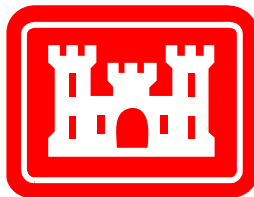


APPENDIX 5

USACE-USEPA COORDINATION AND RELATED CORRESPONDENCE

This appendix contains the following documents:

- Memorandum of Understanding dated July 2, 2002
- Letter from William Slezak to Elizabeth Butler dated August 24, 2005
- Newark Bay Study Area Coordination Plan dated September 21, 2005
- Newark Bay Study Area Coordination Plan dated December 21, 2005
- Memorandum for Record dated March 15, 2006
- Letter from Mr. Pavlou to Colonel Polo dated April 4, 2006
- Memorandum for Record dated April 20, 2006
- Memorandum for Record dated May 18, 2006
- Memorandum for Record dated August 8, 2006
- Newark Bay Remedial Investigation presented August 8, 2006
- Letter from Colonel Polo to Mr. Alan Steinberg dated August 24, 2006
- Memorandum for Record dated October 4, 2006
- Memorandum for Record dated October 10, 2006
- Memorandum for Record dated November 18, 2006
- Memorandum for Record dated January 9, 2007
- Letter from Mr. Pavlou to Colonel Tortora dated January 23, 2007
- Memorandum for Record dated February 13, 2007
- Memorandum for Record dated March 15, 2007



U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
April 2007



JULY 2, 2002

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE U.S. ENVIRONMENTAL PROTECTION AGENCY
AND
THE U.S. DEPARTMENT OF THE ARMY**

SUBJECT: Restoration of Degraded Urban Rivers

ARTICLE I - PURPOSE

The purpose of this Memorandum of Understanding (MOU) is to facilitate cooperation between the U.S. Department of the Army (DA) and the U.S. Environmental Protection Agency (EPA) with respect to environmental remediation and restoration of degraded urban rivers and related resources in the United States. This MOU seeks to foster environmental quality to ensure the protection of public health, economic sustainability and community vitality. This MOU is being entered into for the purpose of coordinating remedial, water quality and environmental restoration activities under the Clean Water Act (CWA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and the various Water Resources Development Act (WRDA) authorities.

ARTICLE II - BACKGROUND

Many urban reaches of rivers in the United States suffer from contaminated sediments, degraded water quality, and lost habitat. These conditions adversely affect human health, as well as the ecological value of aquatic resources, and limit recreational and other economic uses. Coordination of the activities of the signatory agencies in addressing the problems of aquatic sediment contamination aims to significantly improve public health and the effectiveness of efforts to restore the use and enjoyment of these rivers.

The EPA addresses river sediment contamination through a variety of environmental programs in the Office of Solid Waste and Emergency Response (OSWER), and various

SUBJECT: Restoration of Degraded Urban Rivers

programs in the Office of Water (OW). Likewise, the U.S. Army Corps of Engineers (USACE) is involved with numerous river-related activities, including operation and maintenance of navigation channels and harbors, flood control, and ecosystem restoration. The U.S. Army Corps of Engineers is responsible for the safe, reliable and efficient waterborne transportation systems for the movement of commerce, national security purposes and recreation. The Corps is responsible for 25,000 miles of commercially navigable waterways and 299 deep draft harbors, many of which are located in urban areas.

The above programs can lead to remedial investigation/feasibility studies under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and USACE environmental reconnaissance and feasibility studies, including those for environmental dredging under the Water Resources Development Act (WRDA) as well as projects addressed by the EPA's Office of Water (OW) under the Clean Water Act, all focused on the same reaches of contaminated urban rivers. Thus, this MOU relates to cooperation between EPA's remediation and water quality activities and the USACE's environmental restoration, navigation and waterways maintenance activities.

ARTICLE III – SCOPE

In order to begin an evaluation of this urban rivers cooperative approach it is proposed that eight (8) demonstration pilot projects be announced and undertaken during the next 12 months. The pilot projects will include, but not be limited to, projects for water quality improvement, contaminated sediment removal and remediation and riparian habitat restoration. The EPA and the USACE agree to enter into watershed-specific agreements to coordinate remedial, water quality and environmental restoration activities under, but not limited to, the WRDA, CERCLA, RCRA, CWA and other related authorities at locations where such cooperative arrangements are agreed to be mutually beneficial. Under such watershed-specific coordination agreements, the agencies will conduct cooperative project planning and development processes that integrate environmental remediation authorities in WRDA, CERCLA and other legislation. These agreements will be carried out in conjunction with other appropriate federal, state, tribal and local environmental agencies, to identify and implement projects to protect public health, remediate and restore urban rivers in the interest of ecological restoration and economic revitalization. These agreements shall reference this MOU.

The signatory agencies agree that all requirements of the applicable statutes, including WRDA, CERCLA, RCRA, CWA and their implementing regulations, will be met in projects carried out under this MOU. In addition to demonstration projects designated under this MOU,

SUBJECT: Restoration of Degraded Urban Rivers

EPA and USACE will strive for cooperative interagency efforts at other appropriate sites for the purpose of protection of public health and the environment, and ensuring economic sustainability. Project or activity leads will be determined during development of watershed-specific agreements.

The activities contemplated in this agreement will be carried out in accordance with existing statutory authorities and nothing in this agreement will, in any way, alter the specific statutory or regulatory authorities or responsibilities assigned to the EPA or the USACE, or alter existing statutory roles and responsibilities of other agencies, or statutory requirements. This agreement establishes a mechanism of cooperation and coordination, and expresses the intent of the signatory agencies to work together to resolve any conflicts using, as appropriate, consensus building and collaborative decision-making to find common ground and identify practical solutions. Success of this agreement will be evidenced by the efficient accomplishment of each agency's statutory requirements within areas of mutual concern in a timely manner and by minimizing misunderstandings, and duplication of effort.

ARTICLE IV - INTERAGENCY COMMUNICATIONS

To provide for consistent and effective communication between the USACE and the EPA, each party will appoint a Headquarters Agency Representative to serve as its central point of contact on matters relating to this MOU. As watershed specific agreements are created for the demonstration and/or pilot projects, additional representatives may also be appointed to serve as points of contact. Headquarters Representatives are responsible for reviewing reports from Agency Regional Representatives appointed under watershed-specific agreements and elevating any deviations from schedules or other problems to the signatories of this MOU.

ARTICLE V - QUALIFICATIONS AND LIMITATIONS

This document is neither a fiscal nor a funds obligation document, nor does it supplement either agency's existing statutory authorities. Any endeavor involving reimbursement or contribution of funds between the parties to this MOU will be set forth in an Interagency Agreement (IAG).

ARTICLE VI - AMENDMENT AND TERMINATION

This MOU will have an end date of June 2004. This MOU may be modified, amended or renewed only by written, mutual agreement of the parties. Either party may terminate this MOU prior to June 2004 by providing written notice to the other party. The termination will be effective upon the sixtieth calendar day following notice, unless a later date is set forth.

SUBJECT: Restoration of Degraded Urban Rivers

ARTICLE VII - EFFECTIVE DATE

This MOU will become effective when approved by the indicated signatories for the U.S. Environmental Protection Agency and U.S. Department of the Army.

APPROVED:

R. L. Brownlee

R. L. BROWNLEE
Acting Assistant Secretary
of the Army (Civil Works)
U.S. Department of the Army

July 2, 2002
Date

Ben Grumbles

BENJAMIN GRUMBLES
Deputy Assistant Administrator, Office of Water
U.S. Environmental Protection Agency

July 2, 2002
Date

M. Lamont Horinko
MARIANNE LAMONT HORINKO
Assistant Administrator, Office of Solid
Waste and Emergency Response
U.S. Environmental Protection Agency

July 2, 2002
Date



DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

REPLY TO
ATTENTION OF

Harbor Programs Branch

August 24, 2005

Ms. Elizabeth Butler
Remedial Project Manager, Newark Bay
U.S. Environmental Protection Agency, Region 2
290 Broadway
New York, NY 10010

Dear Ms. Butler:

As discussed with you previously (see attached Memorandums for Record) and as recently requested, this letter provides our summary comments to the draft Work Plan related to the EPA CERCLA Newark Bay Study Area (specifically Volume 2a of 3 of the RIWP and the June 2004 TSI Response to Comments, dated May, June and August 2005). These comments reflect several members of the New York District, US Army Corps of Engineers (USACE) review of the current draft Work Plan, especially the sampling plan. Please see the attachment to this letter for the comments.

We also wish to note that the coordination meetings held with you, your consultants and TSI in April, provided substantial amounts of information to you related to the nature of the sediments to be dredged from the deepening of selected navigation channels in the southern half of Newark Bay, bathymetric data on these and other maintained navigation channels in the Bay, and on biological data collections and analysis performed on the sediments in various areas of Newark Bay has been useful to you in your RI/FS. We remain committed to continue to provide your office all information related to our various programs that may be of use in your RI/FS of Newark Bay.

In addition to the comments in the attachment and based on our general understanding of the plans for the Phase 1 sampling in Newark Bay (as described in the draft Work Plan and as relayed by email from you on August 16, 2005 to Mr. Thomas Shea of the New York USACE), we also wish to confirm our initial understanding that potential impacts of our ongoing maintenance and deepening program can be avoided through our understanding of your program and continued coordination. If your office has a different view or concern on any of the statements below, please contact our office as soon as possible so that we may develop plans so to avoid any significant adverse impact upon your sampling effort.

a. The EPA is expected to receive from TSI on or about September 6th the revised Work Plan for the Newark Bay RI/FS, which includes the Phase 1 sampling effort. The EPA is scheduled to approve this plan on or about September 16th. The intent of Phase 1 sampling is to gather preliminary baseline data related to the four goals established in the AOC for the RI/FS. Phase 1 will consist of three data collection efforts: 1) current bathymetry of the study area (planned to occur in October 2005); 2) Biological Activity Zone (BAZ) sampling (also planned to occur in October 2005); and 3) sediment contaminant coring and analysis (planned to occur in November-December 2005). EPA will use this data and analysis to determine its next steps.

1) Regarding the bathymetry data collection, in areas in which we are or plan to be dredging, we can or have made available to you or your consultants, pre and/or post multi-beam surveys of the areas dredged. Given the relatively dense data generated by multi-beam surveys, this should provide better bathymetry

data for the dredged areas of the Bay than what your data collection effort would otherwise. Further, since this and past survey data can help to quantify and localize sedimentation patterns in the Bay, the bathymetry data from our dredging program should have a substantial positive effect on establishing the baseline conditions for the RI/FS and the accomplishment of its goals.

2) Regarding the BAZ sampling, we have provided to your office recently documented biological data from samples from approximately a dozen years ago. This information, combined with the information that will be collected this fall should help to establish not only a baseline but also a trend in the biological benthic conditions that exist in the Bay. Given the relatively low levels of sediment resuspension from the USACE' environmentally protective dredging operations in the Bay and based on our extensive experience and studies, we believe that our continued dredging operations will not adversely interfere with this sampling effort. Of course, given the nature of dredging, samples planned for inside the affected federal channel boundaries may be affected by the obvious disturbance of dredging which has been recently performed or is underway. Should EPA wish to take BAZ samples within the "active" navigation channels, we will coordinate our dredging program to avoid any adverse interference with the BAZ sampling effort.

3) Regarding the sediment coring and analysis effort of the Phase 1 RI/FS, we understand that these cores will be taken to two different depths, 3.5 feet and 6.5 feet, with contaminant analysis performed on the first 6 inches, then every foot thereafter. As noted earlier, we believe that this arbitrarily predetermined depth may be wholly insufficient in selected locations of the bay (see para b. on page 1 above). Further, the locations (particularly as noted in para b. on page 1 above), may be better refined once the bathymetry data collection is completed so thought may be given towards slightly adjusting these locations just after the bathymetry data is collected but prior to the corings being taken. Because the deepening dredging that has been done and is now underway will obviously affect the cores in the channels, we continue to question its utility (as commented in para a. on page 1 above). However, for cores taken outside the dredged areas, our analysis and past experience indicates that the sediment deposited off-channel from the dredging operations will be negligible compared to the vertical resolution of the analysis being performed. Moreover, past comparisons of contamination levels of the silty, recently deposited surficial material in our deepening contracts indicates that it is remarkably similar to the surficial sediment contamination that exists in the sediments outside the HDP boundaries.¹ Nevertheless, we understand that just prior to the Phase 1 sediment sampling, that EPA and the USACE will coordinate on the precise locations of samples to be taken so that we can coordinate with our dredging contractors to ensure that our effort does not interfere with the sampling effort. The USACE and EPA will set-up a meeting that will include their contractors to discuss communications protocols during the sampling in order to minimize impacts to the sampling. It should be noted that Phase 1 cores samples taken in the "active" federal channels, where dredging is currently occurring or where dredging is expected to occur in the near future, that the recently deposited, silty surficial sediments may not physically be there (in terms of stratum) for the Phase 2 sampling. We view the safe and protective dredging, treatment and use of these sediments to remediate impacted upland sites in the Port region as providing considerable environmental benefits to the region beyond the economic benefits related to the improvement of the navigation channels.

b. Phase 2 sampling will be based on the data analysis conducted from the Phase 1 sampling and is not expected to begin until 2006. As you know, we would appreciate receiving as soon as is practicable a more detailed schedule of any and all sampling in the RI/FS effort so that the USACE can analyze any potential (or theoretical) adverse impact or interference that our planned dredging may have on this sampling.

¹ CENAN-PP-H MFR dated 22 March 2005.

c. EPA's future biological sampling is expected to occur in the spring and again in the late fall of 2006. The USACE will continue to provide EPA with all of its biological sampling data collected for the deepening projects. As noted above, our preliminary analysis indicates that our continued deepening effort should not interfere with the planned RI/FS biological sampling, except for samples within the recently dredged/disturbed channel areas.

d. EPA was not sure when it will begin its water quality sampling planned as part of the Phase 2 sampling effort. Again, the USACE will provide its data to the EPA and is committed to work with the EPA to ensure that our continued deepening program does not adversely interfere with your RI/FS sampling effort.

e. EPA will also conduct sampling in and near Combined Sewer Outfalls (CSOs). We understand that you expect this some time in the future and do not foresee any impacts to occur because of our dredging since we are dredging so far away from the CSOs.

In closing, we wish to once again pledge our commitment to work with the EPA so that our respective efforts in the Newark Bay can proceed concurrently and in a complimentary manner. If we, both EPA and USACE, believe that no other alternative is possible and that some USACE activity is likely to interfere with your study sampling effort, we will direct our contractors away from the sampling to avoid the interference. Given the obvious magnitude of these two efforts and their potential future positive impact to this region (environmentally and economically), it is incumbent upon both our agencies to make every effort so that each can proceed as quickly and efficiently as is possible.

Should you wish to discuss this matter further or should you wish to arrange a meeting between our offices (possibly to establish a periodic, regular meeting to coordinate the two efforts), please contact Mr. Thomas Shea, the Project Manager for the USACE 50 foot Harbor Deepening Project, at (917) 790-8304.


