Calc.	%Drift				
31 L6	AR1254-A			-----NA-----				
32 L6	AR1254-B			-----NA-----				
33 L6	AR1254-C			-----NA-----				

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Sample: GMM895-CC895
Lab FileID: MM46791.D

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57 S Tetrachloro-m-xylene #2 -----NA-----

		-----	Amount	Calc.	%Drift	-----			
69	L3	AR1232-A #2	400.000	405.491	-1.4	103	0.00	3.56-	3.66
70	L3	AR1232-B #2	400.000	413.006	-3.3	105	0.00	3.93-	4.03
71	L3	AR1232-C #2	400.000	434.652	-8.7	106	0.00	4.11-	4.21
72	L3	AR1232-D #2	400.000	421.887	-5.5	104	0.00	4.23-	4.33
73	L3	AR1232-E #2	400.000	416.543	-4.1	104	0.00	4.41-	4.51
74	L3	AR1232-F #2	400.000	409.906	-2.5	104	0.00	4.66-	4.76
75	L4	AR1242-A #2			-----NA-----				
76	L4	AR1242-B #2			-----NA-----				
77	L4	AR1242-C #2			-----NA-----				
78	L4	AR1242-D #2			-----NA-----				
79	L4	AR1242-E #2			-----NA-----				
80	L4	AR1242-F #2			-----NA-----				

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FA49143

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Sample: GMM895-CC895
Lab FileID: MM46791.D

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```
(#) = Out of Range          SPCC's out = 0   CCC's out = 0
MM46753.D  8082dod1113.m    Tue Nov 14 15:35:15 2017
```

Continuing Calibration Summary

Page 1 of 3

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46792.D

Evaluate Continuing Calibration Report

Signal #1 : C:\msdchem\2\DATA\gm...cb\MM46792.D\ECD1A.ch Vial: 26
Signal #2 : C:\msdchem\2\DATA\gmm895pcb\MM46792.D\ECD2B.ch
Acq On : 14 Nov 2017 4:27 am Operator: nareshj
Sample : cc895-400 1221/1254 Inst : ECD 9
Misc : op67616,gmm895,15.5,,,5,1,soil Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: EVENTS2.E

Method : C:\msdchem\2\METHODS\8082dod1113.m (ChemStation Integrator)
Title : PCBs by 8082a
Last Update : Tue Nov 14 14:07:28 2017
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.10min
Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound			Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window

1 S	Tetrachloro-m-xylene					-----NA-----			

			Amount	Calc.	%Drift	-----			
2 L1	AR1016-A					-----NA-----			
3 L1	AR1016-B					-----NA-----			
4 L1	AR1016-C					-----NA-----			
5 L1	AR1016-D					-----NA-----			
6 L1	AR1016-E					-----NA-----			
7 L1	AR1016-F					-----NA-----			
8 L2	AR1221-A			400.000	408.651	-2.2	102	0.00	2.96- 3.06
9 L2	AR1221-B			400.000	419.663	-4.9	104	0.00	3.27- 3.37
10 L2	AR1221-C			400.000	419.429	-4.9	104	0.00	3.52- 3.63
11 L2	AR1221-D			400.000	423.429	-5.9	105	0.00	3.59- 3.69
12 L2	AR1221-E			400.000	420.676	-5.2	105	0.00	3.64- 3.74

			Amount	Calc.	%Drift	-----			
13 L3	AR1232-A					-----NA-----			
14 L3	AR1232-B					-----NA-----			
15 L3	AR1232-C					-----NA-----			
16 L3	AR1232-D					-----NA-----			
17 L3	AR1232-E					-----NA-----			
18 L3	AR1232-F					-----NA-----			
19 L4	AR1242-A					-----NA-----			
20 L4	AR1242-B					-----NA-----			
21 L4	AR1242-C					-----NA-----			
22 L4	AR1242-D					-----NA-----			
23 L4	AR1242-E					-----NA-----			
24 L4	AR1242-F					-----NA-----			

			Amount	Calc.	%Drift	-----			
25 L5	AR1248-A					-----NA-----			
26 L5	AR1248-B					-----NA-----			
27 L5	AR1248-C					-----NA-----			
28 L5	AR1248-D					-----NA-----			
29 L5	AR1248-E					-----NA-----			
30 L5	AR1248-F					-----NA-----			

			Amount	Calc.	%Drift	-----			
31 L6	AR1254-A			400.000	425.982	-6.5	108	0.00	4.37- 4.47
32 L6	AR1254-B			400.000	432.055	-8.0	109	0.00	4.74- 4.84
33 L6	AR1254-C			400.000	459.578	-14.9	111	0.00	5.14- 5.24

Continuing Calibration Summary

Page 2 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46792.D

34	L6	AR1254-D	400.000	455.999	-14.0	113	0.00	5.34-	5.43
35	L6	AR1254-E	400.000	433.965	-8.5	113	0.00	5.52-	5.62
36	L6	AR1254-F	400.000	444.203	-11.1	111	0.00	5.62-	5.72
37	L7	AR1260-A							
38	L7	AR1260-B							
39	L7	AR1260-C							
40	L7	AR1260-D							
41	L7	AR1260-E							
42	L7	AR1260-F							
43	L9	AR1262-A							
44	L9	AR1262-B							
45	L9	AR1262-C							
46	L9	AR1262-D							
47	L9	AR1262-E							
48	L9	AR1262-F							
49	L8	AR1268-A							
50	L8	AR1268-B							
51	L8	AR1268-C							
52	L8	AR1268-D							
53	L8	AR1268-E							
54	L8	AR1268-F							
55	S	Decachlorobiphenyl							

***** Signal #2 *****

57	S	Tetrachloro-m-xylene #2							
			Amount	Calc.	%Drift				
58	L1	AR1016-A #2							
59	L1	AR1016-B #2							
60	L1	AR1016-C #2							
61	L1	AR1016-D #2							
62	L1	AR1016-E #2							
63	L1	AR1016-F #2							
64	L2	AR1221-A #2	400.000	407.511	-1.9	102	0.00	2.87-	2.97
65	L2	AR1221-B #2	400.000	416.240	-4.1	103	0.00	3.19-	3.29
66	L2	AR1221-C #2	400.000	424.927	-6.2	105	0.00	3.43-	3.53
67	L2	AR1221-D #2	400.000	422.025	-5.5	105	0.00	3.50-	3.60
68	L2	AR1221-E #2	400.000	427.439	-6.9	106	0.00	3.56-	3.66

			Amount	Calc.	%Drift				
69	L3	AR1232-A #2							
70	L3	AR1232-B #2							
71	L3	AR1232-C #2							
72	L3	AR1232-D #2							
73	L3	AR1232-E #2							
74	L3	AR1232-F #2							
75	L4	AR1242-A #2							
76	L4	AR1242-B #2							
77	L4	AR1242-C #2							
78	L4	AR1242-D #2							
79	L4	AR1242-E #2							
80	L4	AR1242-F #2							

			Amount	Calc.	%Drift				
81	L5	AR1248-A #2							
82	L5	AR1248-B #2							
83	L5	AR1248-C #2							
84	L5	AR1248-D #2							
85	L5	AR1248-E #2							

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Continuing Calibration Summary

Page 3 of 3

Job Number: FA49143
Account: TCMaw Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample: GMM895-CC895
Lab FileID: MM46792.D

86	L5	AR1248-F #2	-----NA-----						
			Amount	Calc.	%Drift	-----			
87	L6	AR1254-A #2	400.000	381.735	4.6	100	0.00	4.27- 4.37	
88	L6	AR1254-B #2	400.000	435.957	-9.0	109	0.00	4.66- 4.76	
89	L6	AR1254-C #2	400.000	446.656	-11.7	112	0.00	5.05- 5.15	
90	L6	AR1254-D #2	400.000	439.771	-9.9	110	0.00	5.21- 5.31	
91	L6	AR1254-E #2	400.000	427.389	-6.8	109	0.00	5.38- 5.48	
92	L6	AR1254-F #2	400.000	432.488	-8.1	110	0.00	5.51- 5.61	
93	L7	AR1260-A #2	-----NA-----						
94	L7	AR1260-B #2	-----NA-----						
95	L7	AR1260-C #2	-----NA-----						
96	L7	AR1260-D #2	-----NA-----						
97	L7	AR1260-E #2	-----NA-----						
98	L7	AR1260-F #2	-----NA-----						
99	L9	AR1262-A #2	-----NA-----						
100	L9	AR1262-B #2	-----NA-----						
101	L9	AR1262-C #2	-----NA-----						
102	L9	AR1262-D #2	-----NA-----						
103	L9	AR1262-E #2	-----NA-----						
104	L9	AR1262-F #2	-----NA-----						
105	L8	AR1268-A #2	-----NA-----						
106	L8	AR1268-B #2	-----NA-----						
107	L8	AR1268-C #2	-----NA-----						
108	L8	AR1268-D #2	-----NA-----						
109	L8	AR1268-E #2	-----NA-----						
110	L8	AR1268-F #2	-----NA-----						
			Amount	Calc.	%Drift	-----			
111	S	Decachlorobiphenyl #2	-----NA-----						

(#) = Out of Range SPCC's out = 0 CCC's out = 0
MM46753.D 8082dod1113.m Tue Nov 14 15:35:17 2017

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8

Metals Analysis

QC Data Summaries

6

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14493
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:40	MA14493-STD1	1		STDA
10:44	MA14493-STD2	1		STDB
10:47	MA14493-STD3	1		STDC
10:51	MA14493-STD4	1		STDD
10:55	MA14493-HSTD1	1		
11:07	MA14493-ICV1	1		
11:14	MA14493-ICB1	1		
11:18	MA14493-CRIA1	1		
11:25	MA14493-ICSA1	1		
11:33	MA14493-ICSAB1	1		
11:41	MA14493-CCV1	1		
11:50	MA14493-CCB1	1		
11:59	MP32987-MB1	1		
12:04	MP32987-B1	1		
12:08	FA48992-3	1		(sample used for QC only; not part of login FA49143)
12:12	MP32987-D1	1		
12:17	MP32987-SD1	5		
12:21	MP32987-PS1	1		
12:25	MP32987-S1	1		
12:30	MP32987-S2	1		
12:34	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:42	MA14493-CCV2	1		
12:47	MA14493-CCB2	1		
12:51	ZZZZZZ	1		
12:55	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:04	ZZZZZZ	1		
13:09	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:18	ZZZZZZ	1		
13:22	ZZZZZZ	1		
13:26	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14493
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:31	ZZZZZZ	1		
13:35	MA14493-CCV3	1		
13:39	MA14493-CCB3	1		
13:48	ZZZZZZ	1		
13:53	ZZZZZZ	1		
13:57	ZZZZZZ	1		
14:28	MA14493-CCV4	1		
14:32	MA14493-CCB4	1		
14:59	MP32990-MB1	1		
15:03	MP32990-B1	1		
15:07	FA48950-1	1		(sample used for QC only; not part of login FA49143)
15:12	MP32990-D1	1		
15:16	MP32990-SD1	5		
15:20	MA14493-CCV5	1		
15:24	MA14493-CCB5	1		
15:29	MP32990-PS1	1		
15:33	MP32990-S1	1		
15:37	MP32990-S2	1		
15:42	ZZZZZZ	1		
15:46	ZZZZZZ	5		
15:50	ZZZZZZ	1		
15:55	ZZZZZZ	1		
15:59	ZZZZZZ	1		
16:04	ZZZZZZ	5		
16:08	ZZZZZZ	1		
16:12	MA14493-CCV6	1		
16:17	MA14493-CCB6	1		
16:21	ZZZZZZ	1		
16:26	ZZZZZZ	5		
16:30	ZZZZZZ	5		
16:35	ZZZZZZ	5		
16:39	ZZZZZZ	5		
16:44	ZZZZZZ	5		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14493
Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Dilution Factor	PS Recov	Comments

16:48	ZZZZZZ	5		
16:53	FA49143-1	5		
-----> Last reportable sample/prep for job FA49143				
16:57	MA14493-CRIA2	1		
17:02	MA14493-ICSA2	1		
17:06	MA14493-CCV7	1		
17:11	MA14493-CCB7	1		
17:15	MA14493-ICSAB2	1		
17:20	MA14493-CCV8	1		
17:24	MA14493-CCB8	1		
-----> Last reportable CCB for job FA49143 Refer to raw data for calibration curve and standards.				

INTERNAL STANDARD SUMMARY

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14493
Parameters: As, Ba, Cd, Cr, Pb, Se, Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
10:40	MA14493-STD1	6703	44316	4966	2660
10:44	MA14493-STD2	6711	44158	5028	2518
10:47	MA14493-STD3	6443	42566	4959	2284
10:51	MA14493-STD4	6231	41835	4887	2122
10:55	MA14493-HSTD1	6210	41627	4899	2118
11:07	MA14493-ICV1	6417	42599	4965	2282
11:14	MA14493-ICB1	6644 R	44113 R	4975 R	2648 R
11:18	MA14493-CRIA1	6670	44174	5024	2575
11:25	MA14493-ICSA1	5938	38652	4611	1985
11:33	MA14493-ICSAB1	5964	38947	4717	1975
11:41	MA14493-CCV1	6462	42506	4942	2290
11:50	MA14493-CCB1	6701	44407	4926	2669
11:59	MP32987-MB1	6710	45223	4949	2664
12:04	MP32987-B1	6544	43379	4932	2399
12:08	FA48992-3	6294	42230	4876	2333
12:12	MP32987-D1	6317	42115	4924	2326
12:17	MP32987-SD1	6631	43845	4958	2538
12:21	MP32987-PS1	6287	41899	4811	2283
12:25	MP32987-S1	6338	41440	4828	2226
12:30	MP32987-S2	6307	41916	4820	2219
12:34	ZZZZZZ	6403	42661	4916	2396
12:38	ZZZZZZ	6439	43144	4935	2408
12:42	MA14493-CCV2	6470	43131	4945	2300
12:47	MA14493-CCB2	6709	44170	4997	2672
12:51	ZZZZZZ	6319	42086	4879	2330
12:55	ZZZZZZ	6392	42628	4957	2372
13:00	ZZZZZZ	6417	42704	4964	2398
13:04	ZZZZZZ	6723	44991	4997	2677
13:09	ZZZZZZ	6304	42035	4920	2354
13:13	ZZZZZZ	6267	41699	4875	2333
13:18	ZZZZZZ	6813	45209	5033	2663
13:22	ZZZZZZ	6768	44780	5004	2655
13:26	ZZZZZZ	6745	44850	4986	2615

INTERNAL STANDARD SUMMARY

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
Analyst: LM Run ID: MA14493
Parameters: As, Ba, Cd, Cr, Pb, Se, Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
13:31	ZZZZZZ	6845	45660	5013	2669
13:35	MA14493-CCV3	6457	42412	4897	2287
13:39	MA14493-CCB3	6687	44157	4963	2656
13:48	ZZZZZZ	7924	52279	5921	2540
13:53	ZZZZZZ	6773	44948	5048	2583
13:57	ZZZZZZ	6741	44656	5025	2595
14:28	MA14493-CCV4	6449	42660	4900	2278
14:32	MA14493-CCB4	6649	44042	4876	2634
14:59	MP32990-MB1	6787	45219	5064	2703
15:03	MP32990-B1	6544	43237	4947	2391
15:07	FA48950-1	7308	48310	5424	2427
15:12	MP32990-D1	7283	47837	5444	2455
15:16	MP32990-SD1	6906	45328	5080	2569
15:20	MA14493-CCV5	6434	42692	4842	2275
15:24	MA14493-CCB5	6660	43635	4864	2637
15:29	MP32990-PS1	7237	47412	5359	2362
15:33	MP32990-S1	7183	46481	5300	2281
15:37	MP32990-S2	7108	46100	5223	2261
15:42	ZZZZZZ	7353	48082	5341	2410
15:46	ZZZZZZ	6795	44542	4960	2510
15:50	ZZZZZZ	7594	49238	5521	2353
15:55	ZZZZZZ	7430	48873	5592	2183
15:59	ZZZZZZ	7928	51502	5935	2094
16:04	ZZZZZZ	6670	43819	4980	2419
16:08	ZZZZZZ	5955	40320	5157	1583 !
16:12	MA14493-CCV6	6460	42768	4741	2281
16:17	MA14493-CCB6	6690	43954	4770	2644
16:21	ZZZZZZ	6030	40706	5124	1589
16:26	ZZZZZZ	7124	46446	5140	2470
16:30	ZZZZZZ	6875	45124	4943	2519
16:35	ZZZZZZ	7068	45969	5018	2494
16:39	ZZZZZZ	7127	46559	5080	2491
16:44	ZZZZZZ	7086	45977	4993	2484

INTERNAL STANDARD SUMMARY

Login Number: FA49143
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
 Analyst: LM Run ID: MA14493
 Parameters: As,Ba,Cd,Cr,Pb,Se,Ag

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4
16:48	ZZZZZZ	7092	46508	5004	2479
16:53	FA49143-1	6516	42703	4753	2329
16:57	MA14493-CRIA2	6696	43827	4729	2558
17:02	MA14493-ICSA2	6009	38683	4435	1995
17:06	MA14493-CCV7	6489	42604	4660	2281
17:11	MA14493-CCB7	6723	43730	4595	2656
17:15	MA14493-ICSAB2	6005	38635	4374	1973
17:20	MA14493-CCV8	6475	42389	4532	2271
17:24	MA14493-CCB8	6709	43566	4564	2641

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium (2243)	60-125 %
Istd#2	Yttrium (3600)	60-125 %
Istd#3	Yttrium (3710)	60-125 %
Istd#4	Indium	60-125 %

9.1.1
9

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14493 Units: ug/l

Time: Sample ID:			11:14 ICB1		11:50 CCB1		12:47 CCB2		13:39 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	6.0	1	anr							
Arsenic	10	1.3	0.10	<10	0.30	<10	0.50	<10	0.50	<10
Barium	200	1	-0.10	<200	-0.40	<200	0.0	<200	-0.10	<200
Beryllium	4.0	.2	anr							
Cadmium	5.0	.2	0.10	<5.0	0.10	<5.0	0.0	<5.0	0.10	<5.0
Calcium	1000	50	anr							
Chromium	10	1	0.20	<10	0.10	<10	0.10	<10	0.20	<10
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	17	anr							
Lead	5.0	1	0.0	<5.0	0.40	<5.0	-0.10	<5.0	-0.20	<5.0
Magnesium	5000	35	anr							
Manganese	15	.5	anr							
Molybdenum	50	.3								
Nickel	40	.4	anr							
Potassium	10000	200	anr							
Selenium	10	2.4	-0.70	<10	-1.9	<10	0.20	<10	-0.30	<10
Silver	10	.7	0.0	<10	0.40	<10	0.50	<10	-0.20	<10
Sodium	10000	500	anr							
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14493 Units: ug/l

Time: Sample ID:			14:32 CCB4		15:24 CCB5		16:17 CCB6		17:11 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	200	14	anr							
Antimony	6.0	1	anr							
Arsenic	10	1.3	0.90	<10	0.20	<10	-0.50	<10	0.50	<10
Barium	200	1	0.0	<200	-0.20	<200	0.0	<200	0.0	<200
Beryllium	4.0	.2	anr							
Cadmium	5.0	.2	0.20	<5.0	0.10	<5.0	0.0	<5.0	-0.10	<5.0
Calcium	1000	50	anr							
Chromium	10	1	0.30	<10	0.10	<10	0.10	<10	0.30	<10
Cobalt	50	.2	anr							
Copper	25	1	anr							
Iron	300	17	anr							
Lead	5.0	1	0.70	<5.0	0.10	<5.0	0.30	<5.0	-0.40	<5.0
Magnesium	5000	35	anr							
Manganese	15	.5	anr							
Molybdenum	50	.3								
Nickel	40	.4	anr							
Potassium	10000	200	anr							
Selenium	10	2.4	-0.30	<10	0.40	<10	-1.7	<10	0.30	<10
Silver	10	.7	0.30	<10	0.20	<10	0.30	<10	0.10	<10
Sodium	10000	500	anr							
Strontium	10	.5								
Thallium	10	1.1	anr							
Tin	50	.9								
Titanium	10	.5								
Vanadium	50	.5	anr							
Zinc	20	3	anr							

(*) Outside of QC limits
(anr) Analyte not requested

9.1.2
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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA49143
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
QC Limits: result < RL Run ID: MA14493 Units: ug/l

Time: Sample ID:		17:24 CCB8		
Metal	RL	IDL	raw	final
Aluminum	200	14	anr	
Antimony	6.0	1	anr	
Arsenic	10	1.3	1.1	<10
Barium	200	1	-0.10	<200
Beryllium	4.0	.2	anr	
Cadmium	5.0	.2	0.0	<5.0
Calcium	1000	50	anr	
Chromium	10	1	0.0	<10
Cobalt	50	.2	anr	
Copper	25	1	anr	
Iron	300	17	anr	
Lead	5.0	1	0.40	<5.0
Magnesium	5000	35	anr	
Manganese	15	.5	anr	
Molybdenum	50	.3		
Nickel	40	.4	anr	
Potassium	10000	200	anr	
Selenium	10	2.4	-1.6	<10
Silver	10	.7	0.30	<10
Sodium	10000	500	anr	
Strontium	10	.5		
Thallium	10	1.1	anr	
Tin	50	.9		
Titanium	10	.5		
Vanadium	50	.5	anr	
Zinc	20	3	anr	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA49143
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14493 Units: ug/l

Time: Sample ID:	ICV	11:07 ICV1		CCV	11:41 CCV1		CCV	12:42 CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2020	101.0	2000	2000	100.0	2000	2000	100.0
Barium	2000	2020	101.0	2000	2020	101.0	2000	2010	100.5
Beryllium	anr								
Cadmium	2000	2030	101.5	2000	2020	101.0	2000	2010	100.5
Calcium	anr								
Chromium	2000	1990	99.5	2000	2010	100.5	2000	1980	99.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	1980	99.0	2000	2010	100.5	2000	2000	100.0
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2000	100.0	2000	2010	100.5	2000	2010	100.5
Silver	250	247	98.8	250	251	100.4	250	251	100.4
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14493 Units: ug/l

Time: Sample ID:	CCV	13:35 CCV3	% Rec	CCV	14:28 CCV4	% Rec	CCV	15:20 CCV5	% Rec
Metal	True	Results		True	Results		True	Results	
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2010	100.5	2000	2010	100.5	2000	2010	100.5
Barium	2000	2050	102.5	2000	2070	103.5	2000	2060	103.0
Beryllium	anr								
Cadmium	2000	2020	101.0	2000	2020	101.0	2000	2030	101.5
Calcium	anr								
Chromium	2000	1990	99.5	2000	1990	99.5	2000	2000	100.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2010	100.5	2000	2020	101.0	2000	2020	101.0
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2030	101.5	2000	2020	101.0	2000	2020	101.0
Silver	250	253	101.2	250	253	101.2	250	253	101.2
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA49143
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
QC Limits: 90 to 110 % Recovery Run ID: MA14493 Units: ug/l

Time: Sample ID:	CCV	16:12 CCV6	% Rec	CCV	17:06 CCV7	% Rec	CCV	17:20 CCV8	% Rec
Metal	True	Results		True	Results		True	Results	
Aluminum	anr								
Antimony	anr								
Arsenic	2000	2000	100.0	2000	1970	98.5	2000	1960	98.0
Barium	2000	2080	104.0	2000	2100	105.0	2000	2110	105.5
Beryllium	anr								
Cadmium	2000	2010	100.5	2000	1980	99.0	2000	1980	99.0
Calcium	anr								
Chromium	2000	1980	99.0	2000	1960	98.0	2000	1960	98.0
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	2000	2010	100.5	2000	1980	99.0	2000	1980	99.0
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	2000	2020	101.0	2000	1980	99.0	2000	1980	99.0
Silver	250	253	101.2	250	252	100.8	250	252	100.8
Sodium	anr								
Strontium									
Thallium	anr								
Tin									
Titanium									
Vanadium	anr								
Zinc	anr								

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA49143
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
 QC Limits: 95 to 105 % Recovery Run ID: MA14493 Units: ug/l

Time: Sample ID:	HSTD	10:55 HSTD1	
Metal	True	Results	% Rec
Aluminum	anr		
Antimony	anr		
Arsenic	4000	4040	101.0
Barium	4000	3990	99.8
Beryllium	anr		
Cadmium	4000	3990	99.8
Calcium	anr		
Chromium	4000	3960	99.0
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	4000	4010	100.3
Magnesium	anr		
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium	anr		
Selenium	4000	4030	100.8
Silver	500	495	99.0
Sodium	anr		
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium	anr		
Zinc	anr		

(*) Outside of QC limits
 (anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA49143
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
 QC Limits: CRI 70-130% CRIA 70-130% Run ID: MA14493 Units: ug/l

Time: Sample ID:	CRI	CRIA	11:18 CRIA1	% Rec	16:57 CRIA2	% Rec
Metal	True	True	Results		Results	
Aluminum	400	200	anr			
Antimony	10	5.0	anr			
Arsenic	20	10	9.3	93.0	9.9	99.0
Barium	400	200	198	99.0	207	103.5
Beryllium	10	5.0	anr			
Cadmium	10	5.0	5.1	102.0	5.1	102.0
Calcium	2000	1000	anr			
Chromium	20	10	9.8	98.0	10.0	100.0
Cobalt	100	50	anr			
Copper	50	25	anr			
Iron	600	300	anr			
Lead	10	5.0	4.8	96.0	4.3	86.0
Magnesium	10000	5000	anr			
Manganese	30	15	anr			
Molybdenum	100	50				
Nickel	80	40	anr			
Potassium	20000	10000	anr			
Selenium	20	10	8.0	80.0	7.2	72.0
Silver	20	10	8.1	81.0	8.0	80.0
Sodium	20000	10000	anr			
Strontium	20	10				
Thallium	20	10	anr			
Tin	100	50				
Titanium	20	10				
Vanadium	100	50	anr			
Zinc	40	20	anr			

(*) Outside of QC limits
 (anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA49143
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: SA111017M1.ICP Date Analyzed: 11/10/17 Methods: SW846 6010C
QC Limits: 80 to 120 % Recovery Run ID: MA14493 Units: ug/l

Time: Sample ID:	ICSA True	ICSAB True	11:25 ICSA1 Results	% Rec	11:33 ICSAB1 Results	% Rec	17:02 ICSA2 Results	% Rec	17:15 ICSAB2 Results	% Rec
Metal										
Aluminum	500000	500000	517000	103.4	521000	104.2	537000	107.4	547000	109.4
Antimony		1000	-1.4		999	99.9	-0.60		984	98.4
Arsenic		1000	0.30		1070	107.0	-0.60		1050	105.0
Barium		500	0.10		501	100.2	-0.30		523	104.6
Beryllium		500	0.0		482	96.4	-0.20		494	98.8
Cadmium		1000	0.0		915	91.5	-0.20		894	89.4
Calcium	500000	500000	475000	95.0	481000	96.2	485000	97.0	488000	97.6
Chromium		500	-0.50		480	96.0	-0.90		470	94.0
Cobalt		500	0.30		457	91.4	0.40		454	90.8
Copper		500	0.0		511	102.2	-0.80		520	104.0
Iron	200000	200000	187000	93.5	184000	92.0	176000	88.0	179000	89.5
Lead		1000	0.20		931	93.1	-2.3		907	90.7
Magnesium	500000	500000	520000	104.0	516000	103.2	529000	105.8	527000	105.4
Manganese		500	-0.50		477	95.4	-2.0		487	97.4
Molybdenum		1000	0.0		986	98.6	-0.50		984	98.4
Nickel		1000	0.0		941	94.1	-0.40		952	95.2
Potassium			9.2		7.4		31.8		23.9	
Selenium		1000	0.30		1010	101.0	-2.8		988	98.8
Silver		1000	-0.30		1020	102.0	-0.30		1020	102.0
Sodium			167		166		178		189	
Strontium		1000	0.10		1040	104.0	1.8		1100	110.0
Thallium		1000	0.0		952	95.2	2.5		931	93.1
Tin		1000	3.5		960	96.0	2.8		960	96.0
Titanium		1000	0.80		1020	102.0	0.70		1050	105.0
Vanadium		500	0.0		466	93.2	0.20		470	94.0
Zinc		1000	-0.90		912	91.2	-6.1		924	92.4

(*) Outside of QC limits
(anr) Analyte not requested

9.1.6
9

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA49143
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
Analyst: DM Run ID: MA14500
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:45	MA14500-STD1	1		STD1
09:46	MA14500-STD2	1		STD2
09:47	MA14500-STD3	1		STD3
09:49	MA14500-STD4	1		STD4
09:50	MA14500-STD5	1		STD5
09:52	MA14500-STD6	1		STD6
09:55	MA14500-HSTD1	1		
09:57	MA14500-ICV1	1		
09:59	MA14500-ICB1	1		
10:01	MA14500-CRI1	1		
10:02	MA14500-CCV1	1		
10:04	MA14500-CCB1	1		
10:06	MP33002-MB1	1		
10:07	MP33002-B1	1		
10:08	FA49180-1	1		(sample used for QC only; not part of login FA49143)
10:10	MP33002-D1	1		
10:12	MP33002-SD1	5		
10:14	MP33002-S1	1		
10:15	MP33002-S2	1		
10:17	ZZZZZZ	1		
10:19	ZZZZZZ	1		
10:21	ZZZZZZ	1		
10:23	MA14500-CCV2	1		
10:24	MA14500-CCB2	1		
10:26	ZZZZZZ	1		
10:27	ZZZZZZ	1		
10:29	ZZZZZZ	1		
10:30	ZZZZZZ	1		
10:32	ZZZZZZ	1		
10:34	ZZZZZZ	1		
10:36	ZZZZZZ	1		
10:37	ZZZZZZ	1		
10:39	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA49143
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
Analyst: DM Run ID: MA14500
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:41	ZZZZZZ	1		
10:43	MA14500-CCV3	1		
10:44	MA14500-CCB3	1		
10:46	FA49143-1	1		
----->	Last reportable sample/	1		prep for job FA49143
10:48	ZZZZZZ	1		
10:49	ZZZZZZ	1		
10:50	MP33003-MB1	1		
10:52	MP33003-B1	1		
10:53	FA49115-1	1		(sample used for QC only; not part of login FA49143)
10:55	MP33003-D1	1		
10:57	MP33003-D2	1		
10:58	MP33003-SD1	5		
11:00	MP33003-S1	1		
11:01	MA14500-CCV4	1		
11:03	MA14500-CCB4	1		
11:06	MP33003-S2	1		
11:07	ZZZZZZ	1		
11:09	ZZZZZZ	1		
11:11	ZZZZZZ	1		
11:12	ZZZZZZ	1		
11:14	ZZZZZZ	1		
11:16	ZZZZZZ	1		
11:18	ZZZZZZ	1		
11:19	ZZZZZZ	1		
11:21	ZZZZZZ	1		
11:23	MA14500-CCV5	1		
11:24	MA14500-CCB5	1		
11:26	ZZZZZZ	1		
11:28	ZZZZZZ	1		
11:30	ZZZZZZ	1		
11:31	ZZZZZZ	1		
11:32	MA14500-CCV6	1		
11:34	MA14500-CCB6	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
Analyst: DM Run ID: MA14500
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:40	MA14500-CRI2	1		
11:41	MA14500-CCV7	1		
11:43	MA14500-CCB7	1		
----->	Last reportable CCB for job FA49143 Refer to raw data for calibration curve and standards.			

