

**ORIGINAL**

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

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NATURAL RESOURCES DEFENSE COUNCIL, :  
INC.; RARITAN BAYKEEPER, INC.; ANDREW :  
WILLNER; and GREENFAITH, :

Plaintiffs, :

-against- :

UNITED STATES ARMY CORPS OF :  
ENGINEERS; and COL. ANIELLO L. :  
TORTORA,<sup>1</sup> in his official capacity as Commander :  
and District Engineer, United States Army Corps :  
of Engineers, New York District, :

Defendants, :

and :

DONJON MARINE INC., and NEW YORK :  
CONTAINER TERMINAL, :

Intervenors. :  
-----X

ECF CASE

05 Civ. 762 (SAS)

**STIPULATION AND ORDER OF  
SETTLEMENT AND DISMISSAL**

USDC SDNY  
DOCUMENT  
ELECTRONICALLY FILED  
DOC #:  
DATE FILED: 10/19/07

WHEREAS, Congress has authorized the United States Army Corps of Engineers ("Army Corps" or "Corps") to deepen the navigational channels of the New York/New Jersey Harbor ("Harbor Deepening Project" or "HDP"); and

WHEREAS, the Army Corps issued environmental reviews and impact statements pursuant to the National Environmental Policy Act, ("NEPA"), 42 U.S.C. § 4321 et seq., addressing the environmental effects of the HDP, between 1986 and January 2004; and

WHEREAS, on February 13, 2004, the United States Environmental Protection

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<sup>1</sup> Colonel Aniello L. Tortora has replaced Colonel Richard J. Polo, Jr. as Commander and District Engineer, United States Army Corps of Engineers, New York District.

Agency (“USEPA”) entered into an Administrative Order on Consent (“AOC”) under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 et seq. (“CERCLA”), that ordered a Remedial Investigation/Feasibility Study (“RI/FS”) in the portion of the New York/New Jersey Harbor lying within the Newark Bay Study Area of the Diamond Alkali Superfund Site (“NBSA”); and

WHEREAS, the AOC states that “conditions in the Newark Bay Study Area may present an imminent and substantial endangerment to public health, welfare or the environment,” due to the “presence of hazardous substances in the sediment at the Newark Bay Study Area, the subsequent migration of hazardous substances within the Newark Bay Study Area, and the potential migration of all such substances outside of the boundaries of the Newark Bay Study Area”; and

WHEREAS, the AOC states that the “actions required by this Order are necessary to protect the public health or welfare or the environment, are in the public interest, . . . are consistent with CERCLA and the [National Contingency Plan, 40 C.F.R. Part 300 et seq.], . . . and will expedite remedial action and minimize litigation” concerning the NBSA; and

WHEREAS, the purpose of the RI/FS in the NBSA is to “determine the nature and extent of contamination within the Newark Bay Study Area of the Diamond Alkali Superfund Site and to develop and evaluate remedial alternatives”; and

WHEREAS, pursuant to CERCLA, and following completion of the RI/FS, USEPA intends to propose and adopt a Record of Decision (“ROD”) and to select one of the alternative remedies evaluated in the RI/FS, which remedy shall be implemented pursuant to CERCLA; and

WHEREAS, Plaintiffs commenced this action on January 21, 2005, pursuant to NEPA and the Administrative Procedure Act, 5 U.S.C. § 706 (“APA”); and

WHEREAS, in their complaint, Plaintiffs alleged that Defendants violated NEPA and the APA by failing to prepare a supplemental Environmental Impact Statement to address the potential detrimental effects of the HDP dredging upon the effort to study, contain, and remediate the risk from contaminated sediments in the NBSA that USEPA instituted with the February 2004 AOC; and

WHEREAS, on August 5, 2005, the Court issued an Opinion and Order that, inter alia, remanded the matter to Defendants for further NEPA review; and

WHEREAS, on January 6, 2006, Defendants issued a revised Environmental Assessment; and

WHEREAS, on March 8, 2006, the Court issued an Opinion and Order that considered the January 6, 2006 Environmental Assessment and, inter alia, remanded the matter to Defendants for further NEPA review; and

WHEREAS, prior to the start of the HDP, the New Jersey Department of Environmental Protection (“NJDEP”) and the New York State Department of Environmental Conservation (“NYSDEC”) each issued to the Corps “umbrella” Federal Consistency Determination/Water Quality Certificates (“FCD/WQCs”) for the HDP, which require the Corps to apply for and obtain additional contract-specific FCD/WQCs before proceeding with each contract area of the HDP; and

WHEREAS, on September 8, 2006, NJDEP issued a FCD/WQC to the Corps for the S-NB-1 contract area of the HDP, which includes certain conditions and reservations,

including a requirement to apply for and obtain a supplemental FCD/WQC before proceeding to dredge in the side slopes of the S-NB-1 contract area; and

WHEREAS, on September 22, 2006, the Corps issued an Invitation for Bids for the S-NB-1 contract area of the HDP, which defines work in the outer side slopes as an option that may be exercised at the Corps' discretion within a set period of time following award of the contract, but within which work shall not proceed absent the Corps' exercise of that option; and

WHEREAS, the Corps published a draft Environmental Assessment (the "Draft EA") on April 4, 2007, for the purpose of addressing the issues raised by the March 8, 2006 Opinion and Order, and received comments on the Draft EA; and

WHEREAS, on or about June 21, 2007, the Corps published a Final Environmental Assessment (the "Final EA") and Finding of No Significant Impact ("FONSI"), which had been signed on June 19, 2007, for the purpose of addressing the issues raised by the March 8, 2006 Opinion and Order, as well as comments received on the Draft EA; and

WHEREAS, on or about June 21, 2007, the Corps made a formal award of the contract to dredge the S-NB-1 contract area of the HDP, but has not yet exercised the option under that contract to dredge the side slopes; and

WHEREAS, following the Court's Opinion and Order of March 8, 2006, the Parties have engaged in extensive negotiations concerning a resolution of this matter; and

WHEREAS, without any admission or adjudication of fact or law, other than as stated herein, the Parties have agreed and stipulated to a resolution of the claims in the action that they consider to be a just, fair, adequate, and equitable resolution thereof, given the unique circumstances presented, and which is in the public interest and in the interests of justice; and

NOW, THEREFORE, IT IS HEREBY STIPULATED AND AGREED by and between Plaintiffs and Defendants, by and through their counsel, as follows:

I. DEFINITIONS

1. Whenever the terms set forth below are used in this Stipulation and Order, the following definitions shall apply:

a. "Complaint" shall mean the complaint filed by the Plaintiffs in this action on January 21, 2005;

b. "Day" shall mean a calendar day unless expressly stated to be a working day. In computing any period of time under this Stipulation and Order, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day;

c. "Defendants" shall mean the United States Army Corps of Engineers, and Colonel Aniello L. Tortora, in his official capacity as Commander and District Engineer, New York District;

d. "Effective Date" shall mean the date this Stipulation and Order is signed by the Court;

e. "Federal Natural Resource Trustee Agencies" shall mean the United States Fish and Wildlife Service, the National Oceanographic and Atmospheric Administration, as well as other agencies that may subsequently exercise their federal Natural Resource Trustee authority pursuant to Executive Order 12580, as amended by Executive Order 13016;

f. "Final EA" shall mean the Final Environmental Assessment published by the Defendants on or about June 21, 2007;



g. “Harbor Deepening Project” (“HDP”) shall mean the project to deepen the federal navigation channels of the New York/New Jersey Harbor to 50 feet as authorized by Congress in 2000, including the contract areas: KVK-5, S-E-1, S-NB-1, S-NB-2, S-AK-1, S-AK-2, S-AK-3, S-KVK-1, S-KVK-2, S-AN-1a, S-AN-1b, S-AN-2, S-AM-1, S-AM-2, S-PJ-3, S-BR-1, as well as any modifications to these contract areas, but shall not include maintenance dredging;

h. “Month” shall mean a calendar month, such that “one month from April 15, 2007” shall mean “May 15, 2007”;

i. “Newark Bay Study Area” (“NBSA”) shall mean the portion of the New York/New Jersey Harbor lying within the Newark Bay Study Area of the Diamond Alkali Superfund Site that is the subject of the AOC ordered by USEPA;

j. “Paragraph” shall mean a portion of this Stipulation and Order identified by an arabic numeral;

k. “Party” or “Parties” shall mean the Plaintiffs and/or Defendants;

l. “Plaintiffs” shall mean Natural Resources Defense Council, Inc., Raritan Baykeeper, Inc., Andrew Willner, and Greenfaith;

m. “Section” shall mean a portion of this Stipulation and Order identified by a roman numeral;

n. “Stipulation and Order” shall mean this document and all appendices and exhibits attached hereto; and

o. “USEPA” shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

II. DISMISSAL WITH PREJUDICE

2. This action is hereby dismissed with prejudice subject to the conditions set forth in the remainder of this Stipulation and Order.

3. In order to allow Plaintiffs a reasonable period of time to prepare an application for attorneys' fees, and notwithstanding paragraph 2, this Court shall not enter a final judgment pursuant to Rule 58(a)(1) of the Federal Rules of Civil Procedure until sixty (60) days after the Court signs this Stipulation and Order.

4. Nothing in this Stipulation and Order shall constitute an admission of liability or fault on the part of Defendants, or their agents, servants or employees, and this Stipulation and Order is entered into by the Parties for the sole purpose of compromising disputed claims and avoiding the expenses and risks of further litigation.

III. COMPLIANCE REQUIREMENTS

A. Compliance Requirements Applicable to the HDP in the NBSA

5. With respect to HDP dredging in the S-NB-1 contract area, Defendants shall comply with the following best management practices ("BMPs"):

a. conditions 2 through 14 as they appear in the September 8, 2006 FCD/WQC (attached hereto as Exhibit A); and

b. Section 2900 of specifications accompanying Invitation for Bids for Contract Area S-NB-1, sub-sections 4, 6.3.c, and 6.3.e (attached hereto as Exhibit B).

6. When applying for FCD/WQCs for any HDP contract within the NBSA subsequent to the Effective Date of this Stipulation and Order, Defendants shall inform the relevant state regulatory agency (or agencies) that they consent to the inclusion of the following

BMPs:

- a. conditions 2 through 14 as they appear in the September 8, 2006 FCD/WQC, except as provided by paragraph 7, below; and
- b. Section 2900 of specifications accompanying Invitation for Bids for Contract Area S-NB-1, sub-sections 4, 6.3.c, and 6.3.e ; except that: (i) if condition 3 from the September 8, 2006 FCD/WQC is omitted for any future contract, Defendants are not obligated to apply to such contract the requirements of Section 02900, ¶ 6.3.e of the Invitation for Bids for Contract Area S-NB-1; and (ii) if condition 4 from the September 8, 2006 FCD/WQC is omitted for any future contract, Defendants are not obligated to apply to such contract the requirements of Section 02900, ¶ 6.3.c of the Invitation for Bids for Contract Area S-NB-1.

7. When applying for WQCs for HDP contracts within the NBSA, Defendants shall not ask NJDEP to alter conditions 2 through 14 as they appear in the September 8, 2006 WQC unless: (a) such a request is accompanied by new data or information that demonstrates that a comparable level of environmental protection can be achieved without the application of one or more of those conditions, or that the level of protection is inappropriate for that area, or (b) such a request is made for the purpose of obtaining scientific data and/or information that would assist the Corps in evaluating whether a greater or equal level of environmental protection could be achieved through alternative BMPs.

8. When issuing Invitations for Bids for contract areas S-NB-2, AK-1, AK-2 and AK-3 of the HDP as defined in the Final EA, the Corps shall define work in:

- a. the side slopes of an existing channel;
- b. locations outside an existing channel into which such channel shall be



widened; and

- c. those portions of the S-NB-2 contract area that are identified as area #10 in Figure 78 of the report titled "Geomorphological/Geophysical Characterization of the Nature and Dynamics of Sedimentation and Sediment Transport in Newark Bay Focusing on the Effects Related to the Continued and Future Federal Navigation Channel Deepening and Maintenance," which is referred to in the April 4, 2007 Draft EA as "USACE 2007" (hereinafter "Geomorphological Report") (attached hereto as Exhibit C);

as one or more options that may be exercised at the Corps' discretion within a set period of time following award of the contract, but within which work shall not proceed absent the Corps' exercise of that/those option(s), and absent an area-specific amended FCD/WQC that covers that/those option area(s). These areas for which a separate contract option is required are hereinafter referred to as the "Contract Option Areas." However, if Defendants have completed the Reports described in paragraphs 14 and 15 and Appendices A and B of this Stipulation and Order prior to issuing an Invitation for Bids for contract area S-NB-2, AK-1, AK-2 or AK-3 of the HDP as defined in the Final EA, Defendants are not required to define work in the areas described in paragraph 8.a-c as separate options for that contract.

9. When applying for an FCD/WQC for contract areas S-NB-2, AK-1, AK-2 and AK-3 of the HDP as defined in the Final EA, the Corps shall notify NJDEP that it consents to the inclusion of a requirement to apply for and obtain an amended FCD/WQC before proceeding to dredge in the Contract Option Areas. However, if Defendants have completed the

Reports described in paragraphs 14 and 15 and Appendices A and B of this Stipulation and Order prior to applying for an FCD/WQC for contract area S-NB-2, AK-1, AK-2 or AK-3 of the HDP as defined in the Final EA, Defendants are not required to apply for an amended FCD/WQC before proceeding to dredge in the areas described in paragraph 8.a-c for that contract.

B. South Elizabeth Channel Silt Curtain Study and Report

10. Defendants shall, consistent with United States Army Corps of Engineers Safety and Health Regulations EM 385-1-1, and subject to any necessary approval by NJDEP, deploy a silt curtain in a portion of the South Elizabeth Channel (an element of the S-NB-2 contract area), subject to appropriate hydrodynamic conditions (i.e., at a minimum, a flow regime that is reasonably steady and is of sufficient velocity to disperse sediments), such that environmental protection, safety, and navigation are not compromised. While the Silt Curtain is deployed, Defendants shall monitor its effectiveness at limiting the transport of any dredging-induced resuspended sediment and evaluate the feasibility of its use in future HDP dredging within the NBSA.

11. Defendants shall document in a written report ("Silt Curtain Pilot Study Report") their monitoring of the silt curtain's effectiveness at reducing the transport of any dredging-induced resuspended sediment, and their assessment of the feasibility of its use for that purpose in future HDP dredging within the NBSA.

12. Defendants shall complete the final Silt Curtain Pilot Study Report within fifteen (15) months after the exercise of the side slope/channel widening option(s) within the S-NB-2 contract. Promptly upon completion, Defendants shall provide the final Silt Curtain Pilot Study Report to Plaintiffs, USEPA, NJDEP and NYSDEC, and shall publish a notice of

availability of the final Silt Curtain Pilot Study Report on its website.

13. Prior to finalizing the Silt Curtain Report, Defendants shall circulate a draft to Plaintiffs, NJDEP and NYSDEC for comment. Defendants shall consider in good faith any comments on the draft Silt Curtain Pilot Study Report that Plaintiffs, NJDEP and/or NYSDEC submit to Defendants, provided that such comments were received by Defendants within twenty-one (21) days of the commenter's receipt of the draft Silt Curtain Pilot Study Report (or within a longer period at the discretion of Defendants). Defendants shall retain ultimate discretion as to incorporation of any specific revisions proposed by the commenters into the final Silt Curtain Pilot Study Report. No later than two (2) months after completing the final Silt Curtain Pilot Study Report, Defendants shall provide a written response to any comments timely submitted by Plaintiffs on the draft Silt Curtain Pilot Study Report.

C. Pilot Project

14. Defendants shall perform a Near Field Turbidity/Total Suspended Sediments Pilot Study ("NFTTSS") Pilot Study in the "narrow channel" contract area of the S-NB-1 contract area (the "NFTTSS Pilot Study") as set forth in Appendix A.

D. Stratified Sampling

15. Defendants shall perform a Stratified Sampling Project for HDP contract areas in the NBSA subsequent to S-NB-1 ("Stratified Sampling"), as set forth in Appendix B.

IV. COORDINATION WITH OTHER AGENCIES

16. Defendants shall continue to coordinate their HDP dredging activities in the NBSA with USEPA, NJDEP, NYSDEC, and the Federal Natural Resource Trustee agencies, and shall solicit the advice of those agencies on any such activities that may have an effect upon

the effort to study, contain and remediate the risk from contaminated sediments in the NBSA. Such coordination shall be conducted through the existing, regular inter-agency meetings identified in the Newark Bay Study Area Coordination Plan, dated December 21, 2005 (attached hereto as Exhibit D). Except as expressly provided in this Stipulation and Order, nothing in this Stipulation and Order shall abrogate or enlarge the Defendants' obligations pursuant to the Newark Bay Study Area Coordination Plan.

17. Defendants shall provide members of the public an opportunity to meet with them to offer questions or comments on their inter-agency coordination pursuant to paragraph 16 on at least a quarterly basis. Such meetings shall be scheduled to occur immediately following the end of a regularly scheduled inter-agency coordination meeting held pursuant to paragraph 16, except that if no such inter-agency coordination meeting is scheduled within a given quarter, upon the request of one or more Plaintiffs, Defendants shall provide members of the public with an equivalent opportunity to meet with them to offer questions or comments, at a time mutually convenient to Plaintiffs and Defendants. Any meeting pursuant to this paragraph may be conducted in-person or by conference call. The time and date of such meetings, as well as a call-in number, shall be posted on the Corps' website, at [www.nan.usace.army.mil](http://www.nan.usace.army.mil). Defendants shall notify USEPA, NJDEP, NYSDEC, and the Federal Natural Resource Trustee agencies of the time and date of such meetings, and shall offer them the opportunity to participate. To the extent practicable, Defendants shall also provide Plaintiffs with other relevant written materials, including Memoranda for Record of any prior coordination meetings held pursuant to paragraph 16, before any meeting pursuant to this paragraph.

18. Defendants shall prepare Memoranda for Record ("MFRs") of the

coordination meetings held pursuant to paragraph 16, and shall post the MFRs, or a notice of availability, on the Corps' website, at [www.nan.usace.army.mil](http://www.nan.usace.army.mil).

19. The foregoing coordination obligations shall terminate upon completion of construction of the final HDP contract reach within the NBSA.

V. RELEASE AND COVENANT NOT TO SUE

20. Plaintiffs release and covenant not to sue or bring any action against the Defendants, the United States, or any department or agency or official thereof concerning the adequacy of the June 2007 Final EA or FONSI. Plaintiffs further release and covenant not to sue or bring any action against the Defendants, the United States, or any department or agency or official thereof, or any of the Defendants' funding partners for the HDP, for any claim that concerns any HDP contracts and/or activities and that:

a. accrued on or before the date on which Plaintiffs sign this Stipulation and Order; or

b. arises from any data or information resulting from Defendants' performance of the South Elizabeth Channel Silt Curtain Study, the NFFTSS Pilot Study, and/or Stratified Sampling required by this Stipulation and Order.

21. In the event of a future dispute regarding the HDP activities within the NBSA, the Parties shall undertake in good faith to resolve such dispute without resort to formal litigation.

