FINAL DECISION DOCUMENT

FORMER SCHENECTADY ARMY DEPOT
AREA OF CONCERN 8:
BLACK CREEK

FORMERLY USED DEFENSE SITE
CO2NY000203

GUILDERLAND, NEW YORK

PREPARED FOR:

US Army Corps
of Engineers®
New York District

JUNE 2011

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ABBREVIATIONS/ACRONYMS AND GLOSSARY

ACEMC	Albany County Environmental Management Council
ACHD	Albany County Health Department
AOC	Area of Concern – portion of a site designated for further study.
ARARs	Applicable requirements means those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site. Only those state standards that are identified by a state in a timely manner and that are more stringent than federal requirements may be applicable. Relevant and appropriate requirements means those cleanup standards, standards or control, or other substantive environmental protection requirements, criteria, or limitations promulgated under federal environmental or state facility siting laws that, while not applicable to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site, address situations sufficiently similar to those encountered at the site that their use is well suited to the particular site. Only those state standards that are promulgated, are identified by a state in a timely manner, and are more stringent than federal requirements may be relevant and appropriate.
BEHP	bis(2-ethylhexyl)phthalate – a semivolatile organic compound.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act – federal statute that concerns responses to releases of threats of releases of hazardous substances, pollutants, or contaminants, and concerns compensation and liability
CFR	Code of Federal Regulations – compilation of Federal regulations
COC	Contaminant of Concern – contaminant suspected to be site-related.
CSM	Conceptual Site Model – a model of the site receptors and exposure pathways.
DA	Department of the Army
DERP	Defense Environmental Restoration Program – Congressionally authorized in 1986, DERP promotes and coordinates efforts for the evaluation and cleanup of contamination at Department of Defense installations and Formerly Used Defense Sites.
DERP-FUDS	Defense Environmental Restoration Program for Formerly Used Defense Sites
DNSC	Defense National Stockpile Center – Federal agency that operated the Voorheesville Depot (Area of Concern 5).

ABBREVIATIONS/ACRONYMS AND GLOSSARY (CONTINUED)

DoD Department of Defense – A Federal department that includes the military services.

EE/CA Engineering Evaluation / Cost Analysis – Section 300.415(b)(4)(i) of the NCP requires an EE/CA for all non-time-critical removal actions (NTCRAs). The goals of the EE/CA are to identify the extent of a hazard, to identify the objectives of the removal action, and to analyze the various alternatives that may be used to satisfy these objectives for cost, effectiveness, and implementability. An EE/CA serves an analogous function to, but is more streamlined than, the remedial investigation/feasibility study (RI/FS) conducted for remedial actions. The results of the EE/CA and the selected removal action are summarized in the Action Memorandum.

EIS Environmental Impact Statement

FFS Focused Feasibility Study – an analysis of potential remedial action alternatives for a site, that is focused on a particular media (groundwater, soil, etc).

FS Feasibility Study - an analysis of potential remedial action alternatives for a site.

ft^2 Square Foot – unit of measure for areas.

FSADVA Former Schenectady Army Depot – Voorheesville Area

FUDS Formerly Used Defense Site– a facility or site (property) that was under the jurisdiction of the Secretary of Defense and owned by, leased to, or otherwise possessed by the United States at the time of actions leading to contamination by hazardous substances. By the Department of Defense Environmental Restoration Program (DERP) policy, the FUDS program is limited to those real properties that were transferred from DoD control prior to 17 October 1986.

HHRA Human Health Risk Assessment – an evaluation of the risk posed to humans from exposure to contaminants.

LOEL Lowest Observed Effect Level – the lowest concentration at which a health effect was observed.

LUC Land Use Control – Physical, legal, or administrative mechanisms that restrict the use of, or limit access to, contaminated property to reduce risk to human health and the environment.

MW Monitoring well – a hollow pipe drilled into the ground, used to collect groundwater samples.

NCP National Oil and Hazardous Substances Pollution Contingency Plan – regulations that implement and provide a regulatory framework for CERCLA.

NEIP Northeastern Industrial Park – current name for the property that was formerly the Schenectady Army Depot – Voorheesville Area.

NYCRR New York Code of Rules and Regulations – compilation of New York State regulations.

ABBREVIATIONS/ACRONYMS AND GLOSSARY (CONTINUED)

NYS	New York State – state in which the Former Schenectady Army Depot—Voorheesville Area (FSADVA) is located.
NYSDEC	New York State Department of Environmental Conservation – regulatory body for environmental issues in New York State.
NYSDOH	New York State Department of Health – regulatory body for health issues in New York State.
PCBs	Polychlorinated biphenyls - A group of toxic, persistent chemicals used in electrical transformers and capacitors for insulating purposes, and in gas pipeline systems as lubricant.
PCL	Protective Concentration Levels – used in the State of Texas to assess health risks to humans caused by sediment contamination.
POTW	Publicly Owned Treatment Works – a wastewater treatment plant
PRG	Preliminary Remediation Goal – a preliminary concentration to be achieved during remediation.
RAB	Restoration Advisory Board – a forum for the discussion and exchange of information between representatives of the Department of Defense (DoD), regulators, state and local governments, tribal governments, and the affected community. RABs provide an opportunity for stakeholders to have a voice and actively participate in the review of technical documents, to review restoration progress, and to provide individual advice to decision makers regarding restoration activities at FUDS Properties and Projects.
RI	Remedial Investigation – An in-depth study designed to gather the data necessary to determine the nature and extent of known contamination at a site, assess risk to human health and the environment, and establish criteria for cleaning up the site.
SADVA	Schenectady Army Depot – Voorheesville Area
SCO	Soil Cleanup Objectives – NYSDEC's Part 375 promulgated soil criteria to assess potential risk from exposure to soils.
SLERA	Screening-level ecological risk assessment – an abbreviated form of an ecological risk assessment that assesses the health of plants and animals at a site.
SPDES	State Pollutant Discharge Elimination System – New York State's system for permitting industrial discharges to surface water.
SVOC	Semivolatile Organic Compound - a class of organic chemicals.
TAGM	Technical and Administrative Guidance Memorandum – a series of guidance documents published by NYSDEC.
TCEQ	Texas Commission on Environmental Quality – agency that provides risk-based sediment quality criteria for protection of human health.
µg/L	Micrograms per liter - unit of measure for contaminants in water.

ABBREVIATIONS/ACRONYMS AND GLOSSARY (CONTINUED)

USACE United States Army Corps of Engineers - The USACE has day-to-day program management and execution responsibilities for the FUDS Program.

USEPA United States Environmental Protection Agency - The mission of the Environmental Protection Agency is to protect human health and the environment.

UU/UE Unlimited use and unrestricted exposure

VC Vinyl chloride – a volatile organic compound.

VOCs Volatile organic compounds – compounds that are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors. VOCs are emitted by a wide array of products numbering in the thousands. Examples include: paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, office equipment such as copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, and photographic solutions.

SECTION 1

DECLARATION

1.1 SITE NAME AND LOCATION

The former Schenectady Army Depot-Voorheesville Area (SADVA) is located one-quarter mile southeast of the Village of Guilderland Center, New York (Figure 1). The Department of Defense (DoD) used the SADVA property from 1941 through 1969. The site was originally constructed as a regulating station and a holding and reconsignment point, and later became a general Army depot. The principal mission of the installation was the receipt, storage, maintenance, and distribution of supply items for the U.S. Department of the Army. The SADVA site is now privately owned and known as the Northeastern Industrial Park.

Area of Concern (AOC) 8 consists of Black Creek from its entry onto SADVA, until approximately ½ mile downstream of its exit from SADVA where the creek flows over a spillway/dam (Figure 1). Included, as part of AOC 8, is the Western Ditch, which discharges to Black Creek. Black Creek flows near many of the other AOCs at SADVA, and receives surface water runoff from most of the AOCs through the perimeter ditches or by direct inflow (Figure 2).

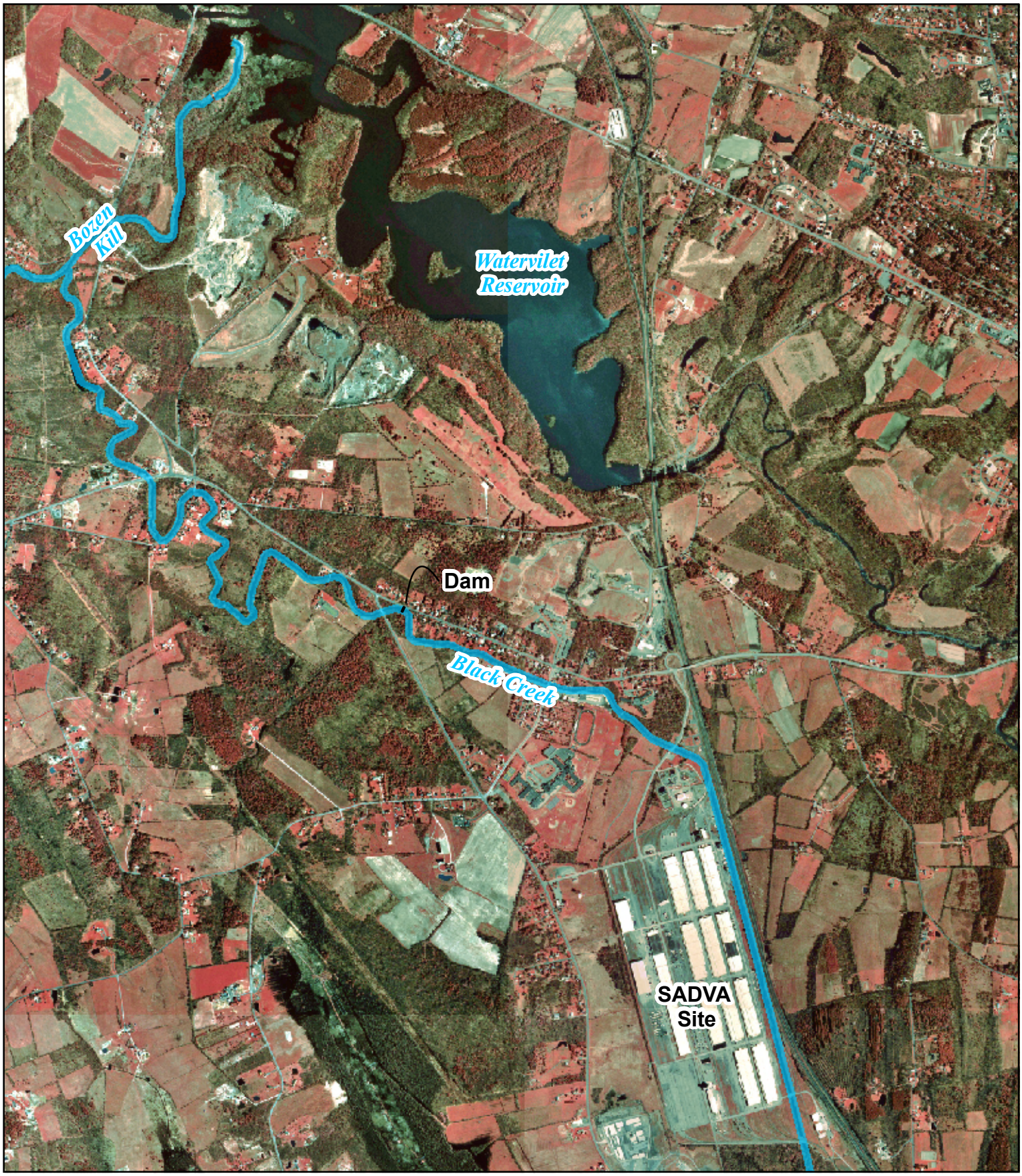
1.2 STATEMENT OF BASIS AND PURPOSE

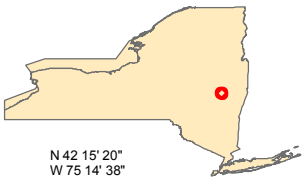
United States Army Corps of Engineers (USACE) is the lead agency for response actions for DoD's hazardous substances at Formerly Used Defense Sites (FUDS) pursuant to: the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601 et seq., and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. part 300.

AOC 8 was included in a remedial investigation (RI) for the SADVA conducted by Parsons under contract to the USACE during the period 1999-2007.

A feasibility study (FS) for AOC 8 was completed by Parsons in 2010. The FS evaluated a range of options for addressing the human health and environmental risks posed by the sites. In February 2011, a Proposed Plan was issued for AOC 8, with a preferred alternative of no further action. The Proposed Plan provided for a public comment period and public meeting, to give the public an opportunity to voice their comments, and/or to provide them in writing.

The Administrative Record, which concerns information relevant to our decision making for this site, may be reviewed at the Guilderland Public Library, 2228 Western Avenue, Guilderland New York, or at the Voorheesville Public Library, 51 School Road, Voorheesville, New York.





The photo mosaic above, downloaded from the New York State Geospatial Clearinghouse, is a false color infrared image. One characteristic of this type of image is that most healthy vegetation (with the exclusion of many conifer species) appears in red instead of green. The "redness" indicates vegetation density, type and whether growing on dry land or in a swamp. Grasslands appear light red, deciduous trees and croplands appear red, and coniferous forests appear dark red or maroon. Paved areas and buildings can appear bluish green.

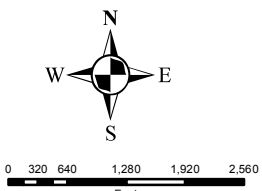


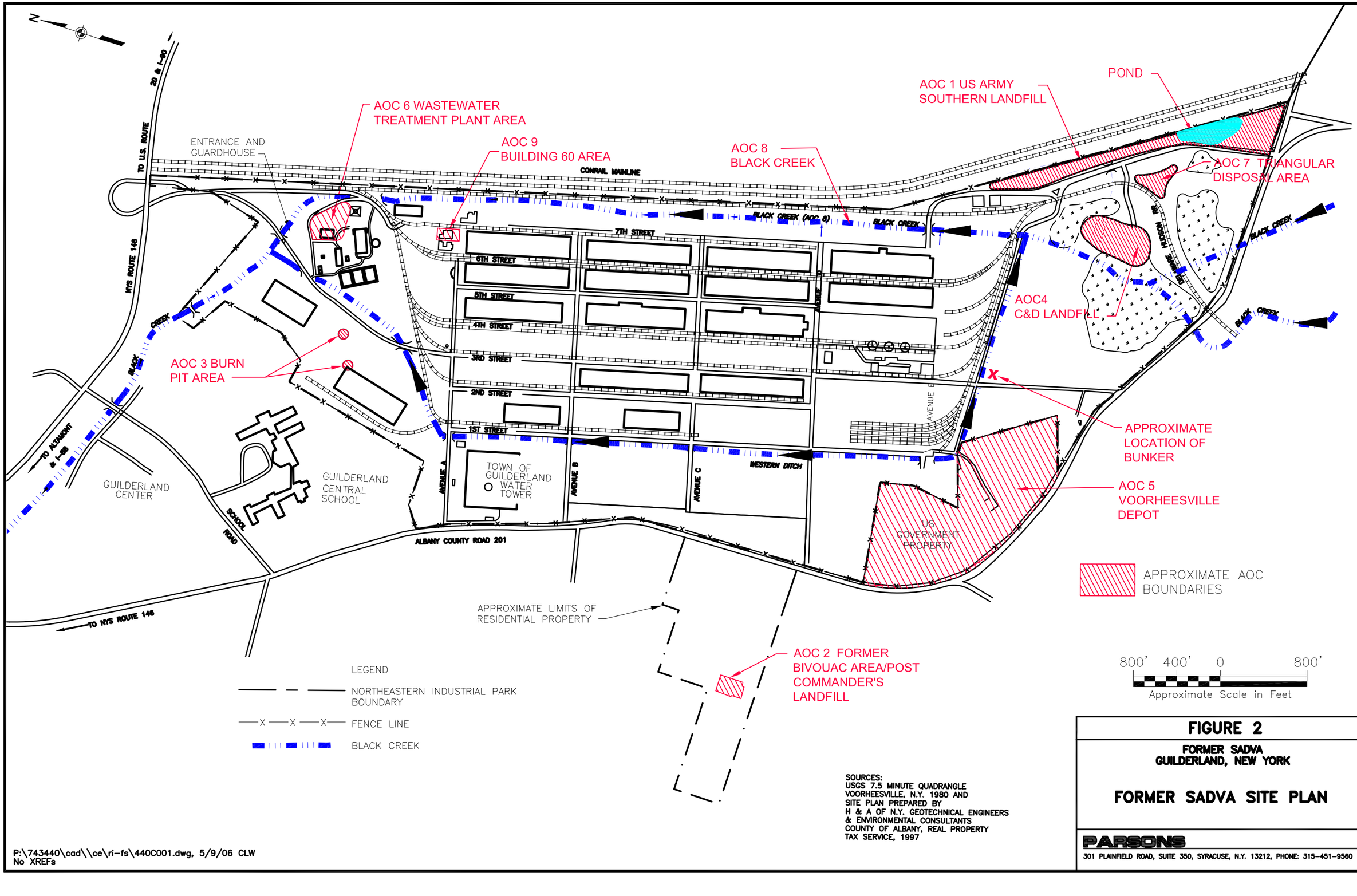
FIGURE 1

SADVA
Guilderland, New York

SITE AND VICINITY

PARSONS
301 PLAINFIELD ROAD, SUITE 350; SYRACUSE, NY 13212 PHONE: (315) 451-9560

Q:\GIS\Projects\SADVA\figure1-1.mxd



SOURCES:
USGS 7.5 MINUTE QUADRANGLE
VOORHEESVILLE, N.Y. 1980 AND
SITE PLAN PREPARED BY
H & A OF N.Y. GEOTECHNICAL ENGINEERS
& ENVIRONMENTAL CONSULTANTS
COUNTY OF ALBANY, REAL PROPERTY
TAX SERVICE, 1997

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No XREFs

FIGURE 2

FORMER SADVA
GUILDERLAND, NEW YORK

FORMER SADVA SITE PLAN

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

1.3 ASSESSMENT OF THE SITE

The results for the sediment and surface water sampling at AOC 8, conducted during the RI between 2000 and 2004 and completed in 2007 by Parsons, are summarized in this section. Parsons is a consulting engineering firm under contract to the USACE. The sampling strategy for the RI was to determine whether past DoD activities at SADVA had contaminated surface water and/or sediment onsite and downstream in Black Creek.