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA14500 Units: ug/l

Time: Sample ID:			09:59 ICB1		10:04 CCB1		10:24 CCB2		10:44 CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.065	<0.50	-0.065	<0.50	-0.057	<0.50	-0.067	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
QC Limits: result < RL Run ID: MA14500 Units: ug/l

Time: Sample ID:			11:03 CCB4		11:24 CCB5		11:34 CCB6		11:43 CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.058	<0.50	-0.060	<0.50	-0.061	<0.50	-0.060	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA14500 Units: ug/l

Time:		09:57			10:02			10:23		
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2		
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec	
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3	3.1	103.3	

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA14500 Units: ug/l

Time:		10:43		11:01		11:23			
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3	3.2	106.7	3	3.1	103.3

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
QC Limits: 90 to 110 % Recovery Run ID: MA14500 Units: ug/l

Time:		11:32			11:41		
Sample ID:	CCV	CCV6		CCV	CCV7		
Metal	True	Results	% Rec	True	Results	% Rec	
Mercury	3	2.9	96.7	3.0	3.0	100.0	

(*) Outside of QC limits
(anr) Analyte not requested

HIGH STANDARD CHECK SUMMARY

Login Number: FA49143
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
 QC Limits: 95 to 105 % Recovery Run ID: MA14500 Units: ug/l

Time:	09:55		
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	5.9	98.3

(*) Outside of QC limits
 (anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA49143
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

File ID: H51115S1.CSV Date Analyzed: 11/15/17 Methods: SW846 7471B
 QC Limits: 80 to 120 % Recovery Run ID: MA14500 Units: ug/l

Time:				10:01		11:40	
Sample ID:	CRI	CRIA	CRI1		CRI2		
Metal	True	True	Results	% Rec	Results	% Rec	
Mercury	0.20		0.17	85.0	0.19	95.0	

(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA49143
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32990
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 11/10/17

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.7	1.8		
Antimony	1.0	.05	.065		
Arsenic	0.50	.065	.1	-0.010	<0.50
Barium	10	.05	.05	-0.010	<10
Beryllium	0.25	.01	.025		
Cadmium	0.20	.01	.025	-0.0050	<0.20
Calcium	250	2.5	2.5		
Chromium	0.50	.05	.05	0.020	<0.50
Cobalt	2.5	.01	.025		
Copper	1.3	.05	.05		
Iron	15	.85	.85		
Lead	1.0	.05	.05	0.015	<1.0
Magnesium	250	1.8	1.8		
Manganese	0.75	.025	.025		
Molybdenum	2.5	.015	.025		
Nickel	2.0	.02	.025		
Potassium	500	10	10		
Selenium	1.0	.12	.12	-0.035	<1.0
Silver	0.50	.035	.041	-0.010	<0.50
Sodium	500	25	25		
Strontium	0.50	.025	.025		
Thallium	0.50	.055	.055		
Tin	2.5	.045	.045		
Titanium	0.50	.025	.025		
Vanadium	2.5	.025	.025		
Zinc	1.0	.15	.15		

Associated samples MP32990: FA49143-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA49143
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32990
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date:

11/10/17

11/10/17

Metal	FA48950-1 Original DUP		RPD	QC Limits	FA48950-1 Original MS		Spikelot MPFLICP2	% Rec	QC Limits							
Aluminum	anr															
Antimony	anr															
Arsenic	2.7	2.2								20.4 (a)	0-20	2.7	108	120	87.7	80-120
Barium	40.8	38.5								5.8	0-20	40.8	156	120	95.9	80-120
Beryllium	anr															
Cadmium	14.7	13.5								8.5	0-20	14.7	15.4	3	23.3 (b)	80-120
Calcium	anr															
Chromium	5.8	5.9								1.7	0-20	5.8	17.6	12	98.3	80-120
Cobalt	anr															
Copper	anr															
Iron	anr															
Lead	33.5	31.2	7.1	0-20	33.5	61.7	30	93.9	80-120							
Magnesium	anr															
Manganese	anr															
Molybdenum																
Nickel	anr															
Potassium	anr															
Selenium	0.0	0.0	NC	0-20	0.0	105	120	87.5	80-120							
Silver	0.0	0.0	NC	0-20	0.0	2.8	3	93.3	80-120							
Sodium	anr															
Strontium																
Thallium	anr															
Tin																
Titanium																
Vanadium	anr															
Zinc	anr															

Associated samples MP32990: FA49143-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA49143
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32990
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 11/10/17

Metal	FA48950-1 Original MSD		Spike lot MPFLICP2 % Rec		MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	2.7	120	137	85.9	10.5	20
Barium	40.8	175	137	98.3	11.5	20
Beryllium	anr					
Cadmium	14.7	17.9	3.41	93.7	15.0	20
Calcium	anr					
Chromium	5.8	19.1	13.7	97.4	8.2	20
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	33.5	65.7	34.1	94.3	6.3	20
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium	anr					
Selenium	0.0	117	137	85.7	10.8	20
Silver	0.0	3.2	3.41	93.7	13.3	20
Sodium	anr					
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP32990: FA49143-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA49143

Account: TCMaw - Tantara Corporation

Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32990

Methods: SW846 6010C

Matrix Type: SOLID

Units: mg/kg

Prep Date: 11/10/17

Metal	BSP Result	Spike lot MPFLICP2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	99.6	100	99.6	80-120
Barium	103	100	103.0	80-120
Beryllium	anr			
Cadmium	2.6	2.5	104.0	80-120
Calcium	anr			
Chromium	10.2	10	102.0	80-120
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	24.3	25	97.2	80-120
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	99.7	100	99.7	80-120
Silver	2.5	2.5	100.0	80-120
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP32990: FA49143-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA49143
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32990
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 11/10/17

Metal	FA48950-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	43.8	47.0	7.3	0-10
Barium	668	739	10.6*(a)	0-10
Beryllium	anr			
Cadmium	241	271	12.6*(a)	0-10
Calcium	anr			
Chromium	94.6	106	11.7*(a)	0-10
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	549	558	1.6	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP32990: FA49143-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested
 (a) Serial dilution indicates possible matrix interference.

POST DIGESTATE SPIKE SUMMARY

Login Number: FA49143
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP32990
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

11/10/17

Metal	Sample ml	Final ml	FA48950-1 Raw	FA48950-1 Corr.**	PS ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum										
Antimony										
Arsenic	9.8	10	43.8	42.924	137.2	0.2	5	100	94.3	80-120
Barium	9.8	10	668.3	654.934	902.9	0.2	12.5	250	99.2	80-120
Beryllium										
Cadmium	9.8	10	240.7	235.886	281.8	0.2	2.5	50	91.8	80-120
Calcium										
Chromium	9.8	10	94.6	92.708	139.1	0.2	2.5	50	92.8	80-120
Cobalt										
Copper										
Iron										
Lead	9.8	10	549	538.02	592.9	0.2	2.5	50	109.8	80-120
Magnesium										
Manganese										
Molybdenum										
Nickel										
Potassium										
Selenium	9.8	10			88.3	0.2	5	100	88.3	80-120
Silver	9.8	10			45.9	0.2	2.5	50	91.8	80-120
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Vanadium										
Zinc										

Associated samples MP32990: FA49143-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (**) Corr. sample result = Raw * (sample volume / final volume)
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA49143
Account: TCMAW - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP33002
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 11/15/17

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.042	.0025	.0042	-0.0025	<0.042

Associated samples MP33002: FA49143-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA49143
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP33002
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/17 11/15/17

Metal	FA49180-1 Original DUP		RPD	QC Limits	FA49180-1 Original MS		Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.019	0.019	0.0	0-20	0.019	0.29	0.247	109.9	80-120

Associated samples MP33002: FA49143-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA49143
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP33002
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/17

Metal	FA49180-1 Original MSD		Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.019	0.34	0.298	107.6	15.9	20

Associated samples MP33002: FA49143-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA49143
 Account: TCMaw - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP33002
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 11/15/17

Metal	BSP Result	Spike lot HGFLWS1	% Rec	QC Limits
Mercury	0.24	0.25	96.0	80-120

Associated samples MP33002: FA49143-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA49143
 Account: TCMAW - Tantara Corporation
 Project: USACE Buffalo Nike Missile UST; E Aurora, NY

QC Batch ID: MP33002
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: ug/l

Prep Date: 11/15/17

Metal	FA49180-1		QC	
	Original	SDL 1:5	%DIF	Limits
Mercury	0.205	0.00	100.0(a)	0-10

Associated samples MP33002: FA49143-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Instrument Detection Limits

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: LEEMANHG5	Effective Date: 10/01/12

Analyte	IDL ug/l
Mercury	.03

The above applies to the following instrument runs:
MA14500

Instrument Detection Limits

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: SSTRACE1	Effective Date: 01/27/15

Analyte	IDL ug/l
Aluminum	14
Antimony	1
Arsenic	1.3
Barium	1
Beryllium	.2
Cadmium	.2
Calcium	50
Chromium	1
Cobalt	.2
Copper	1
Iron	17
Lead	1
Magnesium	35
Manganese	.5
Molybdenum	.3
Nickel	.4
Potassium	200
Selenium	2.4
Silicon	5
Silver	.7
Sodium	500
Strontium	.5
Sulfur	5
Thallium	1.1
Tin	.9
Titanium	.5
Vanadium	.5
Zinc	3

The above applies to the following instrument runs:
MA14493

Instrument Linear Ranges

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Instrument ID: SSTRACE1	Effective Date: 08/13/13

Analyte	Linear Range ug/l
Aluminum	500000
Antimony	10000
Arsenic	10000
Barium	10000
Beryllium	10000
Cadmium	10000
Calcium	500000
Chromium	10000
Cobalt	10000
Copper	10000
Iron	500000
Lead	10000
Magnesium	500000
Manganese	10000
Molybdenum	10000
Nickel	10000
Potassium	80000
Selenium	10000
Silver	1000
Sodium	80000
Strontium	10000
Sulfur	10000
Thallium	10000
Tin	10000
Titanium	10000
Vanadium	10000
Zinc	10000

The above applies to the following instrument runs:
MA14493

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Percent Solids Raw Data Summary

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA49143
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Cyanide Reactivity	GP30628/GN76950	1.5	0.0	mg/kg	50.0	0.029	0.1	0-100%
Sulfide Reactivity	GP30629/GN76947	50	0.0	mg/kg	772	300	38.9	0-100%

Associated Samples:
Batch GP30628: FA49143-1
Batch GP30629: FA49143-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA49143
Account: TCMaw - Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Cyanide Reactivity	GP30628/GN76950	FA49143-1	mg/kg	1.2 U	0.0	84.1(a)	0-30%
Ignitability (Flashpoint)	GN76930	FA49183-1	Deg. F	>200	>200	0.0	0-38%
Solids, Percent	GN76853	FA48989-7	%	92.5	92.6	0.1	0-5%
Sulfide Reactivity	GP30629/GN76947	FA49143-1	mg/kg	83 U	0.00	18.0	0-30%
pH	GN76978	FA48950-1	su	7.01	7.06	0.7	0-10%

Associated Samples:

Batch GN76853: FA49143-1

Batch GN76930: FA49143-1

Batch GN76978: FA49143-1

Batch GP30628: FA49143-1

Batch GP30629: FA49143-1

(*) Outside of QC limits

(a) RPD acceptable due to low duplicate and sample concentrations.

Percent Solids Raw Data Summary

Job Number: FA49143
Account: TCMAW Tantara Corporation
Project: USACE Buffalo Nike Missile UST; E Aurora, NY

Sample:	FA49143-1	Analyzed:	10-NOV-17 by BW	Method:	SM19 2540G
ClientID:	TANK BOTTOMS				
Wet Weight (Total)	25.07		g		
Tare Weight	2.53		g		
Dry Weight (Total)	15.41		g		
Solids, Percent	57.1		%		

10.3
10

Appendix D

NYSDEC Spill Report Form

NYSDEC SPILL REPORT FORM

DEC REGION: 9 SPILL NUMBER: 1706975
 SPILL NAME: SOIL DEC LEAD: FXGALLEG

CALLER NAME: MARK NOTIFIER'S NAME: MARK
 CLR'S AGENCY: TANTARA CORP NOTIFIER'S AGENCY: TANTARA CORP
 CALLER'S PHONE: 5087) 525-599 NOTIFIER'S PHONE: 5087) 525-599

SPILL DATE: 10/18/2017 SPILL TIME: 12:00 pm DISPATCHER: AASPRAGU
 CALL RECEIVED DATE: 10/18/2017 RECEIVED TIME: 2:24 pm

SPILL LOCATION

PLACE: SOIL COUNTY: Erie
 STREET: 601 WILLARD SHIRE ROAD TOWN/CITY: Aurora
 COMMUNITY: EAST AURORA
 CONTACT: MARK CONTACT PHONE: 5087) 525-599

CONT. FACTOR: Unknown SPILL REPORTED BY: Other
 FACILITY TYPE: Unknown WATERBODY:

CALLER REMARKS:

samples came back positive
 clean up is in progress
 Mark's cell 339-234-3142

MATERIAL	CLASS	SPILLED	RECOVERED	RESOURCES AFFECTED
#2 fuel oil	Petroleum			

POTENTIAL SPILLERS

COMPANY	ADDRESS	CONTACT
UNKNOWN	601 WILLARD SHIRE ROAD EAST AURORA NY	MARK 5087) 525-599

Tank No.	Tank Size	Material	Cause	Source	Test Method	Leak Rate	Gross Failure
DEC REMARKS:							

DEC REMARKS:

10/20/17 LCS provided an update email:
 Hi Francine -

I am glad we were able to talk earlier. As discussed, LCS has been retained by the property owner (Waterhill Trust) to provide consultation services with respect to certain activities the United States Army Corps. of Engineers (USACE) is completing at the above-referenced site. As you know, recent activities include the removal of an approximate 8,000-gallon underground storage tank (UST) located proximate a former Generator building. Also as you know, during removal of that UST, apparent impacted soils were identified proximate the westernmost edge of the UST. Based on observations subsequent to your site visit today, it was determined that the concrete slab underlying the tank is stained and evidence of impacted soils have been confirmed extending underneath the concrete pad and appear to have migrated beyond the tank grave.

NYSDEC SPILL REPORT FORM

DEC REGION:	<u>9</u>	SPILL NUMBER:	<u>1706975</u>
SPILL NAME:	<u>SOIL</u>	DEC LEAD:	<u>FXGALLEG</u>

In accordance with the UST Closure Plan that the USACE recently submitted to the NYSDEC Petroleum Bulk Storage (PBS) Department removal of the concrete pad is to be performed. This will also help to facilitate the removal of remaining impacted materials so that the areas proximate the UST can be remediated to a point where there is no potential for special handling of soils in the future (i.e., during redevelopment), no threat of impact to groundwater, no potential to impact the indoor air quality of future structures and so that the value and marketability of the property is not decreased.

The Trust has no interest in an "Inactive" status as remediation can and should be fully completed. To date, there have been no obstacles identified that prevent remediating the tank area to remove future risks and liabilities. The Trust does not object to removal of trees, brush or additional soils by the USACE to facilitate remediation.

Please do not hesitate to contact us with any questions. On behalf of the Trust, thank you for all of your efforts. They are greatly appreciated!

Sincerely,

Douglas B. Reid
Sr. VP, Environmental Services

1-800-474-6802

Army Corps of Engineer contact:
His name is Greg Goepfert (if I am reading Jaspal's handwriting correctly) and his phone number is 732-841-8062.

PIN

T & A

COST CENTER

CLASS: **CLOSE DATE:** **MEETS STANDARDS:** False

Appendix E

Disposal Documentation: Tank Contents

INDUSTRIAL OIL TANK SERVICE CORP.

VACUUM TRUCK & TRANSPORTATION SERVICES
WASTE DISPOSAL - PETROLEUM RECYCLING
REMEDIAL SUPPLIES

EPA NO. NYR000005298

120 Dry Road
Oriskany, New York 13424
Telephone: (315) 736-6080
Fax: (315) 736-4649

PLEASE ATTACH: All Material Safety Data Sheets, (MSDS), Analysis Reports, Handling Precautions, Additional Hazard Information, Support Data & Comments

PROJECT - TANTO 2000

Generator Name US Army Corps of Engineers, NY District
Facility Address 601 Willardshire Rd
City, State, Zip EAST AURORA NY 14052
Technical Contact Greg Goepfert PE
(Name) (Title)
Area Code (917) Telephone # 790-8235

Facility EPA ID # _____

SPECIFIC GENERATING PROCESS INFORMATION

Water removed from UST
former Diesel Fuel Tank

CHEMICAL COMPOSITION (Totals must add up to 100%)

Component	Percentage
Water	100

Certification:

I hereby certify that I have personally examined and am familiar with the information submitted in this and all attached documents. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete to the best of my knowledge and ability and that all known and suspected hazards have been disclosed.

Signature Mark Lovejoy Date 10/24/17
Name/Distributor Mark Lovejoy, TANTARA Corp
on behalf of USACE

Approved for Acceptance: ☐ Yes ☐ No

Sales Rep. _____

Handling Code _____ Date _____

Billing Address SUN ENVIRONMENTAL CORP
4655 CROSSROAD PARK DR
City, State, Zip LIVERPOOL NY 13088
Business Contact Kevin Cronin WNY Manager
(Name) (Title)

Area Code (716) Telephone # 640-3782

Common Name of Waste _____

EPA Haz. _____

Waste No. _____

Non

RCRA No. _____

Container Type ☐ Drum ☒ Bulk ☐ Other _____

Rate of Generation: 8000 6 1 TIME
Quantity Units Per (Mo.Yr.)

Proper DOT Shipping Named: Include RQ Information

NON-RCRA, NON-DOT Regulated Material

Add'l Desc: Groundwater/Vapor Diesel Fuel

Hazard Class NA UN/NA No. _____

PHYSICAL DESCRIPTION

Physical State ☒ Liquid ☐ Semi Solid ☐ Solid

Viscosity ☒ Low ☐ Medium ☐ High

Liquid Layering ☒ None ☐ Bilayered ☐ Multilayered

Solids (Wt%): BS+W _____ Total _____

Free Liquid ☒ Yes ☐ No

Odor NO Color clear

Total Halogen (%) _____ TOC (ppm) _____

Flash Point °F 7200 BTU/lb _____

PCB (ppm) NO Pesticide/Herbicide (ppm) _____

METALS (Mg/l or ppm)

Total	TCLP	Total	TCLP
Antimony (Sb)	_____	Lead (Pb)	<u>50</u>
Arsenic (As)	<u><30</u>	Mercury (Hg)	<u><0.20</u>
Barium (Ba)	<u><200</u>	Nickel (Ni)	_____
Beryllium (B)	_____	Selenium (Se)	<u><10</u>
Cadmium (Cd)	<u><5.0</u>	Silver (Ag)	<u><10</u>
Chromium (Cr)	<u><10</u>	Thallium (Tl)	_____
Copper (Cu)	_____	Zinc (Zn)	_____

ORIGINAL — NOT NEGOTIABLE

Date 10-27-17

Sun Environmental Corp
(Name of carrier)

(SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. I

TO: Industrial Oil Tank Service Corp

Street 120 Dry Rd

City Oniskany State NY

Zip Code 13424

FROM:

Shipper US Army Corp of Engineers NY Dist

Street 601 Willardshire Rd

City EAST AURORA

State N.Y.

Zip Code 14052

24 hr. Emergency Contact Tel. No. _____

Route

Vehicle
Number[illegible]PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."

(2) Where the applicable tariff provisions, specify a limitation of the carrier's liability absent fault or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(a) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignee)

(Signature of Contractor)

~~G.O.D. FEE:
PREPAID ☐
COLLECT ☐~~

TOTAL CHARGES	\$

FREIGHT CHARGES

FREIGHT PREPAID Check box if charges
except when box at are to be
right is checked ☐ collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to con-

tion and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER US Army Corp of Engineers NY District

PER *Robt L. Loe USACE*

CARRIER San Expositions Corp

PER

DATE 10-27-17

Permanent post-office address of shipper.



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Appendix F

**Disposal Documentation: Petroleum-
Contaminated Soil**



EZ Profile™

Requested Facility: Chaffee Landfill☐ Unsure Profile Number: 118430NY☐ Multiple Generator Locations (Attach Locations) ☐ Request Certificate of Disposal ☐ Renewal? Original Profile Number: _____**A. GENERATOR INFORMATION (MATERIAL ORIGIN)**

1. Generator Name: US Army Corp of Engineers, NY District
2. Site Address: 601 Willardshire Road
(City, State, ZIP) East Aurora NY 14052
3. County: Erie
4. Contact Name: Greg Goepfert
5. Email: gregory.j.goepfert@usace.army.mil
6. Phone: (917) 790-8235 7. Fax: _____
8. Generator EPA ID: _____ ☒ N/A
9. State ID: _____ ☒ N/A

C. MATERIAL INFORMATION

1. Common Name: Non Hazardous Soil
Describe Process Generating Material: ☐ See Attached
Removal of an underground fuel oil storage tank.
2. Material Composition and Contaminants: ☐ See Attached

1. Soil	90-95 %
2. Concrete	5-10 %
3.	
4.	