VI. MODIFICATION

22. This Stipulation and Order may be modified by (a) a written stipulation signed by all Parties, or (b) the Court, pursuant to a motion on notice by any Party, for good



cause shown; provided, however, that this Stipulation and Order may not be modified to add new obligations for any Party or to accelerate any deadlines faster than the deadlines set forth above in this Stipulation and Order, except by written stipulation signed by all Parties.

23. If the modification is by written stipulation signed by all Parties, the modification will take effect upon the entry of the written stipulation by the Court.

24. Prior to bringing any motion to modify this Stipulation and Order, the Party seeking the modification shall first seek the other Parties' consent to the proposed modification.

25. If the modification is sought by motion and concerns a deadline set forth in this Stipulation and Order, the following procedures shall apply:

a. The motion shall be filed and served at least sixty (60) days before the applicable deadline; however, failure to meet that deadline shall not, standing alone, be cause to deny the motion. In the event the 60-day deadline is missed, the motion shall state the reasons why.

b. The motion shall be accompanied by a request for expedited consideration by the Court at the option of the movant, including (i) a request that the Court decide the motion no later than twenty (20) days prior to the applicable deadline; and (ii) a request for a briefing schedule that would afford the Court sufficient time to render such an expedited decision. All Parties to this Stipulation and Order shall join in any such request for expedited consideration regardless of whether they oppose the motion on the merits.

VII. RETENTION OF JURISDICTION, REMEDIES FOR BREACH, AND TERMINATION

26. Notwithstanding the dismissal of this action as set forth in paragraph 2,

this Court shall retain jurisdiction to determine, upon motion on notice by any Party, whether any other Party has materially violated the terms of this Stipulation and Order, and has not cured such violation promptly after receiving notice from the moving Party pursuant to the procedures regarding notice set forth in paragraph 27. In any motion pursuant to the terms of this paragraph and paragraph 27, the moving Party shall bear the burden of establishing a violation, and the non-moving Party shall bear the burden of establishing that any violation did not materially affect compliance with the terms and conditions of this Stipulation and Order. If this Court determines that any Party has materially violated this Stipulation and Order, and has not promptly cured such violation after receiving notice of such violation from the moving Party, this action shall be reinstated. Reinstatement of this action pursuant to this paragraph shall be the sole remedy under the Stipulation and Order, and no other remedies, including but not limited to contempt sanctions, may be requested by any Party or ordered by the Court for any alleged breach of this Stipulation and Order. If this action is reinstated, this Stipulation and Order shall be rendered null and void, all pending obligations pursuant to this Stipulation and Order are immediately suspended, and the Parties' legal claims and defenses shall be preserved in full as if the action had not previously been dismissed.

27. In the event there is a dispute over compliance with any term or provision of this Stipulation and Order, the Parties shall engage in informal dispute resolution procedures as set forth in this paragraph, prior to seeking judicial relief. The disputing Party shall notify the other Parties in writing, setting forth (a) the nature of the dispute, (b) the disputing Party's position with respect to the dispute, and (c) the information that the disputing Party is relying on to support its position. The Parties shall then meet and/or confer in good faith to attempt to

resolve the dispute. If the Parties are unable to resolve the dispute within thirty (30) days after the disputing Party has provided written notice of dispute to the other Parties, the disputing Party may file a motion before this Court under paragraph 26 of this Stipulation and Order for a determination that a Party has materially violated this Stipulation and Order and has not promptly cured such violation after receiving notice of such violation. The thirty (30) day dispute resolution period may be shortened by agreement of the Parties, or upon emergency motion by the disputing Party demonstrating by a preponderance of the evidence that the disputing Party will be irreparably injured unless the dispute resolution period is shortened. At least one (1) business day prior to bringing any such emergency motion, the disputing Party shall provide written notice of the dispute to other Parties. Any such emergency motion shall be on notice to all Parties.

28. This Court shall retain jurisdiction to hear any application for attorneys' and expert fees and/or costs. The fact that the Court retains jurisdiction over an application for fees and/or costs shall not indicate in any way that Plaintiffs are eligible for or entitled to recover any fees or costs. Defendants reserve and will assert any and all arguments and defenses in opposition to any application by Plaintiffs for fees and/or costs.

29. Defendants shall notify Plaintiffs in writing when they believe that they have completed all of their obligations pursuant to Sections III and IV of this Stipulation and Order, and that this Stipulation and Order should be terminated ("Notice of Completion"). If Plaintiffs disagree as to whether Defendants have completed all such obligations, Plaintiffs must invoke the dispute resolution procedures set forth in paragraph 27 within fifteen (15) days of receiving the Notice of Completion from Defendants. If the dispute resolution procedures cannot

resolve the dispute, Plaintiffs must file a motion pursuant to paragraph 26 alleging material noncompliance with the terms of this Stipulation and Order no later than fifteen (15) days after the conclusion of the dispute resolution period. This Stipulation and Order shall be terminated if (a) Plaintiffs do not invoke the dispute resolution procedures within fifteen (15) days after receiving the Notice of Completion from the Defendants; (b) Plaintiffs do not file a motion pursuant to paragraph 26 of this Stipulation and Order within fifteen (15) days after the conclusion of the dispute resolution period as set forth in paragraph 27; or (c) Plaintiffs file such a motion and it is denied by the Court.

VIII. ENTIRE AGREEMENT

30. This Stipulation and Order contains the entire agreement between the Parties, and no statements, representations, promises, agreements, or negotiations, oral or otherwise, between the Parties or their counsel that are not included herein shall be of any force or effect.

IX. NO CHANGE IN OTHER LEGAL REQUIREMENTS AND OBLIGATIONS

31. Nothing in this Stipulation and Order shall be interpreted as or constitute a commitment that the Defendants take action in contravention of the APA, the NEPA, or any other law or regulation, substantive or procedural.

32. Nothing in this Stipulation and Order shall be construed to require any of the Defendants to obligate or pay funds or in any other way take action in violation of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable appropriation law.

33. Nothing in this Stipulation and Order shall be construed to restrict or modify any discretion Defendants may have under law, including without limitation, NEPA, or

any other matter not addressed by this Stipulation and Order.

34. Nothing in this Stipulation and Order shall be construed to create rights in, or grant any cause of action to, any person or entity not party to this Stipulation and Order.

X. NOTICES

35. Any notices required to be served under this Stipulation and Order shall be in writing and sent by (a) electronic mail or facsimile and (b) a form of mail or other delivery that includes confirmation of delivery. All notices shall be addressed to each Party at the address specified below, or to any address a Party subsequently designates by notice to all other Parties given in accordance with this paragraph.

36. Notices submitted pursuant to this Section shall be deemed submitted upon receipt, unless otherwise provided in a modification to this Stipulation and Order or by mutual agreement of the Parties in writing.

For Raritan Baykeeper, Inc. (d/b/a NY/NJ Baykeeper) and Andrew J. Willner:

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For Natural Resources Defense Council, Inc. and GreenFaith:

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and:

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Executive Director  
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For the Defendants United States Army Corps and Col. Tortora:

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*Martin.R.Cohen@hq02.usace.army.mil*

XI. EXECUTION BY THE PARTIES

37. The undersigned representatives of each Party certify that they are authorized by the Party to consent to the entry of this Stipulation and Order. This Stipulation and Order may be executed in counterparts.

XII. EFFECTIVE DATE

38. This Stipulation and Order shall become effective upon signature by the Court.

XIII. EXHIBITS

Exhibit A: September 8, 2006 FCD/WQC

Exhibit B: Section 2900 of specifications accompanying Invitation for Bids for Contract Area S-NB-1

Exhibit C: Geomorphological/Geophysical Characterization of the Nature and Dynamics of Sedimentation and Sediment Transport in Newark Bay Focusing on the Effects Related to the Continued and Future Federal Navigation Channel Deepening and Maintenance, Figure 78

Exhibit D: Newark Bay Study Area Coordination Plan, dated December 21, 2005

XIV. APPENDICES

Appendix A: Near Field Turbidity/Total Suspended Sediments Pilot Study

Appendix B: Stratified Sampling Project

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FOR PLAINTIFFS  
NRDC and GREENFAITH:

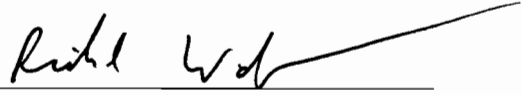
Date: Oct. 16, 2007

A handwritten signature in black ink, appearing to read "Lawrence M. Levine", written over a horizontal line.

LAWRENCE M. LEVINE  
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FOR PLAINTIFFS  
RARITAN BAYKEEPER, INC. and  
ANDREW WILLNER:

Date: Oct 17, 2007

  
\_\_\_\_\_  
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FOR DEFENDANTS:

MICHAEL J. GARCIA  
United States Attorney for the  
Southern District of New York  
Attorney for the Defendants

Date: 10/17, 2007

By: *Sarah E. Light*  
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New York, New York 10007  
Tel. 212-637-2774  
Fax. 212-637-2686

SO ORDERED:

*Shira A. Scheindlin*  
UNITED STATES DISTRICT JUDGE

*Shira A. Scheindlin, USDJ*

Date: Oct. 19, 2007



Exhibit A

State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

LISA P. JACKSON  
Commissioner

JON S. CORZINE  
Governor

Site Remediation Program  
Office of Dredging and Sediment Technology  
P.O. Box 028  
Trenton, NJ 08625  
(609) 292-1250  
FAX (609) 777-1914

September 8, 2006

Mr. Leonard Houston, Chief  
Environmental Analysis Branch  
Department of the Army  
New York District, Corps of Engineers  
Jacob K. Javits Building  
Federal Building  
New York, New York 10278-0090

RE: Federal Consistency Determination / Water Quality Certification  
File: 0000-01-1008.1 CDT 060001  
Project: Harbor Deepening Project  
S-NB-1 Contract Area

Dear Mr. Houston:

This letter is forwarded in response to your February 2, 2006 request for a Federal Consistency (FC), as required by Section 307 of the federal Coastal Zone Management Act (16 USC 1451 et seq.) and Water Quality Certification (WQC) as required by Section 401 of the federal Clean Water Act (33 USC 1251 et seq.). The request was amended by the NY District with the submission of additional information on July 13, 2006. The deadline for rendering a decision on the above referenced request for authorization was mutually extended to September 10, 2006 by the Department and the United States Army Corps of Engineers, New York District (ACOE, NY District).

The proposed project involves deepening Contract Area S-NB-1 of the Newark Bay from its present maintained depth of -45 feet below the plane of mean low water (MLW) to a construction depth of -50 feet + 2.0' safety clearance + 1.5' paid overdredge (total depth=-53.5 feet below MLW). The volume of material to be removed (including overdredge) within this contract area is approximately 2.26 MCY. Of that total: 129,040 cy consists of rock material, 1,549,000 consists of material suitable for use in remediating the Historic Area Remediation Site (HARS), and 579,000 cy unsuitable for use as remediation material at the HARS.

The 129,040 cy of rock material is to be deposited at Axel Carlson Reef artificial reef site. The 1,549,000 cy cubic yards of red-brown clay material and glacial till has been determined to be suitable for use as remediation material at the HARS by a Memorandum for the Record (MFR) signed by the USEPA and NY District on August 26, 2003 for glacial till material removed from areas of the NY/NJ Harbor. A similar MFR was signed by both agencies on January 26, 2000 for the Pleistocene red-brown clay removed from the Harbor.

Regarding the remaining 579,000 cy of non-HARS material, the NY District has requested that the federal consistency determination be generic in terms of the potential upland placement site(s) for this material. A subsequent amendment to the determination would be submitted to the Department by the Corps once the apparent low bidder for the contract has identified a fully permitted or approved upland

placement site(s). The amendment to the determination would need to be submitted by the Corps a minimum of two weeks prior to the award of the contract.

The Plans and Specifications Package dated July 2006, seeks to allow the use of the Newark Bay Confined Disposal Facility (NBCDF) for 50,000 cy of non-HARS material that may not be able to be placed upland due to delays with the selected upland placement site and/or a delay at the processing facility accepting the material. The Department agrees with the use of the NBCDF as a contingency for the placement of up to 50,000 cy of non-HARS material that cannot be processed and placed upland as it is consistent with the intent of the NBCDF and the Rules on Coastal Zone Management. However, the decision to divert any of the 50,000 cy of non-HARS material to the NBCDF will be made on a scow-by-scow basis with verbal notification by the Corps and concurrence by the Department and the Port Authority. Concurrence shall be provided within 48 hours of notification by the Corps that material is not being processed by the upland vendor in accordance with contract specifications. During that 48 hour period the Corps, the Port Authority and the Department shall work with the Corps' contractor and the upland vendor to restore production if possible. If production rates cannot be restored and/or the deficit cannot be recovered, material may be diverted on a scow-by-scow basis as necessary to make up the deficit.

The current Plans and Specification package dated July 2006 divided the contract into twelve option areas, one area being referred to as Option Area 12, Outer Slope Area consisting of the new dredging of approximately 101,400 cy of non-HARS suitable material from the side slope portion of the new federal navigation channel. This volume of material is included in the overall total of 579,000 cy of non-HARS suitable material to be removed under the contract. As you are aware, the NY District is currently in the process of completing an Environmental Assessment of the impacts of NY/NJ Harbor deepening contracts on the current Remedial Investigation/Feasibility Study of the Newark Bay Study Area being performed by the United States Environmental Protection Agency, Region 2 under CERCLA. A number of analyses currently being performed by the NY District consist of a quantitative analysis of re-suspension in the channels, flats and transition areas within the study area. This effort will utilize models to predict the effects to the RI/FS study area by describing the particle re-suspension and re-deposition of material removed during dredging as compared to background total suspended solids. In an effort to ensure that the most recent data and information is provided to the Department to evaluate the potential for additional environment impacts from this area of new dredging, the Department is requiring that the NY District submit an amendment to this determination a minimum of 90 days prior to the anticipated award date for this option to request authorization to dredge Option Area #12. Any request for an amendment to dredge this option area as part of the federal consistency determination for Contract Area S-NB-1 shall include any additional new or significant data that could change the existing environmental conditions or predicted impacts to this area. The NY District shall not award Option Area 12 until such time as an amendment to the federal consistency is issued by the Department. The Department reserves the right to incorporate conditions in addition to those specified herein based on the review of available information pursuant to 40 CFR Part 930.46.

The Rules on Coastal Zone Management (N.J.A.C. 7:7E) constitute New Jersey's enforceable policies under its federally approved Coastal Zone Management Program. Contract S-NB-1 of the Harbor Deepening Project has been reviewed under the following Rules on Coastal Zone Management: Navigation Channels (7:7E-3.7), Ports (7:7E-3.11), Submerged Infrastructure Routes (7:7E-3.12), Historic and Archaeological Resources (7:7E-3.36), Special Hazards Areas (7:7E-3.41), New Dredging (7:7E-4.2(g)), Dredged Material Disposal in Water (7:7E-4.2(h)), Dredged Material Disposal on Land

(7:7E-7.12), Marine Fish and Fisheries (7:7E-8.2) and Water Quality (7:7-8.4). Based on the summary of details of the S-NB1- contract presented in the February 2, 2006 (as amended on July 13, 2006) request for a contract specific FC/WQC, and the Department's umbrella approval of a Federal Consistency Determination/Water Quality Certificate for the entire Harbor Deepening Project dated April 12, 2004 (as amended on October 25, 2004), **I have CONDITIONALLY determined that the dredging of the S-NB-1 Contract Area is consistent with the Rules on Coastal Zone Management and New Jersey's federally approved Coastal Management Program, provided the Corps submits the requests to amend this federal consistency, as identified in Paragraph 4 and 6 of this letter. A written response from the Department on any request for an amendment to the federal consistency determination must be received by the NY District prior to proceeding with any changes to the contract, or awarding Option #12 (Outer Side Slope Area) of the contract.**

I have also reviewed this Contract for potential water quality impacts. Provided that the following conditions are met, I have determined that this project is not likely to cause a violation of New Jersey's Surface Water Quality Standards (N.J.A.C. 7:9B-1.1 et seq.). **Therefore, this determination includes the State's Water Quality Certification pursuant to Section 401 of the federal Water Pollution Control Act (33 USC 1251 et seq.) subject to the following conditions:**

1. Dredging of soft, fine-grained material is prohibited from February 1<sup>st</sup> through May 31<sup>st</sup> in Acceptance Areas A1, A2, B1 and B2 in any given year. Dredging of all other material within Acceptance Areas A1, A2, B1 and B2 is prohibited from March 31<sup>st</sup> through May 31<sup>st</sup> of any given year. This timing restriction has been imposed to protect the early life stages of winter flounder.
2. Dredging of soft, fine-grained material shall be accomplished using a closed clamshell environmental bucket. Said bucket shall be maintained in working condition as per the contract specifications at all times during the dredging operation.
3. The dredge shall be operated so as to control the rate of descent of the bucket so as to maximize the vertical cut of the clamshell bucket while not penetrating the sediment beyond the vertical dimension of the open bucket (i.e. overfilling the bucket). This will reduce the amount of free water in the dredged material, will avoid overfilling the bucket, and minimize the number of dredge bucket cycles needed to complete the dredging contract. The dredging contractor shall use appropriate software and sensors on the dredging equipment to ensure consistent compliance with this condition during the entire dredging operation. The NY District Project Engineer shall monitor the operation of the software and sensors during the inspections required by Condition #15 of this authorization. Any malfunction of the software and sensors on the dredge at any time shall be immediately reported to the NY District Project Engineer by the dredging contractor and shall be immediately repaired to working order.
4. The closed clamshell environmental bucket shall be equipped with sensors to ensure complete closure of the bucket before lifting the bucket. Said sensors shall be operational during the entire dredging operation. Where a closed clamshell environmental bucket is required, it shall be lifted slowly through the water, at a rate of 2 feet per second or less.
5. Dredged material shall be placed deliberately in the barge in order to prevent spillage of material overboard.

6. A "No barge overflow" applies to the material from this contract that is unsuitable for placement at the HARS or is to be placed at the designated artificial fish reefs.
7. All barges or scows used to transport sediment shall be of solid hull construction or be sealed with concrete.
8. The gunwales of the dredge scows shall not be rinsed or hosed during dredging except to the extent necessary to ensure the safety of workers maneuvering on the dredge scow.
9. All decant water holding scows shall be water tight and of solid hull construction.
10. Decant water from this project may only be discharged within the Newark Bay in close proximity to the dredging contract area. Discharge to another receiving waterbody requires prior approval from the Department, and may require a New Jersey Discharge Pollutant Elimination System/Discharge to Surface Water (NJDPES/DSW) permit.
11. All decant water shall be held without further physical disturbance in the decant holding scow a minimum of 24 hours after the last addition of water to the decant holding scow. Said water contained in the decant holding scow may only be discharge after this mandatory 24 hour retention time.

