

APPENDIX D

**PUBLIC COMMENT LETTERS AND RESPONSES TO THE JUNE 30 2005 DRAFT
ENVIRONMENTAL ASSESSMENT AND THE SEPTEMBER 30 2005 DRAFT
AMENDMENT TO THE ENVIRONMENTAL ASSESSMENT**

APPENDIX D

PUBLIC COMMENT LETTERS AND RESPONSES TO THE JUNE 30 2005 DRAFT ENVIRONMENTAL ASSESSMENT AND THE SEPTEMBER 30 2005 DRAFT AMENDMENT TO THE ENVIRONMENTAL ASSESSMENT

This appendix contains the following documents:

- Letters from Cooperating Agencies
 - Letter to Mr. Leonard Houston from Mr. Stanley W. Gorski, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, dated August 10, 2005.
 - Letter to Mr. Ronald Pinzon from Grace Musumeci, United States Environmental Protection Agency dated November 2, 2005.
 - Letter to Mr. Ronald Pinzon from Ms. Suzanne Dietrick, New Jersey Department of Environmental Protection, dated November 15, 2005
 - Letter to Mr. Ronald Pinzon from Thomas Brosnan, National Oceanic and Atmospheric Administration, on behalf of the federal natural resources trustees, dated December 5, 2005.
- Letter to Mr. Ronald Pinzon from Mr. Mauro DiTrizio, Port Newark Container Terminal, dated August 12, 2005. (this letter is representative of the approximately 90 letters received)
- Letter to Mr. Ronald Pinzon from Ms. Nancy Anne Smith, an area resident, dated August 5, 2005 (this letter is representative of approximately 900 emails from the NRDC Listserver group received)
- Letter to Mr. Ronald Pinzon from Ms. Cindy Zipf and Ms. Jennifer Samson, Clean Ocean Action, dated August 16, 2005
- Letter to Mr. Ronald Pinzon from Sandy Batty, Association of New Jersey Environmental Commissions, *et. al.*, dated August 16, 2005.
- Letter to Mr. Ronald Pinzon from Mr. Lawrence M. Levine, Natural Resources Defense Council, *et. al.*, dated August 15, 2005.
- Letter to Mr. Ronald Pinzon from Mr. Lawrence M. Levine, Natural Resources Defense Council, *et. al.*, dated November 11, 2005.
- Responses to other comments received.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Habitat Conservation Division
James J. Howard Marine
Sciences Laboratory
74 Magruder Road
Highlands, New Jersey 07732

August 10, 2005

Mr. Leonard Houston, Chief
Environmental Analysis Branch
U.S. Army Corps of Engineers
New York District
26 Federal Plaza, Room 2136
New York, NY 10278-0090

ATTN: Ronald Pinzon, Environmental Coordinator

Dear Mr. Houston,

We have reviewed the draft Environmental Assessment (EA) on the Newark Bay area of the New York and New Jersey Harbor Deepening Project (HDP) included with you June 30, 2005 letter. Newark Bay has been designated by the EPA as an area of study due to the contiguous proximity of Newark Bay to the Diamond Alkali Superfund site on the Lower Passaic River. Newark Bay is not itself listed on the National Priority List. The EA was prepared to:

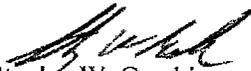
- 1.) Review EPA's designation of Newark Bay and parts of the Arthur Kill and the Kill van Kull as the Newark Bay Study Area (NBSA) as part of the Diamond Alkali Superfund Site Remedial/Investigation/Feasibility Study (RI/FS) and to evaluate whether or not the dredging activities of the HDP will significantly affect the NBSA RI/FS;
- 2.) Determine if the impacts will significantly differ from those previously identified in the USACE's 1999 Final environmental impact statement (EIS), the associated Record of Decision (June 2002), the 2004 EA and the associated Finding of No Significant Impact; and
- 3.) Review the information in the Contaminant Assessment and Reduction Program (CARP; NYSDEC 2003) and Inventory Report (Tierra Solutions, 2004).

- (1) We agree with the ACOE's determination that previous assessments of the NBSA with respect to the dredging of the federal channels are still valid and that the designation of the NBSA does not alter the existing characterization of the resources in the study area or the proposed dredging plans, and therefore has no effect in the previous analysis of impacts as presented in the 1999 Final EIS or the 2004 EA.
- (2) Our agencies have completed the required consultations under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Endangered Species Act for this project. Because the characterization of the resources in the study area and the analysis of the project's impacts remains unchanged, the designation of the NBSA does not present new information that would require that these consultations be reinitiated. We will continue to coordinate with your



office on the HDP and request that you reinitiate consultation with us if new information becomes available or if project conditions change that would change the basis for our original determination. If you have any questions, please contact Karen Greene at 732 872-3023.

Sincerely,


Stanley W. Gorski
Field Offices Supervisor

kmg/newarkbaydea/072505

cf: Milford - Rusanowsky
PRD - Crocker, McNulty

RESPONSE TO COMMENTS

National Marine Fisheries Service (National Oceanographic and Atmospheric Administration) - letter dated August 10, 2005

Comment: *“We agree with the ACOE's determination that previous assessments of the NBSA with respect to the dredging of the federal channels are still valid and that the designation of the NBSA does not alter the existing characterization of the resources in the study area or the proposed dredging plans, and therefore has no effect in the previous analysis of impacts as presented in the 1999 Final EIS 01 the 2004 EA.”*

USACE response: The USACE concurs.

Comment: *“Our agencies have completed the required consultations under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Endangered Species Act for this project. Because the characterization of the resources in the study area and the analysis of the project's impacts remains unchanged, the designation of the NBSA does not present new information that would require that these consultations be reinitiated. We will continue to coordinate with your office on the HDP and request that you reinitiate consultation with us if new information becomes available or if project conditions change that would change the basis for our original determination.”*

USACE response: The USACE concurs.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

NOV 02 2005

Mr. Ronald Pinzon
Environmental Coordinator
Environmental Assessment Branch
New York District, USACE
26 Federal Plaza, Room 2136
New York, New York 10278-0090

Dear Mr. Pinzon:

The Environmental Protection Agency (EPA) has reviewed the U.S. Army Corps of Engineers, New York District's (Corps) Amendment to the Draft Environmental Assessment (ADEA) on the Newark Bay Area of the New York and New Jersey Harbor Deepening Project, dated September 30, 2005. The ADEA provides an analysis of potential effects of the Corp's planned navigational dredging on the ability of the EPA to meet the goals of its Remedial Investigation and Feasibility Study for the Newark Bay Study Area (NBSA). The NBSA includes Newark Bay and portions of the Hackensack River, Arthur Kill and Kill Van Kull.

Our comments on the ADEA are as follows:

1. It should be clarified that for the purposes of the ADEA, the Corps is defining the Newark Bay Study Area (NBSA) to be just the portion of EPA's overall NBSA which coincides with the Corps' dredging areas.
2. Although it is noted on page 2 of the ADEA that the EPA will conduct Phase 1 sampling in November 2005, EPA has completed the Biologically Active Zone investigation and bathymetry. Sediment coring has also begun.
3. The EPA approved Remedial Investigation Work Plan was dated September 2, not September 6 as is referenced on page 3 of the ADEA.
4. The number of cores being collected in or near the channels to be dredged is 19, not 12. In section 2.1.1.2, second paragraph, please clarify what portion of the NBSA is being referred to. If it is only the areas to be dredged, the number of samples is 19, if it is the full NBSA; the number of samples is 28. (Please see first comment.)
5. There are no 5 inch sample segments for radiochemical analyses as is indicated in Section 1. There are only 2 inch sample segments.
6. In Section 3, the source assessment write-up indicates that EPA will be collecting samples prior to the Corps' dredging. Although we may get some source

assessment information from the Phase I sampling, there will be a separate investigatory phase at a later date to be combined with a Combined Sewer Overflow study.

Thank you for the opportunity to comment on the EA. If you have any questions, please call Lingard Knutson at (212) 637-3747.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Grace Musumeci".

Grace Musumeci, Chief
Environmental Review Section

RESPONSE TO COMMENTS

United States Environmental Protection Agency, Region 2 – Letter dated November 2, 2005

Comment: *“It should be clarified that for the purposes of the ADEA, the Corps is defining the Newark Bay Study Area (NSA) to be just the portion of EPA's overall NBSA which coincides with the Corps' dredging areas.”*

USACE response: NYD will make this clarification in Volumes I and II of the EA.

Comment: *“Although it is noted on page 2 of the ADEA that the EPA will conduct Phase I sampling in November 2005, EPA has completed the Biologically Active Zone investigation and bathymetry. Sediment coring has also begun.”*

USACE response: Noted.

Comment: *“The EPA approved Remedial Investigation Work Plan was dated September 2 not September 6 as is referenced on page 3 of the ADEA.”*

USACE response: Noted. USACE will correct the date in Volume II of the EA.

Comment: *“The number of cores being collected in or near the channels to be dredged is 19, not 12. In section 2.1.1.2, second paragraph, please clarify what portion of the NBSA is being referred to. If it is only the areas to be dredged, the number of samples is 19, if it is the full NBSA; the number of samples is 28.”*

USACE responses: Section 2.1.1.2 of Volume II of the EA, second paragraph, refers to the number of samples to be collected in the flats, not in or near the channels. This section was referring to the number of sub-tidal geochemical samples in the NBSA (from Table 6.3 of the RIWP) which should have been 28. USACE will make the correction.

Comment: *“There are no 5 inch sample segments for radiochemical analyses as is indicated in Section 1. There are only 2 inch sample segments.”*

USACE response: USACE will make this correction in Volume II of the EA.

Comment: *“In Section 3, the source assessment write-up indicates that USEPA will be collecting samples prior to the Corps' dredging. Although we may get some source assessment*

information from the Phase I sampling, there will be a separate investigatory phase at a later date to be combined with a Combined Sewer Overflow study.”

USACE response: Noted. USACE will continue to coordinate with the USEPA to ensure the RI/FS study has minimal impacts due to USACE dredging activities and vice versa.



State of New Jersey
Office of Dredging and Sediment Technology
Department of Environmental Protection
P.O. Box 628

Trenton, NJ 08625
(609) 292-1250
FAX (609) 777-1914

Richard J. Codey
Acting Governor

Bradley M. Campbell
Commissioner

Mr Ron Pinzon
Department of the Army
New York District, Corps of Engineers
Jacob K. Javits Federal Building
New York, NY 10278-0090

November 15, 2005

Dear Mr. Pinzon:

The New Jersey Department of Environmental Protection appreciates the opportunity to review and provide comment on the amendment to the document entitled "Draft Environmental Assessment for Newark Bay Area of the NY & NJ Harbor Deepening Project" dated September 30, 2005 (Amendment).

The Department has previously issued an "umbrella" Federal Consistency Determination/Water Quality Certificate (FC/WQC) for the New York/New Jersey Harbor Deepening Project (HDP) on April 12, 2004.⁽¹⁾ Conditions within this authorization require that the NY District Corps of Engineers submit individual requests for a Phased Consistency Determination/Water Quality Certificate (PCD/WQC) for each dredging contract prior to the award of the contract.⁽²⁾ It is understood that ongoing coordination will occur between the agencies as the HDP proceeds, and the Department looks forward to working with the NY District Corps of Engineers to address any issues that may arise during the permit application review process.⁽³⁾ Per the recommendations within the EA Amendment we will continue to seek employment of Best Management Practices and Best Available Technologies to minimize impacts during project construction activities.

If you have any questions, please feel free to contact me at (609) 292-8838.

Sincerely,

Suzanne Dietrick, Chief

Office of Dredging and Sediment Technology
- Site Remediation and Waste Management

RESPONSE TO COMMENTS

Department of Environmental Protection (State of New Jersey) – Letter dated November 15, 2005.

Comment: *“Conditions within this authorization require that the NY District Corps of Engineers submit individual requests for a Phased Consistency Determination/Water Quality Certificate (PCD/WQC) for each dredging contract prior to the award of the contract.”*

USACE response: The USACE has agreed to this request at the onset and will be submitting individual applications for a Phased Consistency Determination/Water Quality Certificate (PCD/WQC) for each dredging contract prior to the award of the contract. This is evidenced by the USACE actions for WQC requests for the S-KVK-2 and the S-AM-1 WQC requests.

Comment: *“It is understood that ongoing coordination will occur between the agencies as the HDP proceeds, and the Department looks forward to working with the NY District Corps of Engineers to address any issues that may arise during the permit application review process.”*

USACE response: The USACE concurs. The USACE also looks forwards to working with the agencies to ensure proper attention and action is taken when issues arise during the permit application process.

Comment: *“Per the recommendations within the EA Amendment we will continue to seek employment of Best Management Practices and Best Available Technologies to minimize impacts during project construction activities.”*

USACE response: The USACE concurs with this statement and encourages the use of Best Management Practices and Best Available Technologies to minimize impacts during project construction activities, where practicable.”



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Response and Restoration
Silver Spring, Maryland 20910

December 5, 2005

Mr. Ronald Pinzon
Environmental Coordinator, Environmental Analysis Branch
New York District, USACE
26 Federal Plaza
New York, New York 10278-0090

Dear Mr. Pinzon:

Thank you for the opportunity to comment on the Amendment to the Draft Environmental Assessment (AEA) on the Newark Bay Area concerning the U.S. Army Corps of Engineers New York and New Jersey Harbor Deepening Project (HDP). The following incorporates the comments of federal natural resources trustees, the National Oceanic and Atmospheric Administration (NOAA) and U.S Fish and Wildlife Service (USFWS), on the AEA. We appreciate the opportunity to provide input into your planning with these comments and look forward to continued coordination opportunities between the trustees and the Corps.

General Comments

We are in the early stages of development of a natural resource damage assessment (NRDA) for the Diamond Alkali Superfund Site and Environs. The first step in the Comprehensive Environmental Response, Compensation, and Liability Act, (as amended, CERCLA) NRDA process is the decision whether to proceed with an NRDA. To make this decision, the trustees gather information on such things as conditions at the site, possible hazardous substance contamination and its extent, data on possible injuries, and more. Trustees evaluate this information to make the decision to proceed or not in a document called the Preassessment Screen Determination (PSD). To date, the trustees have not issued the PSD. Once the PSD is completed, that document and data will be made public and shared with all other interested agencies.⁽¹⁾ Trustees will coordinate with the USACE and EPA in manner that allows for the proposed AEA's iterative approach (Addendum to Appendix B – Alternative BMPS, last paragraph) to accommodate risk and injury identification, remediation, restoration and navigation infrastructure, consistent with legal prerogatives and case management needs.



Printed on Recycled Paper



- (2) We would also suggest the following changes to section 3.2 of the AEA:

3.2 THE NATURAL RESOURCES DAMAGE ASSESSMENT

Natural Resource Damage Assessments under the CERCLA natural resource damage assessment (NRDA) regulations (43 CFR Part 11) require a determination and quantification of injury to a natural resource, and a plan for restoration of injured natural resources and resources services, plus determination of compensation to the public for the loss of services from the time of the injury until restoration is completed. In complex assessments, the trustees must also confirm exposure of a natural resource to the released hazardous substance and demonstrate a pathway from released hazardous substance to the injured natural resource. The natural resource trustees, including NOAA, the USFWS, and the New Jersey Department of Environmental Protection, who have signed a Memorandum of Agreement concerning the Diamond Alkali Superfund Site and Environs, have not yet begun a formal NRDA under the CERCLA regulations. Therefore, it is difficult to evaluate what effect dredging may have upon future damage assessment activities. However, coordination with the natural resource trustees has been initiated, is ongoing and will be continued. The HDP will be managed in a manner that reevaluates information iteratively such that the effects of HDP dredging and sediment disposal on the NRDA process, as well as the Remedial Investigation Work Plan, will be minimized to the fullest extent practicable.

- (3) With respect to ongoing coordination between the COE and the trustees, it would be beneficial for trustee NRDA evaluations if COE testing specifically identified the contaminants that are causing any given project to have a higher level of disposal costs. Sediment bioaccumulation and toxicity analyses coupled with chemical characterization and Toxicity Identification Evaluation would give the trustees data to determine the possible extent of injuries and the ability to identify which hazardous substances are responsible for navigational losses. Any such evaluations that the Corps' conducts on the HDP, other O&M, or regulatory actions over time within the Newark Bay Study Area could also be valuable to the trustees as well as a proactive demonstration of minimizing adverse effects and natural resource injuries.
- (4) It would also be useful to know where historically dredged and future dredged materials have been or will be placed, for both the HDP and other actions, to aid in sampling design and to be able to segregate dredged sediments from other in-place sediments contaminated by potentially responsible parties.

We appreciate the opportunity to work more closely with the Corps to protect and restore the greater New York and New Jersey Harbor. In particular, we appreciate the opportunity to review these documents and being offered the courtesy of seeing the Final EA prior to its release. Please contact me at 301-713-3038 x186 or Tim Kubiak, the USFWS Trustee Council representative at 609-646-310 x26 if you wish to discuss these comments further.

Sincerely,

A handwritten signature in cursive script that reads "Thomas Brosnan". The signature is written in black ink and is positioned above the typed name.

Thomas Brosnan, Chief
Atlantic Branch
Office of Response and Restoration

RESPONSE TO COMMENTS

Federal Natural Resources Trustees (NOAA and USFWS) – Letter dated December 5, 2005

Comment: *“Trustees will coordinate with the USACE and EPA in manner that allows for the proposed AEA’s iterative approach (Addendum to Appendix B – Alternative BMPS, last paragraph) to accommodate risk and injury identification, remediation, restoration, and navigation infrastructure, consistent with legal prerogatives and case management needs.”*

USACE response: The USACE concurs.

Comment: *“We would also suggest the following changes to Section 3.2 of the AEA.”* (Refer to letter for suggested text change)

USACE response: The USACE will make these changes to Section 3.2. of Volume II of the EA.

Comment: *“With respect to ongoing coordination between the COE and the trustees, it would be beneficial for the trustee NRDA evaluations if COE testing specifically identified the contaminants that are causing any given project to have a higher level of disposal costs. Sediment bioaccumulation and toxicity analysis coupled with chemical characterization and Toxicity Identification Evaluation would give the trustees data to determine the possible extent of injuries and the ability to identify which hazardous substances are responsible for navigational losses. Any such evaluations that the Corps’ conducts on the HDP, other O&M, or regulatory actions over time within the Newark Bay Study Area could also be valuable to the trustees as well as a proactive demonstration of minimizing adverse effects and natural resource injuries.”*

USACE response: USACE concurs and will coordinate sediment test data as requested. As stated in the EA, NJDEP requires Bulk Sediment Chemistry testing of raw sediments and end product (dredged material mixed with Portland cement to make structural fill material) and a Multiple Extraction Procedure (MEP) leachate test on end product. Testing is performed on a substantial number of samples for every dredging project that would require upland beneficial use of the dredged material in order to fully characterize potential impacts from the placement of the material to human health and the environment (e.g., 66 samples in 22 composites were required for the upland component of Arthur Kill contract areas 2/3). Composite samples are analyzed for a full suite of contaminants including dioxins, polychlorinated biphenyls, polynuclear aromatic hydrocarbons, pesticides, and metals.

Comment: *“It would also be useful to know where historically dredged and future dredged materials have been or will be placed, for both the HDP and other actions, to aid in sampling design and to be able to segregate dredged sediments from other in-place sediments contaminated by potentially responsible parties.”*

USACE response: The USACE will provide trustees with information regarding the placement of historical and future dredged materials to aid in sampling design.



Port Newark Container Terminal L.L.C.

241 Calcutta Street

Port Newark, NJ 07114

Tel * 973-522-2200

Fax * 973-465-8827

Email * pnct@pnct.net

August 12, 2005

Mr. Ronald Pinzon
Environmental Coordinator, Environmental Assessment Branch
New York District, USACE
26 Federal Plaza, Room 2136
New York, NY 10279-0090

Re: Draft Environmental Assessment on the Newark Bay Area
of the New York and New Jersey Harbor Deepening Project

Dear Mr. Pinzon:

I am employed as a Head Location Man by PNCT. I am writing to comment on the Army Corps' "Draft Environmental Assessment on the Newark Bay Area of the New York and New Jersey Harbor Deepening Project," dated June 2005. I am in favor of the Deepening Project and I agree with the principal conclusion as stated in the draft Environmental Assessment, that the proposed dredging will not hurt the environment and therefore that the project should proceed as currently planned.

- (1) I am aware that environmental groups have encouraged mass mailings to the Army Corps objecting to the Deepening Project. I am as interested as they are in preserving and cleaning up the New York-New Jersey harbor. At the same time, however, I and many thousands of my co-workers are deeply interested in the completion of the Deepening Project, because our livelihoods depend on it. The channels in this harbor already are too shallow to handle the larger ships that, more and more, are being used in world trade. If channel depth is not increased to 50 feet, as planned under the Deepening Project, the marine terminals in this harbor will be unable to compete with those in other ports; they will lose the business to other ports; and I and thousands of other workers will either lose our jobs or see our incomes fall. In addition, thousands of other tax-paying businesses and workers, such as truckers, rail personnel, etc., depend on the ongoing vitality and viability of our port.
- (2) After many years of studies and proceedings, the environmental effect of the dredging has certainly been fully analyzed by the Army Corps and other agencies, such as EPA and the New York and New Jersey environmental agencies. I agree with their conclusion that the dredging will not harm the environment. In fact, I am convinced that the Deepening Project as currently designed will actually improve the quality of the port's waters and the environment generally. The ships currently using the harbor disturb the sea bottom with their keels and

US Army Corps of Engineers

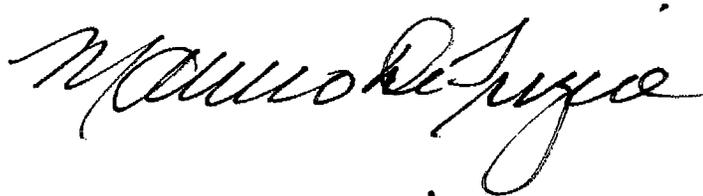
Page 2

August 12, 2005

propellers and disperse contaminants as they traverse the shallow channels. The dredging not only will reduce this dispersion, by deepening the channels, but it will also permanently remove contaminants from the harbor. I understand that dredging contractors are required to use special equipment, such as closed dredging buckets, and must follow strict procedures in disposing of potentially contaminated dredged material.⁽³⁾The increased use of our ports by larger ships also will take truck traffic off our main highways, thereby reducing air pollution.

I believe that the Army Corps has done an excellent job in addressing both the legitimate environmental concerns associated with the Deepening Project and the urgent need for deepening the harbor channels so that our port can remain viable and competitive. On behalf of myself and my thousands of co-workers and our employers, I would like to thank the Army Corps personnel for its dedication and commitment to this project.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Mauro DeTrizio', written in a cursive style.

MAURO DeTRIZIO

RESPONSE TO COMMENTS

Mauro DeTrizio (Port Newark Container Terminal LLC) – Letter dated August 12, 2005

Comment: *“I am aware that environmental groups have encouraged mass mailings to the Army Corps objecting to the Deepening Project. I am as interested as they are in preserving and cleaning up the New York-New Jersey harbor. At the same time, however, I and many thousands of my coworkers are deeply interested in the completion of the Deepening Project, because our livelihoods depend on it. The channels in this harbor already are too shallow to handle the larger ships that, more and more, are being used in world trade. If channel depth is not increased to 50 feet, as planned under the Deepening Project, the marine terminals in this harbor will be unable to compete with those in other ports; they will lose the business to other ports; and I and thousands of other workers will either lose our jobs or see our incomes fall. In addition, thousands of other tax-paying businesses and workers, such as truckers, rail personnel, etc., depend on the ongoing vitality and viability of our port.”*

USACE response: Comment noted.

Comment: *“After many years of studies and proceedings, the environmental effect of the dredging has certainly been fully analyzed by the Army Corps and other agencies, such as EPA and the New York and New Jersey environmental agencies. I agree with their conclusion that the dredging will not harm the environment. In fact, I am convinced that the Deepening Project as currently designed will actually improve the quality of the port’s waters and the environment generally. The ships currently using the harbor disturb the sea bottom with their keels and propellers and disperse contaminants as they traverse the shallow channels. The dredging not only will reduce this dispersion, by deepening the channels, but it will also permanently remove contaminants from the harbor. I understand that dredging contractors are required to use special equipment, such as closed dredging buckets, and must follow strict procedures in disposing of potentially contaminated dredged material.”*

USACE response: Comment noted.

Comment: *“The increased use of our ports by larger ships also will take truck traffic off our main highways, thereby reducing air pollution.”*

USACE response: Comment noted.

Nancy Anne Smith
P.O. Box 74
Avon-by-the-Sea, New Jersey 07717

Mr. Ronald Pinzon
Environmental Assessment Branch
Army Corps of Engineers
26 Federal Plaza, Room 2136
New York, New York 10278 - 0090

RE: June 2005 Draft EA on Harbor Deepening

August 5, 2005

Dear Mr. Pinzon,

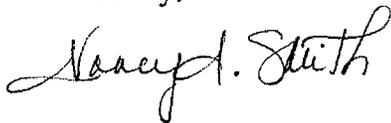
As an area resident who values the health of our estuary, I am very concerned that the Port of New York and New Jersey harbor deepening project, as currently designed, will spread contaminated sediments through the estuary, exacerbating existing pollution and diminishing the Environmental Protection Agency's chances for a successful study and cleanup of the Superfund site in Newark Bay, Arthur Kill and Kill van Kull.⁽¹⁾ There is no reason why the Army Corps of Engineers cannot achieve its goal of deepening the port while also furthering the EPA's efforts, simply by removing the contaminated sediment with the same care that would be used within any other Superfund site.

The draft environmental assessment on the harbor deepening project was supposed to genuinely address these issues, so I am disappointed that it instead simply defends the status quo and ignores serious environmental dangers.⁽²⁾ If the Corps moves forward with the dredging, it should continuously monitor the magnitude and extent of sediment resuspension from its activities, compare the monitoring results against a "performance standard" to make sure control methods are working, and operate dredging equipment in compliance with all "best management practices" used at other highly contaminated sites.⁽³⁾ The Corps should prepare a supplemental environmental impact statement to examine these alternatives, and the New Jersey Department of Environmental Protection

should include these measures, in detail, as mandatory conditions in the water quality certificates for all future navigational dredging within the Superfund site.

I encourage both the Corps and New Jersey Department of Environmental Protection to take these sensible steps to ensure that the harbor deepening project advances, rather than impedes, the ultimate goals of having a world class port and a world class estuary.

Sincerely,



Nancy Anne Smith

P.S. Are you related to the famous explorer & colleague of Christopher Columbus?

RESPONSE TO COMMENTS

Nancy Anne Smith (Area Resident) – Letter dated August 5, 2005

Comment: *“There is no reason why the Army Corps of Engineers cannot achieve its goal of deepening the port while also furthering the EPA's efforts, simply by removing the contaminated sediment with the same care that would be used within any other Superfund site.”*

USACE response: The USACE disagrees with this statement. The USACE analyzed additional Best Management Practices (BMPs), in particular those used in other Superfund sites, and concluded that the majority of those BMPs were inappropriate for the HDP. Nevertheless, the use of an environmental bucket, along with several BMPs that will be implemented during the conduct of the subject navigation dredging operations, including complete bucket closure and ascent speed of 2 feet per second or less, would ensure minimal resuspension during the bucket cycle. These BMPs are fully described in the dredging projects plans and specifications in accordance with the New York and New Jersey Water Quality Certification, and are consistent with the New York/New Jersey Dredged Material Management Plan. The USACE has committed to providing periodic reanalyses of BMPs on an as-needed basis and is willing to revisit additional BMPs with the States of New York and New Jersey throughout the life of the deepening project.

Comment: *“If the Corps moves forward with the dredging, it should continuously monitor the magnitude and extent of sediment resuspension from its activities, compare the monitoring results against a “performance standard” to make sure control methods are working, and operate dredging equipment in compliance with all “best management practices” used at other highly contaminated sites.”*

USACE response: As noted in the response above, Volume I of the EA considered alternative best management practices (BMPs) and engineering performance standards to minimize potential impacts due to dredging. Volume I notes that the HDP operates under contract-specific individual and umbrella water quality certificates (WQCs) from the States of New York and New Jersey under section 401 of the Clean Water Act, (33 U.S.C § 1341(a)(1)), which mandate the use of BMPs designed to minimize the resuspension of contaminated sediments to the fullest extent practicable. Volume I of the EA also notes that the USACE investigated alternative BMPs in the HDP 1999 Final Environmental Impact Statement prior to receiving the WQCs. Nevertheless, USACE analyzed additional BMPs, in particular those used in other Superfund sites, and concluded that the majority of those BMPs were inappropriate for the HDP. The USACE concluded that the BMPs suggested by the public “are either already being used, are inappropriate for navigational dredging, or would unnecessarily increase the cost and time to complete the HDP with insignificant affects on the Remedial Investigation Work Plan (RIWP) study goals. The USACE noted, however, that consistent with its extensive environmental monitoring program, and its ongoing coordination with USEPA, it would, “as appropriate, reevaluate the need of altering its dredging methods within the Newark Bay Study Area to

minimize to the fullest extent practicable any adverse affects to the RIWP study goals.” The USACE has also increased its Total Suspended Solids (TSS) Monitoring Program to better capture the extent and nature of sediments plumes generating for USACE dredging activities. See Appendix E of Volume I of the EA for a list of TSS monitoring components that have been added to the monitoring program for future Harbor Deepening Activities in the Newark Bay Study Area.

Comment: *“The Corps should prepare a supplemental environmental impact statement to examine these alternatives, and the New Jersey Department of Environmental Protection should include these measures, in detail, as mandatory conditions in the water quality certificates for all future navigational dredging within the Superfund site.”*

USACE response: The USACE does not agree with this statement. A federal agency is not required, in all instances, to prepare a SEIS prior to taking or continuing action. Rather, NEPA and its implementing regulations direct an agency to prepare a SEIS only if the proposed action significantly affects the quality of the human environment. Accordingly, an agency can satisfy its obligations under NEPA by first preparing an EA. (40 C.F.R. § 1501.4) An EA is a concise public document that briefly discusses the relevant issues and is designed to provide sufficient evidence and analysis for determining whether an action has significant environmental impacts and requires preparation of a SEIS. The Corps is currently in the process of performing the required NEPA analysis to determine the significance of the potential impacts of the HDP to the USEPA’s RIFS study. A decision will be made regarding significance based upon these analyses.

Participating Organizations

Clean Ocean Action

www.CleanOceanAction.org



Ocean Advocacy
Since 1984

Main Office
18 Hartshorne Drive
P.O. Box 505, Sandy Hook
Highlands, NJ 07732-0505
Voice: 732-872-0111
Fax: 732-872-8041
SandyHook@CleanOceanAction.org

Institute of Coastal Education
3419 Pacific Avenue
P.O. Box 1098
Wildwood, NJ 08260-7098
Voice: 609-729-9262
Fax: 609-729-1091
Wildwood@CleanOceanAction.org

- Alliance for a Living Ocean
- American Littoral Society
- Arthur Kill Coalition
- Asbury Park Fishing Club
- Bayberry Garden Club
- Bayshore Regional Watershed Council
- Bayshore Saltwater Flyfishers
- Belford Sailboat Club
- Belmont Fishing Club
- Beneath The Sea
- Bergen Save the Watershed Action Network
- Berkeley Shores Homeowners Club Association
- Cape May Environmental Commission
- Central Jersey Anglers
- Citizens Conservation Council of Ocean County
- Clean Air Campaign
- Coalition Against Toxics
- Coalition for Peace & Justice
- Coast Alliance
- Coastal Jersey Parrot Head Club
- Communication Workers of America, Local 1034
- Concerned Businesses of CDA
- Concerned Citizens of Bensenville
- Concerned Citizens of CDA
- Concerned Citizens of Montauk
- Eastern Monmouth Chapter of Commerce
- Environmental Response Network
- Explores Erie Club
- Fisher's Island Conservancy
- Fighters Defense Fund
- Fishermen's Dock Cooperative, Pt. Pleasant
- Friends of Island Beach State Park
- Friends of Liberty State Park
- Friends of the Beachwalk
- Garden Club of Englewood
- Garden Club of Fair Haven
- Garden Club of Long Beach Island
- Garden Club of Middletown
- Garden Club of Monticello
- Garden Club of Neptune
- Garden Club of New Jersey
- Garden Club of New Vernon
- Garden Club of Oceanport
- Garden Club of Pennington
- Garden Club of Ridgewood
- Garden Club of Rumson
- Garden Club of Short Hills
- Garden Club of Shrewsbury
- Garden Club of Spring Lake
- Garden Club of Washington Valley
- Great Egg Harbor Watershed Association
- Highlands Business Partnership
- Highlands Chamber of Commerce
- Madison River Fishermen's Association/NJ
- Interact Clubs of Rotary International
- Jersey Coast Anglers
- Jersey Shore Captains Association
- Jersey Shore Running Club
- Junior League of Monmouth County
- Keystone Environmental Commission
- Kiwanis Club of Manasquan
- Kiwanis Club of Shadow Lake Village
- Leonards Pary & Pleasant Boat Association
- Leonards The Payers Association
- Man Street Windward
- Marine Trades Association of NJ
- Monmouth Conservation Foundation
- Monmouth County Association of Realtors
- Monmouth County Audubon Society
- Monmouth County Friends of Clearwater
- Monauk Fisherman's Emergency Fund
- National Coalition for Marine Conservation
- Narrans Resources Protection Association
- NJ Beach Buggy Association
- NJ Commercial Fishermen's Association
- NJ Council of Elms Clubs
- NJ Environmental Federation
- NJ Environmental Lobby
- NJ Marine Ship Owners Group
- NJ Marine Operators Association
- NJ NREG Citizen Lobby
- Narragansett Fishing & Fishing Club
- NYC Sea Gypsies
- NY Marine Boatmen Association
- NYNJ Baykeeper
- Coast Windward
- PaddleOut.org
- Piedmont Saltwater Sportsmen Club
- Rainier Riverkeepers
- Religious on Water
- Riverside Drive Association
- Rotary Club of Long Branch
- St. George's by the River Church, Parsippany
- Saltwater Anglers of Bergen County
- Save Barnegat Bay
- Save the Bay
- SEAC Monmouth
- Seaside Garden Club
- Shark Research Institute
- Shark River Cleanup Coalition
- Shark River Surf Anglers
- Shore Adventure Club
- Shore Surf Club
- Shoreline Shore Chapter
- Scappoose Club of Cape May County
- South Jersey Dive Club
- South Monmouth Board of Realtors
- State Island Friends of Clearwater
- Strathmore Fishing & Environmental Club
- Surfers' Environmental Alliance
- Surfside Foundation, Jersey Shore Chapter
- TACK-1
- Terra Nova Garden Club
- Union of Monmouth County
- United Boatmen of NJ/NJ
- United Sportsmen of NJ
- Volunteer Friends of Bostons Waterpark
- Women's Club of Brick Township
- Women's Club of Keosauqua
- Women's Club of Long Branch
- Women's Club of Metuchenville
- Zen Society

August 16, 2005

Mr. Thomas Shea, Project Manager
New York and New Jersey Harbor Deepening
US Army Corps of Engineers
New York District
26 Federal Plaza, Room 2119
New York, NY 10278-0900

Mr. Ronald Pinzon, Environmental Coordinator
Environmental Assessment Branch
New York District, USACE
26 Federal Plaza, Room 2136
New York, NY 10278-0090

Suzanne Dietrick, Chief
NJ Department of Environmental Protection
Office of Dredging and Sediment Technology
P.O. Box 028
401 East State Street
Trenton, NJ 08625-0028

VIA FACSIMILE

RE: 1) PN # FP64-SNB1-2005; New York and New Jersey Harbor Deepening Project, Newark Bay Channel, Contract Area S-NB-1

2) Draft Environmental Assessment (EA) for the Newark Bay Study Area of the New York and New Jersey Harbor Deepening Project (50 Ft.)