Total comp. must be equal to or greater than 100% ≥100%

3. State Waste Codes: _____ ☒ N/A
4. Color: Brown
5. Physical State at 70°F: ☒ Solid ☐ Liquid ☐ Other: _____
6. Free Liquid Range Percentage: _____ to _____ ☒ N/A
7. pH: _____ to _____ ☒ N/A
8. Strong Odor: ☐ Yes ☒ No Describe: _____
9. Flash Point: ☐ <140°F ☐ 140°-199°F ☒ ≥200° ☒ N/A

E. ANALYTICAL AND OTHER REPRESENTATIVE INFORMATION

1. Analytical attached ☐ Yes
Please identify applicable samples and/or lab reports:

2. Other information attached (such as MSDS)? ☐ Yes

B. BILLING INFORMATION☐ SAME AS GENERATOR

1. Billing Name: Earthwatch Waste Systems
2. Billing Address: 464 Franklin St
(City, State, ZIP) Buffalo NY 14202
3. Contact Name: Chris McCune
4. Email: chris@earthwatchwaste.com
5. Phone: (716) 681-6433 6. Fax: _____
7. WM Hauled? ☐ Yes ☒ No
8. P.O. Number: _____
9. Payment Method: ☒ Credit Account ☐ Cash ☐ Credit Card

D. REGULATORY INFORMATION

1. EPA Hazardous Waste? ☐ Yes* ☒ No
Code: _____
2. State Hazardous Waste? ☐ Yes ☒ No
Code: _____
3. Is this material non-hazardous due to Treatment, Delisting, or an Exclusion? ☐ Yes* ☒ No
4. Contains Underlying Hazardous Constituents? ☐ Yes* ☒ No
5. From an industry regulated under Benzene NESHAP? ☐ Yes* ☒ No
6. Facility remediation subject to 40 CFR 63 GGGGG? ☐ Yes* ☒ No
7. CERCLA or State-mandated clean-up? ☐ Yes* ☒ No
8. NRC or State-regulated radioactive or NORM waste? ☐ Yes* ☒ No
***If Yes, see Addendum (page 2) for additional questions and space.**
9. Contains PCBs? → If Yes, answer a, b and c. ☐ Yes ☒ No
a. Regulated by 40 CFR 761? ☐ Yes ☒ No
b. Remediation under 40 CFR 761.61 (a)? ☐ Yes ☒ No
c. Were PCB imported into the US? ☐ Yes ☒ No
10. Regulated and/or Untreated Medical/Infectious Waste? ☐ Yes ☒ No
11. Contains Asbestos? ☐ Yes ☒ No
→ If Yes: ☐ Non-Friable ☐ Non-Friable - Regulated ☐ Friable

F. SHIPPING AND DOT INFORMATION

1. ☒ One-Time Event ☐ Repeat Event/Ongoing Business
2. Estimated Quantity/Unit of Measure: 500
☒ Tons ☐ Yards ☐ Drums ☐ Gallons ☐ Other: _____
3. Container Type and Size: Dump Truck
4. USDOT Proper Shipping Name: _____ ☒ N/A

G. GENERATOR CERTIFICATION (PLEASE READ AND CERTIFY BY SIGNATURE)

By signing this EZ Profile™ form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Waste Management prior to providing the material to Waste Management.

If I am an agent signing on behalf of the Generator, I have confirmed with the Generator that information contained in this Profile is accurate and complete.

Name (Print): Mark Lovejoy Date: 10/30/17
Title: Project Manager
Company: TANTARA Corp

Certification Signature

ON BEHALF OF USACE

THINK GREEN:

QUESTIONS? CALL 800 963 4776 FOR ASSISTANCE

Revised June 30, 2015
©2015 Waste Management



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535507

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 39 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR 72,917 Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487032
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 10:09:08	INBOUND	JChapma7		65080 lb	
Out	11/07/2017 10:19:36	OUTBOUND	JChapma7		27160 lb	
					Net	37920 lb
					Tons	18.96

Comments

WASTE MANAGEMENT

Product	IDX	Qty	Unit	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	18.96	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch

WASTE SYSTEMS

464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487032

487032 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER MALLARE ENT. 174 N. ELLICOTT CTR RD AMHERST NY	DATE		TIME IN / OUT	
	11/7/17		900	930
	EWS# 8896			
TRUCK# 39	TRAILER#		118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil		
	WEIGHT IN		
	WEIGHT OUT		
	BILLED WEIGHT		

SHIPPER SIGNATURE Matt Herbert PRINT NAME Matt Herbert

DRIVER SIGNATURE Chris Schaffer PRINT NAME Chris Schaffer

SPECIAL INSTRUCTIONS Directions: 118430NY	Approval # 118028NY

FOR APPROVAL: CONSIGNEE PRINT NAME <u>J. Chapman</u> CONSIGNEE SIGN HERE (NO INITIALS) <u>S35507</u>		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <u>Wm. Anderson</u> DATE <u>11-7-17</u> BY: <u>[Signature]</u> TIME <u>10:09 AM</u> ☐ PM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Dlean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535510

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 86 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487033
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 10:15:36	INBOUND	JChapma7		Tare	71180 lb
Out	11/07/2017 10:30:45	OUTBOUND	JChapma7		Net	26480 lb
					Tons	44700 lb
						22.35

Comments

WASTE MANAGEMENT

Product	DD%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	22.35	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487033

487033

Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallare enterprises</i> <i>174 north ellcott creek</i> <i>Amherst NY 14227</i>	DATE	TIME IN / OUT	
	<i>11/7/17</i>	<i>9:00</i>	
	EWS# 8896		
TRUCK# <i>86</i>	TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000	SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
PHONE#		
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Truckload of Non Hazardous Soil	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT
	<i>ON Behalf of USACE</i>	

SHIPPER SIGNATURE

PRINT NAME

DRIVER SIGNATURE

PRINT NAME

SPECIAL INSTRUCTIONS

Approval #
118028NY

Directions:

118430NY

FOR APPROVAL:		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
CONSIGNEE PRINT NAME <i>Shepman</i>		
CONSIGNEE SIGN HERE (NO INITIALS) <i>S35510</i>		
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>Amherst</i> DATE <i>11-7-17</i> BY <i>[Signature]</i> TIME <i>10:15</i> AM ☐ PM ☐	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Ulean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535511

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 55 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487031
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTONHARRA US ARMY CORPS

	Time	Operator	Inbound	Gross	
In	11/07/2017 10:00:37	Chapman		70200	lb
Out	11/07/2017 10:13:45	Chapman		27020	lb
				43180	lb
				21.59	Tons

Comments REPLACEMENT TICKET FOR TICKET # 535504

WM
WASTE MANAGEMENT

Product	ID#	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil Pet-RGC- 100	21.59	Tons				ERI
2	RCR-P-Regulatory C 100		%				ERI
3	EVF-P10-Environmen 100		%				ERI
4	LFS4-LANDFILL FIXE 100		%				ERI

Total Fees
Total Ticket

Driver's Signature _____ 2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487031

487031 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallone ENTER.</i> <i>174 N. ELLICOTT CRK -</i> <i>Amherst, N.Y. - 14221 -</i>	DATE	TIME IN / OUT	
	<i>11-7-17</i>	<i>9⁰⁰</i>	<i>915</i>
	EWS# 8896		
TRUCK# <i>55</i>	TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
PHONE#			
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil		
	WEIGHT IN		
	WEIGHT OUT		
	BILLED WEIGHT		
<i>ON Behalf of USACE</i>			

SHIPPER SIGNATURE *[Signature]* PRINT NAME *Brian Hartman*DRIVER SIGNATURE *Joseph Felus* PRINT NAME *Joseph Felus*

SPECIAL INSTRUCTIONS	Approval # <i>118078NY</i>
Directions: <i>118430 NY</i>	

FOR APPROVAL:		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
CONSIGNEE PRINT NAME	<i>J Chapman</i> <i>535511</i>	
CONSIGNEE SIGN HERE (NO INITIALS)	<i>535504</i>	
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>gmh</i> DATE <i>11-7-17</i> BY <i>[Signature]</i> TIME <i>10:00</i> ☒ AM ☐ PM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Dlean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535513

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 84 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487034
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 10:20:45	INBOUND	JChapma7		Tare	71840 lb
Out	11/07/2017 10:37:13	OUTBOUND	JChapma7		Net	26960 lb
					Tons	44880 lb
						22.44

Comments

WASTE MANAGEMENT

Product	LDX	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-100		22.44	Tons				ERI
2 RCR-P-Regulatory C 100			%				ERI
3 EVF-P10-Environmen 100			%				ERI
4 LFS4-LANDFILL FIXE 100			%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487034

487034 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallard Trucking</i> <i>174 Ellcott</i> <i>Archerst, NY 14327</i>	DATE	TIME IN / OUT	
	10-7-17		
	EWS# 8896		
TRUCK# 84	TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#	SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Truckload of Non Hazardous Soil	WEIGHT IN WEIGHT OUT BILLED WEIGHT
On behalf of USACE <i>[Signature]</i>		

SHIPPER SIGNATURE

PRINT NAME

Brian Hartman

DRIVER SIGNATURE

PRINT NAME

Carmen Jones
 SPECIAL INSTRUCTIONS: Approval #
 118028NY

Directions:

118 430NY

FOR APPROVAL: CONSIGNEE PRINT NAME <i>J. Gopma</i> CONSIGNEE SIGN HERE (NO INITIALS) <i>[Signature]</i> 535513		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>[Signature]</i> DATE 11-7-17 BY <i>[Signature]</i> TIME 10:20 AM QPM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Dlean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535525

Customer Name EARTHWATCH-118430NY EARTHWATC Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 55 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487035
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 11:38:17	INBOUND	mbaker13		Tare	72020 lb
Out	11/07/2017 11:49:36	OUTBOUND	mbaker13		Net	27140 lb
					Tons	44880 lb
						22.44

Comments

WASTE MANAGEMENT

Product	LDX	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-100	100	22.44	Tons				ERI
2 RCR-P-Regulatory C 100	100		%				ERI
3 EVF-P10-Environmen 100	100		%				ERI
4 LFS4-LANDFILL FIXE 100	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



EWS Ventures, LLC, d/b/a

Earthwatch

WASTE SYSTEMS

464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487035

487035 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallare ENT</i> <i>174 N ELLICOTT CRK</i> <i>Amherst N.Y. 14227</i>	DATE	TIME IN / OUT	
	<i>11-7-17</i>	<i>10⁵⁰</i>	<i>11⁰⁵</i>
	EWS# 8896		
TRUCK# <i>#55</i>	TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
PHONE#			
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil		
	WEIGHT IN		
	WEIGHT OUT		
	BILLED WEIGHT		
<i>On Behalf of USACE</i>			

SHIPPER SIGNATURE *[Signature]* PRINT NAME *Brian Hartman*

DRIVER SIGNATURE *Joseph Felvus* PRINT NAME *Joseph Felvus*

SPECIAL INSTRUCTIONS	Approval # <i>118430NY</i>
Directions:	

FOR APPROVAL:		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
CONSIGNEE PRINT NAME		
CONSIGNEE SIGN HERE (NO INITIALS)		
<i>535525</i>		
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>WM Chaffee</i> DATE <i>11/7/17</i>	
	BY <i>M. Baker</i> TIME <i>11:38 AM</i> QPM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535528

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 39 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR 72,917 Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487036
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 11:46:32	INBOUND	sbaker13		Tare	74340 lb
Out	11/07/2017 11:58:04	OUTBOUND	sbaker13		Net	27160 lb
					Tons	47180 lb
						23.59

Comments

WASTE MANAGEMENT

Product	ID#	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	23.59	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487036

487036 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER MAILARE ENT. 174 N. ELLICOTT CAY RD AMHERST NY	DATE	TIME IN / OUT	
	11/7/17	1055	
	EWS# 8896		
TRUCK# 3a	TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
PHONE#			
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil WEIGHT IN WEIGHT OUT BILLED WEIGHT		
	<i>On Behalf of USACE</i>		

SHIPPER SIGNATURE *[Signature]* PRINT NAME Brian Hartmann

DRIVER SIGNATURE *[Signature]* PRINT NAME CHRIS SCHAFFER

SPECIAL INSTRUCTIONS Directions:	Approval # 118430NY

FOR APPROVAL: CONSIGNEE PRINT NAME _____ CONSIGNEE SIGN HERE (NO INITIALS) _____		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM <u>WM Chaffee LF</u> DATE <u>11/7/17</u> BY <u>Mr Baker</u> TIME <u>11:46 AM</u> ☐ AM ☐ PM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10960 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535532

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 86 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487037
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAUBORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 11:59:31	INBOUND	abaker13		Tare	71460 lb
Out	11/07/2017 12:10:32	OUTBOUND	abaker13		Net	30200 lb
					Tons	41260 lb
						20.63

Comments

WASTE MANAGEMENT

Product	ID#	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	20.63	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch

WASTE SYSTEMS

464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487037

487037 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>174. N. Ellicott Creek Road Amherst, NY 14228</i>		DATE <i>11/7/17</i>	TIME IN / OUT <i>11:05</i>
		EWS# 8896	
TRUCK# <i>86</i>	TRAILER#	118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
PHONE#			
NO. PIECES 1	ARTICLES OR DESCRIPTION Truckload of Non Hazardous Soil		WEIGHT
			WEIGHT IN
			WEIGHT OUT
			BILLED WEIGHT
<i>On Behalf of USACE</i>			

SHIPPER SIGNATURE *Brian Hartman* PRINT NAME *Brian Hartman*DRIVER SIGNATURE *David Tatum* PRINT NAME *David Tatum*

SPECIAL INSTRUCTIONS	Approval # <i>118430NY</i>
Directions:	

FOR APPROVAL:		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
CONSIGNEE PRINT NAME		
CONSIGNEE SIGN HERE (NO INITIALS)		
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>WM Chaffee</i> DATE <i>11/7/17</i> BY <i>M. Dallen</i> TIME <i>11:59</i> AM ☐ PM ☐	



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535536

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 84 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487038
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAUBORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 12:11:42	INBOUND	sbaker13		Tare	78460 lb
Out	11/07/2017 12:26:52	OUTBOUND	sbaker13		Net	25840 lb
					Tons	52620 lb
						26.31

Comments

WASTE MANAGEMENT

Product	Qty	Unit	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC- 100	26.31	Tons				ERI
2 RCR-P-Regulatory C 100		%				ERI
3 EVF-P10-Environmen 100		%				ERI
4 LFS4-LANDFILL FIXE 100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch

WASTE SYSTEMS

464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487038

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

487038

Load #

TRANSPORTER MALLARE TRUCK 174 W ELLIOTT CREEK ARHEAT NY 14228		DATE		TIME IN / OUT	
		10/7/17			
		EWS# 8896			
TRUCK# 84	TRAILER#		118430NY		

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT	
1	Truckload of Non Hazardous Soil	WEIGHT IN	
		WEIGHT OUT	
		BILLED WEIGHT	

On behalf of USACE

SHIPPER SIGNATURE *[Signature]* PRINT NAME Brian Hartman

DRIVER SIGNATURE *[Signature]* PRINT NAME CARMEN JONES

SPECIAL INSTRUCTIONS		Approval #
Directions:		<u>118430NY</u>

FOR APPROVAL:		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed.	
CONSIGNEE PRINT NAME		The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material.	
CONSIGNEE SIGN HERE (NO INITIALS)		This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.	
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <u>Wm Chaffee</u> DATE: <u>11/1/17</u> BY: <u>M. Baker</u> TIME: <u>12:11</u> ☐ AM ☒ PM		

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535555

Customer Name EARTHWATCH-118430NY EARTHWATC Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 55 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487039
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 13:05:37	INBOUND	sbaker13		Tare	73060 lb
Out	11/07/2017 13:21:14	OUTBOUND	sbaker13		Net	27280 lb
Comments					Tons	45780 lb
						22.89

WASTE MANAGEMENT

Product	ID#	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil Pet-RBC- 100	22.89	Tons				ERI
2	RCR-P-Regulatory C 100		%				ERI
3	EVF-P10-Environmen 100		%				ERI
4	LFS4-LANDFILL FIXE 100		%				ERI

Total Fees
Total Ticket

Driver's Signature

J. Lehman

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487039

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallare ENT</i> <i>174 N. ELLICOTT CRK</i> <i>Amherst NY - 1422)</i>	DATE	TIME IN / OUT	
	<i>11-7-17</i>	<i>12²²</i>	<i>1232</i>
	EWS# 8896		
TRUCK# <i>55</i>	TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#	SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Truckload of Non Hazardous Soil	WEIGHT IN
		WEIGHT OUT
		BILLED WEIGHT
	<i>On behalf of USACE</i>	

SHIPPER SIGNATURE *Brian Hartman* PRINT NAME *Brian Hartman*DRIVER SIGNATURE *Joseph Felner* PRINT NAME *Joseph Felner*

SPECIAL INSTRUCTIONS: Approval # <i>118430 NY</i> Directions:

FOR APPROVAL:		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
CONSIGNEE PRINT NAME _____		
CONSIGNEE SIGN HERE _____ (NO INITIALS)		
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>WM Chaffee</i> DATE <i>11/7/17</i> BY <i>M. Baker</i> TIME <i>1:05</i> QAM ☒ XPM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535561

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 39 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR 72,917 Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487040
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 13:17:57	INBOUND	ebaker13		Tare	73640 lb
Out	11/07/2017 13:29:46	OUTBOUND	ebaker13		Net	27100 lb
					Tons	46540 lb
						23.27

Comments

WASTE MANAGEMENT

Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	23.27	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487040

487040

Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>MAHARE ENT</i> <i>174 NEW COTTAGE RD</i> <i>AMHERST NY</i>	DATE		TIME IN / OUT	
	<i>11/17/17</i>		<i>1230</i>	
	EWS# 8896			
TRUCK# <i>39</i>	TRAILER#		118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#	SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Truckload of Non Hazardous Soil WEIGHT IN WEIGHT OUT BILLED WEIGHT	
	<i>On behalf of USACE</i>	

SHIPPER SIGNATURE

[Signature]

PRINT NAME

Brian Hartman

DRIVER SIGNATURE

[Signature]

PRINT NAME

CHARIS SCHAFER

SPECIAL INSTRUCTIONS Approval # <i>118430NY</i> Directions:

FOR APPROVAL:		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
CONSIGNEE PRINT NAME		
CONSIGNEE SIGN HERE (NO INITIALS)		
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>WM Chaffee</i> DATE <i>11/17/17</i> BY <i>M. Baker</i> TIME <i>1:17</i> ☐ AM ☒ PM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535563

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 86 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487041
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 13:27:23	INBOUND	sbaker13		Tare	71620 lb
Out	11/07/2017 13:42:12	OUTBOUND	sbaker13		Net	27180 lb
					Tons	44440 lb
						22.22

Comments

WASTE MANAGEMENT

Product	DD%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	22.22	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch

WASTE SYSTEMS

464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487041

487041 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallare enterprises INC.</i> <i>174. Ellicott Creek Road</i>	DATE ~~12/4/17~~ <i>11/7/17</i>	TIME IN / OUT ~~12:44~~
	EWS# 8896	
TRUCK# <i>86</i>	TRAILER#	118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#	SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Truckload of Non Hazardous Soil WEIGHT IN WEIGHT OUT BILLED WEIGHT	
<i>On behalf of USACE</i>		

SHIPPER SIGNATURE *Brian Hartman* PRINT NAME *Brian Hartman*

DRIVER SIGNATURE *Joe Tatum* PRINT NAME *Joe Tatum*

SPECIAL INSTRUCTIONS: Directions:	Approval # <i>118430NY</i> ~~14030-9799~~

FOR APPROVAL: CONSIGNEE PRINT NAME _____ CONSIGNEE SIGN HERE (NO INITIALS) _____		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>WM Chaffee</i> DATE <i>11/7/17</i> BY <i>M. Baker</i> TIME <i>1:20</i> <i>PM</i>	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535571

Customer Name EARTHWATCH-118430NY EARTHWATC Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 84 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487042
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 13:55:33	INBOUND	abaker13		Tare	70820 lb
Out	11/07/2017 14:13:43	OUTBOUND	abaker13		Net	25920 lb
					Tons	44900 lb
						22.45

Comments

WASTE MANAGEMENT

Product	IDX	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RBC-	100	22.45	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487042

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

487042

Load #

TRANSPORTER <i>Mallard ent</i> <i>174 W Ellicott Creek</i> <i>Amherst, NY 14228</i>		DATE		TIME IN / OUT	
		10-7-17			
		EWS# 8896			
TRUCK# 84		TRAILER#		118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
PHONE#			
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil		
			WEIGHT IN
			WEIGHT OUT
			BILLED WEIGHT
	On behalf of USA CE		

SHIPPER SIGNATURE *Brian Heertman* PRINT NAME Brian Heertman

DRIVER SIGNATURE *CAE* PRINT NAME Ann Jans

SPECIAL INSTRUCTIONS		Approval #
		~~118430NY~~ 118430NY
Directions:		

FOR APPROVAL:		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
CONSIGNEE PRINT NAME		
CONSIGNEE SIGN HERE (NO INITIALS)		
535571		
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>Wm. C. LaSalle</i> DATE: <i>11/7/17</i> BY: <i>M. Baker</i> TIME: <i>1:55</i> ☐ AM ☒ PM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535587

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 55 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487043
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 14:41:17	INBOUND	mbaker13		Tare	70960 lb
Out	11/07/2017 14:58:52	OUTBOUND	mbaker13		Net	27220 lb
					Tons	43740 lb
						21.87

Comments

WASTE MANAGEMENT

Product	ID%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC- 100		21.87	Tons				ERI
2 -RCR-P-Regulatory C 100			%				ERI
3 EVF-P10-Environmen 100			%				ERI
4 LFS4-LANDFILL FIXE 100			%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487043

487043

Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallone BNT</i> <i>174 N. ELLICOTT CRK</i> <i>Amherst, NY 14227</i>	DATE	TIME IN / OUT	
	<i>11-7-17</i>	<i>155</i>	<i>205</i>
	EWS# 8896		
TRUCK# <i>55</i>	TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT IN	WEIGHT OUT
1	Truckload of Non Hazardous Soil		
		BILLED WEIGHT	
<i>On behalf of USA CE</i>			

SHIPPER SIGNATURE

[Signature]

PRINT NAME

Brian Hartman

DRIVER SIGNATURE

Joseph Felvus

PRINT NAME

Joseph Felvus

SPECIAL INSTRUCTIONS: SurApproval #

~~118430NY~~*118430NY*

Directions:

FOR APPROVAL:		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.	