Should the contractor wish to reduce the required holding time, the contractor shall demonstrate that the reduced holding time is sufficient to meet the previously established total suspended solids (TSS) background value of 30 mg/L. The total suspended solids shall be determined through gravimetric analysis. No discharge shall be permitted from the decant holding scow until the results of the gravimetric analysis have confirmed that the 30 mg/L background level has been achieved. No additional water shall be added to the decant holding scow between the time of sample acquisition and discharge. Upon successful demonstration that the reduced holding time is sufficient to meet the TSS background level of 30 mg/L, the monitoring of TSS may be suspended and the demonstrated settling time shall replace the 24 hour minimum. A successful demonstration of the reduced holding time efficiency shall be determined once three consecutive TSS analyses have confirmed that the 30 mg/L action level has been achieved by the reduced holding time. Should the contractor wish to demonstrate this reduced holding time, all records including time of last addition of decant water into the scow, time of TSS sampling and the results of TSS sampling shall be submitted to the NJDEP as soon as they become available, together with a request for a reduced holding time.

12. During pumping of the decant water from the holding scow, great care shall be taken to avoid re-suspending or pumping sediment which has settled in the decant holding scow.
13. The dredging contractor shall complete and submit the attached Dewatering Form to the NY District Project Engineer on a weekly basis as part of the Quality Control Report provided to the NY District. Said Dewatering Form shall be certified by a NY District Project Engineer that they have witnessed the dewatering process during the preceding week. The NY District shall submit the completed Dewatering Form with appropriate certifications by fax to the Office of Dredging and Sediment Technology for the preceding week.
14. The NY district shall perform inspections of the dredging contract a minimum of twice per week using the attached WQC Field Inspector form. The NY District shall submit the completed inspection



forms to the NJDEP on at least a weekly basis. Note: The WQC Field Inspection form is being updated to reflect conditions specified in this authorization and will be forwarded to the District prior to the initiation of dredging under this contract.

15. REPORTING REQUIREMENTS: At the completion of this contract, the NY District shall submit the following information to the Department. This information shall be submitted within six months of contract completion.

- Start and finish date of contract
- Post-dredge hydrographic survey
- Completed "Notice of Completion of Work" attached.

Should you have any questions regarding this determination and certification, please do not hesitate to contact me at (609) 292-8838.

Sincerely,

  
Suzanne U. Dietrick, Chief

Office of Dredging and Sediment Technology

C: Michael Riley, Director, Office of Maritime Resources  
Steve Dorrlar, Port Authority of NY/NJ  
Harold Hawkins, NY District ACOE (via facsimile)

Mr. Stephen Zahn  
NY Department of Environmental Conservation  
Division of Environmental Permits, Region 2  
47-40 21<sup>st</sup> Street  
Long Island City, NY 11101-5407

## DEWATERING FORM

Week of \_\_\_\_\_ (Sunday to Saturday) (SEE NOTE BELOW)

USACE Contract: \_\_\_\_\_

Contract Reach: \_\_\_\_\_

Decant Scow Identification \_\_\_\_\_ Capacity \_\_\_\_\_ gallons/ \_\_\_\_\_ cubic yards

Volume Calculation: \_\_\_\_\_ Estimated \_\_\_\_\_ Measured (check one) (If measured, provide calculation procedure)

Dredge Scow Identification #	Date of discharge into decant scow	Time of initiation of discharge into decant scow	Time of cessation of discharge into decant scow	Rate of pump used to discharge into decant scow	Volume of Discharge into decant scow

Last addition of decant water into decant scow:

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Discharge of decant water to surface waterbody

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Volume: \_\_\_\_\_ gallons

**NOTE:** Should more than one decant barge be used during a given week, a new dewatering form should be utilized and submitted to the ACOE Field Office.

### CERTIFICATIONS:

I, \_\_\_\_\_, as Quality Control Officer for \_\_\_\_\_ (Company) for the above ACOE Dredging Contract, do hereby certify that the information provided in this document is true and accurate, and that I have personally observed the dewatering procedure recorded herein during the timeframe specified above. Signature: \_\_\_\_\_

I, \_\_\_\_\_, as ACOE Project Engineer for the above referenced contract have personally observed the dewatering procedure recorded herein during the timeframe specified above. Said procedure has complied with the conditions specified in the Federal Consistency Determination/Water Quality Certificate issued by the NJDEP for the project.

Signature: \_\_\_\_\_

# NOTICE OF COMPLETION OF DREDGING

Date: \_\_\_\_\_

New Jersey Department of Environmental Protection

Office of Dredging and Sediment Technology

P.O. Box 028

401 East State Street

Trenton, NJ 08625

Attn: NJDEP, ODST, Project Manager

FAX: (609) 777-1914

**Re: NJDEP Permit No.**

**Insert project title:** \_\_\_\_\_

**Location of Dredging:** \_\_\_\_\_

Dear Sir/Madam:

I hereby serve notice that the DREDGING allowed by the above referenced permit has been completed as of \_\_\_\_\_, 200\_\_.

The dredged material was removed via mechanical \_\_\_\_\_ or hydraulic \_\_\_\_\_ dredging (check one).

The dredged material was/is being dewatered with discharge into \_\_\_\_\_.

The actual quantity of material dredged was \_\_\_\_\_ cys. The dredged material was taken to:

1. \_\_\_\_\_ cys was taken to the Historic Area Remediation Site.
2. \_\_\_\_\_ cys used on site as per NJDEP Permit(s) # \_\_\_\_\_ (specify the type of permit(s)).
3. \_\_\_\_\_ cys was taken to \_\_\_\_\_ for beneficial reuse.
4. \_\_\_\_\_ cys was taken to \_\_\_\_\_ for disposal.
5. \_\_\_\_\_ cys was taken to \_\_\_\_\_ for beach nourishment.

\_\_\_\_\_  
**Signature of the Permittee**

\_\_\_\_\_  
**Signature of the Contractor (if any)**

\_\_\_\_\_  
**Permittee's Name (Printed)**

\_\_\_\_\_  
**Contractor's Name (Printed)**

\_\_\_\_\_  
**Name of Permitted Agency/Entity**

\_\_\_\_\_  
**Name of Company**

\_\_\_\_\_  
**Street Address**

\_\_\_\_\_  
**Street Address**

\_\_\_\_\_  
**City**

\_\_\_\_\_  
**State**

\_\_\_\_\_  
**ZIP**

\_\_\_\_\_  
**City**

\_\_\_\_\_  
**State**

\_\_\_\_\_  
**ZIP**

\_\_\_\_\_  
**Telephone**

\_\_\_\_\_  
**Telephone**

## SECTION 02900

## DREDGING AND PLACEMENT

**1. Mobilization and Demobilization.**

1.1 Mobilization shall include all costs for operations accomplished prior to commencement of actual dredging operations, such as transfer of dredges, attendant plant, and facilities, and equipment to support the project, and other incidental operations in advance of actual dredging work. Demobilization shall include the transfer of plant to its home base, cleanup of disposal and operation area. The cost of work other than mobilization and demobilization of the Contractor's dredging plant, and equipment shall not be included in this item.

**2. Site Conditions.**

## 2.1 Review of Existing Documents

2.1.1 The Contractor is required to provide mechanical equipment capable of removing material to be dredged at a rate sufficient to complete the work within the specified time period as indicated in SECTION 00800: Special Contract Requirements.

2.1.2 Bidders are invited to examine Corps of Engineers subsurface exploration logs and to decide for themselves the character of the materials. The samples are available for inspection at the New York District, Caven Point Marine Terminal, Jersey City, New Jersey. The Geophysical, subsurface exploration and tests reports are available for review at the New York District. For further information bidders should contact the New York District, Engineering Division, Civil Engineering Section, Mr. Ben Baker, at (917)-790-8379. Soil tests, sediment analyses and other reports and/or documents Survey will be available in [www.fedteds.gov](http://www.fedteds.gov).

2.1.3 Bidders are expected to examine the site of the work, including the disposal areas, and decide for themselves the site condition that may affect their operations. See Contract Clause entitled "Site Investigation and Conditions Affecting the Work". Section 00700.

## 2.2 Existing Conditions

## 2.2.1 Character of Materials.

2.2.1.1 Subsurface Explorations including soil/rock borings are provided so that potential bidders can determine the area extent and characteristics (including dredgeability) of the material to be removed. The results are shown on the maps and drawings referred to in Special Contract Requirements SECTION 00800, entitled "Contract Drawings, Maps, and Specifications". Although the results of these investigations are believed to be representative of subsurface conditions at their respective locations and for their respective vertical reaches, local variations in the subsurface materials are to be expected and, if encountered, will not be considered to constitute "materially different" site conditions within the context of Contract Clause entitled "Different Site Conditions" Section 00700.

2.2.1.2 The materials to be found above the required depth, 52 ft below MLW, include, but are not limited to:

#### Rock Material

1) SANDSTONE - Gray to red-brown, tightly cemented, well indurated, fine to coarse grained, sedimentary rock. Commonly interbedded with shale and may be slightly metamorphosed (i.e. low grade meta-quartzite) where in contact with diabase. Slightly weathered with occasional fractures.

2) SHALE - Red-brown to gray, laminated, moderately well indurated, massive (non-fissile), fine-grained, sedimentary rock. Slightly to moderately weathered with fractures that range from horizontal to near vertical. The shale can change to a low grade metamorphic (argillite or meta-siltstone) where in contact with diabase.

3) DIABASE - Gray to dark gray, very well indurated, fine to medium crystalline, igneous rock. Slightly to moderately weathered with occasional high angle fractures.

#### Non-Rock (soil) Material

4) Pleistocene SAND and GRAVEL (SM-GM) - Red-brown, dense, fine to coarse SAND and GRAVEL, little to some Silt and Clay with frequent Cobbles and Boulders. Commonly referred to as "Glacial Till".

5) Pleistocene SILT and CLAY (CL-ML) - Red-brown to gray, slightly to moderately plastic, soft to very hard SILT and CLAY, trace to some Sand and Gravel with occasional Cobbles and Boulders.

6) Holocene (Recent) SAND (SP-SM) - Gray to brown, poorly graded SAND, trace to some pea-sized Gravel, trace to little Silt and Clay.

7) Holocene (Recent) SILT and CLAY (MH-OH) - Dark gray to black, very soft SILT and CLAY, trace to some Sand and Gravel.

#### Trash and debris-Trash

8) Trash and debris-Trash, debris and other miscellaneous man-made and natural objects may be encountered during the course of the dredging. This material may be present at any location above the required depth as indicated on drawings. Man-made materials may include (but are not limited to) wood, sheet metal, glass, lumber, plastics, tires, hoses, chains, cables, and hawsers.

### 3. Dredging Equipment

#### 3.1 Dredges.

It is anticipated that a variety of dredging equipment will be necessary for the removal of soils within the project area. All material shall be removed with dredging equipment appropriate for the material encountered (i.e. clamshell, closed clamshell "environmental" bucket dredge, dipper, powershovel, etc.). The use of hopper and cutterhead dredges is prohibited.

### 3.2 Dredge and/or Scow Monitoring Equipment, Software, and Website

The dredging contractor is required, at his/her own expense, to have all scows or other vessels used to transport dredged material to designated placement locations (HARS, artificial reefs, and upland locations or other locations in the New York Bight or Lower Bay or any other open-water area as directed by COR) equipped with scow monitoring equipment and software, through a contractor (i.e. scow monitoring contractor) not owned or affiliated with the dredging company. Scow monitoring equipment must be installed and operating correctly on any scow used to transport dredged material prior to ANY dredged material being placed in the scow. All scow monitoring data collection must begin prior to ANY dredged material being placed in the scow.

The dredging contractor must provide access and reasonable assistance, to the scow monitoring contractor, at any time during the dredging contract, to complete any modifications/improvements to the scow monitoring equipment and/or software that may be required to fulfill the scow monitoring requirements associated with the dredging contract.

The following specifications are associated with and required for the scow monitoring equipment, software, and scow-monitoring website (SMW):

- A self-contained "black box" unit must be installed on all scows, and must be capable of recording on a 24-hour basis, latitude and longitude positions of the scow, through DGPS technology, and scow draft, using a water pressure sensor, at variable sampling rates ranging from one position and draft value every 6 seconds to one position and draft value every ten minutes, according to NY District requirements. Scows used for upland placement/treatment trips must include a bin-level sensor in addition to the draft and position sensors.
- Any tugs used to transport dredged material to designated locations (HARS, artificial reefs, and/or upland or other locations in the New York Bight or Lower Bay or other open-water area as directed by COR)) and all dredges used on the project must be equipped with satellite real-time tracking and messaging system maintained by the scow monitoring contractor.
- Primary Scow Monitoring systems, consisting of laptop computers with scow monitoring software, onboard all tugs used to transport dredged material to open-water placement sites, must allow data, being collected by the "black box" units on the scows being towed, to be viewed in real-time by the New York District certified Inspectors of Open Water Placement of Dredged Material (Corps Disposal Inspectors (CDIs)) and by towing vessel crew members when used for offshore placement trips. Primary Scow Monitoring system data must be automatically transmitted from all scows to the dredge for storage and additional transmission to the scow monitoring contractor's computer for posting on the scow monitoring website. Trips to upland placement/treatment sites will not require Corps Disposal Inspectors (CDIs) for scow monitoring.
- Backup Scow Monitoring system, used for open-water placement trips, consisting of laptop computers with scow monitoring software, onboard all tugs used to transport dredged material, must allow the DGPS position of the tug to be viewed on the computer screen, along with an estimated position of the scow based on the towing distance and angular offset of the scow from the course line of the tug.
- Laptop computer scow monitoring software must also include an electronic version of the Transportation and Placement Log Form (TPLF) to be completed



by the CDI during each placement trip.

- Laptop computer scow monitoring software must also include an electronic checklist (described in Section 7.5) for completion by the CDI.

- Laptop computer scow monitoring software must also include map displays with selectable scales that allow Corps Disposal Inspectors (CDI) to view the dredging site, New York Harbor area and New York Bight, HARS and reef placement sites, and designated placement grids and coordinates. The scow monitoring software must graphically display placement grids developed for the project and allow viewing of the position of the towing vessel and scow throughout the placement trip.

- Laptop computer scow monitoring software must also include links to websites that allow NOAA offshore buoy data to be viewed in real-time, along with the latest marine weather forecasts.

- Laptop computer scow monitoring software must allow real-time plotting of scow draft and speed, to be used to monitor potential scow leakage

- Laptop computer scow monitoring software must allow downloading of digital camera photos for inclusion with placement trip data.

- Laptop computer scow monitoring software must allow collection of towing vessel fathometer data for inclusion with other placement trip data.

- Laptop computer scow monitoring software must allow transmission, at the end of each placement trip, of electronic TPLFs, checklists, scow position, speed, draft data, fathometer data, and digital photos, to a website described below.

-A website shall be maintained by the scow monitoring contractor and include the following capabilities:

- Automatically assign trip numbers to scow monitoring software installed on laptop computers via wireless communication technology.

- Scow monitoring data, TPLFs, checklists, digital photos, and all other data collected by the scow monitoring equipment and software must be posted to a website accessible to NYD District personal within two hours of CDI submission of the data from the laptop computer and for each scow used for upland placement/treatment, within 24 hours of being unloaded at the upland/treatment facility.

- A dredging production database that reports the following per trip: trip number, date of trip, dredge used, tug used, scow used, trip destination, estimated scow volume, and the time taken for the following - scow loading, scow de-watering, scow transit, scow unloading, dredged material disposal from the scow, return trip from the placement site and scow idleness, as applicable. The dredging production database will also include a map of the dredging site that is updated after the completion of each trip with the location of where dredging associated with each scow-loading event occurred.

- A placement grid cell management tool that reports the following per grid cell: total scow placements, total estimated volume of dredged material in the cell resulting from scow placements, the trip numbers for the scow placement events that occurred within the cell. The placement grid cell management tool must also have the capability for the NY District to enable, disable, and set the number of maximum scow placement events within placement

grid cells.

- Submission of automatic emails, notifying NY District and contractor personnel when TPL checklist items are marked "No" for trips. These automatic emails will also be recorded on the website in a TPL checklist database that lists the electronic checklist cumulative "No" results for the duration of the project. This database must be designed so that data queries can be done by dredged material placement locations, tug used, scow used, Corps Disposal Inspectors (CDI) and date range.

- Submission of automatic emails, notifying NY District and contractor personnel of potential misplaced dredge material events and/or potentially leaking scows, based on computer analysis of placement trip data. These automatic emails will also be recorded on the website in an email alarms database, which includes the following: trip number, scow used, alarm type, date sent and project name. This database must be designed so that data queries can be done by alarm type and date range.

- Allow positions of all dredge plants and all tugs used in the project, as monitored by the satellite tracking system, to be viewed in real-time, or as soon as satellite data transmission permits. The satellite tracking system must also have the capability to send messages to tugs for the purpose of communicating with CDI when they are out of cell phone range.

- All tugs used to transport dredged material to open-water placement sites (non-upland placement/treatment locations) must be equipped to automatically record bathymetric data using a fathometer on each tug. Bathymetric data must be stored for transmission with other monitoring data. Fathometer data must be collected within the boundaries that define each placement site, as determined by NY District.

- Bathymetric plots based on tug fathometer data, viewable on the scow-monitoring website(SMW).

- Computer modeling of rock placement data from each placement trip involving scows loaded with more than 50% rock using the NY District ROCDMP model, with updates posted on the SMW. Data from each placement trip will be used as input to the model, which must be automatically run after each placement trip, with results posted on the SMW.

- Plotting of summary maps of placements made to date on the SMW.

- Capability of plotting individual or multiple placement trips at variable scales on the SMW.

- Provide a maintenance log of remote-access and on-site service visits related to hardware/software installation and/or repairs on the SMW.

Additionally, in support of the scow monitoring equipment and software, the contractor must ensure the following:

- Towing vessel fathometers must have digital data output that is compatible with scow monitoring laptop computers and software.

- Towing vessels must have fax machines capable of sending fax messages while at sea, and must be able to transmit when vessels are in the vicinity of the Ambrose Channel. The scow monitoring contractor must be provided full access to all tugs and scows used on the project, as required to service scow monitoring equipment and/or software.

- The scow monitoring software/equipment shall be programmed by scow monitoring contractor personnel for use aboard any towing, or other, vessels used to transport dredged material.
  - The contractor shall ensure that the scow monitoring equipment is operational 24 hours each day, at all times any dredged material is being loaded at dredging sites, when any dredged material is contained within any scow, when any dredged material is transported from dredging sites, while any scows are returning to dredging sites after ocean placement, and when any scow is returning from upland facilities.
  - The contractor is required to provide the scow monitoring contractor with a scow loading table, or ullage table, for each scow used to transport dredged material to upland facilities and ocean placement locations, that includes the range of possible scow drafts associated with the range of possible mass of material contained in each scow.
  - The dredging contractor must provide the scow monitoring contractor with all plans and specs, drawings, etc., associated with the project at least 14 days prior to the start of dredging.
  - The dredging contractor must provide the scow monitoring contractor access to all scow monitoring equipment at any time during the dredging project.
  - The dredging contractor must provide transportation from the shore to any vessel equipped with scow monitoring equipment, to the scow monitoring contractor. Transportation must be provided in a timely manner such that the requirements associated with scow monitoring continue without interruption.
- Primary Scow Monitoring system data must be automatically transmitted from upland scows to the dredge for storage and additional transmission to the scow monitoring contractor's computer for posting on the scow monitoring website.
- Scows used on this project must not be used for any other dredging project unless written approval is obtained from the COR.
  - Continuous monitoring by equipment, must be maintained from the time a scow is ready to be transported to any placement site, until placement is complete, regardless of the amount of time required.
  - Scows loaded with any quantity of dredged material transported from the dredging site, must have all monitoring equipment functioning and recording data.
  - The same towing vessel used to transport scows to a placement locations must transport scows from the dredging area; rendezvousing with towing vessels outside of the dredging contract area must not occur.