The New York Bureau of Watershed Management and the New York State Department of Environmental Conservation (NYSDEC) considers the section of Black Creek within and immediately downstream of SADVA to be a Class C water body, suitable for fishing, fish propagation, and primary and secondary contact recreation. Surface water results from Black Creek were therefore compared to NYSDEC Class C standards and upstream concentrations. Upstream concentrations represent background levels of certain analytes that occur naturally or due to man-made activities, such as vehicle traffic, air pollution, etc. The Class C surface water quality standards are primarily for the protection of aquatic life, and for some analytes are more stringent than those for human health protection. Because Class C water quality standards are promulgated criteria, concentrations in excess of the standards (and in excess of upstream/background concentrations) can result in enforcement actions by NYSDEC.

Sediment results from Black Creek were compared to NYSDEC sediment guidance values (NYSDEC, 1999) and upstream ranges. The NYSDEC sediment guidance values are for protection of ecological resources, not human health. NYSDEC does not have sediment criteria for protection of human health.

In general, the surface water sample concentrations from Black Creek were less than the Class C standards or were less than the upstream concentrations. These results indicate that water quality in Black Creek has not been adversely affected by the SADVA site.

In summary, sediment concentrations at AOC 8 exceeded the range of concentrations found upstream of the site and NYSDEC screening criteria for semivolatile organic compound (SVOCs), pesticides and metals. The NYSDEC sediment criteria are not enforceable standards, but rather are guidelines to be considered along with other information, such as the site's industrial setting and the use of the stream.

A human health risk assessment was performed and found no unacceptable risk exists for surface water or sediments. An ecological screening level risk assessment was performed and concluded that although there are chemicals in various media onsite that pose a potential risk to aquatic and terrestrial wildlife, the SADVA site appears to support wildlife typical for the area and for the commercial/industrial setting that the site has retained for over 60 years.

There is no evidence of a release posing an unacceptable risk to human health or the environment and, therefore, USACE has determined that no action is necessary to protect public health or the environment.

1.4 DESCRIPTION OF THE SELECTED REMEDY

The USACE has conducted a thorough remedial investigation of AOC 8, pursuant to CERCLA, with regard to the DoD's former use of the site. Based on that investigation, surface

water quality in Black Creek meets the Class C standards, or is consistent with upstream/background surface water quality. The human health risk assessment showed there is no unacceptable risk to human health posed by surface water (see Section 2.7.1). Sediment concentrations for certain analytes exceeded the NYSDEC sediment screening criteria; however, the risk assessment showed there is no unacceptable risk to human health posed by sediments (see Section 2.7.1). The ecological assessments showed the site supports wildlife typical for an industrial site that has been present for more than 60 years (see Section 2.7.2). Accordingly, USACE does not plan to conduct any response action at AOC 8.

1.5 STATUTORY DETERMINATIONS

1.5.1 Statutory Requirements

This Decision Document is in compliance with CERCLA and the NCP (as well as FUDS policy).

1.5.2 Statutory Preference for Treatment

There are no promulgated regulatory requirements for sediment quality in New York State. Therefore, no treatment of sediments is required. Surface water meets Class C regulatory requirements (or is equivalent to upstream/background concentrations), so no surface water treatment is required.

1.5.3 Recurring (a.k.a. "Five-Year") Review Requirement

In accordance with CERCLA and the NCP, remedial actions that do not allow unlimited use and unrestricted exposure (UU/UE) must be reviewed no less than every five years after the start of the remedial action, or more frequently if required by the Decision Document. The reviews are conducted to ensure that the remedial actions remain protective of human health, safety, and the environment. The Selected Remedy for AOC 8 is No Further Action and there are no restrictions on use or exposure to Black Creek surface water and sediments; therefore, recurring reviews are not required.

1.5.4 Ongoing Responsibility

In accordance with FUDS Program Policy, if future conditions or new information suggests a response action is necessary, the property may be reactivated.

1.6 DECISION DOCUMENT DATA CERTIFICATION CHECKLIST

The following information is included in the Decision Summary section of this Decision Document. Additional information may be found in the Administrative Record for this site.

Decision Document Data Checklist
Former Schenectady Army Depot, AOC 8

Decision Document Data Checklist Item	Decision Document Section, Number Reference
The contaminants of concern (COCs) and their respective concentrations (Sources, Types and Extent of Contamination)	Sections 2.4, 2.5.3
The land use resulting from the implementation of the Selected Remedy	Section 2.6
The estimate of potential risk (Summary of Human Health Risk Assessment)	Section 2.7.1
The cleanup levels established for the COCs and their basis	Section 2.8
The principal threat source materials (Principal-Threat Waste)	Section 2.11
The key factors that led to the selection of the Remedy	Sections 2.12, 2.13
The estimated costs of the Selected Remedy	Section 2.13.7

1.7 AUTHORIZING SIGNATURE

This Decision Document presents the selected response action at the former Schenectady Army Depot, Albany County, Guilderland, New York. The U.S. Army Corps of Engineers is the lead agency under the Defense Environmental Restoration Program (DERP) at the former Schenectady Army Depot, Formerly Used Defense Site, and has developed this Decision Document consistent with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision document will be incorporated into the larger Administrative Record file for the former Schenectady Army Depot, which is available for public view. This document, presenting the selected remedy of "no action" (with no cost), is approved by the undersigned, pursuant to Memorandum, DAIM-ZA, September 9, 2003, subject: Policies for Staffing and Approving Decision Documents (DD), and to Engineer Regulation 200-3-1, Formerly Used Defense Sites (FUDS) Program Policy.

Philip T. Feir
Colonel, U. S. Army
District Engineer

28 July 2011
Date

SECTION 2

DECISION SUMMARY

2.1 SITE NAME, LOCATION, AND BRIEF DESCRIPTION

SADVA is located one-quarter mile southeast of the Village of Guilderland Center, New York (Figure 1). The DoD held ownership of the SADVA property from 1941 through 1969. The site was originally constructed as a regulating station and a holding and reconsignment point, and later became a general Army depot. The principal mission of the installation was the receipt, storage, maintenance, and distribution of supply items for the U.S. Department of the Army.

Area of Concern (AOC) 8 consists of Black Creek from its entry onto SADVA, until approximately ½ mile downstream of its exit from SADVA where the creek flows over a spillway/dam (Figure 1). Included, as part of AOC 8, is the Western Ditch, which discharges to Black Creek. Black Creek flows near many of the other AOCs at SADVA, and receives surface water runoff from most of the AOCs through the perimeter ditches or by direct inflow (Figure 2).

In accordance with the provisions of the Defense Environmental Restoration Program (DERP) Management Guidance, the Department of the Army (DA) serves as the DoD Executive Agent for execution of the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS).

The DA further delegated the responsibility of the DERP-FUDS program management and execution to the USACE. All plans and activities conducted by USACE at Former Schenectady Army Depot Voorheesville Area (FSADVA) are coordinated with the NYSDEC, the New York State Department of Health (NYSDOH), the Albany County Department of Health, and the current owner of the SADVA property.

2.2 SITE HISTORY AND ENFORCEMENT ACTIVITIES

2.2.1 Activities Leading to Current Problems

There is no record of any enforcement activities taken at this site.

2.2.2 Site Investigations

A 1980 report by the Albany County Environmental Management Council (ACEMC) prompted environmental concern at the SADVA (ACEMC, 1980). This report described aerial photographs showing excavation and disposal activities that occurred in the southeastern areas of the SADVA. The aerial photos indicated activity prior to 1942 and extending through 1968, based on 1942, 1952, 1963, and 1968 aerial photographs.

In 1998, USACE investigated Black Creek as part of a focused groundwater and surface water investigation at AOC 9 - Building 60 (USACE, 1999). Building 60 is located in the northeast portion of the site, and was investigated because petroleum contamination and an oil/water separator were encountered during excavation for a new building by the current site owner. The current name of the site is the Northeastern Industrial Park (NEIP). The

investigation objectives were to determine whether petroleum-related contamination in the Building 60 area had impacted groundwater or Black Creek, and whether Black Creek had been impacted by any other contaminants at the SADVA site.

During the 1998 investigation, USACE found that the surface water in Black Creek had not been adversely impacted in the immediate vicinity of Building 60 area. Although lead was detected in creek sediment at concentrations that exceeded the Lowest Observed Effect Level (LOEL) identified in the NYSDEC's Technical Guidance for Screening Contaminated Sediments (NYSDEC, 1999), there was not enough upstream sample data to determine whether the observed concentrations exceeded background concentrations (USACE, 1999). LOELs are the lowest concentrations at which health effects were observed in tests on aquatic life. Sediment is considered to be soil that is submerged beneath a body of water.

USACE also assessed the overall quality of Black Creek. The analytical results of the surface water samples were compared to the ambient statewide surface water quality standards (NYSDEC, 1998). The analytical results were also compared to results for a single upstream sample. Based on these comparisons, there appeared to be an impact on the quality of the surface water in Black Creek. Lead and 1,1,2,2-tetrachloroethane were detected above the upstream concentration and above the applicable state water quality standards at four sampling locations adjacent to the SADVA (USACE, 1999).

The 1999 USACE investigation led to the RI including AOC 8 – Black Creek, and resulted in additional and more extensive characterization of the surface water and sediment quality. For the most part, the 1999 USACE investigation data were not used in the RI conclusions or the risk assessments because more recent sampling data were obtained.

One source of metals to sediments in the Western Ditch and Black Creek was the former Voorheesville Depot, known as AOC 5, which is connected to Black Creek by the southern portion of the Western Ditch. The Voorheesville Depot had been used for many years to store metals and ores used in national defense. The Voorheesville Depot formerly held a State Pollutant Discharge Elimination System (SPDES) permit that was issued by NYSDEC for storm water releases from the site. In the past, the AOC 5 area would experience frequent flooding during storm events, which resulted in a temporary increase in the release of suspended sediments to the Western Ditch and Black Creek. To alleviate this flooding and associated sediment transport, and to ensure compliance with the SPDES permit, remedial activities were completed by the Defense National Stockpile Center (DNSC) in 2004 to construct/enlarge new perimeter ditches and retention ponds. These actions, costing in excess of $1.1 million dollars, funded by the Defense Logistics Agency, have successfully mitigated flow of suspended sediments from the AOC 5 area to Black Creek. Once the pond improvements were made and the depot ceased operations, NYSDEC allowed the permit to be terminated. The Voorheesville Depot is now inactive.

2.2.3 Site Actions

There have been no site actions at AOC 8.

2.3 COMMUNITY PARTICIPATION

Community participation activities provide the public with an opportunity to express its views on the selected remedial action. USACE considered state (NYSDEC and NYSDOH), Albany County Health Department (ACHD) and public input from the community participation activities during the FS phase of work in selecting the Selected Remedy for AOC 8.

Two public meetings were held, one on December 9, 2008, and another on March 29, 2011, to specifically discuss the alternatives identified in the Feasibility Study, as well as to present the "no further action" proposed plan for AOC 8.

Notices announcing the meetings were published in the *Altamont Enterprise*, the *Schenectady Gazette*, and the *Albany Times-Union*, all newspapers of general circulation in the area of the former Schenectady Army Depot. Comments from the public (including from Restoration Advisory Board membership for the site) and the New York State Department of Environmental Conservation were received. A responsiveness summary, in which public comments received both at the December 9, 2008 and March 29, 2011 meetings and via mail, are addressed in Section 3.0 of this *Decision Document*. There were a total of 5 letters received from the public after the December 9, 2008 meeting, which opposed the "no further action" plan. There were no letters received after the March 29, 2011 public meeting; however, the Restoration Advisory Board Acting Co-Chairman reiterated his position at the meeting in disagreement with the "no further action" plan for the Black Creek. In a letter dated April 20, 2011, the NYSDEC concurred that no further action was necessary to address the Black Creek site at the Former Schenectady Army Depot (known as "AOC #8"). The minutes of the December 9, 2008 and March 29, 2011 meetings and the NYSDEC letter are also included in Section 3.0 (Responsiveness Summary).

2.4 SCOPE AND ROLE OF THE RESPONSE ACTION

The site is currently a privately-owned industrial park known as the NEIP. The FUDS program does not address any environmental impacts that may be associated with the current use of the site – it is focused only on DoD's contaminants.

This response action addresses AOC 8 – Black Creek only. It does not include or apply to any other sites at SADVA. The need for remedial action is driven by the presence of risks to human health and the environment, if any, posed by contaminants at AOC 8. The RI found that there were no unacceptable risks to human health or the environment posed by AOC 8, and that is the basis for the no further action decision.

2.5 SITE CHARACTERISTICS

2.5.1 Conceptual Site Model

A conceptual site model (CSM) is an effective tool for defining site dynamics, streamlining risk assessments, establishing exposure hypotheses, and developing appropriate corrective actions. CSMs are useful for identifying completed exposure pathways between the contaminated media and potential receptors. The purpose of the CSM is to aid in understanding and describing a site and presents the assumptions regarding:

- Suspected sources and types of contaminants present;

- Contaminant release and transport mechanisms;
- Affected media;
- Potential receptors that could come in contact with site-related contaminants in affected media under current and future land use scenarios; and
- Potential routes of exposure.

Potential human receptors are defined as individuals who may be exposed to site-related contaminants in environmental media. Consistent with United States Environmental Protection Agency (USEPA) guidance, current and reasonably anticipated land uses were considered in the receptor selection process.

USEPA defines an exposure pathway as: "The course a chemical or physical agent takes from a source to an exposed organism. An exposure pathway describes a unique mechanism by which an individual or population is exposed to chemicals or physical agents at or originating from a site. Each exposure pathway includes a source or release from a source, an exposure point, and an exposure route. If the exposure point differs from the source, a transport/exposure medium (*e.g.*, air) or media (in cases of intermedia transfer) is also included."

A review of potential exposure pathways links the sources, locations, and types of environmental releases with receptor locations and activity patterns to determine the significant pathways of concern.

Based on the previous investigations and the site visit by the project team performing the risk assessment, the observations and reasonable assumptions for the potential human receptors for AOC 8 are listed below.

- **Current Receptors** – The current land use near and around Black Creek at SADVA includes industrial/commercial use of the property. The workers and tenants are not known to use water from Black Creek. Current land use includes infrequent visits to the site, such as those that would be performed during site sampling investigations. NEIP restricts access to the property by the general public.
- **Future Receptors** – Based on future land use plans at SADVA, as described in the Northeastern Industrial Park Generic Environmental Impact Statement (EIS) (Clough, Harbour & Associates LLP, June 2005), future land use is reasonably expected to remain commercial/industrial.

2.5.2 Sampling Strategy

The New York Bureau of Watershed Management and the NYSDEC considers the section of Black Creek within and immediately downstream of SADVA a Class C water body, suitable for fishing, fish propagation, and primary and secondary contact recreation. Surface water results from Black Creek were therefore compared to NYSDEC Class C standards and upstream concentrations. The Class C standards are primarily for the protection of aquatic life, and for some analytes are more stringent than those for human health protection.

Sediment results from Black Creek were compared to NYSDEC sediment guidance values (NYSDEC, 1999) and upstream ranges. The NYSDEC sediment guidance values are for

protection of ecological resources, not human health. NYSDEC does not have sediment criteria for protection of human health.