CONSIGNEE PRINT NAME _____			
CONSIGNEE SIGN HERE _____ (NO INITIALS)			
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>Wm Chaffee</i> DATE <i>11/7/17</i> BY: <i>M. Daker</i> TIME <i>2:41</i> QAM <i>APM</i>		

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535593

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 39 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR 72,917 Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487044
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 14:52:07	INBOUND	abaker13		72200 lb	
Out	11/07/2017 15:05:49	Outbound1	JChapma7		27300 lb	
					Net	44900 lb
					Tons	22.49

Comments

WASTE MANAGEMENT

Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	22.49	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch

WASTE SYSTEMS

464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487044

487044 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER MALLARE ENT 174 N ELLICOTT CRK RD AMHERST NY	DATE		TIME IN / OUT	
	11/17/17		205	
	EWS# 8896			
TRUCK# 39		TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil On behalf of USACE		WEIGHT IN WEIGHT OUT BILLED WEIGHT

SHIPPER SIGNATURE [Signature] PRINT NAME Brian Hartman

DRIVER SIGNATURE [Signature] PRINT NAME CHRIS SCHAFER

SPECIAL INSTRUCTIONS Approval # <u>118430NY</u> Directions:		535543 11/17/17

FOR APPROVAL: CONSIGNEE PRINT NAME _____ CONSIGNEE SIGN HERE (NO INITIALS) _____		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <u>WM Chaffee</u> DATE <u>11/17/17</u> BY <u>M. Baker</u> TIME <u>2:52</u> AM <u>X</u> PM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535600

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 86 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487045
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAUBORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 15:02:30	Inbound1	JChapma7		Tare	73900 lb
Out	11/07/2017 15:16:59	Outbound1	JChapma7		Net	26180 lb
					Tons	47720 lb
						23.86

Comments

WASTE MANAGEMENT

Product	LDX	Qty	UDM	Rate	Fee	Amount	Origin
1	Cont Soil Pet-RGC+ 100	23.86	Tons				ERI
2	RCR-P-Regulatory C 100		%				ERI
3	EVF-P10-Environmen 100		%				ERI
4	LFS4-LANDFILL FIXE 100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487045

487045

Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallare Enterprises</i> <i>174 N. Ellicott Creek RD</i> <i>Amherst, NY 14228</i>		DATE	TIME IN / OUT	
		<i>11/7/17</i>	<i>2:25</i>	
		EWS# 8896		
TRUCK# <i>86</i>	TRAILER#		118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil <i>On behalf of USACE</i>		WEIGHT IN WEIGHT OUT BILLED WEIGHT

SHIPPER SIGNATURE

PRINT NAME

DRIVER SIGNATURE

PRINT NAME

SPECIAL INSTRUCTIONS Landfill Approval # <i>118430NY</i> Directions:	

FOR APPROVAL: CONSIGNEE PRINT NAME <i>J. Lopez</i> CONSIGNEE SIGN HERE (NO INITIALS) <i>J. Lopez</i>		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>Wm. Chaffee</i> DATE <i>11-7-17</i> BY <i>[Signature]</i> TIME <i>3:22</i> AM ☒ PM ☐	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535613

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/07/2017 Vehicle# 84 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487046
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASFAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/07/2017 15:47:42	INBOUND	JChapma7		Tare	72540 lb
Out	11/07/2017 15:58:41	OUTBOUND	JChapma7		Net	25560 lb
					Tons	46980 lb
						23.49

Comments

WASTE MANAGEMENT

Product	ID%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	23.49	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487046

487046 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallone Trucking</i> <i>174 W Ellicott Creek</i> <i>14228</i>	DATE		TIME IN / OUT	
	EWS# 8896			
TRUCK# <i>84</i>	TRAILER#		118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil <i>On behalf of USACE</i>		WEIGHT IN WEIGHT OUT BILLED WEIGHT

SHIPPER SIGNATURE *Brian Hartman* PRINT NAME *Brian Hartman*

DRIVER SIGNATURE *Caesar Jones* PRINT NAME *Caesar Jones*

SPECIAL INSTRUCTIONS: Landfill Approval # <i>118430NY</i> Directions:

FOR APPROVAL: CONSIGNEE PRINT NAME <i>J. J. J.</i> CONSIGNEE SIGN HERE (NO INITIALS) <i>535413</i>		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>Earthwatch</i> DATE <i>11-7-11</i> BY: <i>[Signature]</i> TIME <i>3:47</i> AM <i>4</i> PM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535635

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/08/2017 Vehicle# 39 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR 72,917 Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487047
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/08/2017 08:09:14	INBOUND	JChapma7			62000 lb
Out	11/08/2017 08:21:44	OUTBOUND	JChapma7		Tare	27260 lb
					Net	34740 lb
					Tons	17.37

Comments

WASTE MANAGEMENT

Product	ID%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	17.37	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487047

487047

Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER MALLARE ENT 174 N. ELLICOTT CRK RD AMHERST NY	DATE		TIME IN / OUT	
	11/8/17		730	
	EWS# 8896			
TRUCK# 39	TRAILER#		118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#	SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Truckload of Non Hazardous Soil WEIGHT IN WEIGHT OUT BILLED WEIGHT	

SHIPPER SIGNATURE

PRINT NAME

Brian Hartman

DRIVER SIGNATURE

PRINT NAME

CHRIS SCHAFFER

SPECIAL INSTRUCTIONS

Directions:

 Approval # ~~118430NY~~ **118430NY**

FOR APPROVAL: CONSIGNEE PRINT NAME J Chapman CONSIGNEE SIGN HERE (NO INITIALS)		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: Wm Chaffee DATE 11-8-17 BY: TIME 801 ☐ AM ☐ PM	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535637

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/08/2017 Vehicle# 63 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR 74,271 Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487048
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/08/2017 08:17:52	INBOUND	JChapma7		Tare	66960 lb
Out	11/08/2017 08:28:04	OUTBOUND	JChapma7		Net	27680 lb
					Tons	39280 lb
						19.64

Comments

WASTE MANAGEMENT

Product	ID%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	19.64	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487048

487048 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallone Enterprises</i> 174 N. Elliot + Creek Rd 14228	DATE <i>11/8/17</i>	TIME <i>720</i>	IN / OUT
	EWS# 8896		
TRUCK# <i>63</i>	TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#	SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES 1	ARTICLES OR DESCRIPTION Truckload of Non Hazardous Soil WEIGHT IN WEIGHT OUT BILLED WEIGHT	WEIGHT

On behalf of USACE

SHIPPER SIGNATURE

PRINT NAME

DRIVER SIGNATURE

PRINT NAME

SPECIAL INSTRUCTIONS Approval # <i>118430NY</i> Directions:	

FOR APPROVAL: CONSIGNEE PRINT NAME <i>J. Hapman</i> CONSIGNEE SIGN HERE (NO INITIALS) <i>535637</i> RECEIVED ABOVE MATERIAL IN GOOD CONDITION FIRM: <i>Earthwatch</i> DATE <i>11-8-17</i> BY: <i>Mark G. Lee</i> TIME <i>8:17</i> AM ☐ PM ☐	Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535641

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/08/2017 Vehicle# 86 Volume
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 487049
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

Container
Driver
Check#
Billing # 0004004
Gen EPA ID NOT REQUIRED

	Time	Scale	Operator	Inbound	Gross
In	11/08/2017 08:27:35	INBOUND	JChapma7		65480 lb
Out	11/08/2017 08:40:48	OUTBOUND	JChapma7		26480 lb
Comments					Net 39000 lb
					Tons 19.50

WASTE MANAGEMENT

Product	ID#	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC- 100		19.50	Tons				ERI
2 RCR-P-Regulatory C 100			%				ERI
3 EVF-P10-Environmen 100			%				ERI
4 LFS4-LANDFILL FIXE 100			%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487049

487049 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallard Enterprises Inc</i> <i>174 N. Ellicott Creek Road</i> <i>Amherst NY, 14228</i>		DATE		TIME IN / OUT	
		<i>11/8/17</i>		<i>7:35</i>	
		EWS# 8896			
TRUCK# <i>86</i>		TRAILER#		118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil		
			WEIGHT IN
			WEIGHT OUT
			BILLED WEIGHT

On behalf of USACE

SHIPPER SIGNATURE

PRINT NAME

DRIVER SIGNATURE

PRINT NAME

SPECIAL INSTRUCTIONS:

Approval #

Directions:

FOR APPROVAL: CONSIGNEE PRINT NAME <i>J. Hupme</i> CONSIGNEE SIGN HERE (NO INITIALS) <i>535641</i>		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <i>Wm Cultee</i> DATE <i>11-8-17</i> BY <i>[Signature]</i> TIME <i>8:27</i> AM ☐ PM ☐	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535643

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/08/2017 Vehicle# 67 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487050
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/08/2017 08:51:09	INBOUND	JChapma7		Tare	71540 lb
Out	11/08/2017 09:06:47	OUTBOUND	JChapma7		Net	27940 lb
					Tons	43600 lb
						21.80

Comments

WASTE MANAGEMENT

Product	ID#	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	21.80	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487050

487050 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallare Trucking</i> <i>174 N. Ellicott Creek</i> <i>Amherst NY 14228</i>	DATE	TIME IN / OUT	
	<i>11-8-17</i>	<i>730</i>	
	EWS# 8896		
TRUCK# <i>67</i>	TRAILER#		118430NY

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#	SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Truckload of Non Hazardous Soil	WEIGHT IN WEIGHT OUT BILLED WEIGHT
<i>On behalf of USACE</i>		

SHIPPER SIGNATURE *Brian Hartman* PRINT NAME *Brian Hartman*

DRIVER SIGNATURE *Chris Juchemski* PRINT NAME *Chris Juchemski*

SPECIAL INSTRUCTIONS: Approval # <i>118430NY</i> Directions:

FOR APPROVAL: CONSIGNEE PRINT NAME <i>[Signature]</i> CONSIGNEE SIGN HERE (NO INITIALS) <i>535643</i>	Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION FIRM: <i>[Signature]</i> DATE <i>11-8-17</i> BY <i>[Signature]</i> TIME <i>8:45 AM</i> QPM	



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535660

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/08/2017 Vehicle# 39 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR 72,917 Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487051
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/08/2017 09:54:39	INBOUND	JChapma7			64640 lb
Out	11/08/2017 10:07:05	OUTBOUND	JChapma7		Tare	27260 lb
					Net	37380 lb
					Tons	18.69

Comments

WASTE MANAGEMENT

Product	ID%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	18.69	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch**WASTE SYSTEMS**464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487051

487051

Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER MALLARE ENT 174 N. ELLICOTT CTR RD AMHERST NY	DATE		TIME IN / OUT	
	11/8/17		9:10	
	EWS# 8896			
TRUCK# 39	TRAILER#		118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#		SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION		WEIGHT
1	Truckload of Non Hazardous Soil On behalf of USACE		WEIGHT IN WEIGHT OUT BILLED WEIGHT

SHIPPER SIGNATURE

PRINT NAME

Brian Hartman

DRIVER SIGNATURE

PRINT NAME

CHRIS SCHAFER

SPECIAL INSTRUCTIONS

Directions:

Approval #

118430NY

FOR APPROVAL: CONSIGNEE PRINT NAME <u>J. M. Schaffer</u> CONSIGNEE SIGN HERE (NO INITIALS) <u>[Signature]</u> 535660		Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.
RECEIVED ABOVE MATERIAL IN GOOD CONDITION	FIRM: <u>Chris Schaffer</u> DATE <u>11-8-17</u> BY <u>[Signature]</u> TIME <u>9:54</u> AM ☐ PM ☐	

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper



Chaffee LF
10860 Olean Rd
Chaffee, NY, 14030
Ph: (716) 496-5000

Original
Ticket# 535667

Customer Name EARTHWATCH-118430NY EARTHWATCH Carrier MALLARE MALLARE ENTERPRISES
Ticket Date 11/08/2017 Vehicle# 63 Volume
Payment Type Credit Account Container
Manual Ticket# Driver
Hauling Ticket# Check#
Route PERMITTED FOR 74,271 Billing # 0004004
State Waste Code Gen EPA ID NOT REQUIRED
Manifest 487052
Destination
PO
Profile 118430NY (NH SOIL)
Generator 190-USARMYCORPSEASTAURORA US ARMY CORPS

	Time	Scale	Operator	Inbound	Gross	
In	11/08/2017 10:14:27	INBOUND	JChapma7		Tare	66360 lb
Out	11/08/2017 10:27:09	OUTBOUND	JChapma7		Net	27640 lb
					Tons	38720 lb
						19.36

Comments

WASTE MANAGEMENT

Product	ID%	Qty	UOM	Rate	Fee	Amount	Origin
1 Cont Soil Pet-RGC-	100	19.36	Tons				ERI
2 RCR-P-Regulatory C	100		%				ERI
3 EVF-P10-Environmen	100		%				ERI
4 LFS4-LANDFILL FIXE	100		%				ERI

Total Fees
Total Ticket

Driver's Signature

2E4-1575



Earthwatch

WASTE SYSTEMS

464 Franklin Street
Buffalo, NY 14202
(716) 681-6433
FAX (716) 681-6165

487052

487052 Load #

NON-HAZARDOUS WASTE SOLID WASTE MANIFEST

TRANSPORTER <i>Mallard Enterprises</i> <i>174 N. Ellicott Circle Rd 14228</i>	DATE		TIME IN / OUT	
	<i>11/8/17</i>		<i>9</i>	
	EWS# 8896			
TRUCK# <i>63</i>	TRAILER#		118430NY	

CONSIGNEE: CID Landfill, Inc. 10860 Olean Road Chaffee, NY 14030-9799 (716) 496-5000 PHONE#	SHIPPER US Army Corp of Engineers 601 Willardshire Road East Aurora, NY 14052	
NO. PIECES	ARTICLES OR DESCRIPTION	WEIGHT
1	Truckload of Non Hazardous Soil	
	WEIGHT IN	
	WEIGHT OUT	
	BILLED WEIGHT	
	<i>On behalf of USACE</i>	

SHIPPER SIGNATURE *[Signature]* PRINT NAME *Brian Hartman*

DRIVER SIGNATURE *Mark* PRINT NAME *Mark*

SPECIAL INSTRUCTIONS Directions: <i>118430NY</i>	Approval # <i>535667</i>

FOR APPROVAL: CONSIGNEE PRINT NAME <i>[Signature]</i> CONSIGNEE SIGN HERE (NO INITIALS) <i>[Signature]</i>	RECEIVED ABOVE MATERIAL IN GOOD CONDITION FIRM: <i>[Signature]</i> DATE <i>11-8-17</i> BY <i>[Signature]</i> TIME <i>10:14 AM</i> QPM	Solid waste being interpreted to mean only solid waste or waste containing animal and vegetable matter, rubbish, trash, debris, ashes and non-toxic sludge and other waste materials which is not a radioactive volatile, highly flammable explosive toxic or hazardous nature as listed. The transporter herein named agrees to hold harmless and to indemnify EWS against all losses and claims as a result of shipment of any material. This shipment is to be delivered to the consignee without recourse on Earthwatch, shipper or consignee. The transporter shall not make delivery of this shipment without payment of freight and all other lawful charges.

1st Copy - Earthwatch

2nd Copy - Driver

3rd Copy - Land Fill

4th Copy Shipper

Appendix G

Disposal Documentation:

Tank Cleaning Waste

INDUSTRIAL OIL TANK SERVICE CORP.

VACUUM TRUCK & TRANSPORTATION SERVICES
WASTE DISPOSAL - PETROLEUM RECYCLING
REMEDIATION SUPPLIES

EPA NO. NYR000005298

120 Dry Road
Oriskany, New York 13424
Telephone: (315) 736-6080
Fax: (315) 736-4649

PLEASE ATTACH: All Material Safety Data Sheets, (MSDS), Analysis Reports, Handling Precautions, Additional Hazard Information, Support Data & Comments

PROJECT TANT. 2003

Generator Name US ARMY CORP OF ENGINEERS NY
Facility Address 601 WILLIAMSHIRE RD District 018
City, State, Zip EAST AURORA NY 14052
Technical Contact GREG COETENT PE
(Name) (Title)
Area Code (717) Telephone # 790-8235
Facility EPA ID # _____

SPECIFIC GENERATING PROCESS INFORMATION

Sludge FROM Diesel Tank
Bottoms and wash water

CHEMICAL COMPOSITION (Totals must add up to 100%)

<u>sediment/sludge</u>	<u>80</u>	<u>1</u>
<u>WATER</u>	<u>20</u>	<u>1</u>
_____	_____	<u>1</u>
_____	_____	<u>1</u>
_____	_____	<u>1</u>
_____	_____	<u>1</u>
_____	_____	<u>1</u>
_____	_____	<u>1</u>
_____	_____	<u>1</u>

Certification:

I hereby certify that I have personally examined and am familiar with the information submitted in this and all attached documents. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete to the best of my knowledge and ability and that all known and suspected hazards have been disclosed.

Mark Lovejoy 11/2/17
Signature Date

Mark Lovejoy 11/2/17
Name/Distributor Date

On behalf of USACE

Approved for Acceptance: [] Yes [] No

Sales Rep. _____

Handling Code _____ Date _____

Billing Address SUN ENVIRONMENTAL CORP
4655 CROSSROADS PARK DRIVE
City, State, Zip LIVERPOOL NY 13088
Business Contact Kevin Cannon WNY Manager
(Name) (Title)
Area Code (716) Telephone # 640-3782

Common Name of Waste _____

EPA Haz. _____ Non
Waste No. _____ RCRA No. _____

Container Type ☒ Drum [] Bulk [] Other _____

Rate of Generation: 55 gal drums (2) / TRANS
Quantity Units Per (Mo.Yr.)

Proper DOT Shipping Named: Include RQ Information

NON RHA, NON DOT Regulated Material
Add'l Desc: (Tank bottom sediment/sludge)
Hazard Class NA UN/NA No. _____

PHYSICAL DESCRIPTION

Physical State [] Liquid ☒ Semi Solid [] Solid
Viscosity [] Low [] Medium ☒ High
Liquid Layering [] None ☒ Bilayered [] Multilayered
Solids (Wt%): BS+W _____ Total _____
Free Liquid [] Yes [] No

Odor PETROLEUM Color Brown

Total Halogen (%) _____ TOC (ppm) _____

Flash Point °F _____ BTU/lb _____

PCB (ppm) _____ Pesticide/Herbicide (ppm) _____

METALS (Mg/L or ppm)

Total	TCLP	Total	TCLP
Antimony (Sb)	_____	Lead (Pb)	_____
Arsenic (As)	_____	Mercury (Hg)	_____
Barium (Ba)	_____	Nickel (Ni)	_____
Beryllium (B)	_____	Selenium (Se)	_____
Cadmium (Cd)	_____	Silver (Ag)	_____
Chromium (Cr)	_____	Thallium (Ti)	_____
Copper (Cu)	_____	Zinc (Zn)	_____

Appendix H

Disposal Documentation: Excavation Water

INDUSTRIAL OIL TANK SERVICE CORP.

VACUUM TRUCK & TRANSPORTATION SERVICES
WASTE DISPOSAL - PETROLEUM RECYCLING
REMEDIAL SUPPLIES

EPA NO. NYR000005298

120 Dry Road
Oriskany, New York 13424
Telephone: (315) 736-6080
Fax: (315) 736-4649

PLEASE ATTACH: All Material Safety Data Sheets, (MSDS), Analysis Reports, Handling Precautions, Additional Hazard Information, Support Data & Comments

PROJECT - TANTO 2000

Generator Name US Army Corps of Engineers, NY District
Facility Address 601 Willardshire Rd
City, State, Zip EAST AURORA NY 14052
Technical Contact Greg Goepfert PE
(Name) (Title)
Area Code (917) Telephone # 790-8235

Billing Address SUN ENVIRONMENTAL CORP
4655 CROSSROAD PARK DR
City, State, Zip LIVERPOOL NY 13088
Business Contact Kevin Cronin WNY Manager
(Name) (Title)
Area Code (216) Telephone # 640-3782

Facility EPA ID # _____

SPECIFIC GENERATING PROCESS INFORMATION

Water Removed From UST
Former Diesel Fuel Tank

CHEMICAL COMPOSITION (Totals must add up to 100%)

Component	Percentage
Water	100

Certification:

I hereby certify that I have personally examined and am familiar with the information submitted in this and all attached documents. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete to the best of my knowledge and ability and that all known and suspected hazards have been disclosed.

Mark U. Lovejoy 10/24/17
Signature Date
Mark Lovejoy TANTARA Corp
Name/Distributor Date
on behalf of USACE

Approved for Acceptance: ☐ Yes ☐ No

Sales Rep. _____

Handling Code _____ Date _____

Common Name of Waste _____
EPA Haz. _____ Non _____
Waste No. _____ RCRA No. _____
Container Type ☐ Drum ☒ Bulk ☐ Other _____
Rate of Generation: 8000 G 1 TIME
Quantity Units Per (Mo.Yr.)

Proper DOT Shipping Named: Include RQ Information

NON-RCRA, NON-DOT Regulated Material
Add'l Desc: Groundwater/Vegetation diesel fuel
Hazard Class NA UN/NA No. _____

PHYSICAL DESCRIPTION

Physical State ☒ Liquid ☐ Semi Solid ☐ Solid
Viscosity ☒ Low ☐ Medium ☐ High
Liquid Layering ☒ None ☐ Bilayered ☐ Multilayered
Solids (Wt%): BS+W _____ Total _____
Free Liquid ☒ Yes ☐ No
Odor NO Color clear
Total Halogen (%) _____ TOC (ppm) _____
Flash Point °F 7200 BTU/lb _____
PCB (ppm) NO Pesticide/Herbicide (ppm) _____

METALS (Mg/l or ppm)

Total	TCLP	Total	TCLP
Antimony (Sb)	_____	Lead (Pb)	<u>50</u>
Arsenic (As)	<u><30</u>	Mercury (Hg)	<u><0.20</u>
Barium (Ba)	<u><200</u>	Nickel (Ni)	_____
Beryllium (B)	_____	Selenium (Se)	<u><10</u>
Cadmium (Cd)	<u><5.0</u>	Silver (Ag)	<u><10</u>
Chromium (Cr)	<u><10</u>	Thallium (Tl)	_____
Copper (Cu)	_____	Zinc (Zn)	_____

STRAIGHT BILL OF LADING

ORIGINAL — NOT NEGOTIABLE

Shipper No. 111417
 Carrier No. 7A-709
 Date 11-14-17

Page 1 of 1 SUN ENVIRONMENTAL CORP.
 (Name of carrier) (SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO:
 Consignee Industrial oil TANK SERVICE
 Street 120 Day Rd
 City ORISKANY State NY Zip Code 13424

FROM:
 Shipper US ARMY CORP OF ENGINEERS NY DIST.
 Street 601 Willardshire Rd
 City EAST AURORA State NY Zip Code 14852
 24 hr. Emergency Contact Tel. No. 1-800-807-7455

No. of Units & Container Type	Vehicle Number	BASIC DESCRIPTION	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
<u>1 - TT</u>		<u>NON-RCRA, NON-DOT regulated liquid (ground water/petroleum mix)</u>	<u>EST. 4800</u>	<u>6</u>		
		<u>Don't Use DOTSC</u>				
		<u>11/14/17</u>				
		<u>SUN PROJECT No TANT-2005RI-2242</u>				

PLACARDS TENDERED: YES ☐ NO ☒

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
 (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
 (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(a) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

REMIT C.O.D. TO: ADDRESS _____

COD Amt: \$ _____

C.O.D. FEE: PREPAID ☐ COLLECT ☐ \$ _____

TOTAL CHARGES \$ _____

FREIGHT CHARGES: FREIGHT PREPAID ☐ Check box if charges are to be collect ☐

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER US ARMY CORP OF ENGINEERS NY DIST CARRIER SUN ENVIRONMENTAL CORP
 PER E. Rume PER James Valente
 DATE _____

Appendix I

Data Validation Reports



Data Validation & Usability Assessment

Client/Company: Tantara Corporation, Worcester, MA (Tantara)

Site/Project Name: USACE Buffalo Nike Missile UST Project, East Aurora, NY

Laboratory: SGS-Accutest Southeast, Orlando, FL

SDGs/Lab Project #: FA48546

Date(s) of Collection: October 18, 2017

**Number and type
Samples & analyses:** 8 soil samples for 12 project-specific Volatile Organic Compounds (VOCs) by Method 8260C and 16 project-specific Semivolatile Organic Compounds (SVOCs) by Method 8270D-SIM

Senior Data Reviewers: Dr. Nancy C. Rothman, New Environmental Horizons, Inc.
Susan D. Chapnick, New Environmental Horizons, Inc.

Date Completed: December 14, 2017

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed.

All quality control information associated with accuracy, precision, and sensitivity for the project-specific list of VOCs and SVOCs reported met project criteria for the samples in this SDG. The results presented in the validated database are considered usable for project objectives with the understanding of potential bias in the estimated results.

The VOC and SVOC Data Review Checklists, attached, were completed during this assessment to document the review.

Date Sampled: 10/18/17No. Samples: 8

Method of Analysis: Volatile Organic Compounds (VOCs) by Method 8260C

Matrix: Soil**Data Validation Summary Table - EPA Stage 2B: USACE Buffalo Nike Missile UST, East Aurora, NY**

Data Element Acceptable	HT & Preservation	Blank Actions	Surrogate	LCS/LCSD	MS/MSD	LD / FD	Tunes / ICAL CCV	QL & Quant. Correct	IS	%Solids
Yes	√	√		√		NA	√	√		√
No		None	Estimate (J) 2 results		Estimate (UJ) 8 results				Estimate (J or UJ) 7 results	

Other Issues: *Qualifier Actions:* 3 "J" accepted as "J" values**Comments:**

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with the QAPP and EPA DV guidance present in the data package? Yes. A full data deliverable, including results, summary QC, and all raw data, was provided for review.
2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes.

Additional Notes:

Sample receiving: Samples were received on 10/19/17, the day after sample collection. The temperature upon receipt was within $4 \pm 2^{\circ}\text{C}$. The year for sample collection was missing on the COC (e.g., date of collection listed as "10/18" and should have been listed as "10/18/17"); however, the "Relinquished by" and "Received by" dates clearly show the year of collection, so no action required. The COC indicates that only 1 container of soil for VOCs and SVOCs was submitted; however, the raw lab data clearly indicates that pre-treated vials with preservative were used for these samples and since distinct vial IDs for each vial were used and identified in the analytical run logs, preservation acceptable and met the requirements of the QAPP. The section of the COC describing the samples and preservation used for the sample containers was not fully executed by the field personnel; however, the back-up documentation is acceptable so no action required.

Holding Time (HT) evaluation : All samples were analyzed as low-level VOC soils (water-preserved) except for sample NIKE BOTTOM W, which was analyzed as a medium-level soil, on the day of sample receipt (10/19/17, within 14 days of collection), holding time acceptable. No action required.

Blank Evaluation: All samples were analyzed with Method Blank V2B208-MB. There were no field blanks (equipment blank or trip blanks) associated with the collection of these samples. The Method Blank was non-detect for the 12 project-specific VOCs; therefore, blank action to negate data was not required.

Surrogates: All 4 surrogates (dibromofluoromethane, 1,2-dichloroethane-d4, toluene-d8, and 4-bromofluorobenzene) recovered within criteria in all samples and QC except: 4-bromofluorobenzene was recovered above criteria in the initial and confirmation analyses of samples NIKE BOTTOM S [lab ID FA48546-6] and NIKE BOT-N [lab ID FA48546-8] and toluene-d8 was also high compared to lab criteria in the confirmation analysis of NIKE BOT-N [lab ID FA48546-8] but recovery was acceptable for toluene-d8 in the initial analysis. The confirmation analyses for these 2 samples was done to verify the high recovery for 4-bromofluorobenzene. High recovery only affects detected results and since NIKE BOTTOM S was non-detect for the 12 project-specific VOCs, no action required for this sample.

***ACTION: sec-Butylbenzene and tert-butylbenzene estimated (J+) in sample NIKE BOT-N with possible high bias, unless other issues affect the data, due to high surrogate recovery [NOTE: qualifier changed from "J+" to "J" for both compounds due to other QC issues].**

LCS/LCSD: Only a single LCS (V2B208-BS) - no LCSD. Lab used in-house criteria for recoveries, which were within limits given in QAPP. All 12 project-specific VOCs recovered within criteria - No Action required.

MS/MSD: Although not specified on the COC, the lab performed MS/MSD analysis on sample NIKE SWE [FA48546-1]. All MS&MSD recoveries and MS/MSD RPDs were within lab limits except: n-butylbenzene, sec-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, toluene, and xylene (total) MS&MSD %Rec low, but > 10%, and toluene MS recovery low, but > 10%. Since the MSD recovery and MS/MSD RPD were acceptable for toluene, no action required for low MS of this compound.

***ACTION: n-Butylbenzene, sec-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, toluene, and xylene (total) estimated (UJ) in sample NIKE SWE with possible low bias, unless other issues affect the data, due to low MS/MSD recoveries.**

LD/FD: There were no Lab Duplicates (LD) or Field Duplicates (FD) associated with the samples in this SDG.

Additional Notes:

Instrument Tunes and Calibrations: Instrument GCMS2B 3 tunes (1 ICAL + 2 CCV) met 8260C criteria and all samples were analyzed within 12 hours of tune. The ICAL and CCVs contained more compounds than requested; however, ICAL %RSD < 20% and minimum RRF acceptable for all 12 project-specific compounds. Lab analyzed opening and closing CCVs for each sequence; however, only the opening CCVs were evaluated for this project. The 10/19/17 & 10/20/17 (performed for surrogate confirmation analyses) reported the 12 project-specific VOCs with RRFs exceeding minimum RRF criteria and %D $\leq \pm 20\%$; therefore, no action required.

%Solids: All samples had % solids > 30%, no action required.

IS: All IS areas (fluorobenzene, chlorobenzene-d5, 1,4-dichlorobenzene-d4, and t-butyl Alcohol-d10) and RTs were within criteria in all samples except: t-butyl alcohol-d10 low, but > 20%, for samples NIKE SWE and NIKE BOTTON S and 1,4-dichlorobenzene-d4 low, but > 20%, in sample NIKE BOT-N. Since none of the 12 project-specific compounds are associated with quantitation using t-butyl alcohol-d10, no action for low IS recovery in samples NIKE SWE and NIKE BOTTON S. However, 1,4-dichlorobenzene-d4 is associated with quantitation of n-propylbenzene, 1,3,5-trimethylbenzene, tert-butylbenzene, 1,2,4-trimethylbenzene, sec-butylbenzene, 4-isopropyltoluene, and n-butylbenzene. Since it is unclear whether the associated data are biased low (entire region associated with the IS is suppressed) or high (only IS affected so results biased high), overall bias considered indeterminate.

***ACTION:** *n-propylbenzene, 1,3,5-trimethylbenzene, tert-butylbenzene, 1,2,4-trimethylbenzene, sec-butylbenzene, 4-isopropyltoluene, and n-butylbenzene in sample NIKE BOT-N estimated (J or UI) with indeterminate bias due to low IS recovery.*

Qualifier Action: There were 3 "J" results reported indicating the result reported was uncertain due to quantitation below the instrument calibration range (data accepted as "J" value with indeterminate bias due to result < LOQ). The non-detects (data qualified "U") were reported at the sample-specific QL supported by the Initial Calibration; therefore, these non-detects are accurate as reported.

Sensitivity: All samples except NIKE BOTTOM W were analyzed as low-level soil samples so that the non-detects were all reported at levels < PALs given in Buffalo UST QAPP Worksheet #15-1. Sample NIKE BOTTOM W contained high levels of non-target compounds so the lab analyzed this sample as a medium-level soil and as a consequence, the non-detects for benzene and xylene (total) in this sample exceeded the PALs given in Worksheet #15-1. However, since the lab would have reported "J" data down below the LOQ to the MDL and since the MDL was < PAL for these compounds, sensitivity is considered acceptable.

