

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY REGION 4

IN THE MATTER OF

Great Lakes Dredge & Dock Company, LLC

Docket No. MPRSA-04-2019-7500

Respondent.

Proceeding Pursuant to § 105(a) of the Marine
Protection, Research and Sanctuaries Act,
33 U.S.C. § 1415(a)

BUSINESS CONFIDENTIALITY ASSERTED

The exhibits submitted with Respondent's Initial Prehearing Exchange contain material claimed to be confidential business information (CBI) pursuant to 40 C.F.R. § 2.203(b). The material claimed as CBI are Respondent's Exhibits RX1-80 (excluding RX80(R)), RX84, RX86, RX90, RX95-97, RX100-103, RX105-114, RX116. These exhibits include information considered confidential by Great Lakes Dredge & Dock Co, LLC and are therefore omitted in the e-filed version and further filed under seal pursuant to 40 C.F.R. § 22.5(d).

The prehearing exchange, omitting exhibits containing CBI and PPI, has been e-filed with the Court. The complete set has been mailed, via USPS, to the Headquarters Hearing Clerk. A complete set has been provided to Respondent via Dropbox as agreed to by the parties. If you have any questions, please contact Neal McAliley at 305-530-4039 or at nmcailley@carltonfields.com.

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RESPONDENT'S PREHEARING EXCHANGE

Respondent Great Lakes Dredge & Dock Co., LLC ("Great Lakes"), by and through undersigned counsel, hereby submits its Prehearing Exchange as provided in the Tribunal's Order Lifting Stay and Resetting Prehearing Deadlines dated May 28, 2020 ("Prehearing Order"). The information provided herein tracks the organization of the Prehearing Order.

1(A) Potential Witnesses

1. Christopher Pomfret. Mr. Pomfret was the project manager for Great Lakes on the Port of Miami Project. Mr. Pomfret would testify regarding the project requirements relevant to this matter; the alleged violations identified in Region 4's Complaint; compliance information; evidentiary foundations for exhibits; and penalty considerations. Mr. Pomfret would testify as a fact witness.

2. Russell Zimmerman. Mr. Zimmerman was Vice President and Project Sponsor for Great Lakes on the Port of Miami Project. Mr. Zimmerman would testify regarding general aspects of the project, project solicitation, contract requirements, compliance information, performance evaluation, evidentiary foundations for exhibits, and penalty considerations. Mr. Zimmerman would testify as a fact witness.

3. Andrew Larkin. Mr. Larkin is Mechanical Dredge Fleet Manager for Great Lakes. Mr. Larkin would testify regarding the design and operation of dredge scows, design and functioning of sensors, interpretation of sensor data, compliance information, and penalty considerations. Mr. Larkin would testify both as a fact witness and as an expert witness.

4. Brian Goetchius. Mr. Goetchius is Maintenance Manager Mechanical Fleet for Great Lakes. Mr. Goetchius would testify about the design and operation of dredge scows, design and function of sensors, and penalty considerations. Mr. Goetchius would testify as a fact witness.

5. Timothy Burke. Mr. Burke is Purchasing Agent and Marine Logistics Manager for Great Lakes. Mr. Burke would testify regarding the procurement of tug services on the project and Great Lakes' relationship with tug companies. Mr. Burke would testify as a fact witness.

6. Armand Riehl. Mr. Riehl is Project Manager on the Port of Jacksonville Project for Great Lakes. Mr. Riehl would testify as a fact witness regarding compliance issues on the Jacksonville Project identified by Region 4 in its Prehearing Exchange.

7. Matthew Paladino. Mr. Paladino is the Senior Quality Systems Engineer for Great Lakes on the Port of Charleston Project. Mr. Paladino would testify as a fact witness regarding the compliance issues on the Charleston project identified by Region 4 in its Prehearing Exchange.

8. John Huit. Mr. Huit was Project Manager for Great Lakes on the King's Bay Entrance Channel project. Mr. Huit would testify as a fact witness regarding the compliance issues on the Kings Bay project identified by Region 4 in its Prehearing Exchange.

9. Respondent adopts as its own witnesses all of the individuals identified as witnesses in Region 4's Prehearing Exchange.

1(B) Documents and Exhibits

Great Lakes' Exhibit List is attached to this Prehearing Exchange. Each exhibit is labeled as prescribed in the Prehearing Order.

1(C) Time Needed to Present Case

Great Lakes estimates that it will need approximately three days to present its case. The services of an interpreter will not be needed.

3(A) Denials in the Answer

Documents supporting Great Lakes' denials made in its Answer are included in the Exhibit List.

3(B) Defenses

Documents supporting the defenses set forth in Great Lakes' Answer are included in the Exhibit List. Great Lakes provides the following further explanation of its defenses, which it will supplement at the hearing in this matter.

1. EPA Lacks Authority to Assess Civil Penalties Based on Alleged Violations of Great Lakes' Contract with the U.S. Army Corps of Engineers ("Corps") or the Site Management and Monitoring Plan for the Miami Ocean Dredged Material Disposal Site ("Site Plan"). The civil penalty provision of the MPRSA, 33 U.S.C. § 1415(a), provides that EPA may seek to assess civil penalties against "[a]ny person who violates any provision of this subchapter, or of the regulations promulgated under this subchapter, or a permit issued under this subchapter." The MPRSA does not authorize EPA to assess civil penalties for violation of a contract or a Site Plan. This defense is addressed in greater detail in Great Lakes' submissions related to its Motion to Dismiss.

2. EPA Lacks Authority to Enforce the Terms of the Corps' Contract. Great Lakes conducted dredging activities on the Port of Miami project pursuant to a contract with the Corps. EPA was not a party to that contract. As a nonparty, EPA lacks standing and/or authority to enforce the terms of that contract.

3. Great Lakes Did Not Commit the Violations Alleged in the Complaint. The civil penalty provision of the MPRSA, 33 U.S.C. § 1415(a), provides that EPA may assess civil penalties against "[a]ny person who violates any provision of this subchapter, or of the regulations promulgated under this subchapter, or a permit issued under this subchapter." Great Lakes generally contests that it committed all of the violations alleged in the complaint, and intends to hold EPA to its proof at the hearing. At least some of the alleged violations were committed (if at all) by third parties, such as tug captains who worked as third-party independent contractors. For instance, alleged violations that are based on piloting decisions by tug captains in the maneuvering of dredge scows (e.g., certain violations identified in tables 2, 3 and 5 of the

Complaint) were not committed by Great Lakes or proximately caused by actions of Great Lakes. In addition, the alleged violations identified in table 4 of the Complaint (reporting) were not Great Lakes' responsibility, as the Corps directed Great Lakes to report potential violations only to the Corps, and the Corps was responsible for reporting to EPA.

4. EPA Is Estopped from Claiming "Draft Loss" Violations Contrary to the Corps' Application of its Contract. The Corps construed its contract with Great Lakes to prohibit "draft loss" of greater than 1.0 feet, measured from the dredging area to the disposal area. The Corps is in the best position to interpret its own contract and the project requirements applicable to its contractors. EPA accepted the Corps' construction of the contract during the course of the Port of Miami Project. Great Lakes relied upon the Corps' construction of the contract, and it would be inequitable for EPA to interpret the contract differently now.

5. EPA Cannot Assess Penalties for Alleged Violations Caused by Protection of Life at Sea. The MPRSA provides at 33 U.S.C. § 1415(h) that "[n]o person shall be subject to a civil penalty ... for dumping materials from a vessel if such materials are dumped in an emergency to safeguard life at sea." Some of the alleged violations identified in the complaint (e.g., DQM Load No. 112 and violations in table 2) resulted from actions by Great Lakes to safeguard life at sea. For instance, in table 2 the complaint alleges that dredge scows left the Miami ODMDS with a sensor indicating that the scow hulls were open. In many of these cases, tug crews could have prevented this only by boarding the unmanned scows at sea and resetting scow mechanical systems, but did not do so because it is extremely dangerous and risks the life of the person attempting to board the dredge scow. The alleged violations therefore were proximately caused by tug crews prioritizing safety concerns and safeguarding life at sea.

6. Great Lakes Substantially Complied with Project Requirements. The Port of Miami Project lasted nearly two years, and involved approximately 4,215 trips by dredge scows and additional trips by hopper dredges to the Miami ODMDS involving the disposal of over five million cubic yards of dredged material. The complaint identifies approximately 84 trips by dredge scows and hopper dredges that allegedly involved a violation. Even if those trips did involve violations of requirements enforceable by EPA in this proceeding, they represent less than 2% of the total number of scow trips. The Corps determined at the end of the project that Great Lakes did a very good job ensuring compliance with the requirements of the project.

7. The Site Plan Incorporates a 0.5 Foot Margin of Error in the Measurement of Draft Loss. The Site Plan and contract provide that vertical (draft) sensor data shall have an accuracy of plus/minus 0.5 foot. This provides an allowable margin of error for sensor readings used to determine compliance with the draft loss requirement. Region 4 cannot assess civil penalties for draft loss violations based on sensor data within this margin of error.

3(C) Factual Information and Documents Relevant to Assessment of Penalty

In its Initial Prehearing Exchange, Region 4 did not articulate any specific factual information relevant to the assessment of a penalty in this case, but rather made a general reference to certain of its hearing exhibits. Nowhere has EPA explained why the maximum civil penalty of \$75,000 is warranted for each of the 95 alleged violations in this case. Consistent with Region 4's disclosure, Great Lakes is providing documentation as identified on its exhibit list relevant to the assessment of a penalty. To the extent that EPA seeks to shift of the burden of proof on the issue of penalties to Great Lakes, i.e., to require Great Lakes to prove why it should not be penalized as opposed to EPA proving why it should, Great Lakes objects on grounds that this purported burden shifting is not authorized by and is inconsistent with the MPRSA and runs afoul of general notions of due process and fundamental fairness in a government-initiated legal proceeding. The EPA brought this case against Great Lakes, and it must carry its burden of proving the alleged substantive violations as well its theory of damages and penalties.

3(D) Narrative Statement Regarding Reduction or Elimination of Penalty

The MPRSA civil penalty statute, 33 U.S.C. § 1415(a), provides that “[i]n determining the amount of the penalty, the gravity of the violation, prior violations, and the demonstrated good faith of the person charged in attempting to achieve rapid compliance after notification of a violation shall be considered by [EPA].” Those factors weigh against imposing any significant penalty against Great Lakes, for several reasons.

1. Great Lakes did not commit a large percentage of the violations alleged in the complaint, which will be the subject of the hearing.

2. Great Lakes did not intentionally, knowingly or negligently commit any violations, except for those that may have resulted from decisions to safeguard of life at sea. Instead, Great Lakes took significant steps to avoid the potential for violations, including by thoroughly checking and inspecting dredge scows before each load was transited to the release zone, training tug captains on the Corps’ project requirements, and conducting regular maintenance on project equipment. Any violations occurred despite Great Lakes’ best efforts to avoid them.

3. Some of the violations resulted from environmentally protective measures required by the Corps. Early in the project, concerns were raised by environmental agencies and third parties (including, upon information and belief, the EPA) that normal procedures for loading dredge scows at the point of dredging were contributing to unwanted siltation of nearby environmental resources. The Corps, in consultation with Great Lakes, decided to reduce and/or eliminate direct overflow and decanting of dredge scows at the point of loading. This resulted in scows carrying a higher percentage of water in their trips to the Miami ODMDS, and required many more scow trips than otherwise would have been necessary, which likely caused many of the alleged “draft loss” violations in table 1 because water in the dredge scows can leak more readily than dredged material. It would be unfair to now penalize Great Lakes for taking this environmentally-responsible action directed by the Corps.

4. When violations did occur, Great Lakes immediately acted to determine the cause of the violations and take steps to prevent their recurrence.

5. There was no environmental harm resulting from any of the alleged violations identified in the complaint. The total amount of dredged material that may have escaped the scows outside the Miami ODMDS was very small in both aggregate terms and in terms of the scale of the project. Any dredged material that did escape from the scows as a result of the violations alleged in the Complaint did so away from coral reefs and any other sensitive environmental resources. None of the material was unsuitable for ocean disposal or toxic. Region 4 cannot prove that any environmental harm resulted from these alleged violations.

6. The total number of trips with alleged violations (approximately 84 trips to the Miami ODMS) is very small in the context of the total project (more than 4,376 trips overall by dredge scows and the hopper dredge Terrapin Island). Over five million cubic yards of dredged material were taken to the Miami ODMDS in the Port of Miami project.

7. Great Lakes worked closely with the Corps on the project, and made decisions only with the knowledge and support of that agency. With regard to reporting, the Corps received sensor data from the scow loads as soon as QA/QC data was available, and Great Lakes provided follow-up information to the Corps as required. The Corps concluded at the end of the project that Great Lakes did an excellent job of complying with environmental requirements in the context of a difficult project.