Dear Mr. Pinzon;

Clean Ocean Action submits joint comments on 1) the New York and New Jersey Harbor Deepening Project, Newark Bay Channel, Contract Area S-NB-1 (PN # FP64-SNB1-2005) and 2) the draft Environmental Assessment (EA) on the Newark Bay Area of the New York and New Jersey Harbor Deepening Project (June 2005). These two Public Notices are intrinsically related and address similar issues, making it appropriate to incorporate our comments into one letter.

The project will generate a total of 1,816,000 cubic yards (CY) of dredged material including 1,345,000 CY to be disposed of at HARS (Table 1).

Newark Bay Contract SNB- 1	Proposed for HARS		For upland management		
	Glacial Till (CY)	Red Clay (CY)	Black Silt/Mud (CY)	Rock (CY)	Total Volume (CY)
	288,000	1,057,000	362,000	109,000	1,816,000

Table I. Areas to be dredged, proposed volumes, types of dredged material, and proposed management options. From the Army Corps of Engineers Public Notice #FP64-SNB1-2005.

In addition to the information provided in the Public Notice and the EA, COA also requested and received a core map and core data from the project area.

COA's comments are as follows:

1. Newark Bay Study Area Designation:

Considering the recent designation of the Newark Bay as a Study Area, the specific level of collaboration between all of the different state and federal agencies involved in the Harbor Deepening Project is not clear.

- a. What does the Newark Bay Study Area (NBSA) designation mean for the Harbor Deepening Project?
- b. Does the Army Corp anticipate any changes to their dredging or disposal methods because of the new designation?
- c. Will New Jersey Department of Environmental Protection (NJ DEP) require any additional permit modifications and/or monitoring to accommodate the RI/FS or the new NBSA designation?
- d. What specific steps have the Environmental Protection Agency (EPA) required of the Army Corps to advance the Remedial Investigation/Feasibility Study (RI/FS) of the NBSA?
- e. Has the EPA thoroughly evaluated the Harbor Deepening Project to determine the effect of the dredging on the RI/FS?
- f. To what level have NJ DEP and New York Department of Environmental Conservation (NY DEC) been included in the discussions on the RI/FS of the NBSA?
- g. Are there opportunities for the Army Corps (possibly through funding available via the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) program) to advance the investigation of current and new dredging techniques to reduce resuspension and impacts on water quality during dredging operations?

2. HARS Suitable Materials:

The PN states that the Standard Operating Procedures set forth in a July 17, 2004 joint EPA and Army Corps memo were used to classify 288,000 CY of proposed dredging material as Pleistocene glacial till and a resulting list of sediment characteristics were provided. A few discrepancies need to be addressed including:

- a. The statement that Glacial Till material contained "low organic carbon content," is not supported by the core data and it is unclear what methods were used to make this determination.
- b. There is a lack of consistency between the core logs and subcrop map:
 - i. Cores (DH 75-30, 33, and 34) contain "Brown Silt" or "Brown Sand" above "Black, Oily, Organic Silt". These cores should not be characterized as Pleistocene age

material as there are no Red or even Reddish-Brown sediments in the entire core. The joint SOP specifically states that "...sediments that are gray, light gray or reddish-gray, OR clearly not reddish or red-brown are NOT likely to be glacial till." These areas should be re-characterized as Holocene age materials and will require additional testing before approval for placement at HARS.

- ii. Several core logs (NBC703-12, 13, 14, 15 and 17 plus NB-98-15) indicate the presence of Sandstone Bedrock underlying the Black Silt, these cores contain little or no sand/gravel and represent a significant area that has been characterized as Glacial Till in the Subcrop map.

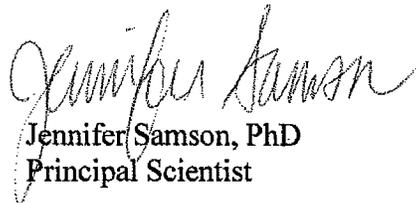
The Army Corps needs to reanalyze these cores and make changes to the subcrop map and proposed volumes listed in Table 1 as necessary. If these locations are found to be rock, COA encourages the Army Corps to dispose of these materials at a designated Artificial Reef site, as rock is a preferred material for enhancing artificial reefs in this region. In previous discussions, the Army Corps also suggested the possible use of rock at HARS might occur as a final habitat enhancement material in location where the remediation was complete and no additional dredged materials would be allowed to be placed over the rock. Therefore, rock placement at this time would be premature.

In conclusion, Clean Ocean Action has presented numerous issues regarding the Newark Bay SNB-1 Contract Area 50-foot deepening project. A written response to these comments is requested.

Sincerely,



Cindy Zipe,
Executive Director



Jennifer Samson, PhD
Principal Scientist

cc: Thomas Shea, Project Manager - New York and New Jersey Harbor Deepening, NY District,
USACE
Suzanne Dietrick, Chief, NJ DEP Office of Dredging and Sediment Technology

RESPONSE TO COMMENTS

Clean Ocean Action – Letter dated August 16, 2005

Comment: *“Considering the recent designation of the Newark Bay as a Study Area, the specific level of collaboration between all of the different state and federal agencies involved in the Harbor Deepening Project is not clear. What does the Newark Bay Study Area (NBSA) designation mean for the Harbor Deepening Project?”*

USACE response: Designation of the NBSA for the Harbor Deepening Project means that USACE will need to coordinate in a formal manner with all cooperating agencies. As discussed in the EA, a coordination team has been established. The “Newark Bay Study Area Coordination Plan” (the “Coordination Plan”), the primary purpose of which is to “ensure that impacts on the USUSEPA’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.” The Coordination Plan establishes a multi-agency coordination team consisting of representatives from the USACE, USUSEPA, the United States Coast Guard, the Port Authority of New York and New Jersey, the New Jersey Department of Environmental Protection (NJDEP), the New York State Department of Conservation (NYSDEC), the United States Fish and Wildlife Service (FWS), and the National Oceanic and Atmospheric Administration (NOAA) (the Coordination Team). Pursuant to the Coordination Plan, the Coordination Team will, meet at 10:00 a.m. on the second Tuesday of every month during the duration of the RI/FS to:

- (1) update each other on current and future activities in the Study Area;
- (2) share information on their respective projects in the Area; and
- (3) resolve any issues that may arise.

The Coordination Plan recognizes that monthly meetings may not be sufficient to fully coordinate the agencies’ respective projects, and therefore provides that more frequent meetings may be held, or Coordination Team members may be invited by particular agencies to attend other relevant meetings as appropriate, “such as USACE meetings with dredging contractors.” The Coordination Plan was initially developed and proposed by the USACE even before the Court ruled in the Opinion and Order that “if the Corps relies on the promise of cooperation between the USEPA and the Corps to minimize the effects of dredging on the RI/FS, the Corps must give full consideration to how that cooperation will be handled.” The Coordination Team was modeled after the overall HDP Project Delivery Team, and can be looked at as a specialized component of that broader team.

On September 21, 2005, the Coordination Plan was adopted by the “New York and New Jersey Harbor Senior Partners,” and the Coordination Plan was issued for public comment in the Amendment. The activities of the Coordination Team have been and will continue to be monitored by the Senior Partners. Even before the Coordination Team was formally established, the USACE and USEPA coordinated their respective projects in the Newark Bay Study Area. In late-March and early-April 2005, the USACE and USEPA shared additional detailed information

on their respective projects and met to better coordinate those projects. Notably, the agencies met on April 7, 2005 to discuss sampling and modeling in the Newark Bay Study Area. Several key points were discussed during this meeting, including:

- (1) the identification of “additional resources, technical products, and coordination that could support EPA’s Newark Bay superfund study [and] to insure that the [Army Corps’] navigation program did not impact or interfere with [EPA’s] sampling”;
- (2) the coordination of USEPA sampling in the Fall with the USACE’ dredging schedules;
- (3) the USACE’ provision of information to USEPA concerning its navigation projects, including sampling results from earlier investigations, to “further the superfund study of Newark Bay”; and
- (4) various issues related to the Draft Newark Bay Sampling Plan of USEPA’s sampling contractor, Tierra Solutions, Inc.’s (“Tierra”).

The agencies met again on April 28, 2005 to further discuss those, and other issues. Coordination continued through the Spring and Summer of 2005. In May 2005, USEPA sought comments from the USACE and others on Tierra’s revised draft Remedial Investigation Work Plan (“RIWP”) for the Newark Bay Study Area. The USACE provided its detailed comments to USEPA on August 24, 2005. Notably, in its August 24th letter the USACE confirmed with USEPA its initial understanding that potential impacts of its ongoing maintenance and deepening projects in the Newark Bay Study Area could be avoided through coordination with USEPA. (“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.”). The August 24th letter summarizes the USACE’ preliminary analysis of the deepening projects’ impacts on each of the three types of Phase I data collection efforts by USEPA – bathymetry, BAZ, and sediment contaminant coring and analysis. The USACE concluded that the only potential adverse impact on USEPA’s Phase I sampling was on sediment samples proposed to be taken in the navigational channels currently being, or proposed to be, dredged. The USACE confirmed, however, that just prior to the Phase I sediment sampling, it would coordinate with USEPA on the precise locations of such sampling to ensure that dredging would not interfere with the sediment sampling. On August 26, 2005, the Army Corp and USEPA convened a conference call to discuss the coordination of the HDP and the RI/FS. During the call, the parties again discussed the different types of data collection that were being planned for Phase I, i.e., bathymetry, BAZ and sediment coring. Most notably, during this call the representatives of Malcolm Pirnie (“MP”), USEPA’s technical project managers for the Diamond Alkali Superfund site, concluded with USEPA’s concurrence that “none of the Phase I sampling actions would, in any significant manner, be interfered with or affected by the ongoing dredging activities of the Corps in Newark Bay. This again confirmed the USACE’ initial understanding that its deepening projects would not affect the RI/FS in any meaningful way. The parties agreed that they would continue to meet and coordinate their efforts so as to, avoid any potential interference caused by sampling and dredging within “the same geographic region at the same time.”

On September 8, 2005, in addition to reviewing the key points of the Coordination Plan, the agencies met to:

- (1) ensure that all parties understood each others' activities in the Study Area;
- (2) discuss whether the USACE' deepening projects would have any adverse impacts on USEPA's sampling in the Study Area and to "identify mitigation or avoidance strategies to minimize the impacts"; and
- (3) identify points of contact for sampling, dredging, and monitoring activities. (email exchanges concerning September 8th meeting).

The agencies discussed in detail their respective programs in the Study Area, the specific requirements and goals of the RIWP, and how to best to ensure that those requirements and goals were not impacted adversely by the USACE' deepening projects in the Area. The representatives of MP explained the purpose behind collecting sediment samples in the navigational channels in the Study Area. The agencies then discussed the USACE' past and future deepening projects in the navigational channels and whether those projects affected or would affect the sediment sampling that would take place in the Fall. It was agreed that a smaller working group would meet on September 13, 2005 to discuss these issues in greater detail and determine how the agencies could coordinate their respective projects to ensure the validity of the specific RIWP sediment samples to be taken from the Kill van Kull and Arthur Kill navigational channels. The smaller working group met on September 13, 2005 to discuss in greater detail the RIWP sediment sampling points in the Kill van Kull and Arthur Kill and their relationship to the deepening projects in those channels. After reviewing the RIWP and proposed sampling plan in relation to past and future USACE dredging in the Area, it was decided that four sampling points in the Kill van Kull and Arthur Kill navigational channels would be relocated to better serve the goals of the Phase I sediment sampling. The four points were moved because the original points proposed in the RIWP sampling plan had been dredged recently, thereby making it difficult to obtain a sufficiently deep and useful sediment core. The alternate sampling points that were agreed upon will enable USEPA to sample sediments in areas that had.

In addition to issuing the EA and coordinating its deepening projects with USEPA's RI/FS, in August 2005 the USACE, along with the other interested federal and state partner agencies, issued the Lower Passaic River Restoration Project and Newark Bay Study Draft Community Involvement Plan ("Draft CIP"). The partner agencies issued the Draft CIP "as a guide for the partner agencies in providing opportunities for public information and input regarding cleanup, injury assessment, and restoration activities in the Lower Passaic River and Newark Bay watershed study areas. It is also designed to assist the communities and other stakeholders throughout the project areas to become meaningfully involved in and informed about the project,"

Comment: *"Does the Army Corps anticipate any changes to their dredging or disposal methods because of the new designation?"*

USACE response: The EA considers alternative best management practices ("BMPs") and engineering performance standards to minimize potential impacts due to dredging. The EA notes that the HDP operates under contract-specific individual and umbrella water quality certificates ("WQC's") from the States of New York and New Jersey under section 401 of the Clean Water

Act, 33 U.S.C § 1341(a)(1), which mandate the use of myriad BMPs designed to minimize the resuspension of contaminated sediments to the fullest extent practicable. The EA also notes that, the USACE investigated alternative BMPs in the HDP 1999 Final Environmental Impact Statement prior to receiving the WQC's. Nevertheless, USACE analyzed additional BMPs, in particular, those used in other Superfund sites, and concluded that those BMPs were inappropriate for the HDP. The USACE also assessed the BMPs suggested in some of the public comments. USACE concluded that the BMPs suggested by the public "are either already being used, are inappropriate for navigational dredging, or would unnecessarily increase the cost and time to complete the [HDP] with only a modest, if any, decrease in the already insignificant affects on the [Remedial Investigation Work Plan ("RIWP")] study goals." The USACE noted, however, that consistent with its extensive environmental monitoring program, and its ongoing coordination with USEPA, it would, "as appropriate, reevaluate the need of altering its dredging methods within the Newark Bay Study Area to minimize to the fullest extent practicable any adverse affects to the RIWP study goals."

Comment: *"Will New Jersey Department of Environmental Protection (NJDEP) require any additional permit modification and/or monitoring to accommodate the RI/FS or the new NBSA designation?"*

USACE response: The Army Corps cannot respond on behalf of NJDEP. The EA notes that the HDP operates under contract-specific individual and umbrella water quality certificates ("WQC's") from the States of New York and New Jersey under section 401 of the Clean Water Act, 33 U.S.C § 1341(a)(1). These WQC's mandate the use of BMPs designed to minimize the resuspension of contaminated sediments to the fullest extent practicable. The USACE expects that NJDEP will make a decision on additional BMP's once this EA is submitted to them.

Comment: *"What specific steps have the Environmental Protection Agency (EPA) required of the Army Corps to advance the Remedial Investigation/Feasibility Study (RI/FS) of the NBSA?"*

USACE response: The USEPA has not required any specific steps of the USACE to advance the RI/FS at this time. However, the Federal and state regulatory agencies have created a formal coordination team to discuss any matters that each agency may determine is important and requires input or action by the other. Please see the response to first comment above for a summary of the Coordination Plan.

Comment: *"Has the EPA thoroughly evaluated the Harbor Deepening Project to determine the effect of dredging on the RI/FS?"*

USACE response: The USACE cannot respond on behalf of the USEPA on the extent of its evaluation of the effects of dredging on the RI/FS. However, a review of USEPA's Remedial Investigation Work Plan indicated that it expects dredging to be on-going during the RI/FS and has apparently incorporated accommodations into its plan. In addition, USEPA has provided a full NEPA review of this EA, which was performed by their NEPA team and comments

coordinated with their CERCLA team and provided the USACE with comments that do not identify any concerns regarding the potential affects of the HDP on the RIFS (see USEPA letter in this section).

Comment: *“To what level have NJDEP and New York Department of Environmental Conservation (NYDEC) been included in the Discussions on the RI/FS of the NBSA?”*

USACE response: Again, the USACE is unable to comment on the extent of coordination by the USEPA with the two states. However, both states are included as members of the NBSA coordination team and the USACE intends to continue to work closely with both agencies.

Comment: *“Are there opportunities for the Army Corps (possibly through funding available via the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) program) to advance the investigation of current and new dredging techniques to reduce resuspension and impacts on water quality during dredging operations?”*

USACE response: At this time, the USACE is unable to use CERCLA funding to accomplish the suggested research. However, the USACE intends to develop an expanded comprehensive and multipurpose TSS Monitoring Program. At its simplest, the TSS Monitoring Program is designed to evaluate the extent of resuspension of sediments caused by dredging. Using water sampling, an optical backscatter sensor, an acoustic Doppler current profiler, and a differential global positioning system, the expanded TSS Monitoring Program will measure the extent of sediment resuspension caused by the dredge plumes. The TSS Monitoring Program will be used for the life of the HDP, and will provide, at a minimum, the data needed to refine the SSFATE modeling for the HDP and the Newark Bay Study Area. The TSS monitoring and SSFATE modeling results be provided to both state regulatory agencies and also to the USACE’ Engineering Research and Development Center at the Waterways Experimentation Center (ERDC). Scientists at ERDC have assisted in developing the monitoring program based on their experience. From the initial analysis of the data by them, they will then be able to determine if additional research under the Dredging Operations and Environmental Research Program is warranted. We fully expect that the results will benefit both the HDP and the USEPA’s RI/FS.

Comment: *“The statement that Glacial Till material contained “low organic carbon content” is not supported by the Cores data and it is unclear what methods were used to make this determination.”*

USACE response: Low organic content is a relative term or qualitative rather than a quantitative term in this case. The objective of the joint SOP was to define the general characteristics of Pleistocene Sand and Gravel versus Holocene Sands. Pleistocene sands were deposited as till or in fresh water outwash (continental) environments that typically do not support abundant plant life or aquatic organisms. The Holocene sands were deposited in marine or estuary conditions that are much more organic rich and do support abundant plant life and aquatic organisms. The gray to black color of Holocene sands is typically due to relatively high organic content. The red

or red-brown color typical of Pleistocene Sands is indicative of oxidizing conditions common in continental (terrestrial) or non-marine settings with relatively low organic content. Shells and shell fragments are commonly found in Holocene sands but are very rarely if found in Pleistocene sands. The relative organic content is one of the identifying criteria that a field geologist attempts to estimate on a regular basis. From an engineering or geotechnical point of view organic rich soils (particularly organic silts) can cause settlement problems and may dictate special building foundations. Geologists in oil and gas look for organic content because organic rich soils (and later rock) are the primary source of hydrocarbons. Oil and gas are predominantly found in rocks that were originally sediments deposited in marine environments. As a consequence, geologists frequently look for clues to the depositional setting one of which is organic content, shells and shell fragments.

Comment: *“Cores (DH-75-30, 33, and 34) contain “Brown Silt” or “Brown Sand” above “Black, oily, organic Silt”. These cores should not be characterized as Pleistocene age material since there are no Red or even Reddish-Brown sediments in the entire cores. Joint SOP specifically states that “...sediments that are gray, light gray or reddish-gray, OR clearly not reddish or red-brown are NOT likely to be glacial till.” These areas should be re-characterized as Holocene age materials and will require additional testing before approval for placement at HARS.”*

USACE response: Cores DH 75-30, 33 and 34 were acquired in 1975 prior to the last two phases (40' and 45' Channels) of dredging. The black silt described at the top of these cores has been removed and the current channel floor elevation is now about -48.5' below mean low water. There is no indication of brown silt or brown sand overlying or above the Black Silt. There is no sand indicated in these three borings below the current dredge depth of approximately -48.5'. There is probably some black silt overlying the Pleistocene that has been deposited since the last phase of dredging (ended about two years ago). The entire contract will be dredged with an environmental bucket and the recently deposited black silt will be removed before the underlying brown silt is dredged. The brown silt that occurs below the current dredge depth (-48.5') is most certainly Pleistocene. The Pleistocene silt is often described as varved which is a characteristic of lakebed sediments. Varved refers alternating light and dark bands that reflect summer and winter months. The color of the bands ranges from red-brown to gray-brown to gray.

Although it is a moot point in this case (because there is no sand below -48.5 in these borings to question) there should be some discussion about color. Color is one of several criteria used to differentiate between Pleistocene and Holocene Sands but it should not be the definitive criteria. There are red Holocene Sands and there are gray Pleistocene Sands. Red sand and gravel that erodes from a nearby red shale source is likely to be red no matter what the age or depositional setting is. Sand and gravel that erodes from nearby black shale is likely to stay black no matter what the age is. It is certainly possible for two individuals to look at the same sample and for one to conclude that the color is red-brown while the other concludes it is brown. Color is not definitive.

Comment: *“Several cores logs (NB710-12, 13, 14, 15 and 17 lush NB-98-15) indicate the presence of Sandstone Bedrock underlying the Black Silt, these cores contain little or no*

sand/gravel and represent a significant area that has been characterizes as Glacial Till in the Subcrop map.”

USACE response: If there is a rock area that occurs unexpectedly then the rock material would be sent to the reef sites.

**Association of New Jersey Environmental Coalitions • Ironbound Community Corp. •
GreenFaith • Hackensack Riverkeeper • Natural Resources Defense Council • Natural
Resources Protective Association • New Jersey Environmental Federation • New Jersey
Environmental Justice Alliance • New Jersey Public Interest Research Group • NY/NJ
Baykeeper • North Jersey Environmental Justice Alliance • North Shore Waterfront
Conservancy of Staten Island, Inc. • Rahway River Association • Riverkeeper, Inc. •
Rutgers Environmental Law Clinic**

August 16, 2005

Mr. Ronald Pinzon
Environmental Coordinator
Environmental Assessment Branch
Army Corps of Engineers, New York District
26 Federal Plaza, Room 2136
New York, NY 10278
Fax: (212) 264-0961

Ms. Suzanne Dietrick
Chief
Office of Dredging and Sediment Technology
New Jersey Dept. of Environmental Protection
P.O. Box 028
401 East State Street, 6th Floor
Trenton, NJ 08625
Fax: (609) 777-1914

BY FACSIMILE AND FIRST CLASS MAIL

- Re: (1) U.S. Army Corps of Engineers' Draft Environmental Assessment on the
Newark Bay Area of the New York and New Jersey Harbor Deepening Project;
and
(2) Request for Water Quality Certification/Federal Consistency Determination for Contract
Area S-NB-1 of the NY & NJ Harbor Deepening Project (New Jersey Department of
Environmental Protection File No. 0000-01-1008.3)

Dear Mr. Pinzon and Ms. Dietrick:

The fourteen undersigned environmental and community organizations submit these comments on the June 2005 Draft Environmental Assessment on the Newark Bay Area of the New York and New Jersey Harbor Deepening Project ("Draft EA") to the U.S. Army Corps of Engineers' ("Corps"). We also address these comments to the New Jersey Department of Environmental Protection ("NJDEP"), in connection with the Corps' pending request for a Water Quality Certification/Federal Consistency Determination ("WQC") for "Contract Area S-NB-1."

As you know, the Environmental Protection Agency ("EPA") recently expanded the Passaic River Superfund site to include Newark Bay and the upper portions of the Arthur Kill and Kill van Kull.

- (1) The Draft EA's purpose, as we understand it, is to examine whether the Corps should, in light of this significant development, modify its channel deepening activities in these areas to minimize interference with the Superfund process and bring its dredging protocols up to the standards used at other sites with comparably-contaminated sediments, such as those being used in the Hudson River. NJDEP, independently, has both the responsibility and the authority to address these issues by imposing appropriate conditions in the WQCs issued for the Corps' activities.

Our organizations are disappointed that the Draft EA does not evince a sincere effort by the Corps to examine these issues. Typically, the Corps does not even conduct navigational dredging in Superfund sites because of the daunting challenges. For the Corps to responsibly dredge in Newark Bay and the Kills, its activities must, at least, be coordinated closely with the Superfund process. However, the Draft EA mentions only general discussions with EPA officials, and lacks any specific coordination *plan*. As for the environmental safety of the Corps' dredging protocols, the Draft EA merely rationalizes the status quo, ignoring key operational safeguards used for dredging other contaminated sites. This is particularly striking since one of the Corps' own studies shows that dredging could disperse contaminated sediments up to a mile from the dredge and cause them to accumulate in ecologically sensitive shallow areas of the harbor.

We believe the goal for this region is to establish both a world class port and a world class estuary. Contaminated sediments, such as those in the Lower Passaic River and Newark Bay, are a major source of heavy metal and synthetic organic contaminants to the Hudson-Raritan Estuary. Uptake of these contaminants by fish and other marine life poses a significant and long-term threat to the estuary's health and, through consumption of locally-caught contaminated fish, to the health of the region's residents. Dioxin levels in the Lower Passaic River and Newark Bay are particularly alarming -- because of "extremely high" cancer risk, crabbing has been banned for years in the Newark Bay Complex. The dioxin has even been tracked up into the Hudson and detected in its fish. Decades have passed since the contamination was discovered and no progress has been made in cleaning it up.

The Corps should not delay EPA's environmental remediation of these sediments, or diminish its chances for success, by dispersing contaminated sediments during dredging and blasting operations.

- (2) There is no reason why the Corps cannot achieve its goal of deepening the port while also advancing the environmental cleanup goals of Superfund, simply by dredging the contaminated sediment with the same care that it, or EPA, would take when conducting remedial dredging within any other Superfund site.
- (3) Towards this end, we request that the Corps develop a Supplemental Environmental Impact Statement to devise a specific plan for avoiding interference – and facilitating coordination – between its deepening projects and the Superfund efforts of EPA and the state and federal Natural Resource Trustees. To minimize resuspension and dispersal of contamination, this plan should include the following two modifications to the portion of the channel deepening project that overlaps with the Superfund site. NJDEP should also include these measures as mandatory conditions in the WQCs for all future navigational dredging within the Superfund site (including Contract Area S-NB-1), in addition to the important requirements already included in the "umbrella" WQC for the harbor deepening project.
- (4) First, the Corps should put in place comprehensive monitoring of resuspension rates and dispersal patterns. The monitoring plan should include continuous, real-time monitoring of the magnitude and extent of any plume of resuspended sediments, using calibrated optical and/or high frequency acoustic instruments (the Corps had done this with other dredging projects). In order to avoid interference from nearby ship traffic, computerized sensors and data recording devices can actually be mounted on the clamshell bucket itself, to provide real-time data on Total Suspended Solids (TSS) and other parameters. The Corps should also implement a "performance standard" against which the effectiveness of resuspension control methods can be measured.

Mr. Ronald Pinzon & Ms. Suzanne Dietrick
August 16, 2005
Page 3 of 4

Such proper monitoring and use of a performance standard would substantially decrease the environmental risks posed by resuspension. These measures are routine at contaminated sediment sites because they enable the dredging to be adjusted as needed, depending on site-specific conditions, to improve environmental performance. Monitoring, with results available to the public, would also ensure that the Corps' contractors are accountable for their environmental performance.

(5) **Second, the Corps should adopt the following best management practices, which are consistent with those used at other highly contaminated sediment sites:**

- Limiting the bucket's rate of descent, to avoid creating excessive water pressure ahead of the bucket.
- Using available software and electronic sensors to carefully control the vertical and horizontal placement of the bucket.
- Using a rinse tank to wash the bucket between unloading and re-entry into the water body.
- Controlling vertical penetration of the bucket to avoiding overfilling it with sediment (which can subsequently be released through the sideplate vents during water draining).
- Using sensors to ensure complete closure of the bucket before lifting it.
- Using a closed environmental clamshell bucket as broadly as possible (*i.e.*, "to refusal"), not only for materials designated as unsuitable for ocean disposal.
- "No barge overflow" allowed for all "unconsolidated" materials, not only for materials designated as unsuitable for ocean disposal.

In closing, we want to reiterate that the Hudson-Raritan Estuary's importance as a natural resource, and as a central part of the region's "public trust," should not be overshadowed by its role as a port. The Corps, as a steward for these natural resources, should embrace the long-delayed and greatly-needed clean-up of Newark Bay's contaminated sediments, not brush it aside. And NJDEP should exercise its regulatory authority over harbor dredging to ensure that the Corps' activities advance, not impede, this effort and the ultimate goal of a clean estuary.

We appreciate the opportunity to make these comments and look forward to working with both the Corps and NJDEP to resolve our concerns.

Sincerely,

Sandy Batty
Executive Director
Association of New Jersey Environmental
Commissions

Rev. Fletcher Harper
Executive Director
Green Faith

Capt. Bill Sheehan
Hackensack Riverkeeper

Michelle Garcia
Ironbound Community Corporation

Mr. Ronald Pinzon & Ms. Suzanne Dietrick
August 16, 2005
Page 4 of 4

Brad Sewell, Esq.
Lawrence M. Levine, Esq.
Natural Resources Defense Council

James Scarcella
President
Natural Resources Protective Association

David Pringle
Campaign Director
New Jersey Environmental Federation

Ana Baptista
New Jersey Environmental Justice Alliance

Dena Mottola
Executive Director
New Jersey Public Interest Research Group

Andrew J. Willner, Executive Director
Deborah A. Mans, Policy Director
NY/NJ Baykeeper

Kim Gaddy
Chairperson
North Jersey Environmental Justice Alliance

Beryl A. Thurman
Secretary
North Shore Waterfront Conservancy of Staten
Island, Inc.

Dennis Miranda
Executive Director
Rahway River Association

Robert J. Goldstein, Esq.
Senior Attorney & Hudson River Program
Director
Riverkeeper, Inc.

Lisa F. Garcia, Esq.
Rutgers Environmental Law Clinic
Counsel to NY/NJ Baykeeper

cc: Bradley M. Campbell, Commissioner, NJDEP
Joseph Seebode, Assistant Commissioner Site Remediation Program, NJDEP
Col. Richard J. Polo, Jr., Commander and District Engineer, USCAE-NYD
Thomas Shea, USACE-NYD
Tim Kubiak, USFWS
Tom Brosnan, NOAA
Elizabeth Butler, USEPA Region 2
Kathryn D. McGuckin, NYSDEC
Honorable Jon S. Corzine
Honorable Frank Lautenberg
Honorable Charles E. Schumer
Honorable Hillary Rodham-Clinton
Honorable Frank Pallone, Jr.
Honorable Rodney Frelinghuysen
Honorable Robert Menendez
Honorable Jerrold Nadler
Honorable Nydia M. Velazquez
Honorable Vito J. Fossella

RESPONSE TO COMMENTS

Association of New Jersey Environmental Coalitions, Ironbound Community Corp, Greenfaith, Hackensack Riverkeeper, Natural Resources Defense Counsel, Natural Resources Protective Association, New Jersey Environmental Federation, New Jersey Environmental Justice Alliance, New Jersey Public Interest Research Group, NY/NJ Baykeeper, North Jersey Environmental Justice Alliance, North Shore Waterfront Conservancy of Staten Island, Inc., Rahway River Association, Riverkeeper, Inc. Rutgers Environmental Law Clinic. – Letter dated August 16, 2005.