Narrative : Did not indicate any additional issues not noted in this DV Checklist.

EPA SW-846 Method 8260B, Region II SOP HW-24; and QAPP requirements

Preservation:	Samples should be preserved following SW-846 Method 5035A (waters acid preserved, soils water & methanol preserved sample); received at $\leq 6^{\circ}\text{C}$. Low-level soils frozen to $< -7^{\circ}\text{C}$ within 48-hr of collection. If samples were not properly preserved, J or J- det / J ND or J det / R ND based on professional judgment
HT:	water: pH < 2 - 14d < HT $\leq$ 28 d; J det/ J NDs; HT > 28 d, J det/R ND; pH > 2 - 7d < HT $\leq$ 14 d; J det/ J NDs; HT > 14 d, J det/R ND soil: 14d < HT $\leq$ 28 d; J det/ J NDs; HT > 28 d, J det/R ND
Surrogates:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs
LCS/LCSD:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs. LCS/LCSD RPD > 20% (GW) or > 30% (soil), J det/J NDs
MS/MSD:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs. MS/MSD RPD > 20% (GW) or > 30% (soil), J det/J NDs unspiked sample only
Lab Dup (LD):	If performed, RPD > 20% (GW) or > 30% (soil) if value >5x QL, J det. Not required for VOC analysis per Buffalo UST QAPP
FD:	Both Conc. > 5xQL, RPD > 30% (GW) or > 50% (soil) J det; One result ND, other >5 x QL, J det/J NDs; Both Conc. < 5xQL; RPD > criteria, No Action
Tune:	Criteria per Table 3 8260C; acquisition of tune given as sum of 3 scans across peak with background subtraction. If criteria not met (Abundances out or analysis > 12 hrs from BFB injection and CCVs don't meet frequency & criteria); use professional judgment
ICAL:	$\geq$ 5-Level, lowest level $\leq$ QL; if min. RRF (Table 4 Method 8260C - minimum RRFs for project-specific compounds are: ethylbenzene, m,p-xylene, and isopropylbenzene = 0.100; o-xylene = 0.300; toluene = 0.400; and benzene = 0.500) not met, J- / J NDs; %RSD > 20% or "r" < 0.995 or "r ² " < 0.99, J det/UJ NDs
CCV:	Analyzed at the beginning of each 12 hour shift. if min. RRF not met, J- / J NDs; %D or %Drift > +20%, J det/J ND; %D or %Drift > -20%, J det/Accept ND (neg. %D = loss in sensitivity; positive %D = enhanced sensitivity)
Internal Standards (IS):	RT shift outside window (RT > ± 30 of IS RT in CCV) or $20\% \leq$ Area < 50% of IS in CCV, J+ det/ UJ NDs; Area < 20% of CCAL, J+ det / R NDs; Area > 200% IS in CCV, J- det / Accept NDs. If it's suspected that IS outside criteria is due to poor IS addition to sample (i.e., miss-spike), then professional judgment used to J det/UJ NDs

EPA SW-846 Method 8260B, Region II SOP HW-24; and QAPP requirements - *continued*

Blanks:	If Blank has a detect $\leq$ QL and sample < QL, negate (U) result at the sample-specific QL; if sample value $\geq$ QL, no action required. If Blank detect > QL and sample < QL; negate (U) result at the sample-specific QL; if sample value > QL but < Blank value on a sample-equivalent basis, negate (U) result at the level found; if sample value > value in Blank on sample-equivalent basis, no action required. The sample weight, %solids, and dilution factors used for analysis of the sample must be considered in comparing the Blank data to the sample data. Note: methylene chloride, acetone, and 2-butanone are evaluated at twice the QL since these are common lab contaminants. However, these compounds are not project-specific compounds.
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
% Solids:	If %Solids < 30%, J det/J NDs; if %Solids < 10% J det/ R NDs
Compounds:	Buffalo UST QAPP specifies 12 project-specific VOCs based on NYSDEC Policy CP-51 - see QAPP Worksheets #15-1 and #15-3
Sensitivity:	Identify non-detects > Project Action Limits (PALs) given in Worksheet #15-1 for Soil and #15-3 for GW of the Buffalo UST QAPP
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; NJ = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
References:	<i>Quality Assurance Project Plan, Underground Storage Tank (UST) Closure Work Plan, Former Launch Area Formerly Used Defense Site - Nike Battery BU-34/35, East Aurora, New York, prepared for USACE - New England District</i> , prepared by Tantara Corporation & New Environmental Horizons, Inc. (Version 02, September 2017); SGS Accutest - Southeast SOP MS016 (March 2017); SW-846 Method 8260C; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

Date Sampled: 10/18/17No. Samples: 8

Method of Analysis: Semivolatile Organic Compounds (SVOCs) by Method 8270D-SIM

Matrix: Soil**Data Validation Summary Table - EPA Stage 2B: USACE Buffalo Nike Missile UST, East Aurora, NY**

Data Element Acceptable	HT & Preservation	Blank Actions	Surrogate	LCS/LCSD	MS/MSD	LD / FD	Tunes / ICAL CCV	QL & Quant. Correct	IS	%Solids
Yes	√	√	√	√	NA	NA	√	√	√	√
No		None								

Other Issues: Qualifier Actions: 14 "J" accepted as "J" values**Comments:**

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with the QAPP and EPA DV guidance present in the data package? Yes. A full data deliverable, including results, summary QC, and all raw data, was provided for review.
2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes.

Date: 12/12/17Data Reviewer: Nancy C. Rothman, Ph.D.

Additional Notes:

Sample Receiving: Samples were received on 10/19/17, the day after sample collection. The temperature upon receipt was within $4 \pm 2^{\circ}\text{C}$. The year for sample collection was missing on the COC (e.g., date of collection listed as "10/18" and should have been listed as "10/18/17"); however, the "Relinquished by" and "Received by" dates clearly show the year of collection, so no action required. The COC indicates that only 1 container of soil for VOCs and SVOCs were submitted; however, separate VOC and SVOC containers were received based on lab preparation information. The section of the COC describing the samples and preservation used for the sample containers was not fully executed by the field personnel; however, the back-up documentation is acceptable, so no action required.

Holding Time (HT) evaluation: All samples were extracted on 10/23/17 (QC Batch OP67316) and the extracts were all analyzed by 10/25/17; therefore, HT met. No Action required.

Blank Evaluation: All samples were analyzed with Method Blank OP7316-MB. There were no field blanks (equipment blanks) associated with the collection of these samples. The Method Blank was non-detect for the 16 project-specific PAHs; therefore, blank action to negate data was not required.

Surrogates: Lab spiked 3 BN surrogates (Nitrobenzene-d5, 2-Fluorobiphenyl, and Terphenyl-d14). All 3 surrogates recovered within criteria in all samples except NIKE BOTTOM W, for which 0% recovery was reported in the DF=10 and DF=20 analysis of this sample. The lab indicates that the surrogates were lost in this sample due to dilution; therefore, no action required.

LCS/LCSD: Only a single LCS (OP67316-BS) - no LCSD. Lab used in-house criteria for recoveries, which were within limits given in QAPP. All 16 project-specific PAHs recovered within criteria - No Action required.

MS/MSD: MS/MSD performed on a sample not associated with this project (batch QC). The lab was method compliant in performing a MS/MSD but the results of this MS/MSD will not impact the data for the samples from the Buffalo NIKE UST project so no review of this QC performed here. Note, the COC did not request that an MS/MSD be performed although the Buffalo UST QAPP did indicate MS/MSD analysis as a QC requirement for SVOCs in soil.

LD/FD: There were no Lab Duplicates (LD) or Field Duplicates (FD) associated with the samples in this SDG.

Additional Notes:

Instrument Tunes and Calibrations: Instrument GCMSW 4 tunes (1 ICAL + 3 CCV) met 8270C and 8270D criteria (criteria in data package is for Method 8270C; however, tunes were checked and also met 8270D tune criteria) and all samples were analyzed within 12 hours of tune. Analysis was performed by Method 8270D operated in the Selected Ion Monitoring mode (8270D-SIM). The ICAL and CCV contained more compounds than requested; however, ICAL %RSD < 20% or r2 > 0.99 and minimum RRF acceptable for all 16 project-specific PAHs. Lab analyzed opening and closing CCVs for each sequence; however, only the opening CCVs were evaluated for this project. The CCVs reported the 16 project-specific PAHs with RRFs exceeding minimum RRF criteria and %D or %Drift < ± 20%; therefore, no action required.

Internal Standards (IS): All 5 IS's (Naphthalene-d8, Acenaphthene-d10, Phenanthrene-d10, Chrysene-d12, and Perylene-d12) had areas and RTs within criteria - No Action required.

%Solids: All samples had % solids > 30%

Qualifier Action: There were 14 "J" results reported indicating the result reported was uncertain due to quantitation below the instrument calibration range (data accepted as "J" value with indeterminate bias due to result < LOQ). The non-detects (data qualified "U") were reported at the sample-specific QL supported by the Initial Calibration; therefore, these non-detects are accurate as reported.

Sensitivity: All non-detects for the 16 PAHs were reported at levels less than PALs given in Buffalo UST QAPP Worksheet #15-2; therefore, sensitivity was acceptable for these data.

Narrative : Did not indicate any additional issues not noted in this DV Checklist.

EPA SW-846 Method 8270C, Region II SOP HW-22; and QAPP requirements

Preservation:	Soils and GW Temperature upon receipt $4^{\circ}\pm^{\circ}2^{\circ}\text{C}$; use judgment if outside criteria.
HT:	GW Extraction: 7d <HT< 14 d; J det/ J NDs; HT >14 d, J det/R ND Soil: extraction: 14d <HT< 28 d; J det/ J NDs; HT >28 d, J det/R ND; however, HT extended to up to 1 year if soil is frozen Analysis of extract: 40d < Extract HT < 60d, J det/ J NDs; Extract HT > 60d; J det/ R NDs; however, HT extended to up to 1 year if extract is frozen
Surrogates:	Acceptance criteria 30-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs
LCS/LCSD:	Acceptance 40-140% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs ; LCS/LCSD RPD > 20% (GW) or > 30% (soil), J det/J NDs
MS/MSD:	Acceptance 40-140% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs ; MS/MSD RPD > 20% (GW) or > 30% (soil), J det/J NDs. Action affects unspiked sample only.
LD:	If performed, RPD > 20% (GW) or > 30% (soil) if value >5x QL, J det. Not required for VOC analysis per Buffalo UST QAPP
FD:	Both Conc. > 5xQL, RPD > 30% (GW) or > 50% (soil) J det; One result ND, other >5 x QL, J det/J NDs; Both Conc. < 5xQL; RPD > criteria, No Action
Tune:	Criteria per Table 3 8270D; acquisition of tune given as sum of 3 scans across peak with background subtraction. If criteria not met (Abundances out or analysis > 12 hrs from DFTPP injection and CCVs don't meet frequency & criteria); use professional judgment
ICAL:	≥ 5 -Level, lowest level $\leq \text{QL}$; if min. RRF per Table 4 of Method 8270D (ranging from 0.400 for dibenz(a,h)anthracene to 0.900 for acenaphthene and acenaphthylene) or %RSD > 20% or " r " < 0.995 or " r^2 " < 0.99, J det/UJ NDs. If %RSD > 90%, J det/ R NDs.
CCV:	Analyzed at the beginning of each 12 hour shift. %D or %Drift > +20%, J det/Accept ND; min. RRF < Table 4 criteria or %D or %Drift > -20%, J det/J NDs (neg. %D = loss in sensitivity; positive %D = enhanced sensitivity)
Blanks:	If Blank has a detect < QL and sample < QL, negate (U) result at the sample-specific QL; if sample value $\geq \text{QL}$, no action required. If Blank detect $\geq \text{QL}$ and sample < QL; negate (U) result at the sample-specific QL; if sample value $\geq \text{QL}$ but < Blank value on a sample-equivalent basis, negate (U) result at the level found; if sample is $\geq \text{QL}$ and $\geq$ Blank value on sample-equivalent basis, no action required. The sample weight, %solids, and dilution factors used for analysis of the sample must be considered in comparing the Blank data to the sample data.

EPA SW-846 Method 8270C, Region II SOP HW-22; and QAPP requirements - *continued*

IS:	20% < IS recovery < 50%; J det/ J ND with indeterminate bias (unclear if low IS is due to overall loss in instrument sensitivity causing IS and other compounds to be biased low or whether issue only affects IS, in which case, quantitation of detects possible biased high). If IS recovery < 20%, J det / R NDs. Project-specific compounds affected by IS issues are:
	Naphthalene-d8 (IS1) affects: naphthalene
	Acenaphthene-d10 (IS2) affects: acenaphthylene, acenaphthene, and fluorene
	Phenanthrene-d10 (IS3) affects: phenanthrene, anthracene, and fluoranthene.
	Chrysene-d12 (IS4) affects: pyrene, benzo(a)anthracene, and chrysene
	Perylene-d12 (IS5) affects: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.
% Solids	If %Solids < 30%, J det/J NDs; if %Solids < 10% J det/ R NDs
Compounds	Buffalo UST QAPP specifies 16 project-specific PAHs based on NYSDEC Policy CP-51 - see QAPP Worksheets #15-2 and #15-4
Sensitivity:	Identify non-detects > PALs given in Worksheet #15-2 for soils and Worksheet #15-4 for GW of the Buffalo UST QAPP
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; NJ = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
References:	<i>Quality Assurance Project Plan, Underground Storage Tank (UST) Closure Work Plan, Former Launch Area Formerly Used Defense Site - Nike Battery BU-34/35, East Aurora, New York</i> , prepared for USACE - New England District, prepared by Tantara Corporation & New Environmental Horizons, Inc. (Version 02, September 2017); SGS Accutest - Southeast SOP MS008 (March 2017); SW-846 Method 8270D; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP# HW-22; rev. 5 (January 2011).



Data Validation & Usability Assessment

Client/Company: Tantara Corporation, Worcester, MA (Tantara)

Site/Project Name: USACE Buffalo Nike Missile UST Project, East Aurora, NY

Laboratory: SGS-Accutest Southeast, Orlando, FL

SDGs/Lab Project #: FA48580

Date(s) of Collection: October 19, 2017

**Number and type
Samples & analyses:** 8 soil samples for 12 project-specific Volatile Organic Compounds (VOCs) by Method 8260C and 16 project-specific Semivolatile Organic Compounds (SVOCs) by Method 8270D-SIM

Senior Data Reviewers: Dr. Nancy C. Rothman, New Environmental Horizons, Inc.
Susan D. Chapnick, New Environmental Horizons, Inc.

Date Completed: December 14, 2017

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed.

All quality control information associated with accuracy, precision, and sensitivity for the project-specific list of VOCs and SVOCs reported met project criteria for the samples in this SDG. The results presented in the validated database are considered usable for project objectives with the understanding of potential bias in the estimated results.

The VOC and SVOC Data Review Checklists, attached, were completed during this assessment to document the review.

Date Sampled: 10/19/17No. Samples: 8

Method of Analysis: Volatile Organic Compounds (VOCs) by Method 8260C

Matrix: Soil**Data Validation Summary Table - EPA Stage 2B: USACE Buffalo Nike Missile UST, East Aurora, NY**

Data Element Acceptable	HT & Preservation	Blank Actions	Surrogate	LCS/LCSD	MS/MSD	LD / FD	Tunes / ICAL CCV	QL & Quant. Correct	IS	%Solids
Yes	√	√	√	√	√	√	√	√	√	√
No		None								

Other Issues: Qualifier Actions: 12 "J" accepted as "J" values**Comments:**

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed. The samples in the SDG were analyzed and validated for 12 project-specific VOCs (benzene, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and xylene (total)) as required by the Buffalo UST QAPP.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with the QAPP and EPA DV guidance present in the data package? Yes. A full data deliverable, including results, summary QC, and all raw data, was provided for review.
2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes.

Additional Notes:

Sample receiving: Samples were received on 10/20/17, the day after sample collection. The temperature upon receipt was within $4 \pm 2^{\circ}\text{C}$. The year for sample collection was missing on the COC (e.g., date of collection listed as "10/19" and should have been listed as "10/19/17"); however, the "Relinquished by" and "Received by" dates clearly show the year of collection, so no action required. The COC has the same time of collection for all samples, which is unlikely, therefore, field notes should be referenced when evaluating the data. The COC indicates that samples should also be analyzed for Waste Characterization; however, only "Soil Pile WC UST" required full VOC, full SVOC, TCLP Metals, TPH, PCB Aroclors, Cyanide Reactivity, Sulfide Reactivity, Ignitability, and pH. At the client's request, sample "Soil Pile WC UST" was validated for only the VOC and SVOC compounds listed in Worksheets #15 of the Buffalo UST QAPP. Since TCL VOCs were analyzed for "Soil Pile WC UST", the lab reported the xylene isomers, o-xylene and m,p-xylene, rather than xylene (total) so that for this one sample, 13 VOC results were validated.

Holding Time (HT) evaluation : All samples were analyzed as low-level VOC soils (water-preserved) except for sample NIKE BOT N2, which was analyzed as a medium-level soil, on the day of sample receipt (10/20/17, within 14 days of collection), holding time acceptable. No action required.

Blank Evaluation: Samples FA48580-1 through -4 were analyzed with Method Blank VF2931-MB and samples FA48580-5 through -8 were analyzed with Method Blank VY1449-MB (2 QC Batches analyzed). There were no field blanks (equipment blank or trip blanks) associated with the collection of these samples. The Method Blanks were non-detect for the 12 project-specific VOCs except VY1449-MB reported a detect for Toluene at $1.8 \text{ J } \mu\text{g/Kg}$; however, since the associated samples were non-detect for Toluene, blank action not required. Note, Method Blank VY1449-MB reported results for the TCL VOCs; however, only the project-specific VOCs are addressed here. No Action Required.

Surrogates: All 4 surrogates (dibromofluoromethane, 1,2-dichloroethane-d4, toluene-d8, and 4-bromofluorobenzene) recovered within criteria in all samples and QC - No Action required.

LCS/LCSD: Only a single LCS (VF2931-BS and VY1449-BS) - no LCSD. Lab used in-house criteria for recoveries, which were within limits given in QAPP. All 12 project-specific VOCs recovered within criteria - No Action required.

MS/MSD: Although not specified on the COC, the lab performed MS/MSD analysis on samples NIKE BOT N2 [FA48580-2] and NIKE PAD BOT W [FA48580-5] for the 2 QC batches. All MS&MSD recoveries and MS/MSD RPDs were within lab limits for the 12 project-specific VOCs in both sets of MS/MSD indicating acceptable accuracy and precision for analysis of the project-specific VOCs in the site matrices. Note that the MS/MSD on sample NIKE PAD BOT W evaluated the full TCL VOC and some TCL compounds did not meet recovery criteria; however, these QC issues do not affect the data validated. No Action required.

Additional Notes:

Instrument Tunes and Calibrations: Instrument GCMSF 2 tunes (1 ICAL + 1 CCV) and Instrument GCMS Y 2 tunes (1 ICAL + 1 CCV) met 8260C criteria and all samples were analyzed within 12 hours of tune. The ICALs and CCVs contained more compounds than requested; however, ICAL %RSD < 20% or $r^2 > 0.99$ and minimum RRF acceptable for all 12 project-specific compounds. Lab analyzed opening and closing CCVs for each sequence; however, only the opening CCVs were evaluated for this project. The two CCVs on 10/20/17 (performed for surrogate confirmation analyses) reported the 12 project-specific VOCs with RRFs exceeding minimum RRF criteria and %D or %Drift $\leq \pm 20\%$; therefore, no action required.

%Solids: All samples had % solids > 30%, no action required.

IS: All IS areas (fluorobenzene, chlorobenzene-d5, 1,4-dichlorobenzene-d4, and t-butyl Alcohol-d10) and RTs were within criteria in all samples - No Action required.

Qualifier Action: There were 12 "J" results reported indicating the result reported was uncertain due to quantitation below the instrument calibration range (data accepted as "J" value with indeterminate bias due to result < LOQ). The non-detects (data qualified "U") were reported at the sample-specific QL supported by the Initial Calibration; therefore, these non-detects are accurate as reported.

Sensitivity: All samples except NIKE BOT N2 were analyzed as low-level soil samples so that the non-detects were all reported at levels < PALs given in Buffalo UST QAPP Worksheet #15-1. Sample NIKE BOT N2 contained high levels of non-target compounds so the lab analyzed this sample as a medium-level soil and as a consequence, the non-detects for benzene and xylene (total) in this sample exceeded the PALs given in Worksheet #15-1. However, since the lab would have reported "J" data down below the LOQ to the MDL and since the MDL was < PAL for these compounds in this sample, sensitivity is considered acceptable.

Narrative : Did not indicate any additional issues not noted in this DV Checklist.

Field Duplicates: NIKE PIPE and NIKE PIPE DUP. All 12 project-specific VOCs were non-detect in both samples; therefore, while these results are consistent with each other, it is not possible to calculate FD precision through RPDs. FD precision considered acceptable, no Action required.

EPA SW-846 Method 8260B, Region II SOP HW-24; and QAPP requirements

Preservation:	Samples should be preserved following SW-846 Method 5035A (waters acid preserved, soils water & methanol preserved sample); received at $\leq 6^{\circ}\text{C}$. Low-level soils frozen to $< -7^{\circ}\text{C}$ within 48-hr of collection. If samples were not properly preserved, J or J- det / J ND or J det / R ND based on professional judgment
HT:	water: pH < 2 - 14d < HT $\leq$ 28 d; J det/ J NDs; HT > 28 d, J det/R ND; pH > 2 - 7d < HT $\leq$ 14 d; J det/ J NDs; HT > 14 d, J det/R ND soil: 14d < HT $\leq$ 28 d; J det/ J NDs; HT > 28 d, J det/R ND
Surrogates:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs
LCS/LCSD:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs. LCS/LCSD RPD > 20% (GW) or > 30% (soil), J det/J NDs
MS/MSD:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs. MS/MSD RPD > 20% (GW) or > 30% (soil), J det/J NDs unspiked sample only
Lab Dup (LD):	If performed, RPD > 20% (GW) or > 30% (soil) if value >5x QL, J det. Not required for VOC analysis per Buffalo UST QAPP
FD:	Both Conc. > 5xQL, RPD > 30% (GW) or > 50% (soil) J det; One result ND, other >5 x QL, J det/J NDs; Both Conc. < 5xQL; RPD > criteria, No Action
Tune:	Criteria per Table 3 8260C; acquisition of tune given as sum of 3 scans across peak with background subtraction. If criteria not met (Abundances out or analysis > 12 hrs from BFB injection and CCVs don't meet frequency & criteria); use professional judgment
ICAL:	$\geq$ 5-Level, lowest level $\leq$ QL; if min. RRF (Table 4 Method 8260C - minimum RRFs for project-specific compounds are: ethylbenzene, m,p-xylene, and isopropylbenzene = 0.100; o-xylene = 0.300; toluene = 0.400; and benzene = 0.500) not met, J- / J NDs; %RSD > 20% or "r" < 0.995 or "r ² " < 0.99, J det/UJ NDs
CCV:	Analyzed at the beginning of each 12 hour shift. if min. RRF not met, J- / J NDs; %D or %Drift > +20%, J det/J ND; %D or %Drift > -20%, J det/Accept ND (neg. %D = loss in sensitivity; positive %D = enhanced sensitivity)
Internal Standards (IS):	RT shift outside window (RT > ± 30 of IS RT in CCV) or $20\% \leq$ Area < 50% of IS in CCV, J+ det/ UJ NDs; Area < 20% of CCAL, J+ det / R NDs; Area > 200% IS in CCV, J- det / Accept NDs. If it's suspected that IS outside criteria is due to poor IS addition to sample (i.e., miss-spike), then professional judgment used to J det/UJ NDs

EPA SW-846 Method 8260B, Region II SOP HW-24; and QAPP requirements - continued

Blanks:	If Blank has a detect $\leq$ QL and sample < QL, negate (U) result at the sample-specific QL; if sample value $\geq$ QL, no action required. If Blank detect > QL and sample < QL; negate (U) result at the sample-specific QL; if sample value > QL but < Blank value on a sample-equivalent basis, negate (U) result at the level found; if sample value > value in Blank on sample-equivalent basis, no action required. The sample weight, %solids, and dilution factors used for analysis of the sample must be considered in comparing the Blank data to the sample data. Note: methylene chloride, acetone, and 2-butanone are evaluated at twice the QL since these are common lab contaminants. However, these compounds are not project-specific compounds.
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
% Solids:	If %Solids < 30%, J det/J NDs; if %Solids < 10% J det/ R NDs
Compounds:	Buffalo UST QAPP specifies 12 project-specific VOCs based on NYSDEC Policy CP-51 - see QAPP Worksheets #15-1 and #15-3
Sensitivity:	Identify non-detects > Project Action Limits (PALs) given in Worksheet #15-1 for Soil and #15-3 for GW of the Buffalo UST QAPP
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; NJ = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
References:	<i>Quality Assurance Project Plan, Underground Storage Tank (UST) Closure Work Plan, Former Launch Area Formerly Used Defense Site - Nike Battery BU-34/35, East Aurora, New York, prepared for USACE - New England District</i> , prepared by Tantara Corporation & New Environmental Horizons, Inc. (Version 02, September 2017); SGS Accutest - Southeast SOP MS016 (March 2017); SW-846 Method 8260C; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

Date Sampled: 10/19/17No. Samples: **8**

Method of Analysis: Semivolatile Organic Compounds (SVOCs) by Method 8270D-SIM

Matrix: Soil**Data Validation Summary Table - EPA Stage 2B: USACE Buffalo Nike Missile UST, East Aurora, NY**

Data Element Acceptable	HT & Preservation	Blank Actions	Surrogate	LCS/LCSD	MS/MSD	LD / FD	Tunes / ICAL CCV	QL & Quant. Correct	IS	%Solids
Yes	√	√	√	√	NA		√	√	√	√
No		None				Estimate (J or UJ) 22 results [11 in each FD sample]				

Other Issues: Qualifier Actions: 17 "J" accepted as "J" values**Comments:**

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed. The samples in the SDG were analyzed and validated for 16 project-specific SVOCs (acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene) as required by the Buffalo UST QAPP.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with the QAPP and EPA DV guidance present in the data package? Yes. A full data deliverable, including results, summary QC, and all raw data, was provided for review.
2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes.

Date: 12/14/17Data Reviewer: Nancy C. Rothman, Ph.D.