WILLIAM J. SLEZAK, P.E.
Chief, Harbor Programs Branch

CF:
Ray Basso, EPA
Alice Yeh, EPA
Ellen Simon, USACE
Bryce Wisemiller, USACE
Scott Nicholson, USACE

USACE Comments to EPA RI/FS Sediment Sampling Plan

a. Tierra Solutions, Inc (TSI) has proposed a large number (20 out of 60) of sampling points that are located in the navigation channels in the southern half of Newark Bay that have been recently or are currently being deepened. We note that these areas have been recently dredged to a depth where the exposed sedimentary deposits are of pre-industrial age and consequently have not been exposed to long term sources of contamination. USACE considers these channels to be well characterized and suggests that many of the sampling locations be relocated outside these dredged channels to other areas, ones that have not been analyzed as frequently. USACE understands the need to get a historic view of the contamination. However, including areas which are known not to have contamination not only wastes limited resources but also implies a potential contamination problem exists in areas that we know, through our thorough and well reviewed sediment testing data, do not have extensive sediment contamination (beyond that which deposits in the channel bottom from off-channel sources).

b. Related to the primary goal of the RI/FS as we understand it is the need to identify and determine the horizontal and vertical distribution and concentration of various contaminants in the Bay. As relayed to you and to TSI in April and related to this goal, we continue to advise that three general locations are primary importance for performing deep sediment sampling (well beyond 6.5 feet potentially). They are locations that, based on historical and, to some extent, recently collected information, appear to be areas of high amounts of sediment deposition through the period in which the pollution occurred in the north, middle and southern portions of Newark Bay. The USACE suggests sampling in these areas, at least to a depth of the Pleistocene-Holocene layer (about 24 ft in one location) instead of the suggested 6.5 feet to determine the historic extent of contamination. During our meetings in April 2005 and most recently in August 17, 2005, the USACE identified to you on a navigation chart the three suggested sampling locations. The attached slides show prime specific locations for consideration in placement of these deep cores.

c. Related to comment b., above, the Newark Bay CDF EIS sought to identify areas of minimal sediment contamination thickness. Rather than sample near the CDF or the 2S/2N sites, samples should be taken in the areas outside of these sites where the thickest contamination was thought or considered to exist, based on the analysis performed during the EIS effort.

d. To our knowledge, the highest level of dioxin contamination measured in Newark Bay occurred along the northern bulkhead in Port Newark. We understand from anecdotal communications that this was the area that was used to load Agent Orange during the Vietnam War period. Further, we understand from the Port Authority of New York and New Jersey (PANY/NJ), that this area has not been maintenance dredged recently. As such and given the previous, relatively high levels of dioxin contamination found along this berthing area, we suggest that further samples be taken in this area and that EPA coordinate this sampling effort with the PANY/NJ to determine the areas of greatest likelihood of having sediments deposited in the past several decades.

e. Related to comment a. above, TSI proposed "grouping" of sediment samples as shown on Figure 6.1 should be revised to better reflect the actual distinctions in the channels, that being to distinguish the northern, unmaintained/deepened channels from those in the southern half that have and are undergoing regular maintenance and deepening. Currently, the figure distinguishes by color the "Port Channels" from the "Navigation Channels" but does not distinguish, except by a line, the northern "inactive" channels from the southern, "active" channels. We consider the east/west distinction (*i.e.* Port vs. navigation) to be far less relevant to the RI/FS effort than distinguishing the southern, "active" federal channels from those in the northern half of the Bay that have not and are not likely to be maintenance dredged (much less deepened) in the foreseeable future.

f. For the hydrodynamic modeling that is currently planned by EPA's consultants (under contract with the USACE's Kansas City District), we note that the selected modeling period for the Bay is the same time period that the USACE has performed substantial channel deepening, both in the Bay and in the Kill Van Kull leading into the Bay. This could very well lead to modeling results that are at least very difficult and at worst impossible to prove conclusively whether if and when the remedial action phase of the study is reached. Rather, modeling runs used for baseline analysis should assume either that the deepening has not yet begun or, better still, that the deepening dredging has been completed, because that is the expected end state of the Bay. That being said, we understand, though that to characterize the dynamic nature of sediment transport in the Bay that modeling runs made during channel deepening may provide useful information.

Newark Bay Study Area Coordination Plan

pertaining to

US Army Corps of Engineers Dredging Activities in the
Newark Bay, Kill Van Kull and Arthur Kill

and the

US Environmental Protection Agency's Remedial Investigation and
Feasibility Study of the Newark Bay Study Area

Prepared by

Harbor Programs Branch
New York District, US Army Corps of Engineers

and

Emergency and Remedial Response Division
Region 2, US Environmental Protection Agency

21 September 2005

Newark Bay Study Area Coordination Plan
pertaining to
US Army Corps of Engineers Dredging Activities in the
Newark Bay, Kill Van Kull and Arthur Kill
and the
US Environmental Protection Agency's Remedial Investigation and Feasibility Study
of the Newark Bay Study Area

Purpose: To describe the coordination activities to take place between the US Army Corps of Engineers (USACE) and the US Environmental Protection Agency (EPA) to ensure that impacts on the EPA's remedial investigation and feasibility study, and possible future environmental remediation, of the Newark Bay Study Area from dredging activities are identified, avoided, and minimized to the fullest extent possible.

Objectives:

- a. In accordance with the stated purpose, share all available information about the agencies' respective projects consistently and in a timely fashion.
- b. Avoid to the fullest extent possible negative schedule impacts to EPA sampling and USACE dredging.
- c. Identify opportunities to support goals and objectives of each agency's projects.

Goals:

- a. Ensure that USACE dredging activities are not delayed by EPA study activities.
- b. Ensure that EPA's remedial investigation and feasibility study, and possible future environmental remediation, of the Newark Bay Study Area activities are not delayed or negatively impacted by the USACE's dredging activities in that Area.
- c. Coordinate sampling and modeling efforts prior to, during, and after dredging, when feasible, to insure integrity and efficiency of both dredging and sampling.
- d. Evaluate results from EPA studies during dredging activities that may inform the Corps on how to improve dredging activities and better understand how to manage future dredging operations more efficiently and effectively to achieve USACE Environmental Operating Principles on environmental protection and sustainability.

1. **Agency Representation:** Team will be co-chaired by the US Army Corps of Engineers – NY District and the US Environmental Protection Agency – Region 2. The team will also include representatives from the following agencies: the Port Authority of NY and New Jersey, the NRDA trustees (US Fish and Wildlife Service, and National Marine Fisheries, The New York State Department of Environmental Conservation (NYSDEC) and, the New Jersey Department of Environmental Protection (NJDEP)), the States of New York and New Jersey regulatory agencies (NJDEP and NYSDEC), and the US Coast Guard. A listing of the initial team members is attached. Agency contractors or other technical experts may be brought on as needed to address specific issues,

2. **Duration of the Team:** The team will remain active for the duration of the NBSA RI/FS.

3. Meetings

- a. The team shall meet monthly to:
 - update each other on current activities,
 - update each other on future activities,
 - identify upcoming document review requirements,
 - update the status and identify issues for on-going document reviews,
 - conduct on-board reviews of documents,
 - resolve any outstanding issues.
- b. The monthly meeting will be held at 10:00 am on the second Tuesday of the month.
- c. The team may meet in between the monthly meetings based on the needs of either agency. Team members may also be invited to attend other relevant meeting, as appropriate, such as USACE meetings with dredging contractors.
- d. A monthly meeting may be cancelled if there is no need to share information. This will be coordinated between the two co-chairpersons.
- e. The team will meet at the offices of USACE or EPA on an alternating month basis. A draft agenda will be circulated to team members for review and input approximately 1 week prior to the scheduled meeting date.
- f. Minutes of the meetings will be prepared and distributed to the team for review, comment and concurrence prior to finalization.

4. Team Members:

| | | |
|-------------------|--------------------|--|
| Thomas Shea | Project Manager | USACE Harbor Programs Branch |
| Scott Nicholson | Project Manager | USACE Harbor Programs Branch |
| Harold Hawkins | Project Manager | USACE Harbor Programs Branch |
| Mike Millard | Project Manager | USACE Harbor Programs Branch |
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| Ellen Simon | Attorney | USACE Office of Counsel |
| Elizabeth Butler | Project Manager | EPA Emergency and Remedial Response Division |
| Alice Yeh | Project Manager | EPA Emergency and Remedial Response Division |
| Amelia Wagner | Attorney | EPA Office of the Regional Counsel |
| LCDR Ernie Morton | Chief | USCG Activities NY, Vessel Traffic Service |
| Steve Dorrier | | Port Authority of NY & NJ |
| Matt Masters | | Port Authority of NY & NJ |

Suzanne Dietrick
Janine MacGregor
KD McGuckin
Tim Kubiak
Tom Brosnan
Reyhan Mehran

NJ Department of Environmental Protection
NJ Department of Environmental Protection
NY Department of Environmental Conservation
US Fish and Wildlife Service
NOAA
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- c. Coordinate sampling and modeling efforts prior to, during, and after dredging, when feasible, to insure integrity and efficiency of both dredging and sampling.
- d. Evaluate results from EPA studies during dredging activities that may inform the Corps on how to improve dredging activities and better understand how to manage future dredging operations more efficiently and effectively to achieve USACE Environmental Operating Principles on environmental protection and sustainability.

1. Agency Representation: Team will be co-chaired by the US Army Corps of Engineers – NY District and the US Environmental Protection Agency – Region 2. The team will also include representatives from the following agencies: the Port Authority of NY and New Jersey, the NRDA trustees (US Fish and Wildlife Service, and National Marine Fisheries, The New York State Department of Environmental Conservation (NYSDEC) and, the New Jersey Department of Environmental Protection (NJDEP)), the States of New York and New Jersey regulatory agencies (NJDEP and NYSDEC), and the US Coast Guard. A listing of the initial team members is attached. Agency contractors or other technical experts may be brought on as needed to address specific issues,

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e. The team will meet at the offices of USACE or EPA on an alternating month basis. A draft agenda will be circulated to team members for review and input approximately 1 week prior to the scheduled meeting date.

f. Minutes of the meetings will be prepared and distributed to the team for review, comment and concurrence prior to finalization.

4. Dispute Resolution: All agencies recognize that they are acting in a cooperative fashion to assist each other in furthering the goals of the coordination plan. As such, it is further recognized that each agency has specific regulatory authorities. In view of this, the team will implement the following as a dispute resolution plan:

a. First, the team will attempt to resolve the dispute at the team level. The team will normally defer issues to the agency that has the legal or regulatory authority pertaining to the issue. The team shall be given seven days to resolve the dispute.

b. If the team cannot resolve the issue, then the issue will be raised to the agency supervisors of the team members who have the dispute. The supervisors will be given seven days to resolve the dispute.

c. If the immediate supervisors cannot resolve the issue, they will raise it the NY & NJ Harbor Senior Partners. This group is composed of the senior representatives of each agency, which may not be the local agency head. The Senior Partners will endeavor to resolve the dispute within 30 days, convening a special meeting amongst its members if necessary in order to resolve the dispute.

5. Team Members:

| | | |
|-----------------|-----------------|------------------------------|
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| Suzanne Dietrick | | NJ Department of Environmental Protection |
| Janine MacGregor | | NJ Department of Environmental Protection |
| KD McGuckin | | NY Department of Environmental Conservation |
| Tim Kubiak | | US Fish and Wildlife Service |
| Tom Brosnan | | NOAA |
| Reyhaneh Mehran | | NOAA |

MEMORANDUM FOR RECORD

SUBJECT: Newark Bay Study Area Coordination Team Meeting

1. The regularly scheduled monthly coordination meeting was held on 14 March 2006 at the USACE office to discuss the USACE and EPA activities in the NBSA. The following persons attended:

| | | |
|----------------------|--------------------|--|
| Tom Shea | USACE, NY District | Project Manager |
| Hal Hawkins | USACE, NY District | Project Manager |
| Scott Nicholson | USACE, NY District | Project Manager |
| Patricia Donohue | USACE, NY District | Project Manager |
| Beth Nash | USACE, NY District | Environmental Engineer |
| Ben Baker | USACE, NY District | Regional Technical Specialist, Geology |
| Elizabeth Buckrucker | USACE, Kansas City | Project Manager |
| Elizabeth Butler | USEPA | Remediation Project Manager |
| Amelia Wagner | USEPA | Assistant Regional Counsel |
| Reyhan Mehran | NOAA | Coastal Resource Coordinator |
| Steve Dorrlor | PANYNJ | Program Manager |
| Janine MacGregor | NJDEP | |

2. The following is a summary of the discussions held during the monthly coordination meeting:

- a. The AK 1 contract is complete as of 21 Feb 06.
- b. The AK 2/3 contract is about 54% complete. Scheduled completion is December 2006. Contractor is removing some non-HARS material, but mostly rock or till.
- c. The S-KVK-2 contract is at about 40% complete based on volume. They will not be east of the Bayonne Bridge until around May. They are currently drilling, blasting, and removing rock.
- d. The USACE is in the process of soliciting the S-NB-1 contract. The Pre-advertisement notice has been postponed due to the recent NRDC lawsuit ruling, issued on 8 March. The schedule for this procurement is being revised. The first step in the contract would be to test the material and then begin dredging. Dredging is not expected to begin until about July. All test data will be provided to EPA.
- e. USACE O&M: The District hopes to proceed with the procurement of the O&M work in Newark Bay. That team is currently assessing the impacts of the recent court ruling on that project.
- f. EPA Phase 1 Sampling: The District has received the bathymetric survey and BAZ data. There were 69 sediment cores taken. Validation of the testing was supposed to be completed in March with the full data available in May. However, the lab encountered quality assurance problems, matrix interference from moisture content and TPH (total petroleum hydrocarbons) which has prevented good readings. On 9 March, the Lab requested that they retest each sample (not resample). EPA provided the approval and stipulated that they use 30 g of sample for each test. This retesting and analysis will take an additional six weeks. The samples affected apply to semi-volatiles, pesticides, herbicides and PCB's. Tests for dioxin, metals and volatiles were not affected by the problem. EPA will be providing a new schedule of when the data should

be available. It was noted that similar problems were being encountered with the sediment testing for the Lower Passaic River.

g. EPA Phase 2 Sampling: TSI is required to provide their proposed Phase 2 sampling plan two months after providing the Phase 1 test results. Because of the testing problems mentioned above, this is now about September 06. EPA expects Phase 2 sampling to begin in the same timeframe as the Phase 1, October-November 06. Phase 2 is expected to be a data gap refinement, trying to narrow in on where data is lacking or where additional data is needed to better define the extent of contamination. EPA expects that TSI will begin another sampling program in 2007, which will focus on source sampling, such as CSO's.

h. Dredging Overdepth. The District raised this topic for overall coordination. In its normal course, the District characterizes material to about 1.5 feet below the required depth of the contract. The District is now required to characterize the material an additional 1.5 to 2 feet. The material below the required depth is overdepth, and the material is taken by the contractor to ensure that he meets the contract required depth. In Newark Bay, the District has characterized the material to be dredged to 53.5 ft and is characterizing the material to 55.5 ft as the same material as that directly above it. EPA Superfund saw no problems with this.

i. The Trustees have signed their Pre-Assessment Screen. This document will be available to the team and public shortly. The document covers both Newark Bay and Lower Passaic River. It is available at: <http://www.darrp.noaa.gov/northeast/passaic/injury.html>.

3. The next meeting will be on 11 April 06 at 1000 hrs at the EPA offices.
4. POC is the undersigned at (917) 790-8304.

THOMAS J. SHEA, III
Project Manager



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1868

APR - 4 2006

Colonel Richard J. Polo, Jr.
Commander and District Engineer
U.S. Army Corps of Engineers
New York District
26 Federal Plaza
New York, New York 10278

Dear Colonel Polo:

This is to provide you with an update on the status of the remedial investigation of Newark Bay being conducted under an Administrative Order on Consent (AOC) with Occidental Chemical Corporation (OCC). Tierra Solution, Inc. (TSI) is performing the work on behalf of OCC. The first phase of the Newark Bay Study, including a biologically active zone (BAZ) investigation, a bathymetric survey, and sediment core collection, was completed from October 3, 2005 through December 12, 2005. A draft BAZ report, a copy of which was provided to your staff, was submitted by TSI on November 14, 2005. The bathymetry results, as well as the summary of the sediment data, are scheduled for submittal by TSI by the end of July 2006. However, a portion of the data, including analytes such as dioxin and metals, should be available by mid-May 2006.

Data for the semi-volatile organic compounds, aroclor PCBs and pesticides were rejected due to chemical interference by petroleum hydrocarbons and moisture content. These samples are being re-analyzed and the results are not expected back until the end of July 2006.

Consequently, we will be providing you with the results of the Newark Bay sampling efforts in two packages. The first data package will be provided to your office in mid-May 2006, and will include all analytes, except semi-volatile organic compounds, aroclor PCBs and pesticides. The second data package, which will include the last three categories of chemical compounds, will be provided to your office by the end of July 2006.

The evaluation of these two data packages will then commence and any conclusions will be incorporated in a Phase I investigation report. The Phase I investigation report will characterize the horizontal and vertical extent of sediment contamination in Newark Bay, as defined by the AOC. TSI is scheduled to submit the Phase I investigation report to EPA by September 2006. EPA's preliminary conclusions regarding the data will only be made once EPA reviews and approves the Phase I investigation report. Conclusions drawn from the data packages prior to EPA's approval of the Phase I investigation report in September 2006 may be premature. Concurrent with the evaluation of the data for inclusion in the Phase I investigation report, TSI will also prepare a Phase II Work Plan, its goal of which is to fill any data gaps needed to fully characterize the contamination in Newark Bay. The Phase II Work Plan is also scheduled for submittal in September 2006.