Comment: *“The Draft EA’s purpose, as we understand it, is to examine whether the Corps should, in light of this significant development, modify its channel deepening activities in these areas to minimize interference with the Superfund process and bring its dredging protocols up to the standards used at other sites with comparably-contaminated sediments, such as those being used in the Hudson River. NJDEP, independently, has both the responsibility and the authority to address these issues by imposing appropriate conditions in the WQCs issued for the Corps’ activities.”*

USACE response: The EA considered alternative best management practices (BMPs) with equipment and inspection requirements to minimize potential impacts to the RI/FS due to dredging. The EA notes that the HDP operates under contract-specific individual and umbrella water quality certificates (“WQCs”) from the States of New York and New Jersey under section 401 of the Clean Water Act, 33 U.S.C § 1341(a)(1), which appropriately require the use of several specific BMPs designed to minimize the resuspension of contaminated sediments to the fullest extent practicable. The EA also notes that the USACE investigated alternative BMPs in the HDP’s 1999 Final Environmental Impact Statement prior to receiving the WQCs. Nevertheless, the USACE analyzed additional BMPs, in particular those used in remediating other Superfund sites, and concluded that the relatively few additional BMPs employed there were inappropriate for the HDP from both environmental and feasibility perspectives. Further, USACE assessed the BMPs suggested in some of the public comments. The USACE concluded that the majority of the BMPs suggested by the public “are either already being used, are inappropriate for navigational dredging, or would unnecessarily increase the cost and time to complete the [HDP] with only a modest, if any, decrease in the already insignificant affects on the [Remedial Investigation Work Plan (“RIWP”)] study goals.” The USACE noted, however, that consistent with its extensive environmental monitoring program, and its ongoing coordination with USEPA, it would, “as appropriate, reevaluate the need of altering its dredging methods within the Newark Bay Study Area to minimize to the fullest extent practicable any adverse affects to the RIWP study goals.”

Comment: *“There is no reason why the Corps cannot achieve its goal of deepening the port while also advancing the environmental cleanup goals of Superfund, simply by dredging the contaminated sediment with the same care that it, or USEPA, would take when conducting remedial dredging within any other Superfund site.”*

USACE response: The HDP do not have in their Congressional Authority provisions to perform remedial dredging. Rather, the sole purpose of the projects is for navigation. The USACE analyzed additional BMPs, in particular those few additional methods used in other Superfund sites, and concluded that those BMPs were largely inappropriate for the HDP from either an environmental and/or a feasibility perspective. Nevertheless, when dredging surficial, unconsolidated silty material the use of an environmental bucket, along with several BMPs that will be implemented during the conduct of the subject navigation dredging operations, including complete bucket closure and ascent speed of 2 feet per second or less, would ensure minimal resuspension during the bucket cycle. These BMPs are fully described in the dredging projects plans and specifications in accordance with the New York and New Jersey Water Quality Certification, and are consistent with the New York/New Jersey Dredged Material Management Plan.” The USACE noted, however, that consistent with its extensive environmental monitoring program, and its ongoing coordination with USEPA, it would, “as appropriate, reevaluate the need of altering its dredging methods within the Newark Bay Study Area to minimize to the fullest extent practicable any adverse affects to the RIWP study goals.”

Comment: *“Towards this end, we request that the Corps develop a Supplemental Environmental Impact Statement to devise a specific plan for avoiding interference - and facilitating coordination between its deepening projects and the Superfund efforts of EPA and the state and federal Natural Resource Trustees.”*

USACE response: The USACE does not agree with this statement. Further, no other agency (*e.g.*, EPA, NJDEP, NOAA, etc.) has commented that they believe an SEIS is necessary. A federal agency is not required, in all instances, to prepare a SEIS prior to taking or continuing an action. Rather, NEPA and its implementing regulations direct an agency to prepare a SEIS only if the proposed action significantly affects the quality of the human environment. Accordingly, an agency can satisfy its obligations under NEPA by first preparing an EA. (40 C.F.R. § 1501.4) An EA is a concise public document that briefly discusses the relevant issues and is designed to provide sufficient evidence and analysis for determining whether an action has significant environmental impacts and requires preparation of a SEIS.

In terms of coordination, the EA discusses the “Newark Bay Study Area Coordination Plan” (the Coordination Plan), the primary purpose of which is 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.” The Coordination Plan establishes a multi-agency coordination team consisting of representatives from the USACE, USEPA, the United States Coast Guard, the Port Authority of New York and New Jersey, the New Jersey Department of Environmental Protection (NJDEP), the New York State Department of Conservation (NYSDEC), the United States Fish and Wildlife Service (FWS), and the National Oceanic and Atmospheric Administration (NOAA) (the Coordination Team). Pursuant to the Coordination Plan, the Coordination Team will meet regularly (*e.g.*, monthly) during the duration of the RI/FS to:

- (1) update each other on current and future activities in the Study Area;
- (2) share information on their respective projects in the Area; and

- (3) resolve any issues that may arise.

The Coordination Plan recognizes that regular meetings may not be sufficient to fully coordinate the agencies' respective projects, and therefore provides that more frequent meetings may be held, or Coordination Team members may be invited by particular agencies to attend other relevant meetings as appropriate, "such as USACE meetings with dredging contractors." The Coordination Plan was initially developed and proposed by the USACE even before the Court ruled in the Opinion and Order that "if the Corps relies on the promise of cooperation between the USEPA and the Corps to minimize the effects of dredging on the RI/FS, the Corps must give full consideration to how that cooperation will be handled." The Coordination Team is comprised of a subteam with special areas of expertise within the overall Project Delivery Team for the NY & NJ Harbor.

On September 21, 2005, the Coordination Plan was adopted by the "New York and New Jersey Harbor Senior Partners," and the Coordination Plan was issued for public comment in Volume II of the EA. The activities of the Coordination Team have been and will continue to be monitored by the Senior Partners. Even before the Coordination Team was formally established, the USACE and USEPA coordinated their respective projects in the Newark Bay Study Area. In late-March and early-April 2005, the USACE and USEPA shared additional detailed information on their respective projects and met to better coordinate those projects. Notably, the agencies met on April 7, 2005 to discuss sampling and modeling in the Newark Bay Study Area. Several key points were discussed during this meeting, including:

- (1) the identification of "additional resources, technical products, and coordination that could support EPA's Newark Bay superfund study [and] to insure that the [Army Corps'] navigation program did not impact or interfere with [EPA's] sampling";
- (2) the coordination of USEPA sampling in the Fall [of 2005] with the USACE's dredging schedules;
- (3) the USACE's provision of information to USEPA concerning its navigation projects, including sampling results from earlier investigations, to "further the superfund study of Newark Bay"; and
- (4) various issues related to the Draft Newark Bay Sampling Plan of USEPA's to be collected by Tierra Solutions, Inc.'s ("Tierra").

The agencies met again on April 28, 2005 to further discuss those, and other issues. Coordination between USEPA, the Corps and Tierra continued through the Spring and Summer of 2005. In May 2005, USEPA sought comments from the USACE and others on Tierra's revised draft Remedial Investigation Work Plan (RIWP) for the Newark Bay Study Area. The USACE provided its detailed comments to USEPA on August 24, 2005. Notably, in its August 24th letter the USACE confirmed with USEPA its initial understanding that potential impacts of its ongoing maintenance and deepening projects in the Newark Bay Study Area could be avoided through coordination with USEPA. ("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."). The August 24th letter summarizes the USACE's preliminary analysis of the deepening projects' impacts on each of the three types of Phase I data collection efforts by USEPA – bathymetry, BAZ, and sediment

contaminant coring and analysis. The USACE concluded that the only potential adverse impact on USEPA's Phase I sampling was on sediment samples proposed to be taken in the navigational channels currently being, or proposed to be, dredged. The USACE confirmed, however, that just prior to the Phase I sediment sampling, it would coordinate with USEPA on the precise locations of such sampling to ensure that dredging would not interfere with the sediment sampling. On August 26, 2005, the USACE and USEPA convened a conference call to discuss the coordination of the HDP and the RI/FS. During the call, the parties again discussed the different types of data collection that were being planned for Phase I, i.e., bathymetry, BAZ and sediment coring. Most notably, during this call the representatives of Malcolm Pirnie (MP), USEPA's technical project managers for the Diamond Alkali Superfund site, concluded with USEPA's concurrence that "none of the Phase I sampling actions would, in any significant manner, be interfered with or [or be] affected by the ongoing dredging activities of the Corps in Newark Bay. This again confirmed the Army Corps' initial understanding that its deepening projects would not affect the RI/FS in any meaningful way. The parties agreed that they would continue to meet and coordinate their efforts so as to, avoid any potential interference caused by sampling and dredging within "the same geographic region at the same time."

On September 8, 2005, in addition to reviewing the key points of the Coordination Plan, the agencies met to:

- (1) ensure that all parties understood each others' activities in the Study Area;
- (2) discuss whether the USACE's deepening projects would have any adverse impacts on USEPA's sampling in the Study Area and to "identify mitigation or avoidance strategies to minimize the impacts"; and
- (3) identify points of contact for sampling, dredging, and monitoring activities. (email exchanges concerning September 8th meeting).

The agencies discussed in detail their respective programs in the Study Area, the specific requirements and goals of the RIWP, and how to best to ensure that those requirements and goals were not impacted adversely by the USACE's deepening projects in the Area. The representatives of MP explained the purpose behind collecting sediment samples in the navigational channels in the Study Area. The agencies then discussed the USACE's past and future deepening projects in the navigational channels and whether those projects affected or would affect the sediment sampling that would take place in the Fall [of 2005]. It was agreed that a smaller working group would meet on September 13, 2005 to discuss these issues in greater detail and determine how the agencies could coordinate their respective projects to ensure the validity of the specific RIWP sediment samples to be taken from the Kill van Kull and Arthur Kill navigational channels. The smaller working group met on September 13, 2005 to discuss in greater detail the RIWP sediment sampling points in the Kill van Kull and Arthur Kill and their relationship to the deepening projects in those channels. After reviewing the RIWP and proposed sampling plan in relation to past and future USACE dredging in the Area, it was decided that four sampling points in the Kill van Kull and Arthur Kill navigational channels would be relocated to better serve the goals of the Phase I sediment sampling. The four points were moved because the original points proposed in the RIWP sampling plan had been dredged recently, thereby making it difficult to obtain a sufficiently deep and useful sediment core. The

alternate sampling points that were agreed upon will enable USEPA to sample sediments in areas that had relatively recent sediment deposits.

In addition to issuing the Draft EA and coordinating its deepening projects with USEPA's RI/FS, in August 2005 the USACE, along with the other interested federal and state partner agencies, issued the Lower Passaic River Restoration Project and Newark Bay Study Draft Community Involvement Plan (Draft CIP). The partner agencies issued the Draft CIP "as a guide for the partner agencies in providing opportunities for public information and input regarding cleanup, injury assessment, and restoration activities in the Lower Passaic River and Newark Bay watershed study areas. It is also designed to assist the communities and other stakeholders throughout the project areas to become meaningfully involved in and informed about the project,"

Comment: *"First, the Corps should put in place comprehensive monitoring of resuspension rates and dispersal patterns. The monitoring plan should include continuous, real-time monitoring of the magnitude and extent of any plume of resuspended sediments, using calibrated optical and/or high frequency acoustic instruments (the Corps had done this with other dredging projects). In order to avoid interference from nearby ship traffic, computerized sensors and data recording devices can actually be mounted on the clamshell bucket itself, to provide real-time data on Total Suspended Solids (TSS) and other parameters. The Corps should also implement a "performance standard" against which the effectiveness of resuspension control methods can be measured."*

USACE response:

The USACE concurs to the extent feasible and practicable. The USACE has developed an expanded comprehensive and multipurpose TSS Monitoring Program beyond the monitoring program, which was already in effect. (See Volume I Appendix E of the EA for a more detailed description of the TSS Monitoring Program) At its simplest, the TSS Monitoring Program is designed to evaluate the extent of resuspension of sediments caused by dredging. Using water sampling, an optical backscatter sensor, an acoustic Doppler current profiler, and a differential global positioning system, the expanded TSS Monitoring Program will measure the extent of sediment resuspension caused by dredging. The TSS Monitoring Program will be used for the life of the HDP, and will provide, at a minimum, the data needed to refine the SSFATE modeling for the HDP and the Newark Bay Study Area. The TSS monitoring and SSFATE modeling results will benefit not only the HDP, by providing necessary feedback to USACE re: BMP's and adaptive management strategies, but also USEPA's RI/FS, as well as the USACE's Newark Bay restoration studies.

Comment: *"Second, the Corps should adopt the following best management practices, which are consistent with those used at other highly contaminated sediment sites:*

Limiting the bucket's rate of descent, to avoid creating excessive water pressure ahead of the bucket.

Using available software and electronic sensors to carefully control the vertical and horizontal placement of the bucket.

Using a rinse tank to wash the bucket between unloading and re-entry into the water body.

Controlling vertical penetration of the bucket to avoiding overfilling it with sediment (which can subsequently be released through the side plate vents during water draining).

Using sensors to ensure complete closure of the bucket before lifting it.

Using a closed environmental clamshell bucket as broadly as possible (i. e. to refusal"), not only for materials designated as unsuitable for ocean disposal.

No barge overflow" allowed for all "unconsolidated" materials, not only for materials designated as unsuitable for ocean disposal."

USACE response: The USACE has taken into consideration the above list of BMPs listed above as well as other BMPs in this EA (See Volume I Appendix B).

Bucket Descent speed: Descent speed is a factor in how deep an environmental clamshell bucket penetrates the substrate. An efficient and environmentally sound method is to maximize substrate penetration without overfilling the bucket. As penetration is controlled not just by speed but by other factors such as bucket weight, bucket footprint, substrate density and hardness, constraining the dredge operation by setting a descent speed may be counterproductive (e.g., longer duration of dredging due to non-optimally filled buckets, less penetration/removal of silty material, etc.) Further, as a variety of buckets will be used in a variety of different material types on this project, a single descent speed will not be appropriate for all these buckets and materials.. Rather it is best not to put a descent speed limit but rather require that the Contractor demonstrate that the dredge operator has sufficient control over bucket depth in the water and bucket closure so that sediment re-suspension from bucket contact with the bottom and due to bucket over-filling can be minimized.¹

Software and electronic sensors: For the HDP, the contractors already use positioning software of one variety or another. Before the use of positioning software became common use, depth sensors on the bucket was an option. According to a manufacturer, depth sensors are not as useful as the current generation of positioning software. When high accuracy is required within a silt face, such as the Lower Passaic Pilot Remediation Dredging, sensors may remain of some use. At this time, no such sensors are deemed appropriate for the HDP. Closure sensors on the bucket are, however, already required when dredging non-HARS suitable material. At this time the use of positioning software isn't required in our navigational dredging contracts and would be worth further investigations as to the industry standard for such practices. Upon conclusion of this effort appropriate specification language will be drafted for future HDP contracts that are within the NBSA.

¹ DACW33-03-0002 clause 02325-3.1.2.1

Rinse Tank: The USACE does not concur with the proposal to require the use of a rinse tank. Rinse tanks are used to rinse the bucket of highly contaminated material that sticks to it before it is placed back into the water in order to reduce or eliminate resuspension in areas of high contamination. The upland material being dredged in Newark Bay is not considered sticky and very little of the material stays on the bucket after it is emptied. As such, USACE does not recommend the use of a rinse tank in this situation since there would be no material to rinse off and the process would significantly extend the cycle time of the environmental bucket operation. Consequently, the dredging would require greater time to complete, thereby extending the effects of dredging on the surrounding environment.

Controlling vertical penetration - See USACE response above on Descent Speed

Using closed environmental clamshell bucket: The USACE does not agree with this comment. While generally used in soft non-HARS suitable Holocene silt and clay, an environmental bucket can be used in soft HARS suitable Holocene silt and clay. However, USACE experience within the NY and NJ Harbor is that the bucket cannot dig material stiffer than “weight of rod” material. Weight of Rod is defined as

There is some precedent for the State of New Jersey requiring the use of an environmental bucket in HARS suitable Holocene silt and clay. A review of the HDP subsurface information indicates that there is only one area in the Newark Bay Study Area (NBSA) where it may be possible to encounter unconsolidated HARS suitable silt and clay, the South Elizabeth Channel widening, which is part of the S-NB-2 contract scheduled for construction no earlier than 2009. If future testing demonstrates that this material is indeed suitable for placement at the HARS, then the appropriateness of this BMP will be discussed with the State of New Jersey.

No barge overflow" allowed for all "unconsolidated" materials in Newark Bay: The USACE concurs with one exception. As noted in the response above regarding the use of a closed clamshell bucket, only one small area may potentially have unconsolidated HARS suitable materials. In all other areas of Newark Bay where the unconsolidated sediments are non-HARS suitable material, no barge overflow is allowed in the dredging of this material. Should future tests confirm that the underlying unconsolidated silty sediments in the widened area of South Elizabeth Channel are suitable for placement at the HARS, then the determination of whether to allow or prohibit barge overflow will be discussed at that time between the involved federal and state regulatory agencies. Several factors would need to be considered in this. First, by prohibiting barge overflow, the barges are less fully loaded and therefore have to make more trips and discharges at the HARS. Further, barges that are less fully loaded are less stable in rough sea conditions, which can occur unexpectedly on trips to and from the HARS. This would also cause greater air pollution and greater construction expenses from the added transits. The excess water within the barge would either need to be decanted prior to discharge, which would raise the cost of HARS placement by a considerable percentage, or would be part of the discharge at the HARS, which would cause greater water quality impacts at the HARS. Past occurrences regarding this balance were discussed among the involved federal and state regulatory agencies (*e.g.*, USACE, USEPA, NOAA, NJDEP, NYSDEC). This resulted in the

joint agency decision to allow barge overflow when dredging material suitable for and targeted for placement at the HARS. Should the underlying, unconsolidated silty material in this area of the South Elizabeth Channel contract be found to be HARS suitable and given these factors, it is inappropriate for the USACE to reverse this precedent at this time and without coordinating the balance of impacts with the other involved regulatory agencies.

The EA also notes that the Army Corps investigated alternative BMPs in the HDP's 1999 Final Environmental Impact Statement prior to receiving the WQCs. Nevertheless, Army Corps analyzed additional BMPs, in particular those used in other Superfund sites, and concluded that those few additional BMPs that are not already employed were inappropriate for the HDP. Further, in the EA, Army Corps also assessed the BMPs suggested in some of the public comments. USACE concluded that the majority of the BMPs suggested by the public "are either already being used, are inappropriate for navigational dredging, or would unnecessarily increase the cost and time to complete the [HDP] with only a modest, if any, decrease in the already insignificant affects on the [Remedial Investigation Work Plan ("RIWP")] study goals." In fact, as noted above, some BMPs could potentially cause additional adverse impacts to other areas of the environment (*e.g.*, placement at the HARS). The Army Corps noted, however, that consistent with its extensive environmental monitoring program, and its ongoing coordination with USEPA, it would, "as appropriate, reevaluate the need of altering its dredging methods within the Newark Bay Study Area to minimize to the fullest extent practicable any adverse affects to the RIWP study goals."



NATURAL RESOURCES DEFENSE COUNCIL

August 15, 2005

Mr. Ronald Pinzon
Environmental Coordinator
Environmental Assessment Branch
Army Corps of Engineers, N.Y. District
26 Federal Plaza, Rm. 2136
New York, NY 10278-0090

BY FACSIMILE (212-264-0961)
AND FIRST CLASS MAIL

Re: Draft Environmental Assessment on the Newark Bay Area of the
New York and New Jersey Harbor Deepening Project

Dear Mr. Pinzon:

Please accept these comments on behalf of Natural Resources Defense Council (“NRDC”), NY/NJ Baykeeper (“Baykeeper”), and GreenFaith (collectively referred to as the “Commentors”) regarding the U.S. Army Corps of Engineers’ (“Corps”) Draft Environmental Assessment on the Newark Bay Area of the New York and New Jersey Harbor Deepening Project, dated June 2005 (“Draft EA”).¹ For the past several years, the Commentors have consistently commented to the Corps that it has failed to anticipate or address all of the consequences of the channel deepening program for the natural resources of the harbor. Unfortunately, the Draft EA follows the same pattern.

The Corps must fully address the issues raised by the Commentors below. A “hard look” at these issues would make clear that EPA’s expansion of the Diamond Alkali Superfund Site into the Corps’ project area, as well as new information about the anticipated extent of sediment resuspension and dispersal, present “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c)(1)(ii); see also 33 C.F.R. § 230.13(b). Thus, the Corps should not issue the proposed Finding of No Significant Impact (“FONSI”) but, rather, should prepare a full Supplemental Environmental Impact Statement (“SEIS”).

Background

The Corps is engaged in a massive “harbor deepening” project to enlarge shipping channels in the New York-New Jersey Harbor – dredging, blasting, and ultimately removing tens of millions of cubic yards of material from the harbor floor over the course of the next decade.

¹ Pursuant to your letter of July 25, 2005, the public comment period has been extended until August 16, 2005.

The channels to be deepened in Newark Bay, Arthur Kill, and Kill van Kull cut through a “toxic soup” of bottom sediments that are highly contaminated by decades of industrial pollution, including what is believed to be the nation’s largest deposit of the extraordinarily toxic 2,3,7,8-tetrachlorodibenzo-p-dioxin (“2,3,7,8-TCDD”), as well as high levels of PCBs, PAHs, pesticides, and heavy metals, and other toxic substances.

Since the late 1940’s, between 4 and 8 kg of 2,3,7,8-TCDD originating from the now-closed Diamond Alkali chemical plant in Newark, NJ are estimated to have deposited in Newark Bay; additional quantities have deposited in Arthur Kill and Kill van Kull or spread there from Newark Bay. Much of that 2,3,7,8-TCDD persists in the aquatic environment – including in sediment and biota – constituting one of the worst cases of 2,3,7,8-TCDD contamination in the world. Sediment and biological monitoring conducted in Newark Bay, Arthur Kill, and Kill van Kull reveals that sediments, shellfish, and fish are contaminated with 2,3,7,8-TCDD in concentrations higher than those found in neighboring locations, except for the Passaic River (on which the Diamond Alkali facility is located). These concentrations exceed scientific and regulatory thresholds for danger, and they remain dangerously high.

EPA designated the Diamond Alkali plant a Superfund site in 1984. In 1994, EPA expanded the Superfund site to include the six miles of the Passaic River adjacent to and downstream of the Diamond Alkali plant. At that time, the site’s downstream boundary was the point where the Passaic River entered Newark Bay. In 2003, the site was further expanded to include an additional eleven-mile stretch of the Passaic upriver of the facility.

On February 13, 2004, twenty years after EPA began to address the toxic contamination from the Diamond Alkali plant, the EPA finally turned its regulatory attention further downstream to Newark Bay and the Bay’s other tributaries. EPA entered into the February 2004 AOC (“Feb. 2004 AOC”) with Occidental Chemical Corporation (“Occidental”), the company responsible for the Diamond Alkali facility, under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”). This order expanded the boundaries of the Superfund site to include Newark Bay and portions of the Hackensack River, Arthur Kill, and Kill van Kull (collectively the “Newark Bay Study Area”), and declared that contaminated sediments and biota in these waters “may present an imminent and substantial endangerment to public health, welfare or the environment.” The entire Diamond Alkali site is included on the National Priorities List (“NPL”), a status reserved for those sites that pose the highest risk to human health and the environment, and which are assigned the “highest priority” for federal government response actions, including comprehensive site investigations and permanent cleanup.²

The Feb. 2004 AOC requires Occidental, in cooperation with and under the supervision of EPA, to conduct a Remedial Investigation/Feasibility Study (“RI/FS”). The RI/FS is to “determine the nature and extent of contamination . . . and to develop and evaluate remedial alternatives,” and specifically will include: (1) a study of the distribution and concentration of dioxin and other contaminants in sediments throughout the Newark Bay Study Area; (2) evaluation of contaminant uptake by aquatic biota; (3) identification of concentrations of

² See 42 U.S.C. § 9605(a)(8)(B); 40 C.F.R. § 300.425(c).

contaminants through the food web; and (4) identification of “hot spots” for possible short-term action. Pursuant to the AOC, EPA will perform ecological and human health risk assessments, based on the data provided by the studies. EPA will also model the fate and bioaccumulation of dioxin and other contaminants, and tie these results into modeling currently underway in the Passaic River. Finally, the AOC provides that, following the RI/FS, “EPA will select a remedy . . . [that] will meet the cleanup standards specified in CERCLA,” including “protect[ion] of human health and the environment.”³

The Superfund process now underway in Newark Bay and the Kills represents a dramatic change in the environmental and public policy context of the Corps’ harbor deepening project, and necessitates a reevaluation of the environmental impacts of the Corps’ deepening projects. As currently proposed, construction of the deeper channels will interfere with EPA’s effort to study, contain, and remediate the contamination, including through resuspension and dispersal of significant amounts of highly contaminated sediments. To the extent the deepening work exacerbates existing conditions, it may also cause the Corps to incur its own CERCLA liability, which would be borne by the public, rather than the original polluters.

The Draft EA was prepared, ostensibly, to address any such issues arising from the designation of the Newark Bay Study Area of the Diamond Alkali Superfund Site. As described below, however, the Draft EA does not credibly examine either the significance of these impacts, or alternatives that could minimize any adverse impacts.

Discussion

1. *The Corps’ prior statements indicate that the Draft EA was prepared to justify a pre-determined result.*

As an initial matter, the Corps’ past statements make clear that the Draft EA was prepared to justify a pre-determined result – that there are no significant new circumstances or information requiring a SEIS – rather than to genuinely assess the facts and consider whether a SEIS is needed. This is contrary to the Corps’ NEPA regulations, which state that the purpose of an EA is to “provide[] sufficient information to the district commander . . . for determining whether to prepare an EIS or a FONSI.” 33 C.F.R. § 230.10; see also 40 C.F.R. § 1509(a)(1).

A Corps memorandum dated Dec. 16, 2004, and provided to the Commentors in connection with ongoing litigation, indicates the Corps’ view that a new EA concerning the harbor deepening would be intended merely to “document why no further SEIS is needed.” Similarly, on June 3, 2005, even as the Corps was preparing the Draft EA, the agency submitted a brief in federal court that reaffirmed the above-quoted passage from the December 2004 memorandum and re-iterated that the Corps “has steadfastly maintained that no SEIS was required.” The U.S. District Court for the Southern District of New York has found this approach to the new EA to be “disturbing,” explaining that “[a]n agency’s NEPA analysis must

³ Feb. 2004 AOC, Statement of Work, pp. 2-5.

be taken objectively and in good faith . . . and not as a subterfuge designed to rationalize a decision already made.”⁴

The tainted decisionmaking process that undergirds the Draft EA cannot form the basis for a legally sufficient Finding of No Significant Impact. To comply with NEPA, the Corps must address – fully and without bias – the specific issues described below. The Corps cannot continue to ignore the issues raised by the Commentors and re-package the same analyses the agency has previously offered to the Commentors.

2. *The Draft EA covers only the 50-Foot “Harbor Deepening Project,” and does not address the ongoing 40/41-foot Arthur Kill project.*

The Corps has maintained – and has obtained a ruling from a federal court supporting its contention – that the 50-foot New York and New Jersey Harbor Deepening Project (“HDP”) is a separate project from the ongoing 40/41-foot Arthur Kill deepening project. The Corps has also represented to the Commentors and to a federal court that the present EA would address the impacts of both of those projects. However, the Draft EA clearly states, both in its title and its text, that its purpose is to assess the impacts of “the HDP.” Unless the Corps has now reversed its position and contends that the 50-foot harbor-wide deepening and the 40/41-foot deepening of Arthur Kill are a single project, called the “HDP,” this means that the Draft EA is limited only to the 50-foot project, contrary to the agency’s prior commitments. As a result, the Draft EA can serve no role in facilitating the Corps’ NEPA compliance for the 40/41-foot Arthur Kill project, since that project is beyond the EA’s defined scope. The Corps must prepare and circulate for public comment a NEPA document that addresses the Arthur Kill 40/41-foot project, including the cumulative impacts of that project and the 50-foot project. (Nonetheless, in this letter, the Commentors will frame their concerns in terms of both deepening projects – the 50-foot harbor-wide deepening and the 40/41-foot deepening of Arthur Kill – as our concerns relate to both of them.)

3. *The Draft EA does not adequately consider the potential for the deepening projects to interfere with EPA’s Superfund efforts to study, contain, and remediate severe toxic contamination in Newark Bay.*

As described above, the Feb. 2004 AOC embodies a new public policy priority in favor of a comprehensive solution to severe toxic contamination in and around the long-forsaken Newark Bay. The AOC provides for the conduct of a RI/FS, to be followed by the selection of a remedy, as critical steps toward achieving that goal. The consent order initiates what is sure to be, in terms of money and time expenditures on the part of the government, the public, and industry, a monumental study and remediation effort – all in the same location as the Corps’ harbor deepening projects. EPA reports that the affected communities surrounding Newark Bay place a high priority on the success of this effort.⁵

⁴ *Natural Resources Defense Council, et al. v. U.S. Army Corps of Engineers, et al.* (“NRDC v. Corps”), No. 05-Civ.-762, 2005 WL 1863670 (S.D.N.Y. Aug. 5, 2005) (internal quotation omitted).

⁵ See http://www.ourpassaic.org/projectsites/premis_public/home/InterviewSummaryApril%2006.doc (EPA “Community Interview Report”).

The Corps' deepening projects, as currently designed, pose the serious risk of working at cross-purposes to the Superfund study and cleanup efforts. By stirring up contamination from the harbor floor, the years of extensive dredging and blasting are likely to interfere with the accurate mapping of contaminant distributions in the sediment, a task which is critical to designing cleanup options.⁶ Since one goal of the AOC is to "expedite effective remedial action,"⁷ the harbor deepening projects would present significant adverse environmental impacts to the extent they complicate and delay EPA's selection, design, or implementation of a remedy. Likewise, one of EPA's priorities is to "control[] contaminant sources" within the Superfund site so that "areas of higher contaminant concentration" will not "act as continuing sources for less-contaminated areas."⁸ Toward that end, one of the goals of the RI/FS is to identify "hot spots" for possible short-term remedial action.⁹ The Corps is obliged, under NEPA, to consider whether and to what extent the harbor deepening projects may interfere with this important aspect of the Superfund process, such as by exacerbating the spread of contamination even as EPA is attempting to control it.¹⁰

The Commentors recognize, as the Corps has previously pointed out, that there is no "guarantee" that EPA will conduct or order an active "cleanup" of Newark Bay following the RI/FS. However, the AOC explicitly commits EPA to "*select a remedy . . . [that] will meet the cleanup standards specified in CERCLA,*" including "protect[ion] of human health and the environment."¹¹ Such remedies, at highly contaminated sediment sites, very often include dredging to remove some or all of the contaminated sediments, and/or some other form of active cleanup, such as capping or *in situ* treatment of contamination. It is, therefore, beyond dispute that the AOC and the initiation of the RI/FS make a cleanup of Newark Bay and the Kills "reasonably foreseeable." The Corps must abide by the ruling of the federal district court that "[t]here can be no serious doubt that some remedial action is sufficiently likely to occur that the possibility must be taken into consideration" in connection with the Corps' harbor deepening project.¹²

⁶ See, e.g., *NRDC v. Corps*, slip op. at 51 & n.169 (Aug. 5, 2005) ("[S]ampling is likely to be essential for the effectiveness of the EPA's cleanup of the Bay," and the "plaintiffs have submitted weighty expert testimony" that the harbor deepening project will "interfere with the RI/FS.").

⁷ Feb. 2004 AOC at ¶ 35.

⁸ EPA, 2005 Draft Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, at 2-20 (avail. at <http://www.epa.gov/superfund/resources/sediment/pdfs/chs1to3.pdf>). (The full document is at <http://www.epa.gov/superfund/resources/sediment/guidance.htm>.)

⁹ Feb. 2004 AOC at Appendix 1, p. 3.

¹⁰ See, e.g., 40 C.F.R. § 1502.16(c) (NEPA review must address "possible conflicts [with] the objectives of Federal . . . policies and controls for the area" where they are taking place).

¹¹ Feb. 2004 AOC at Appendix 1, p. 2. See also 40 C.F.R. § 300.430(f).

¹² *NDRC v. Corps*, slip op. at 41, n. 141 (Aug. 5, 2005).

The Draft EA leaves many important questions entirely unanswered concerning the impacts of the harbor deepening projects on the Superfund process.¹³ For example, how will the Corps' removal of sediments in and around the channels be coordinated with EPA's sampling of sediments in the same locations? How will EPA be able to obtain an accurate picture of the distribution of contaminated sediments within the Superfund site, even while the Corps is dredging massive amounts of that sediment and resuspending and dispersing some portion of it through the Superfund site? Will the amount of sediment dispersal under the Corps' current plan foreclose certain cleanup options? Make some or all cleanup options less effective, or more expensive? Make the design or implementation of a cleanup take longer, thereby prolonging the existing environmental risks posed by the site? Make the assessment of "natural resource damages" more difficult?

The Draft EA does nothing to address these issues in any substantive way. Significantly, it acknowledges (at p. 8) that "potential impacts of the HDP on the RI/FS would be to interfere with the RI/Goal 1," *i.e.*, the determination of the vertical and horizontal distribution and concentration of contaminants of concern. However, the analysis ends there. The Draft EA offers no indication of the extent the dredging would interfere or how the Corps plans to avoid such interference. The Corps' identification of this potential impact indicates the need for further analysis in a full SEIS, particularly since the Corps, in the Draft EA, is unable to describe the nature or extent of the impacts or any steps that will be taken to avoid them.

The Draft EA also indicates (at p. 8) that "EPA has repeatedly stated" that the deepening projects will not interfere with the RI/FS, since material to be removed by the Corps is tested for dioxin and other contaminants, with the results provided to state agencies and EPA. However, the Corps' sediment sampling will not provide data of comparable quality to that which EPA sampling would provide. (For example, contrary to EPA's standard practice at Superfund sites, the Corps uses composite samples, and does not examine the vertical distribution of contaminants.) In any case, this explanation does nothing to address whether, and the extent to which, the Corps' dredging may make completion of the RI/FS more complex, costly, or time-consuming; influence or limit EPA's choice of an appropriate remedy; or hinder EPA's ability to implement a remedy, at the conclusion of the RI/FS.