A total of 36 sediment samples were collected during the remedial investigation conducted by Parsons. In 2000, sediments were collected from 0 to 2 inches beneath the sediment surface at each of the surface water locations, plus another location where a surface water sample could not be collected due to dry conditions. The sediment samples collected in 2000 were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. In 2004 at the request of NYSDEC, deeper sediment samples from 1 to 1.5 feet beneath the sediment surface were collected at new and existing sample locations to characterize deeper sediments. Sediment samples collected in 2004 were analyzed for SVOCs, pesticides, PCBs, and metals, because these were the analytes detected in 2000. In the following paragraphs, the RI sediment data are compared to NYSDEC sediment screening criteria, which are primarily based on protection of aquatic/ecological life. Comparisons are also made to the New York State Part 375 soil cleanup objectives, which are based on protection of human health and are specific to several types of land use – unrestricted, residential and industrial. Comparisons to NYSDEC sediment screening criteria are described in the following paragraphs, followed by comparisons to Part 375 soil cleanup objectives.

2.5.3 Sources, Types and Extent of Contamination

The RI surface water sample results showed that all metals concentrations were either below upstream concentrations, or did not exceed Class C total-concentration-specific standards/guidance values (Figure 3). A limited number of Class C surface water quality criteria specify ionic, dissolved, or acid soluble forms of the metals. Available sample data are reported as total concentrations; therefore direct comparisons to the Class C standards are only applicable when total concentration is specified as the Class C standard.

Note that after the RI Report was finalized in September 2007, NYSDEC eliminated the Class C iron standard for protection of aquatic life in February 2008. Therefore, that change is not reflected in the RI Report data tables and figures.

Volatile organic compounds (VOCs) were not detected above Class C surface water standards/guidance values and upstream concentrations in any Black Creek surface water samples. One SVOC, bis(2-ethylhexyl)phthalate (BEHP) was frequently detected; however, the BEHP concentrations onsite and downstream in Black Creek were within the range detected in the upstream samples (upstream concentrations ranged from not detected to 26 µg/L). BEHP is also a common laboratory contaminant; although in this case, the associated laboratory blank samples were free of BEHP. Pesticides and polychlorinated biphenyls (PCBs) were not detected in any of the surface water samples.

Sediment concentrations at AOC 8 exceeded the range of concentrations found upstream of the site and NYSDEC screening criteria for SVOCs, pesticides and metals (Figure 4 and Appendix A). The NYSDEC sediment criteria are not enforceable standards, but rather are guidelines to be considered along with other information, such as the site's industrial setting and the use of the stream. In part due to the sediment criteria being exceeded, a qualitative ecological risk assessment was performed, as described in Section 5 of this Proposed Plan.

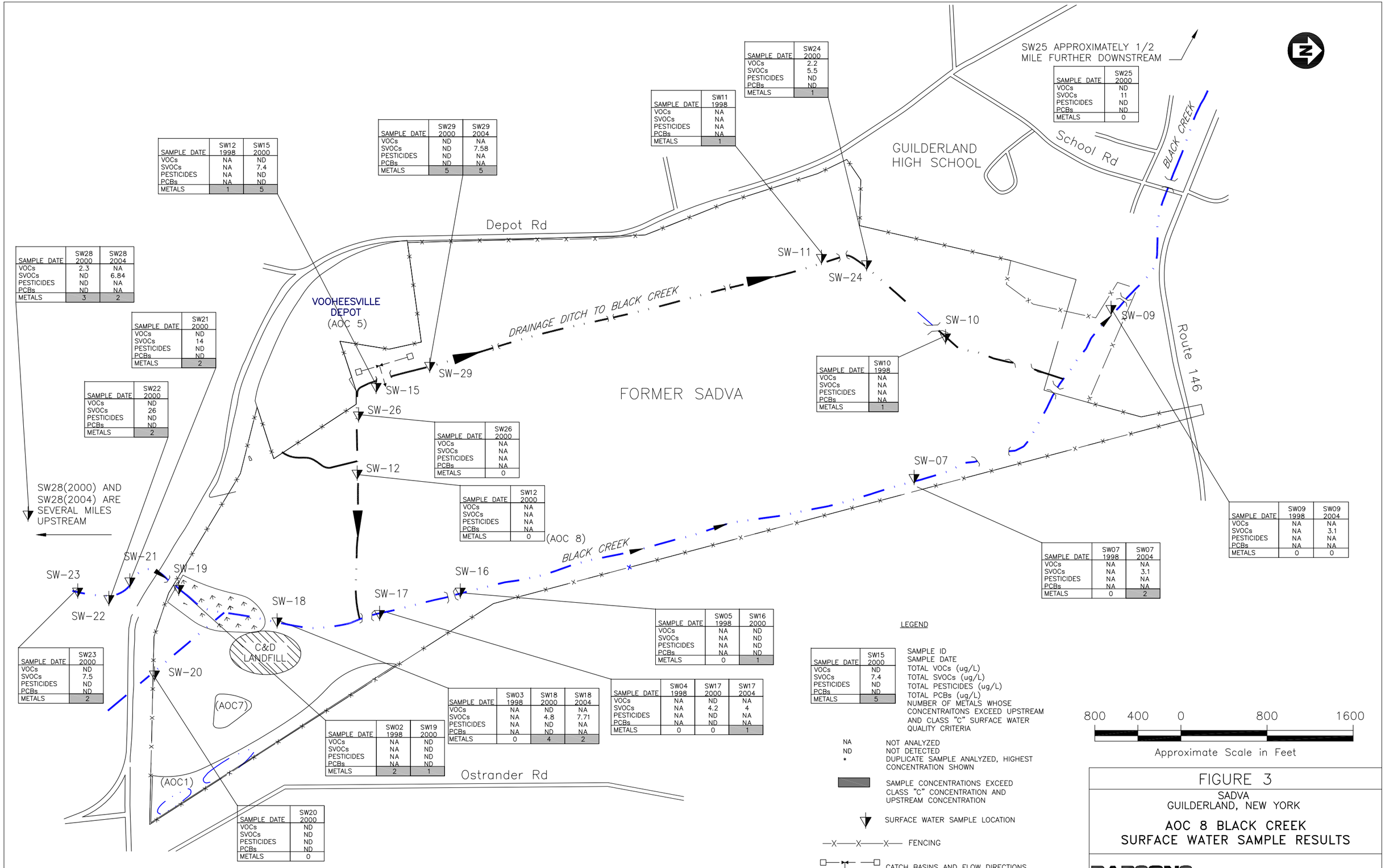
VOCs were not detected above NYSDEC sediment criteria and upstream ranges in any sediment sample. Four shallow sediment samples contained one or more SVOCs above sediment criteria and upstream concentration ranges. One of the four locations is at the upstream end of SADVA, where Black Creek enters the SADVA site. The other three sample locations are downstream and off-site of SADVA. On the basis of these three sample locations, the elevated concentrations of SVOCs may not necessarily be attributable to the SADVA. All three samples are located near Route 146. The detected SVOCs could be attributed to vehicle traffic and exhaust. SVOC concentrations were below NYSDEC sediment criteria or were not detected in all of the deep sediment samples collected onsite and off-site. Pesticides were detected above sediment screening criteria and upstream ranges in ten sediment samples. Total pesticide concentrations were highest in a shallow sample collected from the Western Ditch. Pesticide concentrations at the off-site downstream dam were low; alpha chlordane was the only pesticide detected above sediment criteria downstream of the SADVA. PCBs were only detected in one sample at a concentration of 110 µg/kg. That concentration is below the NYSDEC sediment screening criterion. The deeper sample collected at this location did not contain PCBs. Nine metals were detected above sediment screening criteria and upstream ranges (arsenic, cadmium, chromium, copper, iron, lead, manganese, nickel and zinc). Downstream of SADVA, off-site metals concentrations in both the shallow and deep sediment samples tended to be higher than the metals concentrations onsite in the main channel of Black Creek.

The following paragraphs present comparisons of the sediment data to Part 375 soil cleanup objectives for industrial land use.

All sediment sample concentrations were below the Part 375 soil cleanup objectives for industrial land use for VOCs (Figure 5). The current site land use is industrial, and is expected to be for the foreseeable future. All sediment sample concentrations met industrial criteria for SVOCs, with the exception of one offsite sample, located near the intersection of Route 146 and School Road. The presence of this SVOC (benzo(a)pyrene) could be caused by road traffic and vehicle exhaust, because the concentrations at the SADVA site met the industrial criteria. All sediment sample concentrations for pesticides and PCBs met the Part 375 soil cleanup objectives for industrial land use. Two sediment samples had one or two metals that exceeded Part 375 soil cleanup objectives for industrial land use (for arsenic and/or manganese). Because these are sediment samples beneath a body of water, there is minimal risk of human exposure.

During the RI and during the Focused Feasibility Study (FFS) for AOCs 1 and 7, the impacts of the U.S. Army Southern Landfill (AOC 1) and Triangular Disposal Area (AOC 7) on Black Creek were assessed. The sediment and surface water quality data for Black Creek do not show impacts attributable to AOC 1 or AOC 7. A human health risk assessment was performed and found no unacceptable risk exists for surface water or sediments. An ecological screening level risk assessment was performed and concluded that although there are chemicals in various media onsite that pose a potential risk to aquatic and terrestrial wildlife, the SADVA site appears to support wildlife typical for the area and for the commercial/industrial setting that the site has retained for over 60 years.

There is no evidence of a release posing an unacceptable risk to human health or the environment and, therefore, USACE has determined that no action is necessary to protect public health or the environment.



SAMPLE DATE	SW25 2000
VOCs	ND
SVOCs	11
PESTICIDES	ND
PCBs	ND
METALS	0

SAMPLE DATE	SW24 2000
VOCs	2.2
SVOCs	5.5
PESTICIDES	ND
PCBs	ND
METALS	1

SAMPLE DATE	SW11 1998
VOCs	NA
SVOCs	NA
PESTICIDES	NA
PCBs	NA
METALS	1

SAMPLE DATE	SW29 2000	SW29 2004
VOCs	ND	NA
SVOCs	ND	7.58
PESTICIDES	ND	NA
PCBs	ND	NA
METALS	5	5

SAMPLE DATE	SW12 1998	SW15 2000
VOCs	NA	ND
SVOCs	NA	7.4
PESTICIDES	NA	ND
PCBs	NA	ND
METALS	1	5

SAMPLE DATE	SW28 2000	SW28 2004
VOCs	2.3	NA
SVOCs	ND	6.84
PESTICIDES	ND	NA
PCBs	ND	NA
METALS	3	2

SAMPLE DATE	SW21 2000
VOCs	ND
SVOCs	14
PESTICIDES	ND
PCBs	ND
METALS	2

SAMPLE DATE	SW22 2000
VOCs	ND
SVOCs	26
PESTICIDES	ND
PCBs	ND
METALS	2

SAMPLE DATE	SW26 2000
VOCs	NA
SVOCs	NA
PESTICIDES	NA
PCBs	NA
METALS	0

SAMPLE DATE	SW12 2000
VOCs	NA
SVOCs	NA
PESTICIDES	NA
PCBs	NA
METALS	0

SAMPLE DATE	SW10 1998
VOCs	NA
SVOCs	NA
PESTICIDES	NA
PCBs	NA
METALS	1

SAMPLE DATE	SW09 1998	SW09 2004
VOCs	NA	NA
SVOCs	NA	3.1
PESTICIDES	NA	NA
PCBs	NA	NA
METALS	0	0

SAMPLE DATE	SW07 1998	SW07 2004
VOCs	NA	NA
SVOCs	NA	3.1
PESTICIDES	NA	NA
PCBs	NA	NA
METALS	0	2

SAMPLE DATE	SW05 1998	SW16 2000
VOCs	NA	ND
SVOCs	NA	ND
PESTICIDES	NA	ND
PCBs	NA	ND
METALS	0	1

SAMPLE DATE	SW23 2000
VOCs	ND
SVOCs	7.5
PESTICIDES	ND
PCBs	ND
METALS	2

SAMPLE DATE	SW03 1998	SW18 2000	SW18 2004
VOCs	NA	ND	NA
SVOCs	NA	4.8	7.71
PESTICIDES	NA	ND	NA
PCBs	NA	ND	NA
METALS	0	4	2

SAMPLE DATE	SW04 1998	SW17 2000	SW17 2004
VOCs	NA	ND	NA
SVOCs	NA	4.2	4
PESTICIDES	NA	ND	NA
PCBs	NA	ND	NA
METALS	0	0	1

SAMPLE DATE	SW02 1998	SW19 2000
VOCs	NA	ND
SVOCs	NA	ND
PESTICIDES	NA	ND
PCBs	NA	ND
METALS	2	1

SAMPLE DATE	SW20 2000
VOCs	ND
SVOCs	ND
PESTICIDES	ND
PCBs	ND
METALS	0

SAMPLE DATE	SW15 2000
VOCs	ND
SVOCs	7.4
PESTICIDES	ND
PCBs	ND
METALS	5

LEGEND

SAMPLE ID
SAMPLE DATE
TOTAL VOCs (ug/L)
TOTAL SVOCs (ug/L)
TOTAL PESTICIDES (ug/L)
TOTAL PCBs (ug/L)
NUMBER OF METALS WHOSE CONCENTRAITONS EXCEED UPSTREAM AND CLASS "C" SURFACE WATER QUALITY CRITERIA

NA NOT ANALYZED
ND NOT DETECTED
* DUPLICATE SAMPLE ANALYZED, HIGHEST CONCENTRATION SHOWN

SAMPLE CONCENTRATIONS EXCEED CLASS "C" CONCENTRATION AND UPSTREAM CONCENTRATION

SURFACE WATER SAMPLE LOCATION

FENCING

CATCH BASINS AND FLOW DIRECTIONS

800 400 0 800 1600

Approximate Scale in Feet

FIGURE 3

SADVA
GUILDERLAND, NEW YORK

AOC 8 BLACK CREEK SURFACE WATER SAMPLE RESULTS

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

FILE NAME: P:\743440 (SADVA)\CAD\CE\RI-FS\AOC8-C007.DWG
PLOT DATE: 6/9/2011 8:35 AM PLOTTED BY: RUSSO, JILL

DEPTH	SD28 (2000) 0–0.2'	SD28 (2004) 0–0.5'	SD28 (2004) 1–1.5'
VOCs	ND	NA	NA
SVOCs	5546	44	ND
CPAHs	2248	44	ND
NPAHs	3058	ND	ND
PAHs	5306	44	ND
PESTICIDES	ND	0.35	0.62
PCBs	ND	NA	NA
METALS	3	1	0

DEPTH	SD12 (1998) –	SD15 (2000) 0–0.2'	SD15 (2004) 1–1.5'
VOCs	NA	ND	NA
SVOCs	NA	552	ND
CPAHs	NA	211	ND
NPAHs	NA	201	ND
PAHs	NA	412	ND
PESTICIDES	NA	64.84	49.76
PCBs	NA	ND	NA
METALS	5	8	5

DEPTH	SD29 (2000) 0–0.2'	SD29 (2004) 1–1.5'
VOCs	ND	NA
SVOCs	307	ND
CPAHs	164	ND
NPAHs	143	ND
PAHs	307	ND
PESTICIDES	21.48	ND
PCBs	110	ND
METALS	7	4

DEPTH	SD11 (1998) –
VOCs	NA
SVOCs	NA
CPAHs	NA
NPAHs	NA
PAHs	NA
PESTICIDES	NA
PCBs	NA
METALS	2

DEPTH	SD24 (2000) 0–0.2'
VOCs	ND
SVOCs	1357
CPAHs	600
NPAHs	658
PAHs	1258
PESTICIDES	115
PCBs	ND
METALS	2

DEPTH	SD25 (2000) 0–0.2'	SD30 (2004) 1–1.5'
VOCs	3.4	NA
SVOCs	1782	ND
CPAHs	944	ND
NPAHs	764	ND
PAHs	1708	ND
PESTICIDES	10.34	2.91
PCBs	ND	NA
METALS	1	4

SD25 & SD30–1–1.5 ARE CO–LOCATED AT THE SPILLWAY/DAM APPROXIMATELY 1/2 MILE FURTHER DOWNSTREAM

DEPTH	SD19 (2000) 0–0.2'
VOCs	ND
SVOCs	4947
CPAHs	2142
NPAHs	2696
PAHs	4838
PESTICIDES	1.1
PCBs	ND
METALS	0

DEPTH	SD26 (2000) 0–0.2'
VOCs	NA
SVOCs	NA
CPAHs	NA
NPAHs	NA
PAHs	NA
PESTICIDES	NA
PCBs	NA
METALS	6

DEPTH	SD21 (2000) 0–0.2'
VOCs	2.4
SVOCs	ND
CPAHs	ND
NPAHs	ND
PAHs	ND
PESTICIDES	0.13
PCBs	ND
METALS	2

DEPTH	SD22 (2000) 0–0.2'
VOCs	ND
SVOCs	150
CPAHs	ND
NPAHs	ND
PAHs	ND
PESTICIDES	0.23
PCBs	ND
METALS	4

DEPTH	SD12 (2000) 0–0.2'	SD12 (2004) 1–1.5'
VOCs	NA	NA
SVOCs	NA	41
CPAHs	NA	ND
NPAHs	NA	ND
PAHs	NA	ND
PESTICIDES	NA	3.46
PCBs	NA	NA
METALS	5	0