Additional Notes:

Sample Receiving: Samples were received on 10/20/17, the day after sample collection. The temperature upon receipt was within $4 \pm 2^{\circ}\text{C}$. The year for sample collection was missing on the COC (e.g., date of collection listed as "10/19" and should have been listed as "10/19/17"); however, the "Relinquished by" and "Received by" dates clearly show the year of collection, so no action required. The COC has the same time of collection for all samples, which is unlikely, therefore, field notes should be referenced when evaluating the data. The COC indicates that samples should also be analyzed for Waste Characterization; however, only "Soil Pile WC UST" required full VOC, full SVOC, TCLP Metals, TPH, PCB Aroclors, Cyanide Reactivity, Sulfide Reactivity, Ignitability, and pH. At the client's request, sample "Soil Pile WC UST" was validated for only the VOC and SVOC compounds listed in Worksheets #15 of the Buffalo UST QAPP.

Holding Time (HT) evaluation: All samples except Soil Pile WC UST [FA48580-8] were extracted on 10/23/17 (QC Batch OP67316) and sample Soil Pile WC UST [FA48580-8] was extracted on 10/24/17 (QC Batch OP67326) and the extracts were all analyzed by 10/25/17; therefore, HT met. No Action required.

Blank Evaluation: All samples were analyzed with Method Blank OP7316-MB and Method Blank OP67326-MB. There were no field blanks (equipment blanks) associated with the collection of these samples. The Method Blanks were both non-detect for the 16 project-specific PAHs; therefore, blank action to negate data was not required.

Surrogates: Lab spiked 3 BN surrogates (Nitrobenzene-d5, 2-Fluorobiphenyl, and Terphenyl-d14) for all samples except Soil Pile WC UST [FA48580-8] for which 3 Acid and 3 BN surrogates were spiked since TCL SVOCs reported for this one sample. All 3 BN surrogates in all 8 samples recovered within criteria except NIKE BOTTOM N2, for which 0% recovery was reported in the DF=10 analysis of this sample, and Nitrobenzene-d5 recovery high in sample NIKE PAD BOT W. No action for diluted out surrogates and no action for one BN reported high compared to criteria in one sample since the other surrogates were within criteria.

LCS/LCSD: Only a single LCS (OP67316-BS and OP7326-BS) - no LCSD. Lab used in-house criteria for recoveries, which were within limits given in QAPP. All 16 project-specific PAHs were recovered within criteria in both LCS' - No Action required.

MS/MSD: MS/MSD performed in both QC batches on samples not associated with this project (batch QC). The lab was method compliant in performing a MS/MSD but the results of these MS/MSDs will not impact the data for the samples from the Buffalo NIKE UST project so no review of these QC performed here. Note, the COC did not request an MS/MSD be performed although the Buffalo UST QAPP did indicate MS/MSD analysis as a QC requirement for SVOCs in soil.

Additional Notes:

Instrument Tunes and Calibrations: Instrument GCMSW 3 tunes (1 ICAL + 2 CCV) and Instrument GCMSX 2 tunes (1 ICAL& 1 CCV) met 8270C and 8270D criteria (criteria in data package is for Method 8270C; however, tunes were checked and also met 8270D tune criteria) and all samples were analyzed within 12 hours of tune. Analysis was performed by Method 8270D operated in the Selected Ion Monitoring mode (8270D-SIM). The ICALs and CCVs contained more compounds than requested; however, ICAL %RSD < 20% or r2 > 0.99 and minimum RRF acceptable for all 16 project-specific PAHs. Lab analyzed opening and closing CCVs for each sequence; however, only the opening CCVs were evaluated for this project. The CCVs reported the 16 project-specific PAHs with RRFs exceeding minimum RRF criteria and %D or %Drift < $\pm 20\%$; therefore, no action required.

Internal Standards (IS): All 5 IS's (Naphthalene-d8, Acenaphthene-d10, Phenanthrene-d10, Chrysene-d12, and Perylene-d12) had areas and RTs within criteria - No Action required.

%Solids: All samples had % solids > 30%

Qualifier Action : There were 17 "J" results reported indicating the result reported was uncertain due to quantitation below the instrument calibration range (data accepted as "J" value with indeterminate bias due to result < LOQ). The non-detects (data qualified "U") were reported at the sample-specific QL supported by the Initial Calibration; therefore, these non-detects are accurate as reported.

Sensitivity: All non-detects for the 16 PAHs were reported at levels less than PALs given in Buffalo UST QAPP Worksheet #15-2; therefore, sensitivity was acceptable for these data.

Narrative : Did not indicate any additional issues not noted in this DV Checklist.

Field Duplicates: NIKE PIPE & NIKE PIPE DUP. A comparison of the 16 project-specific SVOCs in this FD pair is shown below

Field Duplicate Evaluation_ Sample IDs:

Field Duplicate Evaluation_ Sample IDs:				Sample = NIKE PIPE			FD = NIKE PIPE DUP				
Analyte Name	DF=1			Sample	Sample Result	FD		FD Result		RPD	Action *
	LOQ (µg/Kg)			µg/Kg	Q	Level	µg/Kg	Q	Level		
Anthracene		73		96.9		< 2 x LOQ	77	U	LOQ	NA	None
Pyrene		73		277		> 2 x LOQ	77	U	LOQ	NA	J / UJ
Benzo(g,h,i)perylene		15		220		> 2 x LOQ	13.2	J	< 5 x LOQ	177.4	J Both
Indeno(1,2,3-cd)pyrene		15		212		> 2 x LOQ	12.8	J	< 5 x LOQ	177.2	J Both
Benzo(b)fluoranthene		15		247		> 2 x LOQ	15.5		< 5 x LOQ	176.4	J Both
Fluoranthene		73		351		> 2 x LOQ	30.2	J	< 5 x LOQ	168.3	J Both
Benzo(k)fluoranthene		15		263		> 2 x LOQ	17		< 5 x LOQ	175.7	J Both
Acenaphthylene		73		160		> 2 x LOQ	77	U	LOQ	NA	J / UJ
Chrysene		15		136		> 2 x LOQ	9.2	J	< 5 x LOQ	174.7	J Both
Benzo(a)pyrene		15		253		> 2 x LOQ	16.5		< 5 x LOQ	175.5	J Both
Dibenzo(a,h)anthracene		15		54.3		> 2 x LOQ	15	U	LOQ	NA	J / UJ
Benzo(a)anthracene		15		174		> 2 x LOQ	11.5	J	< 5 x LOQ	175.2	J Both
Acenaphthene		73		73	U	LOQ	77	U	LOQ	NA	None
Phenanthrene		73		47.1	J	< 2 x LOQ	77	U	LOQ	NA	None
Fluorene		73		73	U	LOQ	77	U	LOQ	NA	None
Naphthalene		73		73	U	LOQ	77	U	LOQ	NA	None

*Action only taken for RPD > 50% if one or both results are ≥ 2 x LOQ; Q = Validator Qualifier

FD precision was unacceptable for 11 out of the 16 SVOCs in NIKE PIPE & NIKE PIPE DUP indicating imprecision and possible sample representativeness issues for the site location for SVOCs.

***ACTION:** Pyrene, benzo(g,h,i)perylene, indeno(1,2,3-cd)pyrene, benzo(b)fluoranthene, fluoranthene, benzo(k)fluoranthene, acenaphthylene, chrysene, benzo(a)pyrene, dibenzo(a,h)anthracene, and benzo(a)anthracene estimated (J or UJ) in samples NIKE PIPE and NIKE PIPE DUP with indeterminate bias due to FD imprecision.

EPA SW-846 Method 8270C, Region II SOP HW-22; and QAPP requirements

Preservation:	Soils and GW Temperature upon receipt $4^{\circ}\pm^{\circ}2C$; use judgment if outside criteria.
HT:	GW Extraction: 7d <HT< 14 d; J det/ J NDs; HT >14 d, J det/R ND Soil: extraction: 14d <HT< 28 d; J det/ J NDs; HT >28 d, J det/R ND; however, HT extended to up to 1 year if soil is frozen Analysis of extract: 40d < Extract HT < 60d, J det/ J NDs; Extract HT > 60d; J det/ R NDs; however, HT extended to up to 1 year if extract is frozen
Surrogates:	Acceptance criteria 30-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs
LCS/LCSD:	Acceptance 40-140% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs ; LCS/LCSD RPD > 20% (GW) or > 30% (soil), J det/J NDs
MS/MSD:	Acceptance 40-140% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs ; MS/MSD RPD > 20% (GW) or > 30% (soil), J det/J NDs. Action affects unspiked sample only.
LD:	If performed, RPD > 20% (GW) or > 30% (soil) if value >5x QL, J det. Not required for VOC analysis per Buffalo UST QAPP
FD:	Both Conc. > 5xQL, RPD > 30% (GW) or > 50% (soil) J det; One result ND, other >5 x QL, J det/J NDs; Both Conc. < 5xQL; RPD > criteria, No Action
Tune:	Criteria per Table 3 8270D; acquisition of tune given as sum of 3 scans across peak with background subtraction. If criteria not met (Abundances out or analysis > 12 hrs from DFTPP injection and CCVs don't meet frequency & criteria); use professional judgment
ICAL:	≥ 5 -Level, lowest level $\leq \text{QL}$; if min. RRF per Table 4 of Method 8270D (ranging from 0.400 for dibenz(a,h)anthracene to 0.900 for acenaphthene and acenaphthylene) or %RSD > 20% or " r " < 0.995 or " r^2 " < 0.99, J det/UJ NDs. If %RSD > 90%, J det/ R NDs.
CCV:	Analyzed at the beginning of each 12 hour shift. %D or %Drift > +20%, J det/Accept ND; min. RRF < Table 4 criteria or %D or %Drift > -20%, J det/J NDs (neg. %D = loss in sensitivity; positive %D = enhanced sensitivity)
Blanks:	If Blank has a detect < QL and sample < QL, negate (U) result at the sample-specific QL; if sample value $\geq \text{QL}$, no action required. If Blank detect $\geq \text{QL}$ and sample < QL; negate (U) result at the sample-specific QL; if sample value $\geq \text{QL}$ but < Blank value on a sample-equivalent basis, negate (U) result at the level found; if sample is $\geq \text{QL}$ and $\geq$ Blank value on sample-equivalent basis, no action required. The sample weight, %solids, and dilution factors used for analysis of the sample must be considered in comparing the Blank data to the sample data.

EPA SW-846 Method 8270C, Region II SOP HW-22; and QAPP requirements - *continued*

IS:	20% < IS recovery < 50%; J det/ J ND with indeterminate bias (unclear if low IS is due to overall loss in instrument sensitivity causing IS and other compounds to be biased low or whether issue only affects IS, in which case, quantitation of detects possible biased high). If IS recovery < 20%, J det / R NDs. Project-specific compounds affected by IS issues are:
	Naphthalene-d8 (IS1) affects: naphthalene
	Acenaphthene-d10 (IS2) affects: acenaphthylene, acenaphthene, and fluorene
	Phenanthrene-d10 (IS3) affects: phenanthrene, anthracene, and fluoranthene.
	Chrysene-d12 (IS4) affects: pyrene, benzo(a)anthracene, and chrysene
	Perylene-d12 (IS5) affects: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.
% Solids	If %Solids < 30%, J det/J NDs; if %Solids < 10% J det/ R NDs
Compounds	Buffalo UST QAPP specifies 16 project-specific PAHs based on NYSDEC Policy CP-51 - see QAPP Worksheets #15-2 and #15-4
Sensitivity:	Identify non-detects > PALs given in Worksheet #15-2 for soils and Worksheet #15-4 for GW of the Buffalo UST QAPP
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; NJ = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
References:	<i>Quality Assurance Project Plan, Underground Storage Tank (UST) Closure Work Plan, Former Launch Area Formerly Used Defense Site - Nike Battery BU-34/35, East Aurora, New York</i> , prepared for USACE - New England District, prepared by Tantara Corporation & New Environmental Horizons, Inc. (Version 02, September 2017); SGS Accutest - Southeast SOP MS008 (March 2017); SW-846 Method 8270D; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP# HW-22; rev. 5 (January 2011).



Data Validation & Usability Assessment

Client/Company: Tantara Corporation, Worcester, MA (Tantara)

Site/Project Name: USACE Buffalo Nike Missile UST Project, East Aurora, NY

Laboratory: SGS-Accutest Southeast, Orlando, FL

SDGs/Lab Project #: FA48865

Date(s) of Collection: October 27, 2017

**Number and type
Samples & analyses:** 4 soil samples for 12 project-specific Volatile Organic Compounds (VOCs) by Method 8260C and 16 project-specific Semivolatile Organic Compounds (SVOCs) by Method 8270D-SIM

Senior Data Reviewers: Dr. Nancy C. Rothman, New Environmental Horizons, Inc.
Susan D. Chapnick, New Environmental Horizons, Inc.

Date Completed: December 15, 2017

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed.

All quality control information associated with accuracy, precision, and sensitivity for the project-specific list of VOCs and SVOCs reported met project criteria for the samples in this SDG. The results presented in the validated database are considered usable for project objectives with the understanding of potential bias in the estimated results.

The VOC and SVOC Data Review Checklists, attached, were completed during this assessment to document the review.

Date Sampled: 10/27/17No. Samples: 4

Method of Analysis: Volatile Organic Compounds (VOCs) by Method 8260C

Matrix: Soil**Data Validation Summary Table - EPA Stage 2B: USACE Buffalo Nike Missile UST, East Aurora, NY**

Data Element Acceptable	HT & Preservation	Blank Actions	Surrogate	LCS/LCSD	MS/MSD	LD / FD	Tunes / ICAL CCV	QL & Quant. Correct	IS	%Solids
Yes	√	√	√	√		NA	√	√	√	√
No		None			Estimate (J, J+, or UJ) 15 results					

Other Issues: Qualifier Actions: 3 "J" accepted as "J" values**Comments:**

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed. The samples in the SDG were analyzed and validated for 12 project-specific VOCs (benzene, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and xylene (total)) as required by the Buffalo UST QAPP.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with the QAPP and EPA DV guidance present in the data package? Yes. A full data deliverable, including results, summary QC, and all raw data, was provided for review.
2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes.

Additional Notes:

Sample receiving: Samples were received on 10/28/17, the day after sample collection. The temperature upon receipt was within $4 \pm 2^{\circ}\text{C}$. The year for sample collection was missing on the COC (e.g., date of collection listed as "10/27" and should have been listed as "10/27/17"); however, the "Relinquished by" and "Received by" dates clearly show the year of collection, so no action required. The COC has no time of collection for the samples; therefore, field notes should be referenced when evaluating the data. The COC indicates that sample "NIKE SIDEWALL NORTH3 EXT" should be analyzed for PCBs and Metals and for this one sample, the lab also reported full TCL VOC and TCL SVOC. At the client's request, sample "NIKE SIDEWALL NORTH3 EXT" was validated for only the VOC and SVOC compounds listed in Worksheets #15 of the Buffalo UST QAPP. Since TCL VOCs were analyzed for "NIKE SIDEWALL NORTH3 EXT", the lab reported the xylene isomers, o-xylene and m,p-xylene, rather than xylene (total) so that for this one sample, 13 VOC results were validated.

Holding Time (HT) evaluation : All samples were analyzed as low-level VOC soils (water-preserved) except for sample NIKE SW2 WEST SIDEWALL [FA48865-3], which was analyzed as a medium-level soil. Samples FA48865-2 & -4 were analyzed on 10/30/17 (QC Batch V2B216), sample FA48865-1 was analyzed on 11/2/17 (QC Batch V2B219), and FA48865-3 was analyzed on 11/6/17 (QC Batch V2B222). Holding time acceptable - no action required.

Blank Evaluation: Samples FA48865-2 & -4 were analyzed with Method Blank V2B216-MB, FA48865-1 was analyzed with Method Blank V2B219-MB, and samples FA48865-3 was analyzed with Method Blank V2B222-MB (3 QC Batches analyzed). There were no field blanks (equipment blank or trip blanks) associated with the collection of these samples. The Method Blanks were non-detect for the 12 project-specific VOCs; therefore, blank action to negate sample data was not required.

Surrogates: All 4 surrogates (dibromofluoromethane, 1,2-dichloroethane-d4, toluene-d8, and 4-bromofluorobenzene) recovered within criteria in all samples and QC except low-level analyses of NIKE SW2 WEST SIDEWALL. This sample was analyzed twice using separate low-level VOC aliquots; however, in both analyses, two surrogates recovered high outside criteria. The lab only had the medium-level sample aliquot left for analysis and this medium-level run reported all surrogates within criteria and was therefore the run used for reporting results for this sample - No Action required.

LCS/LCSD: Only a single LCS (V2B216-BS, V2B219-BS, and V2B222-BS) - no LCSD. Lab used in-house criteria for recoveries, which were within limits given in QAPP. All 12 project-specific VOCs were recovered within criteria - No Action required.

MS/MSD: Although not specified on the COC, the lab performed MS/MSD analysis on samples NIKE SIDEWALL NORTH3 EXT [FA48865-1] for QC Batches V2B216 & V2B219 and NIKE SW2 WEAT SIDEWALL [FA48865-3] for QC Batch V2B222. Since NIKE SIDEWALL NORTH3 EXT was not reported from the analyses performed in QC Batch V2B216 (this was a confirmation run only), this MS/MSD was not reviewed. All MS&MSD recoveries and MS/MSD RPDs were within lab limits for the 12 project-specific VOCs in MS/MSD performed on NIKE SIDEWALL NORTH3 EXT in QC Batch V2B219 except: n-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, n-propylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, m,p-xylene, and o-xylene MS&MSD %Rec low, but > 10%; sec-butylbenzene MS&MSD %Rec high.

***ACTION: sec-Butylbenzene estimated (J+) in sample NIKE SIDEWALL NORTH3 EXT with possible high bias, unless other issues affect the data, due to high MS/MSD recoveries and n-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, n-propylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, m,p-xylene, and o-xylene estimated (J- or UJ) in sample NIKE SIDEWALL NORTH3 EXT with possible low bias, unless other issues affect the data, due to low MS/MSD recoveries [Note: the "J-" qualifier became "J" due to other QC issues].**

Additional Notes:

MS/MSD cont'd: MS&MSD %Rec and MS/MSD RPDs for 12 project-specific VOCs in MS/MSD performed on NIKE SW2 WEST SIDEWALL were acceptable except: sec-butylbenzene, tert-butylbenzene, isopropylbenzene, and n-propylbenzene MS&MSD %Rec low, but > 10%.

***ACTION:** *sec-Butylbenzene, tert-butylbenzene, isopropylbenzene, and n-propylbenzene estimated (UJ) in sample NIKE SW2 WEST SIDEWALL with possible low bias, unless other issues affect the data, due to low MS/MSD recoveries.*

LD/FD: There were no Lab Duplicates (LD) or Field Duplicates (FD) associated with the samples in this SDG.

Instrument Tunes and Calibrations: Instrument GCMS2B 4 tunes (1 ICAL + 3 CCV) met 8260C criteria and all samples were analyzed within 12 hours of tune. The ICALs and CCVs contained more compounds than requested; however, ICAL %RSD < 20% and minimum RRF were acceptable for all 12 project-specific compounds. Lab analyzed opening and closing CCVs for each sequence; however, only the opening CCVs were evaluated for this project. The three CCVs reported the 12 project-specific VOCs with RRFs exceeding minimum RRF criteria and %D $\leq \pm 20\%$; therefore, no action required.

%Solids: All samples had % solids > 30%, no action required.

IS : All IS areas (fluorobenzene, chlorobenzene-d5, 1,4-dichlorobenzene-d4, and t-butyl Alcohol-d10) and RTs were within criteria in all samples - No Action required.

Qualifier Action : There were 3 "J" results reported indicating the result reported was uncertain due to quantitation below the instrument calibration range (data accepted as "J" value with indeterminate bias due to result < LOQ). The non-detects (data qualified "U") were reported at the sample-specific QL supported by the Initial Calibration; therefore, these non-detects are accurate as reported.

Sensitivity: All samples except NIKE SW2 WEST SIDEWALL were analyzed as low-level soil samples so that the non-detects were all reported at levels < PALs given in Buffalo UST QAPP Worksheet #15-1. Sample NIKE SW2 WEST SIDEWALL contained high levels of non-target compounds so the lab analyzed this sample as a medium-level soil and as a consequence, the non-detects for benzene and xylene (total) in this sample exceeded the PALs given in Worksheet #15-1. However, since the lab would have reported "J" data down below the LOQ to the MDL and since the MDL was < PAL for these compounds in this sample, sensitivity is considered acceptable.

Narrative : Did not indicate any additional issues not noted in this DV Checklist.

EPA SW-846 Method 8260B, Region II SOP HW-24; and QAPP requirements

Preservation:	Samples should be preserved following SW-846 Method 5035A (waters acid preserved, soils water & methanol preserved sample); received at $\leq 6^{\circ}\text{C}$. Low-level soils frozen to $< -7^{\circ}\text{C}$ within 48-hr of collection. If samples were not properly preserved, J or J- det / J ND or J det / R ND based on professional judgment
HT:	water: pH < 2 - 14d < HT $\leq$ 28 d; J det/ J NDs; HT > 28 d, J det/R ND; pH > 2 - 7d < HT $\leq$ 14 d; J det/ J NDs; HT > 14 d, J det/R ND soil: 14d < HT $\leq$ 28 d; J det/ J NDs; HT > 28 d, J det/R ND
Surrogates:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs
LCS/LCSD:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs. LCS/LCSD RPD > 20% (GW) or > 30% (soil), J det/J NDs
MS/MSD:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs. MS/MSD RPD > 20% (GW) or > 30% (soil), J det/J NDs unspiked sample only
Lab Dup (LD):	If performed, RPD > 20% (GW) or > 30% (soil) if value >5x QL, J det. Not required for VOC analysis per Buffalo UST QAPP
FD:	Both Conc. > 5xQL, RPD > 30% (GW) or > 50% (soil) J det; One result ND, other >5 x QL, J det/J NDs; Both Conc. < 5xQL; RPD > criteria, No Action
Tune:	Criteria per Table 3 8260C; acquisition of tune given as sum of 3 scans across peak with background subtraction. If criteria not met (Abundances out or analysis > 12 hrs from BFB injection and CCVs don't meet frequency & criteria); use professional judgment
ICAL:	$\geq$ 5-Level, lowest level $\leq$ QL; if min. RRF (Table 4 Method 8260C - minimum RRFs for project-specific compounds are: ethylbenzene, m,p-xylene, and isopropylbenzene = 0.100; o-xylene = 0.300; toluene = 0.400; and benzene = 0.500) not met, J- / J NDs; %RSD > 20% or "r" < 0.995 or "r ² " < 0.99, J det/UJ NDs
CCV:	Analyzed at the beginning of each 12 hour shift. if min. RRF not met, J- / J NDs; %D or %Drift > +20%, J det/J ND; %D or %Drift > -20%, J det/Accept ND (neg. %D = loss in sensitivity; positive %D = enhanced sensitivity)
Internal Standards (IS):	RT shift outside window (RT > ± 30 of IS RT in CCV) or $20\% \leq$ Area < 50% of IS in CCV, J+ det/ UJ NDs; Area < 20% of CCAL, J+ det / R NDs; Area > 200% IS in CCV, J- det / Accept NDs. If it's suspected that IS outside criteria is due to poor IS addition to sample (i.e., miss-spike), then professional judgment used to J det/UJ NDs

EPA SW-846 Method 8260B, Region II SOP HW-24; and QAPP requirements - *continued*

Blanks:	If Blank has a detect $\leq$ QL and sample < QL, negate (U) result at the sample-specific QL; if sample value $\geq$ QL, no action required. If Blank detect > QL and sample < QL; negate (U) result at the sample-specific QL; if sample value > QL but < Blank value on a sample-equivalent basis, negate (U) result at the level found; if sample value > value in Blank on sample-equivalent basis, no action required. The sample weight, %solids, and dilution factors used for analysis of the sample must be considered in comparing the Blank data to the sample data. Note: methylene chloride, acetone, and 2-butanone are evaluated at twice the QL since these are common lab contaminants. However, these compounds are not project-specific compounds.
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
% Solids:	If %Solids < 30%, J det/J NDs; if %Solids < 10% J det/ R NDs
Compounds:	Buffalo UST QAPP specifies 12 project-specific VOCs based on NYSDEC Policy CP-51 - see QAPP Worksheets #15-1 and #15-3
Sensitivity:	Identify non-detects > Project Action Limits (PALs) given in Worksheet #15-1 for Soil and #15-3 for GW of the Buffalo UST QAPP
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; NJ = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
References:	<i>Quality Assurance Project Plan, Underground Storage Tank (UST) Closure Work Plan, Former Launch Area Formerly Used Defense Site - Nike Battery BU-34/35, East Aurora, New York, prepared for USACE - New England District</i> , prepared by Tantara Corporation & New Environmental Horizons, Inc. (Version 02, September 2017); SGS Accutest - Southeast SOP MS016 (March 2017); SW-846 Method 8260C; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

Date Sampled: 10/27/17No. Samples: 4

Method of Analysis: Semivolatile Organic Compounds (SVOCs) by Method 8270D-SIM

Matrix: Soil**Data Validation Summary Table - EPA Stage 2B: USACE Buffalo Nike Missile UST, East Aurora, NY**

Data Element Acceptable	HT & Preservation	Blank Actions	Surrogate	LCS/LCSD	MS/MSD	LD / FD	Tunes / ICAL CCV	QL & Quant. Correct	IS	%Solids
Yes	√	√	√	√	NA	NA	√	√	√	√
No		None								

Other Issues: Qualifier Actions: 5 "J" accepted as "J" values**Comments:**

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed. The samples in the SDG were analyzed and validated for 16 project-specific SVOCs (acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene) as required by the Buffalo UST QAPP.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with the QAPP and EPA DV guidance present in the data package? Yes. A full data deliverable, including results, summary QC, and all raw data, was provided for review.
2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes.

Date: 12/14/17Data Reviewer: Nancy C. Rothman, Ph.D.

Additional Notes:

Sample receiving: Samples were received on 10/28/17, the day after sample collection. The temperature upon receipt was within $4 \pm 2^{\circ}\text{C}$. The year for sample collection was missing on the COC (e.g., date of collection listed as "10/27" and should have been listed as "10/27/17"); however, the "Relinquished by" and "Received by" dates clearly show the year of collection, so no action required. The COC has no time of collection for the samples; therefore, field notes should be referenced when evaluating the data. The COC indicates that sample "NIKE SIDEWALL NORTH3 EXT" should be analyzed for PCBs and Metals and for this one sample, the lab also reported full TCL VOC and TCL SVOC. At the client's request, sample "NIKE SIDEWALL NORTH3 EXT" was validated for only the VOC and SVOC compounds listed in Worksheets #15 of the Buffalo UST QAPP.

Holding Time (HT) evaluation: All samples except NIKE SIDEWALL NORTH3 EXT [FA48865-1] were extracted on 10/31/17 (QC Batch OP67433) and sample NIKE SIDEWALL NORTH3 EXT [FA48865-1] was extracted on 11/3/17 (QC Batch OP67487) and the extracts were all analyzed by 11/8/17; therefore, HT met. No Action required.