As to the latter set of issues, the Draft EA simply states that the Corps "is confident that the material being removed will not impact the results of the RI/FS or any potential remedial action," and that "as a result of continued and extensive USACE coordination with EPA . . . no significant negative impacts to the RI/FS . . . are expected." These are unsupported and conclusory assertions. NEPA requires not merely an expression of "confidence" from the agency, or an assurance that future interagency coordination will address any problems that should arise. Rather, it demands the *identification* of all foreseeable adverse impacts up-front, a

¹³ The Draft EA (at p. 5) repeats the Corps' prior erroneous assertion that "[c]urrently, no part of the [harbor deepening project] occurs within the limits of a CERCLA (Superfund) site." As noted above, the Feb. 2004 AOC rendered Newark Bay and portions of Arthur Kill, Kill van Kull, and the Hackensack River part of the Diamond Alkali Superfund Site. *See, e.g.*, <http://www.epa.gov/Region2/superfund/npl/0200613c.pdf> (EPA fact sheet stating that "[t]he Diamond Alkali Superfund Site includes the former pesticides manufacturing plant . . . in Newark, New Jersey, the Lower Passaic River Study Area, the Newark Bay Study Area and the extent of the contamination.").

reasoned *analysis* that demonstrates a “hard look” at their significance, and a specific *coordination plan* to deal with these issues, including methods to *monitor* the effectiveness of that coordination as the project progresses. Such explanations are critical for the benefit of both the public and agency officials, in order to facilitate informed decisionmaking.¹⁴ The Corps should circulate for public comment a draft NEPA document that actually addresses these issues. This is necessary so the public and other agencies can review and comment on a specific, proposed approach to these issues; to date, the Corps has offered no analysis or plan on which to comment.

Further, at the most fundamental level, the Draft EA fails even to acknowledge the basic problem of sediment resuspension and dispersal, which is presented by any dredging project involving contaminated sediment, especially a dredging project within a Superfund site. Instead, the Draft EA simply defines the problem out of existence. Section 4.1 of the Draft EA introduces the discussion of sediment resuspension by stating that the “two issues associated with sediment resuspension” are that dredge-induced resuspension is relatively small (*i.e.*, limited in both time and space) as compared to other sources of resuspension, and that dredging will actually reduce resuspension over the long-term. From the Corps’ involvement in the Passaic River Restoration Project -- which concerns the study, remediation, and restoration of the Passaic River portion of the Diamond Alkali Superfund Site upstream of the Newark Bay Study Area -- the agency should be well aware that resuspension is a key environmental problem that must be addressed in any dredging project involving contaminated sediment. The Draft Project Plans for Environmental Dredging Pilot Study (June 2005) for that project, which has the Corps’ insignia on the cover, states as follows (at pp. 27-28)¹⁵:

Dredging sediments in rivers and marinas is analogous to excavating soil at land-based construction sites. Moreover, just as construction generates dust particles that are then transported through the air by wind, dredging generates suspended solids that are transported through the water column by water currents. Contaminants associated with suspended solids (resuspended sediments), can impact the water column in a manner that is similar to the way that contaminants associated with dust particles can impact air quality.

Resuspension impacts water quality by two basic means: by the direct addition of contaminated solids to the water column and by the partitioning of contaminants from the contaminated solids to the dissolved phase. . . . [S]ilts and clays will remain in the water column as suspended solids and are easily resuspended during dredging. As a result, silts and clays constitute the majority of dredging-related suspended solids. Equally important, these small-size solids remain in the water column long enough to allow substantive desorption of the contaminant from the solid to the dissolved phase, often achieving near equilibrium conditions.

¹⁴ *Cf. NDRC v. Corps*, slip op. at 52-56 (Aug. 5, 2005).

¹⁵ A copy of this document is available at http://www.ourpassaic.org/projectsites/premis_public/index.cfm?fuseaction=Dredging.

These considerations highlight the need to understand the amount of resuspension occurring at the dredge head as well as the amount of resuspended sediment that may escape the dredging zone. Regardless of the ultimate distribution of contamination in the water column, it is the resuspended sediment that supplies the means for the release of contaminants from the dredging operation. [emphasis added]

Remarkably, the Corps' Draft EA, which addresses dredging in another portion of the same Superfund site, fails even to acknowledge the importance of these resuspension and dispersal issues.

Also, even after contaminated sediments settle out of the water column, the sediment-bound contamination remains bioavailable to benthic organisms and bioaccumulates through the food web, continuing to cause chronic harm. When highly contaminated resuspended sediments settle on top of less-contaminated surface sediments, the total amount of bioavailable contaminants increases over the long-term. The Draft EA ignores this effect.

The Draft EA makes no effort to describe the amount of contaminated sediment that may be resuspended due to dredging and blasting, the fate and transport of that contamination (in the particulate and dissolved phases), the degree of risk it poses to organisms in the food web (both from exposure in the water column, and after the contaminated sediment settles as surface sediment elsewhere in the harbor), or the extent to which such redistribution of contaminants would undermine EPA's efforts under CERCLA to study, contain, and remediate contamination within the Newark Bay Study Area. Instead, the Draft EA makes an irrelevant and erroneous comparison to other, supposedly greater sources of resuspension – such as vessel traffic and storm events – to justify an assertion that dredge-induced resuspension of contaminated sediment is insignificant. The comparison is irrelevant because the purpose of the EA, under NEPA, is to determine whether the harbor deepening projects may have a significant adverse environmental impact in their own right, not whether the impacts will be greater or lesser than other existing sources. Further, regardless of the relative importance of each source of resuspension, different considerations would apply to the mitigation of each source; one important role of the Corps' NEPA review is to consider alternatives and mitigation measures to reduce resuspension from dredging, in particular.

The comparison is also erroneous, as there are several reasons, ignored in the Draft EA, that dredging-induced resuspension may have more significant adverse impacts than other existing sources of resuspension:

- i. All available data show that the subsurface silt layers in Newark Bay and the Kills tend to be more contaminated than the surface layers; one would also expect this to be true in the channels' side slopes and other adjacent areas not previously dredged, which will be subject to dredging as part of the harbor deepening projects. Whereas ship and barge traffic resuspend

only surface sediments, dredging also resuspends these more contaminated sub-surface sediments. Thus, a small volume of sediment resuspended by dredging can have a greater environmental impact than a larger volume resuspended by ship and barge traffic. This impact is long-term, since the more highly contaminated sediments resuspended by dredging ultimately settle out of the water column as new surface sediment – more contaminated than the pre-existing surface sediment – and increase the bioavailability of contaminants in the ecosystem.

- ii. Ship and barge traffic generates short, intermittent spikes in resuspension, occurring only during and immediately following the passage of a vessel. In contrast, the Corps' harbor deepening activities within the Superfund site will take place on a virtually continuous basis over the next eight years, with dredging operations ongoing 24 hours per day for much of that time.¹⁶ The cumulative amount of material resuspended and dispersed from the channels to other areas of the estuary over the life of the deepening projects may, therefore, actually be much greater than the amount attributable to vessel traffic. Coupled with the higher contamination levels in subsurface silty sediments resuspended by the deepening project, this means that the chronic impacts of dredging may greatly exceed those of vessel traffic.
- iii. Vessel traffic does not necessarily resuspend significant amounts of sediment in all areas of the navigation channels. Dredging, in contrast, will cause resuspension everywhere it is conducted.
- iv. Resuspension due to wind, waves, and storm events, like that due to vessel traffic, is intermittent and tends to affect only the surface layer of sediments. In contrast, as described above, dredging will resuspend more highly contaminated subsurface sediments on a nearly constant basis over an extended period of time.

For all of these reasons, the Corps cannot support the assertion that adverse environmental impacts from dredging-induced resuspension are small as compared to other sources of resuspension, nor that the impacts are "short-lived." Further, while the Draft EA asserts that deepening the channels will reduce resuspension of surface sediment from vessel traffic (at least until the channels silt up and require maintenance dredging), there is no basis to conclude, as does the Draft EA (at p. 12), that the net effect would be a long-term reduction in contaminant resuspension and bioavailability. Resuspension from dredging is likely to make bioavailable, over the long-term, subsurface silty sediments – particularly from the channels' side slopes and other areas

¹⁶ The "SSFATE Modeling of Arthur Kill Dredging, Final Report" listed in the bibliography of the Draft EA, also raises this point. That report states, on page 10, that "[o]f course, the duration of the plume from a passing vessel will be much *less* than that of the dredge plant operating around the clock." As discussed below, the Draft EA does not address any of the findings of that study.

not previously dredged – that are more highly contaminated than the existing surface layer. This would undermine EPA’s ability to control existing contamination in the Superfund site and its efforts to study and remediate the contamination, if all appropriate precautions are not taken to reduce dredging-induced resuspension.

The Draft EA also relies on a questionable study to assert that resuspended sediments will disperse less than 350 feet from a dredging location, and completely ignores a more recent Corps study indicating that dredging may spread contaminated sediments much further, up to a mile. A review of “2001 Total Suspended Sediment and Turbidity Monitoring for Newark Bay, Kill van Kull and Port Jersey,” cited on pages 11-12 of the Draft EA, indicates that the “primary focus” of that study was “the determination of baseline TSS levels within particular areas of the NY-NJ Harbor” (see p. 1), rather than the evaluation of dredging-induced resuspension. Unsurprisingly then, that study’s methodology for measuring dredging-induced resuspension in that study did not involve adequate sampling methods.

In particular, the 2001 study measures TSS solely through a small number of drawn water samples. But there is nothing in the study to indicate that these samples were coordinated with the lift cycles of the dredge so as to ensure that they would coincide with, rather than occur in-between, pulses of resuspended material corresponding to the penetration and raising of the bucket. In other words, since the plume from a bucket dredging operation is not continuous, the samples in this study may well have “missed” a substantial amount of resuspended sediment that was actually present. Likewise, there is no way to tell whether the samples were taken from the center of the plume, or off to one side or the other, where TSS levels would be lower.¹⁷ In contrast, for example, the proposed monitoring design for the Environmental Dredging Pilot Study in the Passaic River portion of the Superfund site, mentioned above, should provide a much more comprehensive picture of the extent of resuspension and dispersal from dredging in the Passaic. The Corps has no comparable field data concerning navigational dredging in the Newark Bay Study Area on which to base a sufficiently certain conclusion that the harbor deepening projects will result in minimal levels of resuspension and dispersal.

The Corps does have, however, a report indicating that the harbor deepening projects may cause larger quantities of contaminated sediment to disperse much farther from the dredge than suggested by the 2001 TSS study. The Corps’ 2003 study titled “SSFATE Modeling of Arthur Kill Dredging, Final Report” indicates that contaminated sediments would disperse over a mile from the location of a dredge in the Arthur Kill Channel, traveling the length of Kill van Kull to Upper New York Bay. These findings suggest that dredging in Kill van Kull and Newark Bay would, likewise, disperse resuspended sediment much farther than 350 feet from the dredge.

¹⁷ A recent article co-authored by Donald Hayes, a dredging expert on whose work the Corps frequently relies, raises similar questions about the validity of resuspension measurements derived from drawn water samples or turbidity meters. Burt, Neville T., and Donald F. Hayes, Framework for Research Leading to Improved Assessment of Dredge Generated Plumes, *Terra et Aqua*, No. 98 -- March 2005, pp. 20-31, at p. 27 (available at www.iadc-dredging.com/downloads/terra/terra-et-aqua_nr98_01.pdf).

(While the Corps could easily perform similar analyses for the planned dredging in Kill van Kull and Newark Bay, there is no indication that the agency has done so.) The SSFATE study also indicates that resuspended sediment will tend to deposit in certain shallow areas of the harbor, and may result in a significant increase in local deposition rates when projected over the lifetime of the harbor deepening projects.¹⁸ As noted above, these resuspended and dispersed sediments are likely to be more contaminated than the existing surface sediment layer in most of the harbor.

The results of the 2003 SSFATE study undermine the assertion in the Draft EA – which the Corps also made in the 1999 EIS for the Harbor Deepening Project and the 1998 SEIS for the Arthur Kill 40/41-foot deepening project – that resuspension and dispersal of contaminated sediments are limited to small amounts within a short distance of the dredge. The 2003 study thus represents significant new information that the Corps is required to address under NEPA. Nonetheless, while the Draft EA includes the SSFATE report in its list of references, it does not address the findings of the report at all. In preparing the necessary SEIS, the Corps must account for how the sediment dispersal patterns and deposition rates projected by the SSFATE study, and the significant levels of contamination present in the sediments, will impact the Superfund process, including by enumerating the environmental implications and impacts on possible remedial actions.¹⁹

The Draft EA also does not address the potential for blasting operations to resuspend contaminated sediments, which would have the same types of adverse impacts as dredging-induced resuspension. A memorandum in the Appendix to the Draft EA (dated 1/20/05) notes that overlying silt will be removed before blasting of rock begins. However, the Corps' contract specifications, such as for Contract Area S-KVK-1, divide up each contract into several "acceptance areas." The specifications require only that silt be removed from a particular acceptance area before blasting in that acceptance area. There are no safeguards to ensure that blasting does not disturb layers of contaminated sediment that may remain in an immediately adjacent area. The EA does not assess the potential adverse environmental impacts of blasting under such conditions.

The Draft EA attempts to downplay the level of contamination in the sediments slated to be dredged as part of the harbor deepening, and, thereby, to downplay any potential adverse impacts. On page 5, the Draft EA states that contamination levels in all of the sediment to be dredged are low enough to pass at least the criteria applied by the States of New Jersey and New York to allow upland placement in landfills, as though this has some bearing on whether contaminant levels are low enough to safely disperse the sediments through the aquatic

¹⁸ The SSFATE report (at p. 6) predicts sedimentation rates in the shoals – *i.e.*, shallow areas outside the channels that form important habitat for sensitive species – of up to 5.8 millimeters per year (mm/yr). This is at least twice the background sedimentation rate for shallow areas of Newark Bay, according to studies described in the June 2004 draft Remedial Investigation Work Plan ("RIWP") for the Newark Bay Study Area (range of 1-3 mm/yr). RIWP, Vol. 2a, p. 3-2. Even sedimentation rates closer to the low end of the range predicted in the SSFATE report would be significant relative to these background rates, particularly given that the sediment depositing as a result of dredge-induced resuspension will tend to be more highly contaminated than background deposits.

¹⁹ *Cf. NRDC v. Corps*, slip op. at 48 (Aug. 5, 2005) (noting that the Corps' "failure to give greater consideration to the SSFATE Report" is "questionable").

ecosystem.²⁰ In fact, the Corps is well aware that levels of concern for any given contaminant differ depending upon the available pathways of environmental exposure. Thus, contaminant levels much lower than those deemed “safe” for upland placement are often cause for concern in marine and aquatic environments. Indeed, millions of cubic yards of sediment to be dredged as part of the harbor deepening project and disposed of on land are so toxic to marine life that federal regulations bar the Corps from disposing them at sea.

Moreover, as noted above, EPA has declared that contaminated sediment in Newark Bay, Arthur Kill, and Kill van Kull, are so contaminated with dioxins, PCBs, PAHs, pesticides, and heavy metals, and other toxic substances that they “may present an imminent and substantial endangerment to public health, welfare or the environment.”²¹ (Despite the Corps’ continued suggestion that contaminant levels in the channels present no cause for concern, EPA has not excluded the channels from its draft sampling plan for the Superfund site, indicating that EPA continues to believe its determination of “imminent and substantial endangerment” – and the need for a RI/FS – applies to the channels as well as the shallower areas of the Bay and Kills.) As noted in the Corps’ 1999 EIS (¶¶ 6.47, 6.108-109), sediment sampling by NOAA has found the harbor estuary to be among the most contaminated estuaries in the country. Bioaccumulation of contaminants from the sediments into benthic organisms and through the food web has caused the states of New York and New Jersey to impose consumption advisories and/or bans on many species of fish and shellfish in these waters and elsewhere in the estuary. Elevated levels of dioxin, in particular, have also been observed in local fish-consuming birds.²² Any increase in the bioavailability of sediment-bound contaminants exacerbates these stresses to the ecosystem, and increases the risk to aquatic species, birds, and humans alike. The seriousness of the existing harms underscores the need to avoid exacerbating current conditions or interfering with EPA’s efforts to study, contain, and clean up the contamination.

We also note that The Draft EA also does not address the potential impacts associated with the ongoing “Natural Resource Damage Assessment” under CERCLA. In Newark Bay, Federal and state “natural resource trustee” agencies are now conducting a “natural resource damage assessment,” (“NRDA”) as a complement to EPA’s enforcement activities under the Feb. 2004 AOC. This involves the collection of data on contamination within the bay (including data collected as part of the RI/FS) to assess the value of damages to natural resources, above and beyond any cleanup costs. Just as the dredging may interfere with the EPA-led study and cleanup process, so, too, may it interfere with the Trustees efforts to assess the value of natural resource damages and to recover compensatory damages from the responsible polluters for use in environmental restoration efforts.

²⁰ Similarly, the Corps memo dated March 22, 2005, and included in the appendix to the Draft EA, argues (at p. 7) that Superfund “action levels” for dioxin in soil, or levels previously permitted for burial in confined disposal pits beneath Newark Bay, have some bearing on the matter at hand. This underscores the Corps’ unwillingness, to date, to address the environmental impacts of resuspending and openly dispersing contaminated sediments in the *estuarine* environment.

²¹ Feb. 2004 AOC ¶¶ 2(r), 30, 34.

²² See Parsons, Katherine C. Chemical Residues in Cormorants from New York Harbor and Control Location. Final Report Submitted to New York State Dept. of Env’tl Conservation. Feb. 28, 2003.

The draft EA (at p. 8) states that sediment data collected as part of the deepening project will provide a “net benefit” to the Superfund process. This statement is entirely unsupported and speculative as the adverse impacts – against which any possible benefits must be offset – have not been fully identified or assessed. Further, as noted above, the data provided by the deepening project would be of lesser quality than that which EPA would otherwise collect on its own, and may be of only limited use to the RI/FS. Likewise, the assertion that data the Corps collects on sediment resuspension may be useful to the Superfund study is pure speculation, unless the Corps adds further critical details about the monitoring program, which are absent from the draft EA (as discussed further below, in Part 6).

Finally, the EA (at p. 7) states that since “the [Superfund] study area designation does not warrant any changes in the analysis of any individual impacts, there will be no changes in any cumulative impact assessment (Section 6.3 of the 1999 Final EIS).” However, the ongoing Superfund process does alter specific aspects of the cumulative impact assessment from the 1999 Final EIS. For example, the 1999 Final EIS (at ¶ 6.85) concluded that “[w]hile many other projects were discussed both within and outside of the Harbor area, none were identified that would be negatively impacted by construction of the Recommended Plan. The Recommended Plan may, however, influence decisions related to other projects in the Harbor.” As described above, circumstances have changed. The Superfund study and remedial process is a new project that may be “negatively impacted” by the harbor deepening; implementation of the deepening projects may also “influence decisions related to” the Superfund process in concrete ways that could not have been foreseen in 1999. Similarly, the 1999 Final EIS (at ¶ 6.130) stated that “it is not possible at this time to develop accurate estimates of the magnitude and timing of . . . remedial actions” in the harbor. The February 2004 AOC makes it much more likely that some interim or final remedial action will be taken in Newark Bay and the Kills during the lifetime of the harbor deepening project. The Corps must update these aspects of the cumulative impacts analysis from the 1999 Final EIS to account for the existence of the Newark Bay Study Area, and its interaction with the Corps’ deepening projects.

In sum, NEPA requires the Corps to assess the adverse environmental impacts – on the EPA’s efforts to study, contain, and remediate contamination at the Superfund site, and on the exposed organisms (and people who consume them) – of resuspending highly contaminated sediments and dispersing them up to a mile away from the dredge site in amounts that will accumulate significantly in the shoals of the Newark Bay Complex. The Draft EA utterly fails to do so.

4. *The Draft EA does not support the conclusion that there is no significant new scientific information since the 1999 Final EIS.*

The Draft EA (at p. 11) concludes that “no new sediment data concerning dioxin is contained in or has been added to [relevant] data banks since the 1999 Final EIS that would alter the analysis of contaminant impacts conducted for the Final EIS.” The preceding analysis in the Draft EA does not support this statement. Moreover, the Draft EA limits this “conclusion” to data on dioxin levels in sediment, thereby ignoring other potentially significant new information that has become available since 1999. The Draft EA must be revised to address all such new information, which the Commentors have previously identified in correspondence to the Corps.

First, the analyses in Section 3.3 of the Draft EA identify selected data on dioxin levels in sediment, which has become available since 1999. But the Draft EA does not compare this data to that which the Corps considered at the time of the Final EIS ("FEIS"). Rather, it makes a comparison to other new data collected by the Corps after 1999, and finds the data to be similar. This comparison has no bearing on whether the new data is significant *relative to what the Corps considered in connection with the 1999 FEIS*, and provides no support for the Corps conclusion at the end of Section 3.3., quoted above.

Second, the Draft EA limits its consideration of new data to that which concerns levels of 2,3,7,8-TCDD in sediment. This ignores other new information that the Commentors have previously called to the Corps' attention as potentially significant, in relation to the impacts of the resuspension of contaminated sediment. The analysis ignores new data on other contaminants present in the "toxic soup" at the bottom of Newark Bay, including other congeners of dioxin and PCBs, which also contribute to the need for strict fish consumption advisories in and around Newark Bay.

Further, there are also many new studies, since 1999, not only of sediment contamination, but also of contaminant levels in the tissue of fish, shellfish, and birds, and of the toxicity of the contaminants found in the Bay. The Draft EA entirely ignores these categories of new information. As we have previously noted in a Jan. 4, 2005 letter to the Corps, the Inventory Report accompanying the June 2005 draft Remedial Investigation Work Plan for the Newark Bay Study Area includes 7 bioaccumulation studies of organisms sampled from Newark Bay and the Kills, and 10 toxicity studies based on exposure of organisms to sediment or water from these waterbodies, that were published from 1998 to the present. We also noted another significant bioaccumulation and toxicity study published in 2003, which was not included in the Inventory report.²³

5. *The Draft EA ignores the cumulative impacts of maintenance dredging in Newark Bay scheduled to occur simultaneously with the deepening projects.*

The Draft EA does not address, at all, the maintenance dredging that the Corps plans to undertake in Newark Bay and/or the Kills simultaneously with the deepening projects. The Corps is obligated, under NEPA, to consider the cumulative impacts of the deepening and maintenance projects.²⁴

The Corps has already announced its plans for a maintenance dredging project in an area of Newark Bay that overlaps with the site of the deepening projects.²⁵ The Corps has also just

²³ See M.L. Wintermeyer & K.R. Cooper, Dioxin and Polychlorinated Biphenyl Concentrations in Eastern Oyster (*Crassostrea virginica*, Gmelin) Tissues and the Effects on Egg Fertilization and Development. *Journal of Shellfish Research*, Vol. 22, No. 3, 737-746 (2003).

²⁴ 40 C.F.R. § 1508.7 (agency must consider "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future action").

²⁵ Corps New York District, Public Notice No. Newark Bay 06 (May 2, 2005).

completed bidding on a maintenance dredging project immediately adjacent to the site of deepening work in Arthur Kill.²⁶ Due to the length of time it will take to complete the deepening projects, it is likely that other such maintenance dredging will also occur before the deepening is complete. Contaminated sediment resuspension and dispersal from these maintenance projects will amplify the deepening projects' interference with EPA's efforts to study, contain, and remediate the contamination. The Draft EA fails to account for these cumulative impacts.

6. *The Draft EA fails to adequately address alternatives to minimize interference with the Superfund process caused by resuspension and dispersal of contaminated sediment.*

The Draft EA (at p. 6) incorrectly states that the designation of Newark Bay and the Kills as part of the Diamond Alkali Superfund Site "would not warrant" any reconsideration of the pre-existing measures to control resuspension of contaminated sediment from the harbor deepening projects. To the contrary, as discussed above, there is significant potential for dredging-induced resuspension and dispersal of contaminated sediments to interfere with EPA's study and remedial efforts within the Superfund site. The Corps must reconsider the adequacy of resuspension control measures to avoid such adverse impacts on the Superfund process. The Superfund designation also requires that the Corps re-evaluate whether its resuspension control methods comport with the state-of-the-practice at other Superfund sites, and at similar, highly contaminated sediment sites, which have been subject to dredging by the Corps or other federal or state agencies. Further, the 2003 SSFATE study, discussed above, provides significant new information indicating that the harbor deepening project will resuspend more contaminated sediments and disperse them over greater distances than the Corps has previously assumed. This also triggers the need to re-evaluate the significance of related adverse impacts and the adequacy of previously identified resuspension control methods, as well as to consider additional alternatives.

The Draft EA does purport to address the adequacy of resuspension control measures to minimize adverse environmental impacts. However, as described below, the discussion of this issue is inadequate in several important respects. The Draft EA ignores several practical alternatives previously suggested by the Commentors to minimize resuspension, provides only a cursory discussion of the Corps' intention to monitor actual resuspension during the deepening project, and does not address the need to link monitoring to an enforceable performance standard. The Corps must fully address these matters in a SEIS to fulfill its responsibility under NEPA to consider the impacts of various alternatives to the initial project design.

A. Dredging Methods (or "Best Management Practices")

As noted in the Draft EA (at pp. 12-13), the New Jersey and New York State Water Quality Certifications ("WQCs") require several important measures to control

²⁶ Corps New York District, Solicitation No. W912DS-05-B-0010.

resuspension from dredging. These include use of a closed environmental clamshell bucket dredge for all non-HARS suitable material; a “no barge overflow” restriction for all non-HARS suitable material; a hoist speed limitation of 2 feet per second or less; and operation of the dredge to maximize the bite of the clamshell, which reduces the amount of free water in the dredged material and the number of bites required to complete the job. However, the Corps cannot rely on the WQCs alone to satisfy its NEPA obligations. The WQCs establish a minimum set of required conditions, but NEPA requires that the Corps “consider alterations (above and beyond the applicable water quality standards) which would further reduce environmental damage.”²⁷

In fact, there are a number of other measures that are standard practice when dredging contaminated sediments with a closed environmental clamshell bucket, but which the Draft EA does not consider. All of the following measures are strongly recommended in an article upon which the Corps relies in the Draft EA,²⁸ and were previously highlighted for the Corps in the report of an independent expert retained by the Commentors²⁹:

- Limiting the bucket’s rate of descent, to avoid creating excessive water pressure ahead of the bucket. (This precaution is also recommended in EPA’s 2005 Draft Contaminated Sediment Remediation Guidance for Hazardous Waste Sites.³⁰)
- Using available software and electronic sensors to carefully control the vertical and horizontal placement of the bucket.
- Using a rinse tank to wash the bucket between unloading and re-entry into the water body. (This precaution is also described in the *Dredging Technology Review Report* prepared for the pilot dredging project in the Passaic River portion of the Superfund site.³¹)
- Controlling vertical penetration of the bucket to avoiding overfilling it with sediment (which can subsequently be released through the sideplate vents during water draining).

²⁷ *Calverts Cliffs’ Coordinating Comm., Inc. v. Atomic Energy Comm’n*, 449 F.2d 1109, 1125 (D.C. Cir. 1971).

²⁸ The Corps’ detailed rationale for its selected dredging methods appears in Appendix B to the Draft EA, in a memorandum dated January 20, 2005 and titled “Approaches on Minimizing Re-suspension of Sediment in Dredging.” Page four of that memo states that studies have found closed environmental clamshell buckets, such as those the Corps will use to remove non-HARS-suitable materials, to be “effective in reducing resuspension.” In support of this claim, the memo cites an article by Bergeron, et al., titled “The Cable Arm Clamshell: Development and Track Record for Environmental Dredging.” The Commentors have reviewed a copy of that article, which is available online at www.cablearm.com/promo/TheCableArmClamshell.doc. The article does, in fact, support the effectiveness of this type of bucket at reducing resuspension. However, it also describes a set of techniques to be applied when using the bucket, which are necessary to ensure its effectiveness. The Draft EA, notwithstanding its reliance on the article, ignores these important aspects of resuspension control.

²⁹ Declaration of W. Frank Bohlen, Ph.D. (Feb. 10, 2005), filed in connection with the *NRDC v. Corps* litigation.

³⁰ <http://www.epa.gov/superfund/resources/sediment/pdfs/ch6.pdf>, at 6-22. (The full document is at <http://www.epa.gov/superfund/resources/sediment/guidance.htm>.)

³¹ Lower Passaic River Restoration Project, *Dredging Technology Review Report*, at p. 2-2 (June 2004) (avail. at http://www.ourpassaic.org/projectsites/premis_public/index.cfm?fuseaction=Dredging).

- Using sensors to ensure complete closure of the bucket before lifting it.

In preparing the necessary SEIS, the Corps must fully consider all of these important resuspension control measures, and should adopt them as part of the basic dredging design.

In addition, the Draft EA (and the state WQCs) do not clearly indicate whether a closed environmental clamshell bucket dredge will be used “to refusal,” or only for the materials designated as unsuitable for disposal at the HARS. Even HARS-suitable sediments may contain significant levels of contaminants,³² and the overlying non-HARS-suitable silts may also become mixed with the underlying HARS-suitable sediments. The precaution of using a closed environmental clamshell bucket should be applied as broadly as possible – *i.e.*, to any Holocene-era sediment that is unconsolidated enough for the bucket to penetrate. The Draft EA and state WQCs also do not clearly indicate whether a “no barge overflow” restriction will be applied only for the non-HARS-suitable sediments, or for all non-rock material. For the same reasons, this restriction should be applied broadly, to all Holocene-era material. The Corps’ NEPA review must fully address these issues.

B. Inspections for Compliance

In the Draft EA, the Corps, for the first time, describes planned inspections to ensure that its contractors properly implement the selected resuspension control measures during dredging operations. However, the Draft EA states that inspection requirements only arise under the New York State Department of Environmental Conservation’s WQC, not under the New Jersey WQC.³³ Much of the harbor deepening work will take place exclusively within New Jersey state waters (*i.e.*, the Newark Bay, Elizabeth, and South Elizabeth Channels). Will inspections occur with the same frequency and rigor for these portions of the deepening project? Will the New Jersey Department of Environmental Protection be informed of any problems identified during these inspections? The Corps’ NEPA review must fully address these matters.

C. Monitoring and Performance Standard

The Draft EA also includes a wholly inadequate discussion of the monitoring of contaminated sediment resuspension and dispersal, and lacks any discussion of performance

³² For example, the Corps’ tests for HARS-suitability – which include laboratory tests in which certain invertebrate species are exposed to sediment from areas to be dredged – do not utilize species with sensitivity to dioxin that is representative of the sensitivity of the ecosystem as a whole, and may therefore understate dioxin risks substantially. Further, because the Corps’ HARS-suitability testing is intended to screen for environmental impacts resulting from the ocean disposal of dredged sediment, it does not provide a useful measure of the short- and long-term environmental risks posed by the resuspension and dispersal of sediment within the estuarine ecosystem from which the sediment is dredged.

³³ The Commentors have been unable to locate such a requirement in the New York umbrella WQC, dated April 8, 2004, and included in the bid specifications for contract area S-KVK-2. While the WQC includes an “inspectors form” among the “permit documents,” the WQC does not appear to include a requirement, as described in the Draft EA, that the Corps fill out this form “several times a week” and submit the completed forms to NYSDEC “on a weekly basis.” The Corps should either identify the source of these requirements or correct the EA by deleting these assertions.

standards. Such measures are routine at contaminated sediment sites because they enable the dredging to be monitored and adjusted to ensure adequate or improved environmental performance. Moreover, such measures are an important tool to coordinate the harbor deepening projects with the sampling needs of the Superfund RI/FS.³⁴

Proper implementation of monitoring and enforcement of a performance standard would substantially decrease the adverse environmental effects of resuspension from the harbor deepening projects. While the proper use of a closed environmental clamshell bucket, as discussed above, can substantially reduce the rate of resuspension, the Corps has acknowledged that resuspension rates with such buckets can vary.³⁵ Moreover, even when dredge operation is optimal, non-uniformity in sediment characteristics throughout a site and the presence of debris can cause spikes in resuspension rates. Monitoring and the use of a performance standard are important tools to ensure that resuspension is kept to a minimum, by identifying problems as they occur and adjusting dredging methods to resolve them. Due to the highly contaminated nature of the sediments in Newark Bay and the Kills, and the large volumes of sediment to be dredged, even a small percentage-point improvement in the rate of resuspension can achieve significant environmental improvements.

Documents relied on in the Draft EA highlight the use of monitoring and performance standards at other contaminated sediment dredging projects, including projects designed by the Corps. The article by Bergeron, et al., discussed at note 28 above, describes several examples of projects using a closed environmental clamshell bucket. Most of these projects involved both monitoring and a performance standard specifying maximum acceptable levels of resuspension; one of them, at Saginaw River/Bay, was designed by the Corps. The Feb. 23, 2005 memorandum included in Appendix B to the Draft EA also indicates that the Corps conducted water quality monitoring for contaminated sediment dredging projects in New Bedford, MA, and Providence River, RI. A Corps memo dated December 16, 2004 also indicates that for the New Bedford project, which was conducted within a Superfund site, the Corps “focused primarily on water quality monitoring during dredging” and “work stoppages were implemented” if monitoring revealed excessive levels of resuspension.³⁶

³⁴ See, e.g., *NRDC v. Corps*, slip op. at 56 n.180 (Aug. 5, 2005).