DEPTH	SD16 (2000) 0–0.2'
VOCs	ND
SVOCs	ND
CPAHs	ND
NPAHs	ND
PAHs	ND
PESTICIDES	0.22
PCBs	ND
METALS	2

DEPTH	SD10 (1998) –
VOCs	NA
SVOCs	NA
CPAHs	NA
NPAHs	NA
PAHs	NA
PESTICIDES	NA
PCBs	NA
METALS	3

DEPTH	SD31 (2004) 0–0.5'	SD31 (2004) 1–1.5'
VOCs	NA	NA
SVOCs	5616	ND
CPAHs	2796	ND
NPAHs	2820	ND
PAHs	5616	ND
PESTICIDES	30.39	0.93
PCBs	NA	NA
METALS	5	4

DEPTH	SD32 (2004) 0–0.5'	SD32 (2004) 1–1.5'
VOCs	NA	NA
SVOCs	37030	2021
CPAHs	14570	776
NPAHs	21460	1143
PAHs	36030	1919
PESTICIDES	10.5	18.31
PCBs	NA	NA
METALS	3	3

DEPTH	SD14 (2000) 0–0.2'	SD14 (2004) 0.5–1'
VOCs	ND	NA
SVOCs	266	ND
CPAHs	143	ND
NPAHs	123	ND
PAHs	266	ND
PESTICIDES	288.7	134
PCBs	ND	NA
METALS	5	5

DEPTH	SD09 (1998) –	SD09 (2004) 1–1.5'
VOCs	NA	NA
SVOCs	NA	42
CPAHs	NA	ND
NPAHs	NA	42
PAHs	NA	42
PESTICIDES	NA	3.9
PCBs	NA	NA
METALS	7	4

DEPTH	SD07 (1998) –	SD07 (2004) 1–1.5'
VOCs	ND	NA
SVOCs	3701	ND
CPAHs	NA	ND
NPAHs	NA	ND
PAHs	NA	ND
PESTICIDES	299.6	0.9
PCBs	ND	NA
METALS	5	0

DEPTH	SD20 (2000) 0–0.2'
VOCs	ND
SVOCs	220
CPAHs	90
NPAHs	75
PAHs	165
PESTICIDES	44.2
PCBs	ND
METALS	2

DEPTH	SD17 (2000) 0–0.2'	SD17 (2004) 1–1.5'
VOCs	ND	NA
SVOCs	154	48
CPAHs	106	ND
NPAHs	27	ND
PAHs	133	ND
PESTICIDES	6.3	0.29
PCBs	ND	NA
METALS	2	0

DEPTH	SD23 (2000) 0–0.2'
VOCs	ND
SVOCs	210
CPAHs	ND
NPAHs	ND
PAHs	ND
PESTICIDES	0.15
PCBs	ND
METALS	2

DEPTH	SD20 (2000) 0–0.2'
VOCs	ND
SVOCs	220
CPAHs	90
NPAHs	75
PAHs	165
PESTICIDES	44.2
PCBs	ND
METALS	2

DEPTH	SD18 (2000) 0–0.2'	SD18 (2004) 1–1.5'
VOCs	ND	NA
SVOCs	346	ND
CPAHs	146	ND
NPAHs	156	ND
PAHs	302	ND
PESTICIDES	2.3	ND
PCBs	ND	NA
METALS	9	3

Depot Rd
School Rd
Route 146
Ostrander Rd
GUILDERLAND HIGH SCHOOL
FORMER SADVA
VOOHEESVILLE DEPOT (AOC5)
C&D LANDFILL
(AOC7)
(AOC1)
(AOC 8) BLACK CREEK
DRAINAGE DITCH TO BLACK CREEK
BLACK CREEK
SD-31/SD-31D
SD32/SD32D
SD-11
SD-24
SD-9
SD-10
SD-14
SD-07
SD-29
SD-15
SD-26
SD-12
SD-16
SD-17
SD-18
SD-19
SD-21
SD-23
SD-22
SD-20
SD28(2000) AND SD28(2004) ARE SEVERAL MILES UPSTREAM

LEGEND

SAMPLE ID (DATE)
DEPTH IN FEET
TOTAL VOCs (ug/kg)
TOTAL SVOCs (ug/kg)
TOTAL CPAHs (ug/kg)
TOTAL NPAHs (ug/kg)
TOTAL PAHs (ug/kg)
TOTAL PESTICIDES (ug/kg)
TOTAL PCBs (ug/kg)
NUMBER OF METALS WITH CONCENTRATIONS ABOVE NYSDEC SEDIMENT CRITERIA, UPSTREAM RANGES, OR SIDE RANGES.

– UNKNOWN
NA NOT ANALYZED
ND NOT DETECTED
* DUPLICATE SAMPLE ANALYZED, HIGHEST CONCENTRATION SHOWN

115 ONE OR MORE COMPOUNDS ABOVE NYSDEC SEDIMENT CRITERIA AND UPSTREAM RANGE

SURFACE WATER/SEDMENT SAMPLE LOCATION

SEDMENT SAMPLE LOCATION

FENCING

CATCH BASINS AND FLOW DIRECTIONS

800 400 0 800 1600

Approximate Scale in Feet

FILE NAME: P:\743440 (SADVA)\CAD\CE\RI-FS\AOC8-C008.DWG
PLOT DATE: 8/13/2010 1:36 PM PLOTTED BY: RUSSO, JILL

FIGURE 4

SADVA
GUILDERLAND, NEW YORK

AOC 8 BLACK CREEK SEDIMENT ANALYTICAL DATA MAP

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315-451-9560

DEPTH	SD28 (2000) 0–0.2'	SD28 (2004) 0–0.5'	SD28 (2004) 1–1.5'
VOCs	ND	NA	NA
SVOCs	5546	44	ND
CPAHs	2248	44	ND
NPAHs	3058	ND	ND
PAHs	5306	44	ND
PESTICIDES	ND	0.35	0.62
PCBs	ND	NA	NA
METALS	3	1	0

DEPTH	SD12 (1998) –	SD15 (2000) 0–0.2'	SD15 (2004) 1–1.5'
VOCs	NA	ND	NA
SVOCs	NA	552	ND
CPAHs	NA	211	ND
NPAHs	NA	201	ND
PAHs	NA	412	ND
PESTICIDES	NA	64.84	49.76
PCBs	NA	ND	NA
METALS	5	8	5

DEPTH	SD29 (2000) 0–0.2'	SD29 (2004) 1–1.5'
VOCs	ND	NA
SVOCs	307	ND
CPAHs	164	ND
NPAHs	143	ND
PAHs	307	ND
PESTICIDES	21.48	ND
PCBs	110	ND
METALS	7	4

DEPTH	SD11 (1998) –
VOCs	NA
SVOCs	NA
CPAHs	NA
NPAHs	NA
PAHs	NA
PESTICIDES	NA
PCBs	NA
METALS	2

DEPTH	SD24 (2000) 0–0.2'
VOCs	ND
SVOCs	1357
CPAHs	600
NPAHs	658
PAHs	1258
PESTICIDES	115
PCBs	ND
METALS	2

DEPTH	SD25 (2000) 0–0.2'	SD30 (2004) 1–1.5'
VOCs	3.4	NA
SVOCs	1782	ND
CPAHs	944	ND
NPAHs	764	ND
PAHs	1708	ND
PESTICIDES	10.34	2.91
PCBs	ND	NA
METALS	1	4

SD25 & SD30–1–1.5 ARE CO–LOCATED AT THE SPILLWAY/DAM APPROXIMATELY 1/2 MILE FURTHER DOWNSTREAM

DEPTH	SD19 (2000) 0–0.2'
VOCs	ND
SVOCs	4947
CPAHs	2142
NPAHs	2696
PAHs	4838
PESTICIDES	1.1
PCBs	ND
METALS	0

DEPTH	SD26 (2000) 0–0.2'
VOCs	NA
SVOCs	NA
CPAHs	NA
NPAHs	NA
PAHs	NA
PESTICIDES	NA
PCBs	NA
METALS	6

DEPTH	SD21 (2000) 0–0.2'
VOCs	2.4
SVOCs	ND
CPAHs	ND
NPAHs	ND
PAHs	ND
PESTICIDES	0.13
PCBs	ND
METALS	2

DEPTH	SD22 (2000) 0–0.2'
VOCs	ND
SVOCs	150
CPAHs	ND
NPAHs	ND
PAHs	ND
PESTICIDES	0.23
PCBs	ND
METALS	4

DEPTH	SD12 (2000) 0–0.2'	SD12 (2004) 1–1.5'
VOCs	NA	NA
SVOCs	NA	41
CPAHs	NA	ND
NPAHs	NA	ND
PAHs	NA	ND
PESTICIDES	NA	3.46
PCBs	NA	NA
METALS	5	0

DEPTH	SD10 (1998) –
VOCs	NA
SVOCs	NA
CPAHs	NA
NPAHs	NA
PAHs	NA
PESTICIDES	NA
PCBs	NA
METALS	3

DEPTH	SD16 (2000) 0–0.2'
VOCs	ND
SVOCs	ND
CPAHs	ND
NPAHs	ND
PAHs	ND
PESTICIDES	0.22
PCBs	ND
METALS	2

DEPTH	SD17 (2000) 0–0.2'	SD17 (2004) 1–1.5'
VOCs	ND	NA
SVOCs	154	48
CPAHs	106	ND
NPAHs	27	ND
PAHs	133	ND
PESTICIDES	6.3	0.29
PCBs	ND	NA
METALS	2	0

DEPTH	SD23 (2000) 0–0.2'
VOCs	ND
SVOCs	210
CPAHs	ND
NPAHs	ND
PAHs	ND
PESTICIDES	0.15
PCBs	ND
METALS	2

DEPTH	SD20 (2000) 0–0.2'
VOCs	ND
SVOCs	220
CPAHs	90
NPAHs	75
PAHs	165
PESTICIDES	44.2
PCBs	ND
METALS	2

DEPTH	SD18 (2000) 0–0.2'	SD18 (2004) 1–1.5'
VOCs	ND	NA
SVOCs	346	ND
CPAHs	146	ND
NPAHs	156	ND
PAHs	302	ND
PESTICIDES	2.3	ND
PCBs	ND	NA
METALS	9	3

DEPTH	SD31 (2004) 0–0.5'	SD31 (2004) 1–1.5'
VOCs	NA	NA
SVOCs	5616	ND
CPAHs	2796	ND
NPAHs	2820	ND
PAHs	5616	ND
PESTICIDES	30.39	0.93
PCBs	NA	NA
METALS	5	4

DEPTH	SD32 (2004) 0–0.5'	SD32 (2004) 1–1.5'
VOCs	NA	NA
SVOCs	37030	2021
CPAHs	14570	776
NPAHs	21460	1143
PAHs	36030	1919
PESTICIDES	10.5	18.31
PCBs	NA	NA
METALS	3	3

DEPTH	SD14 (2000) 0–0.2'	SD14 (2004) 0.5–1'
VOCs	ND	NA
SVOCs	266	ND
CPAHs	143	ND
NPAHs	123	ND
PAHs	266	ND
PESTICIDES	288.7	134
PCBs	ND	NA
METALS	5	5

DEPTH	SD09 (1998) –	SD09 (2004) 1–1.5'
VOCs	NA	NA
SVOCs	NA	42
CPAHs	NA	ND
NPAHs	NA	42
PAHs	NA	42
PESTICIDES	NA	3.9
PCBs	NA	NA
METALS	7	4

DEPTH	SD07 (1998) –	SD07 (2004) 1–1.5'
VOCs	ND	NA
SVOCs	3701	ND
CPAHs	NA	ND
NPAHs	NA	ND
PAHs	NA	ND
PESTICIDES	299.6	0.9
PCBs	ND	NA
METALS	5	0

LEGEND

SAMPLE ID (DATE)
DEPTH IN FEET
TOTAL VOCs (ug/kg)
TOTAL SVOCs (ug/kg)
TOTAL CPAHs (ug/kg)
TOTAL NPAHs (ug/kg)
TOTAL PAHs (ug/kg)
TOTAL PESTICIDES (ug/kg)
TOTAL PCBs (ug/kg)
NUMBER OF METALS WITH CONCENTRATIONS ABOVE NYSDEC SEDIMENT CRITERIA, UPSTREAM RANGES, OR SIDE RANGES.

– UNKNOWN
NA NOT ANALYZED
ND NOT DETECTED
* DUPLICATE SAMPLE ANALYZED, HIGHEST CONCENTRATION SHOWN

115 ONE OR MORE COMPOUNDS ABOVE NYSDEC SEDIMENT CRITERIA AND UPSTREAM RANGE

SURFACE WATER/SEDMENT SAMPLE LOCATION

SEDMENT SAMPLE LOCATION

SHALLOW SEDIMENT SAMPLE COLLECTED AFTER DITCH WAS OVER–EXCAVATED

LOCATION AND CATEGORY OF ANALYTE THAT EXCEED PART 375 SOIL CLEANUP OBJECTIVES FOR INDUSTRIAL LAND USE

—X—X—X— FENCING

CATCH BASINS AND FLOW DIRECTIONS

800 400 0 800 1600

Approximate Scale in Feet

FIGURE 5

SADVA
GUILDERLAND, NEW YORK

AOC 8 BLACK CREEK
SEDIMENT ANALYTICAL DATA MAP
(PART 375 COMPARISONS)

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, N.Y. 13212, PHONE: 315–451–9560

FILE NAME: P:\743440 (SADVA)\CAD\CE\RI-FS\AOC8-C010.DWG
PLOT DATE: 8/13/2010 1:31 PM PLOTTED BY: RUSSO, JILL

2.5.4 Materials to be Remediated

The no further action remedy does not provide for remediation of surface water or sediment in Black Creek or the Western Ditch.

2.6 CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

According to the 2000 census, the Town of Guilderland has a population of 32,688. The main portion of SADVA, now operated as Northeastern Industrial Park, is currently zoned industrial, while most properties adjacent to the site are zoned agricultural. According to the 1983 census of agriculture, about 27.2 percent of the area in Albany County was farmed.

Current land use includes infrequent visits to the site, such as those that would be performed during site sampling investigations. Based on future land use plans at NEIP as described in the NEIP Generic EIS dated June 2005, future land use may include commercial development in a portion of the property. The Master Plan discussed in the NEIP EIS indicates that office buildings and parking lots are proposed in the area of AOCs 1 and 7. The plan identifies eight 20,000-square foot (ft^2) offices and three parking areas with a total of 1,300 parking spaces.

2.7 SUMMARY OF SITE RISKS

2.7.1 Findings of the Human Health Risk Assessment

The specific objective of the human health risk assessment (HHRA) was to provide a quantitative risk assessment of the sediment and surface water in Black Creek and the Western Ditch, and to determine whether an unacceptable risk to human health exists associated with exposure to surface water and sediment at AOC 8.

Due to the lack of human health screening levels for sediment from the USEPA, and because the NYSDEC criteria for sediment are for protection of aquatic life only, criteria protective of human health from the Tier 1 sediment protective concentration levels (PCLs) as developed by the Texas Commission on Environmental Quality (TCEQ) were used by Parsons in the risk assessment. Human health sediment screening values from any other source, including USEPA and other state regulatory agencies, were not known to be available. Based on the results of the HHRA, there are no unacceptable non-carcinogenic or carcinogenic risks associated with the sediments at AOC 8. The cumulative non-carcinogenic risk ratio for the site was 0.71, well below USEPA's maximum acceptable level of 1.0. The carcinogenic risk ratio results were 7.8×10^{-6}, within the USEPA acceptable risk range of one in one million (1.0×10^{-6}) to one in ten thousand (1.0×10^{-4}). The results indicate that there is no unacceptable risk from exposure to sediments. Because the results are based on residential exposure to contaminants (i.e., a person living at the site), these results provide a conservative (health-protective) evaluation for the current and/or future worker exposure scenarios and commercial/industrial land use expected for the site.

The risk ratio results show that there is no unacceptable non-carcinogenic risk for the surface water exposure pathway at AOC 8. The cumulative risk ratio result is 1, indicating that there is no unacceptable non-cancer risk for potential exposure to surface water. For the carcinogenic chemicals detected in surface water, the cumulative risk ratio result was 8.0×10^{-5},

within the USEPA acceptable risk range of 10^{-6} to 10^{-4}, indicating that there is no unacceptable risk from exposure (e.g. drinking or dermal contact) to surface water.