- Although the Corps Disposal Inspectors (CDI) will observe the operation of the scow monitoring equipment and software associated with ocean placement trips, operation and maintenance of all scow monitoring equipment and software will be the responsibility of the dredging contractor, through a contract with the scow monitoring contractor. It is the contractor's responsibility to ensure that the scow monitoring equipment is in a continuous, operable condition at all times. Scow monitoring equipment and software must be approved by NY District prior to use. Monitoring data provided by the scow monitoring system must be compatible with data collected

during previous NY District dredging projects and in particular, Data formats and data types required by NY District will be provided upon request by prospective sub-contractors, be compatible with monitoring data maintained on the NY District DAN-NY system. If NY District has not previously observed the operation of scow monitoring equipment and software proposed for use by the contractor, satisfactory demonstration of the equipment and software must be performed prior to approval by NY District. Such approval must be made no sooner than 14 days prior to the start of dredging.

Scows used to transport dredged material to upland facilities are required to have one acoustic bin-level sensor installed in addition to the scow draft sensor. The bin level sensor must be integrated with the Primary Scow Monitoring System to include bin level data with the data provided by the DGPS receiver and scow draft sensor. CQC System Manager or his staff are required to be present on tugs used when transporting scows loaded with dredged material for upland treatment/placement, however, the Contracting Officer, or his Representative, reserves the right to have Corps of Engineers and/or the Environmental Protection Agency Inspectors accompany all trips to the placement site to certify compliance and to verify data associated with each upland placement trip.

Any problems with operation/function of the scow monitoring software and/or equipment should be directed to the scow monitoring contractor immediately, and to the NY District at (917) 790-8538. To ensure proper communication of the scow monitoring components on the tug and scow, the same tug used to transport a scow loaded with dredged material toward a designated ocean placement location must continue to be used until placement has occurred. Switching of tugs once a placement trip has begun must not occur unless a mechanical problem or other unforeseen problem prevents the use of the tug for ocean placement. If such switching is required the scow monitoring contractor must be notified to ensure proper operations of the scow monitoring equipment and software.

#### **4.0 INSPECTORS/INSPECTIONS**

##### **INSPECTION (1965 APR OCE)**

Quality construction is a primary goal of the Corps of Engineers. Managing quality construction is vital to the Corps' reputation and future. The plans and specifications establish the requirements of a contract that the Contractor must be in compliance. The Corps uses a Quality Assurance/Quality Control management system. The Contractor is responsible for controlling the quality of the work and the Government, in separate but coordinated efforts, assures that the level of quality set by the plans and specifications is achieved.

The inspectors and the Contracting Officer's Representative (COR) at the site of the work have certain direct and indirect authority to assure that the work is being performed in compliance with the plans and specifications. The inspectors and COR will direct the maintenance of the gauges, ranges, location marks and limit marks in proper order and position. The presence or absence of an inspector shall not relieve the Contractor of responsibility for the proper execution of the work in accordance with the specifications.

The Government and the Contractor both have a role in obtaining quality construction consistent with the contract requirements. On this dredging the following three inspectors are required.

- Government's Quality Assurance Inspectors (QA Inspector)
- Contractor's Quality Control Inspectors (CQC Inspector)
- Certified Disposal Inspectors (CDI)

The following summarizes the primary responsibilities of the Contractor's Quality Control Inspectors:

Prior to the start of a project the Government prepares a Quality Assurance Plan which addresses the overall Quality Assurance operations of the field office which is responsible for administering the contract. This plan identifies the Quality Assurance organization and the procedures/methodologies that will be used in carrying out their responsibilities. Government Quality Assurance Inspectors, headed up by a Resident Engineer, are responsible for carrying out the following Government Quality Assurance responsibilities: (1) establishing construction standards and quality control requirements; (2) maintaining construction management activities, including, among others, checking adequacy of contractor's control (quality assurance for acceptance), performing specified tests and inspections as designated in the contract, determining that reported construction deficiencies have been corrected; (3) determining payments due to the contractor; and (4) assuring timely completion.

After the award of the contract, the Contractor prepares a Contractor's Quality Control Plan that identifies their Contractor Quality Control organization and documents the process and methodologies that will be used to accomplish the Contractor's Quality Control responsibilities and ensure that the requirements of the contract are met. Contractor Quality Control Inspectors, headed up by a Contractor Quality Control (CQC) System Manager, are responsible for carrying out that the following Contractor's Quality Control responsibilities: (1) producing a quality product on time and in compliance with the terms of the contract; (2) establishing and utilizing a construction quality control program of the scope and character necessary to achieve the quality of construction outlined in the contract; and (3) producing and maintaining acceptable records of its quality control activities.

The Government Quality Assurance inspectors and the Contracting Officer's Representative (COR) at the site of the work have certain direct and indirect authority to assure that the work is being performed in compliance with the plans and specifications. The presence or absence of an inspector shall not relieve the Contractor of responsibility for the proper execution of the work in accordance with the plans and specifications.

The Contracting Officer and the COR, reserve the right to have Corps of Engineers and/or the Environmental Protection Agency and the States of New Jersey and/or New York Inspectors accompany all trips to the placement site to certify compliance with the requirements of the contract.

#### 4.1 Contractor Quality Control (CQC) System

Contractor Quality Control (CQC) is the system by which the Contractor bears responsibility for all activities necessary to manage, control and document work to comply with the plans and specifications and the terms of the contract. It encompasses all phases of the work, such as approval of submittals, procurement, storage of materials and equipment, coordination of subcontractor's activities, and the inspections and tests required to ensure that the requirements of the contract are met, with a goal of delivering the required end product.

For a quality control program to be effective there must be a planned program of actions and lines of authority, and responsibilities must be established, as described in the Contractor's Quality Control Plan.

The Contractor shall be responsible for complying with the requirements of Specification Sections 01312, Quality Control System, and 01451, Contractor Quality Control, for the details and requirements of the CQC Management System.

Items to be included in the Contractor's Quality Control Plan are:

- A CQC inspection staff of adequate size and technical capabilities to accomplish all quality control functions in a timely manner.
- Supervisory staff should have adequate time for CQC activities, as well as their many management responsibilities.
- Organizational lines of authority and responsibility must be clear and logical.
- Explanation of the control, inspection, and test procedures, both on site and off site, and a list of individuals on the CQC staff, with assigned responsibilities.
- Qualifications of the staff should match the control requirements of the plan and an individual's qualifications must be adequate for the duties assigned.
- Contractor's system for tracking construction deficiencies to ensure corrective action is taken in a timely manner.
- The plan must strongly emphasize that quality will be obtained through a preventive type of control of each definable feature of work. This requires an understanding of a definable feature, as discussed later on in this guide. The plan will include a listing of proposed definable features of work.
- Description of procedures for processing submittals and responsible parties for approving each submittal.
- List of tests to be performed, party responsible for the results, and party responsible for preparing and signing reports.
- Inspection and test report forms must be comprehensive.
- Frequency of reporting and time for submitting reports must be indicated.

#### 4.2 Contractor Quality Control (CQC) System Inspections

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause entitled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product that complies with the contract requirements.

No dredging operations shall be done unless the CQC System Manager, approved by the Contracting Officer or Contracting Officer Representatives (COR), is present.



The CQC organization, which includes the CQC System Manager and additional qualified personnel, must at a minimum possess general corporate technical knowledge of all aspects of the project, and must successfully execute the CQC System on all aspects of the project. Individuals possessing experience in specialized areas shall be added to the organization as required during periods when such specialty areas are being executed. Examples of such specialized areas include marine operations, marine safety, dredging and disposal, seismic and noise monitoring, marine diving, hydrographic surveying, chemical data acquisition and testing. The Contractor must demonstrate that such additional qualified personnel have received sufficient training and indoctrination into the CQC system, and that these personnel properly execute the requirements of the CQC System within their areas of expertise.

a) CQC System Manager Qualifications

The Contractor shall identify as CQC System Manager an individual within his organization at the site of the work who shall be responsible for the overall management of the CQC system and have the authority to act in all CQC matters for the Contractor. The Contractor shall identify a CQC System Manager for each shift of work if construction is scheduled on a 24-hour basis. The CQC System Manager shall be a graduate engineer, graduate architect, or a graduate of construction management, or shall hold a state Professional Engineer's license, with a minimum of 2 years construction experience on construction similar to this contract, one year of which as a Quality Control Representative. The CQC Manager may also be a construction person with a minimum of 4 years in related work, one year of which as a QC Representative.

This CQC System Manager shall be on the dredge at all times during the dredging operation and will be employed by the prime Contractor. An alternate for the CQC System Manager will be identified in the plan to serve in the event of the System Manager's illness or unavoidable absence. The requirements for the alternate will be the same as for the designated CQC System Manager. The CQC System Manager shall be assigned no duties other than Quality Control. The CQC System Manager or his alternate shall be on the floating plant at all times during the dredging operation.

In addition to the above experience and education requirements the CQC System Manager shall have completed within the last five years the course entitled "Construction Quality Management for Contractors". This course is given at a cost of \$25 by Government personnel and is of two-day duration.

b) CQC System Representative Qualifications

The Contractor shall identify CQC System personnel for each shift of work if construction is scheduled on a 24-hour basis. The CQC System personnel shall have a minimum of 5 years construction experience on construction similar to this contract, one year of which as a Quality Control Representative.

In addition to the above experience CQC personnel shall have completed within the last five years the course entitled "Construction Quality Management for Contractors". This course is given at a cost of \$25 by Government personnel and is of two-day duration.

c) System's primary inspection responsibilities

The CQC System's primary inspection responsibilities are to ensure that the Contractor performs the work in compliance with the requirements of the contract. The following identifies specific areas for this contract that need to be addressed in the Contractor's Quality Control Plan, which shall describe the specific methods and controls that will be put in place to demonstrate compliance with the contractual requirements:

1. Ensure that the material will be placed at the appropriate disposal site by noting the sediment description through visual inspection as it is loaded into each scow by the dredge operator; the person operating the backhoe or bucket filling each scow.
2. Ensure that material contained in each scow is documented with photographs and/or videos to ensure proper characterization of the dredged material and proper distribution of load.
3. Ensure that full-time inspection of the dredging operation is conducted and that compliance with the Best Management Practices and the Federal Consistency Determination/Water Quality Certification(s) conditions is maintained.
4. Ensure that excessive dredging is minimized and that dredging below the allowable depth is minimized.
5. Ensure that scows are properly loaded based on the characteristics of the dredged material to be transported, condition of the scow, and weather.
6. Ensure that transport, processing and placement of Dredged Material "Unsuitable for placement at the HARS" are conducted in a safe and efficient manner and complies with all environmental laws and regulations.
7. Ensure that transport and placement of Dredged Material at open-water placement sites (HARS, artificial reefs, or other open water placement locations) is conducted in a safe and efficient manner and complies with all environmental laws and regulations
8. Ensure that acceptance of dredged material "Unsuitable for placement at the HARS" at the upland facility is verified at the time of arrival.
9. Ensure compliance with all Federal, State, and local noise ordinances and ensure that a noise monitoring program is implemented.
10. Ensure that blasting operations and blast/vibration monitoring are conducted in a safe and efficient manner and comply with all environmental laws and regulations

The Contracting Officer, or his Representative, reserves the right to have Corps of Engineers and/or the Environmental Protection Agency Inspectors accompany all trips to the placement site to certify compliance with the above.

#### 4.3 Corps Disposal Inspectors (CDIs)

The Contractor at his/her own expense shall have the CDI document the placement activities of all dredged materials at the HARS and/or any other open-water placement location, if used. A list of CDIs may be obtained from the NYD Operations Division, Dredged Material Management Section. Only CDIs on the list may be used during the project. CDIs must complete USACE Transportation and Placement Log Forms (TPLFs) and checklists for all placement activities performed. CDIs are required to be awake and on duty and in the towing vessel wheelhouse, to observe scow monitoring equipment function, watch for endangered species, and perform other Inspector duties, from the time the towing vessel departs from the dredging site until the scow has completely emptied and all reporting requirements have been completed.

CDIs will be responsible for ensuring that the requirements contained in these specifications, and any other guidance and requirements provided to the contractor related to dredged material placement, are met. CDIs will help ensure that placement guidelines, particularly as presented during the ocean placement meeting, and described below, are being followed.

a. A list of Corps Disposal Inspectors (CDIs) can be obtained from the USACE Ocean Placement Manager, Dr. Stephen Knowles, at (917) 790-8538. Fourteen (14) days prior to departure of the first project vessel from port for open water placement of any dredged material, the Contractor must submit a letter to the New York District with the names and certification information of all CDIs who will be working on the project. The Contractor must furnish CDI names, companies the CDIs are affiliated with if not independent CDIs, and the expected duration of employment of CDIs who will begin service at the start of the project. CDIs who will be on duty at the beginning of the dredging project must be present at the ocean placement meeting to review placement guidelines and requirements associated with this project. Any CDIs who begin duty after the first day of dredging must meet with NY District personnel to review placement guidelines and requirements associated with this project prior to working as a CDI on the project. Notice of replacement CDIs must be submitted to NY District at least two weeks prior to beginning work, unless illness of a CDI or other unforeseen event prevents such notification. The Contractor must furnish CDI names, companies CDIs are affiliated with if not independent CDIs, and the expected duration of employment of replacement CDIs who will work on the project.

b. CDIs are not allowed to be on duty for more than twelve (12) hours per day. CDIs must be provided a minimum of eight (8) hours of continuous off-duty time each day to allow appropriate rest to ensure safety and competence. CDIs must be provided with a designated bunk space or other suitable sleeping location while working aboard a towing vessel and a suitable location for completing paperwork associated with CDI duties. The contractor is not permitted to direct the CDIs in completion of CDI duties/requirements unless specifically requested by NY District. Although CDIs are financially employed by the Contractor, either directly or through sub-contracting, CDI duties and requirements are established by NY District. NY District will be responsible for determining whether CDIs are satisfactorily performing their duties and requirements. CDIs who do not fulfill their contractual requirement will be removed from the project by the Contract Officer or Contract Officer Representative (COR)

c. The following items, provisions, accommodations, and supplies must be provided for the use of each CDI working on the dredging contract:

- Legible copy of the permit or contract specifications, as related to scow loading, transport, and dredged material placement;
- A legible copy of the Placement Guidelines and placement grid map received at the ocean placement meeting, or any additional instructions or guidelines as related to scow loading, transport, and dredged material placement;
- an 8" - 12" wide protractor with degrees printed or embossed on the curved surface;
- dividers for scaling distances off of maps and charts;
- scow loading tables for each scow used to transport dredged material;
- a fully operational, handheld laser range finder with a range of at least 1000 feet, and manufactured no earlier than 2001, must be available for use by the CDI at any time. Spare batteries for the laser range finder must be available at all times;
- access to the towing vessel DGPS, fathometer, and radar;

- fully operable personal cellphones in possession of each CDI at all times with active phone numbers unique to each phone available for placing and receiving calls at all times. Cell phone numbers must be provided to NY District at the pre-construction meeting;
- a fully operational fax machine must be onboard the towing vessel for use by the CDI within 2 hours of each placement event at the HARS, or within 4 hours of placement at an artificial reef.
- Any discrepancies or other concerns noted by the CDI regarding placement activities must be reported immediately, via cellular phone from the tug, to the NY District Operations Division (Alex Gregory, 917-790-8427) and a Dredging Contractor representative not onboard the towing vessel, and, if the issue is related to the scow monitoring equipment, the scow monitoring contractor. These contacts are referred to as the "Notification List". Additional items related to the duties of the CDIs may be required at any time during the period of the dredging contract.

#### Responsibilities of Corps Disposal Inspectors (CDIs)

- CDIs must complete USACE Transportation and Placement Log Forms (TPLFs) and checklists for all placement activities performed.
- CDIs are required to be awake and on duty and in the towing vessel wheelhouse, to observe scow monitoring equipment function, watch for endangered species, and perform other Inspector duties, from the time the towing vessel departs from the dredging site until the scow has completely emptied and all reporting requirements have been completed.
- CDIs will be responsible for ensuring that the requirements contained in these specifications, and any other guidance and requirements provided to the contractor related to dredged material placement, are met.
- CDIs will help ensure that placement guidelines, particularly as presented during the pre-construction meeting, and described below, are being followed
- CDIs are not allowed to be on duty for more than twelve (12) hours per day.
- CDIs must be provided a minimum of eight (8) hours of continuous off-duty time each day to allow appropriate rest to ensure safety and competence
- CDIs must be provided with a designated bunk space or other suitable sleeping location while working aboard a towing vessel and a suitable location for completing paperwork associated with NYD Inspector duties
- CDIs are not authorized to operate towing vessel equipment, and in particular, remotely operated scow control equipment
- CDIs are required to use hand-held laser range finders (required to be aboard all towing vessels used for dredged material placement) to determine the tow lengths used at the time of dredged material placement, in the event of scow monitoring equipment/software malfunction
- CDIs are required to communicate with the towing vessel crew to obtain information necessary to document the position of the scow at the time placement occurs, in the event of scow monitoring equipment/software malfunction
- CDIs must complete a map of the placement area showing the position of the scow at the time scow doors were first opened, including the distance from the towing vessel to the scow (as determined using the hand-held laser range

finder),

-Each scow loaded with dredged material must be clearly photographed with a working digital camera by the CDI after loading. Digital photographs taken by CDI clearly show the type of dredged material within the loaded scows, regardless of weather conditions or time of day

-CDI must submit reports of all placement activities authorized by this contract on the basis of one report for each scow of dredged material within 2 hours after each placement event.

-CDI must review each checklist item (described elsewhere) as appropriate, at the dredging site, while underway to the placement location, during placement, and following placement. Copies of the checklist must be completed by CDI during each placement trip,

-CDI must measure the distance from the towing vessel to the scow at the time of placement using the hand-held laser range finder and record the value on the TPL form, if necessary.

-Reports of discrepancies or unusual events must also be faxed by the CDI as soon as possible to (212) 264-1463 and other numbers if required by NY District.

-The dredged material density and scow draft must be used by the CDI to estimate the volume of dredged material in each scow at the start of each trip to the designated dredged material placement location, unless the scow monitoring software provides the calculation automatically based on scow sensor data. This estimated volume must be recorded on the USACE Transportation and Placement Log (TPL) form

#### 4.4 Virtual Inspection

In addition to the on-site inspections performed by Government and Contractor personnel, virtual inspection provided by the contractor through webcam(s) shall be available to Government and regulatory agency personnel. Failure by the contractor to maintain a functioning Virtual Inspection system may require the Government to shut-down dredging operations until it is restored.