Internet Address (URL) • <http://www.epa.gov>

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Per your request at our meeting on March 21, 2006 and the request sent via email to my staff from Bill Slezak the same day, please see the table below for some rough dates for an overall Remedial Investigation/Feasibility Study (RI/FS) schedule, including the milestones which I highlighted above as well as more specific details regarding the Phase II work. This does not include input from TSI and it has been largely based on the Lower Passaic River Restoration Project schedule because we are working to closely coordinate the two projects. Given that that project is in the middle of negotiations to determine how best to move the project forward, there may be implications on the manner in which the Newark Bay Study moves forward as well. Therefore, there are a large number of uncertainties involved in this longer range schedule which should be taken into consideration. However, by taking this schedule through the preparation of a Record of Decision (ROD), I hope that this will assist you with clearing up any confusion regarding our timeline for implementation of a final remedy, which would occur after the issuance of the final ROD. As you know, contrary to suggestions made by NRDC, and, unfortunately, picked up by Judge Scheindlin, EPA developed these schedules independently of the Harbor Deepening Project (HDP); it has neither asked the Corps to adjust the HDP schedule to fit our study nor adjusted or delayed our schedule because of the HDP schedule.

| Activity | Estimated Completion |
|--------------------------------------|-----------------------------------|
| 1 st Phase I data package | Mid-May '06 |
| 2 nd Phase I data package | Late July '06 |
| Phase I investigation report | September '06 |
| Phase II Work Plan | September '06 |
| Phase II Field Work | Late January '07 – Late April '07 |
| Phase II data package | October '07 |
| Completion of all Field Work | Winter '08 |
| Remedial Investigation Report | Winter '09 |
| Draft Feasibility Study | Winter '10 |
| Feasibility Study | Summer '11 |
| Record of Decision | Winter '12 |

My staff and I are committed to continuing our coordination efforts with you and your staff as we move forward with the next phases of the Newark Bay Study.

Sincerely,



George Pavlou, Director
Emergency and Remedial Response Division

DRAFT
FOR AGENCY REVIEW AND COMMENT BEFORE FINALIZATION

CENAN-PP-H

20 April 2006

MEMORANDUM FOR RECORD

SUBJECT: Newark Bay Study Area Coordination Team Meeting

1. The regularly scheduled monthly coordination meeting was held on 11 April 2006 at the USEPA office to discuss the USACE and EPA activities in the NBSA. The following persons attended:

| | | |
|----------------------|--------------------|--|
| Tom Shea | USACE, NY District | Project Manager |
| Scott Nicholson | USACE, NY District | Project Manager |
| Naomi Fraenkel | USACE, NY District | Project Planner |
| Jenine Gallo | USACE, NY District | Project Biologist |
| Beth Nash | USACE, NY District | Environmental Engineer |
| Steve Weinberg | USACE, NY District | Project Engineer |
| Ben Baker | USACE, NY District | Regional Technical Specialist, Geology |
| Ellen Simon | USACE, NY District | Assistant District Counsel |
| Elizabeth Buckrucker | USACE, Kansas City | Project Manager |
| Elizabeth Butler | USEPA | Remediation Project Manager |
| Amelia Wagner | USEPA | Assistant Regional Counsel |
| Keyhan Mehran | NOAA | Coastal Resource Coordinator |
| Steve Dorrier | PANYNJ | Program Manager |
| Susan Metzger | HDR-LMS | Partner |
| Robert Engler | Moffat & Nichol | Sr. Scientist |

2. The following is a summary of the discussions held during the monthly coordination meeting:

a. The AK 1 contract is complete as of 21 Feb 06.

b. The AK 2/3 contract is about 68% complete. Scheduled completion is December 2006. Contractor is removing some non-HARS material, but mostly rock or till. Contract should be completed by the time EPA is prepared for Phase II sampling.

c. The S-KVK-2 contract is at about 45% complete based on volume. They are currently drilling, blasting, and removing rock. Contractor should be east of the Bayonne Bridge by the time EPA is prepared for Phase II sampling.

d. The USACE is in the process of soliciting the Newark Bay O&M contract. The first step in the contract would be to test the material and then begin dredging. Dredging is not expected to begin until about July. All test data will be provided to EPA.

e. The Corps received the EPA letter outlining the general RI/FS schedule and when remediation might start. It is currently estimated that EPA would sign a ROD in 2012 and remediation may start in 2015. It was noted that the HDP should be completed by 2012.

f. EPA Phase 2 Sampling. EPA stated that the Phase 2 sampling will now be conducted in the Winter/Spring of 07. The Work Plan is due in September and should be approved in December/January.

DRAFT
FOR AGENCY REVIEW AND COMMENT BEFORE FINALIZATION

The objective of the sampling is to complete the determination of the nature and extent of contamination. EPA will be better able to designate the study area based on the Phase 2 data.

g. The EPA water and biological data sampling is tied to their modeling efforts. Malcolm Pirnie is developing the work plan for this data collection effort and it should be ready for review in the July 06 timeframe.

h. The PANYNJ reported that they will be performing O&M dredging at the Howland Hook terminal in the Fall 06 and are obtaining the permits for that work now. They also will be doing O&M dredging of the Port Elizabeth Berths this summer and already has the permits for the work.

i. It was noted that there is a permit request for a power cable to cross the Newark Bay. EPA Superfund should be invited to the pre-application meeting, so that their concerns can be identified.

j. It was agreed that the best way to share the Phase 1 data was via PR&MIS. Elizabeth Butler will notify the Corps when the data is posted to that site and is available for download.

k. It was noted that the BAZ report was still in draft format and should be referenced as such.

l. The USACE asked if there was any potential conflict of interest in having Malcolm Pirnie assist in its preparation of the new EA that it is working on. EPA did not see any conflicts.

m. The NRDA Trustees reported that they will be meeting to discuss what information they have that could be useful the Newark Bay or Lower Passaic Studies.

n. The Corps is preparing a new EA based on the 8 May Court Ruling. Alternatives analysis may include separating out the side slopes into a separate contract.

p. The next meeting will be on 9 May 06 at 1000 hrs at the USACE offices.

4. POC is the undersigned at (917) 790-8304.

THOMAS J. SHEA, III
Project Manager

MEMORANDUM FOR RECORD

SUBJECT: Newark Bay Study Area Coordination Team Meeting

1. The regularly scheduled monthly coordination meeting was held on May 18, 2006 at the Corps of Engineers office to discuss the USACE and EPA activities in the NBSA. Attendees are as follows:

| | | |
|----------------------|--------------------|------------------------------|
| Hal Hawkins | USACE, NY District | Project Manager |
| Scott Nicholson | USACE, NY District | Project Manager |
| Mike Millard | USACE, NY District | Project Manager |
| Patricia Donohue | USACE, NY District | Project Manager |
| Bryce Wisemiller | USACE, NY District | Project Manager |
| Bill Slezak | USACE, NY District | Chief, Harbor Program |
| Beth Nash | USACE, NY District | Project Manager |
| Steve Weinberg | USACE, NY District | Engineering Division |
| Naomi Fraenkel | USACE, NY District | Planning Division |
| Jenine Gallo | USACE, NY District | Planning Division |
| Elizabeth Buckrucker | USACE, Kansas City | Project Manager |
| Elizabeth Butler | USEPA | Remediation Project Manager |
| Patricia Hick | USEPA | Assistant Regional Counsel |
| Paul Higgins | PANYNJ | Attorney |
| Reyhan Mehran | NOAA | Coastal Resource Coordinator |
| Tim Kubiak | FWS | Coastal Resource Coordinator |

2. The following is a summary of the discussions held during the monthly coordination meeting:

a. The AK 2/3 contract is approximately 75% complete. Corps contractor is waiting for the opening of the environmental window on June 1 to complete dredging the non-HARS material near Shooter's Island. Corps will conduct TSS monitoring when non-HARS dredging starts up again.

b. The AK 1 deepening contract is 100% complete

c. The S-KVK-2 deepening contract is at about 57 % complete based on volume. The contractor has completed all upland non-HARS dredging in the contract which we all in the Study Area. The contractor is currently dredging in those areas which require drilling, blasting and the removal of rock, or the of HARS material.

d. The Corps deferred the process of soliciting the S-NB-1 contract. .

e. NBSA EA: The Corps is the process of revising its EA. EPA Phase I test results (first dataset of two) are under review and being incorporated into the EA analyses.

f. On May 9, 2006 the Corps opened bids for its "Maintenance Dredging of Newark Bay, New Jersey" contract. We are currently reviewing the bids with the cost share sponsor, PANYNJ, and discussing which options may be included in the contract. The basic work is the southern half of the Port Newark Peirhead channel and the option work is located in Port Newark channel. The apparent low

bidder would be required to, within 70 days of being notified of its status as apparent low bidder, test the material and find an up-land placement site before an award for the contract is issued.

A public notice was recently issued regarding the Corps' permit application to dredge at New York Container Terminal (NYCT) at Howland Hook.

g. EPA Phase 1 Sampling: first dataset of two was received 16 May 2006 by the Corps. Bryce Wisemiller (Corps) did a preliminary review of the data and reported that the data did not appear anomalous to prior contaminant testing performed in the NBSA, particularly in the areas planned for navigation dredging and added that the preliminary results confirm expectations that no real anomalies have yet been identified. Corps added that the preliminary results seemed to validate the January EA analyses and assumptions. Corps asked that EPA review data and make a determination in the area where O&M will be performed and in the 50 ft navigation channels, and determine if additional testing will be needed in these areas for Phase 2 testing as soon as possible. Mr. Wisemiller noted that the data did not appear to indicate a direct need for additional testing in the active federal channels, as part of the EPA's Phase 2 plan EPA (Butler) concurred. Scott Nicholson requested that the EPA review the Phase 1 results and provide their concurrence on the January EA's conclusions regarding the effects of HDP to RI study.

h. EPA Phase 2 Sampling: TSI is required to provide their proposed Phase 2 sampling plan two months after providing the Phase 1 test results (due end of July). EPA stated that it expected the draft Phase 2 plan sometime in early September. EPA expects its Phase 2 sampling to begin no sooner than Spring 07. Phase 2 is expected to be a data gap refinement, trying to narrow in on where data is lacking or where additional data is needed to better define the extent of contamination. EPA stated that it did not expect to return to the channels to either resample for Phase 2 or to identify any Federal channels as remediation targets. EPA expects that TSI will begin another sampling program in 2007, which will focus on source sampling, such as CSO's.

i. EPA indicated that funding for the Passaic Study could affect progress on the Newark Bay Study.

j. Jenine Gallo (Corps) indicated to EPA that a lot of data is being collected as part of both the ongoing project support for environmental studies that may assist the EPA NBSA effort. The Corps and EPA will follow up on coordinating current and new data collection that may assist EPA's NBSA efforts. Bryce Wisemiller pointed out that for the model it will likely be very important to accurately characterize sediment mobility during potential future storm event conditions (tropical and extra tropical), given the spatial distribution of contaminants in the Passaic and Newark Bay.

3. Follow Ups:

Corps asked EPA if it would sign Minutes of the meetings. Two examples were given: HARS determinations and DMMP meetings

TASKER: EPA will look into this issue and see if it could sign minutes

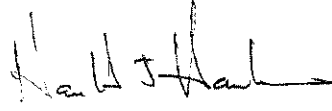
Question was asked about Newark Bay Confined Disposal Facility and its planned closure.

TASKER: Paul Higgins of NYPA will discuss issue with Steve Dorler (NYNJPA) and Susanne Dietrick of NJDEP.

TASKER: Jenine Gallo (Corps) will provide EPA with the TSS monitoring scope of work.

The next meeting will be on 13 June 06 at 1000 hrs at the EPA offices.

4. POC is the undersigned at (917) 790-8204.

A handwritten signature in black ink, appearing to read "Harold J. Hawkins". The signature is written in a cursive style with a long horizontal stroke at the end.

Harold J. Hawkins, PE
Project Manager

MEMORANDUM FOR RECORD

SUBJECT: Newark Bay Study Area Coordination Team Meeting

1. The regularly scheduled monthly coordination meeting was held on August 8, 2006 at the Corps of Engineers office to discuss the USACE and EPA activities in the NBSA. Attendees are as follows:

| | | |
|----------------------|--------------------|------------------------------|
| Hai Hawkins | USACE, NY District | Project Manager |
| Scott Nicholson | USACE, NY District | Project Manager |
| Mike Millard | USACE, NY District | Project Manager |
| Patricia Donohue | USACE, NY District | Project Manager |
| Bryce Wisemiller | USACE, NY District | Project Manager |
| Bill Slezak | USACE, NY District | Chief, Harbor Program |
| Beth Nash | USACE, NY District | Project Manager |
| Steve Weinberg | USACE, NY District | Engineering Division |
| Naomi Fraenkel | USACE, NY District | Planning Division |
| Jenine Gallo | USACE, NY District | Planning Division |
| Elizabeth Buckrucker | USACE, Kansas City | Project Manager |
| Elizabeth Butler | USEPA | Remediation Project Manager |
| Patricia Hick | USEPA | Assistant Regional Counsel |
| Paul Higgins | PANYNJ | Attorney |
| Reyhan Mehran | NOAA | Coastal Resource Coordinator |
| Tim Kubiak | FWS | Coastal Resource Coordinator |

2. The following is a summary of the discussions held during the monthly coordination meeting:

- a. The AK 2/3 contact is approximately 63% complete.
- b. The S-KVK-2 deepening contract is at about 63 % complete based on volume.

3. BBL provided an overview of the Phase 1 testing Program done in Newark Bay RI/FS.

4. POC is the undersigned at (917) 790-8204.



Harold J. Hawkins, PE
Project Manager

Newark Bay Remedial Investigation Overview of Phase I Program

August 8, 2006



Initial Approach

- Focused on Goal 1
 - USEPA primarily responsible for Goals 2 and 3
- Also addressed portions of Goals 2 and 3
- The complex nature of the site and sparse historical data requires a sequenced sampling strategy
 - Consistent with December 2005 USEPA sediment guidance
 - Phase I/Phase II

Phase I DUOS/DQOS

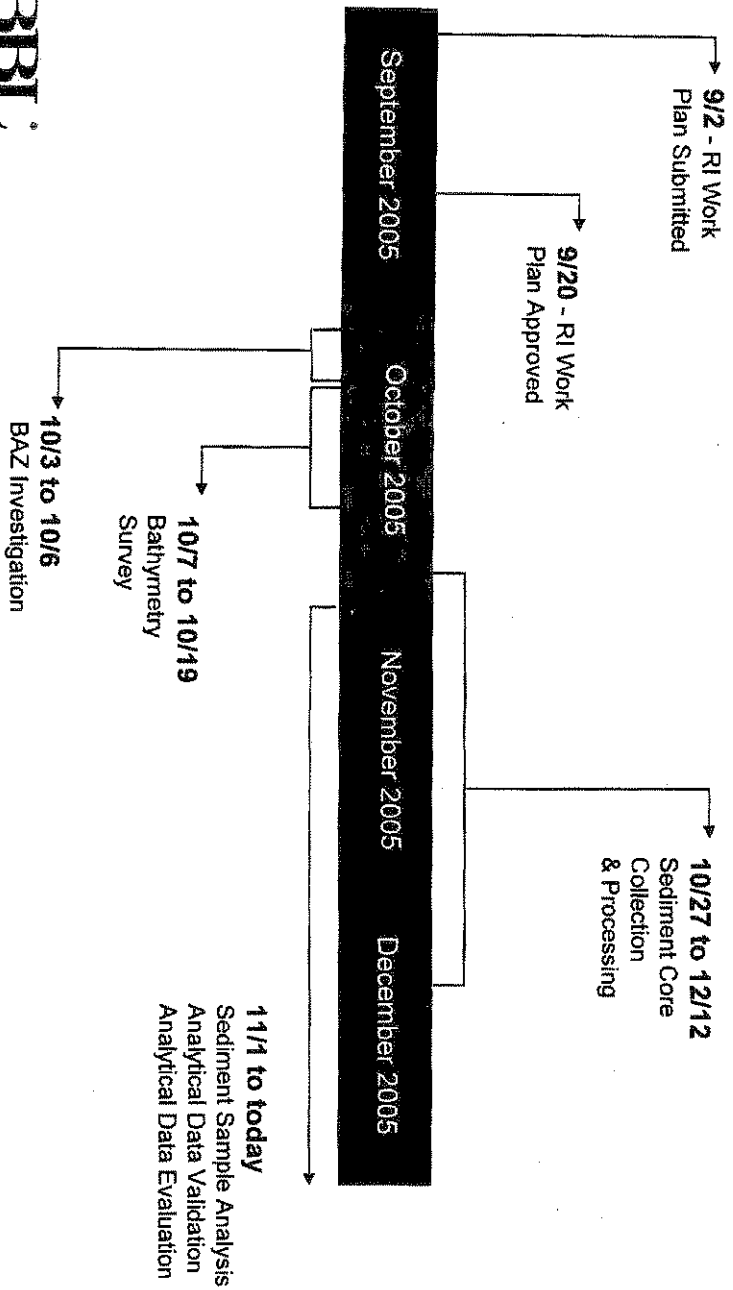
RI Goal 1 (Nature/Extent)