Surface water in Black Creek adjacent to SADVA was conservatively assumed to be suitable for drinking water. The comparison of surface water samples to residential (tap water) criteria was made for information purposes based on Restoration Advisory Board (RAB) concerns that contaminants from SADVA may migrate to the Watervliet Reservoir water supply. The Watervliet Reservoir is tested regularly by the NYSDOH and City of Watervliet to ensure a safe drinking water supply. In the immediate vicinity of the SADVA, Black Creek is not used as a drinking water source. Based on these factors and the risk assessment results, surface water in Black Creek does not pose an unacceptable risk to human health.

2.7.2 Findings of the Ecological Screening Level Risk Assessment

During the RI, a screening-level ecological risk assessment (SLERA) was conducted to evaluate potential adverse impacts to the ecological receptors at SADVA due to the presence of certain organic compounds and metals above applicable criteria in sediment and surface water at SADVA. The SLERA can be used to identify and evaluate the ecological risks at the site, if any. The objective of the SLERA was to evaluate whether unacceptable adverse risks may be present. This objective was met by characterizing ecological plant and animal communities at or near the site, defining and describing the contaminants present in the environmental media at the site, and identifying the potential pathways for exposure to contaminants at the site. The information used in the SLERA was largely taken from the Generic EIS prepared for the NEIP (Clough Harbour and Associates, 2005), supplemented by the RI sampling data and site visits by risk assessment professionals. NYSDEC reviewed and approved the SLERA, as part of the overall approval of the SADVA RI Report.

The qualitative ecological risk assessment for the SADVA site, which included assessment of AOC 8, concluded that although there are chemicals in various media onsite that pose a potential risk to aquatic and terrestrial wildlife, the SADVA site appears to support wildlife typical for the area and for the commercial/industrial setting that the site has retained for over 60 years. This conclusion is reinforced by two other ecological assessments conducted at a pond located at AOC 1, the U.S. Army Southern Landfill. The pond at AOC 1 is connected to Black Creek through a drainage ditch flowing through a wetland area. The 2004 qualitative assessment of the diversity and condition of aquatic life in the pond found that the observed species composition seemed appropriate for the habitat and all species present appeared active. The 2004 macroinvertebrate community analysis of the pond (Ichthyological Associates, 2004) found the sampling stations were only slightly impaired, a condition which is not unexpected given the artificially uniform nature of the man-made pond bottom.

2.8 REMEDIAL ACTION OBJECTIVES

Remedial action objectives were developed for the purpose of evaluating the applicability of remedial technologies and the effectiveness of remedial alternatives. These objectives consist of media-specific goals for protecting human health and the environment.

The remedial action objectives are established herein based on site-specific information, including the nature and extent of chemical constituents, PRGs, existing site conditions, and

future land use plans. Remedial action objectives typically focus on controlling exposure of receptors (humans and wildlife at AOC 8) to chemicals of concern via exposure routes such as dermal contact, ingestion, and inhalation. The remedial action objectives also focus on controlling the release of hazardous substances into the environment (sediment and surface water). Technical feasibility and practicality of achieving the PRGs were also considered in developing the preliminary remedial action objectives. Final remedial action objectives are usually presented, along with the preferred remedy, by the lead agency (USACE) in conjunction with other State and local government entities with jurisdiction.

Remedial action objectives for AOC 8 are as follows:

- Eliminate or minimize, as warranted, the exposure route hazards to human health and the environment posed by impacted sediment and surface water at the site; and
- Minimize off-site migration of contaminants from the former depot.

2.9 PRINCIPAL THREAT WASTES

The NCP establishes an expectation that treatment that reduces the toxicity, mobility, or volume of the principal threat wastes will be utilized by a remedy to the extent practicable. The RI and HHRA did not support the need for treatment or any other type of remedial action.

2.10 THE SELECTED RESPONSE ACTION

2.10.1 Summary of the Rationale for the Response Action

Several steps have already been taken by DNSC at AOC 5 (Voorheesville Depot) which have led to a reduction in the impacts to Black Creek. In 2004 DNSC successfully implemented a $1.1 million site improvement effort to excavate and expand onsite perimeter ditches and retention ponds - all designed to alleviate onsite flooding and to reduce the transportation of suspended sediment and surface soils from the AOC 5 area to Black Creek. By 2006, all metals commodities had been removed from the site, and DNSC ended all operations there. In addition, soil characterization at the depot during the Voorheesville Depot RI has shown that metals concentrations are below the Part 375 restricted-industrial land use soil criteria, and the site is acceptable for industrial use with appropriate institutional controls and other land use restrictions (Parsons, 2007b). Elimination of the source, and transport mechanisms, for one of the major potential metal sources to Black Creek should substantially reduce the metals loading to the Creek, and positively impact the overall quality of surface water and sediments.

Based on the results of the human health risk assessment presented in the SADVA RI Report (Parsons, 2007), concentrations of contaminants in surface water and sediment within AOC 8 do not pose an unacceptable risk to human health. This analysis included consideration that the waters from Black Creek are migrating to the Watervliet Reservoir and the municipal water supply.

Based on the results of the qualitative ecological risk assessment, ecological use of the site appears to be consistent with that expected of the surrounding area and the commercial/industrial nature of the site.

Currently, site access is controlled, and unauthorized access to Black Creek within the NEIP facility is prohibited. The reasonably anticipated future use of the property is an industrial park, so the likelihood of site access continuing to be controlled is high. As such, based on actions taken to date and existing conditions, a No Action alternative would continue to be protective of human health and the environment.

2.10.2 Description of the Selected Alternative

Alternative 1 consists of the following components:

- Allow the area to remain in its present condition; and
- Do not install any form of land use control (LUC) to the affected area(s).

2.10.3 Outcome of the Selected Alternative

It is expected that the selected alternative will be appropriate because there are no unacceptable risks to human health. Further, it is expected that the future use of the site will be industrial.

2.11 STATUTORY DETERMINATIONS

2.11.1 State Acceptance

Definition: This criterion considers whether the State agrees with, opposes, or has no comment on the Selected Alternative.

Analysis: In their letter of April 20, 2011, the New York State Department of Environmental Conservation concurred with the proposed plan of "no action" for the Black Creek site.

2.11.2 Community Acceptance

Definition: This criterion considers whether the local community agrees with the Selected Alternative. Comments received during the Public Comment Period are an important indicator of community acceptance.

Analysis: Members of the public that have attended the public meetings, and who have written letters regarding the "no action" proposed plan, disagree with the "no action" plan. USACE representatives have explained, both in the meetings and in the responsiveness summary, that the mere presence of contaminants is not the determining factor on deciding to take a response action, but rather, the risk posed by elevated contaminant concentrations in addition to a completed exposure pathway. As our assessments of human health and ecological risks indicate an absence of unacceptable risk, then we must propose that no action is necessary. Should conditions at AOC 8 change in the future, related to exposure to DoD contaminants, FUDS Program Policy, ER 200-3-1 (2004), allows for a re-examination of the property; a response action may then be reconsidered and undertaken at that time, under those circumstances. This policy has been identified by the USACE project manager over the years at many public meetings. As the March 29, 2011 minutes indicate, the New York State Department of Health representative expressed confidence with the Corps' recommendation; although contaminants were present in sediments, there was a lack of contaminants present in surface water.

SECTION 3

RESPONSIVENESS SUMMARY

On February 15, 2011, a Final Proposed Plan was issued for public comment. The public notice of the availability of the Final Proposed Plan was placed in following newspapers on March 3, 2011: Schenectady Gazette, Albany Times Union, Altamont Enterprise. The public comment period ended on April 3, 2011. Other than verbal comments received at the March 29, 2011 public meeting, there were no further written comments from the public on the Final Proposed Plan.

The following pages include these documents:

- Letters received from the public and responses provided by the USACE on the AOC 8 Feasibility Study
- December 9, 2008 Public Meeting Minutes (addressing, in part, the AOC 8 Feasibility Study)
- March 29, 2011 Public Meeting Minutes (addressing, in part, the AOC 8 Proposed Plan)
- Letter from NYSDEC dated April 20, 2011 accepting the No Action Remedy for AOC 8 at SADVA.

RESPONSIVENESS SUMMARY

AREA OF CONCERN (AOC) # 8– BLACK CREEK

FORMER SCHENECTADY ARMY DEPOT—

VOORHEESVILLE AREA, FORMERLY USED DEFENSE SITE

Letters received from the public and responses provided by the
U. S. Army Corps of Engineers (USACE) on the Feasibility Study for AOC #8,
Black Creek, within the property currently known as Northeastern Industrial Park,
Guilderland, New York

1. Letter from Mr. Joseph Kaplan and Family (dated Dec. 26, 2008), Slingerlands, NY
"As a Guilderland, NY resident, using water from the Watervliet Reservoir for my family, I am extremely concerned about the underfunded cleanup. Please do whatever you can to secure funds to clean up this environmental and public health mess."

RESPONSE: *Thank you, Mr. Kaplan. While the Formerly Used Defense Site (FUDS) program has been considered to be underfunded at a national level, we have been successful in obtaining funding to address environmental issues at the former Schenectady Army Depot, including the removal of hazardous conditions at AOC #2 (the former Post Commander's Landfill/Bivouac Area) and AOC # 3 (the Burn Pit Area). With respect to AOC #8 (Black Creek), we have compared the results of our sediment sampling of the Black Creek to the soil criteria promulgated by the New York State Department of Environmental Conservation (NYSDEC) as there is no promulgated set of sediment standards. Comparing the sediment results to soil criteria provides the most health-protective assessment of the risk posed by exposure to sediments. Given there is virtually no human exposure to sediments where a soil criterion was exceeded (that area is fenced off from the public), our risk analysis does not support taking any action. Therefore, lack of funding is not precluding our work at AOC #8; but the lack of risk identified by our human health and ecological risk assessments.*

2. Letter from Ms. Lynn Kinlan (letter undated, postmarked Jan. 12, 2009),
Slingerlands, NY:

"I am writing to express concern over proposed remedial action for AOC 8 for the Northeastern Industrial Park located in my town of Guilderland, N.Y. It is my understanding that the Restoration Advisory Board is on record as opposing the mere fencing in of the contaminated area. Given the area is near the Black Creek and local

water sources, it seems that more should be done. Sediment removal and off-site disposal would seem to be a good idea. My husband and I wholeheartedly support an activist (sic. active) solution for the contamination that has remained for far too many decades already. We would appreciate knowing about your eventual decision with regard to AOC 8. Thank you for your consideration of our views. Please imagine that many of our neighbors feel as we do (but they don't write!)"

RESPONSE: *Thank you for your comments, Ms. Kinlan. Neither the New York State Department of Environmental Conservation, nor Department of Health has promulgated sediment standards. We have conducted a thorough investigation of the former Schenectady Army Depot—Voorheesville Area (FSADVA), in Guilderland, New York. AOC #8 is where we used New York State soil standards for comparison of the sediment samples taken from the portion of the Black Creek within the Northeastern Industrial Park; this provides a very health-protective assessment of the risk posed by exposure to sediments. The industrial soil standards were exceeded at two locations within the Northeastern Industrial Park; those locations are already fenced in by its property owners. The assessment found that there is a lack of human exposure to these sediments, nearly all sediment concentrations are below the soil criteria, and the metals detected at concentrations exceeding the soil criteria are non-mobile contaminants. Therefore, we have concluded that there is no need to take any action at AOC 8, since there is no unacceptable risk to human health and the environment that would justify sediment removal. We should note, however, that we expect to be taking remedial actions at a former landfill at the site (AOC 1, "Southern Landfill"), and we have conducted contaminant removals (soils and debris) at both AOC 2 (Former Post Commander's Landfill-Bivouac Area) and AOC 3 (Former Burn Pits), associated with FSADVA.*

3. Memorandum from Ms. Anita Behn (memo undated, postmarked Jan. 12, 2009)

"Recently, Charles Rielly, co chair of the Restoration Advisory Board, wrote a letter to the editor in The Altamont Enterprise about the critical need to ensure removal of ALL contaminant-related hazards on the site of the current Northeastern Industrial Park, which used to be a United States Army depot. In my career, I have had the opportunity to research the dangers of contaminants- particularly the fact that there are many unknown, as well as known risks to human health connected with hazardous materials. To ensure the safety of current and future residents who use the Watervliet Reservoir, please reconsider your decision to use fencing and "no trespassing signs" for AOC 8, the Black Creek. This would not stem the eventual flow of unacceptable contaminants into the Reservoir. I urge you to consider the health, not only of present town residents, but future generations as well, and decide to remove sediment from the Black Creek for off-site disposal, as the Restoration Advisory Board has requested."

RESPONSE: *Thank you, Ms. Behn. The U. S. Army Corps of would like to address hazards to human health and environment from the DoD at Formerly Used Defense Sites, where necessary and appropriate. However, as previously stated above, our human health and ecological risk assessments do not indicate the need to perform removal of sediments from the Black Creek. Further, we have previously included the City of Watervliet, at our previous meetings, where they have discussed their ongoing sampling and testing of any water delivered to residents to ensure public health, using the Watervliet Reservoir as the source. Drinking water testing reports are available from the City of Watervliet.*

4. Letter from Doug & Kris Martin (dated January 4, 2009), Schenectady, NY

"We live about 10 miles from the affected site and [are] not directly affected but have been following the story the past few years. We felt compelled to write and share our feelings, plain and simple as they may be. It is our understanding that the government has admitted they contaminated the Voorheesville property. In the simplest of terms if you made a mistake shouldn't you make things right and fix the problem? What would the government make a private citizen or corporation do? Yes, it would be to fix the problem or in this case clean it up. Why should the government be any different? You can spend billions to bail out poorly run companies. I would think you could clean up the contamination you are responsible for. Please do the right thing!"

RESPONSE: *Thank you sharing your feelings. In previous responses, other areas of the former Schenetady Army Depot—Voorheesville Area were identified where we followed our investigation and risk assessment processes and found that actions were necessary. In those cases, we took the appropriate action, or are recommending that they be taken-- as in the case of AOC #1, The Southern Landfill-- where we are recommending the installation of a landfill cap and placment of soil cover in areas where groundwater has not be affected by contaminants. Please note that the decision to implement a remedial action is not based solely on the presence of contamination, but its presence at levels that indicate unacceptable risk to human health and the environment. In the case of the Black Creek (AOC #8), our risk assessments do not justify taking any actions at this time.*

5. Letter from Mr. Charles Rielly (dated December 27, 2008), Schenectady, NY

See attached letter commenting on a previous version of the feasibility study for AOC #8.

RESPONSE (1): Thank you for taking the time to thoroughly review the previous version of the feasibility study, which has been recently finalized. While we understand your disappointment with our recommendation to not perform any sediment removal from

Black Creek, we can not justify the action based upon our assessment of risk to human health and the environment. As the State of New York has not promulgated sediment standards, we have used their promulgated industrial land use soil standards for comparison. This provides a very health-protective assessment of the sediment results. That assessment showed there are only two locations where sediment concentrations exceeded the industrial soil criteria. Both of those locations are fenced off and inaccessible to the public.

RESPONSE: The following responses to that letter are provided for reference, as they are related to the process of our evaluation of alternatives for AOC #8:

Page 1-7, 1.7.1.1 Who prepared the GEIS for the NEIP and were they hired by the Galesi Group? Who were the risk assessment professionals involved in the RI sampling data and site visits? Who hired them?

RESPONSE: *The GEIS was prepared by Clough Harbour and Associates, LLP and was prepared for the Galesi Group.*

Since 2000, the risk assessment professionals and all those conducting the RI sampling data collection, data assessment, and site visits were employees of Parsons. Parsons was hired by the U.S. Army Corps of Engineers.

Dr. Cliff Opdyke is a risk assessment professional that provided technical review and direction for the risk assessments. Dr. Opdyke is an employee of the U.S. Army Corps of Engineers.

Page 1-8, 1.7.2.2 Why hasn't the USEPA established human health screening levels for sediments? When were Tier 1 Sediment Protective Concentration Levels (PCLs) developed by the Texas Commission of Environmental Quality (TCEQ)? Have they been subjected to peer review? Is the USEPA risk ratio based on the TCEQ?

RESPONSE: *The reason why USEPA has not developed human health screening criteria for sediments was asked of a representative of USEPA. Their response: USEPA has not developed sediment criteria to address human health effects because it is not currently a USEPA mandate. Such human health criteria would depend greatly on the impact pathways and contaminants of concern which are very site-specific considerations.*

The Tier 1 PCLs used in the RI were published by TCEQ in March 2006.

PCLs were developed under the Texas Risk Reduction Program (TRRP), which can be found in 30 Texas Administrative Code Chapter 350. The method for developing and reviewing the PCLs is described in TCEQ Guidance Document TRRP-24. The PCLs themselves are not peer reviewed per se, but the review methodology described in TRRP-24 was developed by a committee of people both within and outside the TCEQ. The Texas PCLs are the only human health risk-based sediment criteria available, and were applied to the SADVA site to provide an assessment of the risk to human health posed by the sediment. This assessment has been accepted by the NYSDEC and NYSDOH in their review and approval of the RI Report.