### 5. General Requirements

#### 5.1 Overdepth and Side Slopes

##### 5.1.1 Allowable Overdepth

To cover the inaccuracies of the dredging process, material actually removed from within the specified areas to be dredged (pay template), including allowable pay overdepth as specified below, will be estimated and paid for at the contract unit price.

Allowable overdepth dredging will be permitted to a depth of not more than 1.5 ft for all dredging areas. The required dredging depth as shown on the drawings is 52 ft below MLW. An allowable overdepth dredging will be measured and paid for at the applicable contract price in the same manner as specified for the overlying material.

##### 5.1.2 Side Slopes

The side slope dredging requirements as shown on the drawings are as follows:

Non-Rock material: 1V to 3H  
Rock material: 1V to 1H

Material removed below any pay slope plane will not be estimated for payment. Sloughing side slopes shall not be the basis for claims against the Government. End slopes, where indicated on the drawings, shall be treated in the same manner as side slopes.

#### 5.1.3 Excessive Dredging

Material taken from beyond the allowable overdepth or side slope limits will be deducted from the total amount dredged as excessive dredging, or excessive side-slope dredging and no payment will be made for material removed below the allowable overdepths. Material from beyond the pay template will not be included in the pay quantity. Materials dredged from below the depth limit which result in extra costs shall be the responsibility of the Contractor. Nothing here shall be construed to prevent the inclusion in the measurement of material dredged for the removal of shoals performed in accordance with the applicable of the paragraph: FINAL EXAMINATION AND ACCEPTANCE in section 00800,1.15.

5.1.4 The contractor shall submit as part of Quality Control Plan specific methods and controls that will be put in place to ensure that dredging below -53.5 ft mlw is minimized.

5.2 If during the dredging or upon completion of the post-dredging surveys and soundings, materials are found above the required dredging depth of 52 ft below MLW, these materials shall be removed immediately by the Contractor to achieve the contract required dredging depth of 52 ft.

5.3 The maximum allowable depth of non-rock material to remain over the rock prior to blasting shall be 1.0 foot.

5.3 not used

#### 5.4 Reprofiling

Reprofiling of the channel in any area at any time is prohibited.

##### 5.4.1 Bed Leveling (Bar Dragging) to Eliminate Local Pinnacles

Bed leveling (bar dragging) to eliminate local pinnacles in previously dredged areas may be used with the prior written approval of the COR with the following conditions:

5.4.1.1 The bar shall not be dragged into an adjacent contract area or into any adjacent acceptance area that has already been accepted by the USACE.

5.4.1.2 Any material that is deposited into an adjacent contract area, or into an adjacent acceptance area that has already been accepted, which in the opinion of the COR was the result of bar dragging, shall be immediately removed by the contractor at no cost to the USACE.

#### 5.5 Order and Sequence of Work

##### 5.5.1 Interference with Navigation

5.5.1.1 The Contractor shall minimize interference with the use of channels and passages. The Contracting Officer will direct the shifting or moving of



dredges, drill barges and other plant or the interruption of dredging operations to accommodate the movement of vessels and floating equipment if necessary.

5.5.1.2 Historic information on vessel traffic is maintained by the USCG Vessel Traffic Service (USCG-VTS). Vessel operations are subject to the USCG's Regulated Navigational Area.

5.5.1.3 The Contractor shall meet at least weekly with representatives of the Army Corps of Engineers, USCG-VTS, pilots and terminal operators to discuss the schedule of upcoming transits of vessels for the following two weeks, and to negotiate windows when these transits shall occur.

#### 5.5.2 Sequence of Work

Upon the Contractor's receipt of the Notice to Proceed (NTP) work shall commence within five(5) calendar days.

When removal of non-HARS material is complete in an acceptance area the Contractor shall proceed to another acceptance area to remove non-HARS material. Non-HARS dredging is prohibited anywhere other than one acceptance area at a time, unless directed by the Contracting Officer's Representative (COR).

Removal HARS and rock material covered by non-HARS material is prohibited in an acceptance area until the non-HARS dredging in that acceptance area is complete and accepted.

Pre-treatment of rock, including but not limited to blasting, hammering, sawing or other means of mechanically fracturing the rock is prohibited in an acceptance area until the non-HARS dredging is complete and accepted.

5.5.2.1 The contract area is divided into eight (8) Acceptance Areas "A1", "A2", "B1", "B2", "B3", "C" and "D" and the Outer Side Slope Area.

#### 5.6 separation plan

5.6.1 After all non-HARS material in these Material Reaches has been dredged with the environmental bucket, dredging operations will cease. Two surveys will then be performed by the Contractor:

5.6.1.1 A bathymetric survey will be conducted of the area, using a frequency suitable for providing reflection from the surface of Holocene black silt. The post-environmental bucket dredging bathymetric survey will be compared with the pre-dredge survey to determine if any areas appear to have residual black silt thicker than 6 inches.

5.6.1.2 A side-scan sonar survey will also be conducted, by a 3rd-party-contractor, to map the extent of any remaining black silt. The side-scan sonar data will be analyzed by a technical expert familiar with such analyses (e.g. someone from the firm hired to conduct the side-scan sonar survey, or other technical expert).

5.6.1.3 Reaches that appear to have remaining black silt, based on either the bathymetric survey data or the side-scan sonar data, will be cored with a gravity-coring device to determine if any areas of black silt remain with thicknesses greater than 6 inches. If areas of black silt thicker than 6

inches remain anywhere in these Material Reaches, those areas within the reach must be re-dredged with an environmental bucket. An on-site USACE Construction Field Office Inspector (QA Inspector) will verify that portions of any Material Reach characterized by black silt exceeding 6-inch thickness have been re-dredged with the environmental bucket. Copies of these surveys, and analysis reports, will be provided to the NY District Operations Division, Dredged Material Management Section, prior to any re-dredging. When re-dredging of all black silt areas has been completed, the on-site QA Inspector shall fax a notice to the HARS manager, Operations Division, indicating that all non-HARS material has been satisfactorily removed from these Material Reaches .

5.6.2 It is the responsibility of the dredging contractor to ensure that the conditions specified in paragraph 5.6.1.3 above are met prior to dredging HARS-suitable material. If NY District determines that non-HARS (upland) material, according to the conditions specified in paragraph 5.6.1.3 above, is transported offshore and placed or leaked anywhere offshore, the U.S. Environmental Protection Agency will be notified for potential enforcement action.

#### 5.7 NOTICE TO MARINERS

The Contractor shall request the Coast Guard to publish a NOTICE TO MARINERS prior to the initiation of any placement/disposal activities. The Contractor shall also coordinate all dredging and transportation activities with the U.S. Coast Guard Sector New York, Vessel Traffic Service Branch at 718-354-4191 or facsimile 718-354-4190. Every vessel engaged in the transportation of dredged material shall have its name or number, and owner's name, painted in letters and numbers at least fourteen (14) inches high, on both port and starboard sides of the vessel. These name and numbers shall be kept distinctly legible at all times, and no vessel not so marked, shall be used to transport dredged material, or place dredged material.

Scow Identification and Certification: All scows that will be used, and/or may be used, during this dredging project must be identified prior to the first day of dredging. Scows identified for use on the project must be certified to be fully operational, mechanically sound, completely seaworthy, and free of leaks or other defects.

#### 5.8 Floatable Material and Debris:

All floatable material and debris excavated during the dredging project, including, but not limited to, wood, tires, scrap metal, car bodies, shopping carts, etc., must be disposed at an existing approved upland disposal area. Should the Contractor encounter floatable material and/or debris, a copy of a letter granting the permission of appropriate authorities to use an existing approved upland area must be submitted to the Contracting Officer and/or his Representative. Floatable material and/or debris must never be transported to the HARS or other open-water placement location. Only dredged material approved for open-water placement shall be placed at designated open-water placement locations. The contractor will be responsible for retrieving non-approved materials from open-water placement sites if such placement occurs.

5.9 The Contracting Officer, or his Representative, reserves the right to have Corps of Engineers and/or the Environmental Protection Agency Inspectors accompany all trips to the placement site to certify compliance with the above.

5.10 CDIs are not authorized to operate towing vessel equipment, and in particular, remotely operated scow control equipment. CDIs are required to use hand-held laser range finders (required to be aboard all towing vessels used for dredged material placement) to determine the tow lengths used at the time of dredged material placement in the event of scow monitoring equipment/software failure. CDIs are required to communicate with the towing vessel crew to obtain information necessary to document the position of the scow at the time placement occurs. In the event of scow monitoring equipment/software malfunction, the CDI must complete a map of the placement area showing the position of the scow at the time scow doors were first opened, including the distance from the towing vessel to the scow (as determined using the hand-held laser range finder), the towing vessel DGPS position at the time of initial scow door opening, the vessel direction of travel, and the bearing to the scow from the towing vessel. Manually prepared maps, if necessary, associated with an ocean placement trip, should also be faxed to NY District with the TPLF and other required documents. If TPLFs (electronically or manually produced) and any other required placement documents are not received within 2 hours of each placement event, scows may be directed to standby at the dredging site until all items have been received at NY District. TPLFs and other paperwork associated with placement trips to artificial reefs must be received within 4 hours of placement.

#### 5.11 Digital Photography of Loaded Scows

Each scow loaded with dredged material must be clearly photographed with a working digital camera by the NYD Inspector/personal after loading, prior to transport away from the dredging site. Flash photography must be used if darkness or other conditions require supplemental illumination. The contractor will be responsible for ensuring that sufficient lighting is provided, as required, such that digital photographs taken clearly show the type and characteristics (color, texture, stone size, etc.) of dredged material within loaded scows, regardless of weather conditions or time of day. At least one photograph is required, however, additional photographs may be required to document the characteristics of the dredged material, and the condition of the scow. The minimum resolution required for each photograph is 1200 x 1600 pixels. Digital cameras used for the photography must be capable of both wide and narrow angle photographs. Photographs must be digitally imprinted with the date and time of each photograph, the trip number, and the scow identification. Each clearly visible digital photograph, taken by NYD Inspectors, of every loaded scow prior to it leaving the dredging site, must be submitted to with the other scow monitoring data (TPL form, etc.) for posting on the scow monitoring website.

#### 5.12 Additional Placement Guidelines

More detailed guidelines information will be provided prior to commencement of dredging, particularly at the ocean placement meeting. Additional placement guidelines and modifications may be provided to the dredging contractor at any time during the dredging contract.

#### 5.13 Dredged Material Placement/Ocean Placement Meeting

A meeting will be held at the NY District Operations Division conference room no more than 15 days before dredging of material for open-water placement begins, and no less than 7 days before dredging of material for ocean placement begins, to discuss the placement guidelines and other aspects of dredged material placement and monitoring. Representatives from the dredging contractor must include the project manager, dredging equipment operator, towing vessel captains, CDI, a representative of the scow monitoring

contractor, members of the NY District Operations Division associated with dredged material placement and monitoring activities, and others invited by the contractor or NY District. The day and time of the meeting will be at the discretion of the NY District Operations Division and must be coordinated by the dredging contractor at least one week before the day of the meeting. Ocean placement of dredged material must not occur until the ocean placement meeting has occurred.

**6. Dredging and Placement of "Non-rock materials" Unsuitable for placement at the HARS.**

6.1 All Non-Rock material that is capable of being removed using an "environmental" bucket shall be dredged with an "environmental" bucket to refusal. The "non-rock" dredged material is composed predominantly of the material identified in para. 2.2.1.2 item numbers 6 and 7 that are deposited within the dredging limits as shown on the contract drawings is considered unsuitable for placement at the HARS.

The Contractor Quality Control (CQC) System Manager and staff, the Contracting Officer Representatives, shall jointly determine the character of materials to be disposed of at the non-ocean placement site or designated upland disposal sites.

Upon completing the dredging of non-rock material Unsuitable for HARS placement with the environmental bucket in an acceptance area, the contractor shall notify the contracting officer for a final inspection to ensure all up-land material that can be dredged with the environmental bucket has been removed.

These dredged materials shall be placed at approved designated upland placement sites unless directed by the COR.

**6.2 Offloading, Processing And Disposal Facilities**

1) The bidders shall identify with their bids the Offloading, Processing and Disposal Facilities or site(s) for the non-ocean placement site(s). The Contractor shall submit a schedule and the anticipated quantity to be placed at the disposal site(s). (See Section 00800).

2) The following site shall be the only non-ocean placement site used for Option Item NO.0006 if awarded

Disposal Site: Newark Bay Confined Disposal Facility (NBCDF)

Operator: Port Authority of New York and New Jersey

Location: Newark Bay

Point of contact: Mr. James Cleary

Phone Number: 973-792-4666

The Contractor will be required to pay an additional management fee of \$36.75 per cubic yard disposed at the NBCDF. Placement of non-rock and non-HARS Materials at the Newark Bay Confined Disposal Facility (NBCDF) shall be at the direction of the Contracting Officer or the Contracting Officer's Representative. Placement of the non-rock material "Unsuitable for placement at the HARS" at the NBCDF will be directed on a "scow by scow" basis. See the Federal Consistency Determination/Water Quality Certification in Section 00902.

All other payment to the Port Authority of New York & New Jersey shall be in

accordance with the requirements specified in the NBCDF Final Operation and Management Plan.

6.3 All Non-rock materials" Unsuitable for placement at the HARS as shown on the drawings capable of being removed using an "environmental" bucket shall be removed with an "environmental" bucket to refusal. The defining characteristics of an environmental bucket are as follows:

- a. The bucket shall be provided with welded steel covers and rubber seals specifically designed and installed by the bucket manufacturer to minimize leakage from the closed bucket.
- b. The closed bucket shall be equipped with vertical side plates, with rubber seals, which overlap or some method to reduce sediment loss at closure and shall act as an enclosure to eliminate redeposit of soil from the bucket.
- c. The bucket shall be equipped with a switch, with signal light in the control station, to verify bucket closure and seal and shall be kept in working order.

When sensors indicate that the environmental bucket has not sealed properly, the operator will raise the bucket through the water column slowly and with care so as to minimize resuspension of material. Before continuing dredging, the Contractor will assess why the bucket did not close and take appropriate corrective action(s.) If sensors are malfunctioning they shall be repaired immediately. If debris or obstructions are the cause, then operation of the bucket will proceed in a careful and vigilant manner to avoid damaging the equipment as well as minimize resuspension of material. The COR shall be notified should excessive debris be encountered. The contractor shall document their procedures in their Quality Control Plan.

- d. The bucket will be designed to produce a flat cut and to minimize resuspension during closing and lifting.
- e. The Contractor will use a combination of software, sensors and data to produce a system that will allow the dredge operator to see the location of the bucket in 3 dimensions in real time. The bucket will be displayed on the monitor in the dredge operating cab relative to the existing bottom. The system will use a 3 dimensional differential global positioning system (3D dGPS) to determine the position of the dredge and real time data from tide gages to determine the position of the dredge. Sensors placed on the dredge will keep track of the rotation of the digging machine and, as appropriate, crane angle, cable let out, arm position, joint position and any other sensors required to accurately reproduce the position of the bucket.

A shop drawing of the contractor's bucket shall be provided to the Contracting Officer for approval prior to the commencement of dredging.

6.4 No transport of scows fully or partially loaded with dredged material for open-water placement, shall be done unless the CDI, approved by the Contracting Officer or Contracting Officer Representative (COR) is present at the dredging site to verify that all of the dredging site requirements associated with transport and placement of dredged material have been met. The CDI shall visually inspect the dredged material, and take digital photographs to document the conditions of the dredged material and complete other CDI duties associated with the dredging site.

6.5 For the purpose of progress payment, the Contractor shall perform bathymetric surveys immediately following removal of debris (if needed) and prior to removing any non-rock material destined for the upland placement site to determine the contract dredged volume of non-rock materials for disposal at the upland placement facility. The contract volume is derived from volume calculations taken from a pre- and post-dredge bathymetric surveys based upon in-situ non-rock sediment at the origin of dredge site. Refer to Section 00800, Quantity Surveys.

6.6 When dredging in non-rock material (non-rock unsuitable for placement at the HARS), the Contractor shall employ the following best management practices:

- 1) No barge overflow shall be permitted during the dredging and transport of any non-HARS dredged material (non-rock unsuitable for placement at the HARS).
- 2) Dredging of non-rock (silt) materials shall be accomplished using a closed "environmental" bucket. Dredging of consolidated "new work" material is not subject to this equipment restriction, but shall be accomplished using best management techniques to minimize the suspension of sediment.
- 3) Dredged material shall be placed deliberately in the barge in order to prevent spillage of material overboard.
- 4) The dredge shall be operated so as to maximize the bite of the environmental bucket. This will reduce the amount of free water in the dredged material and the number of the bites required for completing the job.
- 5) To minimize the loss of material during the excavation the environmental bucket lift speed shall not exceed 2 feet per second.
- 6) All barges or scows used to transport sediment shall be of solid hull construction or be sealed with concrete, except for material permitted for subaqueous disposal.
- 7) Should decanting of water from barges be required before disposal, PANYNJ will make berthing area(s) available for dewatering purpose.

The Contractor may use the berthing area as designated by the Contracting Officer for this project unless otherwise directed by the Contracting Officer.

The water quality certificate (WQC) has set dewatering requirements. The dewatering site is in Newark Bay, the eastern most 400 feet (See Section 00902) of Berth 63 at the Elizabeth Port Authority Marine Terminal is the designated dewatering site. The POC is Gregory Bulthaupt, 973-690-3482. The site being provided by the Port Authority of New York and New Jersey, if used then a dewatering plan will be needed. The plan needs to identify the procedure that will be used, and this plan has to provide for at least two barges to be utilized. One barge would hold dredge material, and the other would be used to receive water decanted off of the barge holding upland material. The barge with only the decanted water can then be brought back to Newark Bay Channel for discharge. If the Contractor wishes to use another site to dewater it will need to be approved by the Corps of Engineers in conjunction with the State(s), and a dewatering plan will also be needed and approved by the Corps and the State(s).

The berth area or piers can be used for settling and decanting (into the decant barge) and all decant water shall be discharge into the contract area.



All operation and management rules shall be in accordance with the requirements specified in the State(s) Water Quality Certificate (WQC)/Federal Consistency (see Section 00902).

The Contractor can identify an alternate site for the decanting water scows. All Decant water shall be discharged into the contract area. Contractor shall submit as per section 00800 1.45.3.A the location and point of contact for the decant water holding scow. The alternate site for decant water holding scows and decant water discharge shall be in accordance with but not limited to the Federal Consistency Determination/Water Quality Certifications and/or host state(s).

6.7 The Contractor shall submit a schedule for placement of dredged material at the disposal facility to the facility's Point of Contact and to the Contracting Officer's Representative at least 30 calendar days prior to the commencement of the dredging of said material. The schedule shall indicate the anticipated flow of material.

6.8 The towing vessel captain is responsible to ensure, prior to the departure of the towing vessel from the dredge site, that the forecasted weather and sea conditions at the expected time of arrival at the disposal facility will allow for safe conditions. If upon arrival at the disposal site facility, prevailing conditions are such that deviation from the operating procedures of the disposal facility is necessary to ensure the safety of the operation, the responsibility for the determination of a minimum safe speed for the towing vessel, and a minimum safe distance will rest solely with the captain of the towing vessel.