- Estimate approximate depth of 1940 horizon
- Understand constituent patterns in sediments and preliminarily identify “hot spots”
- Confirm presence and extent of geomorphic areas
- Confirm current analytical suite

Phase I Program Components

- BAZ Investigation
- Bathymetric Survey
- Sediment Coring
 - Nature/Extent
 - Source Identification
- Other source track-down activities

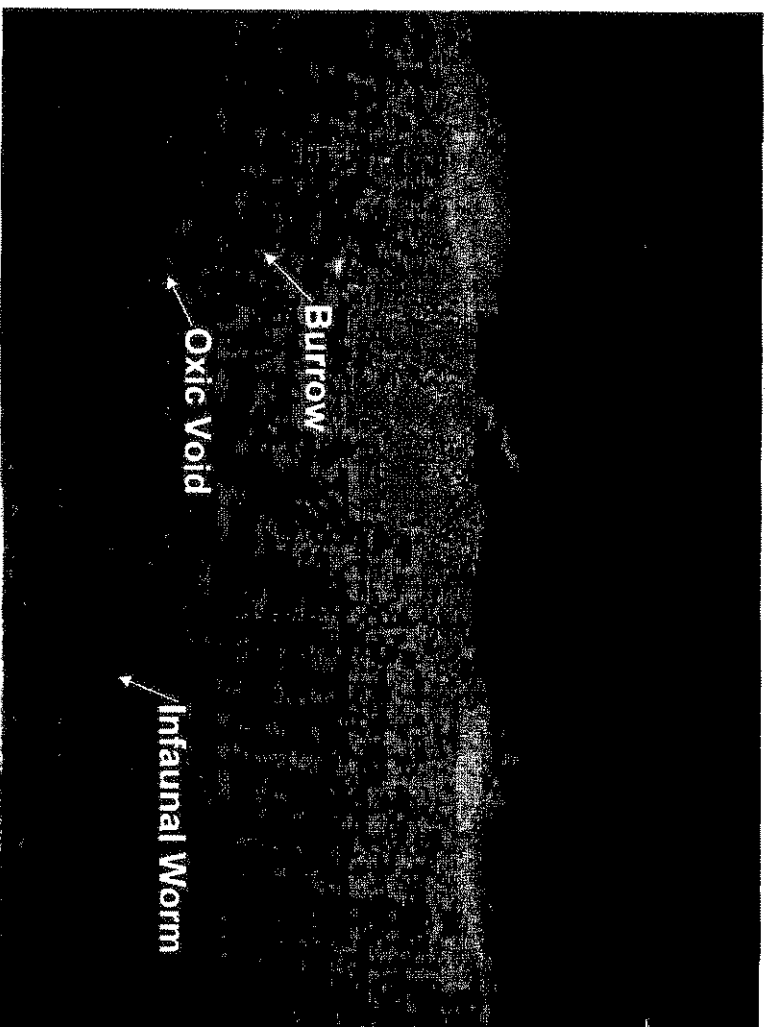
Timeline of Phase I Program



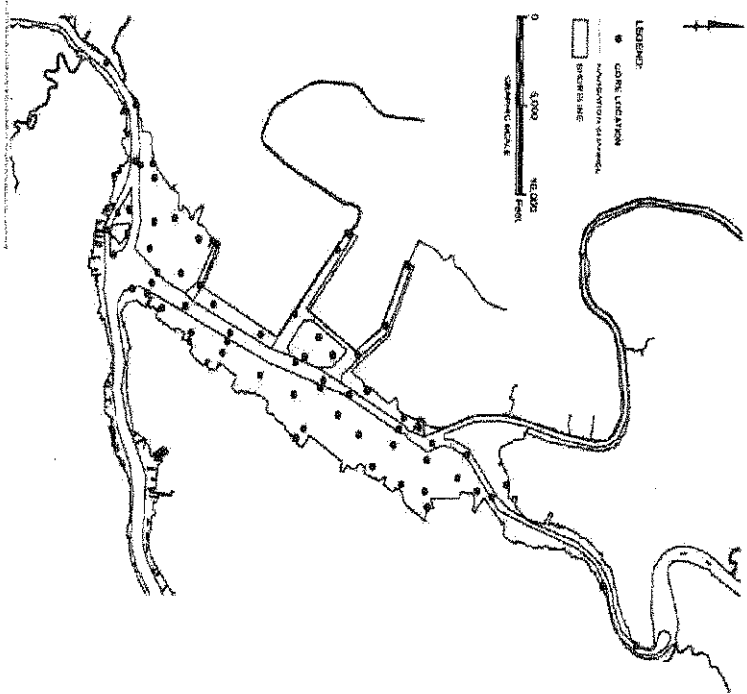
BAZ Investigation – Primary Findings

- Average BAZ depth relatively consistent across Newark Bay
 - Sub-tidal Flats: 5.4 inches
 - Inter-tidal Areas: 5.7 inches
 - Navigation Channels: 6.5 inches
- BAZ thickness corresponds well with depths estimated in other studies
- RI Work Plan BAZ depth of 6 inches is appropriate for sediment sampling work
- Summarized results in a November 14, 2005 memorandum to USEPA

Example SPI Image



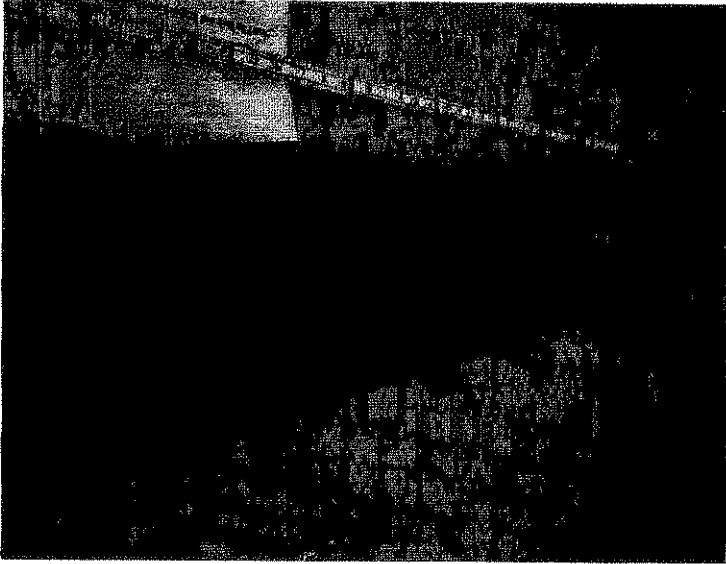
Sediment Core Collection Locations



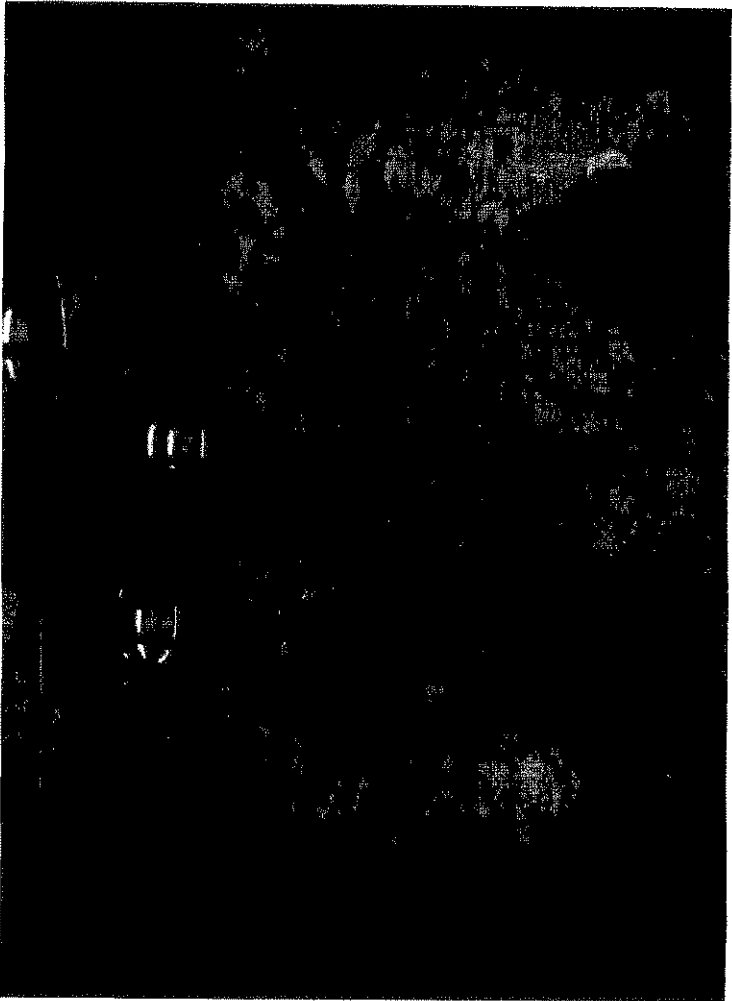
Coring Operations



Red Clay



Processing



Analytical Chemistry – Broad Findings

- Depending on the constituent, observed high detection frequencies and relatively elevated concentrations
- Relatively low detection frequencies observed for VOAs, organotins
- Found generally higher mean concentrations at depth (i.e., greater than 6” deep)
- Phase I results generally consistent with historical dataset

Example Statistical Summary

| Analytes | Depth | Sub-tidal Flats | | | | |
|-----------------------------|------------|-----------------|---------------------|------------------|------------------|--------|
| | | n | Detection Frequency | Range of Detects | % Exceeding ERMs | Mean |
| Mercury (mg/kg) | Surface | 28 | 100% | 0.27 - 9.5 | 82% | 2.34 |
| | Subsurface | 102 | 97% | 0.0035 - 21.6 | 65% | 3.89 |
| Total PCB Congeners (ug/kg) | Surface | 28 | 100% | 4.39 - 2,910 | 71% | 549 |
| | Subsurface | 102 | 97% | 0.00183 - 7,960 | 48% | 1,350 |
| 2,3,7,8-TCDD (pg/g) | Surface | 28 | 100% | 0.947 - 592 | .. | 73.5 |
| | Subsurface | 102 | 77% | 0.11 - 3,220 | .. | 229 |
| Total DDT (ug/kg) | Surface | 28 | 79% | 8.2 - 1,000 | 25% | 75.9 |
| | Subsurface | 102 | 61% | 0.55 - 2,830 | 41% | 96.3 |
| Total PAHs (ug/kg) | Surface | 28 | 100% | 1,765 - 137,000 | 4% | 16,700 |
| | Subsurface | 102 | 75% | 66 - 101,000 | 13% | 18,900 |
| Lead (mg/kg) | Surface | 28 | 100% | 22.4 - 863 | 21% | 168 |
| | Subsurface | 102 | 100% | 1.7 - 1,070 | 39% | 201 |

Notes:

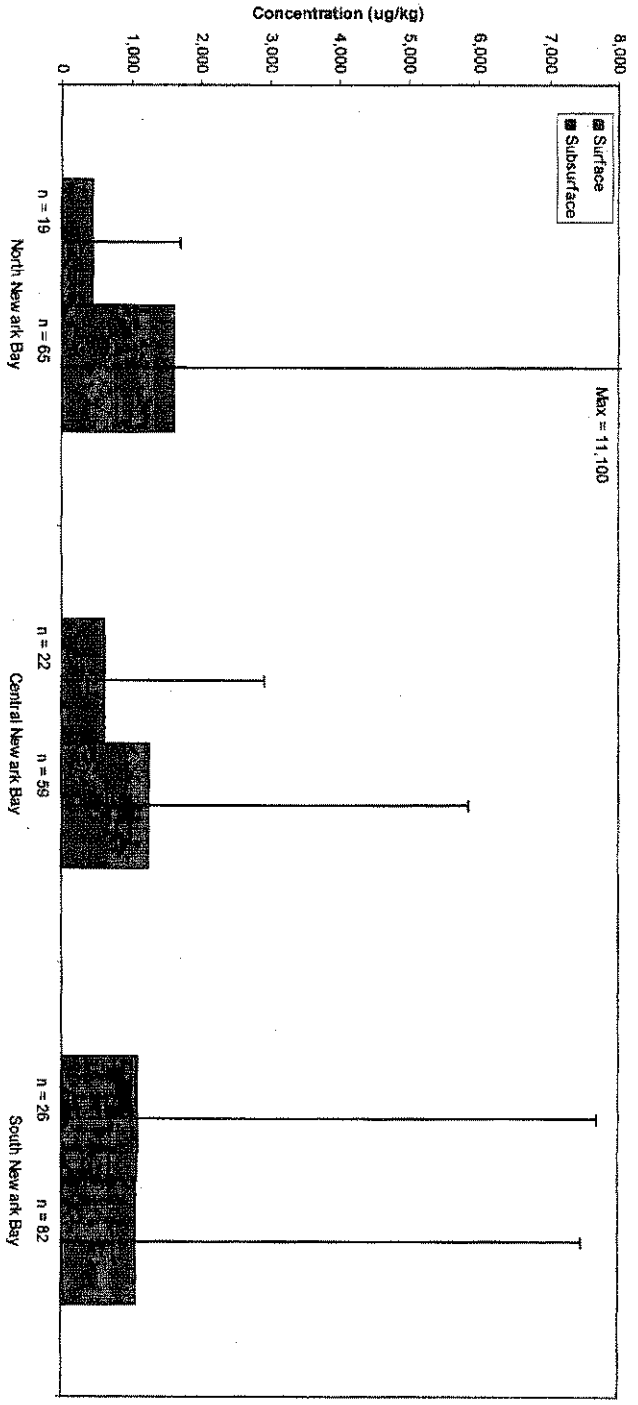
Mean values were calculated using one-half the detection limit for non-detects.

Parent and duplicate values were averaged to create one result.