The sediment risk ratios referenced in the AOC 8 FS Report and presented in the RI Report are based on the TCEQ PCLs. The method for calculating the risk ratios was identified by Dr.Clifford Opdyke of the U.S. Army Corps of Engineers, and is similar to methods used by the TCEQ.

Page 2-4, 2.3.3 What effect does the fact that the areas surrounding Black Creek and the Western Ditch on the SADVA property lie within the 100-year floodplain have on the ARARs?

RESPONSE: *The ARARs used in the AOC 8 FS take into account the presence of the noted surface water drainage features within the 100-year floodplain.*

Page 4-4, 4.2.3.2 How can HHRA and SLERA state that there are "…..no unacceptable risks to human health....." when so many metals at AOC 8 exceed NYSDEC's sediment quality standards?

RESPONSE: The risks to human health were calculated based on the TCEQ PCLs because those standards are based on human health risks. In contrast, the NYSDEC sediment quality criteria are based on protection of benthic and aquatic life – not human health. Note also that the NYSDEC sediment quality criteria are not promulgated and are not considered "standards." As noted in NYSDEC's Technical Guidance for Screening Contaminated Sediments, which is the document that presents NYSDEC's sediment quality criteria, "These criteria are intended to be used for screening; that is, to identify potentially contaminated sites and provide a qualitative estimate of risk. Once a site is found to be contaminated with metals, further studies are necessary to quantify risk and determine if remedial actions are necessary. Remediation should not be based solely on exceedances of these criteria".

Page 4-5, 4.3.2 If ”concentrations of contaminants in surface water and sediment within AOC 8 do not pose an unacceptable risk to human health”, then why is it necessary to “provide an additional measure of human health protection by prohibiting fishing and recreational use of Black Creek within the NEIP fence line”?

RESPONSE: *In our final version of the Proposed Plan, we removed the statements related to prohibiting fishing and recreational use of the Black Creek within the NEIP fence line.*

Page 4-6, 4.2.3.2 If the SLERA was “satisfied” with the health and diversity of wildlife why is there a concern over fish bioaccumulation? What prevents these same fish from migrating to the Watervliet Reservoir and being caught and eaten by fishermen?

RESPONSE: *The SLERA found that the health and diversity of wildlife in the AOC 8 area was consistent with the surrounding region and the commercial/industrial setting the site has had over the past 60 years. The SLERA does not specifically address fish bioaccumulation. There is no specific concern over fish bioaccumulation, based on the RI results. Therefore, the prohibition of fishing within the site boundaries has been removed from the final version of the Proposed Plan.*

Nothing is known to prevent fish from migrating from the SADVA site area to the Watervliet Reservoir, although the spillways may affect fish migration downstream in Black Creek. Any fish that migrate from within the site boundaries in Black Creek to the Watervliet Reservoir would likely join a significantly larger population of fish from the feeder streams that also ultimately discharge to the Watervliet Reservoir, and that live in the reservoir itself.

December 27, 2008

Gregory Goepfert, Project Manager
USACOE, New York District
CENAN-PP-E, Room 1811
26 Federal Plaza
New York, NY 10278

Dear Greg,

I strongly oppose the ACOE recommended Alternative 2-Land Use Controls, for AOC 8. I strongly support Alternative 3-Focused Sediment Removal and Off-Site Disposal.

Fencing in and posting the contaminated property does not meet the preliminary remedial objectives for AOC 8, i.e. "Eliminate or minimize...the exposure route hazards to human health and the environment posed by impacted sediment and surface water...and minimize off-site migration of contaminants from the former depot (2.5.3)." The following quotations from the FS have led me to conclude that Alternative 2 does not provide for the long-term protection of the health of the thousands of Guilderland and Watervliet residents who use the Watervliet Reservoir as their source of drinking water.

p. 1-4, 1.5.4 "Lead and...tetrochloroethane were...above...applicable state water standards..."

p. 1-5, 1.6.3 "A limited number of (SW) samples exceeded Class C surface water quality standards..."

p. 1-6, 1.6.7 "Pesticides were detected above sediment criteria and background ranges in ten sediment samples."

p. 1-6, 1.6.9 " Nine metals were detected above sediment criteria and background ranges...(at SD 19)...Metals exceeding criteria were also detected in the Western Ditch...adjacent to AOC 5, at SD 12 (five metals), SD 15 (eight metals), SD 26 (six metals), and SD 29 (seven metals)."

As I read the FS the following questions came to mind (I have included the page and section number for reference).

p. 1-7, 1.7.1.1 Who prepared the GEIS for the NEIP and were they hired by the Galesi Group? Who were the risk assessment professionals involved in the RI sampling data and site visits? Who hired them?

p. 1-8, 1.7.2.2 Why hasn't the USEPA established human health screening levels for sediments? When were Tier 1 Sediment Protective Concentration Levels (PCLs) developed by the Texas Commission of Environmental Quality (TCEQ)? Have they been subjected to peer review? Is the USEPA risk ratio based on the TCEQ?

p. 2-4, 2.3.3 What affect does the fact that the areas surrounding Black Creek and the Western Ditch on the SDAVA property lie within the 100-year floodplain have on the ARARS?

p. 4-4, 4.2.3.2 How can HHRA and SLERA state that there are "...no unacceptable risks to human health..." when so many metals at AOC 8 exceed NYSDEC's sediment quality standards?

p. 4-5, 4.3.2 If "concentrations of contaminants in surface water and sediment within AOC 8 do not pose an unacceptable risk to human health", then why is it

necessary to "provide an additional measure of human health protection by prohibiting fishing and recreational use of Black Creek within the NEIP fence line"?

p. 4-6, 4.2.3.2 If the SLERA was "satisfied" with the health and diversity of wildlife why is there a concern over fish bioaccumulation? What prevents these same fish from migrating to the Watervliet Reservoir and being caught and eaten by fishermen?

Alternative 2 does nothing to "...eliminate or minimize...the exposure root hazards..." nor does it "... minimize off-site migration of contaminants". Cost seems to be the over-riding factor in choosing this alternative, much to the detriment of other criteria. As it has been said repeatedly, the army put the contaminants there, now the army should remove them.

Sincerely,

Charles Rielly, co-chairman of RAB
4005 Luigi Court
Schenectady, NY 12303
518-355-4834

Meeting Minutes
Public Meeting
Former Schenectady Army Depot – Voorheesville Area (FSADVA)
December 9, 2008
Lynnwood Reformed Church
Schenectady, New York

Attendees and Affiliations:

Ted Ausfeld, FSADVA Restoration Advisory Board Alternate Acting Community Co-Chairman
Heather Bishop, New York State Department of Environmental Conservation (NYSDEC)
Joan Burns, FSADVA Restoration Advisory Board
Bridget Callaghan, New York State Department of Health (NYSDOH)
Gregory J. Goepfert, U.S. Army Corps of Engineers, FSADVA Restoration Advisory Board Army Co-Chair
George Moreau and David Babcock, Parsons
Hamid Rafiee, U.S. Army Corps of Engineers, Baltimore District
Charles Rielly, FSADVA Restoration Advisory Board Acting Community Co-Chairman
Saranac Hale Spencer, Altamont "Enterprise" newspaper
John Swartwout, New York State Department of Environmental Conservation (NYSDEC)
Deb Volkmer, Weston Solutions, Inc.

Introductions

G. Goepfert called the meeting to order at 6:34 p.m. and welcomed everyone for coming to the meeting. Meeting attendees and the project staff introduced themselves. G. Goepfert provided a fact sheet entitled *Corps Cleans Up One Area and Proposes Actions at Three More* that summarized the Proposed Plan for AOC 2 and the Focused Feasibility Studies for AOCs 1, 7 and 8. The fact sheet can be accessed on the FSADVA Website (www.fsadva.com). G. Goepfert said the reason for the public meeting is to discuss the documents for the four AOCs:

- Proposed Plan — AOC 2 – Former Bivouac Area/Post Commander's Landfill
- Focused Feasibility Study — AOC 1 – U.S. Army Southern Landfill and AOC 7 – Triangular Disposal Area
- Focused Feasibility Study — AOC 8 – Black Creek

He said the objective for AOC 2 is to reach a decision for no further action required at the site. The objective for AOC 1, AOC 7, and AOC 8 is to evaluate remedial alternatives.

G. Goepfert said public comments will be compiled with the Corps' responses in a document known as a Responsiveness Summary.

Area of Concern 2 – Former Bivouac Area/Post Commander's Landfill

G. Goepfert said there was no news for AOC 2 and recapped the site's most recent environmental actions:

- Completed cleanup action in September 2006.
- After the cleanup work was completed, the Corps conducted two rounds of groundwater sampling six months apart. State of New York requested a third round of sampling and analysis, which was subsequently completed.
- Post cleanup sampling results indicated no contamination associated with items disposed at the site remained in the soil or groundwater.

G. Goepfert added that other than closing groundwater monitoring wells, the Corps proposes that no further work is required. He said the Corps will issue a decision document and will work with the State of New York to conclude work at AOC 2.

G. Goepfert said if any new findings of site impacts are evidenced from the Department of Defense use of the property designated as AOC 2, the Corps would address the issue.

C. Rielly asked if the solvents were related to the Depot's operation of cleaning parts.

G. Goepfert said he couldn't be sure of which operations the material came from, but material was removed from all source areas identified.

C. Rielly said he was curious and asked where the mercury could have come from.

T. Ausfeld said it all boils down to the contamination was there, the Corps cleaned it up, AOC 2 is no longer contaminated.

T. Ausfeld said at the very beginning the State of New York and the Corps said nothing was there.

Area of Concern 1 – U.S. Army Southern Landfill and Area of Concern 7 – Triangular Disposal Area

G. Moreau said concentrations of contamination have decreased over time at AOC 1 and AOC 7.

C. Rielly asked where the contamination is going as it decreases.

G. Moreau responded the contamination is breaking down into other substances.

G. Moreau said issues with these two areas are the groundwater plume and BEHP – bis(2-ethylhexyl) phthalate, a semivolatile organic compound – in surface water. He added the contaminated soils are not a risk to humans; however, AOC 1 has a health risk related to the use of groundwater at the site, if it was to be used as a drinking water source (which it presently is not).

G. Moreau said there are four remedial alternatives for consideration for AOC 1 and AOC 7:

1. No action. Cost - $0.

2. Groundwater monitored natural attenuation, Land use controls. Cost - $300,000.
3. Groundwater monitored natural attenuation, Landfill cap, Cover, Ex-situ carbon treatment of surface water, Land use controls. Cost - $2.7 million.
4. Chemical oxidation of groundwater, Landfill cap, Cover, Carbon treatment of surface water, Land use controls. Cost - $3 million.

G. Moreau said the Corps evaluated each alternative and proposes Alternative 4.

C. Rielly asked if the land use controls permitted building on the AOCs.

G. Goepfert noted that, typically, building on a landfill cap would be precluded.

T. Ausfeld asked about the warrantee of the cap.

G. Moreau responded warrantee of the cap should last 30 years.

J. Swartwout added that the cap should last 30 to 50 years with the monitoring that the Corps will perform throughout the years.

T. Ausfeld asked when the monitoring will be determined.

G. Goepfert said monitoring will be part of the remedial action and will be scheduled on a regular basis.

C. Rielly asked about the railroad and how its operations may affect the cap and cover.

G. Goepfert said the railroad tracks are outside of the area of concern, however, any potential impact of railroad use will be evaluated in the design of the cap and cover.

J. Swartwout said the railroad operations may vibrate the area.

G. Goepfert said the cap will be designed to drain rain water away from the contamination and the cover consists of clean fill material.

J. Swartwout said there are state requirements to design a landfill cap.

T. Ausfeld asked what if the Northeast Industrial Park (NEIP) wants to build on the area of concern.

G. Goepfert said the Corps will meet with NEIP to determine what can be done.

B. Callaghan added that the land use controls would be in effect.

J. Swartwout added if NEIP wants to build over the landfill, then NEIP would have to remove the waste.

T. Ausfeld said that would be one big cleanup.

G. Goepfert said the Corps cannot determine what will happen in 50 years; however, the Corps will be responsible for the cleanup linked to Department of Defense operations. He added that the responsibilities of the Corps and NEIP will be determined when the Record of Decision document is developed.

C. Rielly asked why there wasn't a fifth remedial alternative to remove all of the wastes.

G. Goepfert said it is the Corps policy to follow a presumed remedy to cap landfills.

C. Rielly asked how much it would cost to remove the wastes.

G. Goepfert said the removal cost can not be estimated with certainty since we have no documentation of the volume of waste buried there.

J. Swartwout said a cap is a standard cleanup action with State of New York and U.S. Environmental Protection Agency programs.

J. Swartwout provided a brief overview of NYSDEC's Environmental Easements policy. He said the state Superfund law may impose on a site's cleanup remedy to include engineering controls (i.e., landfill cap) and institutional controls where the state has ownership of the easement. This is so the state can enforce the engineering controls. An Environmental Easement would list the controls and gives the state the right to inspect the property during the remedial action. At FSADVA the Corps would continue the monitoring and maintenance of the site and certify to the state that all controls are being followed and adhered to.

G. Goepfert said there is a difference between an environmental easement and deed restriction.

J. Swartwout said yes, deed restriction language – restricted covenant – is printed on the deed and recorded at the county office. However, a deed restriction does not provide the state access to the site for its work as the Environmental Easement does.

G. Rielly asked if there was degradation of metals.

G. Moreau responded no.

C. Rielly asked if the metals would then stay forever.

G. Moreau said there would be institutional controls to prohibit the use of the site groundwater as drinking water, etc.

G. Goepfert said metals generally cling to soil and do not move.

C. Rielly said the area is in a flood plain and eventually the metals could enter the Black Creek.

J. Swartwout said the metals could move if they were adhered to soil on the surface during a rainstorm.

B. Callaghan said that is where the cap and cover come into play.

G. Moreau said there is no easy treatment for metals in groundwater and the volatile organic compounds are more of a concern/risk than metals.

C. Rielly said what happens when the current standards change and what is currently acceptable will no longer be acceptable.

G. Goepfert said the five year reviews will check on the effectiveness of the cleanup and change in the standards.

C. Rielly said we do not want to change or upgrade the local treatment plant to address the Army's contamination.

G. Goepfert said the cap is shaped for water to drain away from the waste.

T. Ausfeld asked if there is a drainage system for the surface water to go.

G. Moreau said a drainage system will be designed.

T. Ausfeld said the town has a capped landfill. He asked what a capped landfill would look like after 50 years.

H. Bishop said it would look the same because it holds up with maintenance.

C. Rielly asked who is responsible for the maintenance and mowing of the landfill cap.

G. Goepfert said the design plan includes the responsibilities of maintenance and mowing.

T. Ausfeld asked if a SPDES (State Pollution Discharge Elimination System) permit would be needed for the cover.

G. Goepfert said no, the waste will remain in place.

G. Moreau added that the oxidation treatment of volatile organic compounds in groundwater will be completed before the cap is installed.

G. Goepfert said other sites used existing monitoring wells to inject the oxidation compound.

T. Ausfeld said that volatile organic compounds could come back into the pond after cleanup.

G. Moreau said it is possible; however, it is only an issue if someone uses the pond water for drinking water.

J. Swartwout asked what the pond sediment is like.

G. Moreau said the benthic macroinvertebrate organism study indicated no impacts.

H. Bishop said the state Fish and Wildlife Division reviewed the report.

Area of Concern 8 – Black Creek

G. Moreau provided a brief overview of the AOC 8 history. He said the Western Ditch is usually dry. He said Black Creek and AOC 1 pond are Class C waters. He added the human health risk assessment used criteria from Texas for sediment because no other sediment criterial for protection of human health are available.

C. Rielly asked when Texas developed the criteria.

G. Moreau said he did not know but could look that up [the Texas sediment criteria were last updated March 31, 2006].

B. Callaghan said NYSDOH uses soil cleanup standards for sediment.

T. Ausfeld why there wasn't input from NYSDOH and the City of Watervliet water department. He noted that no one representing Albany County was in attendance at the meeting.

C. Rielly requested more information on the Texas criteria [additional information can be found at http://www.tceq.state.tx.us/assets/public/remediation/trrp/sedpcls_2006.pdf].

B. Callaghan said the NYSDOH will look at the feasibility study and sediment risk assessment independently from the Corps. She added that New York State does not use other state's guidance, but does use New York State soil standards for sediment. She said if there is no exposure then there is no risk.

G. Goepfert said the Corps will revise the reports to include New York State's soil criteria in comparison to the sediment results.

T. Ausfeld asked what the State of New York is going to do to protect the watershed and Black Creek now and into the future.

G. Goepfert said the purpose of this public meeting was to discuss the one specific segment of Black Creek that the Corps is addressing.

C. Rielly said the alternatives are not removing the wastes and fishing is prohibited because of the concern of bioaccumulation in humans.