6.9 The Contractor shall be responsible for the transport of dredged material and the tie-down of the scow to the designated location identified by the disposal operator. The Contractor shall take all necessary precautions for the safety of, and to provide necessary protection to prevent damage, injury or loss to any person or property, including but not limited to: a) All employees of the Contractor, public, and other persons and entities who may be affected by thereby; b) the physical structure(s) in surrounding the navigation channel; and c) other property at the upland disposal facility, including piers, docks, berths, vessels, markers, lights, buoys, and other structures.

6.10 The dredging and placement logs for dredged material Unsuitable for placement at the HARS shall be completed and attached to the Contractor's daily CQC report and submitted on a daily basis and.

## **7. PLACEMENT OF DREDGED MATERIAL**

7.1 The following requirements are applicable for the loading and towing of vessels containing Dredged Materials.

The American Bureau of Shipping (ABS) load lines will be required for all Contractors or its authorized dredging or towing contractors using unmanned dump scows towing and heading for placement sites beyond the US Boundary lines.

Plimsoll mark disk and Load lines shall be painted and maintained to be clearly visible on the scow.

The Tug captain shall be informed of any temporary repairs made to the scow

prior to departure.

Scows shall not be overloaded relative to its appropriate A-B Load Line. Appropriate A-B Load Lines (draft) shall be included on the USACE-TPL.

Photographs should be taken of the loaded scow's plimsoll mark disk and respective load line prior to its towing. These shall be submitted with the USACE-TPL.

The Quality Control Manager shall assign a person other than the Dredge Operator to perform a quality control function to insure scow are loaded properly.

Loads should be distributed within the scow and water introduced into the scow during the loading process shall be kept to a minimum.

All of the provisions, guidelines, requirements, and instructions (PGRIs) in this section of the contract specification must be completed/complied with before any dredged material may be placed at a designated ocean placement site. Many of the PGRIs must be completed/complied with prior to the start of dredging. Any misplaced dredged material deemed to constitute a potential hazard to navigation by the Corps will be the sole liability of the dredging contractor to remove, as directed by the Corps. This would include, for example, placement of dredged material in a navigation channel that results in a mound or causes an area of shallower water within the channel; or any dredged material placed above a permitted depth associated with an artificial reef or at the HARS. The dredging contractor will assume all expenses and liabilities associated with creating mounds of dredged material above a permitted depth at an artificial reef site or HARS and expenses and liabilities associated with bringing such mounds below permitted depths.

7.1.2 Personnel Notification: Section 02900 of the contract specification must be provided to all contractor personnel working on any aspect of open-water placement of dredged material associated with this project, including personnel loading scows at the dredging site, personnel working on scows at the dredge site, personnel onboard towing vessels at the dredging site or while towing scows, including USACE NY District certified Corps Disposal Inspectors, and personnel aboard scows being towed. All personnel associated with loading of scows, transportation of dredged material, and placement of dredged material must be familiar with the guidelines and requirements contained in this portion of the contract specifications. Prior to the start of dredging, the contractor must submit a letter to the NY District listing the name, position title, and job description of each person who will be working on the towing vessels used to transport dredged material, each person who will be loading the scows with dredged material at the dredging site, and anyone else involved with scows at the dredge site or while being towed to the designated placement location. This letter must include verification that each person has been provided a copy of this portion of the contract specification, has read this portion of the contract specification, and understands the requirements described in this contract specification as related to their job duties. Additional guidelines and directives may be provided at any time during the duration of the dredging project and will become part of the contract specifications.

## 7.2 Ocean Placement Locations for HARS suitable material and ROCK

The Government has identified the Historic Area Remediation Site (HARS) for placement of dredged material, approved for ocean disposal, removed under

this contract. However, barges that contain less than 25% non-rock material (i.e., vessels which contain 75% or more rock material) should not be transported to the HARS unless approved by NY District and the U.S.E.P.A. (Non-rock material is defined as material that is less than 2.5 inches in diameter.)

#### 7.2.1 HARS

The Contractor shall perform dredged material placement at specific locations within the HARS, defined by the following perimeter coordinates:  
(40 is 40 Degrees)

Point	LatitudeDMS	LongitudeDMS	LatitudeDDM	LongitudeDDM
B	40 25' 23" N	73 53' 34" W	40 25.38' N	73 53.57' W
D	40 25' 22" N	73 52' 08" W	40 25.37' N	73 52.13' W
F	40 23' 13" N	73 52' 09" W	40 23.22' N	73 52.15' W
G	40 23' 13" N	73 51' 28" W	40 23.22' N	73 51.47' W
H	40 22' 41" N	73 51' 28" W	40 22.68' N	73 51.47' W
I	40 22' 41" N	73 50' 43" W	40 22.68' N	73 50.72' W
L	40 25' 22" N	73 50' 44" W	40 25.37' N	73 50.73' W
N	40 25' 22" N	73 49' 19" W	40 25.37' N	73 49.32' W
O	40 21' 35" N	73 49' 19" W	40 21.58' N	73 49.32' W
Q	40 21' 36" N	73 52' 08" W	40 21.60' N	73 52.13' W
T	40 22' 08" N	73 52' 08" W	40 22.13' N	73 52.13' W
U	40 22' 08" N	73 53' 34" W	40 22.13' N	73 53.57' W

DMS = Degrees, Minutes, Seconds

DDM = Degrees, Decimal Minutes

7.2.2 The Contractor will also use exact placement criteria set by the New York District Corps of Engineers. All placement of dredged material within the HARS will occur in strict accordance with the placement guidelines and locations given at the pre-construction meeting, and any future updates when provided by USACE, particularly at the pre-construction meeting.

7.2.3 All non-rock material approved for ocean disposal, excluding floating debris and trash, shall be transported to the HARS, unless otherwise directed.

#### 7.2.4 Rock

1) The Government has identified the Axel Carlson Reef for placement of dredged rock (i.e., vessels that contain 75% or more rock material) that is approved for ocean disposal.

The rock material to be dredged, exclusive of all debris, floatable material, and other materials not approved for ocean placement. The artificial reef site is located approximately ~60 statute miles from project area to southern end of Axel Carlson Reef (see maps in section 00901)

Note: The coordinates of the exact location of the grid used for placement of dredged material at the HARS and artificial Reef will be provided during the pre-construction meeting and may be changed at any time during the dredging project.

7.3 General Requirements: ALL PLACEMENT ACTIVITIES MUST BE RECORDED, AND REQUIREMENTS ADHERED TO, AS SPECIFIED BELOW.

a. Twenty four (24) hours prior to departure of the first project vessel from port for the open water placement of any dredged material, the Contractor

must notify the New York District USACE by telephone. Calls regarding departures must be made to the Dredged Material Management Section at (917) 790-8538 or x8427. The Contractor must furnish the Contractor name, project name, CDI name and estimated time of departure.

b. The Contracting Officer, or his Representative, reserves the right to have Corps of Engineers and/or Environmental Protection Agency employees and other invited representatives accompany all trips to the placement site to observe placement activities and/or certify compliance with any contract specifications or environmental regulations.

c. The Contracting Officer, or his authorized Representative, must give notice of sailing by telephone, or via direct radio transmission between the Contractor's tug and the US Coast Guard two hours prior to departure of a vessel from port. Telephone calls must be made to (718) 354-4088.

d. CDI must submit reports of all placement activities authorized by this contract on the basis of one report for each scow of dredged material within 2 hours after each placement event.

In addition to the TPLF, a checklist must be completed for each ocean placement trip. Any items receiving a "NO" answer are considered discrepancies and must be reported immediately to the Notification List. Discrepancies that must be noted by the CDI on the TPL form and checklist and must be reported immediately to the Notification List include, but are not limited to, the following items

- A scow has a mechanical problem, a leak, or visible damage that may cause leaking.
- A scow contains more than the maximum volume allowed for placement during a single trip.
- A scow has a noticeable list
- A trail of leaking dredged material is visible behind the scow
- A scow monitoring system (Primary or Secondary) is not functioning properly
- Fathometer, radar, vessel DGPS, and any other equipment/information necessary to conduct CDI duties are not present or are not fully functional.
- Scow draft pressure varies more than 20 points, or 1.5 feet of draft, from the value at the dredge site.
- A gradual increase or decrease in scow draft pressure values as recorded by the scow draft sensor, exceeding 12 points (or actual scow draft of more than 1 foot) is observed.
- Any water depths observed anywhere within an artificial reef boundary within 15 feet of the permitted water depth at the reef, or within 15 feet of a depth specified by NY District.
- Placement occurred in the incorrect grid cell
- Any placement outside of the designated placement grid, including locations within the HARS, the HARS Buffer Zone, shipwreck Buffer Zones, the HARS No-Discharge Zone, and all areas outside of the HARS.
- Any placement outside of the designated artificial reef boundary

CDI should check each item as appropriate, at the dredging site, while underway to the placement location, during placement, and following placement. Copies of the checklist must be completed by CDI during each placement trip, signed and dated by the CDI, and submitted to the NY District on a weekly basis. Any discrepancies must be recorded on the TPLF or a separate report. Separate reports must include the name of the CDI, the date and time of the incident, and a detailed description of any discrepancy. These supplemental reports must be submitted at the same time TPLFs are submitted.

e. Contractor must receive grid coordinates for the placement location at the HARS before dredging starts; usually at the pre-construction meeting. Individual grid cells may be as small as 100 feet wide and 200 feet long. Placement must be made while towing scows in the direction of the longest grid cell dimension, unless otherwise directed by the NY District. All placement events must be recorded and signed by the master of the tow. Copies must be submitted to the U.S. Coast Guard no later than the fourth day after each week of activity. The Coast Guard address is:

Captain of the Port of New York  
212 Coast Guard Drive  
Staten Island, New York 10305

f. Every vessel engaged in the transportation of dredged material must have its name or number, and owner's name, painted in letters and numbers at least fourteen (14) inches high, on both port and starboard sides of the vessel. These names and numbers must be kept distinctly legible at all times, and vessels not so marked, cannot be used to transport or dump dredged material

#### 7.4 Placement of Dredged Material Suitable for Ocean Disposal, General:

a. A National Marine Fisheries Services-approved Observer, at the Contractor's expense, must be aboard the tug transporting a loaded scow to the ocean placement sites. The observer will have the responsibility for determining the presence of endangered species (sea turtles and whales) during transit to, and upon arrival at the location for all placement activities. Upon arrival at the placement site, placement of dredged material may occur only if no specimens of endangered species are observed to be present within a 0.25 nautical mile of the placement site. If endangered species are observed to be present within 0.25 nautical mile of the designated placement location, then the placement of dredged material must not occur. Placement of the dredged material may occur only when the observed animals have moved outside the 0.25 nautical mile zone around the designated placement location, or have completely departed the site. In all such cases where whales or sea turtles have been encountered, the observer must submit a written report incorporating the following information: animal type (Whale or sea turtle); the specific species (if known); the date, time and location of the sighting (latitude, longitude); approximate distance away from the vessel and scow/barge; number of individuals observed; behavior (feeding, nursing, migrating, etc.,). If a CDI is to be used for this function, he/she should possess or acquire, prior to the initiation of the project, valid certification from the National Marine Fisheries Service or other accredited agency of training on techniques for identifying species, and preparing applicable reports for instances where endangered species are encountered. Twenty-one (21) days prior to departure of the first project vessel from port for open water placement of any dredged material, the Contractor must submit a letter to the New York District with the names and certification information of all NMFS Observers who will be working on the project. The Contractor must furnish Observer names, companies Observers are affiliated with if not independent Observers, and the expected duration of employment of Observers who will begin service at the start of the project. CDI who are also NMFS Observers may fulfill the duties of both positions.

b. The towing vessel captain and the CDI must jointly determine and agree, prior to the departure of the towing vessel from the dredging site, that the forecasted weather and sea conditions at the expected time of placement of

dredged material within the HARS or artificial reef site will:

1) allow for the safeguard of personnel and property during the towing operation and full release of material from the scow at the designated location and

2) not result in a loss of dredged material from the scow due to waves breaking in the scow.

If weather/sea conditions will not permit placement of dredged material at the designated grid cell, the scow must not be towed from the dredging site until conditions improve and allow safe and accurate dredged material placement.

c. The distance between the towing vessel and the placement scow when placing the dredged material must be noted by the CDI on the TPL form used to document each trip. A hand-held laser range finder, manufactured no earlier than 1998 and rated to measure accurate distance to at least 1000 yards, must be aboard each towing vessel for use in determining the distance between the towing vessel and placement scow.

d. DGPS navigation and fathometer equipment must be present and fully operational on board the towing vessel and must be calibrated periodically in accordance with the manufacturer's guidelines. The instrumentation must also conform to current industry standards. Re-calibration of the instrumentation will be required in instances where major modifications to the towing vessel have been made. Specific documentation certifying the accuracy of instruments may be requested by the USACE. Fixed aids to navigation, with known latitude-longitude coordinates, should be used periodically to double-check the accuracy of navigation equipment. Likewise, locations with a known depth and stable bottom should be used to periodically double-check accuracy of fathometers.

f. Scows may not be transported from the dredging site for offshore placement of dredged material unless the tugs DGPS navigation system, scow monitoring equipment and software, tug fathometer, hand-held laser rangefinder, scow radio-control system (if used), digital camera, and backup radio on scow (if scowman is used) are all in full working order and provide correct information. However, if scow monitoring contractor personnel are servicing/repairing the primary scow monitoring equipment, the backup scow monitoring equipment may be used, and an affected scow may be transported for ocean placement. The backup scow monitoring equipment must only be used on two consecutive placement trips of a scow. The backup scow monitoring equipment and software is an emergency backup to the primary scow monitoring equipment and must not be routinely used.

#### 7.5 Protocol for Placement of Dredged Material at Open Water Sites:

##### 1-Protocol for Placement of Dredged Material at Open Water Sites

To help ensure proper placement of dredged material at the Historic Area Remediation Site (HARS), the following placement protocol must be followed:

-Scows used on this project must not be used for any other dredging project unless written approval is obtained from NY District.

-Continuous monitoring by equipment and the Corps Disposal Inspectors (CDI) must be maintained from the time a scow is ready to be transported to an open-water placement site, until placement is complete, regardless of the

amount of time required.

-Scows loaded with any quantity of dredged material transported from the dredging site, must have all monitoring equipment functioning and recording data, and have a CDI present to observe monitoring data and perform Inspector duties.

-The same towing vessel used to transport scows to open-water placement locations must transport scows from the dredging area; rendezvousing with open-water towing vessels outside of the dredging contract area must not occur.

2-When CDI place the notification telephone calls, they must state their name, the dredging project they are serving as a CDI on, the name of the towing vessel, the date, the time, and a brief description of the checklist item and the reason for the "NO" answer(s) for any checklist items.

a. Prior to leaving the dredging site, scows must be inspected to ensure correct operation of mechanical features. Scows must also be inspected for the presence of any conditions that may cause navigation problems. The scow radio-control system (if used on the project) and the Primary and Backup systems must be inspected for correct operation. A hand-held laser range finder, with a range of at least 1000 feet, manufactured no earlier than 2001, must be carried aboard each towing vessel. Hand-held laser range finders must be tested prior to departure from the dredge site. If any problems with the scow, radio-control system, Primary and Backup scow monitoring systems, video camera, or laser range finder, are encountered, corrections must be made before offshore transport of the scow may proceed, except when scow monitoring contractor personnel are onboard or attempting to fix a scow monitoring problem, in which case placement would proceed using the Backup scow monitoring equipment. However, the backup scow monitoring equipment/software must not be used on more than two consecutive placement trips.

b. Scows must be inspected for the presence of any conditions that may cause potential leakage. Prior to loading an empty scow at the dredging site, the empty scow must be inspected for presence of large dents or visible holes. Any holes must be repaired prior to placing any dredged material in the scow. Dents must be closely examined to ensure that a hole is not present, or that the hull strength is not compromised. The juncture of the two split hulls, when the scow is closed, must form a straight line and the rubber gasket must form a tight seal. Damage to the rubber seal or juncture must be repaired prior to loading the scow. Scow draft/pressure values as recorded by the scow draft sensor at the dredging site at the time the scow is towed away for open-water placement must be recorded on the TPL form by the CDI. Scow draft/pressure values as recorded by the scow draft sensor must also be recorded 30 minutes after departing the dredge site. Scow draft/pressure values as recorded by the scow draft sensor at the designated placement location, just prior to scow door opening, must also be recorded on the TPL form by the CDI.

c. Scows must be observed for potential leaking of dredged material, as indicated by visible turbidity plumes (muddier water) behind the scow, or significant change in the scow draft (more than 1.5 feet). The scow draft pressure values as recorded by the scow draft sensor, or actual draft values displayed by the scow monitoring software, at the start of the trip and just before scow opening, must be recorded on the TPLF for every trip, regardless of the values or variability. Scows exhibiting draft changes of more than one foot may be leaking. A gradual increase or decrease in scow draft of more

than one foot may indicate leakage, and must be noted on the TPLF, and also must be reported to the Notification List immediately. If the scow has not reached the Verazanno Narrows bridge, the scow must be towed back to the dredging site to determine the cause of the change in draft. If the scow is seaward of the Verazanno Narrows bridge, the scow may be transported to the designated placement location. In this case, the scow draft should continue to be highly scrutinized for the possible need for emergency procedures. If a situation arises that requires emergency dumping of dredged material, all reasonable efforts to dump outside of navigation channels must be made. Steady, gradual changes in scow draft may also indicate that dredged material is leaking from the scow, or water is leaking into the scow's hull. If gradual draft changes appear to occur regularly, the scow must be examined to determine if a leak is present.

d. After ensuring that all inspections have been performed at the dredging site, and compliance with all provisions and guidelines associated with scow loading and use has been met, scows must be brought to the designated grid cell, or coordinates, of the HARS, or other designated placement location, using the DGPS navigation systems of the tugboat and the scow monitoring software onboard the tugboat. Placement in the appropriate location, and scow draft immediately prior to scow door opening, must be documented by the CDI using the scow monitoring software while the scow position and draft information are monitored automatically by the scow monitoring system. Scows should be towed no faster than 2 knots, unless weather/sea conditions require higher speed to maintain safe and reliable navigation. Lengths of tows should be no longer than 200 feet, unless weather/sea conditions require longer tow lengths to maintain safe and reliable navigation. Regardless of the conditions at the time of placement, tow lines must not be longer than 500 feet at the time of placement. CDI must measure the distance from the towing vessel to the scow at the time of placement using the hand-held laser range finder and record the value on the TPL form. During each trip to the HARS and/or reef, the dredged material contained in a scow must be able to be placed within individual grid cells as small as 100 feet wide and 200 feet long. Dredged material must never be placed outside of designated grid areas of the HARS or artificial reefs.