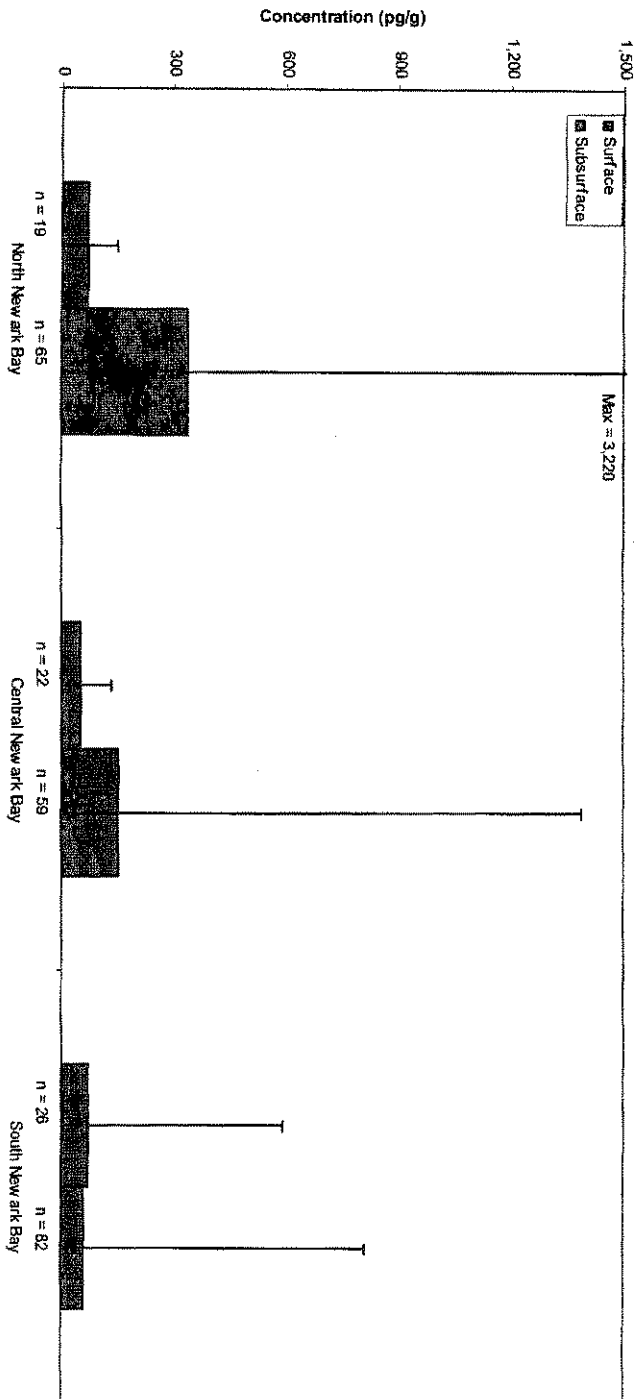
Constituent Breakdown – Total PCB Congeners

- High detection frequencies noted across geomorphic areas
- Relatively high mean concentrations found throughout Bay
- Highest individual concentrations found in Northwest and Southwest Sub-tidal Flats
- Highest mean concentrations generally found at depth
 - Particularly evident in northern regions

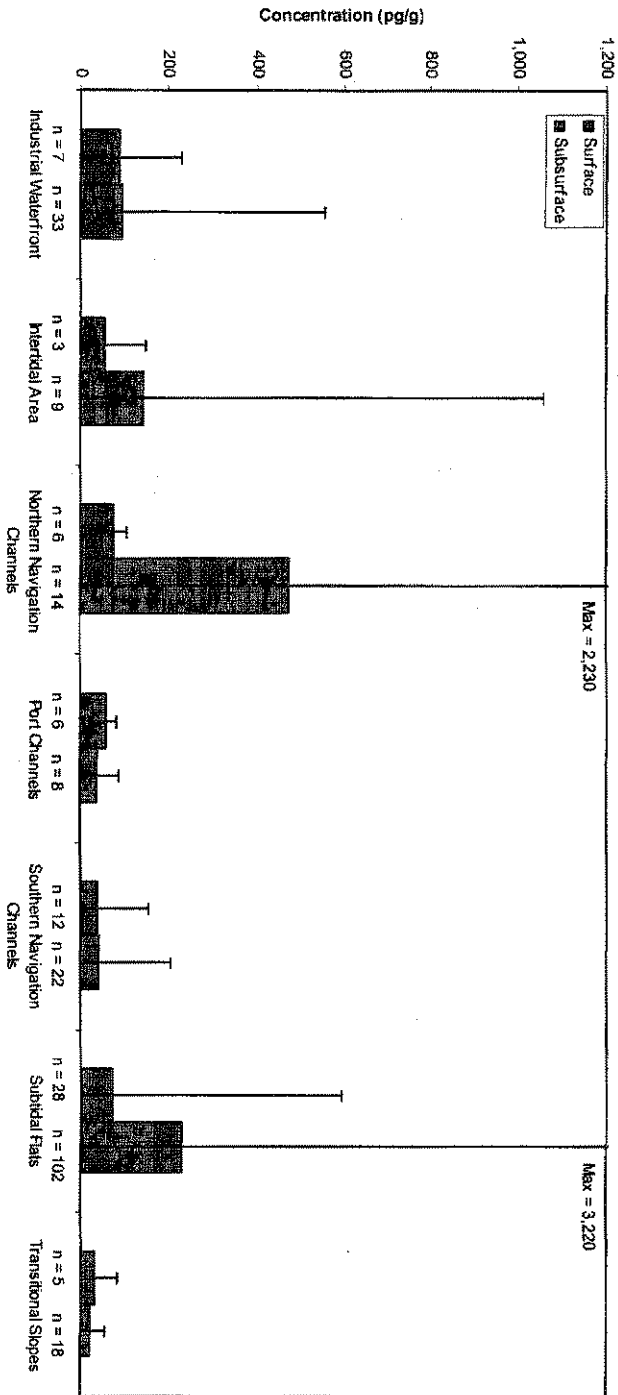
Total PCB Congener Concentrations Across Newark Bay



2,3,7,8-TCDD Concentrations Across Newark Bay



2,3,7,8-TCDD Concentrations Across Geomorphic Areas



Summary of Analytical Findings by Geomorphic Area (cont'd)

- Southern Navigation Channels (considering Industrial Waterfront)
 - High detection frequencies for most chemicals of interest
 - Relatively elevated levels of mercury, lead, Total PCB Congeners, and Total DDT
 - Higher mean concentrations consistently at depth
 - Highest concentrations south of Shooters Island and in Arthur Kill
- Transitional Slopes
 - High detection frequencies for most chemicals of interest
 - None of the identified constituents are shown to be relatively elevated
 - Generally higher concentrations at the surface

Summary of Analytical Findings by Geomorphic Area (cont'd)

- Industrial Waterfront
 - High detection frequencies for most chemicals of interest
 - Relatively elevated levels of mercury, lead, Total PCB Congeners, 2,3,7,8-TCDD, Total DDT, and Total PAHs
 - Elevated concentrations found throughout core
 - Southwest Sub-tidal Flat and Port Newark especially impacted
- Inter-tidal Areas (considering Industrial Waterfront)
 - High detection frequencies for most chemicals of interest
 - Relatively elevated levels of lead, 2,3,7,8-TCDD, and Total DDT
 - No consistent surface/subsurface trends

Radiochemistry Program

- Collected Be-7, Pb-210 and Cs-137
- Used to evaluate short and long-term deposition rates
- Attempted to date sediments to 1940 time period

Be-7 Results

- Analyzed at all 69 coring locations
- 68% of samples reported activity above quantitation level
 - Levels ranged up to 3.76 pCi/g
- Statistically significant break in concentration at 25 ft of water
 - Highest levels generally found in Channels, Transitional Slopes

Pb-210

- Analyzed at 51 coring locations
- 24 cores produced reliable sedimentation rates
- Computed rates ranged from 0.36 in/year (eastern Sub-tidal Flat; Core 037) to 3.5 in/year (Turning Basin; Core 052)
- Cores 025 and 068 (southwestern shoreline) and Core 041 (near CDF) suggest anthropogenic activity (slumping or mass dumping)

CS-137

- Analyzed at 45 coring locations
- 20 cores showed measurable rate of deposition
 - Rates varied up to 1.8 in/year (CDF Sub-tidal Flat; Core 044)
- More difficult to interpret remaining 25 cores
 - 11 very shallow (0.24 in/year); mostly Sub-tidal Flats
 - 13 inconsistent patterns
 - 1 sloughing (Core 068)

Summary of Radiochemistry Findings

- Findings generally consistent with preliminary CSM
- Minimal deposition in Sub-tidal Flats
 - Exception: In/around suspected Sub-tidal Flat anthropogenic features
- Preferential deposition in deeper navigation channels
 - Not as prevalent as thought in Northern Navigation Channels
- Cored/sampled to 1940 horizon in 7 locations

Source Identification Process

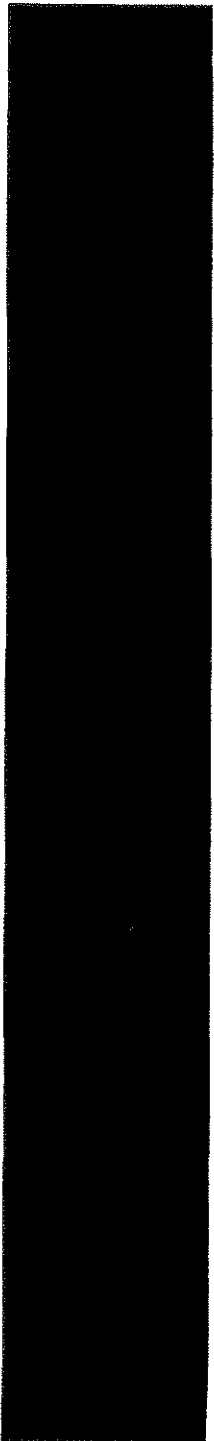
- Conducted intensive research on potential Bay sources
 - CSOs/SWOs
 - POTWs
 - Hazardous Waste Sites
 - e.g., CERCLA Sites
 - Secondary tributaries
- Obtained cores as part of Phase I in selective waterfront locations with Bay
- Deliver Source Identification Report to USEPA

Check on Phase I DQOs

- Confirm presence of geomorphic areas
- Estimate approximate depth of 1940 horizon
- Assess broad constituent patterns, and attempt to identify “hot spots”
- Confirm that the current analytical suite is appropriate
- Preliminarily characterize ecologically sensitive areas
- Gather information on on-going sources
- Confirm current and historical discharges in isolated areas

Phase I Summary

- Phase I Program considered to be very successful
 - Met Field Completeness goal
 - Met Analytical Completeness goal
 - Met majority of DUOs/DQOs
- Propose that future sampling efforts exclude VOAs and organotins
- Did not completely meet goal of finding 1940 horizon, especially in certain depositional areas

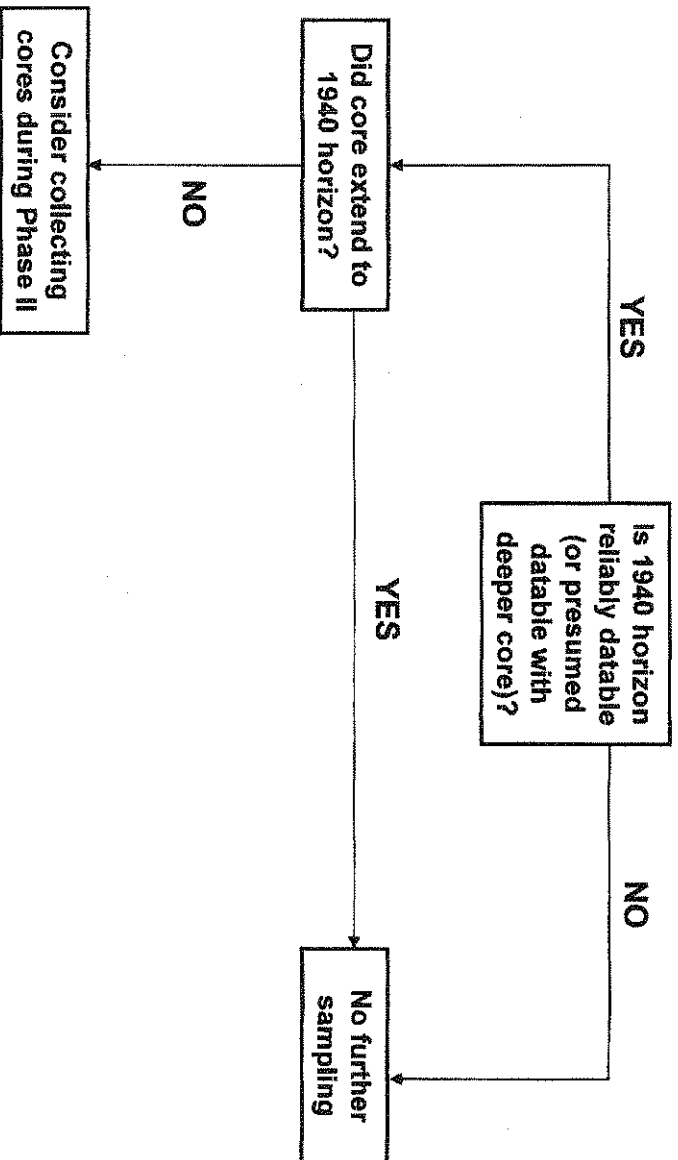


Phase II Considerations

Phase II Concepts

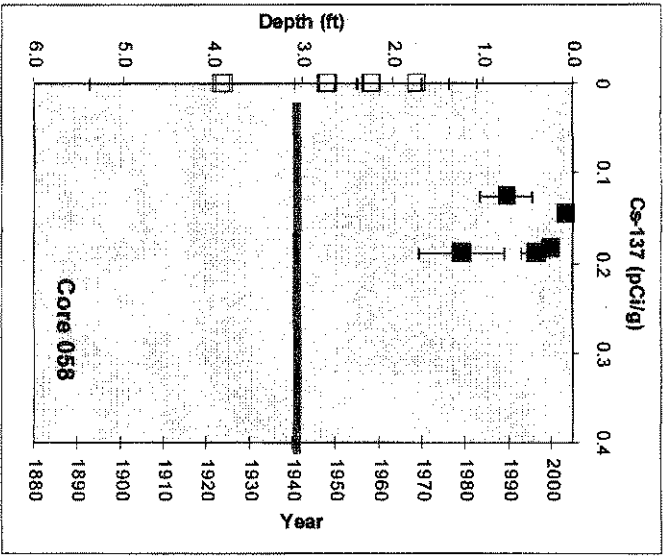
- Seek to fill data gaps produced by Phase I Program
 - Complete search for 1940 horizon in depositional areas
 - Will allow for a more comprehensive understanding of historical loading patterns
- Supplement with additional source identification cores

Phase II Approach

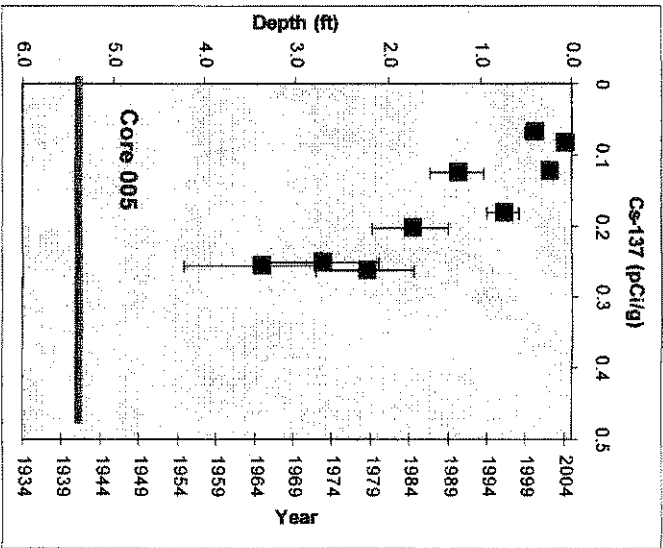


Did Core Extend to 1940 Horizon?