8. Great Lakes received no benefit from the alleged violations. Instead, the Corps reduced its payments to Great Lakes for certain errors, and Great Lakes otherwise has spent enormous time and resources responding to allegations of fault.

9. Great Lakes has been in existence since 1890, and is the largest dredging company in the United States. Dredging involves the transport of large amounts of material to offshore disposal sites, and as the Corps itself has acknowledged, dredge scows inherently have

the potential to leak. By the sheer volume of projects conducted by Great Lakes over the last century, Region 4 can identify other instances where there were alleged violations, but in the context of the amount of dredging that occurred, the number of those alleged violations is small. Even taken in isolation, those other projects do not demonstrate a pattern of violations by Great Lakes. In fact, the opposite is true. Great Lakes' history of successful dredging projects and environmental compliance is demonstrated by the miniscule numbers of incidents or alleged violations identified by Region 4 in other dredging projects. In particular:

a. The Port of Oakland Project. This project occurred in the 1980s, and the violations involved only a few loads that would be comparable to the violations alleged in this case. The Administrative Law Judge concluded after trial that the violations were minor, and did not warrant major penalties, only to be overturned by the Environmental Appeals Board on legal grounds.

b. The Mayport (Jacksonville) Project. This project occurred in the early 2010s, and the alleged violations primarily consisted of tug captains driving the scows in excess of project speed limits and are unrelated to any of the alleged violations in this action. EPA has presented no evidence regarding these violations. The Consent Order provided by EPA specifically provides that the agency cannot use it to establish a violation, and to the extent that Region 4 seeks to use it for that impermissible purpose in this case, Region 4 is breaching the agreement.

c. The Jacksonville Project, Charleston, and King's Bay Entrance Channel Projects. These projects either are ongoing or were recently completed. Region 4 has identified only a small number of incidents or problematic scow or hopper dredge trips, it is not clear that these constituted violations, and the numbers of incidents or problematic trips on these projects are very small in the context of the overall projects.

10. Imposition of any significant penalty in this matter would simply be punitive, and would not serve the goals of penalty assessment. The primary goal of penalty assessment should be to encourage persons to fully comply with applicable legal requirements. None of the alleged violations were knowing or intentional (other than those necessary to safeguard life at sea); Great Lakes took significant efforts to prevent them from happening; and Region 4 has not identified any specific action that Great Lakes could have taken that would have prevented them. In this circumstance, imposing any civil penalty would serve no purpose other than to punish Great Lakes.

Dated: July 31, 2020

Respectfully Submitted,

/s/ Neal McAilely

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*Counsel for Respondent Great Lakes
Dredge & Dock Co., LLC*

CERTIFICATE OF SERVICE

I hereby certify that a copy of this document was sent by e-mail on July 31, 2020 to Natalie Beckwith, Office of Regional Counsel, U.S. Environmental Protection Agency, Region 4, 61 Forsyth St., SW, Atlanta, Georgia 30303.

Redacted:
OALJ E-Filing System

Unredacted:
Mary Angeles, Headquarters Clerk
U.S. Environmental Protection Agency
Office of Administrative Law Judges
Ronald Reagan Building, Room M1200
1300 Pennsylvania Ave., N.W.
Washington DC 20004

Unredacted via Dropbox as agreed to by the parties:
beckwith.natalie@epa.gov
nagrani.kavita@epa.gov

A handwritten signature in blue ink that reads "David Chee". The signature is written in a cursive, flowing style.

David Chee

.Docket No. MPRSA-04-2019-7500

Exhibit RX 00

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Exhibit RX 00 – Index of Exhibits

Exhibit Number		Description	Confidential Status
RX 00		Index of Exhibits	
RX 1: Exhibits Related to Load GLDD 80/DQM 31			
	RX 1 (A)	Corps Email for Load GLDD 80/DQM 31	CBI
	RX 1 (B)	ADISS Pages for Load GLDD 80/DQM 31	CBI
	RX 1 (C)	Draft Plot for Load GLDD 80/DQM 31	CBI
RX 2: Exhibits Related to Load GLDD 83/DQM 41			
	RX 2 (A)	Corps Email for Load GLDD 83/DQM 41	CBI
	RX 2 (B)	ADISS Pages for Load GLDD 83/DQM 41	CBI
	RX 2 (C)	Draft Plot for Load GLDD 83/DQM 41	CBI
	RX 2 (D)	Pre-Loading Checklist for Load GLDD 83/DQM 41	CBI
RX 3: Exhibits Related to Load GLDD 117/DQM 49			
	RX 3 (A)	Corps Email for Load GLDD 117/DQM 49	CBI

Exhibit Number		Description	Confidential Status
	RX 3 (B)	ADISS Pages for Load GLDD 117/DQM 49	CBI
	RX 3 (C)	Checklists for Load GLDD 117/DQM 49	CBI
RX 4: Exhibits Related to Load GLDD 124/DQM 52			
	RX 4 (A)	Corps Email for Load GLDD 124/DQM 52	CBI
	RX 4 (B)	ADISS Pages for Load GLDD 124/DQM 52	CBI
	RX 4 (C)	Draft Plot for Load GLDD 124/DQM 52	CBI
	RX 4 (D)	Checklists for Load GLDD 125/DQM 52	CBI
RX 5: Exhibits Related to Load GLDD 134/DQM 53			
	RX 5 (A)	Corps Email for Load GLDD 134/DQM 53	CBI
	RX 5 (B)	ADISS Pages for Load GLDD 134/DQM 53	CBI
	RX 5 (C)	Draft Plot for Load GLDD 134/DQM 53	CBI
	RX 5 (D)	Checklists for Load GLDD 134/DQM 53	CBI
RX 6: Exhibits Related to Load GLDD 140/DQM 55			
	RX 6 (A)	Corps Email for Load GLDD 140/DQM 55	CBI
	RX 6 (B)	ADISS Pages for Load GLDD 140/DQM 55	CBI
	RX 6 (C)	Draft Plot for Load GLDD 140/DQM 55	CBI

Exhibit Number		Description	Confidential Status
	RX 6 (D)	Post-Loading Checklist for GLDD 140/DQM 55	CBI
RX 7: Exhibits Related to Load GLDD 142/DQM 65			
	RX 7 (A)	Corps Email for Load GLDD 142/DQM 65	CBI
	RX 7 (B)	ADISS Pages for Load GLDD 142/DQM 65	CBI
	RX 7 (C)	Draft Plot for Load GLDD 142/DQM 65	CBI
	RX 7 (D)	Checklists for Load GLDD 142/DQM 65	CBI
RX 8: Exhibits Related to Load GLDD 151/DQM 27			
	RX 8 (A)	Corps Email for Load GLDD 151/DQM 27	CBI
	RX 8 (B)	ADISS Pages for Load GLDD 151/DQM 27	CBI
	RX 8 (C)	Draft Plot for Load GLDD 151/DQM 27	CBI
	RX 8 (D)	Checklists for Load GLDD 151/DQM 27	CBI
RX 9: Exhibits Related to Load GLDD 194/DQM 88			
	RX 9 (A)	Corps Email for Load GLDD 194/DQM 88	CBI
	RX 9 (B)	ADISS Pages for Load GLDD 194/DQM 88	CBI
	RX 9 (C)	Draft Plot for Load GLDD 194/DQM 88	CBI
	RX 9 (D)	Checklists for Load GLDD 194/DQM 88	CBI
RX 10: Exhibits Related to Load GLDD 205/DQM 93			

Exhibit Number		Description	Confidential Status
	RX 10 (A)	Corps Email for Load GLDD 205/DQM 93	CBI
	RX 10 (B)	ADISS Pages for Load GLDD 205/DQM 93	CBI
	RX 10 (C)	Draft Plot for Load GLDD 205/DQM 93	CBI
	RX 10 (D)	Checklists and Photo for Load GLDD 205/DQM 93	CBI
RX 11: Exhibits Related to Load GLDD 209/DQM 60			
	RX 11 (A)	Corps Email for Load GLDD 209/DQM 60	CBI
	RX 11 (B)	ADISS Pages for Load GLDD 209/DQM 60	CBI
	RX 11 (C)	Checklists for Load GLDD 209/DQM 60	CBI
RX 12: Exhibits Related to Load GLDD 226/DQM 67			
	RX 12 (A)	Corps Email for Load GLDD 226/DQM 67	CBI
	RX 12 (B)	ADISS Pages for Load GLDD 226/DQM 67	CBI
	RX 12 (C)	Draft Plot for Load GLDD 226/DQM 67	CBI
	RX 12 (D)	Checklists and Photo for Load GLDD 226/DQM 67	CBI
RX 13: Exhibits Related to Load GLDD 290/DQM 57			
	RX 13 (A)	Corps Email for Load GLDD 290/DQM 57	CBI
	RX 13 (B)	Draft Plot for Load GLDD 290/DQM 57	CBI
	RX 13 (C)	Checklists and Photo for Load GLDD 290/DQM 57	CBI

Exhibit Number		Description	Confidential Status
RX 14: Exhibits Related to Load GLDD 340/DQM 18			
	RX 14 (A)	Corps Email for Load GLDD 340/DQM 18	CBI
	RX 14 (B)	Draft Plot for Load GLDD 340/DQM 18	CBI
RX 15: Exhibits Related to Load GLDD 344/DQM 19			
	RX 16 (A)	Corps Email for Load GLDD 344/DQM 19	CBI
	RX 16 (B)	Draft Plot for Load GLDD 344/DQM 19	CBI
RX 16: Exhibits Related to Load GLDD 407/DQM 78			
	RX 16 (A)	Corps Email for Load GLDD 407/DQM 78	CBI
	RX 16 (B)	ADISS Pages for Load GLDD 407/DQM 78	CBI
	RX 16 (C)	Draft Plot for Load GLDD 407/DQM 78	CBI
	RX 16 (D)	Checklists and Photo for Load GLDD 407/DQM 78	CBI
RX 17: Exhibits Related to Load GLDD 542/DQM 217			
	RX 17 (A)	Corps Email for Load GLDD 542/DQM 217	CBI
	RX 17 (B)	ADISS Pages for Load GLDD 542/DQM 217	CBI
	RX 17 (C)	Draft Plot for Load GLDD 542/DQM 217	CBI
	RX 17 (D)	Checklists and Photo for Load GLDD 542/DQM 217	CBI
RX 18: Exhibits Related to Load GLDD 645/DQM 207			
	RX 18 (A)	Corps Email for Load GLDD 645/DQM 207	CBI

Exhibit Number		Description	Confidential Status
	RX 18 (B)	Draft Plot for Load GLDD 645/DQM 207	CBI
	RX 18 (C)	Checklists for Load GLDD 645/DQM 207	CBI
RX 19: Exhibits Related to Load GLDD 852/DQM 7			
	RX 19 (A)	Corps Email for Load GLDD 852/DQM 7	CBI
	RX 19 (B)	ADISS Pages for Load GLDD 852/DQM 7	CBI
	RX 19 (C)	Draft Plot for GLDD 852/DQM 7	CBI
	RX 19 (D)	Checklists and Photo for Load GLDD 852/DQM 7	CBI
RX 20: Exhibits Related to Load GLDD 984/DQM 267			
	RX 20 (A)	Corps Email for Load GLDD 984/DQM 267	CBI
	RX 20 (B)	ADISS Pages for Load GLDD 984/DQM 267	CBI
	RX 20 (C)	Draft Plot for Load GLDD 984/DQM 267	CBI
	RX 20 (D)	Checklists and Photo for Load GLDD 984/267	CBI
RX 21: Exhibits Related to Load GLDD 1012/DQM 8			
	RX 21 (A)	Corps Email for Load GLDD 1012/DQM 8	CBI
	RX 21 (B)	ADISS Pages for Load GLDD 1012/DQM 8	CBI
	RX 21 (C)	Checklists and Photo for Load GLDD 1012/DQM 8	CBI
RX 22: Exhibits Related to Load GLDD 1212/DQM 282			

Exhibit Number		Description	Confidential Status
	RX 22 (A)	Corps Email for Load GLDD 1212/DQM 282	CBI
	RX 22 (B)	ADISS Pages for Load GLDD 1212/DQM 282	CBI
	RX 22 (C)	Draft Plot for Load GLDD 1212/DQM 282	CBI
	RX 22 (D)	Checklists and Photo for Load GLDD 1212/DQM 282	CBI
RX 23: Exhibits Related to Load GLDD 1334/DQM 312			
	RX 23 (A)	Corps Email for Load GLDD 1334/DQM 312	CBI
	RX 23 (B)	ADISS Pages for Load GLDD 1334/DQM 312	CBI
	RX 23 (C)	Draft Plot for GLDD 1334/DQM 312	CBI
	RX 23 (D)	Checklists and Photo for Load GLDD 1334/DQM 312	CBI
RX 24: Exhibits Related to Load GLDD 1439/DQM 334			
	RX 24 (A)	Corps Email for Load GLDD 1439/DQM 334	CBI
	RX 24 (B)	ADISS Pages for Load GLDD 1439/DQM 334	CBI
	RX 24 (C)	Draft Plot for GLDD 1439/DQM 334	CBI
	RX 24 (D)	Checklists and Photo for Load GLDD 1439/DQM 334	CBI
RX 25: Exhibits Related to Load GLDD 1441/DQM 25			
	RX 25 (A)	Corps Email for Load GLDD 1441/DQM 25	CBI
	RX 25 (B)	ADISS Pages for Load GLDD 1441/DQM 25	CBI