³⁵ For example, the 1999 Final EIS on the 50-foot harbor deepening project (at p. 8-6) states that “[m]echanical dredging operations may be expected to result in temporary suspension of 3-5% of the total dredging quantity.” The 2003 SSFATE report (at p. 3) states that “[t]here is limited data on the source strengths of clamshell dredges”; the report assumes a best-case resuspension rate for a closed bucket of about 0.7%, with the possibility of much higher rates. (The report expressed this best case scenario as a “source strength” of 19 kg/m³. Because the report assumed a sediment bulk density of 2,500 kg/m³, the 19 kg/m³ source strength equates to 0.7% (or 19/2,500) of a given unit of sediment.) Another Corps technical report suggests a typical rate of 1.5% for a closed bucket. U.S. Army Corps of Engineers-Engineer Research and Development Center, *Demonstration of the SSFATE Numerical Modeling System* (Publication No. ERDC TN-DOER-E12) (July 2000) (available at <http://el.erd.c.usace.army.mil/dots/doer/technote.html>). A recent presentation by a Corps expert indicated a range of up to 3% with a closed bucket. Schroeder, Paul and C. Kirk Ziegler, *Understanding, Predicting, and Monitoring Contaminant Releases During Dredging*, Presentation at USCAE/USEPA/SMWG Joint Sediment Conference (Oct. 27, 2004) (available at <http://el.erd.c.usace.army.mil/training.cfm?Topic=Workshop&List=04oct-ccs>). The literature is replete with various other estimates.

³⁶ The Corps provided that memo to the Commentors in connection with ongoing litigation. It can be found at Volume 2, p. 260 of the administrative record in the *NRDC v. Corps* litigation.

As another example, the Draft Project Plans for Environmental Dredging Pilot Study in the Passaic River, referenced above, explain that monitoring is important because of “the need to understand the amount of resuspension occurring at the dredge head as well as the amount of resuspended sediment that may escape the dredging zone.” (The Corps’ New York District is a participant in the Passaic River Restoration Project, of which the pilot dredging project is a part.) The same rationale applies to Newark Bay which, like the Passaic, is designated as a “Study Area” of the Diamond Alkali Superfund Site and is the subject of an ongoing RI/FS. Further, Corps regulations for civil works projects stress the importance not only of monitoring, but also of using monitoring data to identify problems and improve environmental performance on an ongoing basis. The regulations emphasize that “effective reporting and monitoring [of water quality impacts is] essential to responsible management,” and provide that the Corps should collect and water quality data to, *inter alia*, facilitate “real-time project regulation,” “evaluate water/sediment interactions and their effects on overall water quality,” “evaluate the . . . operation of each project,” and “document identified opportunities, problems, and solutions.”³⁷

Likewise, EPA, when dredging in the Hudson River PCBs Superfund Site, will apply “engineering performance standards” to ensure the effectiveness of re-suspension control, conduct continuous monitoring for compliance with the performance standards, and implement a feedback system to adjust or correct dredging methods when performance standards are not met.³⁸ EPA’s 2005 Draft Contaminated Sediment Remediation Guidance for Hazardous Waste Sites also states, as a general principle, that “it is important to monitor resuspension during dredging to evaluate the effect on water quality.”³⁹

Despite the critical importance of monitoring in the circumstances at issue, the Draft EA’s discussion of monitoring (at p. 14) provides only a cursory discussion, with very little detail about the Corps’ actual monitoring plans. Nor is such detail provided elsewhere in prior NEPA documentation, as the Corps’ project plans have never before reflected an intent to monitor dredging-induced resuspension during construction. The Draft EA (at p. 16) states that “extensive monitoring conditions are proposed in the States[’] permits [*i.e.*, WQCs]”; however, the WQCs contain no requirements to monitor resuspension and dispersal of contaminated sediments and the state agencies, to date, have not publicly disclosed any intent to add such requirements to the WQCs. This makes it even more important that the Corps publicly describe its monitoring plans in detail, since there is no oversight by the state agencies of the quality of the Corps’ monitoring. The Draft EA also asserts (at p. 8) that “data on sediment resuspension during dredging collected as part of the HDP monitoring program will provide information that may be useful to EPA and its goals [in the Superfund process].” While any such benefits would be commendable, the assertion is pure speculation unless the Corps adds further details about the

³⁷ Engineer Regulation No. 1110-2-8154 at §§ 10(a)(6)-(7), 13(e)-(f).

³⁸ See USEPA, Region 2, Hudson River PCBs Superfund Site, *Engineering Performance Standards, Volume 1: Statement of the Engineering Performance Standards for Dredging* (April 2004); USEPA, Region 2, Hudson River PCBs Superfund Site, *Engineering Performance Standards, Volume 2: Technical Basis and Implementation of the Resuspension Standard* (April 2004). These documents are available at www.epa.gov/hudson.

³⁹ <http://www.epa.gov/superfund/resources/sediment/pdfs/ch6.pdf>, at 6-4. (The full document is at <http://www.epa.gov/superfund/resources/sediment/guidance.htm>.)

monitoring program, which demonstrate how it will be designed to collect data useful to the Superfund process.

In preparing the necessary SEIS, the Corps should provide much more detail about the design of the monitoring program to ensure that the monitoring effort provides meaningful data, *i.e.*, that it accurately captures the amount of resuspension and patterns of dispersal. A detailed monitoring plan should be attached as an appendix to the Corps' final NEPA documentation. As the Commentors have previously recommended to the Corps, an adequate monitoring plan should include continuous, real-time monitoring of the magnitude and extent of any plume of resuspended sediments, using calibrated optical and/or high frequency acoustic instruments (a method that has been employed by the Corps at other dredging projects).⁴⁰ Further, the article by Bergeron, *et al.*, discussed at note 28 above and relied on as a reference in the Draft EA, indicates that computerized sensors and data recording devices can be mounted on the sideplates of the clamshell bucket itself, to provide real-time data on TSS and other parameters. The Corps should utilize such equipment as part of a monitoring plan. Monitoring at the dredge head would allow for distinguishing dredging-induced resuspension from that caused by ship wakes, and real-time data would allow a properly-trained dredge operator to identify elevated resuspension rates and take corrective measures as needed. Also, a memorandum in the Appendix to the Draft EA (dated 1/20/05) notes that "literature on the effects of blasting on resuspension is limited." Thus, the Corps should conduct monitoring of resuspension due to blasting, unless and until sufficient data is gathered to indicate that such resuspension is *de minimis*.

Finally, the Draft EA includes absolutely no discussion of a performance standard against which the effectiveness of resuspension control methods can be measured. As described above, monitoring is important – and is standard practice – not simply to collect data, but also to allow for adaptive management whereby dredging methods are adjusted in the event of excessive resuspension. The Corps should implement a "performance standard" that sets an upper bound on the allowable amount of contaminated sediment resuspension and dispersal, based on environmental harm. When the standard is exceeded, dredging methods would be modified until compliance is achieved.

7. ***The Draft EA does not address the applicability of the Corps' own "HTRW" Guidance.***

EPA's February 2004 AOC also had the effect of making the Corps' "Hazardous, Toxic, and Radioactive Waste (HTRW) Guidance for Civil Works Projects" (ER 1165-2-132) applicable to the portions of the deepening projects within the Newark Bay Study Area. The Draft EA, however, incorrectly states (at p. 5) that it does not apply, and consequently ignores its substantive requirements.

The Guidance defines HTRW materials as "any material listed as a 'hazardous substance' under [CERCLA]," except for "dredged material and sediments beneath waters proposed for

⁴⁰ See, e.g., U.S. Army Corps of Engineers-Engineer Research and Development Center, *Acoustic Monitoring of Dredging-Related Suspended Sediment Plumes*, Publication No. ERDC TN-DOER-E12 (July 2000) (avail. at <http://el.erd.c.usace.army.mil/dots/doer/pdf/doere7.pdf>).

dredging.”⁴¹ However, the exception does not apply if such materials and sediments “are within the boundaries of a site designated by EPA or a state for a response action (either a removal action or a remedial action) under CERCLA, or if they are part of a National Priority List (NPL) site under CERCLA.”⁴²

Much of the sediment to be dredged in Newark Bay and the Kills contains high levels of pollutants listed as “hazardous substances” under CERCLA; indeed the Feb. 2004 AOC was based, in part, on a legal determination by EPA, pursuant to CERCLA, that the contaminants present in Newark Bay sediments are “hazardous substances” that “may present an imminent and substantial endangerment to public health, welfare, or the environment.”⁴³ Thus, the main part of the Corps’ HTRW definition applies. Until February 2004, sediment from Newark Bay and the Kills would have fallen within the exception for dredged sediment, making the Guidance inapplicable to the Corps’ deepening projects. However, after the Feb. 2004 AOC, the sediments within the Newark Bay Study Area are subject to the HTRW Guidance, notwithstanding that they are part of a Corps dredging project, because the consent order both rendered the area part of the Diamond Alkali Superfund Site (which is on the NPL), and required the conduct of a RI/FS (which is a type of “removal action” under CERCLA).⁴⁴

The HTRW Guidance requires the Corps, among other things, to take special care to design “detailed” “response actions” to address any hazardous substances present within the site of a civil works project, and alters the cost-sharing responsibilities with respect to such work. It requires coordination and consultation with EPA, state, and local authorities, before proceeding with the project. The Corps’ final NEPA documentation must address the agency’s application of the HTRW Guidance to the portion of the deepening projects that lie within the Newark Bay Study Area. In fact, the Guidance explicitly states that, during this HTRW review process, “special care and attention must be given to changes that must be reflected in . . . NEPA documentation.” This further supports the need for a full SEIS, not merely an EA.

8. ***The Draft EA ignores the potential for the Corps to incur liability under CERCLA.***

Federal agencies, such as the Corps, are subject to the same liability rules under CERCLA as any other entity.⁴⁵ Following the Superfund site designation of Newark Bay, parties that contribute to creating or exacerbating the contamination within the site are more likely to be subject to actions for response costs or natural resource damages under CERCLA. The Corps, if it proceeds with the project as currently designed, may become a “potentially responsible party” subject to liability for costs or damages due to its role in the re-suspension and re-distribution of contaminated sediment through the ecosystem. This issue has a direct bearing on the costs and

⁴¹ HTRW Guidance at ¶4(a)(1).

⁴² *Id.* at ¶4(a)(2).

⁴³ Feb. 2004 AOC, at ¶¶ 30-31, 34.

⁴⁴ See *Razore v. Tualip Tribes of Wash.*, 66 F.3d 236, 239 (9th Cir. 1995).

⁴⁵ See generally 42 U.S.C. § 9620(a).

benefits of various alternative dredging methods, and should be accounted for in the Corps' alternatives assessment under NEPA.

9. ***The Corps should hold a public hearing on the Draft EA.***

The Commentors request a public hearing to address the environmental issues raised by the Draft EA, and by the harbor deepening project as a whole. EPA reports that the affected communities surrounding Newark Bay have a keen interest in the success of the Superfund effort at remedying the decades of contamination in Newark Bay.⁴⁶ As described above, the harbor deepening project threatens to interfere with progress towards that goal. By providing a forum for interested parties to participate, a hearing would allow the public, government agencies, and other interested parties an opportunity to provide more meaningful input to the Corps on this critical issue.

The Commentors have also requested a public hearing on the Corps' Public Notice No. FP64-SNB1-2005, concerning proposed Contract Area S-NB-1. The Corps should hold a joint hearing on these two fundamentally related matters.

* * *

We thank you for your attention to this matter and look forward to your response.

Very truly yours,



Lawrence M. Levine, Esq.
Brad Sewell, Esq.
Natural Resources Defense Council
40 West 20th Street
New York, NY 10011
(212) 727-2700

Lisa F. Garcia
Rutgers Environmental Law Clinic
School of Law-Newark
Center for Law and Justice
123 Washington Street
Newark, New Jersey 07102-3094
(973) 353-5695

Andrew J. Willner
Deborah A. Mans
NY/NJ Baykeeper
52 West Front Street
Keyport, NJ 07735
(732) 888-9870

Rev. Fletcher Harper
Executive Director
Green Faith
714 South Clinton Avenue
Trenton, NJ 08611
(609) 394-1090

cc: Bradley M. Campbell, Commissioner, NJDEP
Joseph Seebode, Assistant Commissioner Site Remediation Program, NJDEP

⁴⁶ See http://www.ourpassaic.org/projectsites/premis_public/home/InterviewSummaryApril%206.doc (EPA "Community Interview Report").

Mr. Ronald Pinzon
August 15, 2005
page 23 of 23

Suzanne Dietrick, NJDEP
Elizabeth Butler, USEPA Region 2
Tim Kubiak, USFWS
Tom Brosnan, NOAA
Kathryn D. McGuckin, NYSDEC

RESPONSE TO COMMENTS

Natural Resources Defense Council – Letter dated August 15, 2005

Comment: *“The Corps’ prior statements indicate that the Draft EA was prepared to justify a pre-determined result.”*

USACE response: The USACE disagrees with this conclusion. Through a thorough scientific and empirical analysis, using the best available data, reported in the June 30th Draft EA and September 30th Amendment (hereinafter the EA), USACE reasonably concludes that the Harbor Deepening Project will have only minimal adverse impacts on the RI/FS, and that through coordination with EPA and the state regulatory authorities, those minimal impacts will be mitigated. This document presents a qualitative and quantitative analysis of the effect of dredging on the RI/FS.

A federal agency is not required, in all instances, to prepare a Supplemental Environmental Impact Statement (“SEIS”) prior to taking or continuing action. Rather, National Environmental Protection Act (“NEPA”) and its implementing regulations direct an agency to prepare a SEIS only if the proposed action significantly affects the quality of the human environment. Accordingly, an agency can satisfy its obligations under NEPA by first preparing an Environmental Assessment (“EA”). 40 C.F.R. § 1501.4. An EA is a concise public document that briefly discusses the relevant issues and is designed to provide sufficient evidence and analysis for determining whether an action has significant environmental impacts and requires preparation of a full-blown SEIS.

Comment: *“The Draft EA covers only the 50-Foot “Harbor Deepening Project” and does not address the ongoing 40/41-foot Arthur Kill project.”*

USACE response: USACE does not concur. The AK 41/40 Project, Contract Area 2/3 and the S-KVK-2 Contract Area of the HDP dredging programs are all included in the analysis in the EA.

Comment: *“The Draft EA does not adequately consider the potential for the deepening projects to interfere with EPA’s Superfund efforts to study, contain, and remediate severe toxic contamination in Newark Bay.”*

USACE response: USACE does not concur with this conclusion. The purpose of the EA was to provide an analysis of the potential effects of the navigational dredging on the ability of the U.S. Environmental Protection Agency (USEPA) to meet the goals of its Remedial Investigation and Feasibility Study (RI/FS) for the Newark Bay Study Area (NBSA). The EA describes the goals of the RI/FS, and discusses the specific components of the RI/FS Phase I data collection efforts: (1) sediment sampling; (2) a bathymetry survey; and (3) biologically active zone (“BAZ”) studies. The qualitative and quantitative analyses in the EA “focus primarily on the potential effects of ongoing and planned navigational dredging on [RI/FS] sediment samples” but that the

potential effects on bathymetry and BAZ studies are also analyzed. The EA further explains that potential effects on later phases and components of the RI/FS, including water and biota sampling, the selection of a remedy, and the natural resources damage assessment are also analyzed, even though those phases have neither been designed nor scheduled.

With respect to Phase I sediment sampling, the EA analyzes “the extent to which dredging may affect the utility of samples collected pursuant to the RI/FS both before and after dredging,” and considers separately the effects on sediment samples taken from the navigational channels and from areas adjacent to the channels.

The EA notes that EPA is taking sediments samples from within the navigational channels because “samples of surface sediments collected in these areas may provide a ready source of recently settled material which can aid in estimating current food web exposure as well as characterizing current sources of contaminants to the NBSA.” The EA correctly concludes that the USACE dredging activities will have no significant effects on Phase I sediment samples taken from the navigational channels themselves, as those samples will all be taken prior to dredging:

The [sediment] cores that are collected [in the navigational channels] prior to the dredging considered in this DEA will provide a record that includes material deposited since the previous dredging event, in some combination with material left after the last dredging event (the dredging residual). Whether or not these sediments are subsequently dredged is immaterial to the interpretation of [that] core data. Furthermore, the removal of channel sediments post-sampling will not affect the utility of the surface samples to the RI/FS. To the extent that there is a need for further evaluation of contamination in newly deposited material, future sampling can be conducted in other areas, for example in the subtidal flats or in other areas that were historically deepened by are now not actively maintained.

The EA continues by pointing out that the subsurface portions of the sediment cores from the channels are unlikely to add much value to the evaluation of historical deposition of contaminated sediments in the Bay (which is one goal of the RI/FS) because much of the subsurface sediments in the channels are likely to be pre-industrial-aged, non-contaminated material. Indeed, the RIWP itself states “the informational value” of the subsurface sediments from the cores in the navigational channels “is expected to be relatively low.” Thus, to evaluate the historical deposition of contaminated subsurface sediments, EPA will “focus on data collected in the flats (28 samples in the NBSA), where the subsurface layers that provide the historical record is much less likely to be disturbed by dredging. Therefore, the dredging of the channels will not significantly affect USEPA’s ability to collect historical data.”

Phase I sediment samples collected from areas adjacent to the navigational channels and/or from the subtidal flats “will provide several types of information including current exposure levels for ecological and human health risk assessment, historical trends in exposure levels to aid in estimating the rate of natural recovery, and spatial gradients in surface sediment concentrations to aid in determining the sources of contaminants” to the Study Area. Both surface and subsurface portions of such samples are important to those evaluations. The EA recognizes that

dredging may indirectly affect the interpretation of the data from these sediment cores by causing contaminated sediments from the channels to be resuspended and deposited onto the sediment surface in areas where such cores will be taken. To determine the extent of and evaluate those indirect effects, USACE conducted a quantitative analysis of (1) *the amount and spatial extent of sediments that are resuspended from the channels by dredging*, (2) *the concentrations of contaminants on those resuspended sediments*, and (3) *the resulting effect on the chemical analyses to be performed on the Phase I sediment cores taken from the adjacent areas*. USACE determined the amount and spatial extent of resuspended sediments from the channels by using the most recent site-specific resuspension studies available, e.g., the 2001 and 2005 Total Suspended Solids (“TSS”) studies. The USACE concluded that while dredging causes “plumes” of resuspended sediments, such plumes are generally “localized to within 250 ft downstream of the dredge and were limited to the channel. Thus, the data indicate that the effects of dredging on suspended sediments dynamics, especially in the flats adjacent to the channels, are minimal, both temporally and spatially.”

To determine the contaminant concentrations on the resuspended sediments, the USACE used “all available sediment data collected within the [NBSA] since 1990.” Comments indicate that concentrations of dioxin are highly elevated in subsurface sediments outside of the channels, and therefore that channel widening may result in the resuspension of deeply buried, highly contaminated sediments not previously in the channel. The USACE investigated this issue directly in several analyses. First, contaminant concentrations in surface sediments of Newark Bay were compared with concentrations in buried sediments. “The average concentrations of each of the compounds analyzed here were found not to change significantly with depth,” with few exceptions. Further, “in an extension of this analysis, contaminant concentrations in each surface slice (0 - 0.15 m) were compared with subsurface concentrations measured in the same core. Values are generally scattered around the 1-to-1 line or fall below it, indicating that concentrations at the surface are similar to or higher than those in deeper sediments.” The one exception was 2,3,7,8-TCDD, for which concentrations in segments lying at depths between 0.15 and 0.85 m within the sediment bed were often found to be higher than concentrations at the surface. The Amendment concludes, however, that the impact of the elevated subsurface concentrations on the average concentration in dredge material is likely to be minimal since the differences were generally less than a factor of two, and since 2,3,7,8-TCDD concentrations in segments deeper than 0.85 m were lower than at the surface. An additional analysis was performed using the contaminant concentrations measured in composited USACE’ sediment cores collected to characterize the dredge material in the Arthur Kill, Newark Bay and Kill van Kull contract areas. These contaminant concentrations were found to be similar to or less than average concentrations measured in surface sediments in southern Newark Bay. It was concluded that resuspended dredge material from the contract areas is unlikely to increase concentrations of 2,3,7,8-TCDD in the surface sediments of the Bay. However, it was found that average concentrations of the other compounds in Arthur Kill composite cores were greater than the overall averages for the surface sediments, and for that reason, additional studies were done to evaluate any potential effects of the dredge material on surface sediment concentrations of those contaminants. To determine the effect of resuspended dredged material on the chemical analyses to be performed on the Phase I sediment cores taken from areas adjacent to the channels, USACE first calculated “the thickness of a sediment deposit that might be expected in the flats due to dredging.” Using mathematical formulas based upon well-known scientific

principles, USACE calculated the average thickness of the dredged sediment deposit to be less than .2 cm, which is two percent of the thickness of each Phase I sediment core. USACE then calculated “a weighted average of the newly deposited dredged material and the existing surface sediments in order to simulate the concentration of each contaminant anticipated in” the six-inch Phase I sediment cores. Based on that second calculation, USACE estimated that contaminant concentrations in the Phase I sediment cores would be increased by no more than five percent for all chemicals due to dredging.

The EA’s analysis of the HDP effects on the Phase I sediment samples from the areas adjacent to the navigational channels concludes with the following:

Based on a conservative analysis (i.e., tending to overestimate), resuspended material is unlikely to result in the deposition of more than a thin layer of material on the flats of NBSA; this layer has been estimated to *be less than 2%* of the thickness of the 6 in. core segments to be collected by USEPA. Furthermore, this redeposited dredged material is unlikely to affect contaminant concentrations in surface sediments *by more than 5%*. Thus, the effect of the deepening work on the RI/FS cores is likely to be *di minimus* [sic], and therefore, insignificant in nature.

Moreover, to the extent that deposition is sufficient to affect sediment analyses, the USEPA sampling program is designed to provide information that will aid in the proper interpretation of cores collected in the study area. Discontinuities that may occur at the sediment surface due to newly deposited material may be observable in the contaminant and radiochemical analyses that will be performed. For example, the absence of Beryllium-7 or the presence of elevated Cesium-137 levels in the surface segment would be indicative of older subsurface material that has been deposited on the bed.

The EA properly notes that Phase II of the RI/FS will include additional sediment sampling, as well as water and biota sampling. These later phases of the RI/FS have yet to be neither developed nor scheduled. Nevertheless, based on the USACE analysis performed to determine the potential adverse effects of the HDP on Phase I sediment sampling, the EA concludes that the effects of dredging on Phase II sediment sampling is likely to be insignificant. Similarly, and for other reasons as well, the EA concludes that the HDP affects on Phase II water and biota sampling is also likely to be minimal.

As described above, the EA considered the problem of resuspension and dispersal caused by dredging. In terms of resuspension rates, much of the debate over the magnitude of resuspension rates stems from the paucity of published measurements. This in turn is attributable to the technical challenges in obtaining accurate field measurements. Within the “dredging zone”, immediately adjacent to the source, turbulent mixing and loss of “clumped” sediment severely hampers precise measurements of sediment loss. Consequently, values reported as loss rates vary considerably. A comprehensive list of scientific references pertaining to resuspension by dredges can be obtained by searching the USACE’s Environmental Effects and Dredging and Disposal literature database (<http://el.erdc.usace.army.mil/e2d2/index.html>). Attempts have been made to summarize the state of the knowledge (e.g. Anchor Environmental 2003, in which an average resuspension rate of 2.1% is given for mechanical dredges). A general pattern exists among published data that losses measured in the **0.5 to 1.5% range** are associated with clean-up and remediation dredging projects where minimization of sediment resuspension was a

primary objective designed into the project, whereas rates of **3% or greater** have been measured for projects **where maximized production** (sediment removal per unit time) **was the primary objective**. In the latter case, an aggressive dredger can minimize the duration of dredging at a site, although instantaneous loss rates can be comparatively higher. Likewise, encounters with large debris could account for high release rates. The use of an environmental bucket, with best management practices in place to minimize resuspension, as used in the USACE' dredging program, would create a loss rate closer to the lower end of the reported range.

In terms of dispersal, the EA concluded that while dredging causes "plumes" of resuspended sediments, such plumes are generally "localized to within 250 ft [to 350ft] downstream of the dredge and were limited to the channel. Thus, the data indicate that the effects of dredging on suspended sediments dynamics, especially in the flats adjacent to the channels, are minimal and not likely to cause significant effects to the RIFS goals."

With regard to SSFATE, as described in Appendix A of the EA, the results of the 2003 application of the β version SSFATE model to the harbor deepening project (recall- this 2003 application was in the form of a demonstration/pilot study for the new model and not utilized to base any USACE management decisions) indicate that the model was not reliable, particularly for the purpose of evaluating local deposition in specific areas. The USACE intends to update this information by utilizing the most recent SSFATE model for the site by using the results of an expanded comprehensive and multipurpose TSS Monitoring Program. At its simplest, the TSS Monitoring Program is designed to evaluate the extent of resuspension of sediments caused by dredging. Using water sampling, an optical backscatter sensor, an acoustic Doppler current profiler, and a differential global positioning system, the expanded TSS Monitoring Program will measure the extent of sediment resuspension caused by the dredge plumes. The TSS Monitoring Program will be used for the life of the HDP, and will provide, at a minimum, the data needed to refine the SSFATE modeling for the HDP and the Newark Bay Study Area. The TSS monitoring and SSFATE modeling results will benefit not only the HDP, but also EPA's RI/FS, as well as the USACE' Newark Bay restoration studies.

Regardless of the HDP, the sediments in the Newark Bay and Kills complex will not remain relatively stable while EPA does their work. The assumption that the sediments will remain stable ignores the effects of confounding episodic natural and non-dredging anthropogenic events that move and redeposit sediments far in excess of any percent dredging-related material resuspension postulated. Sediments in this estuarine complex are highly dynamic and are continuously under the influence of natural physically dominating events (tides, freshwater discharges, wind-waves, and episodic meteorological forcing) and human-induced disturbances (maritime activities, academic, resource and regulatory agency field monitoring pursuits and dredging) that will cause sediment movement within the complex. Comparison of sediment inputs and outputs suggest that the Newark Bay system is currently in dynamic equilibrium. The average annual sediment load accumulating in Newark Bay is approximately equal to the mass routinely removed by dredging. Cessation of dredging activities will cause immediate shoaling in channels and other depositional zones and create uncertain physical changes (e.g., hydrodynamics) in a system where navigation has been maintained by dredging for decades. Furthermore, dredging has removed several million cubic meters of contaminated sediments from the Newark Bay system and placed them in confined sites or used them beneficially outside

of the marine environment. Cessation of dredging will not only allow these sediments to continue to circulate and jeopardize navigation but will not protect the EPA's sediment sampling program from substantial and complex changes resulting from natural physical forces altering the site's sediment character. The allegation of negative impact by continuation of dredging on the site's overall sediment characteristics is therefore without substance.

In terms of coordination, the EA discusses in detail the "Newark Bay Study Area Coordination Plan" (the "Coordination Plan"), the primary purpose of which is 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 practicable." The Coordination Plan establishes a multi-agency coordination team consisting of representatives from the USACE, EPA, the United States Coast Guard, the Port Authority of New York and New Jersey, the New Jersey Department of Environmental Protection ("NJDEP"), the New York State Department of Conservation ("NYSDEC"), the United States Fish and Wildlife Service ("FWS"), and the National Oceanic and Atmospheric Administration ("NOAA") (the "Coordination Team"). Pursuant to the Coordination Plan, the Coordination Team will meet at 10:00 a.m. on the second Tuesday of every month during the duration of the RI/FS to:

- (1) update each other on current and future activities in the Study Area;
- (2) share information on their respective projects in the Area; and
- (3) resolve any issues that may arise via an interagency coordinated Dispute Resolution Plan.

The Coordination Plan recognizes that monthly meetings may not be sufficient to fully coordinate the agencies' respective projects, and therefore provides that more frequent meetings may be held, or Coordination Team members may be invited by particular agencies to attend other relevant meetings as appropriate, "such as USACE meetings with dredging contractors." The Coordination Plan was initially developed and proposed by the USACE even before the Court ruled in the Opinion and Order that "if the Corps relies on the promise of cooperation between the EPA and the Corps to minimize the effects of dredging on the RI/FS, the Corps must give full consideration to how that cooperation will be handled." The Coordination Team was modeled after the HDP project delivery team and is can be looked at as a specialized component of that broader team.

History: On September 21, 2005, the Coordination Plan was formally adopted by the "New York and New Jersey Harbor Senior Partners," and the Coordination Plan was issued for public comment in the EA. The activities of the Coordination Team have been and will continue to be monitored by the Senior Partners. Even before the Coordination Team was formally established, the USACE and EPA coordinated their respective projects in the Newark Bay Study Area. In late-March and early-April 2005, the USACE and EPA shared additional detailed information on their respective projects and met to better coordinate those projects. Notably, the agencies met on April 7, 2005 to discuss sampling and modeling in the Newark Bay Study Area. Several key points were discussed during this meeting, including:

- (1) the identification of “additional resources, technical products, and coordination that could support EPA’s Newark Bay superfund study [and] to insure that the [USACE’s] navigation program did not impact or interfere with [EPA’s] sampling”;
- (2) the coordination of EPA sampling in the Fall with the USACE’s dredging schedules;
- (3) the USACE’s provision of information to EPA concerning its navigation projects, including sampling results from earlier investigations, to “further the superfund study of Newark Bay”; and
- (4) various issues related to the Draft Newark Bay Sampling Plan of EPA’s sampling contractor, Tierra Solutions, Inc.’s (“Tierra”).

The agencies met again on April 28, 2005 to further discuss those, and other issues.

Coordination continued through the Spring and Summer of 2005. In May 2005, EPA sought comments from the USACE and others on Tierra’s revised draft Remedial Investigation Work Plan (“RIWP”) for the Newark Bay Study Area. The USACE provided its detailed comments to EPA on August 24, 2005. Notably, in its August 24th letter the USACE confirmed with EPA its initial understanding that potential impacts of its ongoing maintenance and deepening projects in the Newark Bay Study Area could be avoided through coordination with EPA. (“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.”). The August 24th letter summarizes the USACE’s preliminary analysis of the deepening projects’ impacts on each of the three types of Phase I data collection efforts by EPA – bathymetry, BAZ, and sediment contaminant coring and analysis. The USACE concluded that the only potential adverse impact on EPA’s Phase I sampling was on sediment samples proposed to be taken in the navigational channels currently being, or proposed to be, dredged. The USACE confirmed, however, that just prior to the Phase I sediment sampling, it would coordinate with EPA on the precise locations of such sampling to ensure that dredging would not interfere with the sediment sampling. On August 26, 2005, the Army Corp and EPA convened a conference call to discuss the coordination of the HDP and the RI/FS. During the call, the parties again discussed the different types of data collection that were being planned for Phase I, i.e., bathymetry, BAZ and sediment coring. Most notably, during this call the representatives of Malcolm Pirnie (“MP”), EPA’s technical project managers for the Diamond Alkali Superfund site, concluded with EPA’s concurrence that “none of the Phase I sampling actions would, in any significant manner, be interfered with or affected by the ongoing dredging activities of the Corps in Newark Bay. This again confirmed the USACE’s initial understanding that its deepening projects would not affect the RI/FS in any meaningful way. The parties agreed that they would continue to meet and coordinate their efforts so as to, avoid any potential interference caused by sampling and dredging within “the same geographic region at the same time.”

On September 8, 2005, in addition to reviewing the key points of the Coordination Plan, the agencies met to:

- (1) ensure that all parties understood each others’ activities in the Study Area;
- (2) discuss whether the USACE’s deepening projects would have any adverse impacts on EPA’s sampling in the Study Area and to “identify mitigation or avoidance strategies to minimize the impacts”; and

- (3) identify points of contact for sampling, dredging, and monitoring activities. (email exchanges concerning September 8th meeting).

The agencies discussed in detail their respective programs in the Study Area, the specific requirements and goals of the RIWP, and how to best to ensure that those requirements and goals were not impacted adversely by the USACE' deepening projects in the Area. The representatives of MP explained the purpose behind collecting sediment samples in the navigational channels in the Study Area. The agencies then discussed the USACE' past and future deepening projects in the navigational channels and whether those projects affected or would affect the sediment sampling that would take place in the Fall. It was agreed that a smaller working group would meet on September 13, 2005 to discuss these issues in greater detail and determine how the agencies could coordinate their respective projects to ensure the validity of the specific RIWP sediment samples to be taken from the Kill van Kull and Arthur Kill navigational channels. The smaller working group met on September 13, 2005 to discuss in greater detail the RIWP sediment sampling points in the Kill van Kull and Arthur Kill and their relationship to the deepening projects in those channels. After reviewing the RIWP and proposed sampling plan in relation to past and future USACE dredging in the Area, it was decided that four sampling points in the Kill van Kull and Arthur Kill navigational channels would be relocated to better serve the goals of the Phase I sediment sampling. The four points were moved because the original points proposed in the RIWP sampling plan had been dredged recently, thereby making it difficult to obtain a sufficiently deep and useful sediment core. The alternate sampling points that were agreed upon will enable EPA to sample sediments in areas that had.

In addition to issuing the Draft EA and coordinating its deepening projects with EPA's RI/FS, in August 2005 the USACE, along with the other interested federal and state partner agencies, issued the Lower Passaic River Restoration Project *and Newark Bay Study* Draft Community Involvement Plan ("Draft CIP"). The partner agencies issued the Draft CIP "as a guide for the partner agencies in providing opportunities for public information and input regarding cleanup, injury assessment, and restoration activities in the Lower Passaic River and Newark Bay watershed study areas. It is also designed to assist the communities and other stakeholders throughout the project areas to become meaningfully involved in and informed about the project,"

Comment: *"The Draft EA does not support the conclusion that there is no significant new scientific information since the 1999 Final EIS."*

USACE response: USACE does not concur for the multiple reasons stated above in previous responses.