e. If the Primary scow monitoring equipment/software does not show reliable DGPS coordinates in the vicinity of the designated placement grid or other designated placement location, or is not functional, the Backup scow monitoring equipment/software must be used to locate the placement site and estimate the scow position during placement. Length of tows must be measured using the hand-held laser range finder. The bearing to the scow from the towing vessel must also be noted at the time of placement. Tow lengths must be less than 200 feet unless ocean/weather conditions require longer lines for safe navigation. Vessel navigation must be maintained in the direction of the maximum grid dimension for all placements, to the greatest extent possible. The angular displacement of the scow from the towing vessel course (track line) must be estimated by sighting the scow behind the towing vessel while holding a protractor with the 90 mark pointing directly behind the towing vessel in line with the vessel track line (wake). A pencil must then be used to point at the scow, to the left or right of the 90 mark, to determine the angular displacement off of the towing vessel track line, recorded as degrees to the left or right when sighting the scow, rounded to the nearest 5. Scows directly behind the tug would be reported at 0 angular displacement. (a scow displaced 10 to the left of the 90 mark on the protractor would be reported as 10 left, etc.) This angle must be recorded on the TPL form, along with the following information if this option is used:



- 1) Coordinates of the tug at the start and end of placement
- 2) Length of tow line (distance from tug stern to scow bow)
- 3) Angular displacement of scow from trackline of tug
- 4) Estimate of lateral displacement of scow from the towing vessel trackline
- 5) Estimated longitude and latitude of scow at time of door opening and closing

The lateral displacement may be estimated by the following formula (for angular displacements up to 20):

displacement = towlength x sine of angular displacement

The following values of sine may be used:

- 5 degrees of angular displacement - sine = 0.087
- 10 degrees of angular displacement - sine = 0.174
- 15 degrees of angular displacement - sine = 0.259
- 20 degrees of angular displacement - sine = 0.342

For example, when using a 200 foot towlength, a scow is observed to track 15 degrees to the right of the tug trackline. The estimated displacement of the scow is

200 feet x 0.259 = 52 feet

This means that when plotting the scow position on a map of the placement area, the scow would be plotted ~50 feet to the right and ~200 feet behind the position of the tug. The errors in estimating increase with longer towlengths. Because of this, it is critical to maintain as short a towlength as possible if the Backup scow monitoring equipment/software or tug's DGPS navigation system is used for placement. Perimeter grid cells are not permitted for use if Primary scow monitoring equipment/software is not functioning. The closest adjacent grid cell toward the center of the grid must be used.

f. If neither the Primary nor Backup scow monitoring equipment/software show reliable DGPS coordinates in the vicinity of the designated placement grid or other designated placement location, or is not functional, or weather/sea conditions prevent reliable maneuvering of the scow, the tugboat DGPS must be used to position the scow at the center of the grid, or other backup location in the grid as specified by NY District. Length of towlines must be measured using the hand-held laser range finder. The bearing to the scow from the towing vessel must also be noted at the time of placement. Tow lengths must be less than 200 feet unless ocean/weather conditions require longer lines for safe navigation. The angular displacement of the scow from the towing vessel course (track line) must be estimated by sighting the scow behind the towing vessel while holding a protractor. This angle must be recorded on the TPL form, along with the following information if this option is used:

- 1) coordinates of the tug at the start and end of placement
- 2) length of tow line (distance from tug stern to scow bow)
- 3) angular displacement of scow from trackline of tug
- 4) estimate of lateral displacement of scow from the towing vessel trackline
- 5) estimated longitude and latitude of scow at time of door opening and closing

g. If weather and/or sea conditions prevent reliable measurement of towing distance using the hand-held laser range finder, the towing vessel's radar must be used to determine the distance and bearing to the scow.

h. If neither the Primary nor Backup scow monitoring systems, nor the

tugboat DGPS systems, provide navigation coordinates, the scow must be brought to a suitable location for correction of navigation problems. Placement of dredged material is not allowed if a reliable DGPS system is not providing coordinates at the time of scow door opening.

i. The grid center, or other backup placement location, will only be used if steps (e) and (f) are attempted without success, or when inclement weather/sea conditions prevent reliable maneuvering of the scow. The grid center should not be used if inclement weather conditions persist. Placement at the grid center is an emergency procedure. Regardless of the size of the grid, the scow must be towed with a length of towline such that, at the time of placement, both the scow and towing vessel are both within the grid boundary. If the Primary scow monitoring system fails after leaving the dredging site, the scow must not be used again until a fully operational Primary scow monitoring system is installed. However, if scow monitoring contractor personnel are onboard or on their way to the transporting vessel to service/repair the Primary scow monitoring system, the scow may be used to transport dredged material while using the Backup system. The Backup system may be used for up to two consecutive placement trips while awaiting contractor personnel to service the equipment. No more than two consecutive trips to ocean placement sites may be made without the Primary scow monitoring equipment/software fully functioning.

j. If radio communication with the scow is lost, preventing operation of radio-controlled scows, placement must not occur until the system is repaired. Voice contact, through radio or direct communication, must be maintained with a scow man, or other personnel, who is riding aboard a scow, for the duration of the placement trip. Scow opening must only occur when a direct, voice command has been given to personnel aboard the scow, or when radio communication with radio-controlled scows is maintained. If the scow's engine can not be operated by the radio-control system, and the scow is boarded to attempt to fix the engine, the scow must be located at the designated placement position if the scow's engine is started. Past use of radio-controlled scows revealed that manually starting a scow's engine after a failed radio-controlled engine start could cause the "scow open" command to be completed, causing the scow to dump at the location of engine startup. Any problems with a radio control system must be fixed prior to subsequent use of the scow. The CDI must note on the TPL form any time the radio-controlled scow system malfunctions and manual discharge is required, and immediately notify the Notification List.

k. A primary and backup radio must be onboard all manned scows, along with backup power supplies. Hand signals must never be used to direct the scowman regarding scow opening/closing. All personnel aboard scows, or who may board scows while transporting dredged material, must be informed that discharge of dredged material will only be allowed while voice communication is maintained.

l. To help ensure that dredged material is transported and placed at the HARS in accordance with the guidelines described above, the following checklist has been prepared. Items in the checklist must be reviewed by the CDI at the dredging site, while underway, and at the HARS. Any item on the checklist that receives a "NO" answer must be reported immediately to the Notification List. If the "NO" answer is related to the scow monitoring equipment and/or software, the scow monitoring contractor must also be notified immediately. These discrepancies must be noted on the TPLF associated with the trip using the letter-number code associated with each item. Each placement trip to the HARS must use a checklist, to be completed by the CDI working aboard the towing vessel, using the scow monitoring software or by hand. A supplemental report must be filed and faxed to NY District at (212) 264-1463 if space on

the TPLF is not sufficient to explain the discrepancy. The first time a "NO" answer occurs, the notification list must be notified. However, if the same item continues to receive "NO" answers, telephone calls should not be made until the problem is corrected, or if more than three additional trips occur without the deficiency being corrected. Checklist copies must be signed and dated by the CDI and placed in a file. All original, signed checklists associated with this project must be submitted to the NY District on a weekly basis for the duration of the project. Checklists must be hand delivered or mailed to:

U.S. Army Corps of Engineers, NY District  
Dredged Material Management Section  
Room 1937, CENANOP-SD  
26 Federal Plaza  
New York, NY 10278-0090  
Attn: Dr. Stephen C. Knowles

m. Original copies of TPL forms for each trip to the HARS, signed and dated by the CDI on duty during each trip, must be submitted to the Dredged Material Management Section at the above address at the completion of the project, or after a CDI has discontinued working as a CDI on the project, either temporarily or permanently.

n. If the CDI answers "NO" to any item in Part A, dredged material must not be transported from the dredging site until any discrepancies have been corrected. Only after all requirements have been met, equipment/supplies are operable and available, required information has been supplied, etc., as indicated by the CDI being able to answer "YES" to all items, is dredged material allowed to be transported from the dredging site.

o. Two exceptions to this exist: 1) If a backup scow is used, it should be noted on the TPL form, but normal placement can continue. 2) When the the Primary scow monitoring systems are malfunctioning, dredged material may be transported from the dredging site if scow monitoring contractor personnel are onboard to fix/service the equipment, or if the Backup scow monitoring system is functioning. If any of the items in Part A answered "NO" by the CDI, the Notification List must be contacted immediately, even if contractor personnel are onboard the towing vessel. Telephone numbers of personnel on the Notification List must be supplied to all Corps Disposal Inspectors (CDI) working on the dredging project. Reports of discrepancies or unusual events must also be faxed by the CDI as soon as possible to (212) 264-1463 and other numbers if required by NY District. Discrepancies must be noted on the TPLF using the code letter/number associated with each item in the lists. A supplemental report must also be faxed if the incident can not be adequately documented on the TPLF.

p. Parts B and C of the checklist pertain to activities/requirements of CDI while underway to the designated placement location and at the placement location, respectively. All of these items must be verified by the CDI aboard the transportation vessel. If any of these items are answered "NO" by the CDI, the Notification List must be contacted immediately, and any supplemental reporting completed.

#### **PART A. DREDGING SITE (Checklists)**

A1\_\_\_ A legible copy of the permit conditions and guidelines, as related to scow loading, transport, and dredged material placement, is in possession of the CDI.

A2\_\_ A legible copy of the Placement Guidelines and placement grid map received at the pre-construction meeting, or any additional instructions or guidelines as related to scow loading, transport, and dredged material placement, is in possession of the CDI.

A3\_\_ The scow being used to transport the dredged material is mechanically sound, does not leak, and has no visible damage that may cause leaking.

A4\_\_ A regularly used scow was used.

A5\_\_ A scow loading table for the scow being towed is aboard the towing vessel and available for the CDI to use.\*

A6\_\_ An estimated dredge material density has been provided by the dredging contractor. Estimated density is: \_\_\_\_\_

A7\_\_ The material being dredged has been observed by the CDI for general characteristics (grain size, color, consistency). Majority of material is dry/thick/watery, color:\_\_\_\_\_, mud/sand/gravel/rock.

A8\_\_ For scows loaded with any rock (rock is defined as any stones greater than 2.5 inches in diameter), the estimated rock percent has been recorded on the TPL form.

A9\_\_ An estimate of the volume of material in the scow has been calculated by the CDI using the scow loading table and recorded on the TPL form.

A10\_\_ Scow contains less volume of dredged material than the maximum volume allowed for placement during a single trip.

If a scow contains a volume of dredged material greater than the maximum volume allowed for placement during a single trip, the volume must be decreased below the maximum volume before the dredged material can be transported away from the dredge site.

A11\_\_ The scow monitoring systems (Primary and Backup) are fully operational and are functioning.

Any scow monitoring system malfunctions must be reported immediately to the scow monitoring contractor. Tugs are not allowed to leave the dredging site while towing any scows with dredged material if the scow monitoring systems are not fully operational. However, if scow monitoring contractor personnel are onboard the transporting vessel to service the equipment, or in communication with the CDI via cellphone or radio, or on the way to repair/service the equipment, the vessel may depart from the dredging site while malfunctions are being repaired/corrected. In this case, the Backup scow monitoring system must be used and the scow may be transported from the site. If the Primary scow monitoring system is not functional, the Backup monitoring system may only be used on two consecutive offshore placement trips using an affected scow. No more than two consecutive trips without the Primary monitoring system can ever be made.

A12\_\_ The scow draft pressure value, as displayed by the scow monitoring software, has been recorded on the TPL form. (this value should be noted a few minutes after leaving the dredging site, while being towed, to allow the material in the scow to shift and settle)

A13\_\_ A fathometer is fully operational, functioning, and installed on the

transporting vessel.

A14\_\_ A radio onboard the transporting vessel is operable and can receive NOAA marine weather forecasts and ocean conditions.

A15\_\_ Current and forecasted marine weather and ocean conditions at the designated placement location have been monitored on the radio and will allow safe and accurate placement of dredged material. Winds at a reporting station closest to the placement location are presently blowing \_\_\_\_\_ from the \_\_\_\_\_, with \_\_\_\_\_ ft seas. Winds forecast for the placement location are \_\_\_\_\_ from the \_\_\_\_\_, with \_\_\_\_\_ seas.

A16\_\_ DGPS navigation system is fully operational, functioning, and installed aboard the transporting vessel.

A17\_\_ A radar system is fully operational, functioning, and installed aboard the transporting vessel.

A18\_\_ Radio-control system for scow operation (if scowman is not used) is fully operational and functioning.

A19\_\_ Radio and backup radio system, for communication between scows and towing vessels, are aboard scow (if scowman is used), and are fully operational and functioning.

A20\_\_ Hand-held laser range finder, manufactured no earlier than 1998, with at least a 1000 foot range, is aboard towing vessel, fully operational and functioning, and available for CDI use, along with a set of backup batteries.

A21\_\_ A fully operable cell phone that can send and receive calls is in the possession of the CDI onboard the towing vessel.

A22\_\_ A protractor is available for use by the CDI aboard the towing vessel.

A23\_\_ A pair of dividers, for map/chart distance scaling, is available for use by the CDI aboard the towing vessel.

A24\_\_ An up-to-date nautical chart that includes the placement area is available for use by the CDI.

A25\_\_ CDI is provided full access to fathometer, radar, vessel DGPS, and any other equipment/information necessary to conduct CDI duties.

A26\_\_ A digital photograph has been taken of the loaded scow such that the level and characteristics of material within the scow can be determined from the photograph.

A27\_\_ The digital photograph has been downloaded into the scow monitoring system for inclusion with the Transportation and Placement Log form

A28\_\_ The satellite, vessel tracking system on the tug is present and operable.

A29\_\_ Full compliance with any other contract or regulatory requirements related to dredged material placement has been met.

A30\_\_ Time of departure from dredging site has been recorded on the TPL form.

A31\_\_ All other information relative to the dredging site has been entered into the TPL form.

A32\_\_ The CDI activated the scow monitoring software at the dredging site

A33\_\_ The CDI was present at the dredging site to complete all items in this section of the checklist

\* Unless the scow monitoring software provides the necessary data, scow loading tables for each scow used on a dredging project must be provided to CDIs working on the project. CDIs must be provided estimated dredged material density from the dredging contractor for each loaded scow. The dredged material density and scow draft must be used by the CDI to estimate the volume of dredged material in each scow at the start of each trip to the designated dredged material placement location. This estimated volume must be recorded on the USACE Transportation and Placement Log (TPL) form.

#### **PART B . ENROUTE TO THE PLACEMENT LOCATION (Checklists)**

B1\_\_ scow pressure/draft from the scow monitoring system has been recorded on the TPL form thirty minutes after leaving the dredging site.

B2\_\_ Scow draft is being monitored with scow monitoring software to detect sudden or gradual changes in draft.

B3\_\_ If the CDI is also a NMFS certified marine mammal/endangered species observer, observation and appropriate reporting is conducted.

B4\_\_ Scow draft pressure varies less than 20 points, or 1.5 feet of draft, from the value at the dredge site.

B5\_\_ A gradual increase or decrease in scow draft pressure values as recorded by the scow draft sensor, exceeding 12 points (or actual scow draft of more than 1 foot) is not observed.

B6\_\_ Scow does not appear to be listing.

B7\_\_ Water behind scow has been observed, if possible, to ensure that no turbid water plumes are present.

B8\_\_ A fixed reference position, such as a channel marker, has been used to ensure that the towing vessel DGPS and scow DGPS positions agree.

B9\_\_ Marine weather and sea conditions present and forecast to be present at the placement location are periodically monitored. The CDI and towing vessel captain may decide to return to the dredging site based on an updated marine forecast.

#### **PART C. IN THE VICINITY OF THE PLACEMENT LOCATION (HARS AND/OR REEF)**

For artificial reef placement:

C1\_\_ Water depths were continuously monitored (a reading taken at least every 5 seconds) with the towing vessel fathometer while navigating anywhere within the reef boundary. (towing vessel crew must also monitor water depths)

C2\_\_ All water depths observed anywhere within the reef boundary were at

least 15 feet deeper than the permitted water depth at the reef.

If any depths less than or equal to 15 feet deeper than the permitted reef depth, or other depth specified by NY District, are observed anywhere at the reef site, using the towing vessel fathometer, the incident must be reported immediately to the Notification List, and the Artificial Reef manager, and all areas within 200 feet of the shallower water must not be used for placement of dredged material. Other vessels used for transportation of dredged rock must be notified of the observation, provided coordinates, and instructed not to place additional rock closer than 200 feet of the reported position. Anytime depths within 15 feet of the permitted reef depth, or other specified depth, are noted by observing a fathometer while traversing a reef site, the geographic coordinates and depths must be recorded and reported, even if the same locations were previously noted and reported.

C3\_\_ If depths less than or equal to 15 feet deeper than the permitted reef depth, or other specified depth, are observed anywhere in the reef, the latitude, longitude and depth has been recorded.

LATITUDE \_\_\_\_\_ LONGITUDE \_\_\_\_\_ DEPTH \_\_\_\_\_

For all ocean placement locations:

C4\_\_ Scow radio control equipment operates without any problems.

C5\_\_ Placement occurred in correct grid cell and was coordinated with towing vessel crew.

C6\_\_ Scow draft information immediately prior to scow door opening has been recorded on the TPL form.

C7\_\_ TPL form was completed using the scow monitoring software, or by hand if the software malfunctions, within 30 minutes of scow door opening.

C8\_\_ Scow monitoring equipment, transportation vessel navigation equipment, and all other equipment related to placement of dredged material worked without any problems.

C9\_\_ All activities associated with placement of dredged materials appeared to be conducted in a safe manner.

C10\_\_ Nothing occurred that may have resulted in incorrect placement of dredged material.

C12\_\_ TPL form and any supplemental reports faxed to (212) 264-1463 within 2 hours of scow door, or hopper bin, opening.

C13\_\_ For reef placement, TPL form also faxed to the applicable State Artificial Reef coordinator within 8 hours of scow door opening.

C14\_\_ A copy of the TPL form has been signed by the CDI and placed in a file/folder to become part of the permanent record of the trip. All signed TPL forms must be submitted to NY District when offshore transport of dredged material associated with the project ends, or when the CDI finishes working on the project.

\* Scow loading tables for each scow used on a dredging project must be provided to the CDI working on the project. CDI must be provided an estimated dredged material density by the dredging contractor for each loaded scow. The dredged material density and scow draft must be used by the CDI to estimate the volume of dredged material in each scow at the start of each trip to the designated dredged material placement location. This estimated volume must be

recorded on the USACE Transportation and Placement Log (TPL) form.

7.6 The Contractor shall prepare a Daily Report of Operations form and the Transportation and Placement Log and shall furnish signed copies thereof to the Contracting Officer, or his representative, on a daily basis. Copies shall also be faxed to the HARS Manager at (212) 264-1463 with (212) 264-4260 as a backup if the 1463 extension is not working. Copies of the forms are attached at the end of Section 00901. Further instructions on the preparation and submittal of these reports will be provided at the pre-dredging conference. Contractor shall provide all final forms and other reports in an electronic format (PDF, WORD or other acceptable format ) as directed by the COR when needed.

#### 8. Vessel Movement Reporting System (VMRS)

The Contractor's dredge and equipment shall be designated a Vessel Movement Reporting System (VMRS) User required to participate in the Vessel Movement Reporting System (VMRS) as a as described in Title 33 Code of Federal Regulations part 161. All VMRS USERS are required to MONITOR the VTS frequency, PARTICIPATE in the VMRS and REPORT to the VTC.