Exhibit Number		Description	Confidential Status
	RX 25 (C)	Draft Plot for Load GLDD 1439/DQM 334	CBI
	RX 26 (D)	Checklists and Photo for Load GLDD 1441/DQM 25	CBI
RX 26: Exhibits Related to Load GLDD 1538/DQM 458			
	RX 26 (A)	Corps Email for Load GLDD 1538/DQM 458	CBI
	RX 26 (B)	ADISS Pages for Load GLDD 1538/DQM 458	CBI
	RX 26 (C)	Draft Plot for Load GLDD 1538/DQM 458	CBI
	RX 26 (D)	Checklists and Photo for Load GLDD 1538/DQM 458	CBI
RX 27: Exhibits Related to Load GLDD 1549/DQM 407			
	RX 27 (A)	Corps Email for Load GLDD 1549/DQM 407	CBI
	RX 27 (B)	ADISS Pages for Load GLDD 1549/DQM 407	CBI
	RX 27 (C)	Draft Plot for GLDD 1549/DQM 407	CBI
	RX 27 (D)	Checklists and Photo for Load GLDD 1549/DQM 407	CBI
RX 28: Exhibits Related to Load GLDD 1562/DQM 467			
	RX 28 (A)	Corps Email for Load GLDD 1562/DQM 467	CBI
	RX 28 (B)	ADISS Pages for Load GLDD 1562/DQM 467	CBI
	RX 28 (C)	Draft Plot for GLDD 1562/DQM 467	CBI
	RX 28 (D)	Checklists and Photo for Load GLDD 1562/DQM 467	CBI

Exhibit Number		Description	Confidential Status
RX 29: Exhibits Related to Load GLDD 1569/DQM 470			
	RX 29 (A)	ADISS Pages for Load GLDD 1569/DQM 470	CBI
	RX 29 (B)	Draft Plot for Load GLDD 1569/DQM 470	CBI
	RX 29 (C)	Checklists and Photo for Load GLDD 1569/DQM 470	CBI
RX 30: Exhibits Related to Load GLDD 1570/DQM 366			
	RX 30 (A)	Corps Email for Load GLDD 1570/DQM 366	CBI
	RX 30 (B)	ADISS Pages for Load GLDD 1570/DQM 366	CBI
	RX 30 (C)	Draft Plot for Load GLDD 1570/DQM 366	CBI
	RX 30 (D)	Checklists and Photo for Load GLDD 1570/DQM 366	CBI
RX 31: Exhibits Related to Load GLDD 1580/DQM 411			
	RX 31 (A)	Corps Email for Load GLDD 1580/DQM 411	CBI
	RX 31 (B)	ADISS Pages for Load GLDD 1580/DQM 411	CBI
	RX 31 (C)	Checklists and Photo for Load GLDD 1580/DQM 411	CBI
RX 32: Exhibits Related to Load GLDD 1607/DQM 29			
	RX 32 (A)	Corps Email for Load GLDD 1607/DQM 29	CBI
	RX 32 (B)	ADISS Pages for Load GLDD 1607/DQM 29	CBI
	RX 32 (C)	Draft Plot for GLDD 1607/DQM 29	CBI

Exhibit Number		Description	Confidential Status
	RX 32 (D)	Checklists and Photo for Load GLDD 1607/DQM 29	CBI
RX 33: Exhibits Related to Load GLDD 1611/DQM 30			
	RX 33 (A)	Corps Email for Load GLDD 1611/DQM 30	CBI
	RX 33 (B)	ADISS Pages for Load GLDD 1611/DQM 30	CBI
	RX 33 (C)	Draft Plot for Load GLDD 1611/DQM 30	CBI
	RX 33 (D)	Checklists and Photo for Load GLDD 1611/DQM 30	CBI
RX 34: Exhibits Related to Load GLDD 1677/DQM 41			
	RX 34 (A)	Corps Email for Load GLDD 1677/DQM 41	CBI
	RX 34 (B)	ADISS Pages for Load GLDD 1677/DQM 41	CBI
	RX 34 (C)	Checklists and Photo for Load GLDD 1677/DQM 41	CBI
RX 35: Exhibits Related to Load GLDD 1696/DQM 47			
	RX 35 (A)	Corps Email for Load GLDD 1696/DQM 47	CBI
	RX 35 (B)	ADISS Pages for Load GLDD 1696/DQM 47	CBI
	RX 35 (C)	Draft Plot for Load GLDD 1696/DQM 47	CBI
	RX 35 (D)	Checklists and Photo for Load GLDD 1696/DQM 47	CBI
RX 36: Exhibits Related to Load GLDD 1725/DQM 411			
	RX 36 (A)	Corps Email for Load GLDD 1725/DQM 411	CBI

Exhibit Number		Description	Confidential Status
	RX 36 (B)	ADISS Pages for Load GLDD 1725/DQM 411	CBI
	RX 36 (C)	Draft Plot for Load GLDD 1725/DQM 411	CBI
	RX 36 (D)	Checklists and Photo for Load GLDD 1725/DQM 411	CBI
RX 37: Exhibits Related to Load GLDD 1791/DQM 429			
	RX 37 (A)	Corps Email for Load GLDD 1791/DQM 429	CBI
	RX 37 (B)	ADISS Pages for Load GLDD 1791/DQM 429	CBI
	RX 37 (C)	Draft Plot for Load GLDD 1791/DQM 429	CBI
	RX 37 (D)	Checklists and Photo for Load GLDD 1791/DQM 429	CBI
RX 38: Exhibits Related to Load GLDD 1832/DQM 356			
	RX 38 (A)	Corps Email for Load GLDD 1832/DQM 356	CBI
	RX 38 (B)	ADISS Pages for Load GLDD 1832/DQM 356	CBI
	RX 38 (C)	Draft Plot for Load GLDD 1832/DQM 356	CBI
	RX 38 (D)	Checklists and Photo for Load GLDD 1832/DQM 356	CBI
RX 39: Exhibits Related to Load GLDD 1875/DQM 367			
	RX 39 (A)	Email for Load GLDD 1875/DQM 367	CBI
	RX 39 (B)	Corps Email for Load GLDD 1875/DQM 367	CBI
	RX 39 (C)	ADISS Pages for Load GLDD 1875/DQM 367	CBI

Exhibit Number		Description	Confidential Status
	RX 39 (D)	Draft Plot for Load GLDD 1875/DQM 367	CBI
	RX 39 (E)	Checklists and Photo for Load 1875/DQM 367	CBI
RX 40: Exhibits Related to Load GLDD 1877/DQM 3			
	RX 40 (A)	ADISS Pages for Load GLDD 1875/DQM 367	CBI
	RX 40 (B)	Draft Plot for Load GLDD 1875/DQM 367	CBI
	RX 40 (C)	Checklists and Photo for Load 1875/DQM 367	CBI
RX 41: Exhibits Related to Load GLDD 1909/DQM 5			
	RX 41 (A)	Corps Email for Load GLDD 1909/DQM 5	CBI
	RX 41 (B)	ADISS Pages for Load GLDD 1909/DQM 5	CBI
	RX 41 (C)	Draft Plot for Load GLDD 1909/DQM 5	CBI
	RX 41 (D)	Checklists and Photo for Load GLDD 1909/DQM 5	CBI
RX 42: Exhibits Related to Load GLDD 1925/DQM 502			
	RX 42 (A)	Corps Email for Load GLDD 1925/DQM 502	CBI
	RX 42 (B)	ADISS Pages for Load GLDD 1925/DQM 502	CBI
	RX 42(C)	Checklists and Photo for Load GLDD 1925/DQM 502	CBI
RX 43: Exhibits Related to Load GLDD 1930/DQM 1			
	RX 43 (A)	Corps Email for Load GLDD 1930/DQM 1	CBI

Exhibit Number		Description	Confidential Status
	RX 43 (B)	Draft Plot for Load GLDD 1930/DQM 1	CBI
	RX 43 (C)	Checklists and Photo for Load GLDD 1930/DQM 1	CBI
RX 44: Exhibits Related to Load GLDD 1942/DQM 2			
	RX 44 (A)	Corps Email for Load GLDD 1942/DQM 2	CBI
	RX 44 (B)	ADISS Pages for Load GLDD 1942/DQM 2	CBI
	RX 44 (C)	Draft Plot for Load GLDD 1942/DQM 2	CBI
	RX 44 (D)	Checklists and Photo for Load GLDD 1942/DQM 2	CBI
RX 45: Exhibits Related to Load GLDD 1997/DQM 6			
	RX 45 (A)	Corps Email for Load GLDD 1997/DQM 6	CBI
	RX 45 (B)	ADISS Pages for Load GLDD 1997/DQM 6	CBI
	RX 45 (C)	Draft Plot for Load GLDD 1997/DQM 6	CBI
	RX 45 (D)	Checklists and Photo for Load GLDD 1997/DQM 6	CBI
RX 46: Exhibits Related to Load GLDD 2024/DQM 7			
	RX 46 (A)	Corps Email for Load GLDD 2024/DQM 7	CBI
	RX 46 (B)	ADISS Pages for Load GLDD 2024/DQM 7	CBI
	RX 46 (C)	Draft Plot for Load GLDD 2024/DQM 7	CBI
	RX 46 (D)	Checklists and Photo for Load 2024/DQM 7	CBI

Exhibit Number		Description	Confidential Status
RX 47: Exhibits Related to Load GLDD 2025/DQM 489			
	RX 47 (A)	Email (Wakeman) for Load GLDD 2025/DQM 489	CBI
	RX 47 (B)	Corps Email for Load GLDD 2025/DQM 489	CBI
	RX 47 (C)	ADISS Pages for Load GLDD 2025/DQM 489	CBI
	RX 47 (D)	Draft Plot for Load GLDD 2025/DQM 489	CBI
	RX 47 (E)	Checklists and Photo for Load 2025/DQM 489	CBI
RX 48: Exhibits Related to Load GLDD 2033/DQM 415			
	RX 48 (A)	Corps Email for Load GLDD 2033/DQM 415	CBI
	RX 48 (B)	ADISS Pages for Load GLDD 2033/DQM 415	CBI
	RX 48 (C)	Draft Plot for Load GLDD 2033/DQM 415	CBI
	RX 48 (D)	Checklists for Load 2033/DQM 415	CBI
RX 49: Exhibits Related to Load GLDD 2098/DQM 508			
	RX 49 (A)	Corps Email for Load GLDD 2098/DQM 508	CBI
	RX 49 (B)	ADISS Pages for Load GLDD 2098/DQM 508	CBI
	RX 49 (C)	Draft Plot for Load GLDD 2098/DQM 508	CBI
	RX 49 (D)	Checklists and Photo for Load 2098/DQM 508	CBI
RX 50: Exhibits Related to Load GLDD 2181/DQM 552			

Exhibit Number		Description	Confidential Status
	RX 50 (A)	Corps Email for Load GLDD 2181/DQM 552	CBI
	RX 50 (B)	ADISS Pages for Load GLDD 2181/DQM 552	CBI
	RX 50 (C)	Draft Plot for Load GLDD 2181/DQM 552	CBI
	RX 50 (D)	Checklists and Photo for Load 2181/DQM 552	CBI
RX 51: Exhibits Related to Load GLDD 2262/DQM 545			
	RX 51 (A)	Corps Email for Load GLDD 2262/DQM 545	CBI
	RX 51 (B)	ADISS Pages for Load GLDD 2262/DQM 545	CBI
	RX 51 (C)	Draft Plot for Load GLDD 2262/DQM 545	CBI
	RX 51 (D)	Checklists and Photo for Load 2262/DQM 545	CBI
RX 52: Exhibits Related to Load GLDD 2274/DQM 547			
	RX 52 (A)	Corps Email for Load GLDD 2274/DQM 547	CBI
	RX 52 (B)	ADISS Pages for Load GLDD 2274/DQM 547	CBI
	RX 52 (C)	Draft Plot for Load GLDD 2274/DQM 547	CBI
	RX 52 (D)	Checklists and Photo for Load 2274/DQM 547	CBI
RX 53: Exhibits Related to Load GLDD 2366/DQM 570			
	RX 53 (A)	Corps Email for Load GLDD 2366/DQM 570	CBI
	RX 53 (B)	Email for Load GLDD 2366/DQM 570	CBI