Comment: *"The Draft EA ignores the cumulative impacts of maintenance dredging in Newark Bay scheduled to occur simultaneously with the deepening projects."*

USACE response: USACE does not concur. In addition to analyzing the HDP potential effects on the RI/FS, the EA also analyzes the cumulative effects on the RI/FS of the USACE' separately funded and authorized operations and maintenance projects ("O&M projects"), and

permit actions pursuant to Section 404 of the CWA, 33 U.S.C § 1344, and Section 10 of the Rivers and Harbors Act, 33 U.S.C. § 403 (“permit actions”). The EA notes that there are only three Phase I sediment sample locations in areas planned for potential O&M projects or permit actions in the near future. However, those Phase I sediment samples will be taken before these projects will commence in March 2006. Thus, the EA correctly concludes, those projects will have no effect on the RI/FS Phase I sediment samples. The EA also notes that the future phases of sampling under the RI/FS will be coordinated with the USACE’ O&M projects and permit actions, which require separate and distinct NEPA review and interagency coordination, to “ensure that neither agency’s mission is significantly impacted.”

The EA recognizes that future permit actions may have an effect on the future phases of the RI/FS, which again have neither been proposed nor accepted by EPA. These permits, on an annual basis, generally reflect work required adjacent to the [navigational] channels to maintain commercial activities and allow facilities to accommodate vessels received. The permitted work typically represents maintenance around pier areas with limited dredging in terms of volume, area, and duration. The work includes but is not limited to dredging, pier rehabilitation, pier maintenance, rehabilitation of wave breaks, bridge abutment rehabilitation, and wharf reinforcements. The EA concludes, however, that “the cumulative effects of these actions on the RIWP study goals are likely to be insignificant, since these activities are small in area and volume (scale) relative to the HDP projects and are short in duration, when considered in addition to the AK 40/41 and the HDP. The O&M actions are required to be documented and reviewed under separate NEPA analyses. Coordination between the USACE and USEPA is currently underway and is planned to continue for the duration of the RI/FS in order to ensure each agency’s program goals are not adversely affected.

The Maintenance dredging will occur in the Port Newark Pierhead and Port Newark Branch. Although these two actions occur simultaneously, they are located in distinct and separate areas. These two areas within Newark Bay are not part of the deepening work. The current deepening work is ongoing in the Arthur Kill located 2 miles away. The future work will occur in the southern part of the Main channel. Resedimentation that may occur with the Maintenance dredging will remain localized and will not overlap with or accumulate on the resedimentation resulting from the deepening work, and thus will have no significant impact on the RI/FS.

Comment: *“The Draft EA fails to adequately address alternatives to minimize interference with the Superfund process caused by resuspension and dispersal of contaminated sediment.”*

USACE response: While the USACE does not concur with commenter’s conclusions, we have performed another reevaluation of alternatives in the EA. In addition, several best management practices (“BMP”) that will be implemented during the conduct of the subject navigation dredging operations, including but not limited to complete environmental bucket closure and ascent speed of 2 feet per second or less, would ensure minimal resuspension during the bucket cycle. Additionally, the dredger is not allowed to overflow contaminated material from the barge or scow. These BMPs are actually fully described in the dredging projects plans and specifications in accordance with both the New York and New Jersey Water Quality Certifications, and are consistent with the New York/New Jersey Dredged Material Management

Plan. Also, the Corps has developed an expanded comprehensive and multipurpose TSS Monitoring Program. The TSS (total suspended sediment) Monitoring Program is designed to evaluate the extent of resuspension of sediments caused by dredging. The TSS Monitoring Program will be used for the life of the NBSA HDP elements, and will provide, at a minimum, the data needed to refine the SSFATE modeling for the HDP and the Newark Bay Study Area as well as provide necessary feedback to USACE re: adaptive management practices to be coordinated with the States of New York and New Jersey and as part of the formal Coordination Plan process.

Comment: “The Draft EA does not address the applicability of the Corps' own "HTRW" Guidance.”

USACE response: ER 1165-2-132 “Hazardous, Toxic, And Radioactive Waste (HTRW) Guidance For Civil Works Projects” dated 26 Jun 92 specifically excludes dredged material from being classified as “HTRW unless it is within the boundary’s of a site designated by the EPA or a state for a response action”. Although at first glance, this would require the USACE to treat the NB material as HTRW, the regulation further states that the:

“Dredged material and sediments beneath the navigable waters proposed for dredging shall be tested and evaluated for their suitability for disposal in accordance with the appropriate guidelines and criteria adopted pursuant to Section 404 of the Clean Water Act and/or Section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA) and supplemented by the Corps of Engineers Management Strategy for Disposal of Dredged Material: Contaminated Testing and Controls (or ors appropriate updated version) as cited in Title 33 Code of Federal Regulations Section 336.1.”

All material that has been proposed for dredging from Newark Bay by the HDP has been either tested or characterized for its suitability for placement at the Historic Area Remediation Site (meeting the requirements of Section 103 of MRPSA) or at an upland site (meeting the requirements imposed by the state regulatory agencies). As such, the USACE is in full compliance with the HTRW regulation.

Comment: “The Draft EA ignores the potential for the Corps to incur liability under CERCLA.”

USACE response: The Corps does not concur. Dredging does not create contamination. Based on ER 1165-2-132, civil works navigation dredging is regulated and possible even in sites designated for a response action by the appropriate lead environmental regulatory agency, which is not currently the case in Newark Bay nor is it expected, if at all, for several years while the RI/FS is being performed. Ostensibly, the continued use of either the CWA and/or the MPRSA to regulate the civil works dredging of navigation channels relates to the need to maintain efficient navigation, which is also vital to the economic competitiveness of the nation.

As regulated by the EPA, NJDEP and NYSDEC, the Corps is performing the navigational dredging of contaminated sediments in the NBSA in as an environmentally protective manner as is feasible, similar to if it were remedial dredging itself. The material is thoroughly characterized for contamination prior to dredging, several specialized types of equipment and methods for

dredging are employed to minimize adverse impact to the surrounding environment, and the ultimate disposition of the material is carefully managed and overseen by the Corps and the appropriate federal and state regulatory agencies. All of these aspects of the dredging process well illustrate the thoughtful care and diligence that the Corps and the other involved federal and state regulatory agencies give to the dredging of these contaminated sediments; a process which itself removes large amounts of these contaminated sediments from further exposure to the environment. The Corps also documents the costs associated with dredging and managing contaminated material so that, to the extent that these costs can be assigned to PRPs in the future, these added costs may be recoverable from the polluters who may be found liable for the contamination.

Comment: *“The Corps should hold a public hearing on the Draft EA.”*

USACE response: USACE does not concur. The USACE received only one request (yours) for a public hearing and therefore concluded that no relevant additional, significant or new information would be forthcoming by conducting a hearing. In addition to the Clean Water Act Section 401 Water Quality Certification public hearings conducted in March and February of 2004, the USACE, along with the other interested federal and state partner agencies, issued the Lower Passaic River Restoration Project and Newark Bay Study Draft Community Involvement Plan (“Draft CIP”) in August 2005. The partner agencies issued the Draft CIP “as a guide for the partner agencies in providing opportunities for public information and input regarding cleanup, injury assessment, and restoration activities in the Lower Passaic River and Newark Bay watershed study areas. It is also designed to assist the communities and other stakeholders throughout the project areas to become meaningfully involved in and informed about the project,”



NATURAL RESOURCES DEFENSE COUNCIL

November 11, 2005

Mr. Ronald Pinzon
Environmental Coordinator
Environmental Assessment Branch
Army Corps of Engineers, N.Y. District
26 Federal Plaza, Rm. 2136
New York, NY 10278-0090

BY FIRST CLASS MAIL

Re: Draft Environmental Assessment on the Newark Bay Area of the
New York and New Jersey Harbor Deepening Project

Dear Mr. Pinzon:

On behalf of Natural Resources Defense Council ("NRDC"), NY/NJ Baykeeper ("Baykeeper"), and GreenFaith (collectively referred to as the "Commentors"), please accept the attached documents as comments on the U.S. Army Corps of Engineers' ("Corps") Amendment to the Draft Environmental Assessment on the Newark Bay Area of the New York and New Jersey Harbor Deepening Project, dated September 30, 2005 ("Draft EA Amendment").¹ The Commentors also incorporate by reference their August 15, 2005 comments on the June 2005 Draft EA.

The attached documents represent the Commentors' recent court filing in *Natural Resources Defense Council, et al. v. U.S. Army Corps of Engineers, et al.*, No. 05-Civ.-762 (S.D.N.Y.). In particular, pages 9-20 of the Amended Plaintiffs' Memorandum of Law in Support of Injunctive Relief present our comments on the Draft EA Amendment. The declarations of Dr. deFur, Dr. Bohlen, and Ms. Lew, along with the accompanying exhibits, present the scientific bases for these comments.

As demonstrated by our comments, the Draft EA Amendment remains manifestly inadequate to satisfy the Corps' obligations under the National Environmental Policy Act ("NEPA"). To date, the Corps has consistently ignored or mischaracterized the scope and magnitude of the foreseeable adverse impacts of its harbor deepening activities. The Corps should now prepare a full Supplemental Environmental Impact Statement to accurately assess

¹ Pursuant to a notice published in the October 11, 2005 edition of the *New York Post*, the public comment period on the Draft EA Amendment allows for the submission of comments bearing a postmark date of November 12, 2005 or earlier.

Mr. Ronald Pinzon
November 11, 2005
page 2 of 2

these impacts, and to facilitate the selection of mitigation measures and/or alternatives to avoid or minimize them.²

* * *

We thank you for your attention to this matter and look forward to your response.

Very truly yours,



Lawrence M. Levine, Esq.
Brad Sewell, Esq.
Natural Resources Defense Council
40 West 20th Street
New York, NY 10011
(212) 727-2700

Lisa F. Garcia
Rutgers Environmental Law Clinic
School of Law-Newark
Center for Law and Justice
123 Washington Street
Newark, New Jersey 07102-3094
(973) 353-5695

Andrew J. Willner
Deborah A. Mans
NY/NJ Baykeeper
52 West Front Street
Keyport, NJ 07735
(732) 888-9870

Rev. Fletcher Harper
Executive Director
Green Faith
714 South Clinton Avenue
Trenton, NJ 08611
(609) 394-1090

cc (w/o attachments):

Bradley M. Campbell, Commissioner, NJDEP
Joseph Seebode, Assistant Commissioner Site Remediation Program, NJDEP
Suzanne Dietrick, NJDEP
Elizabeth Butler, USEPA Region 2
Tim Kubiak, USFWS
Tom Brosnan, NOAA
Kathryn D. McGuckin, NYSDEC

² See, e.g., *Senville v. Peters*, 327 F. Supp. 2d 335, 356 (D. Vt. 2004) (SEIS is required where there is a "substantial possibility that the action may have significant impacts, not that it clearly will have such impacts") (emphasis added); *Nat'l Audubon Soc'y v. Hoffman*, 132 F.3d 7, 18 (2d Cir. 1997) (EIS required where project is "likely to have a significant environmental impact") (emphasis added).

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

NATURAL RESOURCES DEFENSE)	
COUNCIL, INC.; RARITAN)	
BAYKEEPER, INC.; ANDREW)	
WILLNER; and GREENFAITH,)	
)	
Plaintiffs,)	
)	
-v.-)	05-CV-0762 (SAS)
)	
UNITED STATES ARMY CORPS OF)	ECF Case
ENGINEERS; and COL. RICHARD J.)	
POLO, JR., in his official capacity as)	
Commander and District Engineer,)	
United States Army Corps of Engineers,)	
New York District,)	
)	
Defendants.)	

**MEMORANDUM OF LAW IN SUPPORT OF PLAINTIFFS'
REQUEST FOR INJUNCTIVE RELIEF**

TABLE OF CONTENTS

TABLE OF AUTHORITIES iii

INTRODUCTION 1

BACKGROUND 2

 The Newark Bay Study Area..... 2

 Plaintiffs’ Lawsuit 3

 The Court’s Opinion and Order 4

 Post-Opinion and Order 5

STANDARD OF REVIEW 5

ARGUMENT 6

 I. The Corps’ Inadequate EA Demonstrates Continued NEPA Non-Compliance..... 6

 A. Overview of the CERCLA process 8

 B. The EA Does Not Adequately Identify and Assess the Potential Adverse
 Impacts of the Harbor Deepening Projects on the CERCLA Process 9

 1. Undermining the usefulness of data collected for the RI/FS..... 9

 2. Consequences of having to re-sample or re-interpret data after dredging..... 15

 3. Other factors that are ignored in the EA 16

 C. The EA Presents an Inadequate Coordination Plan 17

 D. The EA Dismisses Alternatives in Conclusory Fashion 19

 II. The Court Should Order the Corps to Conduct a NEPA-Compliant Environmental
 Review, Pursuant to an Enforceable Deadline and Specific Instructions, and Should
 Enjoin Further Contracting Until the Court Approves Final NEPA Documentation 20

 A. The Court Should Order the Corps to Conduct an Objective, Rigorous, and Timely
 Analysis of the Issues Identified in the Court’s Op. and Order..... 20

 B. The Court Should Enjoin the Corps from Further HDP Contracting Until It Approves the
 Agency’s Final NEPA Documentation 22

 1. Defendants’ activities cause irreparable harm that can only be redressed by a

prohibitory injunction..... 22

2. An injunction, to be lifted only upon Court approval of final NEPA
documentation, is necessary to ensure the purpose of NEPA is fulfilled 23

CONCLUSION 25

TABLE OF AUTHORITIES

CASES

Amoco Prod. Co. v. Village of Gambell
480 U.S. 531 (1987) 23

Citizens to Preserve Overton Park v. Volpe
401 U.S. 402 (1971) 25

City of Waltham v. United States Postal Serv.
11 F.3d 235 (1st Cir. 1993) 6

Comm. to Save the Rio Hondo v. Lucero
102 F.3d 445 (10th Cir. 1996) 23

Davis v. Mineta
302 F.3d 1104 (10th Cir. 2002) 24

Envtl. Def. Fund v. Marsh
651 F.2d 983 (5th Cir. 1983) 25

Louisiana v. Lee
758 F.2d 1081 (5th Cir. 1985) 25

Marsh v. Oregon Natural Res. Council
490 U.S. 360 (1989) 24

Metcalf v. Daly
214 F.3d 1135 (9th Cir. 2000) 6, 25

Middle Rio Grande Conservancy Dist. v. Norton
294 F.3d 1220 (10th Cir. 2002) 22

N.A.A.C.P. v. Town of East Haven
70 F.3d 219 (2d Cir. 1995) 6

Nat'l Ass'n of Mfrs. v. United States Dep't of Interior
134 F.3d 1095 (D.C. Cir. 1998) 8

Nat'l Audubon Soc'y v. Hoffman
132 F.3d 7 (2d Cir. 1997) 6, 20, 21

Nat'l Parks & Conservation Ass'n v. Babitt
241 F.3d 722 (9th Cir. 2001) 22, 24

<u>NRDC v. Callaway</u> 524 F.2d 79 (2d Cir. 1975).....	6, 23
<u>Portland Audubon Soc’y v. Lujan</u> 795 F. Supp. 1489 (D. Or. 1992).....	21
<u>Preservation Coalition v. Fed. Transit Admin.</u> 129 F. Supp. 2d 551 (W.D.N.Y.).....	21, 22
<u>Ross v. Fed. Highway Admin.</u> 162 F. 3d 1046 (10th Cir. 1998).....	24
<u>Seattle Audubon Soc’y v. Moseley</u> 798 F. Supp. 1484 (W.D. Wa. 1992).....	21
<u>Senville v. Peters</u> 327 F. Supp. 2d 335 (D. Vt. 2004).....	6, 7, 21, 24
<u>Sierra Club v. Bosworth</u> 352 F. Supp. 2d 909 (D. Minn. 2005).....	22
<u>Sierra Club v. Mason</u> 351 F. Supp. 419 (D. Conn. 1972).....	24
<u>Sierra Club v. United States Army Corps of Eng’rs</u> 701 F.2d 1011 (2d Cir. 1983).....	6, 24
<u>Town of Huntington v. Marsh</u> 884 F.2d 648 (2d Cir. 1989).....	5, 6, 23, 24
<u>United States v. 27.09 Acres of Land</u> 760 F. Supp. 345 (S.D.N.Y. 1991).....	23

STATUTES

Administrative Procedure Act
5 U.S.C. §§ 505 et seq. 1

Comprehensive Environmental Response, Compensation, and Liability Act
42 U.S.C. §§ 9601, et seq. 3

National Environmental Policy Act
42 U.S.C. §§ 4321 et seq. 1

REGULATIONS

40 C.F.R. § 1508.8(b) 7

40 C.F.R. § 1508.9(b) 7

43 C.F.R. Part 11 8

Pursuant to the Court's scheduling order and Federal Rule of Civil Procedure 65, Natural Resources Defense Council, Raritan Baykeeper, Andrew Willner, and GreenFaith (collectively the "Plaintiffs") seek injunctive relief against defendants United States Army Corps of Engineers and Col. Richard J. Polo, Jr., as Commander and District Engineer, Corps New York District (together the "Corps" or "Defendants") to remedy their violations of the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321, et seq., and the Administrative Procedure Act ("APA"), 5 U.S.C. § 505 et seq.¹

INTRODUCTION

As the Court is aware, in February 2004, the U.S. Environmental Protection Agency ("EPA") initiated a program, pursuant to its Superfund authorities, to study and remediate as appropriate the highly-contaminated sediments lying at the bottom of Newark Bay. In its August 5, 2005 Opinion and Order ("Op. and Order"), the Court determined that the Corps had violated NEPA and the APA by failing to take a "hard look" at the possible impacts of its massive harbor deepening projects ("HDP") on the Newark Bay Superfund effort, as well as at alternatives that might mitigate any such impacts. In response to the Court's judgment, the Corps released a September "Amendment" to a June 2005 draft "Environmental Assessment" (collectively, "EA") in which the agency concludes that there are, in fact, no significant impacts and thus no need for any meaningful consideration of alternatives or coordination mechanisms, or for the preparation of a Supplemental Environmental Impact Statement ("SEIS").

In dogged pursuit of carrying out its navigational project wholly unfettered by the Superfund study, the Corps continues to evade the letter and spirit of NEPA. Any casual observer would recognize that there will be significant impacts – some currently foreseeable and some not – from blasting and dredging millions of cubic yards of highly-contaminated sediment from the middle of a Superfund site, at which teams of scientists are attempting to determine the exact nature of the contamination, the risks it

¹ In addition to this Memorandum of Law, Plaintiffs submit the October 21, 2005 Declarations of Dr. Christopher G. Ingersoll, Dr. W. Frank Bohlen, and Megan Y. Lew, and Plaintiffs' Exhibits 1-8.

poses, how it might be cleaned up, and who should pay for it. Rather than forthrightly addressing such impacts, the September EA amendment denies their existence with little more than “back of the envelope” calculations based on arbitrary, poorly supported or, in some cases, blatantly self-serving assumptions. The agency continues to evade some of the most fundamental and obvious concerns about the overlap between the two government programs. For example, the Corps does not address the likelihood of sequestered “hotspots” of contaminants within the Bay, which may either be exposed by the dredging or dispersed (thus making characterization of the site, and clean-up of the hotspots, more difficult or impossible).

NEPA’s value springs wholly from the process it requires. Accordingly, agencies must be diligent and fair-minded in service to this process. The Corps has been neither. Since the Corps has persisted in its failure to satisfy its obligations under NEPA and the APA, we ask that the Court order the Corps to prepare NEPA-compliant documentation, pursuant to an enforceable deadline and specific instructions as to the elements of, and process for, completing its review; enjoin the Corps from proceeding with future contracting in connection with the HDP, until such time as the Corps submits to the Court a final NEPA document that receives approval from the Court of its compliance with NEPA; and retain jurisdiction to enforce the terms of the remedy order.²

BACKGROUND

The Newark Bay Study Area

The bottom sediments of Newark Bay contain a “toxic soup” that is highly contaminated by decades of industrial pollution, including what is believed to be the nation’s largest deposit of the extraordinarily toxic 2,3,7,8-tetrachlorodibenzo-p-dioxin (“2,3,7,8-TCDD”). Op. and Order at 2; Pls.’

² Plaintiffs emphasize that they seek to enjoin only those contracts in the NBSA that have not yet begun; Plaintiffs do not seek to enjoin all ongoing HDP work. Thus, no party with any vested contractual rights will be adversely affected by the requested relief. Moreover, any perceived harm to the port economy would be short term, as the requested injunction would only remain in place until the Corps complies with NEPA – surely not a Herculean task if the Corps puts it mind to it.

Mem. of Law in Supp. of Mot. for Summ. Jt. (“Pls.’ S.J. Br.”) at 4. In a step towards addressing this pollution threat, on February 13, 2004, EPA entered into an administrative order on consent (“AOC”) with Occidental Chemical Corporation (“Occidental”), the company responsible for 2,3,7,8-TCDD dioxin pollution, under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA,” also known as “Superfund”). Op. and Order at 2, 7-8. The AOC encompassed Newark Bay and portions of the Hackensack River, Arthur Kill, and Kill van Kull downstream (collectively the “Newark Bay Study Area” or “NBSA”). *Id.* at 7-8. In the AOC, EPA declared that contaminated sediments and biota in the NBSA “may present an imminent and substantial endangerment to public health, welfare or the environment.” *Id.* at 8.

The AOC requires Occidental, in cooperation with and under the supervision of EPA, to conduct a Remedial Investigation/Feasibility Study (“RI/FS”) of the NBSA. The RI/FS is to “determine the nature and extent of contamination . . . and to develop and evaluate remedial alternatives.” The AOC also provides that, based on the RI/FS, “EPA will select a remedy. . . [that] will meet the cleanup standards specified in CERCLA,” including “protect[ion] of human health and the environment.”³ AR 48:16145-49; *see also* Ingersoll Decl. ¶¶ 6-9.

Plaintiffs’ Lawsuit

Following entry of the AOC, Plaintiffs became increasingly concerned that the Corps’ massive HDP, which runs through the Superfund site, would interfere with the study of and possible remedies for the NBSA. After unsuccessfully prevailing on the Corps to consider these consequences of its own volition, Plaintiffs filed this action on January 21, 2005. While summary judgment briefs were pending before the Court, the Corps decided to conduct an Environmental Assessment, which was ultimately

³ Plaintiffs cite to pages in the original Administrative Record in the form “AR [Tab]:[BATES number].” (AR 1:100 would indicate BATES-stamped page no. 100, located under Tab 1.) Plaintiffs cite to pages in the Corps’ Administrative Record Documents for Remedy Phase (filed on 10/6/05, as supplemented on 10/14/05) in the form “USACE [Volume]:[BATES number].” (USACE I:12613 would indicate BATES-stamped page no. 12613, located in Volume I of the record on remedy issues.)

released in draft form, together with a draft Finding of No Significant Impact (“FONSI”), in June 2005 (“Draft EA”). USACE I:20084-20145.

The Court’s Opinion and Order

On August 5, 2005, the Court issued its Opinion and Order, in which it concluded that the Corps had failed to take a “hard look” at the possibility that the HDP will interfere with the RI/FS and at ways of avoiding such interference. Op. and Order at 3; see also id. at 49, n. 162 (“The Corps’ environmental review did *not* consider the issue of the possible impacts of dredging on sampling for an RI/FS, or methods by which those impacts could be minimized.”) (emphasis in original). As a result, the Court found that the Corps was in violation of NEPA and the APA, granted summary judgment on liability to Plaintiffs, and ordered further briefing on appropriate remedy. Id. at 5.

In its Opinion and Order, the Court explained that, to comply with NEPA in this case, the Corps: must assess the impact of its dredging on the sampling required for the RI/FS before committing to a particular method of dredging, rather than waiting until dredging interferes with that sampling and causes unrecoverable delays to the potential cleanup process. Similarly, if the Corps relies on the promise of cooperation between the EPA and the Corps to minimize the effects of dredging on the RI/FS, the Corps must give full consideration to how that cooperation will be handled before committing to a particular method of dredging, not after problems arise.

Id. at 4; see also id. at 39-40 (“[A]dditional analysis of methods of coordination [may] help mitigate the impact of dredging on the RI/FS,” including by leading to alteration of dredging methods.)

The Court found that the record contained no substantive discussion concerning the form of coordination between the Corps and EPA, nor of “how the effectiveness of that coordination will be monitored.” Id. at 55. For example, the Court noted, Plaintiffs had recommended a number of procedures to the Corps concerning coordination that NEPA required the Corps to consider, even if it was under no obligation to adopt any of them. Id. at 56, n.180. While the Court stated that it was not reaching the question of whether the HDP will in fact interfere with the RI/FS, it did note that plaintiffs had submitted substantial evidence to this effect. Id. at 51, n. 169.

Post-Opinion and Order

In light of the Opinion and Order, the Corps decided to prepare an Amendment to the Draft EA, which it released on September 30, 2005 (“Draft EA Amendment”), and which purports to address the issues identified in the Opinion and Order. See USACE II:20993-20137 In this document, the Corps again concluded that “the effects of dredging on the ability of the USEPA to achieve the RIWP study [i.e., the RI/FS] goals are determined to be insignificant and to have no material bearing on EPA’s decision-making process regarding potential remedies.” USACE II:21042.

During this mutating EA process, the Corps has not modified or suspended ongoing dredging activities in the Arthur Kill and Kill van Kull portions of the NBSA. The agency plans to expand the deepening project north into Newark Bay itself by this spring, see USACE I:20146-79, II:21128, and to continue with further stages of the project, within the NBSA, continuing through early 2013. AR 5:2356.

For its part, by the end of September, EPA had finalized its work plan for the RI/FS. USACE III:21138, et seq. The agency plans to begin Phase 1 sediment sampling pursuant to the work plan by October 24, 2005. Defs.’ Ltr. to Court of 10/19/05 at 1. EPA will conduct further sediment and biological sampling in the spring and fall of 2006, USACE I:20282, and will then continue with the remaining steps of the RI/FS (which could include further sampling) and remedy selection, likely over a period of several years, see Ingersoll Decl. ¶¶ 7-9.

STANDARD OF REVIEW

Where a court has found a federal agency defendant to be in violation of NEPA and the APA, the plaintiff may obtain injunctive relief upon a showing of “irreparable injury,” and the Court is to “consider and balance all the equities and interests presented for its determination” in deciding on the appropriate equitable remedy. Town of Huntington v. Marsh, 884 F.2d 648, 654 (2d Cir. 1989) (remanding to district court for evidentiary hearing on remedy issue). Irreparable injury need not be certain, but can be harm that is “likely and imminent . . . [and] not capable of being fully remedied by money damages.”

N.A.A.C.P. v. Town of East Haven, 70 F.3d 219, 224 (2d Cir. 1995); see also Town of Huntington, 884 F.2d at 654 (plaintiff should “establish some actual or threatened [irreparable] injury” (emphasis added)).

At the remedy phase, the Court must conduct a de novo review of all relevant evidence presented by the parties, and is not limited to review of an administrative record. See id.; NRDC. v. Callaway, 524 F.2d 79, 82 (2d Cir. 1975) (plaintiffs presented evidence of irreparable harm). The defendant may introduce environmental analyses it has conducted since the original NEPA violation, but the Court should “consider [such analyses] independently . . . , without giving the benefit of any particular doubt to the agency in light of any presumed agency expertise, or special legal authority, to resolve such matters.” City of Waltham v. United States Postal Serv., 11 F.3d 235, 240 (1st Cir. 1993) (Judge Breyer) (emphasizing need to guard against “post hoc rationalizations” by the agency). Additionally, the agency should bear the burden of demonstrating that such analyses were done “under circumstances that ensure an objective evaluation,” and “in good faith.” Metcalf v. Daley, 214 F.3d 1135, 1146 (9th Cir. 2000).

ARGUMENT

I. The Corps’ Inadequate EA Demonstrates Continued NEPA Non-Compliance.

As this Court has stated, NEPA and the APA require federal agencies to take a hard look at the possible environmental impacts, including indirect and cumulative impacts, of their activities and at alternatives that would mitigate such potential impacts. Op. and Order at 31, 41-43. If the impacts are significant, the agency must conduct an EIS or, in the case of ongoing activities like those involved here, a SEIS. Id. at 28. “Close calls should be resolved in favor of preparing a SEIS.” Id. at 29 (citing Senville v. Peters, 327 F. Supp. 2d 335, 356 (D. Vt. 2004) (citing Nat’l Audubon Soc’y v. Hoffman, 132 F.3d 7, 13 (2d Cir. 1997)). At the remedy phase, the Corps must address the potential impacts and conflicts identified by the Court in an objective, good-faith, and reasonable manner. Sierra Club v. United States Army Corps of Eng’rs, 701 F.2d 1011, 1035 (2d Cir. 1983); Senville, 327 F. Supp. 2d 335, 369-70 (D. Vt. 2005) (directing agency to produce supplemental “NEPA-compliant” documentation to address significant new information and circumstances identified by court).

To pass muster as a hard look in this case and at this stage, accordingly, Defendants must adequately examine the following: (1) most obviously, possible impacts on EPA's ability to characterize the site's risk through sampling, including whether pre-dredging samples will remain relevant after the HDP has dispersed sediments from the channels and altered flow and dispersal characteristics within the NBSA., *see, e.g.*, Op. and Order at 3, 42 n.6; (2) possible alternatives to mitigate such impacts, *id.*; 40 C.F.R. § 1508.9(b); *Senville*, 327 F. Supp. 2d at 353 (EA must consider reasonable alternatives, even if impacts are not adjudged significant and no SEIS done); (3) possible impacts on remedial options (*e.g.*, will sediment dispersal and/or redeposition as a result of the HDP complicate, prolong, or even foreclose cleanup options) and alternatives to mitigate such impacts (*e.g.*, sampling and/or monitoring or changes to dredging protocols); (4) possible impacts on other aspects of the Superfund process, such as the Corps' potential liability for exacerbating the risk and/or complicating the cleanup, and possible interference with the Natural Resources Trustees' efforts to determine and collect natural resource damages; and (5) possible impacts from other aspects of the HDP (in addition to the channel deepening), such as the deepening of berths, as well as the cumulative impacts of other actions in the NBSA, such as the dredging of channels for maintenance purposes, *see* 40 C.F.R. § 1508.8(b) (defining "cumulative" impacts).

The EA fails to take a hard look at the issues identified in the Opinion and Order, as well as in the applicable case law and regulations.⁴ Specifically, the EA (a) summarily rejects reasonable alternatives without discussion, (b) with respect to necessary coordination with EPA, offers little more than a re-packaging of the Corps' previously stated intention to confer, and (c) offers no "substantial evidence" that the Corps' efforts to mitigate the adverse effects of the deepening projects on the CERCLA process will

⁴ The June 2005 Draft EA is essentially a repackaging of the documents in the administrative record submitted to the Court. As such, it suffers from the same inadequacies identified in the Opinion and Order. Plaintiffs and other interested parties submitted to the Corps detailed public comments describing the Corps' myriad errors, omissions, misleading statements, and unsubstantiated conclusions that undermine the analysis and conclusions presented in the document. *See, e.g.*, USACE I:20293-20317, 20444-52, III:21875 (and accompanying CD-ROM) (public comments of fifteen community and environmental organizations and about 900 individual residents of New York and New Jersey).

successfully prevent any potentially significant adverse impacts. Instead of a NEPA document recognizing a problem and setting forth a responsible approach to it, the Corps now proffers muddled quantitative analyses, relying on inadequate data, misleading statistical analyses, and flawed assumptions, that simply serve to compound their error.⁵

A. Overview of the CERCLA Process.

The RI/FS for the NBSA will include: (1) a study of the distribution and concentration of dioxin and other contaminants in sediments throughout the Newark Bay Study Area; (2) evaluation of contaminant uptake by aquatic biota; (3) identification of contaminant concentrations through the food web; and (4) identification of “hot spots” for possible short-term action. Based on the data collected for RI/FS, EPA will model the fate and bioaccumulation of dioxin and other contaminants and perform ecological and human health risk assessments. AR 48:16145-49; see also Ingersoll Decl. ¶¶ 6-9, 15. Data from the RI are also used to identify the sources of the contamination, Ingersoll Decl. ¶ 13, allowing for the identification of responsible parties, and assessment of natural resource damages.⁶ Id. at ¶ 3.

For purposes adjudging impacts of the HDP, several characteristics of the extremely-complex RI/FS process particularly stand out. The success of the RI/FS – and, therefore, of any remedial efforts – depends on the collection of sufficient quantities of high quality data on environmental conditions in the NBSA to support all of these analyses. Ingersoll Decl. ¶ 15. The conduct of a RI/FS is also a dynamic, flexible, and iterative process tailored to specific circumstances of individual sites. Ingersoll Decl. ¶ 6.

⁵ One expert considered the Diamond Alkali Site, including the NBSA, to be one of the most complex Superfund Sites in the country, due to the extent and variety of contamination, number of potential sources, and continually changing conditions, Ingersoll Decl. ¶ 20, and related that the added layer of a multi-year large scale dredging project creates significant new uncertainties and potential impacts. Id.