Blank Evaluation: All samples were analyzed with Method Blank OP67433-MB and Method Blank OP67487-MB. There were no field blanks (equipment blanks) associated with the collection of these samples. The Method Blanks were both non-detect for the 16 project-specific PAHs; therefore, blank action to negate data was not required.

Surrogates: Lab spiked 3 BN surrogates (Nitrobenzene-d5, 2-Fluorobiphenyl, and Terphenyl-d14) for all samples except NIKE SIDEWALL NORTH3 EXT [FA48865-1] for which 3 Acid and 3 BN surrogates were spiked since TCL SVOCs reported for this one sample. All surrogates recovered within criteria - No Action required.

LCS/LCSD: Only a single LCS (OP67433-BS and OP67487-BS) - no LCSD. Lab used in-house criteria for recoveries, which were within limits given in QAPP. All 16 project-specific PAHs recovered within criteria in both LCS' except pyrene %Rec high in OP67433-BS. Since the 3 samples associated with this LCS were non-detect for pyrene, no action required for high recovery in the LCS.

MS/MSD: MS/MSD performed in both QC batches on samples not associated with this project (batch QC). The lab was method compliant in performing a MS/MSD but the results of these MS/MSDs will not impact the data for the samples from the Buffalo NIKE UST project so no review of these QC performed here. Note, the COC did not request an MS/MSD be performed although the Buffalo UST QAPP did indicate MS/MSD analysis as a QC requirement for SVOCs in soil.

LD/FD: There were no Lab Duplicates (LD) or Field Duplicates (FD) associated with the samples in this SDG.

Additional Notes:

Instrument Tunes and Calibrations: Instrument GCMSW 2 tunes (1 ICAL + 1 CCV) and Instrument GCMSX 2 tunes (1 ICAL& 1 CCV) met 8270C and 8270D criteria (criteria in data package is for Method 8270C; however, tunes were checked and also met 8270D tune criteria) and all samples were analyzed within 12 hours of tune. Analysis was performed by Method 8270D operated in the Selected Ion Monitoring mode (8270D-SIM). The ICALs and CCVs contained more compounds than requested; however, ICAL %RSD < 20% or r2 > 0.99 and minimum RRF acceptable for all 16 project-specific PAHs. Lab analyzed opening and closing CCVs for each sequence; however, only the opening CCVs were evaluated for this project. The CCVs reported the 16 project-specific PAHs with RRFs exceeding minimum RRF criteria and %D or %Drift < $\pm 20\%$; therefore, no action required.

Internal Standards (IS): All 5 IS's (Naphthalene-d8, Acenaphthene-d10, Phenanthrene-d10, Chrysene-d12, and Perylene-d12) had areas and RTs within criteria - No Action required.

%Solids: All samples had %solids > 30%

Qualifier Action : There were 5 "J" results reported indicating the result reported was uncertain due to quantitation below the instrument calibration range (data accepted as "J" value with indeterminate bias due to result < LOQ). The non-detects (data qualified "U") were reported at the sample-specific QL supported by the Initial Calibration; therefore, these non-detects are accurate as reported.

Sensitivity: All non-detects for the 16 PAHs were reported at levels less than PALs given in Buffalo UST QAPP Worksheet #15-2; therefore, sensitivity was acceptable for these data.

Narrative : Did not indicate any additional issues not noted in this DV Checklist.

EPA SW-846 Method 8270C, Region II SOP HW-22; and QAPP requirements

Preservation:	Soils and GW Temperature upon receipt $4^{\circ}\pm^{\circ}2C$; use judgment if outside criteria.
HT:	GW Extraction: 7d <HT< 14 d; J det/ J NDs; HT >14 d, J det/R ND Soil: extraction: 14d <HT< 28 d; J det/ J NDs; HT >28 d, J det/R ND; however, HT extended to up to 1 year if soil is frozen Analysis of extract: 40d < Extract HT < 60d, J det/ J NDs; Extract HT > 60d; J det/ R NDs; however, HT extended to up to 1 year if extract is frozen
Surrogates:	Acceptance criteria 30-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs
LCS/LCSD:	Acceptance 40-140% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs ; LCS/LCSD RPD > 20% (GW) or > 30% (soil), J det/J NDs
MS/MSD:	Acceptance 40-140% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs ; MS/MSD RPD > 20% (GW) or > 30% (soil), J det/J NDs. Action affects unspiked sample only.
LD:	If performed, RPD > 20% (GW) or > 30% (soil) if value >5x QL, J det. Not required for VOC analysis per Buffalo UST QAPP
FD:	Both Conc. > 5xQL, RPD > 30% (GW) or > 50% (soil) J det; One result ND, other >5 x QL, J det/J NDs; Both Conc. < 5xQL; RPD > criteria, No Action
Tune:	Criteria per Table 3 8270D; acquisition of tune given as sum of 3 scans across peak with background subtraction. If criteria not met (Abundances out or analysis > 12 hrs from DFTPP injection and CCVs don't meet frequency & criteria); use professional judgment
ICAL:	≥ 5 -Level, lowest level $\leq \text{QL}$; if min. RRF per Table 4 of Method 8270D (ranging from 0.400 for dibenz(a,h)anthracene to 0.900 for acenaphthene and acenaphthylene) or %RSD > 20% or " r " < 0.995 or " r^2 " < 0.99, J det/UJ NDs. If %RSD > 90%, J det/ R NDs.
CCV:	Analyzed at the beginning of each 12 hour shift. %D or %Drift > +20%, J det/Accept ND; min. RRF < Table 4 criteria or %D or %Drift > -20%, J det/J NDs (neg. %D = loss in sensitivity; positive %D = enhanced sensitivity)
Blanks:	If Blank has a detect < QL and sample < QL, negate (U) result at the sample-specific QL; if sample value $\geq \text{QL}$, no action required. If Blank detect $\geq \text{QL}$ and sample < QL; negate (U) result at the sample-specific QL; if sample value $\geq \text{QL}$ but < Blank value on a sample-equivalent basis, negate (U) result at the level found; if sample is $\geq \text{QL}$ and $\geq$ Blank value on sample-equivalent basis, no action required. The sample weight, %solids, and dilution factors used for analysis of the sample must be considered in comparing the Blank data to the sample data.

EPA SW-846 Method 8270C, Region II SOP HW-22; and QAPP requirements - *continued*

IS:	20% < IS recovery < 50%; J det/ J ND with indeterminate bias (unclear if low IS is due to overall loss in instrument sensitivity causing IS and other compounds to be biased low or whether issue only affects IS, in which case, quantitation of detects possible biased high). If IS recovery < 20%, J det / R NDs. Project-specific compounds affected by IS issues are:
	Naphthalene-d8 (IS1) affects: naphthalene
	Acenaphthene-d10 (IS2) affects: acenaphthylene, acenaphthene, and fluorene
	Phenanthrene-d10 (IS3) affects: phenanthrene, anthracene, and fluoranthene.
	Chrysene-d12 (IS4) affects: pyrene, benzo(a)anthracene, and chrysene
	Perylene-d12 (IS5) affects: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.
% Solids	If %Solids < 30%, J det/J NDs; if %Solids < 10% J det/ R NDs
Compounds	Buffalo UST QAPP specifies 16 project-specific PAHs based on NYSDEC Policy CP-51 - see QAPP Worksheets #15-2 and #15-4
Sensitivity:	Identify non-detects > PALs given in Worksheet #15-2 for soils and Worksheet #15-4 for GW of the Buffalo UST QAPP
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; NJ = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
References:	<i>Quality Assurance Project Plan, Underground Storage Tank (UST) Closure Work Plan, Former Launch Area Formerly Used Defense Site - Nike Battery BU-34/35, East Aurora, New York</i> , prepared for USACE - New England District, prepared by Tantara Corporation & New Environmental Horizons, Inc. (Version 02, September 2017); SGS Accutest - Southeast SOP MS008 (March 2017); SW-846 Method 8270D; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP# HW-22; rev. 5 (January 2011).



Data Validation & Usability Assessment

Client/Company: Tantara Corporation, Worcester, MA (Tantara)

Site/Project Name: USACE Buffalo Nike Missile UST Project, East Aurora, NY

Laboratory: SGS-Accutest Southeast, Orlando, FL

SDGs/Lab Project #: FA48965

Date(s) of Collection: November 1, 2017

**Number and type
Samples & analyses:** 3 soil samples for 12 project-specific Volatile Organic Compounds (VOCs) by Method 8260C and 16 project-specific Semivolatile Organic Compounds (SVOCs) by Method 8270D-SIM

Senior Data Reviewers: Dr. Nancy C. Rothman, New Environmental Horizons, Inc.
Susan D. Chapnick, New Environmental Horizons, Inc.

Date Completed: December 18, 2017

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed.

All quality control information associated with accuracy, precision, and sensitivity for the project-specific list of VOCs and SVOCs reported met project criteria for the samples in this SDG. The results presented in the validated database are considered usable for project objectives with the understanding of potential bias in the estimated results.

The VOC and SVOC Data Review Checklists, attached, were completed during this assessment to document the review.

Date Sampled: 11/1/17No. Samples: 3

Method of Analysis: Volatile Organic Compounds (VOCs) by Method 8260C

Matrix: Soil**Data Validation Summary Table - EPA Stage 2B: USACE Buffalo Nike Missile UST, East Aurora, NY**

Data Element Acceptable	HT & Preservation	Blank Actions	Surrogate	LCS/LCSD	MS/MSD	LD / FD	Tunes / ICAL CCV	QL & Quant. Correct	IS	%Solids
Yes	√	√	√	√	NA	NA	√	√	√	√
No		None								

Other Issues: Qualifier Actions: 2 "J" accepted as "J" values**Comments:**

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed. The samples in the SDG were analyzed and validated for 12 project-specific VOCs (benzene, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and xylene (total)) as required by the Buffalo UST QAPP.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with the QAPP and EPA DV guidance present in the data package? Yes. A full data deliverable, including results, summary QC, and all raw data, was provided for review.
2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes.

Additional Notes:

Sample receiving: Samples were received on 11/2/17, the day after sample collection. The temperature upon receipt was within $4 \pm 2^{\circ}\text{C}$. The year for sample collection was missing on the COC (e.g., date of collection listed as "11/1" and should have been listed as "11/1/17"); however, the "Relinquished by" and "Received by" dates clearly show the year of collection, so no action required. The COC has no time of collection for the samples; therefore, field notes should be referenced when evaluating the data. The COC indicates that sample "NIKE BOT N3" should be analyzed PCBs and Metals and for this one sample, the lab also reported full TCL VOC and TCL SVOC. At the client's request, sample "NIKE BOT N3" was validated for only the VOC and SVOC compounds listed in Worksheets #15 of the Buffalo UST QAPP. Since TCL VOCs were analyzed for "NIKE BOT N3", the lab reported the xylene isomers, o-xylene and m,p-xylene, rather than xylene (total) so that for this one sample, 13 VOC results were validated.

Holding Time (HT) evaluation : All samples were analyzed as low-level VOC soils (water-preserved) except for sample NIKE BOT N3 [FA48965-2], which was analyzed as a medium-level soil. All 3 samples were analyzed on 11/1/17 (QC Batch V2B219). Holding time acceptable - no action required.

Blank Evaluation: Method Blank V2B219-MB was associated with all samples. There were no field blanks (equipment blank or trip blanks) associated with the collection of these samples. The Method Blank was non-detect for the 12 project-specific VOCs; therefore, blank action to negate sample data was not required.

Surrogates: All 4 surrogates (dibromofluoromethane, 1,2-dichloroethane-d4, toluene-d8, and 4-bromofluorobenzene) were recovered within criteria in all samples and QC except low-level analyses of NIKE BOT N3 reported 1 to 2 surrogates recovered above criteria. This sample was analyzed twice using separate low-level VOC aliquots; however, in both analyses, 1 or 2 surrogates were recovered high outside criteria. The lab only had the medium-level sample aliquot left for analysis and this medium-level run reported all surrogates within criteria and was therefore the run used for reporting of results for this sample - No Action required.

LCS/LCSD: Only a single LCS (V2B219-BS) - no LCSD. Lab used in-house criteria for recoveries, which were within limits given in QAPP. All 12 project-specific VOCs were recovered within criteria - No Action required.

MS/MSD: Performed on a sample from a different SDG (FA48865), which was analyzed with the samples in this SDG and serves as batch QC for this SDG. Since the results of this MS/MSD will not impact the results for the samples reported here, no review of the MS/MSD performed.

LD/FD: There were no Lab Duplicates (LD) or Field Duplicates (FD) associated with the samples in this SDG.

Additional Notes:

Instrument Tunes and Calibrations: Instrument GCMS2B 2 tunes (1 ICAL + 1 CCV) met 8260C criteria and all samples were analyzed within 12 hours of tune. The ICALs and CCVs contained more compounds than requested; however, ICAL %RSD < 20% and minimum RRF acceptable for all 12 project-specific compounds. Lab analyzed opening and closing CCVs for each sequence; however, only the opening CCVs were evaluated for this project. The CCV reported the 12 project-specific VOCs with RRFs exceeding minimum RRF criteria and %D $\leq \pm 20\%$; therefore, no action required.

%Solids: All samples had % solids > 30%, no action required.

IS: All IS areas (fluorobenzene, chlorobenzene-d5, 1,4-dichlorobenzene-d4, and t-butyl Alcohol-d10) and RTs were within criteria in all samples except: tert-Butyl alcohol-d10 area low in samples NIKE SWN EXT4 and NIKE SWW2. Since the 12 project-specific VOCs do not use this IS for quantitation, no action required. Also, both low-level analyses for NIKE BOT N3 reported low recovery for one of the IS that is used for quantitation, which is another reason the medium-level analysis was reported for this sample.

Qualifier Action: There were 2 "J" results reported indicating the result reported was uncertain due to quantitation below the instrument calibration range (data accepted as "J" value with indeterminate bias due to result < LOQ). The non-detects (data qualified "U") were reported at the sample-specific QL supported by the Initial Calibration; therefore, these non-detects are accurate as reported.

Sensitivity: All samples except NIKE BOT N3 were analyzed as low-level soil samples so that the non-detects were all reported at levels < PALs given in Worksheet #15-1. Sample NIKE BOT N3 contained high levels of non-target compounds so the lab analyzed this sample as a medium-level soil and as a consequence, the non-detects for benzene and xylene (total) in this sample exceeded the PALs given in Worksheet #15-1. However, since the lab would have reported "J" data down below the LOQ to the MDL and since the MDL was < PAL for these compounds in this sample, sensitivity is considered acceptable.

Narrative: Did not indicate any additional issues not noted in this DV Checklist.

EPA SW-846 Method 8260B, Region II SOP HW-24; and QAPP requirements

Preservation:	Samples should be preserved following SW-846 Method 5035A (waters acid preserved, soils water & methanol preserved sample); received at $\leq 6^{\circ}\text{C}$. Low-level soils frozen to $< -7^{\circ}\text{C}$ within 48-hr of collection. If samples were not properly preserved, J or J- det / J ND or J det / R ND based on professional judgment
HT:	water: pH < 2 - 14d < HT $\leq$ 28 d; J det/ J NDs; HT > 28 d, J det/R ND; pH > 2 - 7d < HT $\leq$ 14 d; J det/ J NDs; HT > 14 d, J det/R ND soil: 14d < HT $\leq$ 28 d; J det/ J NDs; HT > 28 d, J det/R ND
Surrogates:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs
LCS/LCSD:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs. LCS/LCSD RPD > 20% (GW) or > 30% (soil), J det/J NDs
MS/MSD:	Acceptance criteria 70-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq$ Recovery < LCL, J- det/J NDs; Recovery < 10%, J- det/R NDs. MS/MSD RPD > 20% (GW) or > 30% (soil), J det/J NDs unspiked sample only
Lab Dup (LD):	If performed, RPD > 20% (GW) or > 30% (soil) if value >5x QL, J det. Not required for VOC analysis per Buffalo UST QAPP
FD:	Both Conc. > 5xQL, RPD > 30% (GW) or > 50% (soil) J det; One result ND, other >5 x QL, J det/J NDs; Both Conc. < 5xQL; RPD > criteria, No Action
Tune:	Criteria per Table 3 8260C; acquisition of tune given as sum of 3 scans across peak with background subtraction. If criteria not met (Abundances out or analysis > 12 hrs from BFB injection and CCVs don't meet frequency & criteria); use professional judgment
ICAL:	$\geq$ 5-Level, lowest level $\leq$ QL; if min. RRF (Table 4 Method 8260C - minimum RRFs for project-specific compounds are: ethylbenzene, m,p-xylene, and isopropylbenzene = 0.100; o-xylene = 0.300; toluene = 0.400; and benzene = 0.500) not met, J- / J NDs; %RSD > 20% or "r" < 0.995 or "r ² " < 0.99, J det/UJ NDs
CCV:	Analyzed at the beginning of each 12 hour shift. if min. RRF not met, J- / J NDs; %D or %Drift > +20%, J det/J ND; %D or %Drift > -20%, J det/Accept ND (neg. %D = loss in sensitivity; positive %D = enhanced sensitivity)
Internal Standards (IS):	RT shift outside window (RT > ± 30 of IS RT in CCV) or $20\% \leq$ Area < 50% of IS in CCV, J+ det/ UJ NDs; Area < 20% of CCAL, J+ det / R NDs; Area > 200% IS in CCV, J- det / Accept NDs. If it's suspected that IS outside criteria is due to poor IS addition to sample (i.e., miss-spike), then professional judgment used to J det/UJ NDs

EPA SW-846 Method 8260B, Region II SOP HW-24; and QAPP requirements - *continued*

Blanks:	If Blank has a detect $\leq$ QL and sample < QL, negate (U) result at the sample-specific QL; if sample value $\geq$ QL, no action required. If Blank detect > QL and sample < QL; negate (U) result at the sample-specific QL; if sample value > QL but < Blank value on a sample-equivalent basis, negate (U) result at the level found; if sample value > value in Blank on sample-equivalent basis, no action required. The sample weight, %solids, and dilution factors used for analysis of the sample must be considered in comparing the Blank data to the sample data. Note: methylene chloride, acetone, and 2-butanone are evaluated at twice the QL since these are common lab contaminants. However, these compounds are not project-specific compounds.
QLs:	If result > upper calibration range, J result, if result < lowest calibration standard, J result. Verify all J data reported properly, if applicable. Verify QLs are sample specific and that all compounds requested were reported.
% Solids:	If %Solids < 30%, J det/J NDs; if %Solids < 10% J det/ R NDs
Compounds:	Buffalo UST QAPP specifies 12 project-specific VOCs based on NYSDEC Policy CP-51 - see QAPP Worksheets #15-1 and #15-3
Sensitivity:	Identify non-detects > Project Action Limits (PALs) given in Worksheet #15-1 for Soil and #15-3 for GW of the Buffalo UST QAPP
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; NJ = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
References:	<i>Quality Assurance Project Plan, Underground Storage Tank (UST) Closure Work Plan, Former Launch Area Formerly Used Defense Site - Nike Battery BU-34/35, East Aurora, New York, prepared for USACE - New England District</i> , prepared by Tantara Corporation & New Environmental Horizons, Inc. (Version 02, September 2017); SGS Accutest - Southeast SOP MS016 (March 2017); SW-846 Method 8260C; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Methods 8260B & 8260C, SOP# HW-24; rev. 4 (October 2014).

Date Sampled: 11/1/17No. Samples: 3

Method of Analysis: Semivolatile Organic Compounds (SVOCs) by Method 8270D-SIM

Matrix: Soil**Data Validation Summary Table - EPA Stage 2B: USACE Buffalo Nike Missile UST, East Aurora, NY**

Data Element Acceptable	HT & Preservation	Blank Actions	Surrogate	LCS/LCSD	MS/MSD	LD / FD	Tunes / ICAL CCV	QL & Quant. Correct	IS	%Solids
Yes	√	√	√	√	NA	NA	√	√	√	√
No		None								

Other Issues: Qualifier Actions: 1 "J" accepted as a "J" value**Comments:**

An EPA Stage 2B data validation was performed on Quality Control forms associated with this data package, which involved evaluation of the following (where applicable): agreement of analyses conducted with COC requests; Holding times and sample preservation; Laboratory blanks/equipment blanks/ field blanks results compared to field sample results; Field duplicate results; Quantitation limits and sample results; spike recoveries; LCS/LCSD (or equivalent) results; MS/MSD results; Laboratory duplicate results; Performance evaluation recoveries; instrument tuning and calibration summaries; and evaluation of laboratory qualifiers applied to the dataset. The project narrative was also reviewed to determine whether additional issues were found that weren't reported in the QC previously evaluated. No raw data was reviewed nor were any re-calculations of data performed. The samples in the SDG were analyzed and validated for 16 project-specific SVOCs (acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene) as required by the Buffalo UST QAPP.

Data Package Completeness:

1. Were all required forms (results, summary QC, COC), as required to validate the data in accordance with the QAPP and EPA DV guidance present in the data package? Yes. A full data deliverable, including results, summary QC, and all raw data, was provided for review.
2. Were all result forms for all samples listed on the chain-of-custody present in data package? Yes.

Date: 12/18/17Data Reviewer: Nancy C. Rothman, Ph.D.

Additional Notes:

Sample receiving: Samples were received on 11/2/17, the day after sample collection. The temperature upon receipt was within $4 \pm 2^{\circ}\text{C}$. The year for sample collection was missing on the COC (e.g., date of collection listed as "11/1" and should have been listed as "11/1/17"); however, the "Relinquished by" and "Received by" dates clearly show the year of collection, so no action required. The COC has no time of collection for the samples; therefore, field notes should be referenced when evaluating the data. The COC indicates that sample "NIKE BOT N3" should be analyzed PCBs and Metals and for this one sample, the lab also reported full TCL VOC and TCL SVOC. At the client's request, sample "NIKE BOT N3" was validated for only the VOC and SVOC compounds listed in Worksheets #15 of the Buffalo UST QAPP.

Holding Time (HT) evaluation: All samples except NIKE BOT N3 [FA48965-2] were extracted on 11/4/17 (QC Batch OP67513) and sample NIKE BOT N3 [FA48965-2] was extracted on 11/7/17 (QC Batch OP67546) and the extracts were all analyzed by 11/13/17; therefore, HT met. No Action required.

Blank Evaluation: All samples were analyzed with Method Blank OP67546-MB and Method Blank OP67513-MB. There were no field blanks (equipment blanks) associated with the collection of these samples. The Method Blanks were both non-detect for the 16 project-specific PAHs; therefore, blank action to negate data was not required.

Surrogates: Lab spiked 3 BN surrogates (Nitrobenzene-d5, 2-Fluorobiphenyl, and Terphenyl-d14) for all samples except NIKE BOT N3 [FA48965-2] for which 3 Acid and 3 BN surrogates were spiked since TCL SVOCs reported for this one sample. All surrogates recovered within criteria - No Action required.

LCS/LCSD: Only a single LCS (OP67546-BS and OP67513-BS) - no LCSD. Lab used in-house criteria for recoveries, which were within limits given in QAPP. All 16 project-specific PAHs recovered within criteria in both LCS' except pyrene %Rec high in OP67433-BS. Since the 3 samples associated with this LCS were non-detect for pyrene, no action required for high recovery in the LCS.

MS/MSD: MS/MSD performed in both QC batches on samples not associated with this project (batch QC). The lab was method compliant in performing a MS/MSD but the results of these MS/MSDs will not impact the data for the samples from the Buffalo NIKE UST project so no review of these QC performed here. Note, the COC did not request an MS/MSD be performed although the Buffalo UST QAPP did indicate MS/MSD analysis as a QC requirement for SVOCs in soil.

LD/FD: There were no Lab Duplicates (LD) or Field Duplicates (FD) associated with the samples in this SDG.

Additional Notes:

Instrument Tunes and Calibrations: Instrument GCMSW 3 tunes (1 ICAL + 2 CCV) and Instrument GCMSX 3 tunes (1 ICAL& 2 CCV) met 8270C and 8270D criteria (criteria in data package is for Method 8270C; however, tunes were checked and also met 8270D tune criteria) and all samples were analyzed within 12 hours of tune. Analysis was performed by Method 8270D operated in the Selected Ion Monitoring mode (8270D-SIM). The ICALs and CCVs contained more compounds than requested; however, ICAL %RSD < 20% or r2 > 0.99 and minimum RRF acceptable for all 16 project-specific PAHs. Lab analyzed opening and closing CCVs for each sequence; however, only the opening CCVs were evaluated for this project. The CCVs reported the 16 project-specific PAHs with RRFs exceeding minimum RRF criteria and %D or %Drift < $\pm 20\%$; therefore, no action required.

Internal Standards (IS): All 5 IS's (Naphthalene-d8, Acenaphthene-d10, Phenanthrene-d10, Chrysene-d12, and Perylene-d12) had areas and RTs within criteria - No Action required.

%Solids: All samples had %solids > 30%

Qualifier Action : There was 1 "J" result reported indicating the result reported was uncertain due to quantitation below the instrument calibration range (data accepted as "J" value with indeterminate bias due to result < LOQ). The non-detects (data qualified "U") were reported at the sample-specific QL supported by the Initial Calibration; therefore, these non-detects are accurate as reported.

Sensitivity: All non-detects for the 16 PAHs were reported at levels less than PALs given in Buffalo UST QAPP Worksheet #15-2; therefore, sensitivity was acceptable for these data.

Narrative : Did not indicate any additional issues not noted in this DV Checklist.

EPA SW-846 Method 8270C, Region II SOP HW-22; and QAPP requirements

Preservation:	Soils and GW Temperature upon receipt $4^{\circ}\pm^{\circ}2^{\circ}\text{C}$; use judgment if outside criteria.
HT:	GW Extraction: 7d <HT< 14 d; J det/ J NDs; HT >14 d, J det/R ND Soil: extraction: 14d <HT< 28 d; J det/ J NDs; HT >28 d, J det/R ND; however, HT extended to up to 1 year if soil is frozen Analysis of extract: 40d < Extract HT < 60d, J det/ J NDs; Extract HT > 60d; J det/ R NDs; however, HT extended to up to 1 year if extract is frozen
Surrogates:	Acceptance criteria 30-130% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs
LCS/LCSD:	Acceptance 40-140% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs ; LCS/LCSD RPD > 20% (GW) or > 30% (soil), J det/J NDs
MS/MSD:	Acceptance 40-140% or lab limits; Recovery > UCL, J+ det/Accept ND; $10\% \leq \text{Recovery} < \text{LCL}$, J- det/J NDs; Recovery < 10%, J- det/R NDs ; MS/MSD RPD > 20% (GW) or > 30% (soil), J det/J NDs. Action affects unspiked sample only.