Exhibit Number		Description	Confidential Status
	RX 53 (C)	ADISS Pages for Load GLDD 2366/DQM 570	CBI
	RX 53 (D)	Draft Plot for Load GLDD 2366/DQM 570	CBI
	RX 53 (E)	Checklists and Photo for Load 2366/DQM 570	CBI
RX 54: Exhibits Related to Load GLDD 2561/DQM 536			
	RX 54 (A)	Corps Email for Load GLDD 2561/DQM 536	CBI
	RX 54 (B)	Email for Load GLDD 2561/DQM 536	CBI
	RX 54 (C)	ADISS Pages for Load GLDD 2561/DQM 536	CBI
	RX 54 (D)	Draft Plot for Load GLDD 2561/DQM 536	CBI
	RX 54 (E)	Checklists and Photo for Load 2561/DQM 536	CBI
	RX 54 (F)	Towing Tug Log for Load 2561/DQM 536	CBI
RX 55: Exhibits Related to Load GLDD 2922/DQM 681			
	RX 55 (A)	Email for Load GLDD 2922/DQM 681	CBI
	RX 55 (B)	Email for Load GLDD 2922/DQM 681	CBI
	RX 55 (C)	Corps Email for Load GLDD 2922/DQM 681	CBI
	RX 55 (D)	ADISS Pages 1 for Load GLDD 2922/DQM 681	CBI
	RX 55 (E)	ADISS Pages 2 for Load GLDD 2922/DQM 681	CBI
	RX 55 (F)	Draft Plot for Load GLDD 2922/DQM 681	CBI

Exhibit Number		Description	Confidential Status
RX 56: Exhibits Related to Load GLDD 2926/DQM 621			
	RX 56 (A)	Corps Email for Load GLDD 2926/DQM 621	CBI
	RX 56 (B)	Corps Email for Load GLDD 2926/DQM 621	CBI
	RX 56 (C)	Corps Email for Load GLDD 2926/DQM 621	CBI
	RX 56 (D)	ADISS Pages for Load GLDD 2926/DQM 621	CBI
	RX 56 (E)	Draft Plot for Load GLDD 2926/DQM 621	CBI
	RX 56 (F)	Towing Tug Log for Load 2926/DQM 621	CBI
RX 57: Exhibits Related to Load GLDD 2936/DQM 624			
	RX 57 (A)	Corps Email for Load GLDD 2936/DQM 624	CBI
	RX 57 (B)	Loewe Leidos Email for Load GLDD 2936/DQM 624	CBI
	RX 57 (C)	ADISS Pages for Load GLDD 2936/DQM 624	CBI
	RX 57 (D)	Draft Plot for Load GLDD 2936/DQM 624	CBI
	RX 57 (E)	Photo and Checklists for Load GLDD 2936/DQM 624	CBI
RX 58: Exhibits Related to Load GLDD 3361/DQM 105			
	RX 58 (A)	Corps Email for Load GLDD 3361/DQM 105	CBI
	RX 58 (B)	Draft Plot for Load GLDD 3361/DQM 105	CBI
	RX 58 (C)	Photo and Checklists for Load GLDD 3361/DQM 105	CBI

Exhibit Number		Description	Confidential Status
RX 59: Exhibits Related to Load GLDD 3475/DQM 456			
	RX 59 (A)	Corps Email for Load GLDD 3475/DQM 456	CBI
	RX 59 (B)	ADISS Pages for Load GLDD 3475/DQM 456	CBI
	RX 59 (C)	Draft Plot for Load GLDD 3475/DQM 456	CBI
	RX 59 (D)	Checklists and Photo for Load 3475/DQM 456	CBI
RX 60: Exhibits Related to Load GLDD 3521/DQM 757			
	RX 60 (A)	Corps Email for Load GLDD 3521/DQM 757	CBI
	RX 60 (B)	ADISS Pages for Load GLDD 3521/DQM 757	CBI
	RX 60 (C)	Draft Plot for Load GLDD 3521/DQM 757	CBI
	RX 60 (D)	Photo and Checklists for Load 3521/DQM 757	CBI
RX 61: Exhibits Related to Load GLDD 3570/DQM 762			
	RX 61 (A)	Corps Email for Load GLDD 3570/DQM 762	CBI
	RX 61 (B)	Corps Email for Load GLDD 3570/DQM 762	CBI
	RX 61 (C)	ADISS Pages for Load GLDD 3570/DQM 762	CBI
	RX 61 (D)	Draft Plot for Load GLDD 3570/DQM 762	CBI
	RX 61 (E)	Photo and Checklists for Load 3570/DQM 762	CBI
RX 62: Exhibits Related to Load GLDD 3625/DQM 69			

Exhibit Number		Description	Confidential Status
	RX 62 (A)	Corps Email for Load GLDD 3625/DQM 69	CBI
	RX 62 (B)	ADISS Pages for Load GLDD 3625/DQM 69	CBI
	RX 62 (C)	Draft Plot for Load GLDD 3625/DQM 69	CBI
	RX 62 (D)	Photo and Checklists for Load 3625/DQM 69	CBI
RX 63: Exhibits Related to Load GLDD 3636/DQM 484			
	RX 63 (A)	5/27/2015 Email String between Corps and EPA re DQM Load 484 (GLDD Load 3636)	CBI
	RX 63 (B)	Corps Email for Load GLDD 3636/DQM 484	CBI
	RX 63 (C)	ADISS Pages for Load GLDD 3636/DQM 484	CBI
	RX 63 (D)	Draft Plot for Load 3636/DQM 484	CBI
	RX 63 (E)	Photo and Checklists for Load 3636/DQM 484	CBI
RX 64: Exhibits Related to Load GLDD 3670/DQM 16			
	RX 64 (A)	Corps Email for Load GLDD 3670/DQM 16	CBI
	RX 64 (B)	ADISS Pages for Load GLDD 3670/DQM 16	CBI
	RX 64 (C)	Draft Plot for Load GLDD 3670/DQM 16	CBI
	RX 64 (D)	Photo and Checklists for Load 3670/DQM 16	CBI
RX 65: Exhibits Related to Load GLDD 3775/DQM 24			

Exhibit Number		Description	Confidential Status
	RX 65 (A)	Corps Email for Load GLDD 3775/DQM 24	CBI
	RX 65 (B)	ADISS Pages for Load GLDD 3775/DQM 24	CBI
	RX 65 (C)	Draft Plot for Load GLDD 3775/DQM 24	CBI
	RX 65 (D)	Photo and Checklists for Load 3775/DQM 24	CBI
RX 66: Exhibits Related to Load GLDD 3918/DQM 898			
	RX 66 (A)	Corps Email for Load GLDD 3918/DQM 898	CBI
	RX 66 (B)	ADISS Pages for Load GLDD 3918/DQM 898	CBI
	RX 66 (C)	Draft Plot for Load GLDD 3918/DQM 898	CBI
	RX 66 (D)	Photo and Checklists for Load 3918/DQM 898	CBI
RX 67: Exhibits Related to Load GLDD 3919/DQM 834			
	RX 67 (A)	Corps Email for Load GLDD 3919/DQM 834	CBI
	RX 67 (B)	ADISS Pages for Load GLDD 3919/DQM 834	CBI
	RX 67 (C)	Draft Plot for Load GLDD 3919/DQM 834	CBI
	RX 67 (D)	Photo and Checklists for Load 3919/DQM 834	CBI
RX 68: Exhibits Related to Load GLDD 3933/DQM 901			
	RX 68 (A)	Corps Email for Load GLDD 3933/DQM 901	CBI
	RX 68 (B)	ADISS Pages for Load GLDD 3933/DQM 901	CBI

Exhibit Number		Description	Confidential Status
	RX 68 (C)	Draft Plot for Load GLDD 3933/DQM 901	CBI
	RX 68 (D)	Photo and Checklists for Load 3933/DQM 901	CBI
RX 69: Exhibits Related to Load GLDD 3968/DQM 846			
	RX 69 (A)	Corps Email for Load GLDD 3968/DQM 846	CBI
	RX 69 (B)	ADISS Pages for Load GLDD 3968/DQM 846	CBI
	RX 69 (C)	Draft Plot for Load GLDD 3968/DQM 846	CBI
	RX 69 (D)	Photo and Checklists for Load 3968/DQM 846	CBI
RX 70: Exhibits Related to Load GLDD 4042/DQM 862			
	RX 70 (A)	Corps Email for Load GLDD 4042/DQM 862	CBI
	RX 70 (B)	ADISS Pages for Load GLDD 4042/DQM 862	CBI
	RX 70 (C)	Draft Plot for Load GLDD 4042/DQM 862	CBI
	RX 70 (D)	Photo and Checklists for Load 4042/DQM 862	CBI
RX 71: Exhibits Related to Load GLDD 4055/DQM 865			
	RX 71 (A)	Corps Email for Load GLDD 4055/DQM 865	CBI
	RX 71 (B)	ADISS Pages for Load GLDD 4055/DQM 865	CBI
	RX 71 (C)	Draft Plot for Load GLDD 4055/DQM 865	CBI
	RX 71 (D)	Photo and Checklists for Load 4055/DQM 865	CBI

Exhibit Number		Description	Confidential Status
RX 72: Exhibits Related to Load GLDD 4060/DQM 868			
	RX 72 (A)	Corps Email for Load GLDD 4060/DQM 868	CBI
	RX 72 (B)	ADISS Pages for Load GLDD 4060/DQM 868	CBI
	RX 72 (C)	Draft Plot for Load GLDD 4060/DQM 868	CBI
	RX 72 (D)	Photo and Checklists for Load 4060/DQM 868	CBI
RX 73: Exhibits Related to Load GLDD 4100/DQM 874			
	RX 73 (A)	Corps Email for Load GLDD 4100/DQM 874	CBI
	RX 73 (B)	Email for Load GLDD 4100/DQM 874	CBI
	RX 73 (C)	ADISS Pages for Load GLDD 4100/DQM 874	CBI
	RX 73 (D)	Photo and Checklists for Load 4100/DQM 874	CBI
RX 74: Exhibits Related to Load GLDD 4101/DQM 876			
	RX 74 (A)	Corps Email for Load GLDD 4101/DQM 876	CBI
	RX 74 (B)	ADISS Pages for Load GLDD 4101/DQM 876	CBI
	RX 74 (C)	Photo for Load 4101/DQM 876	CBI
RX 75: Exhibits Related to Load GLDD 4136/DQM 948			
	RX 75 (A)	Corps Email for Load GLDD 4136/DQM 948	CBI
	RX 75 (B)	ADISS Pages for Load GLDD 4136/DQM 948	CBI
	RX 75 (C)	Draft Plot for Load GLDD 4136/DQM 948	CBI

Exhibit Number		Description	Confidential Status
	RX 75 (D)	Photo and Checklists for Load 4136/DQM 948	CBI
RX 76: Exhibits Related to Load GLDD TI 112/DQM 112			
	RX 76 (A)	Corps Email for Load GLDD TI 112/DQM 112	CBI
RX 77: USACE Performance Evaluations			
	RX 77 (A)	Interim Evaluation for Port of Miami 7/2/13 - 11/30/14	CBI
	RX 77 (B)	Final Evaluation for Port of Miami 12/1/14 - 11/19/15	CBI
	RX 77 (C)	Interim Evaluation for Charleston Project 10/26/17 - 10/25/18	CBI
	RX 77 (D)	Interim Evaluation for Charleston Project 10/26/18 - 10/25/19	CBI
	RX 77 (E)	Interim Evaluation for Jacksonville Project 9/27/18 - 9/26/19	CBI
RX 78: Purchase Orders			
	RX 78 (A)	Purchase Order 656643 (Neptune)	CBI
	RX 78 (B)	Purchase Order 656655 (Coastal Dawn)	CBI
	RX 78 (C)	Purchase Order 656682 (Larry J Herbert)	CBI
	RX 78 (D)	Purchase Order 656739 (Pacific Dawn and Indian Dawn)	CBI
	RX 78 (E)	Purchase Order 657010 (Jack Holland and Ellie J)	CBI

Exhibit Number		Description	Confidential Status
	RX 78 (F)	Purchase Order 657406 (American Patriot - American Marine Corps)	CBI
	RX 78 (G)	Purchase Order 657893 (Kendall J Herbert)	CBI
	RX 78 (H)	Purchase Order 658287 (Colonel)	CBI
	RX 78 (I)	Purchase Order 659278 (Bering Dawn)	CBI
	RX 78 (J)	Purchase Order 659292 (Larry J Herbert)	CBI
	RX 78 (K)	Purchase Order 659371 (Miss Gloria and Mr. Roland)	CBI
	RX 78 (L)	Purchase Order 656553 Allie B	CBI
	RX 78 (M)	Purchase Order 655307 Sarah Dann and Shannon Dann	CBI
RX 79: Drawings and Diagrams			
	RX 79 (A)	General Arrangement Technical Drawing of GL 501 and 502 Series Scow	CBI
	RX 79 (B)	Section Diagram of Linatex Rubber Hopper Seal and Closing Bar Arrangement	CBI
	RX 79 (C)	Technical Drawing of Sealing System Arrangement and Details for 500 Series Scows	CBI
	RX 79 (D)	Dump Scow Hydraulic System Technical Diagram	CBI
	RX 79 (E)	GL-702 Lightship Draft Estimation R1	CBI
RX 80: Photographs			
	RX 80 (A)	Photograph of GL 66 Scow	CBI