⁶ See also USCA III:21866-67 (NOAA memorandum detailing data needs for the natural resource damages assessment (“NRDA”) of the Newark Bay Study Area). The Trustee agencies conduct a NRDA pursuant to regulations issued by the Dept. of Interior, 43 C.F.R. Part 11, and comparable state law, and seek to recover monetary damages for the lost value of natural resources at the site – above and beyond any cleanup costs – from those parties identified as responsible for the contamination. See generally Nat’l Ass’n of Mfrs. v. United States Dep’t of Interior, 134 F.3d 1095 (D.C. Cir. 1998).

B. **The EA Does Not Adequately Identify and Assess the Potential Adverse Impacts of the Harbor Deepening Projects on the CERCLA Process.** (1)

The EA asserts that the HDP will have “insignificant” effects on the RI/FS and “no material bearing” on EPA’s decisionmaking regarding potential remedies, USACE II:21042. These conclusions are unsupported and unsupportable. As an expert from the United States Geological Service has concluded and as discussed in greater detail below, the HDP will, in fact, significantly complicate the RI/FS process, and the natural resource damage assessment process, rendering the evaluation of the nature and extent of contamination less certain, making the human health and ecological risk assessments more challenging, complicating source identification and apportionment of liability, and altering remedy selection, cost, and effectiveness. Ingersoll Decl. ¶¶ 3, 5, 19.

1. **Undermining the usefulness of data collected for the RI/FS** (1a)

The RI/FS depends on extensive and accurate sampling to support evaluation of the nature and extent of contamination and assessments of human health and environmental risks. Ingersoll Decl. ¶ 15. The sediment samples are also used to identify, in the first instance, the contaminants of concern, to determine the likely sources (and thereby the responsible parties) of those contaminants, and to assist in the evaluation of natural resource damages. *See id.* at ¶¶ 3, 12-13. Any changes in sediment quality conditions that result from sediment redeposition after sampling is done could affect the interpretation of data and/or necessitate collection of additional samples to replace any data judged to be of questionable validity. *Id.* ¶ 10 (emphasis in original). Likewise, if resuspension results in increased concentrations of contaminants in the water column and/or increased exposure of biota to contaminants subsequent to water column and biological sampling, the reliability of the RI/FS may be called into question. Ingersoll Decl. ¶ 16-17. In other words, if there are significant alterations to the distribution of contaminants in the sediment, water column, or aquatic life at specific locations within the Superfund site, as a result of dredging-induced resuspension, prior samples taken in those locations may no longer be valid as an accurate representation of site conditions. This would represent a significant interference with the RI/FS

attributable to the HDP. Indeed, EPA recognizes the potential for adverse impacts from post-sampling dredging; when the Corps drafted a memo summarizing a meeting with EPA concerning the HDP, EPA's project manager for the NBSA deleted from the Corps' draft a paragraph stating that the group "discussed concerns about post-sampling dredging and its impacts to the RI/FS" and concluded that "there should be no affect[sic]/impact to the RI/FS once samples are collected and dredging begins." USACE III:21851, 21853 (¶ 7).

The EA addresses the possible impacts of dredging after sampling in a confusing and, ultimately, inadequate manner. For unknown reason, the EA never addresses the issue head-on, even asserting that cores are collected prior to dredging solely for the purpose of establishing a baseline record of current and past contamination and therefore, "by definition, the interpretation of this record will not be affected by the possible deposition of additional material [due to resuspension from dredging] after the cores are collected." USACE II:21040. See also id. at USACE II:21041 (applying same analysis to water and biota sampling for RI/FS, and to the use of sediment data for "source identification").⁷ Ultimately, however, the document does present quantitative analyses – albeit crude ones – concerning the resuspension of contaminated sediment, and associated alterations in the distribution of contaminants in Newark Bay. Though not explicitly framed as such in the EA, these analyses are relevant to potential effects on dredging that occurs after sampling – for the reasons described above – as well as of dredging that occurs before sampling.⁸

⁷ This approach simply ignores that data is put to many uses – not merely the establishment of a historical baseline – to support the entire RI/FS, which include forward-looking analyses such as the human and ecological risk assessments used to help select a remedy protective of human health and the environment. See, e.g., Ingersoll Decl. ¶ 14. For such purposes, among others, dredging that occurs after sampling can adversely impact important aspects of the RI/FS. Id. at ¶ 10.

⁸ The Draft EA Amendment explicitly considers these analyses only as relevant to the possibility that dredging before sampling takes place would interfere with aspects of the RI/FS. See, e.g., USACE II:21039 (impact of dredging prior to sediment sampling); USACE II:21028, 21040 (impact on water quality sampling); USACE II:21029, 21041 (biota sampling); USACE II:21031-21032 (risk assessment, modeling, and rate of recovery); USACE II:21032 (natural resource damage assessment).

The EA's analyses of sediment resuspension center on: (a) a comparison of the contaminant concentrations in the sediment to be dredged relative to the existing surface sediment concentrations in the Bay, and (b) the amount of resuspended sediment to be deposited in the Bay, outside the channels. The EA concludes that contaminant levels in the dredged material and the existing surface sediment in the Bay are similar, and that only a thin layer of resuspended dredged sediment will deposit outside the channels. USACE II:21019-27. If however: (1) contaminant levels in the channels are higher than the Corps asserts, (2) surface sediment contaminant levels in the flats of Newark Bay are lower than the Corps asserts, and/or (3) deposition rates for resuspended sediment are higher than the Corps asserts, the Corps' analysis would have under-estimated – potentially to a very large degree – the alterations to the distribution of contaminants within the Superfund site as a result of dredging-induced resuspension. In turn, this would undermine the Corps' assertion that there will be no significant impact to the RI/FS attributable to the re-distribution of contaminants. In fact, it proves readily apparent that the uncertainty surrounding these issues is so substantial that the Corps' estimates may have erred significantly in all three respects. In the end, the analysis in the EA is deeply flawed and does not provide a scientifically valid basis on which to quantify the effects of dredge-induced resuspension on the distribution of contaminated sediment within the Superfund site.

First, the Corps' estimates concerning contaminant levels rely on studies widely recognized as unsuitable for the uses the Corps is attempting to put them to. The "evaluation of ambient sediment quality conditions that is presented in the Draft EA may not be reliable" or even "suited for evaluating the potential effects of dredging activities on sediment quality conditions in the NBSA" because "it is based on data compiled from multiple studies that were conducted for various purposes . . . [and] [t]he Draft EA does not describe the procedures that were used to evaluate the relevance of the existing data for the types of analyses that were conducted (relative to, e.g., detection limits, analytical methods, accuracy, precision, completeness, and representativeness)." Ingersoll ¶ 11; see also USACE III:21204 (NBSA work plan stating that current data is inadequate to form broad conclusions regarding vertical

distribution). Thus, notwithstanding the authoritative tone of the EA, there remains much “uncertainty about the characteristics of sediment in areas to be dredged and in depositional areas.” *Id.* ¶ 10.

For example, to estimate contaminant levels in the deepest sediment layers throughout the NBSA, the Corps relied upon a total of only 13 samples. *Lew Decl.* ¶ 10. Moreover, these samples measured no more than one meter to one-and-a-half meters deep, *id.*— even though the Corps states that the layer of soft, silty sediments (which tend to be the most contaminated) in the voluminous “side slopes” of the channels extends *as deep as 25 feet*. USACE II:21020.⁹

Second, the Corps applied statistical techniques that serve only to further undermine the data’s usefulness. Specifically, the Corps relies on data and calculates averages in a manner that “could result in inaccurate conclusions regarding sediment quality conditions at specific depths below the surface of the sediments, mask sediment ‘hot spots’, and/or incorrectly characterize materials that could be resuspended from deeper strata or post-dredging.” *Ingersoll Decl.* ¶ 12. Thus, although dredging activities could interfere with the RI/FS and “result in unacceptable risks to human health and/or the environment” by “expos[ing] layers of highly contaminated, deeper sediments (*i.e.*, those associated with the side slopes and/or newly-dredged navigation channels) that had been covered by cleaner materials that were deposited more recently,” *id.* ¶ 17, the EA does nothing to assess the presence of such contaminated subsurface layers. For example, whereas the Corps, using sediment samples undifferentiated by depth, assumed the average 2,3,7,8-TCDD concentration for any area to be dredged would not exceed 50.4 ng/kg, USACE II:21026-21027, 21048, an examination of the sub-surface sediment concentrations in one discrete area of the HDP, the Port Elizabeth Channel, shows an average concentration almost three times as high, or 140.76 ng/kg, *Lew Decl.* ¶ 5. Further, when the Corps did examine sub-surface sediments specifically, it used a statistical methodology that artificially excluded many of the sub-surface samples

⁹ Additionally, notwithstanding the Corps’ description of the methodologies it used to identify data within the relevant project area, or for use in the calculation of certain averages, it actually deviated from these methodologies in several instances by including or excluding, without explanation, samples that it appears should have been treated otherwise. *Id.* ¶¶ 12-14.

with the highest dioxin concentrations, id. ¶¶ 6-9. In contrast, in some other studies of the bay, depth-stratified sediment cores have been used specifically to identify subsurface layers with particularly high contamination levels. See USACE III:21774 (“Comment 4”). In the end, the Corps’ assertion that subsurface levels of contamination tend to be similar to or lower – rather than higher – than surface levels of contamination cannot be taken seriously, at least based on the available sampling data. See USACE II:21021, 21051-62.¹⁰

Further, hotspots can exist not only as a layer of high contamination at a particular depth, but also as a cluster of highly contaminated sediment at a particular location. For example, a Corps memorandum included in Appendix C to the Draft EA Amendment actually notes that sediments in one particular area of Arthur Kill, which is about to be dredged, “contain[s] higher levels of contaminants relative to nearby areas,” such that the sediment exceeds New Jersey’s standards for land disposal of contaminated materials. USACE II:21126. Yet the analysis in the EA accounts neither for this hotspot, nor for the potential that other hotspots exist in the areas to be dredged. Cf. USACE III:21757 (RI/FS will apply statistical analysis to Phase I sediment samples specifically to look for hot spots). In fact, the Corps’ composite (i.e., non-depth-specific) cores from Arthur Kill, Kill van Kull, and Newark Bay Channels indicate a number of samples at particular locations that contain substantially higher concentrations of dioxin than other nearby samples. See, e.g., USACE III:21452 (169 ng/kg); 21557 (188 ng/kg); 21642 (157 ng/kg). Also, the RI/FS study plan notes an elevated concentration of several contaminants both near Arthur Kill, and in and around Port Newark and Port Elizabeth Channels. USACE III: 21205, 21207.

¹⁰ In fact, despite the serious flaws in the Corps’ data analysis, in at least one case even the Corps’ own graphic representation of the data flatly contradicts the EA’s generalized conclusions concerning the relative levels of surface and subsurface concentration. The left panel in the Corps’ Figure 3a, USACE II:21057, clearly indicates that in most cases, sub-surface concentrations of 2,3,7,8-TCDD in the 15-85cm range are higher than surface concentrations, often several times higher. Even a simple examination of the Corps’ raw data demonstrates that, considering all the available stratified core samples, the shallowest depths generally have the lowest concentrations. Lew Decl. ¶ 9.

The second part of the analysis – concerning the amount of sediment to be resuspended and deposited outside the channels – is just as flawed. The EA “do[es] not provide an accurate assessment of the amount of contaminated sediment likely to be resuspended by the Corps’ harbor deepening projects within the Newark Bay Study Area, the dispersal patterns of such resuspended sediment, the locations in which such resuspended sediment will deposit on the harbor floor, or the depth to which such sediment will accumulate upon deposition. . . . Dredging-induced resuspension may, in fact, alter the distribution of contaminants in the surface sediments of the bay to an extent that would complicate the Remedial Investigation/Feasibility Study (“RI/FS”) in the Newark Bay Study Area.” Bohlen Decl. ¶¶ 4, 5-11, 23-24; see also Ingersoll Decl. ¶ 10 (citing “uncertainty associated with the ultimate fate of resuspended sediments”).

The most significant problem with the Corps’ redeposition estimates is also the most basic. A calculation of an average depositional thickness – the key end-point on which the Corps’ analysis relies – simply “does not provide any useful information for present purposes”; due to the high spatial variability in deposition rates, “[t]he dredging-induced deposition rate in certain locations in the flats and over certain periods of time is likely to be significantly higher than the ‘average’ rate calculated by the Corps.” Bohlen Decl. ¶ 24; see also USACE III:21772 (“comment 1”).

Further, even the “average” depositional thickness is likely underestimated. The EA very likely underestimates the percentage of dredged sediment that will be resuspended. Id. ¶ 7. A realistic conservative assessment of the amount of dredged sediment lost to resuspension would be about three times the so-called “conservative” estimate used in the EA; even dredging experts from the Corps have endorsed such higher estimates. Id. ¶ 8. The EA also makes entirely arbitrary assumptions about the amount of resuspended sediment that will settle in the flats (or “shallows”) of the Bay (as opposed to settling back into the channels) and the area of the flats across which that sediment will be distributed. Id. ¶ 9-10. And it does not account for cumulative deposition of contaminated sediment from dredging in multiple, adjacent channel segments, nor for the difference among the channels in the total amount of

sediment to be dredged. *Id.* ¶ 11. Finally, the EA does not account for the likelihood that some portion of the materials uncovered by dredging of overlying sediment in the channel side slopes or in newly dredged channels – which may include layers of highly contaminated sediment – will be resuspended and redeposited in nearby areas even after dredging is completed.¹¹ *Ingersoll Decl.* ¶ 17.

2. **Consequences of having to re-sample or re-interpret data after dredging**

(1b)

As described above, redistribution of contamination through the resuspension of dredged sediment can affect the interpretation of sediment, water, and biological samples that had been previously taken, and may necessitate collection of additional samples to replace any data judged to be of questionable validity in order to ensure the reliability of the RI/FS. *See, e.g., Ingersoll Decl.* ¶¶ 8, 10. Since the RI/FS – and the entire CERCLA process, including remediation, the assignment of liability, and natural resource damage assessment – is dependent on the collection of sufficient quantities of high quality data on environmental conditions in the NBSA, *Ingersoll Decl.* ¶¶ 3, 12, 15, anything that compromises the validity of sampling data, including resuspension and redistribution of contaminated sediments, would have a cascading series of adverse effects.

For example, identification of contaminants of concern to human health and the environment, and the likely sources of those contaminants, would be made more difficult. *Id.* ¶ 13. Increased difficulty in identifying sources would, in turn, render more difficult the assignment of liability, and thus the recovery of the necessary costs of cleanup (or of legally binding commitments to implement a cleanup) from responsible parties. The need to re-sample would not only delay progress on the RI/FS and the

¹¹ It is significant that, after the Court described as “questionable” the Corps’ past failure to consider its own “SSFATE Study,” Op. and Order at 48, which predicted much higher levels of deposition of resuspended sediment than the Corps predicts in the EA, the Corps now dubiously finds fatal flaws in the study and again disregards it entirely, notwithstanding that its results would be of some value even if their precision can be called into question. *Bohlen Decl.* ¶¶ 20, 23. Rather, the EA relies on a 2005 study of resuspension from ongoing dredging (and a similar study from 2001) to shore up its position that the amount of resuspension will be minimal. USACE II:21015-21019. Some of the results of the 2005 study are actually quite to the contrary. *Bohlen Decl.* ¶ 12-13. Moreover, the studies, due to several design flaws, provide a seriously incomplete picture of the extent of sediment resuspension from the deepening project, rendering its conclusions unreliable. *Id.* ¶¶ 12-18.

natural resource damage assessment, id. ¶ 15, but would increase study costs and could substantially undermine the quality of the RI/FS if additional resources are not available to support such re-sampling, id. ¶ 14. In a vicious circle, any increased difficulty in identifying responsible parties would increase the difficulty of obtaining resources needed for such work. Moreover, delays in completion of the RI/FS would result in further damages to natural resources within the NBSA and could increase the cost and decrease the effectiveness of any remedy that is ultimately selected at the site. Id. ¶ 15. Resuspension of contaminated sediment in the water column and exposure of long-buried contamination could adversely affect aquatic organisms through direct toxicity, by decreasing dissolved oxygen levels in the water, and/or as a result of increased bioaccumulation of contaminants in the tissues of aquatic organisms; such effects would likely go undetected by the RI/FS, and unaddressed by whatever remedy is ultimately selected. Id. ¶¶ 16-17.

The effectiveness of a cleanup may also be diminished in other ways. If dredging resuspends and disperses through the NBSA contaminants that are currently located within concentrated hotspots (such as in the side slopes of the channels), and which therefore represent easy targets for early cleanup, AR 48:16147, it will become tougher to remove the contamination in a future remedial action after it has been diffused across the site. Also, as the Corps notes, it is likely that some of the sediment resuspended by dredging will be transported out of the NBSA. USACE II:21025 This would have the adverse impact of redistributing the contamination to an area of the harbor estuary that is not slated for remediation at all, thereby making it far more likely that this contamination would remain within the ecosystem indefinitely.

3. **Other factors that are ignored in the EA**

(1c)

The EA ignores a number of other potentially significant factors that would contribute to interference with the CERCLA process. First, the Corps fails to account for the cumulative effects of the resuspension, dispersal, and deposition of contaminated sediment from planned maintenance dredging (i.e., dredging to maintain the existing depths of the channels) within the NBSA. Bohlen Decl. ¶ 4. The Corps summarily dismisses the cumulative impacts of maintenance dredging, asserting that such dredging

is insignificant because it is small in area and in volume of dredged material, and short in duration. USACE II:21034-35, 21042. This grossly misrepresents the nature and amount of the sediment implicated in upcoming maintenance dredging along the western edge of Newark Bay and in the Port Newark Channel. The project involves 1.8 million cubic yards (cy) of material, of which 362,000 cy is in the most highly contaminated class of sediment. USACE II:20147. This latter figure is, by comparison, 100,000 cy more than in the ongoing S-KVK-2 deepening contract. AR 5:2345. Moreover, sediment data not considered by the Corps, but which are included in the NOAA database on which the EA relies, indicate the average concentrations of 2,3,7,8-TCDD in surface sediment, and especially in subsurface sediment, of Port Newark Channel are higher than concentrations in areas to be deepened, based on the available data. Lew Decl. ¶ 4. Indeed, in comments to EPA on the RI/FS work plan, the Corps notes the high levels of contamination in the Port Newark Channel and suggests the need for more intensive sampling there. USACE I:20202.

The EA also dismisses the potential for adverse impacts to the Natural Resource Trustees' efforts to assess natural resource damages, based on the same analysis applied to potential impacts on the RI/FS. However, the same potential impacts the Corps overlooked with respect to the RI/FS would also pertain to the natural resource damage assessment, since it depends heavily on data from the former study. Ingersoll Decl. ¶ 3. The Corps also gives no consideration to contaminated sediment to be dredged from the berths where vessels dock beside the channels, even though this dredging work is defined as part of the HDP, is silent as to the potential for the agency to incur CERCLA liability for dispersing long-buried contaminated sediments, cf. USACE I:20295-20317, and does not meaningfully respond to comments indicating that the Corps is in violation of its own "HTRW Guidance," compare USACE II:20994-96 with USACE I:20295-20317.

C. The EA Presents an Inadequate Coordination Plan.

(2)

The Court has held that "if the Corps relies on the promise of cooperation between the EPA and the Corps to minimize the effects of dredging on the RI/FS, the Corps must give full consideration to

how that cooperation will be handled before committing to a particular method of dredging, not after problems arise.” Op. and Order at 4. The EA does, in fact, rely on such coordination to “address the issue of potential conflicts between the [RI/FS] sampling and the [HDP].” USACE II:21012. See also *id.* at 21028, 21030 (“ongoing and planned coordination will ensure” no conflicts between HDP and water and biota sampling). However, the “coordination plan” presented in the EA, USACE II:21110-21137, although described by the Corps as “detail[ed],” USACE II:21036, provides a wholly insufficient description of the nature, content, or mechanisms of interagency coordination. The lack of details on a coordination process, including a mechanism for resolving inter-agency conflicts and agreement on data quality objectives for environmental monitoring to be done by the Corps, makes it uncertain whether the HDP and the RI/FS can be coordinated in a way that ensures timely completion of a reliable RI/FS. Ingersoll Decl. ¶ 18-19.

The plan includes no discussion, for example, of how – or whether – the Corps would use results of its own resuspension monitoring, or of EPA’s RI/FS sampling, to check the accuracy of its predictions of sediment dispersion patterns and estimates of contaminant levels, identify any unexpected conflicts with the RI/FS, and modify dredging practices to avoid or minimize any such conflicts. Bohlen Decl. ¶ 21. It also includes nothing to describe “how the effectiveness of that coordination will be monitored,” as required by the Court’s prior decision. Op. and Order at 55. *Id.* Neither does it address the prior suggestions concerning coordination made by Plaintiffs, which, as the Court has noted, the Corps is obliged to address under NEPA.¹² *Id.* at 56, n.180.

Essentially, the two-page coordination “plan” amounts to nothing more than a general statement of goals and objectives, a statement of intent to meet monthly during the HDP, and a description of the

¹² Revealingly, in every instance to date of “coordination” documented in the EA, any conflicts were resolved by changes to EPA’s sampling plans in order to accommodate the HDP, without any apparent consideration of changes to the HDP to accommodate the needs of the RI/FS. See USACE II:21012-21013, 21037; USACE I:20202-03 (letter from Corps seeking to convince EPA not to sample at all in the navigation channels); USACE II:21132-21133. Further, while the Corps claims that these changes have “little or no impact,” USACE II:21013, there is nothing in the record to substantiate that claim.

composition of the coordination “team” (which comprises about half of the document). USACE II:21135-37.¹³

D. **The EA Dismisses Alternatives in Conclusory Fashion.** (3)

The EA’s “errata sheet” includes a short, supplemental discussion of alternative measures to control resuspension and minimize potential adverse impacts. USACE II:20994-995. After listing several – though not all – of the alternatives suggested by Plaintiffs and others, the EA simply states, in conclusory fashion, that these alternatives “are either already being used, are inappropriate for navigational dredging, or would unnecessarily increase the cost and time to complete the [HDP] with only a modest, if any, decrease in the already insignificant impacts on the [RI/FS] study goals.”¹⁴

¹³ By way of contrast, shortly after the designation of the Portland Harbor Superfund Site, the Corps’ Portland District and EPA Region 10 entered into a formal “Letter of Agreement” concerning coordination of Superfund and navigational dredging activities (among other things) within the site. Pls.’ Ex. 8. The stated goals of the agreement include ensuring that all agency actions carried out within the site are consistent with CERCLA and assuring that CERCLA schedules, and not simply Corps’ schedules, are not delayed. The agreement also recognizes the Corps’ potential CERCLA liability arising from dredging activities within the Superfund Site, and sets as a goal inter-agency cooperation to avoid such liability. *Id.* at 1-2. It assigns EPA responsibility for “ensur[ing] that the impact of USACE’s Federal channel maintenance dredging responsibilities on the RI/FS are evaluated.” *Id.* at 3. Finally, it establishes a detailed and formal dispute resolution procedure, as well as a monthly schedule for coordination meetings. *Id.* at 4-5.

¹⁴ While it is unclear which of the proposed alternatives are “already being used,” it is clear than many of them certainly are not. As examples, the state Water Quality Certificates and the Corps’ contract specifications still do not require: (1) any restriction on the speed at which the bucket is lowered, *see* AR 48:16031 (¶ 18(b)) (Bohlen Decl. of 2/10/05), even though this measure is recommended for contaminated sediment sites in EPA’s 2005 Draft Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, at 6-22 (<http://www.epa.gov/superfund/resources/sediment/guidance.htm>); or (2) independent inspections of the contractors’ compliance with dredging protocols designed to minimize resuspension during dredging – even though the Corps’ contract specifications include exhaustive inspection requirements to ensure compliance with protocols to minimize adverse impacts from the ocean disposal of sediment after dredging, *see* AR 39:11966-68 (§§ 5.13-5.15), 11974-87 (§§ 7.3-7.5); and the American Association of Port Authorities recommends, in an Environmental Management Handbook co-authored by representatives of the Corps’ partner in the HDP, the Port Authority of NY & NJ, that there should be “continuous inspection of dredging activities, particularly during night work,” to ensure compliance with specified environmental precautions (http://www.aapa-ports.org/govrelations/env_mgmt_hb.htm, at EMP No. O-16). *See also* USACE I:20309-20314 (Plaintiffs’ comment letter setting forth additional alternatives).

The EA also includes sparse details on the nature of the Corps' planned resuspension monitoring. USACE II:20993. Significantly, the apparent proposed monitoring plan retains many of the same flaws at the Corps' earlier studies and, moreover, lacks any defined purpose other than to create a historical record of the effects of dredging, thus making its utility for the ongoing management of the harbor deepening project at best unclear. Bohlen Decl. ¶ 19. Finally, there is no indication of Corps coordination with EPA or the Trustees in developing the parameters of its monitoring plan, in order to ensure that useful data will be collected. See Ingersoll Decl. ¶ 14. In sum, the Corps has again taken the "trust us" approach, promoting the sufficiency of (unenumerated) measures to control resuspension but not providing a mechanism to monitor the effectiveness of such practices and, if necessary, improve upon them as work progresses. The Second Circuit has emphasized that such an analysis does not constitute a hard look at environmental impacts; rather, any "mitigation" measures intended to render potential environmental impacts "insignificant" must be supported by "substantial evidence" of their efficacy, in the form of "studies and/or procedures to monitor their effectiveness." Nat'l Audubon Soc'y, 132 F.3d at 17.¹⁵

II. The Court Should Order the Corps to Conduct a NEPA-Compliant Environmental Review, Pursuant to an Enforceable Deadline and Specific Instructions, and Should Enjoin Further Contracting Until the Court Approves Final NEPA Documentation.

In light of the Corps' continued intransigence, the imminent irreparable harm to the Superfund process arising from conflicts with the HDP, and benefits to the public interest in fulfilling the purposes of NEPA, Plaintiffs respectfully request that the Court order the relief described below.

A. The Court Should Order the Corps to Conduct an Objective, Rigorous, and Timely Analysis of the Issues Identified in the Court's Op. and Order.

¹⁵ Cf. Engineer Regulation No. 1110-2-8154, at §§ 10(a)(6)-(7), 13(e)-(f) ("effective reporting and monitoring [of water quality impacts is] essential to responsible management" of civil works projects; Corps should collect and water quality data to, *inter alia*, facilitate "real-time project regulation," "evaluate water/sediment interactions and their effects on overall water quality," "evaluate the . . . operation of each project," and "document identified opportunities, problems, and solutions") (avail. at <http://www.usace.army.mil/inet/usace-docs/eng-regs/er1110-2-8154/entire.pdf>).

The inadequacies of the EA, which was conducted *after* a finding of liability by an agency amply aware of the issues of concern, demonstrate that more specific judicial instructions are required. See, e.g., Preservation Coalition v. Fed. Transit Admin., 129 F. Supp. 2d 551, 576 (W.D.N.Y. 2000) (SEIS must address certain issues). Specifically, the Court should require the Corps to address, *inter alia*, the following in subsequent NEPA documentation: (1) the presence and effects of potential hotspots in the channels, side slopes, and adjacent areas; (2) the effect of variability in deposition rates on the potential for interference with the RI/FS; (3) existing uncertainties and consideration of them as a factor in whether to do a SEIS; (4) a meaningful treatment of cumulative impacts from maintenance dredging; (5) a reasoned comparison of specific alternatives; (6) substantial evidence to support the efficacy of mitigation measures; and (7) a detailed plan for ongoing coordination with EPA and the Trustees, including specific decisional criteria and dispute resolution mechanisms. In addition, the Court should clearly instruct the Corps that a SEIS is required where the environmental impacts *may* be significant – not where they clearly will be significant – and that its analysis must be framed in terms of this standard.¹⁶ Finally, the Court should order an enforceable schedule within which the Corps must prepare adequate NEPA documentation.¹⁷ Such a schedule would assure the maximum benefit of well-informed environmental decisionmaking not only for future dredging work, but significantly also for the ongoing work in Arthur Kill and the Kill van Kull.¹⁸

¹⁶ See Senville, 327 F. Supp. 2d at 356 (SEIS is required where there is a “substantial possibility that the action may have significant impacts, not that it clearly will have such impacts”) (emphasis added); Nat’l Audubon Soc’y, 132 F.3d at 18 (EIS required where project is “likely to have a significant environmental impact”) (emphasis added).

¹⁷ See e.g., Portland Audubon Soc’y v. Lujan, 795 F. Supp. 1489, 1510 (D. Or. 1992) (court-ordered deadline for completion of SEIS); Seattle Audubon Soc’y v. Moseley, 798 F. Supp. 1484, 1493 (W.D. Wa. 1992) (listing cases imposing court-ordered deadlines for NEPA-documentation); Preservation Coalition, 129 F. Supp. 2d at 575 (SEIS must be conducted “with all deliberate speed”).

¹⁸ Plaintiffs continue to maintain that a SEIS is required to address the HDP’s impacts on the RI/FS process. While the Second Circuit has held that remand is the appropriate remedy where the agency’s review is “incomplete,” Nat’l Audubon Soc’y, 132 F.3d at 15, certain circumstances justify a Court-ordered EIS, including where the agency repeatedly performs inadequate EAs and the proper

B. The Court Should Enjoin the Corps from Further HDP Contracting Until It Approves the Agency's Final NEPA Documentation.

The next contract slated to be awarded, S-NB-1, would be for work in the middle section of Newark Bay, and would involve the largest volume of the most contaminated class of sediment of any HDP contract area within the NBSA. AR 3:2345. The start of that work would introduce resuspended sediment from the navigational channels to areas of Newark Bay that the resuspension from the current dredging in Arthur Kill and Kill Van Kull Channels does not affect. Bohlen Decl. ¶ 22. Work in that contract area would also occur concurrently with EPA's second phase of sediment and biological sampling. USACE I:20282. Presently, the Corps remains free to proceed with this contract – or any others within the NBSA – on its own desired schedule, regardless of whether it has first complied with NEPA.¹⁹ This Court should enjoin the Corps from doing so, in order to prevent irreparable harm to the Superfund process in Newark Bay, and to fulfill the paramount objective of the statute – to infuse environmental considerations into agency decisionmaking before the agency takes action.

1. Defendants' activities cause irreparable harm that can only be redressed by a prohibitory injunction.

In addition to the NEPA violation this Court has found, the HDP poses “some actual or threatened injury to the physical, chemical, and biological balance at” the Newark Bay Study Area. Town

implementation of a related federal statute is at stake. See Middle Rio Grande Conservancy Dist. v. Norton, 294 F.3d 1220, 1227(10th Cir. 2002) (court ordered EIS where delayed, inadequate compliance with NEPA and the ESA imperiled species and there was record evidence of environmental impacts). In this case, the Corps' repeated failure to seriously consider the impacts of the HDP and the record evidence of a substantial potential for interference with the study and remediation of Newark Bay, see supra at Part I, warrant a judicially-mandated SEIS. See also Preservation Coalition, 129 F. Supp. 2d at 572 (directing agency to perform a SEIS to address newly discovered archeological site); Nat'l Parks & Conservation Ass'n, 241 F.3d at 732 (appropriate remedy for agency's failure to take a hard look and quantify uncertain impacts was a court-mandated EIS); Sierra Club v. Bosworth, 352 F. Supp. 2d 909, 925 (D. Minn. 2005) (failure to take a hard look “favors the necessity of preparing an EIS”).

¹⁹ While the Corps previously informed the Court of its intent to finish its NEPA evaluation prior to awarding the contract for the next segment of the HDP, Defs.' Ltr. to Court of 8/26/05 at 2, the agency has already deviated substantially from the NEPA compliance schedule it set forth to the Court, and so cannot be deemed to have committed, in any binding way, to delay awarding the contract until after agency fulfills all NEPA responsibilities.

of Huntington, 884 F.2d at 653 (internal quotations omitted). Absent an injunction, the HDP will spread contaminated sediment and interfere with the RI/FS process, resulting in prolonged exposure of natural and human resources to toxic chemicals. This injury – prolonged (and potentially intensified) exposure of humans, fish, and biota to biomagnifying, persistent, and bioconcentrating toxic chemicals, AR 48:16015 (Livingston Decl. ¶ 11); Ingersoll Decl. ¶¶ 14-17, 20 – is one that “by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, *i.e.*, irreparable.” Town of Huntington, 884 F.2d at 652 (quoting Amoco Prod. Co. v. Village of Gambell, 480 U.S. 531, 545 (1987)). See also NRDC v. Callaway, 524 F.2d at 82 (granting injunction in dredging case).

Although the analysis in the EA is mired with uncertainty, *see supra* Part I.B.1, it is certain that the “HDP significantly complicates the RI/FS process,” Ingersoll Decl. ¶ 20, presenting serious threats to the “timely completion of a reliable and cost-effective RI/FS,” *id.* ¶ 5, the NRDA, and the identification of contaminant sources and responsible parties, *see id.* ¶¶ 3, 13. “Any such delays will result in further damages to natural resources within the NBSA and could, in turn, influence the cost and effectiveness of any remedy that is ultimately selected at the site.”²⁰ *Id.* ¶ 15. See also Bohlen Decl. ¶ 22 (any harms from HDP are “cumulative over time”). An injunction is both necessary and appropriate in this case to redress that harm.

2. An injunction, to be lifted only upon Court approval of final NEPA documentation, is necessary to ensure the purpose of NEPA is fulfilled.