YES – core extended to 1940 horizon

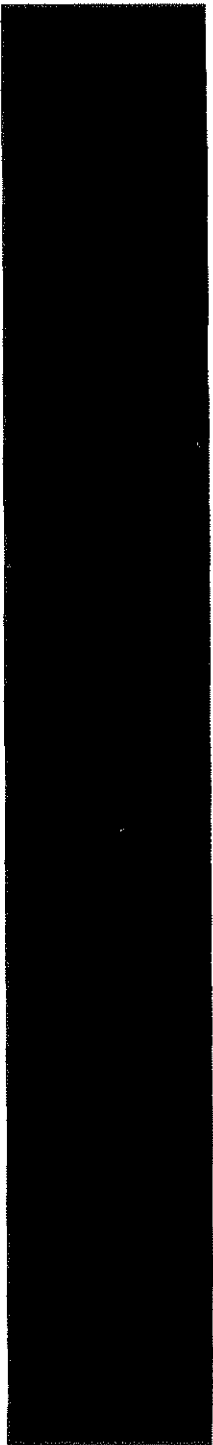


NO – core shallower than 1940 horizon

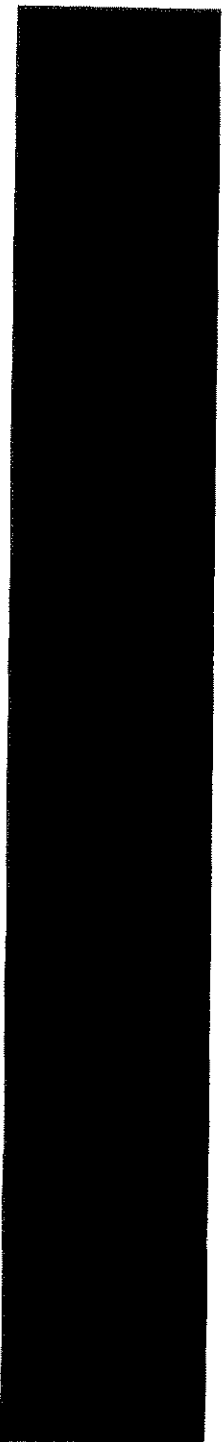


Phase II Overview

- Consider collecting additional chemistry and radiochemistry cores in those depositional areas where we may find 1940
- Consider collecting additional Industrial Waterfront cores
- Target same chemistry and radiochemistry analytes
 - Proposed exceptions: VOAs, organotins
- Utilize similar segmentation scheme as used in Phase I



QUESTIONS/DISCUSSION



Radiochemistry

Presentation Overview

- Phase I Goals and Approach
- Phase I Program and Primary Findings
- Phase II Considerations

Newark Bay Study Area RI Goals

- **RI Goal 1:** Determine the horizontal and vertical distribution and concentration of PCDDs, PCDFs, PCBs, PAHs, pesticides, and metals for the Newark Bay Study Area sediments
- **RI Goal 2:** Determine the primary human and ecological receptors (endpoints) of PCDDs, PCDFs, PCBs, PAHs, pesticides, and metals contaminated sediments for the Newark Bay Study Area
- **RI Goal 3:** Determine the significant direct and indirect continuing sources of PCDDs, PCDFs, PCBs, PAHs, pesticides, and metals to sediments in the Newark Bay Study Area

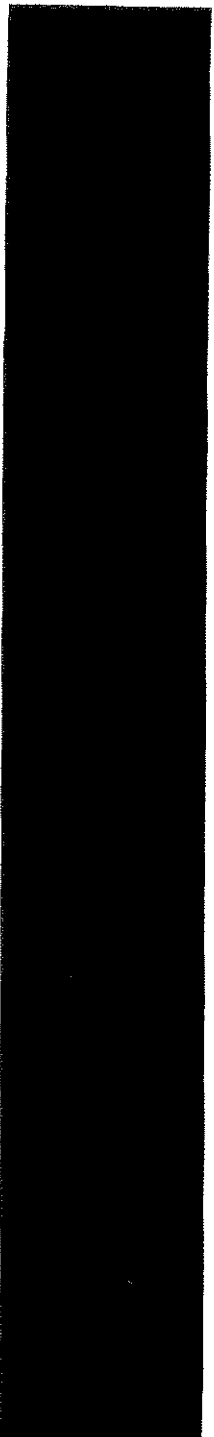
Phase I DUOS/DQOs (cont'd)

RI Goal 2 (Risk Assessment)

- Preliminarily characterize sediment concentrations in inter-tidal mudflats
- Determine BAZ depth

RI Goal 3 (Source Identification)

- Gather information to identify on-going sources
- Confirm (through sediment sampling) impact of select areas believed to be affected by historic and/or current discharges

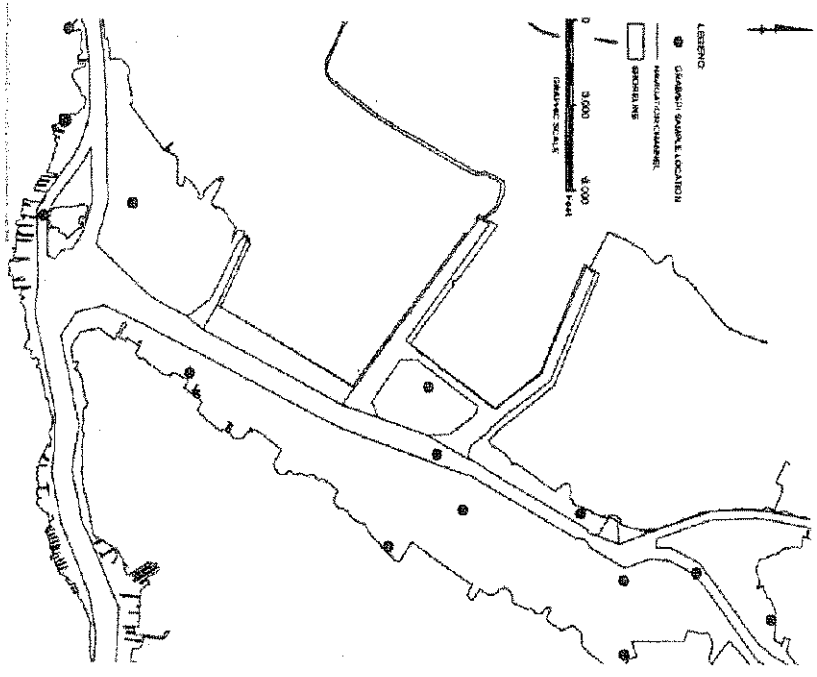


Phase I Program and Primary Findings

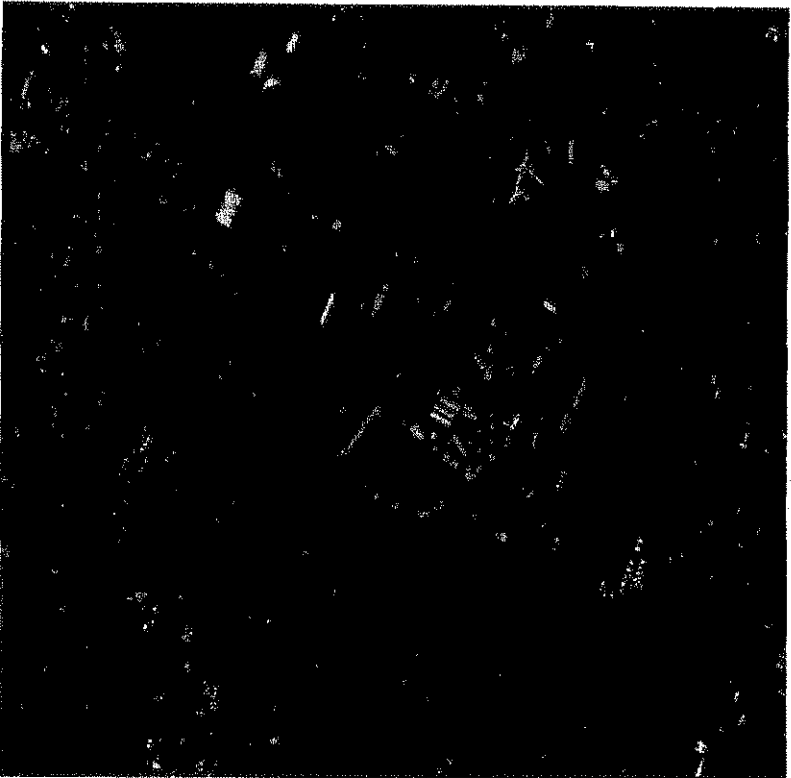
Overview of Phase I Program – BAZ Investigation

- Performed to determine depth of the BAZ
- Obtained Sediment Profile Images (SPI) and grab samples at 14 locations
 - Sub-tidal Flats (6)
 - Inter-tidal Areas (5)
 - Navigation Channels (3)
- Conducted literature search

BAZ Investigation (cont'd)



Bathymetric Survey Transect Locations



Bathymetric Survey – Primary Findings

- Bathymetric data confirmed presence of distinct geomorphic features within the Bay
- Original geomorphic area designations generally accurate
 - Slight adjustments made in several locations
- Deeper water than expected in Northern Navigation Channel (north of Port Newark) based on projected sedimentation
- Summarized results in a December 9, 2005 memorandum to USEPA

Operational Challenges

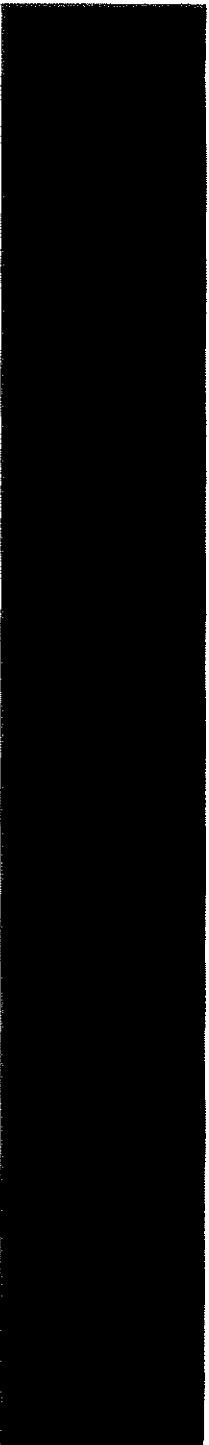
- Inclement weather conditions (strong winds) caused loss of 6 full coring days
- Minimal daylight hours available in winter months
- Location of marina caused long transit time and loss of approximately 2 hours/day of coring time
- Vessel traffic and dredging activities in Southern Navigation Channel caused significant idle time

Sediment Coring – General Field Observations

- Found limited sediment in active navigation channels
 - Required relocating several original locations
- Observed significantly less sediment than expected in Northern Navigation Channels
- Encountered refusal in red clay along Transitional Slopes, Northern Navigation Channels, Southern Navigation Channels, and Port Channels

Lithology Observations

- Navigation Channel and Transitional Slope sediments generally comprised of silt overlaying red clay
- Sub-tidal Flat sediments also comprised mainly of silts
- Minimal layering

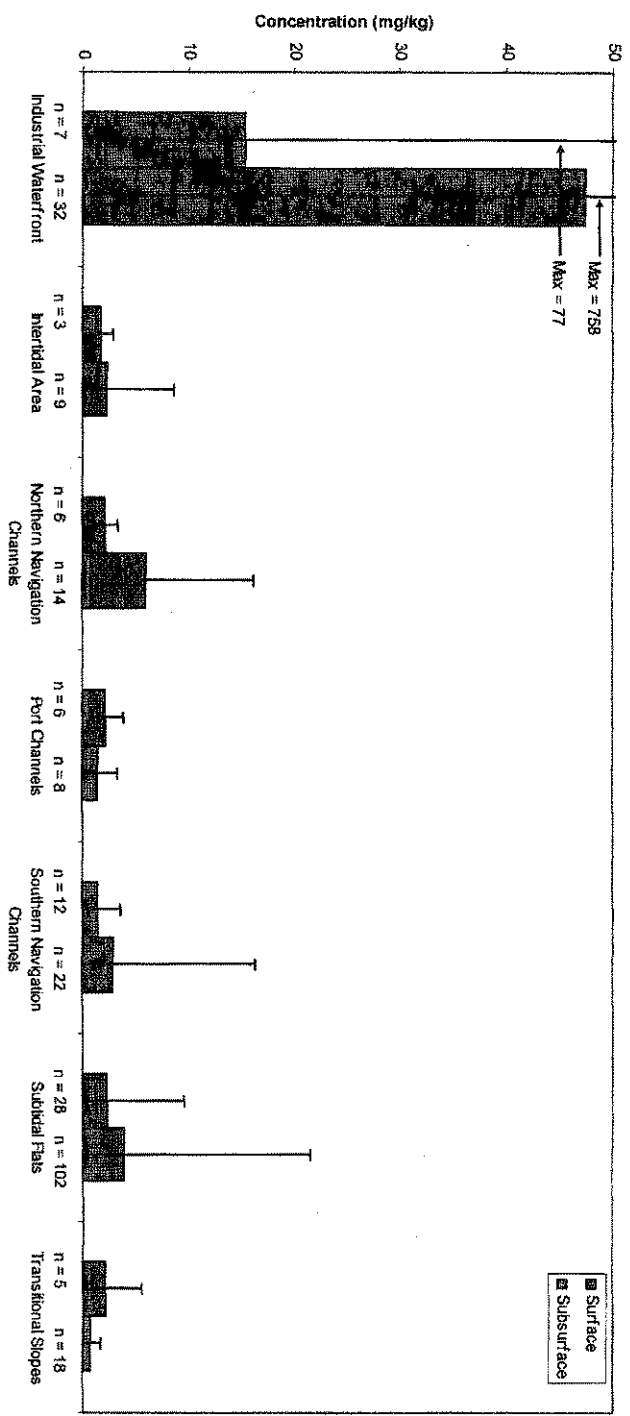


Analytical Chemistry

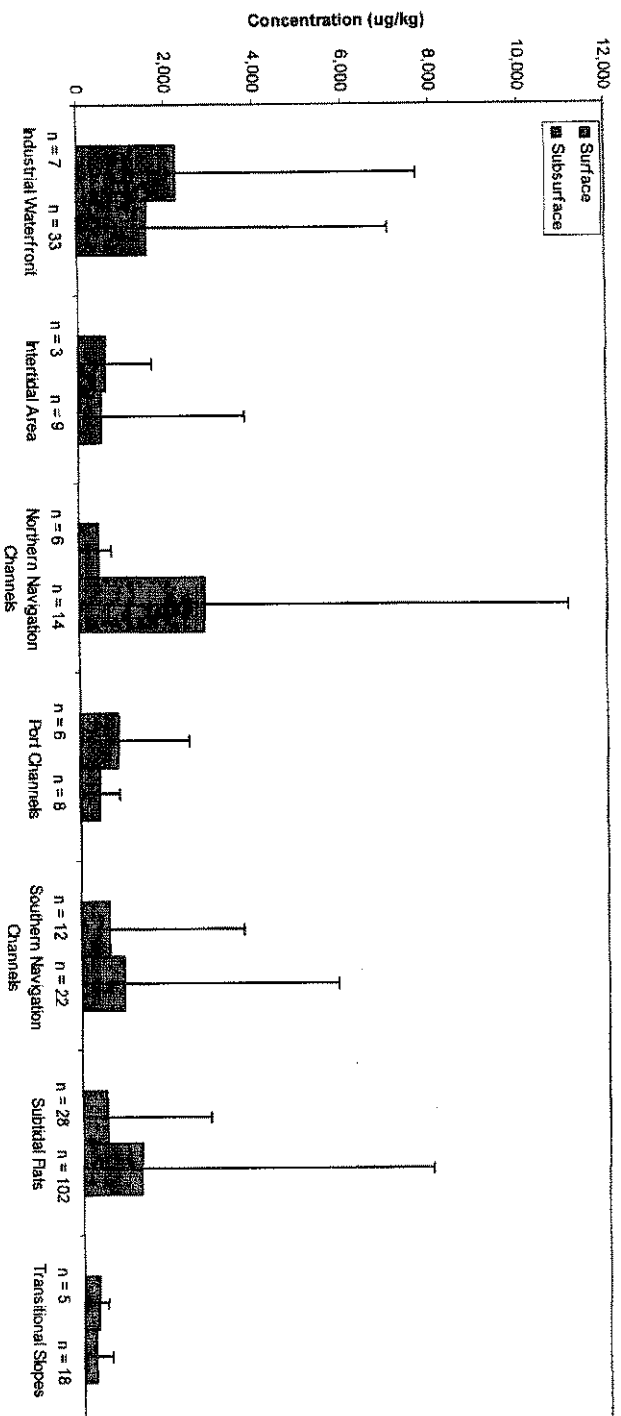
Constituent Breakdown – Mercury

- High detection frequencies noted across geomorphic areas
- Exceptionally high level detected in Port Newark (Industrial Waterfront core)
 - Top 6 hits found in this single core (049)
 - Influence from Pierson's Creek evident
- Otherwise relatively high concentrations found primarily in northern and southern regions
- Highest mean concentrations generally found at depth
 - Despite this, surface concentrations detected up to 10 ppm throughout

Mercury Concentrations Across Geomorphic Areas



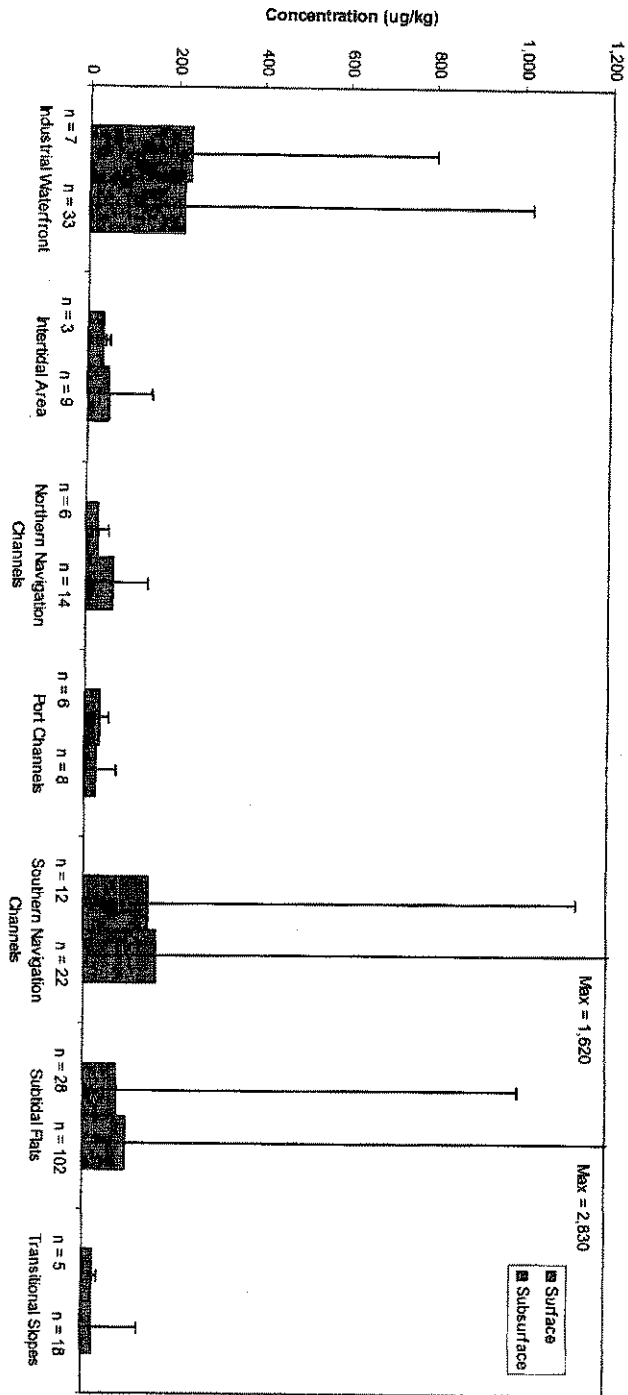
Total PCB Congener Concentrations Across Geomorphic Areas