Exhibit Number		Description	Confidential Status
	RX 80 (B)	Photograph of Control Box on Tug	CBI
	RX 80 (C)	Photograph of Limit Switch Sensors	CBI
	RX 80 (D)	Closeup of Photograph of Limit Switch Sensors and Wire	CBI
	RX 80 (E)	Photograph of Empty Scow	CBI
	RX 80 (F)	GL64 Aft Draft Sensor Flange Going to Steel Pipe	CBI
	RX 80 (G)	GL64 Aft Hull Status Proximity Sensor Image2	CBI
	RX 80 (H)	GL64 Aft Hull Status Proximity Sensor Image3	CBI
	RX 80 (I)	GL64 Aft Hull Status Proximity Sensor Image4	CBI
	RX 80 (J)	GL64 Aft Hull Status Proximity Sensor	CBI
	RX 80 (K)	GL64 Fore Draft Sensor in PVC Pipe	CBI
	RX 80 (L)	GL66 Aft Draft Sensor Flange Going to Steel Pipe	CBI
	RX 80 (M)	GL66 Aft Hull Status Proximity Sensor Image2	CBI
	RX 80 (N)	GL66 Aft Hull Status Proximity Sensor Image3	CBI
	RX 80 (O)	GL66 Aft Hull Status Proximity Sensor	CBI
	RX 80 (P)	GL66 Fore Draft Sensor Going into Ram Well then into PVC Pipe	CBI

Exhibit Number		Description	Confidential Status
	RX 80 (Q)	Photo of Empty Scow Showing Hinge Pin and Skimmer (GL 701)	CBI
	RX 80 (R)	Photo of Terrapin Island	
RX 81: Selected filings from <i>Biscayne Bay Waterkeeper, Inc., Dan Kipnis, Miami-Dade Reef Guard Association, and Tropical Audubon Society v. United States Army Corps of Engineers</i> , Case No. 1:14-cv-23632-FAM (S.D. Fla.)			
	RX 81 (A)	10/20/2014 <i>BBWK v. USACE</i> Corps Response to Motion for Preliminary Injunction (DE 18)	
	RX 81 (B)	10/20/2014 <i>BBWK v. USACE</i> Declaration of Terri Jordan-Sellers (Exhibit 15 to DE 17)	
	RX 81 (C)	10/20/2014 <i>BBWK v. USACE</i> Declaration of Christopher Pomfret (Exhibit 17 to DE 17)	
	RX 81 (D)	11/14/2016 U.S. Army Corps of Engineers' Statement of Material Facts in Support of Motion for Summary Judgment (DE 138)	
RX 82 GLDD Terms and Conditions			
	RX 82 (A)	October 2014 Quote Request Attaching GLDD Terms and Conditions	
	RX 82 (B)	GLDD Terms and Conditions (Current)	
RX 83		Table Matching GLDD and DQM Numbers (Cross Reference Table)	
RX 84		ADISS Webpage for Port of Miami Project Trips at Issue in Case www.adissdata.com	CBI

Exhibit Number		Description	Confidential Status
RX 85		Map Showing Project Boundaries	
RX 86		Corps Form 93 Deducting Payment for Alleged Violations	CBI
RX 87		9/26/2011 EPA Letter to Corps enclosing Revisions to the Miami ODMDS Disposal Site Site Management and Monitoring Plan	
RX 88		12/29/2011 Letter from EPA Giattina to Corps Summa re Sec 103 Concurrence	
RX 89		6/11/2012 Letter from EPA Giattina to Corps Summa with Sec 103 Concurrence	
RX 90		11/2013 Corps Approval of Environmental Plan	CBI
RX 91		12/10/2013 McArthur EPA Email re Draft Loss	
RX 92		11/17/2014 Letter from Corps to EPA re Two-year Extension Request	
RX 93		12/19/2014 Letter from EPA to Corps re Two-year Extension Request	
RX 94		2/4/2015 Letter from Corps to EPA Giattina re Dredged Material Management Practices and per Section 103 of MPRSA	
RX 95		2/16/2015 Letter from GLDD to Corps re Serial Letter C-0076	CBI
RX 96		4/30/2015 Email EPA re Percentage of Leaks	CBI

Exhibit Number		Description	Confidential Status
RX 97		5/4/2015 Email EPA forwarding DQM Screen Shots and re Draft Loss	CBI
RX 98		5/29/2015 Email EPA attaching Project Plan and re Draft Loss	
RX 99		6/1/2015 Email from Montone to Summa re SAD Seeking Feedback from Meeting with EPA	
RX 100		6/11/2015 Email from McGill to McArthur re Miami Harbor Compliance	CBI
RX 101		6/26/2015 Email from McGill to McArthur EPA re Miami Disposal Compliance	CBI
RX 102		Summary Table Spreadsheet for Scows	CBI
RX 103		Summary Table Spreadsheet for Terrapin Island	CBI
RX 104		Release Zone Pages for Scows	
RX 105 Demonstrative Exhibits			
	RX 105 (A)	Port of Miami Project - ODMDS Trips During Port of Miami Project (Reflecting No Violations and Alleged Violations)	CBI
	RX 105 (B)	Port of Miami Project - Dredged Material (Cubic Yards) from the Port of Miami Project	CBI
	RX 105 (C)	Port of Miami Project Number of ODMDS Trips	CBI

Exhibit Number		Description	Confidential Status
RX 106		Video of Scow Opening and Closing	CBI
RX 107		Port Jersey 60 Series Scow Video 1	CBI
RX 108		Port Jersey 60 Series Scow Video 2	CBI
RX 109		Scow 64 Video 1	CBI
RX 110		Scow 64 Video 2	CBI
RX 111		Scow 64 Video 3	CBI
RX 112		Scow 64 Video 4	CBI
RX 113		Scow 64 Video 5	CBI
RX 114		Scow 64 Video 6	CBI
RX 115		Resume of Andrew Larkin (July 2020)	
RX 116		Miami Harbor Phase 3 Final Pay KO Signed	CBI
		All Exhibits Listed in Petitioner's Initial and Rebuttal Prehearing Exchange	

Docket No. MPRSA-04-2019-7500

Exhibit RX 1 (A)

Withheld as CBI

Exhibit RX 1 (B)

Withheld as CBI

Exhibit RX 1 (C)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 2 (A)

Withheld as CBI

Exhibit RX 2 (B)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 2 (C)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 2 (D)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 3 (A)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 3 (B)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 3 (C)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 4 (A)

Withheld as CBI

Exhibit RX 4 (B)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 4 (C)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 4 (D)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 5 (A)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 5 (B)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 5 (C)

Withheld as CBI

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Exhibit RX 5 (D)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 6 (A)
Withheld as CBI

Exhibit RX 6 (B)

Withheld as CBI

Docket No. MPRSA-04-2019-7500

Exhibit RX 6 (C)

Withheld as CBI

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Exhibit RX 6 (D)

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Docket No. MPRSA-04-2019-7500

Exhibit RX 7 (A)

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Exhibit RX 7 (B)

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Docket No. MPRSA-04-2019-7500

Exhibit RX 7 (C)

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Exhibit RX 7 (D)

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Docket No. MPRSA-04-2019-7500

Exhibit RX 8 (A)

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Docket No. MPRSA-04-2019-7500

Exhibit RX 8 (B)

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Docket No. MPRSA-04-2019-7500

Exhibit RX 8 (C)

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Exhibit RX 8 (D)

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Docket No. MPRSA-04-2019-7500

Exhibit RX 9 (A)
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Docket No. MPRSA-04-2019-7500

Exhibit RX 9 (B)

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Docket No. MPRSA-04-2019-7500

Exhibit RX 9 (C)

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Exhibit RX 9 (D)

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Docket No. MPRSA-04-2019-7500

Exhibit RX 10 (A)

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Exhibit RX 10 (B)

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Exhibit RX 10 (C)

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Exhibit RX 10 (D)

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Docket No. MPRSA-04-2019-7500

Exhibit RX 11 (A)

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Exhibit RX 11 (B)

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Exhibit RX 11 (C)

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Exhibit RX 12 (A)

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Exhibit RX 12 (C)

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Exhibit RX 12 (D)

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Exhibit RX 13 (A)

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Exhibit RX 13 (C)
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Exhibit RX 14 (A)

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Exhibit RX 14 (B)

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Exhibit RX 15 (A)

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Exhibit RX 16 (A)

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Exhibit RX 71 (A)

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Exhibit RX 80 (R)



.Docket No. MPRSA-04-2019-7500

Exhibit RX 81 (A)

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

Case Number: 1:14-cv-23632-FAM

SIANN A. ATROP
DAN P. N. S. M. A. M. D. A. D. R. F. A. R. D.
ASSOCIATION and TROP A. A. D. O. N.
S. O. T.

Plaintiffs/Petitioners

s

UNITED STATES ARMY CORPS OF
ENGINEERS

Defendant/Respondent

**DEFENDANTS' MEMORANDUM IN OPPOSITION TO
PLAINTIFFS' MOTION FOR INJUNCTION**

INTRODUCTION

Plaintiffs seek to enjoin the U.S. Army Corps of Engineers ("Corps") from completing the deepening and widening of the Miami Harbor channel based on alleged violations of the Endangered Species Act ("ESA").¹ Plaintiffs allege that dredging operations, which have been ongoing for almost a year, will harm threatened staghorn corals and seek emergency relief to halt further dredging.

For the reasons explained below, Plaintiffs are not entitled to this drastic remedy. As a preliminary matter, Plaintiffs are not likely to succeed on the merits of their claims, as they fail

¹ Plaintiffs' Complaint, ECF No. 1, further requests the Court to exercise supplemental jurisdiction to decide claims concerning the Corps' alleged violation of a State of Florida Permit. See 28 U.S.C. §1367(a). There is no waiver of sovereign immunity or a private right of action for the Court to exercise supplemental jurisdiction over such claims. However, as Plaintiffs' motion for preliminary injunction does not appear to raise arguments concerning the State Permit, it is unnecessary at this time for the Court to decide whether it may exercise supplemental jurisdiction.

to demonstrate any ESA violation. Prior to starting the challenged dredging operations, the Corps completed the required ESA consultations with the National Marine Fisheries Service (NMFS) to ensure that the project will not jeopardize the continued existence of staghorn coral or adversely modify designated critical habitat. The Corps has continued to engage in informal ESA consultation with NMFS, pursuant to ESA Section 7, while NMFS prepares an amended biological opinion.

Moreover, Plaintiffs cannot make the requisite showing of irreparable harm. As part of their informal consultation, the Corps and NMFS have finalized a plan to relocate and transplant an estimated 300 ESA-listed corals, which will begin in 7 days, on October 27, 2014, and is estimated to be completed in approximately 14 working days. NMFS and the Corps agree that these corals can be successfully relocated without suspending dredging operations. Furthermore, this project has been ongoing since November 2013 and the dredging in the outer channel is anticipated to be completed in November 2014. The impacts of the Project were evaluated by NMFS prior to its commencement and the expert agency charged with implementing the ESA concluded that even if there were some take of ESA-listed corals, that take would not jeopardize the continued existence of the species, given that the species would persist elsewhere throughout its range. Now, a mere 30 days prior to its completion, and 11 months after its commencement, Plaintiffs rush to the Court seeking an order to halt all dredging activity. Plaintiffs cannot demonstrate that there will be irreparable harm to the staghorn coral species, and on that basis alone, the preliminary injunction may be denied.

Further, the requested injunctive relief would be contrary to the public interest. The project will benefit the people of Miami-Dade County Florida and is being paid for entirely by Miami-Dade County and the State of Florida. A delay in completing the project will result in considerable financial harm to the people of Miami-Dade County. Furthermore, corals will be relocated from the project area to the University of Miami's coral nursery, monitored and stabilized for up to two years, and then transplanted to natural reefs, thereby providing measurable benefits to the species. Thus, any alleged injury to Plaintiffs is heavily outweighed by the harm to the public interest that would result from further delay of the project. . For these reasons, and those set forth below, the Court should deny Plaintiffs request for preliminary

injunctive relief.