NEPA requirements are not procedural “rituals,” NRDC v. Callaway, 524 F.2d at 91-92; rather, compliance with NEPA protects important public interests. At stake is “[t]he injury of an increased risk of harm due to an agency’s uninformed decision.” Comm. to Save the Rio Hondo v. Lucero, 102 F.3d

²⁰ Further, “NEPA’s statutory purpose is to ensure that federal actions occur only after the decisionmakers have considered fully the environmental consequences of their actions. Regardless of the actual physical harm to the environment that may occur as a result, when an agency embarks on significant activity without adequately considering its environmental consequences, the harm that NEPA intends to prevent has been suffered.” United States v. 27.09 Acres of Land, 760 F. Supp. 345, 354-5 (S.D.N.Y. 1991) (internal quotations omitted).

445, 448-49 (10th Cir. 1996). See Davis v. Mineta, 302 F.3d 1104, 1114 (10th Cir. 2002) (“Congress has presumptively determined that the failure to comply with NEPA has detrimental consequences for the environment.”); Nat’l Parks & Conservation Ass’n, 241 F.3d at 733 (unknown risks from environmental impacts required a SEIS even though Parks Service proposed a “research and monitoring program ‘to fill information needs, and understand the effects of vessel traffic,’” as this manner of proceeding “has the [NEPA] process exactly backwards.”). Preventing uninformed, environmentally significant decisions and requiring agencies to follow the law in the manner and time required by law benefits the public interest and therefore weigh heavily in plaintiffs’ favor in the balance of the equities. See Town of Huntington, 884 F.2d at 654 (imperative of “expeditious[]” compliance with NEPA must be considered in the balance of “all the equities and interested presented”). An injunction barring further contract awards would force the Corps to “infuse into the ongoing” HDP the “environmental goals set out in NEPA.” Marsh v. Oregon Natural Res. Council, 490 U.S. 360, 374 n.14 (1989) (internal quotations omitted). See Sierra Club v. United States Army Corps of Eng’rs, 701 F.2d 1011, 1016, 1049 (2d Cir. 1983)(upholding injunction of “further construction” until the agency issued a SEIS); Senville, 327 F. Supp. 2d at 370 (enjoining “construction and/or ground-disturbing work” until agency issued SEIS or Supplemental EA); Ross v. Fed. Highway Admin., 162 F.3d 1046, 1054 (10th Cir. 1998) (listing cases enjoining projects until [S]EIS was completed); Sierra Club v. Mason, 351 F. Supp. 419, 427, 429 (D. Conn. 1972) (enjoining a harbor dredging project because off-shore dumping of spoil posed “a substantial risk to the environment” and core samples of the harbor channel revealed toxic chemicals but were not analyzed “to determine how this matter is chemically organized” and “whether these toxic substances occur in discrete locations which might permit them to be buried under less polluted material at the dump site.”) Since “there exists a reasonable possibility that adequate consideration of alternatives might disclose some realistic course of action with less risk of damage,” id. at 427; see also Op. and Order at 39-40, the Court should enjoin the award of any further contracts for the HDP until the Corps complies with NEPA.

Moreover, the Court should order that such an injunction will remain in place until the Corps satisfies the Court that it has prepared legally adequate NEPA documentation. The Court should maintain jurisdiction pending submission of a document the Corps presents as its final NEPA documentation, at which time “the district court may issue whatever order it finds to be appropriate and consistent with [its prior opinions].” Envtl. Def. Fund v. Marsh, 651 F.2d 983, 1006-7 (5th Cir. 1981). When the Corps’ NEPA documentation again “come[s] back to the courts for additional scrutiny, . . . the burden shall be on the Federal Defendants to demonstrate to the district court that they have” carried out their NEPA analyses “objectively and in good faith.” Metcalf v. Daley, 214 F.3d 1135, 1146 (9th Cir. 2000).²¹ Furthermore, in light of documents indicating that Corps’ personnel prejudged the need for a SEIS nearly a year ago, prior to taking a hard look, AR 2:263, the Court should require the Corps to demonstrate upon completion of its NEPA review that the review was conducted under conditions that would “ensure an objective evaluation free of previous taint,” to ensure the newly ordered NEPA review is not “a classic Wonderland case of first-the-verdict-then-the-trial.” Metcalf, 214 F.3d at 1146.

CONCLUSION

For the reasons set forth above, Plaintiffs urge the Court to grant the injunctive relief requested above.

²¹ Such burden-shifting is particularly appropriate here because there is evidence in the record that Corps personnel have repeatedly prejudged the issue of whether the HDP has significant adverse impacts without taking a hard look, AR 2:263; USACE I:20199, and repeatedly denied that the Superfund designation constitutes relevant new information, AR:260 (Superfund designation “has no effect on this [environmental] impact analysis”); 48:16225-26 (¶¶ 19, 21). See, e.g., Louisiana v. Lee, 758 F.2d 1081, 1085 (5th Cir. 1985) (agency’s proffered assessment is, “to some extent, . . . a *post hoc* rationalization and thus must be viewed critically.”) (citing Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402 (1971)).

Dated: New York, New York
October 23, 2005

Respectfully submitted,

s/ _____

Mitchell S. Bernard (MB-5823)

Bradford S. Sewell (BS-4496)

Lawrence M. Levine (LL-2994)

Amelia Toledo (AT-7075)

Natural Resources Defense Council

40 West 20th Street

New York, NY 10011

(212) 727-2700

Attorneys for Plaintiffs

Lisa F. Garcia (LG-8889)

Rutgers Environmental Law Clinic

School of Law-Newark

Center for Law and Justice

123 Washington Street

Newark, New Jersey 07102-3094

(973) 353-5695

Attorney for Plaintiffs Raritan Baykeeper, Inc.
and Andrew Willner

CERTIFICATE OF SERVICE

I, Mitchell S. Bernard, hereby certify that on October 23, 2005, I electronically filed the foregoing Plaintiffs' Memorandum Of Law In Support of Plaintiffs' Request for Injunctive Relief, declarations of W. Frank Bohlen, Christopher G. Ingersoll, and Megan Y. Lew, and Plaintiffs' Exhibits 1-8 with the Clerk of Court using the CM/ECF system, providing notification to counsel of record registered with the system and caused true copies of the foregoing to be served by first-class mail upon the following:

Michael H. Payne, Esq.
Starfield & Payne, PC
220 Commerce Dr. Ste 250
Ft. Washington, PA 19034

Robert C. Clyne, Esq.
Daniel J. McInerney, Esq.
Hill Rivkins & Hayden, LLP
45 Broadway, Ste 1500 New York. NY 10006

Mark M. Jaffe, Esq.
Hill, Betts & Nash LLP
One World Financial Center
200 Liberty Street, 26th Fl.
New York. NY 10281

Dated: New York, New York
October 23, 2005

s/ _____
Mitchell S. Bernard

RESPONSE TO COMMENTS

Natural Resources Defense Council – Letter dated November 11, 2005

Comment: *“The EA Does Not Adequately Identify and Assess the Potential Adverse Impacts of the Harbor Deepening Projects on the CERCLA Process, Undermining the usefulness of data collected for the RI/FS”*

USACE response: USACE does not concur. The purpose of the September Amendment (Volume II) to the June Draft EA (Volume I) (collectively known as the EA) was to provide an analysis of the potential effects of the navigational dredging on the ability of the U.S. Environmental Protection Agency (USEPA) to meet the goals of its Remedial Investigation and Feasibility Study (RI/FS) for the Newark Bay Study Area (NBSA). The EA describes the goals of the RI/FS, and discusses the specific components of the RI/FS Phase I data collection efforts: (1) sediment sampling; (2) a bathymetry survey; and (3) biologically active zone (“BAZ”) studies. The analyses in the EA “focus primarily on the potential effects of ongoing and planned navigational dredging on [RI/FS] sediment samples” but the potential effects on bathymetry and BAZ studies are also analyzed. The EA further explains that potential effects on later phases and components of the RI/FS, including water and biota sampling, the selection of a remedy, and the natural resources damage assessment are also analyzed, even though those phases have neither been designed nor scheduled.

With respect to Phase I sediment sampling, the EA analyzes “the extent to which dredging may affect the utility of samples collected pursuant to the RI/FS both before and after dredging,” and considers separately the effects on sediment samples taken from the navigational channels and from areas adjacent to the channels.

The EA notes that USEPA is taking sediments samples from within the navigational channels because “samples of surface sediments collected in these areas may provide a ready source of recently settled material which can aid in estimating current food web exposure as well as characterizing current sources of contaminants to the NBSA.” The EA concludes that the HDP will have no significant effects on Phase I sediment samples taken from the navigational channels themselves, as those samples will all be taken prior to dredging:

“The [sediment] cores that are collected [in the navigational channels] prior to the dredging considered in this DEA will provide a record that includes material deposited since the previous dredging event, in some combination with material left after the last dredging event (the dredging residual). Whether or not these sediments are subsequently dredged is immaterial to the interpretation of [that] core data. Furthermore, the removal of channel sediments post-sampling will not affect the utility of the surface samples to the RI/FS. To the extent that there is a need for further evaluation of contamination in newly deposited material, future sampling can be conducted in other areas, for example in the subtidal flats or in other areas that were historically deepened by are now not actively maintained.”

The EA continues by pointing out that the subsurface portions of the sediment cores from the channels are unlikely to add much value to the evaluation of historical deposition of contaminated sediments in the Bay (which is one goal of the RI/FS) because much of the subsurface sediments in the channels are likely to be pre-industrial-aged, non-contaminated material. Indeed, the RIWP itself states “the informational value” of the subsurface sediments from the cores in the navigational channels “is expected to be relatively low.” Thus, to evaluate the historical deposition of contaminated subsurface sediments, USEPA will “focus on data collected in the flats (28 samples in the NBSA), where the subsurface layers that provide the historical record is much less likely to be disturbed by dredging. Therefore, the dredging of the channels will not significantly affect USEPA’s ability to collect historical data.”

Phase I sediment samples collected from areas adjacent to the navigational channels and/or from the subtidal flats “will provide several types of information including current exposure levels for ecological and human health risk assessment, historical trends in exposure levels to aid in estimating the rate of natural recovery, and spatial gradients in surface sediment concentrations to aid in determining the sources of contaminants” to the Study Area. Both surface and subsurface portions of such samples are important to those evaluations. The EA recognizes that dredging may indirectly affect the interpretation of the data from these sediment cores by causing contaminated sediments from the channels to be resuspended and deposited onto the sediment surface in areas where such cores will be taken. To determine the extent of and evaluate those indirect effects, USACE conducted a detailed quantitative analysis of (1) the amount and spatial extent of sediments that are resuspended from the channels by dredging, (2) the concentrations of contaminants on those resuspended sediments, and (3) the resulting effect on the chemical analyses to be performed on the Phase I sediment cores taken from the adjacent areas. USACE determined the amount and spatial extent of resuspended sediments from the channels by using the most recent site-specific resuspension studies available, e.g., the 2001 and 2005 Total Suspended Solids (“TSS”) studies. USACE concluded that while dredging causes “plumes” of resuspended sediments, such plumes are generally “localized to within 250 ft [to 350ft] downstream of the dredge and were limited to the channel. Thus, the data indicate that the effects of dredging on suspended sediments dynamics, especially in the flats adjacent to the channels, are minimal, both temporally and spatially.”

To determine the contaminant concentrations on the resuspended sediments, USACE used “all available sediment data collected within the [NBSA] since 1990.” Comments indicate that concentrations of dioxin are highly elevated in subsurface sediments outside of the channels, and therefore channel widening may result in the resuspension of deeply buried, highly contaminated sediments not previously contained within the channel. USACE investigated this issue *directly* in several analyses. First, contaminant concentrations in surface sediments of Newark Bay were compared with concentrations in buried sediments. “The average concentrations of each of the compounds analyzed here were found not to change significantly with depth,” with few exceptions. Further, “in an extension of this analysis, contaminant concentrations in each surface slice (0 – 0.15 m) were compared with subsurface concentrations measured in the same core. Values are generally scattered around the 1-to-1 line or fall below it, indicating that concentrations at the surface are similar to or higher than those in deeper sediments.” The one exception was 2,3,7,8-TCDD, for which concentrations in segments lying at depths between 0.15

and 0.85 m within the sediment bed were often found to be higher than concentrations at the surface. The EA concludes, however, that the impact of the elevated subsurface concentrations on the average concentration in dredge material is likely to be minimal since the differences were generally less than a factor of two, and since 2,3,7,8-TCDD concentrations in segments deeper than 0.85 m were lower than at the surface. An additional analysis was performed using the contaminant concentrations measured in composited USACE' sediment cores collected to characterize the dredge material in the Arthur Kill, Newark Bay and Kill van Kull contract areas. These contaminant concentrations were found to be similar to or less than average concentrations measured in surface sediments in southern Newark Bay. It was concluded that resuspended dredge material from the contract areas is unlikely to increase concentrations of 2,3,7,8-TCDD in the surface sediments of the Bay. However, it was found that average concentrations of the other compounds in Arthur Kill composite cores were greater than the overall averages for the surface sediments, and for that reason, *additional studies were done* to evaluate any potential effects of the dredge material on surface sediment concentrations of those contaminants. To determine the effect of resuspended dredged material on the chemical analyses to be performed on the Phase I sediment cores taken from areas adjacent to the channels, USACE first calculated "the thickness of a sediment deposit that might be expected in the flats due to dredging." Using mathematical formulas based upon technically acceptable and well-known scientific principles, USACE calculated the average thickness of the sediment deposit to be less than .2 cm, which is two percent of the thickness of each Phase I sediment core. USACE then calculated "a weighted average of the newly deposited dredged material and the existing surface sediments... in order to simulate the concentration of each contaminant anticipated in" the six-inch Phase I sediment cores. Based on that second calculation, USACE estimated that contaminant concentrations in the Phase I sediment cores would be increased by *no more than five percent* for all chemicals due to dredging.

The EA's analysis of the HDP effects on the Phase I sediment samples from the areas adjacent to the navigational channels concludes with the following: Based on a conservative analysis (i.e., tending to overestimate), resuspended material is unlikely to result in the deposition of no more than a thin layer of material on the flats of NBSA; this layer has been estimated to be *less than 2% of the thickness* of the 6 in. core segments to be collected by USEPA. Furthermore, this redeposited dredged material is unlikely to affect contaminant concentrations in surface sediments *by no more than 5%*. Thus, the effect of the deepening work on the RI/FS cores is likely to be di minimus [sic], and therefore, insignificant in nature. Moreover, to the extent that deposition is sufficient to affect analyses, the USEPA sampling program is designed to provide information that will aid in the proper interpretation of cores collected in the study area. Discontinuities that may occur at the sediment surface due to newly deposited material may be observable in the contaminant and radiochemical analyses that will be performed. For example, the absence of Beryllium-7 or the presence of elevated Cesium-137 levels in the surface segment would be indicative of older subsurface material that has been deposited on the bed.

The fact that data were collected from multiple studies does not invalidate their use in the analyses presented in the EA. The EA analysis used sediment data included in the RI database developed by Tierra (RIWP Volume 1). Volume 1 of the RIWP contains an extensive summary of the datasets that are included in the RI database, including reference information and quality assurance/quality control (QA/QC) information. For the analyses presented in the EA, it is

considered reasonable to combine these data, since “most of the available and obtainable sediment and bioaccumulation data that have been collected to date for the Inventory Area, have been collected under major government programs/initiatives and by studies sponsored by Tierra.” (RIWP Volume 1, pages ES-6).

The EA properly notes that Phase II of the RI/FS will include additional sediment sampling, as well as water and biota sampling. These later phases of the RI/FS have neither been developed nor scheduled. Nevertheless, based on the analysis performed to determine the effects on Phase I sediment sampling, the EA concludes that the effects of dredging on Phase II sediment sampling is likely to be insignificant. Similarly, and for other reasons as well, the EA concludes that the HDP affects on Phase II water and biota sampling is also likely to be minimal.

Furthermore, the sediments in Newark Bay and Kills complex will not remain relatively stable while USEPA does their work. The assumption that the sediments will remain stable ignores the effects of confounding episodic natural and non-dredging anthropogenic events that move and redeposit sediments far in excess of any percent dredging-related material resuspension postulated. Sediments in this estuarine complex are highly dynamic and are continuously under the influence of natural physically dominating events (tides, freshwater discharges, wind-waves, and episodic meteorological forcing) and human-induced disturbances (maritime activities and dredging) that will cause sediment movement within the complex. Comparison of sediment inputs and outputs suggest that the Newark Bay system is currently in dynamic equilibrium. The average annual sediment load accumulating in Newark Bay is approximately equal to the mass routinely removed by dredging. Cessation of dredging activities will cause immediate shoaling in channels and other depositional zones and create uncertain physical changes (e.g., hydrodynamics) in a system where navigation has been maintained by dredging for decades. Furthermore, dredging has removed several million cubic meters of contaminated sediments from the Newark Bay system and placed them in confined sites or used them beneficially outside of the marine environment. Cessation of dredging will not only allow these sediments to continue to circulate and jeopardize navigation but will not protect the USEPA’s sediment sampling program from substantial and complex changes resulting from natural physical forces altering the site’s sediment character. The allegation of negative impact by continuation of dredging on the site’s overall sediment characteristics is therefore without substance.

Comment: *“The EA Does Not Adequately Identify and Assess the Potential Adverse Impacts of the Harbor Deepening Project on the CERCLA Process.”*

USACE response: USACE does not concur. Through coordination with USEPA, the need for EPA to re-sample and re-interpret data will be kept to a minimum, as will the HDP’s potential effects on remedy selection. The EA analyzed the potential of the HDP to significantly affect USEPA’s ability to select an environmental remedy, if any, for the NBSA. The EA recognizes that remedy selection relies upon the field data collected in the RI, *i.e.*, the USEPA’s sampling of sediments, BAZ, bathymetry, biota, and water. The EA also recognizes that remedy selection will likely depend in part upon the estimation of the rate of natural recovery, upon the identification of contaminant sources, and upon an evaluation of the fate, transport and bioaccumulation of contaminants in the NBSA. While USACE notes that the basis for USEPA’s remedy selections cannot be conclusively determined at this point, since the remedial

investigation is in its beginning stages, USACE nevertheless concludes that the HDP is unlikely to effect USEPA's ability to select a remedy because, as determined through the quantitative analysis, dredging will have at most an insignificant effect (less than 2% resuspension attributable to dredging, less than 5% contaminant concentration increase, attributable to dredging, based upon worst-case scenario estimates) on surface sediment contaminant concentrations in the areas adjacent to the navigational channels. Thus, ongoing and planned dredging is unlikely to significantly affect the relevant aspects of the decision-making process to:

1. select a remedy, that is, the estimation of the rate of natural recovery
2. identify contaminated sources, and the evaluation of the fate, transport, and bioaccumulation of contaminants.

Any field-based sampling plan is designed to account for unknown field conditions. There are control samples collected to detect background conditions not attributable to the study area and in this specific case the sampling plan has a radioisotope component designed to date the sediment. EPA/Tierra's sampling plan is very sophisticated and includes radiodating. Beryllium 7 is a quick decaying isotope and its presence will be used to determine if the material is *recently* settled; as in within the last 6 months. Cesium is a product of nuclear testing fallout from the 1950s and 1960s and its presences indicates the 1950 horizon and its peak concentration indicates the 1963 horizon. All samples have chemical signatures that can be correlated to each other, whether it is a high PAH and a trace of cadmium or a high of cadmium with a trace of PCB and a little DDT that help the investigators relate the samples to each other. This level of analysis and evaluation will be required for sampling in a physically and ecologically dynamic and heterogeneous area such as Newark Bay, which is also one of the largest commercial ports in the United States. The design of the sampling plan and its interpretation by the investigators intrinsically familiar with the site and its history will allow the data to be most accurately interpreted and subsequent remedies evaluated. EPA/Tierra are best suited to interpret this data with coordination from the Corps regarding dredging history. With this level of sophistication built into their sampling plan, USEPA will not have to resample or re-interpret data. Also, one of the major goals of the sampling effort is located the 1940 horizon to determine what impact, if any, the Diamond Alkali Superfund site has had on the Bay. There is more interest in the historic cores than in the material recently settled. There is significant surficial data; the sampling plan is targeting the deeper sediments to provide a history of contaminant dispersion and any other potential contaminant source areas.

A 5% change in sediment contaminant concentration will have little to no impact on data interpretation. As an example, the data reviewed for the EA as well as by other investigators (Defur, Plaintiffs exhibit #5) shows the majority of the TCDD concentration data is less than 100 parts per trillion (ppt). If the re-sedimentation increases this concentration 5% its concentration value increases to 105 ppt. 100ppt and 105 ppt in a contaminant plume are essentially the *same value*. These concentrations are the same order of magnitude. It is common practice in the environmental industry to create contaminant isopleth maps (contaminant contours) that are exponential or map out 100 ppt, then 1,000 ppt then 10,000 ppt. This represents the various and complex components in the contaminant fate and transport equations such as the solubility of the contaminant, the adherence to soil particles, adsorption, and the volume of the water passing the soil particles. These form a complex equation that follows an exponential or polynomial pattern rather than a linear pattern, *i.e.* 100 ppt. 102 ppt. etc. Concentrations of 100 ppt and 105 ppt

would fall within the same isopleths. Even if we use 1,000 ppt and add 5% showing an increase in concentration of 1,050 ppt., these values would fall within the same isopleths (contaminant contour). The order of magnitude isopleths, when mapped, provides concentric circles or ovals indicating a bulls eye type of target, or “hot spot”, that indicates the source area of the contaminant plume or the center of a fast moving free plume (*i.e.* MTBE in groundwater). There is no value in re-analyzing contaminant concentration data that fall within 5 % of each other.

Comment: *“The EA Does Not Adequately Identify and Assess the Potential Adverse Cumulative Impacts of the Harbor Deepening Projects on the CERCLA Process.”*

USACE response: USACE does not concur. In addition to analyzing the HDP’s direct potential effects on the RI/FS, the EA also analyzes the cumulative effects on the RI/FS of the USACE’ separately funded and authorized operations and federal maintenance projects (“O&M projects”), and permit actions pursuant to Section 404 of the CWA, 33 U.S.C § 1344, and Section 10 of the Rivers and Harbors Act, 33 U.S.C. § 403 (“permit actions”). The EA notes that there are only three Phase I sediment sample locations in areas planned for potential O&M projects or permit actions in the near future. However, those Phase I sediment samples will be taken before these projects will commence in March 2006. Thus, the EA concludes, those projects will have no effect on the RI/FS Phase I sediment samples. The EA also notes that the future phases of sampling under the RI/FS will be coordinated with the USACE’ O&M projects and permit actions, which require separate and distinct NEPA review and compliance, to “ensure that neither agency’s mission is significantly impacted.”

The EA recognizes that future permit actions may have an effect on the future phases of the RI/FS, which again have neither been proposed nor accepted by USEPA. “These permits, on an annual basis, generally reflect work required adjacent to the [navigational] channels to maintain commercial activities and allow facilities to accommodate vessels received. The permitted work typically represents maintenance around pier areas with limited dredging in terms of volume, area, and duration. The work includes but is not limited to dredging, pier rehabilitation, pier maintenance, rehabilitation of wave breaks, bridge abutment rehabilitation, and wharf reinforcements.” The EA concludes, however, “the cumulative effects of these actions on the RIWP study goals are likely to be insignificant, since these activities are small in area and volume of dredged material and are short in duration, in addition to the AK 40/41 and the HDP. Coordination between the USACE and USEPA is currently underway and is planned to continue for the duration of the RI/FS in order to ensure each agency’s program goals are not adversely affected.”

In terms of the potential NRDA, the EA notes that this process requires the Natural Resource Trustees (“Trustees”) to quantify the injury to Newark Bay’s natural resources, determine the source(s) of any such injury, and develop a plan for restoring the resources to their original state, all of which depend upon the collection and analysis of field data from the Bay. The EA notes further, however, that field studies for the NRDA have been neither designed nor scheduled, and thus the effects of dredging cannot be evaluated to any degree of certainty at this time. Nonetheless, the EA concludes that, based on quantitative analysis performed to determine the HDP’s effects, if any, on USEPA’s RI/FS, the effects on the NRDA are likely to be insignificant,

since dredging is unlikely to result in more than insignificant changes to the surface sediment contaminant concentrations. Moreover, the EA concludes by noting that coordination with the Trustees is ongoing and will be continued to ensure the utility of samples that may be collected for the NRDA, and to ensure that the effects of dredging on the NRDA process will be minimized to the greatest extent possible.

Comment: *“The EA Presents an Inadequate Coordination Plan.”*

USACE response: USACE does not concur. As discussed in the EA, a formal interagency coordination team has been established. The “Newark Bay Study Area Coordination Plan” (the “Coordination Plan”), the primary purpose of which is to “ensure that impacts on the USEPA’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.” The Coordination Plan establishes a multi-agency coordination team consisting of representatives from the USACE, USEPA, the United States Coast Guard (USCG), the Port Authority of New York and New Jersey (PANYNJ), the New Jersey Department of Environmental Protection (“NJDEP”), the New York State Department of Conservation (“NYSDEC”), the United States Fish and Wildlife Service (“FWS”), and the National Oceanic and Atmospheric Administration (“NOAA”) (the “Coordination Team”). Pursuant to the Coordination Plan, the Coordination Team will, meet at 10:00 a.m. on the second Tuesday of every month during the duration of the RI/FS to:

- (1) update each other on current and future activities in the Study Area;
- (2) share information on their respective projects in the Area; and
- (3) resolve any issues that may arise.

The Coordination Plan recognizes that monthly meetings may not be sufficient to fully coordinate the agencies’ respective projects, and therefore provides that more frequent meetings may be held, or Coordination Team members may be invited by particular agencies to attend other relevant meetings as appropriate, “such as USACE meetings with dredging contractors.” The Coordination Plan was initially developed and proposed by the USACE even before the Court ruled in the Opinion and Order that “if the Corps relies on the promise of cooperation between the USEPA and the Corps to minimize the effects of dredging on the RI/FS, the Corps must give full consideration to how that cooperation will be handled.” The Coordination Team was modeled after the overall HDP Project Delivery Team, and can be looked at as a specialized component of that broader team.

On September 21, 2005, the Coordination Plan was adopted by the “New York and New Jersey Harbor Senior Partners,” and the Coordination Plan was issued for public comment in the EA. The activities of the Coordination Team have been and will continue to be monitored by the Senior Partners. Even before the Coordination Team was formally established, the USACE and USEPA coordinated their respective projects in the Newark Bay Study Area. In late-March and early-April 2005, the USACE and USEPA shared additional detailed information on their respective projects and met to better coordinate those projects. Notably, the agencies met on April 7, 2005 to discuss sampling and modeling in the Newark Bay Study Area. Several key points were discussed during this meeting, including:

- (1) the identification of “additional resources, technical products, and coordination that could support USEPA’s Newark Bay superfund study [and] to insure that the [Army Corps’] navigation program did not impact or interfere with [EPA’s] sampling”;
- (2) the coordination of USEPA sampling in the Fall with the USACE’ dredging schedules;
- (3) the USACE’ provision of information to USEPA concerning its navigation projects, including sampling results from earlier investigations, to “further the superfund study of Newark Bay”; and
- (4) various issues related to the Draft Newark Bay Sampling Plan of USEPA’s sampling contractor, Tierra Solutions, Inc.’s (“Tierra”).

The agencies met again on April 28, 2005 to further discuss those, and other issues.

Coordination continued through the Spring and Summer of 2005. In May 2005, USEPA sought comments from the USACE and others on Tierra’s revised draft Remedial Investigation Work Plan (“RIWP”) for the Newark Bay Study Area. The USACE provided its detailed comments to USEPA on August 24, 2005. Notably, in its August 24th letter the USACE confirmed with USEPA its initial understanding that potential impacts of its ongoing maintenance and deepening projects in the Newark Bay Study Area could be avoided through coordination with USEPA. (“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.”). The August 24th letter summarizes the USACE’ preliminary analysis of the deepening projects’ impacts on each of the three types of Phase I data collection efforts by USEPA – bathymetry, BAZ, and sediment contaminant coring and analysis. The USACE concluded that the only potential adverse impact on USEPA’s Phase I sampling was on sediment samples proposed to be taken in the navigational channels currently being, or proposed to be, dredged. The USACE confirmed, however, that just prior to the Phase I sediment sampling, it would coordinate with USEPA on the precise locations of such sampling to ensure that dredging would not interfere with the sediment sampling. On August 26, 2005, the Army Corp and USEPA convened a conference call to discuss the coordination of the HDP and the RI/FS. During the call, the parties again discussed the different types of data collection that were being planned for Phase I, i.e., bathymetry, BAZ and sediment coring. Most notably, during this call the representatives of Malcolm Pirnie (“MP”), USEPA’s technical project managers for the Diamond Alkali Superfund site, concluded with USEPA’s concurrence that “none of the Phase I sampling actions would, in any significant manner, be interfered with or affected by the ongoing dredging activities of the Corps in Newark Bay”. This again confirmed the USACE’ initial understanding that its deepening projects would not affect the RI/FS in any meaningful way. The parties agreed that they would continue to meet and coordinate their efforts so as to, avoid any potential interference caused by sampling and dredging within “the same geographic region at the same time.”

On September 8, 2005, in addition to reviewing the key points of the Coordination Plan, the agencies met to:

- (1) ensure that all parties understood each others’ activities in the Study Area;

- (2) discuss whether the USACE' deepening projects would have any adverse impacts on USEPA's sampling in the Study Area and to "identify mitigation or avoidance strategies to minimize the impacts"; and
- (3) identify points of contact for sampling, dredging, and monitoring activities. (email exchanges concerning September 8th meeting).

The agencies discussed in detail their respective programs in the Study Area, the specific requirements and goals of the RIWP, and how to best to ensure that those requirements and goals were not impacted adversely by the USACE' deepening projects in the Area. The representatives of MP explained the purpose behind collecting sediment samples in the navigational channels in the Study Area. The agencies then discussed the USACE' past and future deepening projects in the navigational channels and whether those projects affected or would affect the sediment sampling that would take place in the Fall. It was agreed that a smaller working group would meet on September 13, 2005 to discuss these issues in greater detail and determine how the agencies could coordinate their respective projects to ensure the validity of the specific RIWP sediment samples to be taken from the Kill van Kull and Arthur Kill navigational channels. The smaller working group met on September 13, 2005 to discuss in greater detail the RIWP sediment sampling points in the Kill van Kull and Arthur Kill and their relationship to the deepening projects in those channels. After reviewing the RIWP and proposed sampling plan in relation to past and future USACE dredging in the Area, it was decided that four sampling points in the Kill van Kull and Arthur Kill navigational channels would be relocated to better serve the goals of the Phase I sediment sampling. The four points were moved because the original points proposed in the RIWP sampling plan had been dredged recently, thereby making it difficult to obtain a sufficiently deep and useful sediment core. The alternate sampling points that were agreed upon will enable USEPA to sample sediments in areas that had.

Comment: *"The EA Dismisses Alternatives in Conclusory Fashion."*

USACE response: USACE does not concur. The EA provides considerable analyses of alternative best management practices ("BMPs") to minimize potential impacts due to dredging. The EA notes that the HDP operates under contract-specific individual and umbrella water quality certificates ("WQCs") from the States of New York and New Jersey under section 401 of the Clean Water Act, 33 U.S.C § 1341(a)(1), which mandate the use of myriad BMPs designed to minimize the resuspension of contaminated sediments to the fullest extent practicable. The EA also notes that the USACE investigated alternative BMPs in the HDP's 1999 Final Environmental Impact Statement prior to receiving the WQCs. Nevertheless, USACE analyzed additional BMPs, in particular those used in other Superfund sites, and concluded that some of those BMPs were inappropriate for the HDP. Further, in the EA, the USACE also assessed the BMPs suggested in some of the public comments. USACE concluded that the majority of the BMPs suggested by the public "are either already being used, are inappropriate for navigational dredging, or would unnecessarily increase the cost and time to complete the [HDP] with only a modest, if any, decrease in the already insignificant affects on the [Remedial Investigation Work Plan ("RIWP")] study goals." The USACE noted, however, that consistent with its extensive environmental monitoring program, and its ongoing coordination with USEPA and the two regulating states, it would, "as appropriate, reevaluate the need of altering its dredging methods

within the Newark Bay Study Area to minimize to the fullest extent practicable any adverse affects to the RIWP study goals.”

The BMPs that will be implemented during the conduct of the subject navigation dredging operations, including complete environmental bucket closure and ascent speed of 2 feet per second or less, would ensure minimal resuspension during the bucket cycle. Additionally, the dredger is not allowed to overflow contaminated material from the barge or scow. These BMPs are fully described in the dredging projects plans and specifications in accordance with the New York and New Jersey Water Quality Certification, and are consistent with the New York/New Jersey Dredged Material Management Plan. .

Additionally, the USACE intends to develop an expanded comprehensive and multipurpose TSS Monitoring Program. At its simplest, the TSS Monitoring Program is designed to evaluate the extent of resuspension of sediments caused by dredging. Using water sampling, an optical backscatter sensor, an acoustic Doppler current profiler, and a differential global positioning system, the expanded TSS Monitoring Program will measure the extent of sediment resuspension caused by the dredge plumes. The TSS Monitoring Program will be used for the life of the HDP elements within the NBSA, and will provide, at a minimum, the data needed to refine the SSFATE modeling for the HDP and the Newark Bay Study Area as well as provide necessary feedback for reconsideration of BMP’s and adaptive management reviews to be coordinated with the States of New York and New Jersey as conducted via the formal HDP-NBSA Interagency Coordination Plan process. The TSS monitoring and SSFATE modeling results will benefit not only the HDP, but also USEPA’s RI/FS, as well as the USACE’ Newark Bay restoration studies.