B. Callaghan said there are no fish advisories in that area.

H. Bishop agreed that fish advisories do not exist; however, she said she will compare the data.

C. Rielly asked if there are no risks to human health then why limit fishing and swimming.

T. Ausfeld said he did not understand why close off a public stream.

G. Moreau said some samples showed contamination infrequently and to be safe it is recommended not to fish or swim. He added that canoeing down the creek would not be restricted for health-risk purposes.

T. Ausfeld asked how much testing was done in that area and the ponds.

G. Moreau said the AOC 1 pond was tested (surface water and sediment samples were collected and a biological risk assessment was performed).

T. Ausfeld said he wants to hear from representatives of Albany County about this and what they think of the recommended cleanup alternative.

C. Rielly said he was concerned about the fish advisory, reservoir, and fish bioaccumulation. He added that he was concerned about the watershed and creek. He said he was concerned that the Cities of Guilderland and Watervliet were not participating in this meeting and what measures needed to be taken to protect the water.

Both C. Rielly and T. Ausfeld said they were not happy with the recommended alternatives [namely, restricting access to the AOC 8 site to prevent recreational or other use of the Black Creek (including fishing), and the Western ditch. Access would be restricted only within the Northeastern Industrial Park (NEIP) fenceline, and posting "no trespassing" signs to minimize/prevent unauthorized access to the site].

T. Ausfeld said more input from the right people is needed for Black Creek.

G. Goepfert said the Corps provided documentation, informed them of the public meeting, and announced the public meeting in three area newspapers (Altamont *Enterprise*, Albany *Times-Union*, and Schenectady *Gazette*).

Both H. Bishop and B. Callaghan said the state has not yet determined their recommendation for the AOC 8 focused feasibility study.

T. Ausfeld asked if the government is selling the DLA – Voorheesville depot property.

J. Swartwout said the state is reviewing that and setting up deed restrictions for the transfer of property.

G. Goepfert said the deadline for submitting comments on the proposed plan and two focused feasibilities studies is January 9, 2009. He added that the Corps will respond to all public comments regarding the proposals discussed this evening in a *Responsiveness Summary*.

Adjournment

The meeting was adjourned at approximately 8:22 p.m.

Meeting Minutes
Public Meeting
Former Schenectady Army Depot – Voorheesville Area
March 29, 2011
Lynnwood Reformed Church
Schenectady, New York

Attendance

Ted Ausfeld, Alternate Acting Community Co-Chairman, Restoration Advisory Board (RAB)
Heather Bishop, New York State Department of Environmental Conservation (NYSDEC)
Joan Burns, Member, Restoration Advisory Board
Bridget Callaghan, New York State Department of Health (NYSDOH)
Joseph Crua, NYSDOH
Gregory J. Goepfert, U.S. Army Corps of Engineers, Army Co-Chair
Jim Harrington, NYSDEC
Anne Hayden, Altamont "Enterprise" newspaper
George Moreau, Parsons
Cliff Opdyke, U.S. Army Corps of Engineers, Baltimore District
Hamid Rafiee, U.S. Army Corps of Engineers, Baltimore District
Charles Rielly, Acting Community Co-Chairman, Restoration Advisory Board
Neil Sanders, Guilderland Central School District
Deb Volkmer, Weston Solutions, Inc.

Handouts

The agenda of the meeting, U.S. Army Corps of Engineers presentation, and minutes of the May 6, 2010, Restoration Advisory Board (RAB) meeting were available to the attendees. The agenda and presentation slides are provided at the end of these minutes. The minutes of the May 6, 2010, RAB meeting are posted on the project website.

Introductions

G. Goepfert called the meeting to order at 6:30 p.m. and welcomed everyone for coming to the meeting. Meeting attendees introduced themselves.

G. Goepfert said the discussion at the May 6, 2010, RAB meeting focused on the irrigation well at Guilderland High School. He said the result of the groundwater sample taken was clean; therefore, the water is deemed safe to use for irrigation at the school.

G. Goepfert said the primary purpose for the public meeting was for the two proposed plans; one for the Southern Landfill and Triangular Disposal Area and the other for Black Creek.

Request for Public Comments on Proposed Plan for Southern Landfill (AOC 1) and Triangular Disposal Area (AOC 7)

G. Goepfert said the feasibility study for Areas of Concern (AOCs) 1 and 7 was issued in June 2010 and the proposed plan was issued in February 2011. Both documents were posted on

the project website. He asked if anyone had a chance to review the documents and no one had. He asked attendees to take a look at the proposed plan and submit comments in the next few days.

T. Ausfeld asked if a hard copy of the proposed plan was available.

G. Goepfert and G. Moreau provided hard copies of both proposed plans to T. Ausfeld and C. Rielly.

G. Goepfert said the cleanup plan for AOCs 1 and 7 is a presumptive remedy which means that when a landfill was used on a military facility, the presumption is to cap and cover the landfill. He added the Corps asked the Northeastern Industrial Park owners to grant an easement to the State of New York because of TCE (trichloroethylene) in the groundwater at the site. The owners agreed to file an easement to the state stating that they will not use the groundwater in the area for potable use. No wells will be installed to be used for consumption in that landfill area. In addition, the remedy includes a prohibition on any construction in landfill cap and cover area.

T. Ausfeld asked if a lot of solid waste or chemicals were in the landfill.

G. Goepfert said TCE was found in the groundwater; however, the Corps did not conduct a full characterization of the waste that was in the landfill. He added that characterization of the landfill is not necessary under the Presumptive Remedy; however, characterization work did define the perimeter of the landfilled area. He said characterization and removal of the wastes could be more dangerous (because it is not known what chemical wastes might be encountered, or the condition of the containers) and that is another reason to do the presumptive remedy of cap and cover.

T. Ausfeld asked how big of an area will be covered.

G. Goepfert said one area is about 2 acres and the other area is about 6½ to 7 acres.

C. Rielly said the presumptive remedy is the cheaper alternative than a removal and asked if the Corps had the money would they conduct a removal of the landfill wastes.

G. Goepfert noted that factors such as tranferring removed landfilled wastes elsewhere, and the fact that the landfill has not been fully characterized outweigh the strict money issue.

T. Ausfeld asked for the closest distance of the landfill to Black Creek.

G. Moreau said about 500 feet.

H. Bishop said the state reviewed the data of Black Creek to make sure that the landfill was not impacting the creek.

B. Callaghan said one of the problems with characterizing a landfill is the potential of puncturing drums or disturbing waste that could make the contamination problem more significant.

T. Ausfeld asked if the Corps or state assumes that there are a lot of drums at the site like there was at other AOCs.

G. Goepfert said it could be and the Corps assumes there is hazardous waste present.

J. Harrington said presumptive remedies are based on years of experience on a lot of other similar type sites. Studies have shown that it doesn't make sense to spend a gargantuan amount of money to dig up a landfill and then still be faced with the problem of putting it somewhere else. The investigation shows there is limited migration at the landfill and once it is capped the amount of precipitation that enters the landfill will stop. So anything that is being pushed out by the rainwater will stop and the limited migration will be much reduced.

G. Goepfert said in a removal there is risk in transporting wastes somewhere and wastes could be going to another landfill for which the Corps would be taking on additional responsibility at the disposal landfill.

C. Rielly said it sounds like a counter argument for what they are doing on the Hudson River. They are removing the contamination from the river and the remedy for the landfill is to just cover it and leave.

J. Harrington said the big difference is the exposure to the PCBs (polychlorinated biphenyls) in the sediment of the Hudson River. Much of the river's remediation is driven by the environmental risk that fish consume PCBs which leads to a human pathway when people eat the fish. There is no human exposure to the materials in the landfill beneath the cover.

J. Crua said it is demonstrated also that fish that are heading upriver that are clean and when they check them later they are found to contain some amount of PCBs. The river is not cleaning itself.

C. Rielly asked from where did the Northeastern Industrial Park owners agreed not to take water in the easement.

G. Goepfert responded from the area of the landfill.

C. Rielly replied that the landfill will be capped.

G. Goepfert said yes, the landfill will be capped; however, wells could be installed next to the site and hydraulically downgradient from the landfill. The Corps informed the industrial park owners not to dig any wells for potable use downgradient of the landfill so that no one is exposed to untreated groundwater.

T. Ausfeld asked if the test wells will remain.

G. Goepfert said yes, and during the final design phase the wells will be evaluated to make sure they are sentinel wells for future monitoring. The Corps will have an annual monitoring routine as part of the decision to cap the landfill.

C. Rielly asked how the industrial park would use nonpotable water.

G. Goepfert said they could use the groundwater for watering grass, washing cars, and other things.

C. Rielly asked if that activity could potentially drain to areas where water is potable.

G. Goepfert said the easement will state nonpotable use; the industrial park owns the water rights and if they want to use the water for anything else it is at their own risk.

T. Ausfeld said once the cap is on the landfill the Army is not released from its responsibility for the site.

G. Goepfert said yes, the Army will always be responsible for the site.

J. Harrington said basically the property owner gives up some of their rights to develop their property to the benefit of New York State. An owner needs approval, an agreement, or easement to do something to the property. For example, with a drainage easement across one's property, the owner can't dig a hole in that property unless the town permits the work to be done. It is the same concept.

T. Ausfeld asked if New York State will take ownership from the Army so the Army won't be responsible.

J. Harrington said no, the water easement is called an institutional control. The reason New York State is accepting it is that an easement has to be provided by the state and not the Army.

G. Goepfert said that is right, the state is the owner of all waters of the state. It is not an easement the Corps can provide to the state because the Corps is not the property owner. Therefore, the easement needs to be granted from the property owner to the state.

C. Rielly said the industrial park is not being denied the use of groundwater for nonpotable uses. He added the industrial park only has to stay away from the cap, but can drill and get the water and spray it on lawns and do whatever they want to do.

G. Goepfert said installing wells depend on what the rules are from the local health department and that the Corps does not administer the water program in New York.

J. Harrington said what Mr. Rielly said is theoretically possible; however, the question is to what purpose or why would they do that. The property has been under investigation for years. It is not something expected to happen; however, if it did happen the water is very lightly contaminated and slightly above drinking water standards. If the water was sprayed on grass the contamination would evaporate and there would be no exposure to the contaminants. It would not be an environmental or human health threat so there is really no reason to prohibit it.

C. Rielly said all the horrible things in the landfill could possibly come into contact with water. Contents of the landfill are not known.

J. Harrington said the groundwater has been tested. The testing has gone on for a number of years and the groundwater will continue to be monitored. If the groundwater monitoring shows a release of contamination then the remedy should be reopened and reconsidered. However, based on experience of the Corps environmental team the presumptive remedy is satisfactory for landfills. If there was information like a nest of drums in the landfill the drums would have been removed, but there isn't. There wasn't extensive sampling because if there was a stray drum it would be possible to put a hole in it. Based on the historical information, one can't say there aren't any drums but there isn't any information indicating burial of a lot of drums.

G. Goepfert said the industrial park is on city water.

T. Ausfeld said yes, but as long the Corps is making recommendations we prefer that the industrial park doesn't install wells for any purpose.

G. Goepfert said he could ask the industrial park owners if they would agree to that, but currently the remedy has an easement prohibiting potable use and the industrial park owners have agreed to that.

J. Crua said the industrial park would need a permit if they were using processed water and discharging it somewhere.

J. Harrington said that is correct, if the industrial park used water in a manufacturing process which generated wastewater a permit is required. However, if the industrial park owners install a well just to water lawns a permit would probably not be required.

G. Goepfert said the Northeast Industrial Park owners have already gone on record and agreed to grant an easement to not use water for potable use. That is part of the remedy.

C. Rielly said he was concerned if wells were installed and the water used for washing vehicles it is possible that water could drain to Black Creek and enter the local drinking water supply. He understood when watering the lawn the water will evaporate and there's not going to be anything there. He said it is the same thing when they say Roundup disappears and he has read a lot about that and believes it is a lot of baloney. He said he is concerned for the local drinking water supply because Black Creek goes into the reservoir.

J. Crua said the contamination is low levels of volatile organic contaminants which would volatilize. The contaminants wouldn't sit in surface water; any agitation would increase volatilization.

G. Moreau said any wells that the property owner would install would be in "clean" areas outside the limits of the landfill. The monitoring wells that are in the contaminated groundwater zone (plume) range from 10 to 30 feet deep and are close to the center of the landfill.

T. Ausfeld asked if there was core testing of soils close to the landfill and if that would be part of the cap remedy. He asked if there is a solid core underneath.

G. Goepfert said the drill logs show what the geology looks like.

T. Ausfeld asked if it is shale-like every place else around there like where the ponds are located.

G. Moreau said it is glacial till that is pretty tight soil. It is actually a pretty good location for a landfill. It is the reason the contaminated groundwater is just sitting there and doesn't really move too much.

G. Goepfert said he would ask the Northeastern Industrial Park owners if they would agree to not install any wells. Some of the wells in the general vicinity of the landfill show no detection of contaminants. The additional item the industrial park owners have to agree to is that they cannot build anything on the landfill cap or cover. He said the industrial park operations manager assured that would be the case. G. Goepfert said he would include that language in the easement. It all will be in writing to have the remedy enforceable. He said the Corps has a good working relationship with the industrial park owners.

T. Ausfeld said that in 50 years someone may want to use that property for something.

H. Bishop said the easement goes on in perpetuity and if they want to change it they have to go to the state and ask for approval to make changes and it would probably be denied.

G. Goepfert said the warranty of the cap is for 50 years but the cap will last 100 years. Also part of the remedy is the Corps' 5-year reviews to make sure the system is working and meeting the remedy's objectives.

J. Harrington said another part of the remedy is the site management plan; the plan provides periodic review and the technical person would have to certify on a regular basis that the cap is working as intended and the monitoring wells are tested per the schedule and does not show contamination. The site management plan, just like the environmental easement, goes on in perpetuity – the institutional controls don't go away.

C. Rielly said that as long as the water samples continue to be OK they are assuming the cap is still functioning.

G. Goepfert said there is potential for erosion and some of the cap/cover material may need to be replaced. Part of the maintenance routine is to ensure the integrity of the cap/cover remains.

T. Ausfeld asked which contaminant exceeded standards.

G. Goepfert said the big issue was the TCE.

C. Opdyke said the landfill has been there a long time and there has been contaminants leaching into the groundwater and subsequently tested by the Corps years after the fact. The Corps has a pretty good feeling that what it's seeing is what is actively leaching. The cap will stop that or greatly reduce it.

J. Crua said technology does not stand still. There may be some concern that the cap's integrity is questionable after 75-100 years but technology marches on. At some point there may be something new to deal with the integrity of the cap.

G. Goepfert said the cap and cover technology is probably the best near term remedy the Corps can recommend. The technology has been used successfully in other locations. The geo-membrane layers of a cap/cover are good technology. Municipalities have closed their own landfills with the cap/cover technology so this remedy is used outside of the Department of Defense sites. The Corps is confident it is the right thing to do. The Corps technical staff has reviewed the document and they are satisfied with the remedy presented. The Corps invites public comments.

G. Goepfert said the Corps has received comments from Mr. Rielly in a letter a couple of years ago and those comments will be included in the responsiveness summary. He understands Mr. Rielly's concern of leaving the landfill contents in place rather than removing them. The Corps is committed to going forward with the remedy with the RAB/public support. Then he can request funding for the remedy sooner.

Request for Public Comments on Proposed Plan for Black Creek (AOC 8)

G. Goepfert said the feasibility study was released in February 2010 and the proposed plan was issued in February 2011. Black Creek AOC 8 is another area where the Corps thoroughly reviewed the numbers and looked at the site risk assessment. The Corps proposed plan recommends no action at the site because there isn't an actionable risk. He added that he understands that is not the recommendation the RAB members wanted to hear. The Corps does have a policy that will be stated in the decision document that if evidence is presented in the future showing that a risk has developed that wasn't seen in previous testing, then the Corps has the ongoing responsibility to return to the site. If the state sees something they feel the Department of Defense is responsible for, the state has the opportunity to bring that forward to the Corps.

C. Rielly said if samples shows sediment in the reservoir shows contamination the problem is that the Army says it isn't theirs, somebody else did it, and it couldn't be proven that contamination is a result of the Army. We're just going around in circles. But you still don't want to sample in the delta.

G. Goepfert said no, the Corps has gone as far as it's going to go. But if there were impacts directly attributable to DOD use of the site that showed up at a later time the Corps would take responsibility for it.

T. Ausfeld asked if that would be in the document.

G. Goepfert said yes, it would be in the decision document.

T. Ausfeld asked if someone sampled the mud and silt and found contamination, it would have had to come from military application or something.

C. Rielly said it would have to be proven. There were some things above expected percentages or contaminants and the argument was the Corps couldn't figure out how the military put it there so the contaminants must be from somebody else that put it there.