□□□A□FRAM□□OR□

□□ The Endangered Species Act

The ESA provides for listing species as "threatened" or "endangered" if warranted, as well as for designation of their "critical habitat." 16 U.S.C. §1533(a). Once listed, certain protections apply. ESA section 7(a)(2) provides that federal agencies must ensure that any action authorized, funded, or carried out by such agency is not likely to "jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary . . . to be critical. . . ." 16 U.S.C. §1536(a)(2).² To achieve this objective, the ESA requires the action agency to consult with NMFS or the U.S. Fish and Wildlife Service ("FWS") whenever a federal action "may affect" an endangered or threatened species. 50 C.F.R. §402.14(a).

Section 7 and its implementing regulations set out detailed consultation procedures designed to provide action agencies with expert advice to determine the biological impacts of their proposed activities. 16 U.S.C. §1536(b); 50 C.F.R. pt. 402. "Formal consultation" is described at length at 50 C.F.R. §402.14. Formal consultation culminates in the issuance of a "biological opinion" by NMFS or FWS, which advises the action agency whether jeopardy is likely to occur for any listed species and, if so, whether "reasonable and prudent alternatives" exist to avoid a jeopardy situation. *Id.* §402.14(h)(3).

The ESA requires NMFS to conclude consultation within 90 days of its initiation and to furnish a biological opinion "promptly" at the end of consultation. 16 U.S.C. §1536(b)(3)(A). If the consultation involves an applicant for a federal permit, the consultation period may be extended to 150 days. 16 U.S.C. §1536(b)(1)(B)(i). The ESA's implementing regulations construe the statutory directive to provide the opinion "promptly" to mean that it must be furnished within 45 days after consultation ends. 50 C.F.R. §402.14(e). Therefore, absent agreement from the action agency or applicant, the ESA and its implementing regulations

² "Secretary" as used in the ESA means the Secretary of the Interior or the Secretary of Commerce, who in turn have delegated their responsibilities to FWS and NMFS, respectively. 16 U.S.C. §1532(15). In general, FWS has authority over terrestrial species, and NMFS has authority over marine species, such as the corals at issue here.

contemplate that FWS would have a total of 135 days (or 195 days if an applicant is involved) to complete consultation and provide a biological opinion. The ESA implementing regulations contemplate that additional extensions of time beyond the 135-day period may be necessary for particularly complex consultations not involving an applicant. 50 C.F.R. §402.14(e).

The ESA's implementing regulations also recognize the use of "informal consultation" to assist an action agency in determining whether and when further consultation is necessary. Informal consultation "includes all discussions, correspondence, etc., between the Service and the Federal agency or the designated non-Federal representative prior to formal consultation, if required." 50 C.F.R. §402.02.

The ESA consultation regulations require action agencies and NMFS and/or FWS to reinstitute consultation where discretionary Federal involvement or control over the action has been retained or is authorized by law and: "(a) If the amount or extent of taking specified in the incidental take statement is exceeded; (b) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (c) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (d) If a new species is listed or critical habitat designated that may be affected by the identified action." 50 C.F.R. §402.16.

Section 9 of the ESA prohibits the "taking" of any endangered or threatened species. 16 U.S.C. §1538(a)(1)(B). "Take" as defined by the ESA means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. 16 U.S.C. §1532(19). The ESA's prohibition on taking species applies to all "persons," including individuals, corporations, and federal or state agencies. 16 U.S.C. §1532(13). The ESA provides authority for both civil and criminal penalties for violations. For example, the civil penalty provision in Section 11(a) of the ESA provides for a penalty of "\$2,000 (as adjusted by inflation) per violation for persons who knowingly violate regulations under the ESA. See 16 U.S.C. §1540(a)(1). The taking of a threatened or endangered species by a private party may be permitted, "if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." 16 U.S.C. §1539(a)(1)(B). Take incidental to federal actions can be

exempted from liability as part of the consultation process in an "incidental take statement" attached to the final biological opinion. 16 U.S.C. §1536(b)(4). Under Section 7(o) of the ESA, "any taking that is in compliance with the terms and conditions specified in [an incidental take statement] shall not be considered to be a prohibited taking of the species concerned." 16 U.S.C. §1536(o)(2). An incidental take statement must specify "those reasonable and prudent measures [RPMs] that the Director considers necessary or appropriate to minimize the impact of authorized incidental take. 50 C.F.R. §402.14(i)(1)(ii).

FACTS AND RECORD

The Port of Miami

The Port of Miami, Miami-Dade County, Florida ("Port of Miami" or "Port") is a federally authorized Navigation Channel and is the largest container port in Florida. Due to its geographic location, the Port of Miami is easily accessible to the Caribbean and Latin American trade markets, as well as those of Asia and Europe by way of the Panama Canal. Def. Ex. 13 ("Kuryla Decl."). ¶¶7-10. In 2013, 4.7 million cruise ship passengers and over 875,000 marine container ships in the Port of Miami from around the world. *Id.* ¶5. The Port is Miami-Dade County's second most important economic engine contributing \$27 billion annually to the local economy and more than 207,000 jobs in South Florida. *Id.* ¶¶5-6. Once the project to deepen and widen the Port is completed, it is expected to generate 30,000 new jobs statewide, double cargo throughput, and increase the Port's annual economic benefit by approximately \$4 billion. *Id.* ¶6.

Deepening and Expansion Project

Phases and

The Corps has worked with the Port and the City of Miami community for decades to improve the Port of Miami. Def. Ex. 2 ("Summa Decl.") ¶4. In Phase I, the Port deepened the entrance channel and Fisher Island turning basin, both of which were completed in 1993. *Id.* In Phase II during the mid-1990s, work was undertaken to deepen the South Harbor, but was unsuccessful due to the hardness of the bedrock. *Id.* As a result, the Port enlisted the Corps to complete the construction of Phase II, which was successfully completed in July 2006. *Id.*

Phase III (Project or Phase III)

A subsequent congressional authorization in 2007 outlined additional deepening and widening measures to be implemented at Miami Harbor, known as Phase III. Phase III is currently in progress. Although the Project began construction in 2013, the extensive planning process dates back 14 years. See Final General Reevaluation Report and Environmental Impact Statement (FEIS) Def. Ex. 1 at iii (summarizing planning process). The Project includes widening and deepening portions of the Federal channel from 42 ft. to 50 ft. in the inner channel, and 44 ft. to 52 ft. in the outer entrance channel to accommodate larger vessels that will soon be able to sail through the expanded Panama Canal. By enabling the Port to accommodate larger cargo vessels and other ships, the Project will facilitate a more efficient movement of global goods and services. Summa Decl. ¶8. After notice and comment, a final environmental impact statement and Record of Decision of Phase III improvements were signed and issued on May 22, 2006. As a result of the extensive comments, meetings, and coordination process, the Corps modified the Project proposal to further reduce environmental impacts by restoring seagrass beds and creating artificial reefs while also increasing navigation safety. Def. Ex. 1 FEIS at 72-74, 40 (summarizing environmental mitigation).

In 2012, the Project became one of seven nationally and regionally significant infrastructure projects in which federal review would be expedited to drive job growth and strengthen the economy. See Executive Order 13604, 77 Fed. Reg. 18,887 (March 22, 2012); Summa Decl. ¶8. Pursuant to the Executive Order, the Corps partnered with the State of Florida to advance the timeframe for construction by years. Summa Decl. ¶8. In 2013, the Corps awarded a dredging contract to the Great Lakes Dredge & Dock Corporation (GLDD). Id. ¶9. Construction commenced in November 2013, has been underway for 11 months, and is scheduled to be completed by July 2015. Id. ¶11. The construction in the outer channel, the Project area closest to the staghorn coral and its designated critical habitat, is 95% completed with only about 30 days of dredging remaining.³ Def. Ex. 14 (Pomfret Decl.) ¶8. The remaining work will take place in the inner channel, an area that will not impact the staghorn

³ This work is located in the outer channel and is denoted as Cuts 1 and 2. Summa Decl. Fig. 1 (denoting Cuts 1 and 2); Def. Ex. 3 (map denoting location of staghorn corals).

coral.⁴ See Summa Decl. ¶8.

¶¶ **Adaptive Management Measures**

The Corps and GLDD took steps throughout the Project to implement adaptive management measures that would further protect the corals/hardbottom habitat within the Project area. The first adaptive measures were implemented in December 2013, and were increased throughout Project implementation. See Def. Ex. 15 (¶Week 44 Compliance Report¶) at 13.⁵ During the dredging process, turbidity, or sediment floating in the water, monitoring stations are established for locations that have the highest turbidity concentration and monitoring reports are generated every four hours. Jordan-Sellers Decl. ¶18; Def. Ex. 21 (¶Kruempel Declaration¶) ¶¶25-31.⁶

The Corps has instituted a series of adaptive management measures, including four voluntary changes in the dredging process, designed to further mitigate any possible environmental harm stemming from increased turbidity. Jordan-Sellers Decl. ¶19. First, GLDD increased the number of scows it uses. Id. ¶19(c). In prior practice, GLDD filtered out as much water as possible so that the scows would have heavier sediment loads to reduce the number of trips to the offshore dumping site and reduce the number of scows needed. By using more scows, GLDD's scows make more frequent trips with more water in each load, thereby reducing the amount of water being filtered out while still in the Project area. Id. This reduction of filtered water in the project area reduces the risk of reintroducing water containing fine sediment matter in the Project area. Id.

Second, GLDD slowed the cutting speed to reduce the amount of water being pumped into the scows. Id. ¶19(e). The higher the cutting speed used in dredging, the more water and

⁴ This work is located in the inner channel and is denoted as Options A ¶ B. Summa Decl. Fig. 1.

⁵ For further background on the dredging process, see Def. Ex. 12 (¶Jordan-Sellers Decl.¶) ¶18.

⁶ Before and after the adaptive monitoring measures, the Corps has exceeded the turbidity standards set forth in its state permit only twice. Jordan-Sellers Decl. ¶18. Florida's Department of Environmental Protection (¶DEP¶) permit authorizes the Corps to exceed state water quality standards, and consequently, waives the water quality certification provision in section 401 of the Clean Water Act, 33 U.S.C. ¶1341. Pl. Ex. 1 at 8. Thus, the turbidity standards set forth in the Permit, id. at 19, are for Permit compliance purposes only.

less sediment matter produced. As such, more water must be filtered out of the scow, and may lead to a higher likelihood of water with fine sediment matter being reintroduced into the water. Id. By slowing the rate of cutting, GLDD increased the ratio of sediment to water. This creates less water to be pumped into the scows and to be filtered out, thereby lessening the environmental impacts in the Project area.

Third, GLDD periodically moves the spider barge and scows to different locations to reduce the risk of a concentration of fine sediment matter in one particular location and lessened the impacts on any nearby corral. Id. ¶19(b). Finally, GLDD eliminated the use of "green valves." Id. ¶19(a). The employment and use of green valves were utilized when the dredge Texas began work, during the January and early February 2014 time frame, and discontinued upon evaluation and determination by GLDD that, although the method may reduce surface turbidity, it also seemed to enhance translocation of suspended solids (within the decanted dredge water) to the ocean floor. These adaptive management measures, combined with ongoing monitoring by the Corps and compliance with the permit turbidity standards, all work in concert to minimize and mitigate environmental impacts during the Project. See id. ¶20.

□□□□ **Staghorn corals**

Staghorn coral is a member of the genus *Acropora* and is one of the major reef-building corals in the Caribbean including locations in Florida. Biological Opinion ("BiOp") (Pl. Ex. 3) at 12. They are considered to be environmentally sensitive, requiring relatively clear, well-circulated water, and are almost entirely dependent upon sunlight for nourishment. Id. at 13. Staghorn corals still occupy their historic range, but populations have experienced losses from 80-98% of their historic 1970s baseline. Id. at 15. Declines over the past 30 years have been attributed to factors including white band disease outbreaks, warming ocean temperatures, and hurricane damage. Id.

On May 9, 2006, NMFS published a final rule listing staghorn coral as a threatened species under the ESA. 71 Fed. Reg. 26,852 (May 9, 2006). While acknowledging that a decline in the abundance of the species has been observed over the past 30 years, NMFS noted that the total number of colonies remains very large and the species persists across a very large geographic range with no evidence of range contractions. Id. Because staghorn coral "retain[s]"

significant potential for persistence, NMFS concluded that the species is "not currently at risk of extinction throughout all or a significant portion of [its] ranges." Id. at 26, 853. NMFS designated critical habitat that included the Florida area, for staghorn corals on November 26, 2008. 73 Fed. Reg. 72,210 (Nov. 26, 2008). NMFS critical habitat designation identified the "key conservation objective" for the corals as "facilitating increased incidence of successful sexual and asexual reproduction." Id. On August 27, 2014, NMFS issued a final rule to list five Caribbean coral species as threatened pursuant to the ESA, in addition to the staghorn coral species at issue in this case, which continues to be classified as threatened. See 79 Fed. Reg. 53,852 (Sept. 10, 2014) (final rule).