Constituent Breakdown – 2,3,7,8 TCDD

- High detection frequencies noted across geomorphic areas
- Highest mean concentrations found predominantly in mid-to-northern region of Bay
- Northern Sub-tidal Flats contain highest individual concentrations
 - Elevated concentrations also found in isolated southern Sub-tidal Flat
- Highest mean concentrations generally found at depth
 - Surface/subsurface concentration ratio very pronounced in northern region

Total DDT Concentrations by Geomorphic Area



Summary of Analytical Findings by Geomorphic Area

- Northern Navigation Channels
 - High detection frequencies for all chemicals of interest
 - Relatively elevated levels of mercury, lead, Total PCB Congeners, 2,3,7,8-TCDD, and Total PAHs
 - Higher mean concentrations consistently at depth
 - Largely driven by Turning Basin
- Port Channels (considering Industrial Waterfront)
 - High detection frequencies for all chemicals of interest
 - Relatively elevated levels of mercury, lead, Total PCB Congeners, and Total PAHs
 - Higher mean concentrations consistently at surface
 - Port Newark (with Pierson's Creek influence) especially contaminated

Summary of Analytical Findings by Geomorphic Area (cont'd)

- Sub-tidal Flats
 - High detection frequencies for most chemicals of interest
 - Relatively elevated levels of mercury, lead, Total PCB Congeners, 2,3,7,8-TCDD, Total DDT, and Total PAHs
 - Northwest, CDF, and southwest regions especially impacted

Overall Analytical Summary

- Established broad constituent patterns in surface and subsurface
 - Phase I data support preliminary CSM
 - Exception: Sub-tidal Flat subsections
 - Anecdotal evidence suggests that “holes” existed at one time
- Preliminarily identified “hot spots” through outlier analysis
 - Completed without benefit of risk assessment
 - Identified potential outliers using inter-quartile range test (USEPA, 2006)
 - 11 cores contained one or more samples with one or more constituents as an outlier



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

24 August 2006

District Engineer

Mr. Alan J. Steinberg
Region 2 Administrator
U.S. Environmental Protection Agency
290 Broadway
New York, New York 10007-1866

Dear Mr. Steinberg:

As you may know, August 25 is my last day as the District Engineer for the New York District. I would like to express my appreciation to you and to your staff for the support and cooperation that you have given both to me and to the entire New York District.

One of our mutual challenges has been the New York and New Jersey Harbor Deepening project. As discussed at our Senior Partners meeting last March, we are following a dual track of developing a supplemental environmental assessment, while continuing to discuss and negotiate with stakeholders. In addition, our staffs continue to meet monthly to coordinate the many activities within the Newark Bay study area under the auspices of the Newark Bay Study Area Coordination team.

We will be looking to EPA to review our analyses and findings with regard to the impact to the RI/FS, and to include your conclusions in the final assessment that we are scheduled to complete by February 1, 2007. Because of the time sensitivity, my staff would like to start the review process, including the model runs, as soon as possible.

We appreciate your continued personal involvement and support.

Sincerely,

Richard J. Polo, Jr.
Colonel, U.S. Army
District Engineer

*Thanks sir
for the
partnership!*

CENAN-PP-H

4 October 2006

MEMORANDUM FOR RECORD

SUBJECT: Coordination of Continued Corps Dredging Activities in Newark Bay with EPA's Remedial Investigation of the Newark Bay CERCLA Study Area

1. At 1000 hours on 12 September 2006, the following met to discuss the subject issue:
 - Elizabeth Butler, USEPA R2
 - Ellen Simon, CENAN-OC
 - Reyhan Mehran, NOAA
 - Steve Dorrier, PANY/NJ
 - Amelia Wagner, USEPA R2
 - Patricia Donohue, CENAN-OP
 - Kenneth Peterson, CENAN-OP
 - Sharon Heller, PANY/NJ
 - Steven Weinberg, CENAN-EN
 - Elizabeth Buckrucker, CENWK-PM-ES (via conference phone)
 - Bryce Wisemiller, CENAN-PP-H

2. The annotated agenda and discussion items of the meeting are as follows:
 - a. Status of Corps Projects:
 - 1) Mr. Weinberg and Mr. Wisemiller noted that the ongoing Arthur Kill 2/3 contract was approximately 86% complete by volume and that only the relatively difficult rock material in remaining high spots was left to dredge. This contract was expected to be completed by December 2006. Also, they noted that the S-KVK-2 contract was approximately 68% completed and on schedule for completion by March 2007. In both contracts, all surficial silt material had been dredged for beneficial upland use.
 - 2) Mr. Wisemiller noted that on the upcoming S-NB-1 contract that the WQC/FC had been issued by NJDEP on 8 September 2006. Further, Mr. Weinberg noted that Plans and Specifications were expected to be issued within the next week to two weeks, with bid opening at least 30 days thereafter. Construction on the contract is expected approximately two months following, assuming no unexpected issues arise.
 - 3) Ms. Patricia Donohue noted that the O&M dredging in the Port Newark and Pierhead channels was still planned for contract award by the end of the month. Further, Ms. Donohue noted that the contract was currently planned to perform the basic work plus options 2 and 3 and possibly option 4, but not the other options of the contract due to funding constraints. The volumes of the basic work (Pierhead Channel) and options 2 & 3 (Port Newark Channel off

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SUBJECT: Coordination of Continued Corps Dredging Activities in Newark Bay with EPA's Remedial Investigation of the Newark Bay CERCLA Study Area

- 4) of Newark Bay Main Stem) amounted to approximately 170,420 cubic yards (CY), 20,000 CY and 40,000 CY, respectively. Option 4, if awarded, is an additional 20,000 CY. The work was expected to begin in October and end the following month, assuming no other issues arise. Corps representatives asked EPA if there were any issues from their agency's perspective with this O&M working proceeding. Ms. Elizabeth Butler, Project Manager of the USEPA R2 Newark Bay CERCLA Study responded that there were no issues with this work proceeding.
 - 5) Mr. Steve Dorler noted that the Port Authority of New York and New Jersey (PANY/NJ) ongoing maintenance berth dredging not presently active and that remaining work, if any, was expected to be completed in the next few months.
- b. Mr. Wisemiller noted that the Environmental Assessment presently under development by the Corps in response to the U.S. District Court order of 8 March 2006 was nearing completion of the draft assessment, scheduled for finalization by 1 February 2007. Related to this, Mr. Wisemiller further noted to USEPA the letter dated 24 August 2006 from the District Engineer to the USEPA Region 2 Administrator noting the need for interagency coordination related to the technical evaluations underway by each agency. The EPA representatives responded that they had not yet received the letter on the staff level.
- c. Ms. Elizabeth Butler summarized the status of the USEPA R2 ongoing CERCLA study in Newark Bay as follows:
- 1) The draft report from Tierra Solutions, Inc. regarding the Phase 1 Summary Report and Phase 2 Sampling Workplan was expected on 9 October 2006. The draft report would be immediately distributed to the involved agencies and consultants for review with comments wanted by the end of November 2006. EPA would then compile the comments along with their own for response back to TSI.
 - 2) Ms. Butler also noted that TSI was scheduled to provide a Source Identification Report on 18 September 2006 but that a review by other agencies was not requested, since the results would be incorporated into the Phase 2 Workplan.
 - 3) Ms. Butler further noted that the technical consultant supporting the USEPA R2 CERCLA study of Newark Bay, Malcolm Pirnie, Inc., was scheduled to release the split sample testing results by 15 September 2006.
- d. Mr. Wisemiller asked two related questions at the end of the meeting. First, had the Preassessment Screen Determination been completed. Ms. Reyhan Mehran of NOAA responded that it was, and was viewable thru their website (provided subsequently for inclusion in this MFR: <http://www.darrp.noaa.gov/northeast/passaic/admin.html>). Second, Mr. Wisemiller asked if the EPA had done the separate sediment investigatory phase

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SUBJECT: Coordination of Continued Corps Dredging Activities in Newark Bay with EPA's Remedial Investigation of the Newark Bay CERCLA Study Area

to be combined with the Combined Sewer Overflow study and if it was part of the Phase 2 sampling effort. Ms. Butler of USEPA R2 responded no to both.

3. The next subject meeting date and time was tentatively set for 1000 hours on 10 October 2006 in EPA R2 offices.


BRYCE WISEMILLER
Project Manager, CENAN-PP-H

MEMORANDUM FOR RECORD

SUBJECT: Newark Bay Study Area Coordination Team Meeting

1. The regularly scheduled monthly coordination meeting was held on October 10, 2006 at the Corps of Engineers office to discuss the USACE and EPA activities in the NBSA. Attendees are as follows:

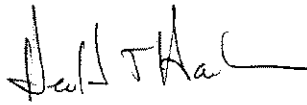
| | | |
|----------------------|--------------------|------------------------------------|
| Hal Hawkins | USACE, NY District | Project Manager |
| Patricia Donohue | USACE, NY District | Project Manager |
| Bryce Wisemiller | USACE, NY District | Project Manager |
| Suzanne Dietrick | NJDEP | Chief (Via phone) |
| Amelia Wagner | EPA | Attorney |
| Steve Weinberg | USACE, NY District | Engineering Division |
| Elizabeth Buckrucker | USACE, Kansas City | Project Manager (Via phone) |
| Elizabeth Butler | EPA | Project Manager |
| Reyhan Mehran | NOAA | Coastal Resource Coordinator |
| Steve Dorrier | PANYNJ | Manager, Waterways Planning & Dev. |
| Ellen Simon | USACE, NY District | Assistant District Counsel |
| Janine McGregor | NJDEP | Via phone |

2. The following is a summary of the discussions held during the monthly coordination meeting:

- a. The AK 2/3 contact is approximately 88% complete.
- b. The S-KVK-2 deepening contract is at about 72 % complete based on volume.
- c. The S-NB-1 Plans and Specifications are available and the bid opening is currently scheduled for 23 October. A Pre-Bid meeting was held Oct 3, 2006. The contract components (base bid and options) were discussed. Before the side slope option is awarded NJDEP will be give notice. NJDEP may choose to add additional requirements and/or modify the BMP's in the current WQC if additional information from EPA's testing or other information warrant such changes.

Ms. Reyhan Mehran discussed NOAA's need to take samples in the NBSA. She was concerned about the dredging of the side slope area. It was suggested that NOAA could take samples at anytime and store the samples prior to lab analysis. Side slope dredging is an option to the S-NB-1 contract. Coordination will take place amongst the agencies well in advance of the side slope work commencing (i.e., awarding this option to the contract). Steve Weinberg discussed the difference between the current and post-dredge geometry in relation to the pre-anthropogenic sediment horizon. The majority of the sediment beneath the dredge prism is pre-industrial and should not expose degraded sediment as a result of the dredging. Basically only a small amount of material located in the top of the slope is above the 1940 sediment horizon should be of concern to NOAA in their damages assessment. Steven Weinberg drew a diagram on the board to illustrate that the amount of material being removed from the top of the side slopes above the 1940 horizon was minimal.

- d. Corps O&M: Patricia Donahue indicated that the Newark Bay Maintenance Contract was awarded September 29, 2006 and that a pre-construction meeting would be held within the next 15 days. The base bid and options 2&3 were awarded. Operations Division is looking at awarding option 4, which could be awarded 60 days after the NPT.
3. Port Authority O&M: Steve Dorrier indicated that Port Elizabeth and Port Newark was completed. Howland Hook dredging was ongoing.
4. The Corps schedule for the draft EA was reported as on schedule for December, with a final report being issued in February.
5. EPA reported that the Phase II work plan should be out today and would be posted on the web site by the end of the week. Comments are due by the end of November.
6. Next meeting is on 14 November at 10 a.m., New York District Corps offices at 26 Federal Plaza.
4. POC is the undersigned at (917) 790-8204.



Harold J. Hawkins, PE
Project Manager

MEMORANDUM FOR RECORD

SUBJECT: Newark Bay Study Area Coordination Team Meeting

1. The regularly scheduled monthly coordination meeting was held on November 14, 2006 at the Corps of Engineers office to discuss the USACE and EPA activities in the NBSA. Attendees are as follows:

| | | |
|----------------------|--------------------|------------------------------|
| Hal Hawkins | USACE, NY District | Project Manager |
| Patricia Donohue | USACE, NY District | Project Manager |
| Bryce Wisemiller | USACE, NY District | Project Manager |
| Suzanne Dietrick | NJDEP | Chief (Via phone) |
| Amelia Wagner | EPA | Attorney |
| Steve Weinberg | USACE, NY District | Engineering Division |
| Elizabeth Buckrucker | USACE, Kansas City | Project Manager (Via phone) |
| Elizabeth Butler | EPA | Project Manager |
| Reyhan Mehran | NOAA | Coastal Resource Coordinator |
| Steve Dorrier | PANYNJ | Engineer (Via phone) |
| Ronald Pinzon | USACE, NY District | |
| Ellen Simon | USACE, NY District | Attorney |
| Janine McGregor | NJDEP | Via phone |
| Adam Devenyi | USACE, NY District | |
| Eugenia Naranjo | EPA | |
| Patricia Nick | EPA | |
| Chuck Nace | EPA | |
| Diane Waldschmidt | EDS | |
| Paul Bwestein | Tierra Solutions | |
| Sarah Zappala | HDRILMS | |
| Bob Romagnoli | BBL for Tierra | |
| Len Warner | Malcolm Pirnie | |
| Jenine Gallo | USACE, NY District | |
| Edward Demarest | NJDEP | |
| Sharon Heller | PANYNJ | |
| Anne Hayton | NJDEP | |

2. The following is a summary of the discussions held during the 14 November 2006 monthly coordination meeting:

1. The meeting had begun with a Q&A session with Tierra and BBL. After this session many of the attendees left.
 - a. Notable items that were discussed with the Corps during the Q&A session include the following:
 - i. Tierra and Malcolm Pirnie representatives remarked about the value of considering historical bathymetric data information in capturing the 1940 vertical horizon for contamination in the NBSA. They questioned whether the Corps had any further information available on this matter. Mr. Wisemiller of the Corps responded that as part of the development of an

Environmental Assessment in response to the U.S. District Court remand of March 8, 2006, that the NY District had hired a consultant to investigate this matter further as these historical dredged areas may or may not intersect with the continued Harbor Deepening Project. Mr. Wisemiller further stated that the finalization of this investigation was dependent upon the finalization of the EA now under development. As such he could not state when this information would be available for the RI/FS team's use but that he would see what existing data sources may be available in the time being (e.g., data directly from NOAA historical map and chart project, etc.).