LD:	If performed, RPD > 20% (GW) or > 30% (soil) if value >5x QL, J det. Not required for VOC analysis per Buffalo UST QAPP
FD:	Both Conc. > 5xQL, RPD > 30% (GW) or > 50% (soil) J det; One result ND, other >5 x QL, J det/J NDs; Both Conc. < 5xQL; RPD > criteria, No Action
Tune:	Criteria per Table 3 8270D; acquisition of tune given as sum of 3 scans across peak with background subtraction. If criteria not met (Abundances out or analysis > 12 hrs from DFTPP injection and CCVs don't meet frequency & criteria); use professional judgment
ICAL:	≥ 5 -Level, lowest level $\leq \text{QL}$; if min. RRF per Table 4 of Method 8270D (ranging from 0.400 for dibenz(a,h)anthracene to 0.900 for acenaphthene and acenaphthylene) or %RSD > 20% or " r " < 0.995 or " r^2 " < 0.99, J det/UJ NDs. If %RSD > 90%, J det/ R NDs.
CCV:	Analyzed at the beginning of each 12 hour shift. %D or %Drift > +20%, J det/Accept ND; min. RRF < Table 4 criteria or %D or %Drift > -20%, J det/J NDs (neg. %D = loss in sensitivity; positive %D = enhanced sensitivity)
Blanks:	If Blank has a detect < QL and sample < QL, negate (U) result at the sample-specific QL; if sample value $\geq \text{QL}$, no action required. If Blank detect $\geq \text{QL}$ and sample < QL; negate (U) result at the sample-specific QL; if sample value $\geq \text{QL}$ but < Blank value on a sample-equivalent basis, negate (U) result at the level found; if sample is $\geq \text{QL}$ and $\geq$ Blank value on sample-equivalent basis, no action required. The sample weight, %solids, and dilution factors used for analysis of the sample must be considered in comparing the Blank data to the sample data.

EPA SW-846 Method 8270C, Region II SOP HW-22; and QAPP requirements - *continued*

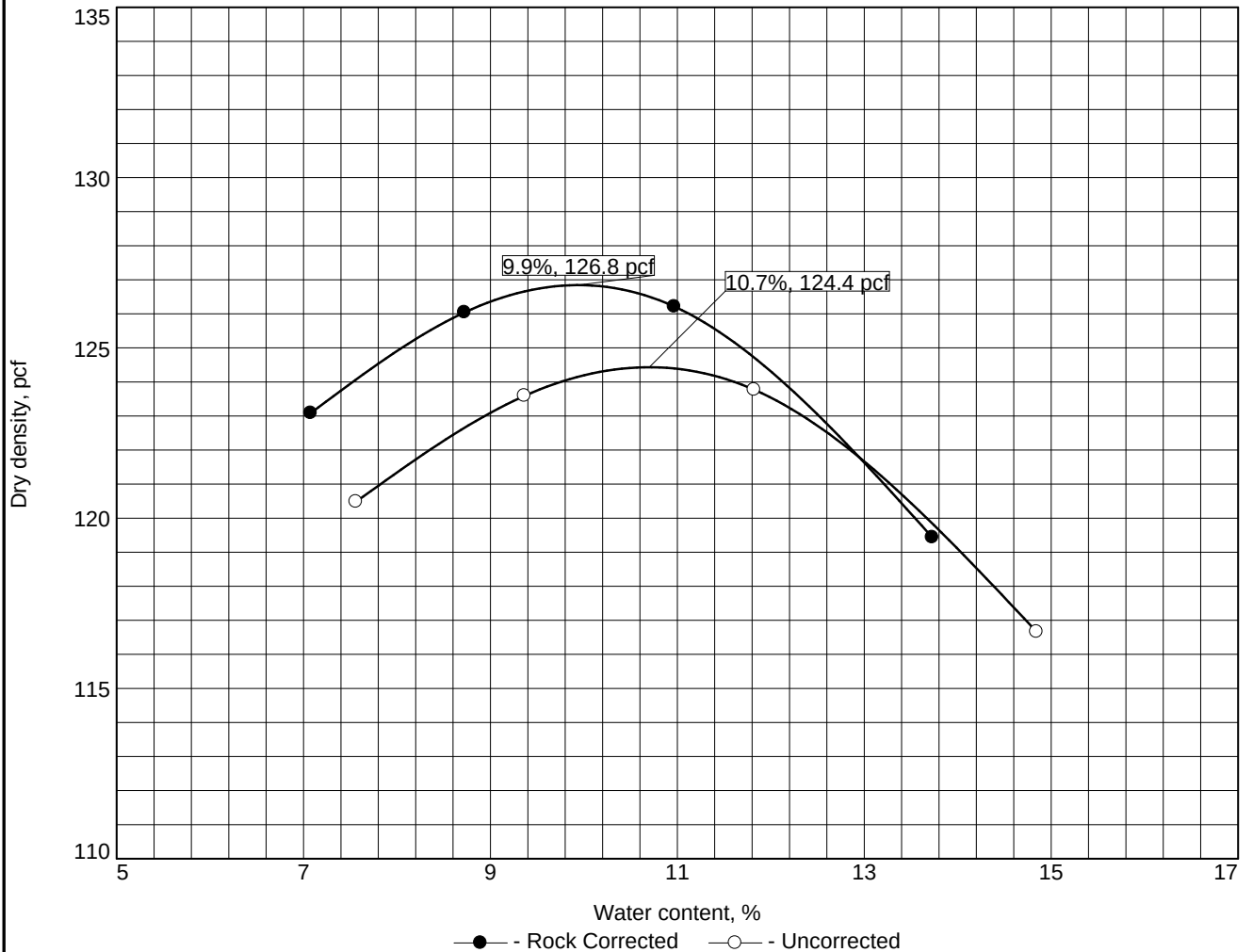
IS:	20% < IS recovery < 50%; J det/ J ND with indeterminate bias (unclear if low IS is due to overall loss in instrument sensitivity causing IS and other compounds to be biased low or whether issue only affects IS, in which case, quantitation of detects possible biased high). If IS recovery < 20%, J det / R NDs. Project-specific compounds affected by IS issues are:
	Naphthalene-d8 (IS1) affects: naphthalene
	Acenaphthene-d10 (IS2) affects: acenaphthylene, acenaphthene, and fluorene
	Phenanthrene-d10 (IS3) affects: phenanthrene, anthracene, and fluoranthene.
	Chrysene-d12 (IS4) affects: pyrene, benzo(a)anthracene, and chrysene
	Perylene-d12 (IS5) affects: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.
% Solids	If %Solids < 30%, J det/J NDs; if %Solids < 10% J det/ R NDs
Compounds	Buffalo UST QAPP specifies 16 project-specific PAHs based on NYSDEC Policy CP-51 - see QAPP Worksheets #15-2 and #15-4
Sensitivity:	Identify non-detects > PALs given in Worksheet #15-2 for soils and Worksheet #15-4 for GW of the Buffalo UST QAPP
DV Qualifier Definitions:	U = analyte is non-detect at the sample-specific Quantitation Limit (usable); UJ = non-detect is usable as an estimated value; J = result is usable as an estimated value with indeterminate bias; J+ = result is usable as an estimated value with possible high bias; J- = result is usable as an estimated value with possible low bias; NJ = the analyte has been "tentatively identified" and the result is usable as an estimated value with indeterminate bias; R = result is rejected due to severe QC exceedance and unusable for project objectives. Bias: L = Low; H = High; I = Indeterminate.
References:	<i>Quality Assurance Project Plan, Underground Storage Tank (UST) Closure Work Plan, Former Launch Area Formerly Used Defense Site - Nike Battery BU-34/35, East Aurora, New York</i> , prepared for USACE - New England District, prepared by Tantara Corporation & New Environmental Horizons, Inc. (Version 02, September 2017); SGS Accutest - Southeast SOP MS008 (March 2017); SW-846 Method 8270D; and USEPA Region II, USEPA Hazardous Waste Support Branch Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP# HW-22; rev. 5 (January 2011).

Appendix J

Proctor Test Analytical Report and

Density Testing Results

COMPACTION TEST REPORT



Test specification: ASTM D 1557-07 Method C Modified
 ASTM D 4718-87 Oversize Corr. Applied to Each Test Point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
							8.7	

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 126.8 pcf	124.4 pcf	ID#17-531
Optimum moisture = 9.9 %	10.7 %	

Project No. 17-036 Client: Tantara Corporation Project: 601 Willardshire Source of Sample: Willardshire Rd. Sample Number: OnSite Soil 10-24-17 3rd Rock, LLC East Aurora, NY	Remarks: Figure

Tested By: ETC 10/26/17 Checked By: JMA



NUCLEAR DENSITOMETER FIELD LOG

Project:	Tank Excavation Backfill, 601 Willardshire Rd, Elma, NY	Date:	11/09/17
Client:	Tantara Corporation	Report No.:	1
Job No.:	17-036	Inspector:	ETC
Contractor:	Tantara Corporation	Page	1 of 2

PROCTOR DATA:

Type of Material	
Source Area	Onsite Stockpile
Maximum Density	126.8 pcf
Optimum Moisture Content	9.9 %

NUCLEAR DENSITOMETER RESULTS:

STANDARD COUNTS				GAUGE INFORMATION:								
Density:	2014					Troxler Model No.:	3440					
Moisture:	595					Troxler Serial No.:	31337					
TEST NUMBER	1	2	3	4	5	6	7	8	9	10	11	12
DEPTH OR ELEVATION (in.)	12	12	12	12	12	12	12	12	12	12	12	12
PERCENT COMPACTION (%)	91.3	82.2	87.3	90.0	87.5	90.4	91.6	90.0	91.8	93.4	96.0	88.1
DRY DENSITY (pcf)	115.8	104.2	110.7	114.1	111.3	114.6	116.1	114.1	116.4	118.4	121.8	111.7
PERCENT MOISTURE (%)	8.4	9.0	9.9	9.4	10.5	13.9	11.6	9.8	10.9	11.3	9.5	12.5
Pass/Fail	P	F	F	P	F	P	P	P	P	P	P	F

LOCATION:

TEST NO. (from above)	Notes
1	Lift #1. 11ft E of W wall, 7ft S of N wall.
2	Lift #1. 6ft W of E wall, 12ft N of S wall.
3	Lift #1. 6.5ft W of E wall, 12ft N of S wall.
4	Rerolled, Retest of #2 & #3
5	Lift #2. 19ft W of E wall, 5.5ft S of N wall.
6	Lift #2. 20ft W of E wall, 9ft N of S wall.

TEST NO. (from above)	Notes
7	Rerolled, Retest of #5
8	Lift #3. 8ft E of W wall, 7ft S of N wall.
9	Lift #3. 21ft W of E wall, 18ft S of N wall.
10	Lift #4. 10ft W of E wall, 8ft S of N wall.
11	Lift #4. 17ft E of W wall, 11ft S of N wall.
12	Lift #5. 19ft W of E wall, 6ft N of S wall.

REMARKS:

SIGNED: Erin Caughel

DATE: 11/9/17



NUCLEAR DENSITOMETER FIELD LOG

Project:	Tank Excavation Backfill, 601 Willardshire Rd, Elma, NY	Date:	11/09/17
Client:	Tantara Corporation	Report No.:	1
Job No.:	17-036	Inspector:	ETC
Contractor:	Tantara Corporation	Page	2 of 2

PROCTOR DATA:

Type of Material	
Source Area	Onsite Stockpile
Maximum Density	126.8 pcf
Optimum Moisture Content	9.9 %

NUCLEAR DENSITOMETER RESULTS:

STANDARD COUNTS					GAUGE INFORMATION:							
Density:	2014				Troxler Model No.:	3440						
Moisture:	595				Troxler Serial No.:	31337						
TEST NUMBER	13	14	15	16	17	18	19	20	21			
DEPTH OR ELEVATION (in.)	12	12	12	12	12	12	12	12	12			
PERCENT COMPACTION (%)	94.0	92.3	87.4	91.3	91.8	90.8	90.3	92.2	90.2			
DRY DENSITY (pcf)	119.2	117.0	110.8	115.3	116.4	115.1	114.5	116.9	114.3			
PERCENT MOISTURE (%)	10.7	12.5	11.2	10.7	11.7	11.1	10.6	10.8	12.1			
Pass/Fail	P	P	F	P	P	P	P	P	P			

LOCATION:

TEST NO. (from above)	Notes
13	Lift #5. 11ft W of E wall, 5ft S of N wall.
14	Rerolled, Retest of #12
15	Lift #6. 12ft E of W wall, 21ft S of N wall.
16	Lift #6. 25ft W of E wall, 11ft N of S wall.
17	Lift #6. 19ft W of E wall, 8ft S of N wall.
18	Rerolled, Retest of #15

TEST NO. (from above)	Notes
19	Lift #7. 12ft W of E wall, 17ft N of S wall.
20	Lift #7. 30ft W of E wall, 18ft N of S wall.
21	Lift #7. 31ft W of E wall, 9ft N of S wall.

REMARKS:

SIGNED: Erin Caughel

DATE: 11/9/17

Appendix K

Survey of UST Excavation



NORTH DAVIS ROAD

CONTROL POINT 1

MAG NAIL
N 1012424.282
E 1124875.846
LAT 42°46'43.2107"
LONG 78°40'13.9975"
ELEV 898.29

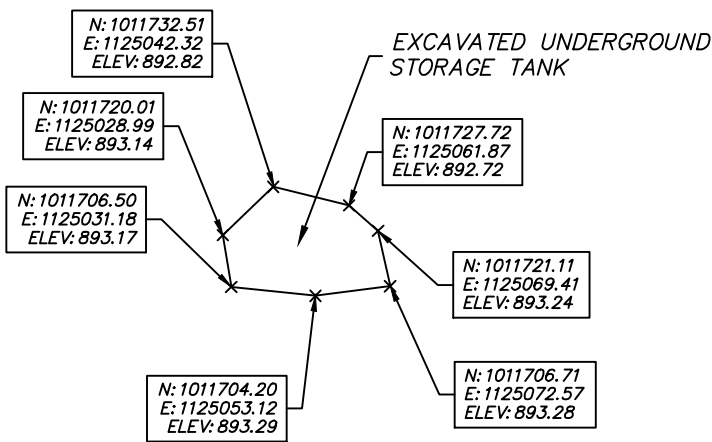
CONTROL POINT 2

MAG NAIL
N 1012392.998
E 1125459.269
LAT 42°46'42.9076"
LONG 78°40'06.1736"
ELEV 902.37

WILLARDSHIRE ROAD
AZI 93°04'10" 584.26'

GRAVEL DRIVE

GRAVEL DRIVE



EXCAVATED UNDERGROUND
STORAGE TANK

MAP OF
FORMER NIKE BASE SITE BU-34/35
PART OF LOT 56, TOWNSHIP 9, RANGE 6
HOLLAND LAND SURVEY
TOWN OF AURORA, ERIE COUNTY, NEW YORK



**GPI ENGINEERING, LANDSCAPE
ARCHITECTURE & SURVEYING, LLP**
ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE
4950 GENESEE STREET, SUITE 100
BUFFALO, NEW YORK 14225
(716) 633-4844 FAX 633-4940

Job No. 6733UST Date: NOVEMBER 10, 2017
Scale 1" = 50' Tax No. 163.00-2-36.1&36.2

DATE	REVISION/TYPE

Appendix L

Petroleum Bulk Storage Application

PBS Number:

Petroleum Bulk Storage Application

Pursuant to the Environmental Conservation Law: Article 17, Title 10; and
Regulations 6 NYCRR Part 613 and 6 NYCRR Subpart 374-2
(Please Type or Print Clearly and Complete All Items for Sections A, B & C)

Section A - Facility/Property Owner/Contact Information

Expiration Date:

Transaction	F A C I L I T Y	Facility Name: Former Niagara Falls Defense Battery Launch Area	Tax Map Info: Borough/Section:	TYPE OF PETROLEUM FACILITY (Check only one) ☐ 01=Storage Terminal/Petrol. Distributor ☐ 02=Retail Gasoline Sales ☐ 03=Other Retail Sales ☐ 04=Manufacturing ☐ 05=Utility ☐ 06=Trucking/Transportation/Fleet ☐ 07=Apartment/Office Building ☐ 08=School ☐ 09=Farm ☐ 10=Private Residence ☐ 11=Airline/Air Taxi/Airport ☐ 12=Chemical Distributor ☐ 13=Municipality ☐ 15=Railroad ☐ 25=Auto Service/Repair (No Gasoline Sales) ☐ 28=Cemetery / Memorial ☐ 26=Religious (Church, Synagogue, Mosque, Temple, etc.) ☐ 27=Hospital/Nursing Home/Health Care ☐ 52=Marina ☐ 53=Nuclear Power Plant ☒ 99=Other (Specify): <u>Former Nike Missile Launch Site</u>		
Type: 1 & 3		Facility Address (Physical Address, No P.O. Boxes) 601 Willardshire Road	Block:			
1) Initial/New Facility		Facility Address (cont.):	Lot:			
2) Change of Ownership		City: East Aurora	State: NY ZIP Code: 14052			
3) Tank Installation, Closing, or Repair		County: Erie	Township/City: Aurora Facility Phone Number: NA			
4) Information Correction		Name of Class B (Daily On-Site) Operator: NA Operator Authorization No. NA				
5) Renewal	Name of Class A (Primary) Operator: NA Operator Authorization No. NA					
NOTE: Fill in former Property Owner information here.....>>> Indicate Tank Owner in Section C.	O W N E R	Facility (Property) Owner (from Deed): United States Army Corps of Engineers, NY District		Emergency Contact Name: Gregory Goepfert, P.E., PMP	Emergency Telephone Number: 917-790-8235	
		Facility Owner Address (Street and/or P.O. Box): 26 Federal Plaza, Rm 1811		I hereby certify, under penalty of law, that all of the information provided on this form is true and correct. False statements made herein may be punishable as a criminal offense and/or a civil violation in accordance with applicable state and federal law.		
		City: New York	State: NY			ZIP Code: 10278
		Federal Tax ID Number: NA	Owner Telephone Number: 917-790-8235		Name of Property Owner or Authorized Representative: Gregory Goepfert, P.E., PMP	Amount Enclosed: \$ 0.00
		Type of Owner: (check only one) 1 ☐ Private Resident 4 ☒ Federal Government 2 ☐ State Government 5 ☐ Corporate/Commercial/Other		Title: Project Manager Signature: _____ Date: _____		
Official Use Only Date Received: ____/____/____ Date Processed: ____/____/____ Amount Received: \$_____ Reviewed By: _____ Rev12/22/2016	C O R R E S P O N D E N C E	(Please keep this information up to date) Gregory Goepfert, P.E., PMP				
		Facility Contact Person Name:				
		Contact Person Company Name: United States Army Corps of Engineers, NY District				
		Address: 26 Federal Plaza, Rm 1811				
		Address (cont.):				
		City/State/ZIP Code: New York, NY 10278				
Tel. Number: 917-790-8235		eMail Address: gregory.j.goepfert@usace.army.mil				

PBS Number:

(Please use the key located on the last page to complete each item/column)

Registration Expiration Date:[illegible]

Note: If you need to add tanks to your registration, write them in using blank lines above. Attach additional sheets as needed. Blank Section B is available at http://www.dec.ny.gov/docs/remediation_hudson_pdf/pbsrenewal.pdf

PBS Number:

Petroleum Bulk Storage Application
Section C – Tank Ownership Information (for PBS tanks listed in Section B)

Tank Owner Information X Check box if same as Facility (Property) Owner. If tank owner is different from property owner, fill out information below:			Tank Owner Information			Tank Owner Information		
Tank Owner Name (Company/Individual):			Tank Owner Name (Company/Individual):			Tank Owner Name (Company/Individual):		
Contact Person:			Contact Person:			Contact Person:		
Tank Owner Address:			Tank Owner Address:			Tank Owner Address:		
Tank Owner Address (cont.)			Tank Owner Address (cont.)			Tank Owner Address (cont.)		
City:	State:	ZIP:	City:	State:	ZIP:	City:	State:	ZIP:
Contact Person Telephone Number:			Contact Person Telephone Number:			Contact Person Telephone Number:		
Contact Person Email:			Contact Person Email:			Contact Person Email:		
Specific Tanks Owned X Check box if this owner owns all tanks at this facility. If not, list tanks owned by this owner below:			Specific Tanks Owned			Specific Tanks Owned		
Tank Number	Tank Number (cont.)		Tank Number	Tank Number (cont.)		Tank Number	Tank Number (cont.)	

Attach additional sheets as needed.

PETROLEUM BULK STORAGE APPLICATION – SECTION B – TANK INFORMATION – CODE KEYS

Action (1)

1. Initial Listing
2. Add Tank
3. Close/Remove Tank
4. Information Correction
5. Repair/Reline Tank

Tank Location (3)

1. Aboveground-contact w/ soil
2. Aboveground-contact w/ impervious barrier
3. Aboveground on saddles, legs, stilts, rack or cradle
4. Partially buried tank (Tank with 10% or more below ground)
5. Underground including vaulted with no access for inspection
6. Aboveground in Subterranean Vault w/ access for inspections

Status (4)

1. In-service
2. Out-of-service
3. Closed-Removed
4. Closed-In Place
5. Tank converted to Non-Regulated use

Products Stored (7)

Heating Oils: On-Site Consumption

- 0001. #2 Fuel Oil
- 0002. #4 Fuel Oil
- 0259. #5 Fuel Oil
- 0003. #6 Fuel Oil
- 0012. Kerosene
- 0591. Clarified Oil
- 2711. Biodiesel (Heating)
- 2642. Used Oil (Heating)

Heating Oils: Resale/ Redistribution

- 2718. #2 Fuel Oil
- 2719. #4 Fuel Oil
- 2720. #5 Fuel Oil
- 2721. #6 Fuel Oil
- 2722. Kerosene
- 2723. Clarified Oil
- 2724. Biodiesel (Heating)

Motor Fuels

- 0009. Gasoline
- 2712. Gasoline/Ethanol
- 0008. Diesel

- 2710. Biodiesel
- 0011. Jet Fuel
- 1044. Jet Fuel (Biofuel)
- 2641. Aviation Gasoline

Emergency Generator Fuels

- 0001. #2 Fuel Oil
- 2730. Biodiesel (E-Gen)
- 2731. Diesel (E-Gen)

Lubricating/Cutting Oils

- 0013. Lube Oil
- 0015. Motor Oil
- 1045. Gear/Spindle Oil
- 0010. Hydraulic Oil
- 0007. Cutting Oil
- 0021. Transmission Fluid
- 1836. Turbine Oil
- 0308. Petroleum Grease

Oils Used as Building Materials

- 2626. Asphaltic Emulsions
- 0748. Form Oil

Petroleum Spirits

- 0014. White/Mineral Spirits
- 1731. Naphtha

Mineral/Insulating Oils

- 0020. Insulating Oil (e.g., Transformer, Cable Oil)
- 2630. Mineral Oil

Waste/Used/Other Oils

- 0022. Waste/Used Oil
- 9999. Other-Please list:*

Crude Oil

- 0006. Crude Oil
- 0701. Crude Oil Fractions

Tank Type (8)

- 01. Steel/Carbon Steel/Iron
- 02. Galvanized Steel Alloy
- 03. Stainless Steel Alloy
- 04. Fiberglass Coated Steel
- 05. Steel Tank in Concrete
- 06. Fiberglass Reinforced Plastic (FRP)
- 07. Plastic
- 08. Equivalent Technology
- 09. Concrete

- 10. Urethane Clad Steel
- 99. Other-Please list:*

Internal Protection (9)

- 00. None
- 01. Epoxy Liner
- 02. Rubber Liner
- 03. Fiberglass Liner (FRP)
- 04. Glass Liner
- 99. Other-Please list:*

External Protection (10/18)

- 00. None
- 01. Painted/Asphalt Coating
- 02. Original Sacrificial Anode
- 03. Original Impressed Current
- 04. Fiberglass
- 05. Jacketed
- 06. Wrapped (Piping)
- 07. Retrofitted Sacrificial Anode
- 08. Retrofitted Impressed Current
- 09. Urethane
- 99. Other-Please list:*

Tank Secondary Containment (11)

- 00. None
- 01. Diking (AST Only)
- 02. Vault (w/access)
- 03. Vault (w/o access)
- 04. Double-Walled (UST Only)
- 05. Synthetic Liner
- 06. Remote Impounding Area
- 07. Excavation Liner
- 09. Modified Double-Walled (AST Only)
- 10. Impervious Underlayment (AST only)**
- 11. Double Bottom (AST Only)**
- 12. Double-Walled (AST Only)
- 99. Other-Please list*

Tank Leak Detection (12)

- 00. None
- 01. Interstitial Electronic Monitoring
- 02. Interstitial Manual Monitoring
- 03. Vapor Well
- 04. Groundwater Well
- 05. In-Tank System (Auto Tank Gauge)
- 06. Impervious Barrier/Concrete Pad (AST Only)

- 07. Statistical Inventory Reconciliation (SIR)
- 08. Weep holes in vaults with no access for inspection
- 99. Other-Please list:*

Overfill Protection (13)

- 00. None
- 01. Float Vent Valve
- 02. High Level Alarm
- 03. Automatic Shut-Off
- 04. Product Level Gauge (AST Only)
- 05. Vent Whistle
- 99. Other-Please list:*

Spill Prevention (14)

- 00. None
- 01. Catch Basin
- 99. Other-Please list:*

Pumping/Dispensing Method (15)

- 00. None
- 01. Pressurized Dispenser
- 02. Suction Dispenser
- 03. Gravity
- 04. On-Site Heating System (Suction)
- 05. On-Site Heating System (Supply/Return)
- 06. Tank-Mounted Dispenser
- 07. Loading Rack/Transfer Pump

Piping Location (16)

- 00. No Piping
- 01. Aboveground
- 02. Underground/On-ground
- 03. Aboveground/Underground Combination

Piping Type (17)

- 00. None
- 01. Steel/Carbon Steel/Iron
- 02. Galvanized Steel
- 03. Stainless Steel Alloy
- 04. Fiberglass Coated Steel
- 05. Steel Encased in Concrete
- 06. Fiberglass Reinforced Plastic (FRP)
- 07. Plastic
- 08. Equivalent Technology

- 09. Concrete
- 10. Copper
- 11. Flexible Piping
- 99. Other-Please list:*

Piping Secondary Containment (19)

- 00. None
- 01. Diking (Aboveground Only)
- 02. Vault (w/access)
- 04. Double-Walled (Underground Only)
- 06. Remote Impounding Area
- 07. Trench Liner
- 12. Double-Walled (Aboveground Only)
- 99. Other-Please list:*

Pipe Leak Detection (20)

- 00. None
- 01. Interstitial Electronic Monitoring
- 02. Interstitial Manual Monitoring
- 03. Vapor Well
- 04. Groundwater Well
- 07. Pressurized Piping Leak Detector
- 09. Exempt Suction Piping
- 10. Statistical Inventory Reconciliation (SIR)
- 99. Other-Please list:*

Under Dispenser Containment (UDC) (21)

Check Box if Present

* If other, please list on a separate sheet including tank number.

** Each of these codes must be combined with code 01 or 06 to meet compliance requirements.