SA Section Consultation History

A 2011 Biological Opinion

Pursuant to Section 7 of the ESA, the Corps requested formal consultation with NMFS for the Project, and on September 8, 2011, NMFS issued its most recent BiOp for the Project.⁷ NMFS and the Corps agreed to a number of environmental mitigation measures to ensure that numerous ESA-listed species, as well as their critical habitat, are not likely to be adversely affected by the Project. See BiOp at 7-9. In the BiOp, NMFS determined that the Project is likely to adversely affect one ESA-listed species, staghorn coral and its designated critical habitat, but the Project is not likely to jeopardize its continued existence or destroy or adversely modify its designated critical habitat. Id. at 10-14.

Staghorn Coral Surveys

There have been three surveys conducted to identify staghorn coral in the Project area, the first of which was conducted by the Miami-Dade Department of Resources Management ("DERM") in October 2006. 2011 Biological Assessment ("BA") (Def. Ex. 5) at 5. The DERM survey was not limited to the Project area, and did not utilize the NMFS recommended mapping survey protocol for staghorn coral since it was not developed until October 2007. Id. at 5. On May 2010, the Corps commissioned a second survey for staghorn coral that was more closely

⁷ The Corps previously entered into consultation with NMFS in 2002 to consider the impact on Johnson's seagrass and its designated critical habitat, resulting in a February 26, 2003 biological opinion. BiOp at 4.

tailored to the Project, staying within 150 meters of the Channel (north and south) and following the NMFS-approved staghorn coral survey protocols.⁸ BiOp at 10. Both of these surveys found staghorn coral in the Project area, with the second survey finding 31 staghorn coral colonies. The Corps proposed to transplant these 31 staghorn coral colonies because of potential impacts from a contractor's anchor and cable system, and NMFS concurred in this mitigation measure. Id. at 36, 47. Based on this proffered mitigation, NMFS determined that the Project would result in the take of 31 staghorn coral colonies via transplantation, five of which could be lethally taken through mortality associated with NMFS-approved transplantation methods. Id. at 35, 47.

As required by the BiOp, the Corps conducted a third survey prior to construction to re-identify and then relocate the 31 staghorn coral colonies that were previously found by the second survey. Pl. Ex. 4 at 1. This third survey, conducted on October 2, 2013, utilized a more rigorous mapping technique than that set forth in the NMFS-approved mapping protocol, resulting in a survey covering 100% of the Project area and documenting 243 colonies of staghorn coral. Id. at 1-2. Upon receipt of these updated findings, the Corps promptly notified NMFS on October 4, 2013 to share the updated information and develop appropriate protective measures. Id.

Reinitiation of Consultation

2013 Request For Reinitiation of Consultation

In response to the Corps' October 4, 2013 notification, National Oceanic and Atmospheric Administration ("NOAA") Assistant Regional Administrator David Bernhart recommended that the Corps undertake relocation of the colonies closest to the channel (up to 40 colonies within 50 feet of the channel), leaving the remaining colonies in place with monitoring for potential effects associated with sedimentation and turbidity. Def. Ex. 6 (10/21 email). Assistant Administrator Bernhart also recommended that the Corps reinitiate ESA consultation with NMFS and complete an analysis pursuant to ESA Sections 7(a) and 7(d). Id.

The Corps completed the recommended analysis pursuant to ESA Sections 7(a) and 7(d).

⁸ See Def. Ex. 22 "Recommended Survey Protocol for *Acropora* spp. in Support of Section 7 Consultation" (rev. Oct. 2007) (explaining a sampling methodology is required for larger areas, as opposed to a 100% area survey).

Pl. Ex. 4 Attach. 2. Following the recommendations from Assistant Administrator Bernhart, the Corps provided a written request to reinitiate ESA consultation with NMFS on October 21, 2013. Def. Ex. 6 (1:13 pm email); Def. Ex. 8 (10/29/13 email). The Corps also provided the survey information from the contractor. Def. Ex. 7 (10/21/13 12:54 pm email). In response to this request for reinitiation of consultation, NMFS staff informed the Corps that, subject to approval of counsel, NMFS would provide an amendment to the 2011 BiOp to authorize the relocation of up to 40 colonies of staghorn coral on the channel edge while leaving the others in place. Def. Ex. 9.

After reinitiating consultation with NMFS, the Corps proceeded with the dredging operations in reliance on, and consistent with, the 2011 BiOp and the additional advice received through emails and telephone conversations with NMFS pursuant to the informal consultation procedures set forth in 50 C.F.R. §402.13. Between November 19 and 21, 2013, the Corps proceeded with the NMFS-recommended relocation of 38 staghorn coral colonies, which represented all colonies within 100 feet north and south of the channel [at the area identified as the second reef]. 9/14/14 7a27d at 5. The most recent monitoring post-relocation report indicated that 100% of the relocated corals are surviving. Id. at 6.

On March 28, 2014, NMFS advised the Corps that it would prefer to prepare an updated BiOp, rather than an amendment to the 2011 BiOp. Def. Ex. 10 (4:13pm email). NMFS staff did not provide an estimate as to how long it would take to complete the updated BiOp. Id. NMFS staff did not request the Corps to suspend the dredging or take any further remediation measures at this time, and the Corps proceeded with the dredging operations in reliance on the 2011 BiOp and the additional advice received through emails and telephone conversations with NMFS pursuant to 50 C.F.R. §402.13 (informal consultation). As dredging operations continued, Corps staff continued to actively engage in informal consultations with NMFS to develop survey protocols to assess project-related sedimentation on either side of the channel. Sep 14 Corps Letter at 1.

2. 2. Request For Reinitiation of Consultation

On August 18, 2014, the DEP notified the Corps of possible compliance concerns with the State Permit. The Corps, on September 2, 2014, provided a detailed response to each of the

issues and expressed its continued and shared desire to cooperate. Def. Ex. 11. The Corps also suggested specific changes to the Permit for clarity. Id. The Corps and State are continuing to work cooperatively to expeditiously address the compliance concerns identified by the State. See, e.g., Pl. Ex. 11 (9/22/14 Letter); Def. Ex. 14 (Vinyard letter). Meanwhile, on September 10, 2014, Assistant Administrator Bernhart provided Corps staff with "Emergency Remediation Recommendations" as background material for a planned discussion between the Corps and DEP officials. Pl. Ex. 15; Def. Ex. 12 (9/9/14 email); Def. Ex. 13 (9/10/14 email). The recommendations entailed removing additional staghorn corals from the project area and relocating them to another nursery location within Miami-Dade and/or Broward County, Florida. Pl. Ex. 15.

On August 22, 2014 a new survey was performed by the Corps to determine sedimentation impacts to staghorn coral, and subsequent surveys have occurred every two weeks since then. Pl. Ex. 4 (Sept. 14 Letter) at 3. In response to information from the 2014 surveys indicating that effects of sedimentation may have been greater than anticipated, the Corps again requested reinitiation of consultation by letter dated September 14, 2014. Id. at 3-4. In its accompanying determination pursuant to Sections 7(a) and 7(d) of the ESA, the Corps concluded that continued dredging was not likely to jeopardize the continued existence of staghorn coral, based on the data collected during the 2014 surveys, the Corps has "not observed any stress to corals resulting from project-related turbidity." Pl. Ex. 4 Attach. 4 at 16-17.⁹ NMFS staff have indicated that it may take more than six months for NMFS to issue an amended biological opinion. Summa Decl. ¶20.

Construction of the entire project has been underway for 11 months, with 9 months remaining in the contractual period of performance which terminates July 29, 2015. Summa Decl. ¶8. Dredging in the outer channel (Cuts 1 and 2) in area of hardbottom and reef is 95% complete with approximately 30 days of dredging remaining. Id. There are no staghorn coral colonies in the other areas slated for dredging when the outer channel is completed. Id. The

⁹ This conclusion is further supported by NMFS's recent determination that it is unnecessary to uplist staghorn coral from threatened to endangered, because the species has persisted throughout its range and there are tens of millions of colonies of staghorn coral in the Florida Keys and Dry Tortugas. 79 Fed. Reg. 53,852 (Sept. 10, 2014) (final rule).

Corps is proceeding with these nearly completed operations in reliance on the 2011 BiOp and the additional advice received to date through emails and telephone conversations with NMFS pursuant to 50 C.F.R. §402.13 (informal consultation).

3. Relocation of Staghorn Coral

As a result of continuing informal consultation, the Corps and NMFS recently finalized an agreement to relocate the live coral colonies within 150 meters of the entrance channel. See Def. Exs. 23 (Corps Relocation Letter), 24 (NMFS Relocation Letter).¹⁰ Beginning on October 27, 2014, NMFS will relocate the 211 colonies identified in field surveys, and any other colonies found within 10 meters of the surveyed colonies, resulting in an estimated relocation of 300 coral colonies. NMFS Relocation Letter at 2. The corals will be relocated to the University of Miami's coral nursery, which will (1) provide for the health stabilization and maintenance of the colonies/fragments for up to two years, and (2) subsequently transplant the corals onto natural reefs. Id. Once work begins on October 27, 2014, the relocation is estimated to be completed in approximately 14 working days. Id. According to NMFS, this relocation proposal (1) adequately addresses the concerns expressed in the Bernhart letter, dated September 10, 2014, and (2) does not necessitate an interruption to the project's work schedule since it can be accomplished simultaneously with the remaining dredging in the entrance channel. Id.; see Pl. Ex. 15.

STANDARD OF REVIEW

A preliminary injunction is an extraordinary remedy, the entitlement to which the plaintiff bears the burden of proving by clear and convincing evidence. See Granny Goose Foods, v. Brotherhood of Teamsters, 415 U.S. 423, 442-442 (1974); Canal Auth. of Florida v. Callaway, 489 F.2d 567, 573 (5th Cir. 1974). An injunction should issue only where the intervention of a court of equity is essential in order effectually to protect property rights against

¹⁰ The relocation of staghorn coral is the product of continuing informal consultation, and is being carried out under the authority provided in NMFS's final rule promulgated under ESA Section 4(d) to provide for the conservation of staghorn coral. 73 Fed. Reg. 64,264 (Oct. 29, 2008) (4(d) Rule). The 4(d) Rule provides two specific activities that are exempt from the Section 9 take prohibition: (1) scientific research and species enhancement, and (2) restoration carried out by authorized personnel. 73 Fed. Reg. 64,264 (Oct. 29, 2008).

injuries otherwise irreparable. □ Weinberger v. Romero-Barcelo, 456 U.S. 305, 312 (1982).

□ A plaintiff seeking a preliminary injunction must establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest. □ Winter v. Natural Res. Def. Council, 555 U.S. 7 (2008). □ The focus always must be on prevention of injury by a proper order, not merely on preservation of the status quo. □ Canal Auth., 489 F.2d at 576.¹¹

The Supreme Court has found that Congress modified the district courts' exercise of traditional equitable discretion in certain ESA cases, Tenn. Valley Auth. (□TVA□) v. Hill, 437 U.S. 153, 193-94 (1978),¹² and various courts have held that the balance of equities should favor endangered species when the ESA has been violated. E.g., Florida Key Deer v. Stickney, 864 F. Supp. 1222, 1241 (S.D. Fla. 1994).¹³ However, Plaintiffs incorrectly assert that the required

¹¹ The Supreme Court has rejected the notion that an injunction presumptively follows the violation of environmental statutes. Amoco Prod. Co. v. Village of Gambell, 480 U.S. 531, 545 (1987) (finding the environment can be "fully protected" without the presumption that irreparable damage occurs when an agency fails to evaluate thoroughly the environmental impact of a proposed action); Weinberger, 456 U.S. at 313 ("The grant of jurisdiction to ensure compliance with a statute hardly suggests an absolute duty to do so under any and all circumstances, and a federal judge . . . is not mechanically obligated to grant an injunction for every violation of law."). Thus, injunctive relief may be granted only if Plaintiffs demonstrate both an underlying legal violation and irreparable injury. See id. at 312-14. This burden applies with full force in the ESA context. Nat'l Wildlife Fed'n v. Burlington Northern RR, Inc., 23 F.3d 1508, 1511 (9th Cir. 1994) ("These cases [including TVA] do not stand for the proposition that courts no longer must look at the likelihood of future harm before deciding whether to grant an injunction under the ESA. Federal courts are not obligated to grant an injunction for every violation of the law.").

¹² In TVA, the record established, and no party disputed, that "the challenged agency action. . . would result in *total destruction of the snail darter's habitat*, and jeopardize the continued existence of the endangered snail darter, not merely pose harm to some individual members of the species. 437 U.S. at 162 (emphasis in original). See Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of the Navy, 898 F.2d 1410, 1418 (9th Cir. 1990); Burlington Northern R.R., Inc., 23 F.3d at 1512. See also Weinberger, 456 U.S. at 314 (noting that issue of elimination of an endangered species by destruction of its habitat was "conceded" in TVA). No such allegations, much less evidence, has even been presented here.