G. Goepfert said the Corps is not putting anything under the carpet here. This document clearly shows the data results and it is all spelled out. The Corps compared the data as requested by the health department; looked at a very conservative evaluation of any kind of risk from sediment; and completed a detailed analysis for human health risk that determined there was a lack of risk to human health.

T. Ausfeld said the New York State Department of Health has seen all of the data, noted that Black Creek is a drinking water supply, and asked if the department is confident enough with the data and Corps recommendation.

J. Crua responded the department is confident because they aren't seeing any levels in the surface water. He added that there are polyaromatic hydrocarbons in a couple sediment locations. Out of 12 samples there were two locations that were slightly above what would be acceptable for residential soil. These aren't contaminants which tend to leach – they tend to bind tightly and stay bound to the sediment. Exposure to humans would be limited and very infrequent – by stepping out of a kayak or canoe. Trying to quantify that risk would not be realistic to do.

H. Bishop said the source of the polyaromatic hydrocarbon at the location near School Road is expected to be car exhaust.

T. Ausfeld said he sees a real big risk within the whole Army depot because the entire drainage system was designed to go to the Black Creek. So if you have a train derailment it is going to the Black Creek.

J. Harrington said in an emergency situation that would be something entirely different. That will be addressed when it happens. NYSDEC responds to 16,000 emergency calls a year. In the case of a train derailment the first thing they do is install a containment system to stop the influx to the creek that leading to the reservoir. And then they come back and fix what problems were caused.

T. Ausfeld said but the drainage system was designed by the Army.

J. Harrington said that is where clean stormwater should go.

T. Ausfeld said yes, clean water, especially when it is drinking water.

G. Moreau said the same would be true if a tanker spilled over on the highway and contents went into the creek.

T. Ausfeld said the Army designed the system that everything drained into the Black Creek. At that time the reservoir wasn't used for drinking water because the Army had wells and their own treatment facility. Since then it changed and now the reservoir is the drinking water supply. Before they had private wells by the reservoir and a lot of stuff was dumped down the

drains over the years. It is good that the Corps is keeping it open because if an engineering crew goes there to do a study or build a bridge and they find something they can go back to the Army to investigate.

G. Goepfert said he provided Mark Gleason, Watervliet City Manager, a copy of the proposed plan and asked the city to respond.

C. Rielly said it is amazing the two communities; Watervliet and Guilderland, which get their water from the reservoir don't come to these meetings.

G. Goepfert said Heather Bishop (NYSDEC) and Bridget Callaghan (NYSDOH) have been very diligent on the project so if anything happened locally they would inform him of the incident. The Corps understands RAB member concerns and will include the clause in the decision document. The next step in the process is to prepare a responsiveness summary to address public concerns. The responsiveness summary is attached to the decision document. In the case of the landfills, because the cost is over $2 million the approval and review levels are much higher in the Corps than something that costs less than that. It goes right up to the General for a signature; therefore, it takes a little bit more time. Several organizations within the Corps have to review the decision document. Because the Corps has support for the remedy it is anticipated the decision document will go through rather smoothly. Optimistically, he would like to have the two decision documents completed by the end of June 2011. After that, the next steps for the landfill are to get the easements consummated, obtain funding, start the remedial design and work plans, and hire a contractor who can handle the job from start to finish. The same contractor would do the design and install the cap. Based on funding, the Corps will decide what will be awarded to a contractor. For example, this year the Corps may not have enough money to fund the entire remedial action. But there may be enough money to complete the work plan and designs. When working on the designs the Corps will consider what Mr. Rielly brought up like checking to see if the railroad vibrates that whole area and drainage of the water. The Corps has been listening to public comments and concerns. If all goes well the Corps will have at least a decision document by the end of the fiscal year (September 30, 2011) , and we'll start on the designs. If everything goes well the Corps and its contractor may be in the field next summer to start the construction work. That is an optimistic outlook – Congress hasn't passed the fiscal year 2011 budget yet. Next to Mrs. Burns' property (AOC 2 – Former Bivouac Area/Post Commander's Landfill) this job is the biggest one at $2.5 million.

Status of Work Accomplished and Planned

G. Goepfert reported on other AOCs per the presentation slides:

- **AOC 2 – Former Bivouac Area/Post Commander's Landfill**: Finished AOC 2, Mrs. Burns' property. Monitoring wells were closed last year. Received "no further action" letter for AOC 2 from the state last year. AOC 2 is also subjected to 5-year reviews as discussed for AOCs 1 and 7. The clause is included in the decision document.

- **AOC 3 – School and Former Burn Pits**: After completion of the remediation at the landfills (AOCs 1 and 7), the next big effort will be closing the issue with AOC 3. The Corps did a large removal action at Guilderland High School in 2002 at the cost of about $900,000. Completed an interim action on the industrial park side of the property in the spring of 2003 at the cost of about $700,000. At last year's meetings parents voiced concerned about water from the irrigation wells at the high school. Subsequent sampling showed the water was suitable for irrigation. The Corps has been sampling monitoring well #9 for the past four year and will sample again in June 2011. The Corps will look at all the data generated during the past decade and decide the action necessary for the area that straddles the Guilderland High School and the industrial park. The Corps will prepare a feasibility study that will describe different alternatives. The feasibility study will address monitoring well #9 that continues to show levels of TCE above the standard of 5 micrograms per liter. If necessary, the Corps will work with the school district and industrial park owners for an easement stating the water will not be used for potable use.

C. Rielly asked what it means that the water is safe for lawn irrigation. Does that mean kids could immediately roll around on the grass when playing on the athletic field?

B. Callaghan said it means the water is below drinking water standards. The TCE concentration in the sample was 1.8 micrograms per liter.

G. Goepfert said the water is drinkable in theory based on that one contaminant, but drinking water goes over finishing steps of testing for other possible contaminants and adding chlorine. Because the water is safe to drink it is safe to play on the irrigated lawn.

B. Callaghan said the contaminants would immediately volatilize into the air during irrigation. It's like rubbing alcohol; when you put it on it's gone.

G. Goepfert said regardless of volatilization or not, the numbers were so low that it wasn't really an issue. Even if the water is below MCL (maximum contaminant level) for drinking, without the polishing steps it isn't wise to drink the water.

T. Ausfeld asked if the levels in monitoring well #9 are staying the same.

G. Goepfert said the levels straddle the MCL, and he is very interested in the results of the next sampling round because of the large amount of snowfall in the region. The feasibility study for this area will decide what action to take in a global sense since spending $2 million on removal actions.

G. Goepfert continued his update on other AOCs and summary/follow-up actions per the presentation slides:

- **AOC 4 – C&D Landfill**

- **AOC 5 – DNSC Voorheesville Depot**: DNSC (Defense National Stockpile Center) spent over $1 million spent on installation of a retention basin. The new retention basin is effective and protective of Black Creek.

- **AOC 6 – Former SADVA Wastewater Treatment Plant**

- **AOC 9 – Building 60 Area**

- **Summary/Follow-up Actions**

- **The CERCLA Process**: The steps from start to finish for a hazardous waste site under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act of 1980).

Discussion

G. Goepfert said the Corps looks forward to making more progress at the site this year. If he is successful in obtaining funding for AOCs 1 and 7 he will notify the RAB members.

T. Ausfeld said he is still willing to go on-site and take a look around.

G. Goepfert said he has noted Mr. Ausfeld's availability to take a look around; however, the property is privately owned and not owned by the government.

G. Goepfert said he is seeing things happen on-site. He thanked his colleagues at NYSDEC, NYSDOH, Corps-Baltimore District, and Parsons.

B. Callaghan expressed appreciation to the RAB members.

J. Burns expressed her appreciation for the help and support for the completion of the remediation done at AOC 2.

Adjournment

G. Goepfert thanked the participants for attending the meeting.

The meeting was adjourned at approximately 7:32 p.m.

U.S. Army Corps
of Engineers –
New York District

Agenda
Public Meeting
Former Schenectady Army Depot – Voorheesville Area

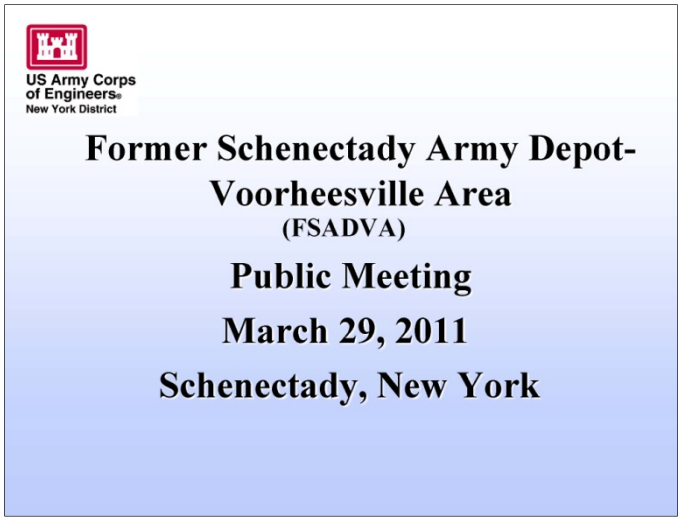
Tuesday, March 29, 2011
Lynnwood Reformed Church
3714 Carman Road
Schenectady, New York

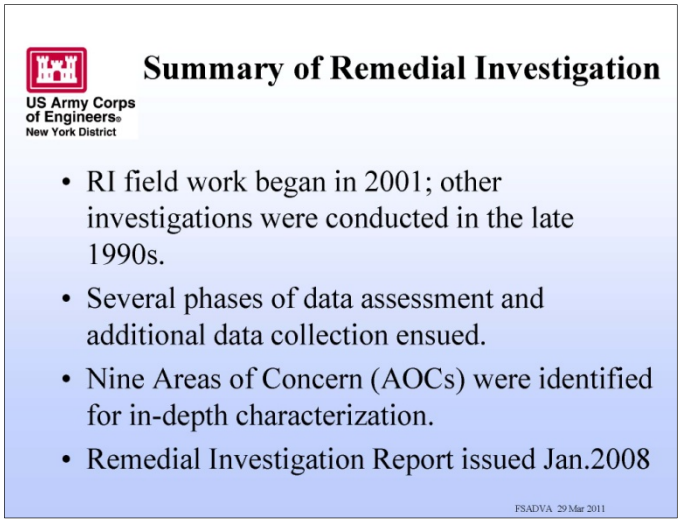
1. Introductions
2. Request for public comments on Proposed Plans for the Southern Landfill (AOC 1), the Triangular Disposal Area (AOC 7), and the Black Creek (AOC 8)
3. Status of work accomplished and planned
4. Discussion
5. Adjournment

Public Comments on the Proposed Plans are requested to be sent in writing, by April 3, 2011 to:

Mr. Gregory J. Goepfert
Project Manager
U.S. Army Corps of Engineers, New York District
26 Federal Plaza, Room 1811
CENAN-PP-E
New York, NY 10278

If you have any questions or are interested in joining the Restoration Advisory Board as a volunteer, please contact Mr. Goepfert at:
Telephone (917) 790-8325





AOCs 1 & 7
U.S. Army Southern Landfill and Triangular Disposal Area

- Feasibility Study – issued Jun 2010
- Proposed Plan – issued Feb 2011
- Record of Decision – issue by Jun 2011
- Implement ROD – subject to availability of funds (Fiscal Year 2012)

FSADVA 29 Mar 2011

AOCs 1 & 7
U.S. Army Southern Landfill and Triangular Disposal Area

- Alternative 3 is proposed:
- Landfill Cover & Cap
- Groundwater Monitored Natural Attenuation
- Land use controls (Groundwater easement, no building construction in landfill areas)

FSADVA 29 Mar 2011

AOC 8
Black Creek

- Feasibility Study – issued Feb 2010
- Proposed Plan – issued Feb 2011
- Record of Decision – issue by Jun 2011

FSADVA 29 Mar 2011

AOC 8
Black Creek

- Human Health Risk Assessments performed using sediment and surface water data assumed residential exposure scenario
- Risk Assessments concluded no unacceptable human health risk
- Screening level ecological risk assessment concluded: "…observed species composition seemed appropriate for the habitat, and all species appeared active."
- No response action proposed

FSADVA 29 Mar 2011

AOC 2
Former Bivouac Area / Post Commander's Landfill

- Record of Decision signed in Nov. 2009
- Monitoring wells closed
- No further action - letter of concurrence from NYSDEC, dated Jan. 6, 2010

FSADVA 29 Mar 2011

AOC 3 School &Former Burn Pits

- Removal Action conducted at Guilderland School, Fall 2002; cost - $900,000
- Interim Action conducted at Burn Pits, Spring 2003; cost- $700,000
- School Irrigation water tested in 2010
- Follow – up groundwater monitoring
  - Two years (8 quarters) of monitoring 9/2003 – 6/2005
  - Two additional rounds 8/2006 and 11/2006
  - Five annual samples from MW-09 [2007 – 2011]

FSADVA 29 Mar 2011

AOC 4
C&D Landfill

- The construction and demolition (C&D) landfill was not active during the Army's operation of SADVA
- Limited characterization indicated that high levels of contamination were not found and there is no evidence of direct connection to SADVA operations
- No further actions anticipated

FSADVA 29 Mar 2011

AOC 5
DNSC Voorheesville Depot

- This area is the only part of the former SADVA that was operated by the government until 2007 (now inactive).
- Used for storage of materials critical to national defense (metals and ores).
- DNSC conducted their own RI for the site in cooperation with the SADVA RI.
- Property transfer now being administered by General Services Administration

FSADVA 29 Mar 2011

AOC 6
Former SADVA Wastewater Treatment Plant

- Historical aerial photos suggested this may have been a dumping ground.
- Waste materials were found and disposed of during construction of the new Guilderland wastewater treatment plant in mid-1990s.
- Test pits were excavated during the RI; buried wastes were not found.
- Some metals concentrations in soils were slightly above background and NYSDEC criteria; however there no obvious signs of buried waste sources or significant contamination that would warrant further action.
- No further actions anticipated.

FSADVA 29 Mar 2011

AOC 9
Building 60 Area

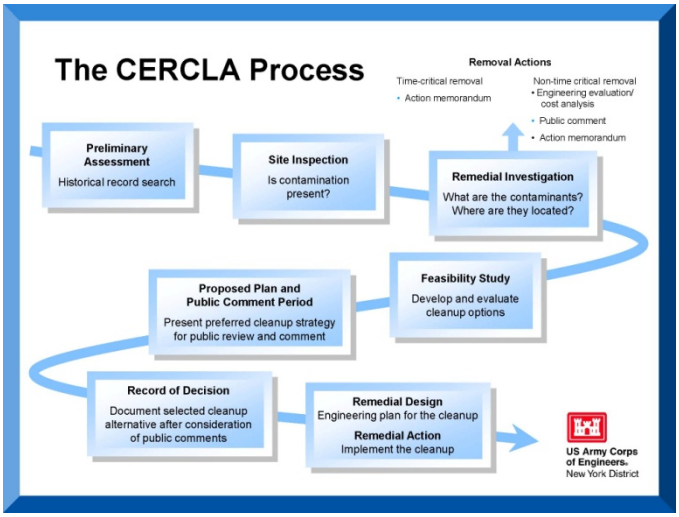
- No further actions anticipated.

FSADVA 29 Mar 2011

Summary/Follow up Actions

- Prepare responsiveness summaries and records of decision for AOCs 1 & 7, 8
- Program and prepare design documents for AOC 1 & 7; implement design, subject to availability of funds
- Sample groundwater from MW-09 [Jun 2011]
- Prepare Feasibility Study / Proposed Plan for AOC 3
- AOC 5 being addressed by General Services Administration (GSA).

FSADVA 29 Mar 2011



New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau A, 11th Floor
625 Broadway, Albany, New York 12233-7015
Phone: (518) 402-9625 • **Fax:** (518) 402-9627
Website: www.dec.ny.gov

Joe Martens
Commissioner

APR 20 2011

Gregory J. Goepfert, Project Manager
Department of the Army
New York District Corps of Engineers
Jacob K. Javits Federal Building
New York, NY 10278-0090

Re: Former Schenectady Army Depot, 401009
Black Creek Area of Concern (AOC) 8
Proposed Remedial Action Plan, dated February 2011

Dear Mr. Goepfert:

The New York State Department of Environmental Conservation has reviewed the Proposed Remedial Action Plan for the above-referenced site. Based on our review of surface water and sediment analysis results provided in the Remedial Investigation Report, it appears that the site has not significantly impacted the creek. The State, therefore, concurs with Proposed Remedial Action Plan conclusion that no action is needed for the Black Creek Site at the Former Schenectady Army Depot.

If you have any questions, please feel free to contact Mr. John Swartwout, of my staff, at (518) 402-9620.

Sincerely,

James B. Harrington, P.E.
Bureau Director
Remedial Bureau A

ec: J. Swartwout
H. Bishop

INTERNATIONAL YEAR OF FORESTS 2011

SECTION 4

REFERENCES

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