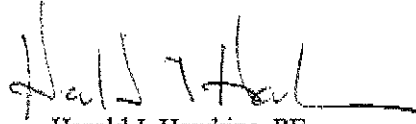
- ii. Mr. Wisemiller noted to Tierra that the federal navigation channels were still inaccurately mapped. As an example, the turning basin area noted at the convergence of the Passaic and Hackensack River Channels with the Newark Bay main stem was incorrectly drawn. Mr. Wisemiller offered to provide GIS data layer for the federal navigation channels within the NBSA.
- iii. Mr. Wisemiller asked Tierra about the methods used to define the upper boundary of the "transition zone" geomorphic unit. Tierra responded that the upper limit was defined by a fixed bathymetric depth. Mr. Wisemiller noted that while this method for defining this geomorphic unit may be wholly appropriate for the RI/FS purposes, that using this approach to define this zone results in an area that is noticeably different than the areas dredged as part of the federal navigation channel side slopes, which are defined differently.
- iv. Ms. Patricia Donohue asked about the data sources for the historical federal navigation channel dredging volumes. Tierra noted that the volumes were the same as the prior Phase I workplan. Ms. Donohue responded that the estimated volumes seem to include dredging other than that funded thru the federal Operations and Maintenance appropriations and that the historical dredging information was not reconcilable against the District's records. Corps representatives noted that the federal dredging records were available for viewing and use in the RI/FS. An additional meeting between the District and TS was suggested in order to clarify previous dredge actions and volumes.
- v. Tierra representatives discussed that based on comments and additional data the proposed Phase II sampling locations may be expanded
- vi. Tierra representatives discussed that several chemical parameters from Phase I have changed in Phase II due to a change in lab analysis methods. They also discussed that they were not going to conduct Be analyses.

2. Following the Q&A was the main NBSA meeting. The following was discussed:

- a. The CoE projects' statuses were reviewed.
 - i. AK 2/3 is 96% complete. Clean up work is ongoing in the rock. Scheduled for a December 2006 completion.

- ii. No new AK dredging in the NBSA during FY 07. There will be some O&M work south of the NBSA area in December 06. As some of the Phase II samples will be outside of the NBSA there's a need to coordinate the work.
 - iii. S-KVK-2 is 77%, with a March completion scheduled. Blasting will be done momentarily, leaving till and rock dredging
 - iv. NB O&M is awarded. Dredging will start in about a week and go for 90 days. Due to increased quantities in the basic option 4 will not be exercised.
 - v. Bid opening for S-NB-1 has been re-scheduled for 15 December. After that the apparently low bidder has 35 days to submit evidence of responsibility. Anticipate a mid-February award and March dredging. Slopes are a separate option. Due to EFH windows slope dredging will not occur before June 2007.
- b. EPA anticipates Phase II sampling will be no earlier than March 2007. The following schedule is optimistic.
- i. Comments due 30 November (except NOAA)
 - ii. NOAA comment 7 December
 - iii. Comments to Tierra mid-December
 - iv. 30 day turn around by Tierra (mid-January)
 - v. Finalize early February
 - vi. March field work.
- c. Some of the Phase II samples are outside of the NBSA. These are source ID samples. There was some discussion about the NBSA limits being "mutable", but that at this time, EPA did not believe that the NBSA boundaries would be changing. Can Honeywell data be used? Probably not, it's restricted due to another lawsuit. The Honeywell data is relatively recent.
- d. There is no PA O&M at this time. The PA is awarding a new O&M contract. The earliest any dredging will under this contract will occur would be in the Spring, possibly in the Port Newark/Elizabeth area. Mr. Dorrier will check.
- e. The USACE EA is still on schedule.
- f. The Tierra Work-plan and Preliminary Source ID report are in PREMIS in the NB/RI/FS directory.
- g. Interim remediation within the NBSA is not anticipated at this time. Rather, the process would begin after the Phase I was more rigorously evaluated and the Phase II data was collected and the risk assessment. This would be used to determine when/where interim remediation would make sense (ie, "hot spots")
3. Next meeting 12 December at 10 AM at EPA offices.
4. POC is the undersigned at (917) 790-8204.

18 NOV

A handwritten signature in black ink, appearing to read "Harold J. Hawkins". The signature is written in a cursive style with a long horizontal line extending to the right.

Harold J. Hawkins, PE
Project Manager

CENAN-PP-H

SUBJECT: Coordination of Continued Corps Dredging Activities in Newark Bay with EPA's Remedial Investigation of the Newark Bay CERCLA Study Area

CENAN-PP-H

9 January 2007

MEMORANDUM FOR RECORD

SUBJECT: Coordination of Continued Corps Dredging Activities in Newark Bay with EPA's Remedial Investigation of the Newark Bay CERCLA Study Area

1. At 1000 hours on 12 January 2007, the following met to discuss the subject issue:

- Elizabeth Butler, USEPA R2
- Ellen Simon, CENAN-OC
- Reyhan Mehran, NOAA
- Steve Dorrier, PANY/NJ
- Amelia Wagner, USEPA R2
- Sharon Heller, PANY/NJ
- Elizabeth Buckrucker, CENWK-PM-ES (via conference phone)
- Janine McGregor NJDEP (via conference phone)
- Beth Buckrucker NOAA (via conference phone)
- Bryce Wisemiller, CENAN-PP-H
- Ben Baker CENAN-EN
- Adam Perelson CENAN-PL
- Jenine Gallo CENAN-PL
- Hal Hawkins CENAN-PP-H

1. Hal Hawkins briefed the status of the Corps Engineers construction contracts:

- i. Contract AK 2/3 is 99% constructed. Clean up work is ongoing to remove the high spots. Controlling Depth Report is expected at the end of the month. Scheduled contract completion by January 31, 2007.
- ii. Contract S-KVK-2 is 88% constructed, with a scheduled 26 March 2007 completion.
- iii. Bid opening for contract S-NB-1 has been re-scheduled for 17 January 2007 (Was held 19 January) - anticipate a March - April NTP

2. Steve Dorrier briefed that the PANYNY had on going projects:

"NJ Marine Terminal (NJMT) Multi Facility Maintenance Dredging and Berth Deepening" contract was awarded to Donjon Marine, Inc on 12/28/06.

CENAN-PP-H

SUBJECT: Coordination of Continued Corps Dredging Activities in Newark Bay with EPA's Remedial Investigation of the Newark Bay CERCLA Study Area

In early January, NJMT staff received the latest hydrographic surveys, which in turn were forwarded to the tenants (Maher, APM, PNCT and others) to obtain feedback on their dredging needs/requirements.

NJMT staff anticipates issuing the first Work Order Request for maintenance dredging in early February. It will most likely include deepening work at selected Maher berths.

New contract pending-awaiting award to support FY 07-08 program

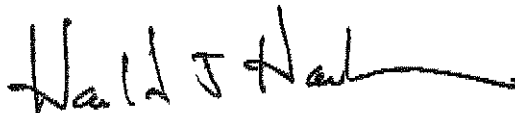
3. Corps Engineers O&M schedule and anticipated work:

Hal Hawkins briefed (for Corps Operations Division [OP]) that he believed the Newark Bay O&M contract as being completed. However, after the meeting OP indicated that construction is still on going.

4. Ms. Elizabeth Butler of EPA summarized the status of the USEPA R2 ongoing CERCLA study in Newark Bay as follows:

- i. EPA "Compilation of Comments on Phase I Report/ Phase II Workplan Report due to Tierra Solutions this due Friday, January 12, 2007. EPA will provide report to USACE at the same time.
- ii. Phase II Work Plan status: EPA/USACE meeting to discuss and correct Tierra Solutions report assumptions, errors, scheduled for January 30. Phase II WP tentatively scheduled to be final by March 2007.
- iii. Ensuing field work to initiate April 2007. EPA indicated that there would probably be same type of a Phase III- sampling event conducted in the NBSA - schedule unknown at this time.

5. Next meeting 13 February 2007 10 AM at EPA offices. POC is the undersigned at (917) 790-8204



Harold J. Hawkins, P.E.
Project Manager, CENAN-PP-H



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

Electronically-mailed
Hand Delivered

January 23, 2007

Colonel Nello Tortora
U.S. Army Corps of Engineers
26 Federal Plaza
New York, NY 10007

Dear Colonel Tortora:

This is a follow up to your communication with Kathy Callahan, Deputy Regional Administrator of January 22, 2007 regarding coordination of our respective Agency's activities in Newark Bay.

In October 2006, EPA received from Tierra Solutions a Phase 1 compilation report on their Newark Bay sampling efforts which was designed in consultation with your staff. The Phase 1 report was provided to the Corps of Engineers, NOAA, U.S. Fish and Wildlife, NJDEP, NRDC (the stakeholders) and our consultants for review and comment. Comments from all stakeholders have been received and EPA is in the process of compiling these comments for submission to Tierra Solutions. We expect to forward these comments to Tierra Solutions before February 15, 2007. In accordance with the Administrative Order on Consent (AOC) for Newark Bay, Tierra Solutions will have 30 days to resubmit the Phase 1 report. Furthermore, Malcolm Pirnie has completed a more detailed evaluation of this Phase 1 report which has been forwarded to your staff. This document should be helpful in understanding EPA's approach to the RI/FS going forward. Concurrent with Phase 1, Tierra Solutions submitted a Phase 2 draft workplan which proposed 18 additional sampling locations. We have received stakeholder comments on the draft Phase 2 workplan and are proceeding along the same timeline as the Phase 1 completion report for its finalization.

Regarding future RI/FS sampling activities in Newark Bay, we will be requesting that Tierra Solutions identify and locate additional coring locations in anomalous areas. These areas are located in the shallows where legacy slips and channels have filled in with contaminated sediments. These areas are important to EPA's RI/FS because they can contain high levels of contamination and may require remediation under Superfund.

I should point out however that future sampling activities in and around the channel deepening efforts being conducted by the Corps of Engineers is not envisioned at this time. During the Phase 1 planning process, we coordinated with your staff and obtained sediment samples in these locations and EPA has no plans to conduct further sediment sampling in these locations during Phase 2.

Our expectation is to finalize the Phase 1 report and Phase 2 workplan during Spring 2007 and commence Phase 2 sediment sampling activities shortly thereafter. As discussed in our previous letter from Alan Steinberg, Regional Administrator, to Colonel Polo, your predecessor, our target date for completion of a Record of Decision for Newark Bay is 2011.

If you have any questions, please do not hesitate to call me at 212-637-4390.

Sincerely,

A handwritten signature in black ink, appearing to read "George Pavlou".

George Pavlou, Director
Emergency and Remedial Response Division
Telephone: 212-637-4390
Fax: 212-637-4439

cc: Kathy Callahan, DRA
EPA - Region II
Ray Basso, USEPA, ERRD
Edward Scarvalone, USDOJ
William F. Slezak, USACE
Eric Schaaf, USEPA, ORC
Paul Simon, USEPA, ORC
Ellen B. Simon, USACE
Elizabeth Butler, USEPA, ERRD

CENAN-PP-H

SUBJECT: Coordination of Continued Corps Dredging Activities in Newark Bay with EPA's Remedial Investigation of the Newark Bay CERCLA Study Area

CENAN-PP-H

13 February 2007

MEMORANDUM FOR RECORD

SUBJECT: Coordination of Continued Corps Dredging Activities in Newark Bay with EPA's Remedial Investigation of the Newark Bay CERCLA Study Area

1. At 1000 hours on 13 February 2007, the following met to discuss the subject issue:

- * Elizabeth Butler, USEPA R2
- * Paul Higgins, PANY/NJ
- * Amelia Wagner, USEPA R2
- * Patricia Donohue, CENAN-OP
- * Sarah Zappala, HDR/LMS
- * Sharon Heller, PANY/NJ
- * Elizabeth Buckrucker, CENWK-PM-ES (via conference phone)
- * Janine McGregor NJDEP (via conference phone)
- * Bryce Wisemiller, CENAN-PP-H
- * Melissa Foster FWS (via conference phone)
- * Jenine Gallo CENAN-PL
- * Hal Hawkins CENAN-PP-H

2. Hal Hawkins briefed the status of the Corps Engineers construction contracts:

i. Contract AK 2/3 is 100% constructed. Clean up work is ongoing to remove the high spots in AK-1. Controlling Depth Report is expected at the end of the month.

ii. Contract S-KVK-2 is 93% constructed, with a scheduled 26 March 2007 completion.

iii. Bid opening for contract S-NB-1 was held 19 January 2007 - anticipate a March -April NTP

3. USEPA:

* There will likely be a Phase III effort (may include additional sediment samples. Likely to include more modeling and risk assessment data collection.

* Draft Phase II WP due Mid-April

* Final Phase II WP due April 25

* Phase II sampling field data collection to start May/June 07

* ROD schedule maintained at 2012

* Phase I Modeling (Hydrodynamic) being done by Hydroqual (Jim Fitzpatrick)

* Phase II modeling (Sediment transport) being done by above-comprehensive modeling calibration chapter for NB will be included in overall LPR report - due end of March

CENAN-PP-H

SUBJECT: Coordination of Continued Corps Dredging Activities in Newark Bay with EPA's Remedial Investigation of the Newark Bay CERCLA Study Area

* EPA will develop TS coordinated milestone schedule by end of this week

* Four new PRP's have been notified/identified:

- 1) PSEG
- 2) Troy Chemical
- 3) Allied Signal
- 4) Prentiss

* There is potential for new designations of study areas (new AOC's or amend current AOC's) for Hackensack River and Arthur Kill tributary (south to Prall's Island

* OP preparing revised table for inclusion in TS reports re: schedules and volumes

* Earthworks Geomorph report will be provided to EPA end of March.

* EPA will reference EW report for finalization of Compilation Report and other comments to TS re: identification of historic and or contaminated silts location and potential "hot spots"

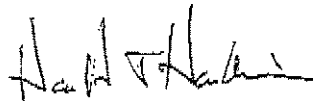
4. NYENOEPA:

PANYNJ 07 berth deepening to 50' to occur at NJ Marine Terminal berths 62 (Mahr), 82 and 84 (APM) - pending USACE permits

5. COE-OP

Dredging continues in Newark between Elizabeth and Newark Channels.

5. Next meeting 13 March 2007 10 AM at Army Corps offices. POC is the undersigned at (917) 790-8204



Harold J. Hawkins, P.E.
Project Manager, CENAN-PP-H

MEMORANDUM FOR RECORD

SUBJECT: Newark Bay Study Area Interagency Coordination Team Meeting Minutes

1. On 13 March 2007 at 1000 hours, the subject meeting was held at the New York District offices. The following attended the meeting either in person or via conference call:

USACE: Bryce Wisemiller, Jenine Gallo, Patricia Donohue, Steve Weinberg, Ellen Simon
EPA: Amelia Wagner, Elizabeth Butler
NOAA: Reyhan Mehran, Eli Reinharz
NJDEP: Suzanne Dietrick, Anne Hayton
PANYNJ: Steve Dorrler

2. USACE PPMD briefed dredging program projects status
-AK1 status: construction complete
-AK 2/3 status: construction completion expected this month
-SKVK 2 status: construction completion expected this month
Post-dredge surveys and/or controlling depth reports will be provided to EPA when completed.
3. USACE OP briefed O&M Program/project status
-PN O&M: ten days work (approx 2%) remains on contract; not awarding remaining options due to lack of funding
4. EPA briefed RI status:
-USACE-EPA NBSA invitees list needs updating: Hawkins, Butler to coordinate.
-EPA & TS coordinating on Mar 1 Compilation Report remaining comments
-Phase II work plan will be a continuation of the Phase I work plan efforts and Phase III work plan will be developed.
-USACE provided list of additional sampling locations (approx 18) to EPA/TS at Mar 1 mtg. based upon USACE Geomorphological Report findings. EPA considers these sampling locations a "good starting place" from which TSI can develop the final sampling plan for Phase II work plan.
-EPA and TSI are scheduling mtg. Mar 21 to resolve remaining comments on the Compilation Report.
-Phase II revised schedule still pending;
Response to Comments report anticipated early April
Phase II Final Work Plan anticipated early May
Phase II field work anticipated to begin June
Phase III schedule TBD
-EPA sees "no conflict" between the NB-1 base contract dredging and the initiation of the Phase II field work/data collection, currently scheduled to occur simultaneously.
5. NOAA/NRDA Trustees:
- NRDA field investigations are not/will not be affected by the planned dredging in Newark Bay

CENAN-PP-H

SUBJECT: Newark Bay Study Area Interagency Coordination Team Meeting
Minutes

-Follow up by USACE-PPMD requested per email re: Phase III
"language" in last months MFR

6. PANYNJ:

-12 berths to be dredged (terminals)at/near Elizabeth Channel and
Pierhead; estimated to begin May

-NJDEP still needs to issue AUD's

-PANYNJ awaiting USACE permit on berth deepening (HARS) at Port
Elizabeth

7. Summary:

-USACE-PPMD will develop a summary presentation of the
Geomorphological Report findings for the benefit of the NBSA
Coordination Team at the April meeting.

-Next mtg. April 10 at EPA



BRYCE W. WISEMILLER

Project Manager

Harbor Programs Branch