The Vessel Movement Reporting System is a system used to manage and track vessel movements within a VTS area. This is accomplished by a vessel providing information under established procedures as set forth in this 33CFR161, or as directed by the VTS.

Vessel Traffic Center (VTC) is the shore-based facility that operates the vessel traffic service for the Vessel Traffic Service area or sector within such an area.

Vessel Traffic Services (VTS) is a service implemented by the United States Coast Guard designed to improve the safety and efficiency of vessel traffic and to protect the environment. The VTS has the capability to interact with marine traffic and respond to traffic situations developing in the VTS area.

VTS User's Manual is the manual established and distributed by the VTS to provide the mariner with a description of the services offered and rules in force for that VTS. Additionally, the manual may include chartlets showing the area and sector boundaries, general navigational information about the area, and procedures, radio frequencies, reporting provisions and other information which may assist the mariner while in the VTS area.

VTS User's Manual is available from VTS New York at 212 Coast Guard Drive, Staten Island NY 10305.

#### 8.1 Automatic Identification System (AIS).

The Contractor shall have a properly installed, operational, type approved Automatic Identification System (AIS) that in dredges and Drill Boats:

1-provide information - including the ship's identity, type, position, course, speed, navigational status and other safety-related information - automatically to appropriately equipped shore stations, other ships and aircraft;

2-receive automatically such information from similarly fitted ships; monitor and track ships;

3-exchange data with shore-based facilities.



a) The following information is excerpted from Title 33 Code of Federal Regulations Sec. 164.46 Automatic Identification System (AIS).

``Properly installed'' refers to an installation using the guidelines set forth in IMO SN/Circ.227 (incorporated by reference, see Sec. 164.03). (available at [http://www.imo.org/includes/blastDataOnly.asp/data\\_id%3D6645/227.pdf](http://www.imo.org/includes/blastDataOnly.asp/data_id%3D6645/227.pdf) )

Not all AIS units are able to broadcast position, course, and speed without the input of an external positioning device (e.g. dGPS); the use of other external devices (e.g. transmitting heading device, gyro, rate of turn indicator) is highly recommended,

b)The requirements for Vessel Bridge-to-Bridge radiotelephones in Sec. 26.04(a) and (c), 26.05, 26.06 and 26.07 of this chapter also apply to AIS. The term ``effective operating condition'' used in Sec. 26.06 of this chapter includes accurate input and upkeep of AIS data fields.

c)The use of a portable AIS is permissible only to the extent that electromagnetic interference does not affect the proper function of existing navigation and communication equipment on board and such that only one AIS unit may be in operation at any one time.

9. The Contractor shall prepare a Daily Report of Operations form and the Transportation and Placement Log and shall furnish signed copies thereof to the Contracting Officer, or his representative, on a daily basis. Copies shall also be faxed to the HARS Manager at (212) 264-1463 with (212) 264-4260 as a backup if the 1463 extension is not working. Copies of the forms are attached at the end of Section 00901. Further instructions on the preparation and submittal of these reports will be provided at the pre-dredging conference.

#### **10. Buoy Removal.**

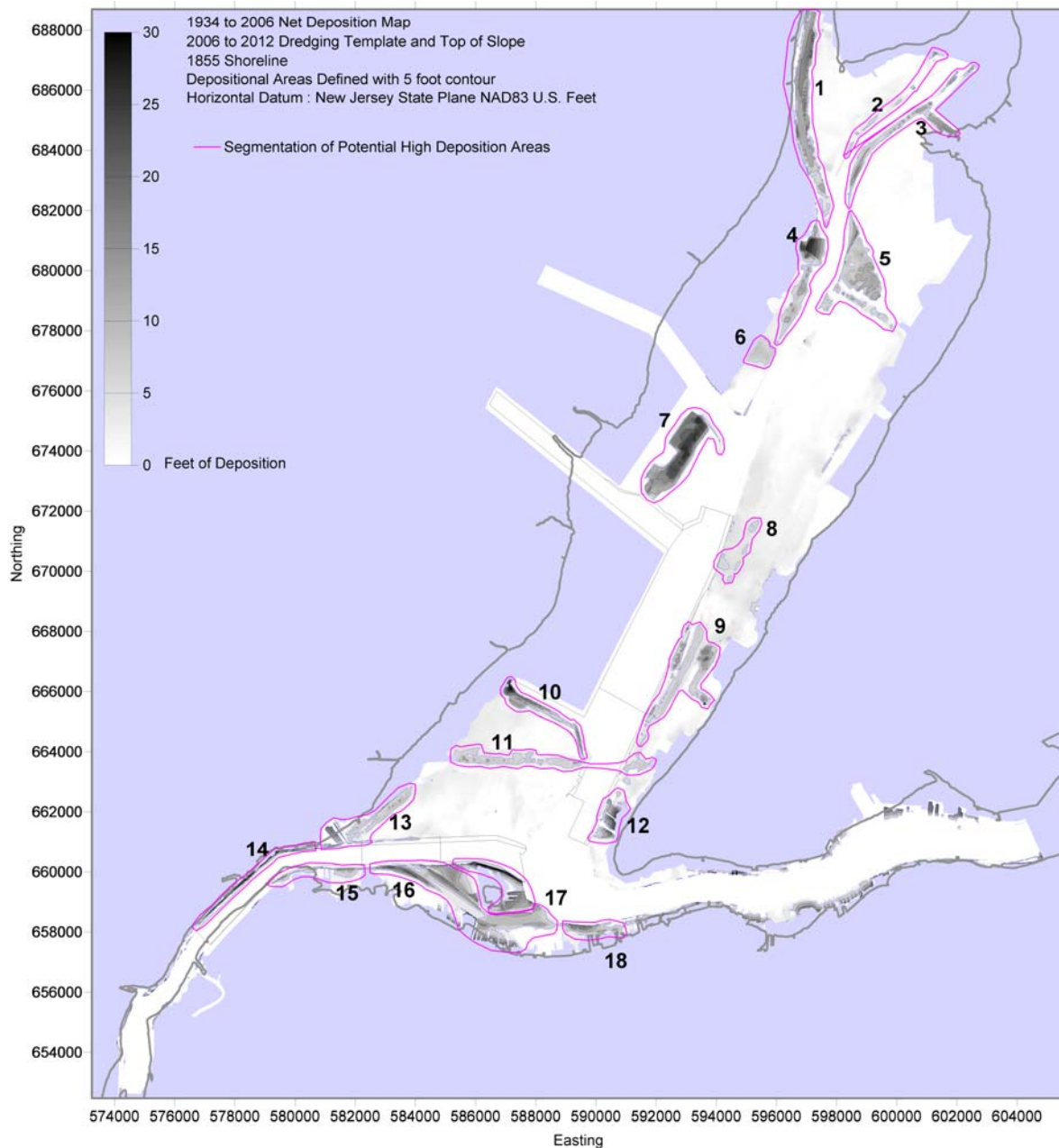
The Contractor shall notify the Coast Guard, with a copy to the Contracting Officer, at least 30 days prior to the date desired for having buoys removed or relocated which interferes with dredging operations. Requests may be made telephonically at (718) 354-4191/4089, or by writing to:

Commander, U.S. Coast Guard Activities New York  
212 Coast Guard Drive  
Staten Island, NY 10305

#### **11. Measurements and Payment.**

Measurement and Payment shall be in accordance with the applicable paragraphs in Section 01270: MEASUREMENT AND PAYMENT.

- End of Section -



**Figure 78.** Segmentation of contour map into areas of potential high net deposition determined for the interval 1934 to 2006 by subtracting the minimum elevation between the years 1934 and 2006 from the 2006 bathymetry. The thickness of deposition is denoted by gray scale from white to dark over a range of 0 to 30ft, respectively. The gray line is the 1855 shoreline. The black lines denote the channel boundary and top-of-slope. The eighteen depositional features are outlined by contour lines at 5ft contour intervals: 5, 10, 15, 20, 25 and 30ft. The purple lines differentiate the groupings in each area. The horizontal scale is NJ State Plane NAD83 in feet.

Newark Bay Study Area Coordination Plan

pertaining to

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

and the

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

Prepared by

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

and

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

21 December 2005

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

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

**Objectives:**

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

**Goals:**

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

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

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

### 3. Meetings

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

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

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

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

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

### 5. Team Members:

Thomas Shea	Project Manager	USACE Harbor Programs Branch
Scott Nicholson	Project Manager	USACE Harbor Programs Branch
Harold Hawkins	Project Manager	USACE Harbor Programs Branch
Mike Millard	Project Manager	USACE Harbor Programs Branch

Patricia Donohue	Project Manager	USACE Operations Division
Joe Olha	Project Manager	USACE Operations Division
Ron Conetta	Resident Engineer	USACE Construction Division
Sam DiDato	Project Engineer	USACE Construction Division
David Gentile	Project Engineer	USACE Construction Division
Richard Tomer	Chief	USACE Regulatory Branch
Jenine Gallo	Team Leader	USACE Environmental Analysis Branch
Ronald Pinzon	Biologist	USACE Environmental Analysis Branch
Adam Perelson	Physical Scientist	USACE Environmental Analysis Branch
Steven Weinberg	Project Engineer	USACE Engineering Division
Ben Baker	Geologist	USACE Engineering Division
Beth Nash	Envir. Engineer	USACE Operations Division
Ellen Simon	Attorney	USACE Office of Counsel
Elizabeth Butler	Project Manager	EPA Emergency and Remedial Response Division
Alice Yeh	Project Manager	EPA Emergency and Remedial Response Division
Amelia Wagner	Attorney	EPA Office of the Regional Counsel
LCDR Ernie Morton	Chief	USCG Activities NY, Vessel Traffic Service
Steve Dorrlar		Port Authority of NY & NJ
Matt Masters		Port Authority of NY & NJ
Suzanne Dietrick		NJ Department of Environmental Protection
Janine MacGregor		NJ Department of Environmental Protection
KD McGuckin		NY Department of Environmental Conservation
Tim Kubiak		US Fish and Wildlife Service
Tom Brosnan		NOAA
Reyhan Mehran		NOAA

## **Appendix A: Near Field Turbidity/Total Suspended Sediments Pilot Study**

1. The Defendants shall, consistent with United States Army Corps of Engineers Safety and Health Regulations EM 385-1-1, conduct a Near Field Turbidity/Total Suspended Sediments Pilot Study (“NFTTSS Pilot Study”) within the S-NB-1 “narrow channel” contract area as set forth below.
2. The NFTTSS Pilot Study will test the near-field use of both optical (OBS) and acoustic (ADCP) sensors to collect near-field optical and acoustic backscatter measurements, which will then be converted into Total Suspended Sediments (“TSS”) levels, by deploying OBS sensors mounted to the bucket, and OBS and ADCP sensors to the dredge platform. Specifically, the study will attempt to determine:
  - a. whether either type of sensor, mounted as set forth above, is sufficiently reliable and resilient to continuously record and/or transmit data from which quantitative backscatter measurements can be obtained continuously and in real time, within a turbulent near-field environment, over a time span routinely involved in navigational dredging; and
  - b. if either type of sensor were found to demand repair, maintenance, and/or recalibration, on a frequency that made continuous monitoring impractical, whether the sensor could be hardened to avoid the need for such repair, maintenance, and/or recalibration.
3. Defendants shall prepare and provide to Plaintiffs, NJDEP and NYSDEC a draft Scope of Work prior to commencing the NFTTSS Pilot Study. Prior to issuing a final Scope of

Work, Defendants shall consider in good faith any comments on the draft Scope of Work that Plaintiffs, NJDEP and/or NYSDEC submit to Defendants, provided such comments are submitted within fourteen (14) days of the commenter's receipt of the draft Scope of Work (or within a longer period of time at the discretion of Defendants). Defendants shall retain ultimate discretion as to incorporation of any specific revisions proposed by the commenters into the final Scope of Work. Defendants shall provide a copy of the final Scope of Work to Plaintiffs, NJDEP and NYSDEC prior to initiating the NFTTSS Pilot Study. No later than two (2) months after approving the final Scope of Work, Defendants shall provide to Plaintiffs a written response to any comments that Plaintiffs, NJDEP and/or NYSDEC timely submitted on the draft Scope of Work.

4. Defendants shall provide access to at least one qualified technical expert, as designated by Plaintiffs, to observe the field work for the NFTTSS Pilot Study. The number of additional personnel permitted to observe field work may be limited in the discretion of the Defendants due to health and safety conditions.
5. The NFTTSS Pilot Study shall take place during dredging of non-HARS suitable materials from an area within the S-NB-1 "narrow channel" contract area that is subject to moderate to high current velocities characteristic of tidal flows in the main Newark Bay channel reaches. Measurements shall be taken at a range of conditions in the tidal cycle.
6. Defendants shall request any FCD/WQCs from appropriate State regulatory agencies that may be necessary to conduct the NFTTSS Pilot Study.
7. Following the completion of the field work described in paragraphs 1 and 2 of this



Appendix, Defendants shall prepare a technical report (the “NFTTSS Pilot Study Report”) that:

- a. addresses each of the issues set forth in paragraphs 2.a and 2.b of this Appendix;
  - b. analyzes the feasibility of applying the pilot-tested configuration of optical and acoustic backscatter instrumentation and data collection capability or a refinement thereof to future HDP activities within the NBSA and the anticipated efficacy of such pilot-tested measures to assist in minimizing dredging-induced sediment resuspension during such dredging activities;
  - c. presents all measured optical and acoustic backscatter levels, with corresponding information describing, for each measurement, the location in the NBSA where it was taken, the date and time when it was taken, and the type of instrument used; and
  - d. presents all gravimetric water sample calibration data collected to generate the data set used to establish a relationship among optical backscatter measurements, acoustic backscatter measurements, and TSS concentrations. These calibration data are distinct from instrumentation calibration that are performed by the manufacturer.
8. Defendants shall complete the NFTTSS Pilot Study Report prior to submitting a request for an amendment to an FCD/WQC to support exercising of any of the Contract Option Areas defined in paragraph 8 of this Stipulation and Order. If Defendants complete the NFTTSS Pilot Study Report prior to applying for an FCD/WQC for contract area S-NB-2,

AK-1, AK-2 or AK-3 of the HDP as defined in the Final EA, then Defendants shall not be required to apply for an amendment to the FCD/WQC for that contract, as set forth in paragraphs 8 and 9 of this Stipulation and Order.

9. Prior to finalizing the NFTTSS Pilot Study Report, Defendants shall circulate a draft NFTTSS Pilot Study Report to Plaintiffs, NJDEP and NYSDEC for comment.  
  
Defendants shall consider in good faith any comments on the draft submitted by Plaintiffs, NJDEP and/or NYSDEC, provided that such comments are submitted within twenty-one (21) days of the commenter's receipt of the draft NFTTSS Pilot Study Report (or within a longer period of time at the discretion of Defendants). Defendants shall retain ultimate discretion as to incorporation of any specific revisions proposed by the commenters into the final NFTTSS Pilot Study Report.
10. Defendants shall in good faith consider the results of the NFTTSS Pilot Study Report in the preparation of any specifications for and any determination to proceed with any HDP dredging contract or contract option for work within the NBSA that is awarded subsequent to completion of that Report.
11. Promptly upon completion of the final NFTTSS Pilot Study Report, Defendants shall provide a copy of that Report to Plaintiffs, NJDEP, NYSDEC, and USEPA, and shall make the Report available to members of the public upon request. No later than two months after completing the final NFTTSS Pilot Study Report, Defendants shall provide to Plaintiffs a written response to any comments that Plaintiffs, NJDEP and/or NYSDEC had timely submitted to Defendants on the draft NFTTSS Pilot Study Report.

## **Appendix B: Stratified Sampling Project**

1. The Defendants shall, consistent with United States Army Corps of Engineers Safety and Health Regulations EM 385-1-1, conduct a stratified sampling project in HDP contract areas within the NBSA commenced after S-NB-1, to collect approximately 22 sediment cores and to conduct chemical analysis of such cores as set forth below.
2. The cores shall be located within the footprint of the HDP contract areas within the NBSA that are scheduled to be commenced after the start of work on contract S-NB-1. The cores shall be located within the channel side slopes and/or other areas not previously dredged, into which the Corps plans to widen the existing channels, except that cores taken in the South Elizabeth Channel may also be taken within the footprint of the existing channel bottom. The cores shall be located in areas where there are likely to be relatively thick sediment deposits from the past 70 years, as identified in the Geomorphological Report. The cores shall be taken to a depth of the Holocene refusal or to the depth that the above-referenced report identifies as the lowest point at which the sediment-water interface may have been located at any time since 1934, whichever is shallower.
3. Defendants shall coordinate with USEPA to identify the exact locations and number of cores. Prior to taking core samples, Defendants shall prepare and provide to Plaintiffs, NJDEP and NYSDEC a draft map of all proposed core locations, including geographic coordinates and an estimate of the expected depth of each core. Defendants shall consider in good faith any comments on the draft map that Plaintiffs, NJDEP and/or

NYSDEC submit to Defendants, provided that such comments are submitted within fourteen (14) days of the commenter's receipt of the draft map (or within a longer period of time at the discretion of Defendants). Defendants shall retain ultimate discretion as to incorporation of any specific revisions proposed by the commenters into the final map of sampling locations. Prior to initiating the sampling, Defendants shall provide to Plaintiffs, NJDEP and NYSDEC a map of the final selected core locations, including geographic coordinates and an estimate of the expected depth of each core. No later than one (1) month after approving the final map, Defendants shall provide to Plaintiffs a written response to any comments that Plaintiffs, NJDEP and/or NYSDEC timely submitted on the draft map of proposed core locations.

4. The cores shall be segmented for stratified chemical analysis in the same manner as sediment cores are segmented for analysis in the NBSA RI/FS.
5. Except as provided in paragraph 4 herein, the chemical analysis shall include the same set of chemical analytes and method as the Corps uses in its upland placement testing program, pursuant to the New Jersey upland placement testing protocols (NJDEP, October, 1997) for sediment dredged from the New York/New Jersey Harbor.
6. Following completion of the work described in paragraphs 1-5 herein, Defendants shall prepare a technical report (the "Stratified Sampling Report") setting forth the results of the chemical analysis and evaluation of the data yielded from the sampling. Promptly upon completion of the Stratified Sampling Report, Defendants shall provide a copy of the Report to USEPA, Plaintiffs, NJDEP and NYSDEC, and shall make the Report

available to members of the public upon request.

7. Defendants shall complete the Stratified Sampling Report prior to submitting a request for an amendment to an FCD/WQC to support exercising of any of the Contract Option Areas defined in paragraph 8 of this Stipulation and Order. If Defendants complete the Stratified Sampling Report prior to applying for an FCD/WQC for contract area S-NB-2, AK-1, AK-2 or AK-3 of the HDP as defined in the Final EA, then Defendants shall not be required to apply for an amendment to the FCD/WQC for that contract, as set forth in paragraphs 8 and 9 of this Stipulation and Order.
8. Defendants shall in good faith consider the results of the Stratified Sampling Report in the preparation of any specifications for, and any determination to proceed with, any HDP contract or contract option for work within the NBSA that is awarded subsequent to completion of the Report.