¹³ In Key Deer, Judge Moore concluded that "the third and fourth prongs of the injunction analysis have been foreclosed by Congress" based on the specific facts in Florida Key Deer v.

showing of irreparable harm has been dispensed and is no longer relevant. ECF No. 9 at 9-10. To the contrary, the Supreme Court has firmly established that in order to obtain this drastic and extraordinary remedy, a plaintiff must demonstrate that irreparable harm is not only possible, but that it is likely. Winter, 555 U.S. at 20.

ARGUMENT

Plaintiffs Are Unlikely To Succeed On The Merits

A. Plaintiffs Are Unlikely To Succeed On The Merits Of Their ESA Section 7 Claims

1. The Corps Has Satisfied Its Obligations Under ESA Section 7(a)(2)

After obtaining the advice of NMFS through the consultation process, the Corps as the action agency in the consultation process has the primary responsibility for implementing section 7's substantive command. 51 Fed. Reg. 19,926, 19,928 (June 3, 1986). Accordingly, the action agency makes the ultimate decision as to whether its proposed action will satisfy the requirements of section 7(a)(2). Id. at 19,928. See also Tribal Vill. of Akutan v. Hodel, 869 F.2d 1185, 1193-1194 (9th Cir. 1988). Here, the Corps has complied with ESA Section 7(a)(2)'s procedural requirements (by engaging in consultation) and its substantive obligations (of avoiding jeopardy). Accordingly, Plaintiffs' claims must fail.

As explained above, NMFS previously concluded that the challenged dredging operations are not likely to jeopardize the continued existence of staghorn corals or destroy or adversely modify designated critical habitat, and NMFS' determination in this regard is unchallenged. BiOp at 37. Based on new information about potential effects of the dredging on

Brown, 386 F. Supp. 2d 1281, 1284 (S.D. Fla. 2005). In short, the Court concluded that an injunction was necessary in light of FWS' own determination that the agency action at issue posed a risk of jeopardizing numerous endangered species in the Florida Keys, and in light of the Court's finding that the "reasonable and prudent alternative" identified in the biological opinion there was insufficient to avoid jeopardy to the species. Here, by contrast, there has been no determination by the expert agency (NMFS) that the Corps' action pose any risk of jeopardy to staghorn corals or any other endangered or threatened species. The reasoning in Florida Key Deer is inapplicable. Therefore, the Court retains equitable discretion not to issue an injunction in this case, even if Plaintiffs could show that there has been a violation of the ESA.

staghorn corals within the Project area, however, the Corps reinitiated ESA consultation with NMFS in October 2013, see Def. Ex. 6 and again via letter dated September 14, 2014, Pl. Ex. 4. The Corps' decision to proceed with dredging in light of previous formal and informal consultations with NMFS, and prior to issuance of an amended BiOp by NMFS is explained in detail in the Corps' memoranda dated October 2013 and September 14, 2014 (Pl. Ex. 4 Attachs. 2 - 4). The Corps determined that, although sedimentation from dredging would adversely affect staghorn corals, such dredging was not likely to jeopardize the species. Pl. Ex. 4 Attach. 4 at 16. Moreover, NMFS and the Corps agree that dredging operations can continue while an estimated 300 staghorn coral are relocated, and that the relocation will "ensure the conservation and recovery" of this species. Def. Ex. 24 at 3. The Corps' reliance on NMFS' technical expertise to continue dredging during the relocation and pendency of its continuing informal consultation with NMFS, that will ultimately result in an amended biological opinion, does not constitute any violation of ESA Section 7(a)(2). There is no information that calls into question NMFS' determinations that dredging is unlikely to jeopardize the continued existence of staghorn coral or adversely modify designated critical habitat.¹⁴ NMFS' 2011 no jeopardy biological determination remains unchallenged, and in any event, the translocation effort is similarly consistent with the requirements of the ESA.

Thus, no injunction is necessary here pending completion of the relocation of coral and a new biological opinion by NMFS because there has been no finding that the permitted actions, including the relocation of staghorn, are likely to jeopardize the species. Def. Ex. 24 at 2-3. The

¹⁴ Even notwithstanding the upcoming relocation of the coral, NMFS' 2011 biological opinion had determined that the Project would not jeopardize the coral species as a whole. The biological opinion presumed that **all** staghorn coral colonies within the 150-meter indirect impact zone would be incidentally taken by translocation and associated mortality. BiOp at 27 ("the transplantation and fragment collection actions involve directed take of *A. cervicornis*"), 29 (stating that within "the 150 meter indirect impact zone adjacent to the channel" sedimentation [will affect] larval settlement."). NMFS' determination that the localized impacts from this project would not jeopardize the species was not based on the precise number of colonies to be affected. Rather, NMFS' determination was based on its finding that the species persists *throughout* its historic range, and therefore, a reduction of the then-known staghorn coral colonies (i.e. 5 colonies) in the project area would "not have a measurable effect on the distribution of the species within the Florida unit or throughout its range." BiOp at 31-32.

Corps has reasonably elected to follow NMFS's expert opinion and proceed with the dredging, and Plaintiffs are not likely to succeed on the merits of their claims concerning any alleged violation of ESA Section 7(a)(2). By initiating, and reinitiating, consultation with NMFS, the Corps has met its procedural obligations under Section 7, and it has reasonably concluded that its actions will avoid jeopardy, thereby satisfying Section 7(a)(2)'s substantive mandate. In deference to NMFS's expertise, the Court should deny Plaintiffs's request to intervene in this ongoing ESA consultation process.¹⁵

2. The Corps has complied with it's ESA Section 7(d)

Plaintiffs further claim that the Corps has failed to comply with ESA Section 7(d). To be clear, ESA Section 7(d) has not been interpreted to mean "that no agency can ever proceed with proposed action until consultation is complete." Pacific Rivers Council v. Thomas, 936 F.Supp. 738, 746 (D. Idaho 1996). Rather, agencies may move forward with their action following initiation (or reinitiation) of consultation, provided that the agency makes no an irreversible or irretrievable commitment of resources that would foreclose the formulation or implementation of any reasonable and prudent alternatives that would needed to avoid jeopardy. 16 U.S.C. § 1536(d).

Here, although NMFS previously concluded that the Miami Harbor dredging project is not likely to jeopardize the continued existence of staghorn coral or adversely modify critical habitat, Plaintiffs assert that the Corps should not be permitted to proceed with dredging operations while the reinitiated consultation is pending. ECF No. 9 at 14. However, nothing in the ESA, its implementing regulations, or case law requires an agency to hold every action entirely in abeyance until consultation is complete.

In its recent determination pursuant to ESA Section 7(a)/7(d), Pl. Ex. 4 Attach. 4, the Corps further assessed the risk of jeopardy in light of new information about adverse effects from sedimentation. Based on the reasoning in NMFS's previous biological opinion (i.e., because the dredging project will have localized impacts and staghorn corals persist throughout their

¹⁵ See Marsh v. Oregon Natural Resources Council, 490 U.S. at 378; Fund for Animals v. Rice, 85 F.3d 535, 541 (11th Cir. 1996).

historic range, see BiOp at 31-32), there is little likelihood that it would be necessary for NMFS to recommend reasonable and prudent alternatives to avoid jeopardy to the species when it completes its amended biological opinion. Moreover, the Corps is making no irreversible or irretrievable commitment of resources that would foreclose the development of any reasonable and prudent measures, given that it is able to actively manage its project and implement recommendations are necessary to ameliorate impacts to ESA-listed species, as evidenced by its ongoing adaptive management efforts and the relocation effort that will soon begin. See Pl. Ex. 4 Attach. 4. Therefore, continued dredging while NMFS completes an amended biological opinion and the relocation of the coral will not result in any ESA violation, and Plaintiffs are not likely to succeed on the merits of their ESA Section 7(d) claim.¹⁶

Plaintiffs Are Unlikely To Succeed On The Merits Of Their Section 7 Claims

1 Plaintiffs Cannot Demonstrate That Sedimentation Is Causing Unlawful Take

Plaintiffs assert that sediments generated by the [Corps] past and ongoing dredging are resulting in a direct take of corals. . . and are degrading the ESA designated critical habitat in a manner that itself is resulting in a take. . . . ECF No. 9 at 13. However, NMFS, the expert agency charged with implementing the ESA, previously considered the potential effects of sedimentation from the project in its biological opinion dated September 8, 2011, Pl. Ex. 3.

¹⁶ The facts here are different than in Florida Key Deer, 386 F. Supp. 2d at 1294, in which FWS had *already* determined in a biological opinion that the agency action at issue risked jeopardy to several endangered species. Here, by contrast, NMFS arrived at a “no jeopardy” conclusion, based on its determination that there would be localized take but the species as a whole would persist elsewhere throughout its range. Because the Florida Key Deer court concluded that the reasonable and prudent alternatives in the FWS biological opinion were insufficient to avoid jeopardy to the species, the Court concluded that an injunction was necessary to avoid a violation of ESA Section 7(d) pending completion of a revised biological opinion. Here, by contrast, NMFS has issued a biological opinion concluding that the project is not likely to jeopardize staghorn coral. Although Corps staff have expressed concerns about potential adverse effects from sedimentation that were not addressed in the 2011 biological opinion, NMFS has never indicated that the dredging operations pose a risk of jeopardy to staghorn coral. BiOp (Pl. Ex. 3) at 30-34 (“[T]he proposed action is not likely to appreciably reduce staghorn coral’s likelihood of surviving and recovering in the wild.”).

Plaintiffs can demonstrate no violation of ESA Section 9 and their claims must fail.

NMFS was unequivocally aware that the project would potentially impact *Acropora* critical habitat adjacent to the channel through sedimentation. BiOp at 29. Indeed, NMFS specifically acknowledged that "resuspension of sediment during construction will result in sediment transport and deposition onto benthic substrate containing the physical element essential for coral designated critical habitat." Id. However, NMFS also recognized that the Corps would require continuous monitoring of sedimentation and turbidity levels within the project area in accordance with the state water quality certification. BiOp at 30. NMFS determined that, in its expert judgment, "impacts from sedimentation will be insignificant." Id. NMFS further concluded that effects on designated critical habitat from sedimentation will be temporary and localized in nature, noting that it expected that "[s]ediments will return to background levels upon project completion." Id.

In conjunction with its most recent request to reinitiate formal ESA consultation, NMFS acknowledged that effects of sedimentation "may exceed the assumptions of either the Biological Assessment or the Biological Opinion." Pl. Ex. 4 Attach. 4 at 1. However, this acknowledgement does not support a conclusion that sedimentation from the dredging operations at issue in this case has resulted in the unauthorized "taking" of corals. Specifically, a recent *Acropora* coral survey conducted August 19-22, 2014 within 150m of the channel indicated that the percentage of corals with observed stress was similar along the South side of the channel and at a reference site located approximately 5 miles north of the project area. Pl. Ex. 4 Attach 4 at 14. A higher percentage of corals with observed stress along the north side of the channel was attributed to the predominantly south-to-north current, which creates "more stressful" conditions than on the south side of the channel. The second, third, and fourth surveys indicated a high percentage of corals with observed stress at all three sites (i.e., north of the channel, south of the channel, and the reference site), which was attributed to thermal stress due to high water temperatures. Pl. Ex. 4 Attach. 4 at 15. Because the available data indicates that corals at all three locations (including those miles away from the Project site) are exhibiting signs of stress, and have been doing so for quite some time, Plaintiffs' assertions that sediment from the dredging project has resulted in all of the observed stress and any associated injury or mortality

to corals cannot form the basis for their claim for an emergency injunction. As explained in the NMFS biological opinion, any adverse effects of sedimentation are "insignificant." BiOp at 30.

Plaintiffs and their declarants fail to account for sedimentation prior to the Project (baseline conditions) and the natural sediment oscillations common to hardbottom habit; instead Plaintiffs conclude the Project has caused the current sediment impacts. See Pl. Exs. 13 (Silverstein Decl.), 14 (Baker Decl.), 16 (Haus Decl.). These conclusions are ill-supported. Jordan-Sellers Decl. ¶¶22-31. Drawing on baseline surveys, historical data, and compliance monitoring, sediment has been observed, but this is not indicative that it is caused by the dredging. Id. ¶¶5-10 (explaining baseline condition of natural sedimentation in Project area), 12-17. Rather, sediment is precisely what is anticipated in this area since it is a hardbottom habitat that is subject to oscillations between periodic sandy areas and exposed hardbottom (without any sediment). Id. ¶17. The coral in the Project area have adapted to large, temporary levels of direct and indirect sedimentation, which have led to complete burial, but not the death of the coral colony. Id. ¶6 (citing scientific literature). Such impacts from sediment can also be dissipated by natural processes. Id. ¶12 (explaining many variables determine coral sensitivity to sediment and strong currents, such as the Gulf Stream can naturally disperse sediment), 30 (movement of sediment by animals).

Moreover, although Federal Defendants disagree with the conclusions drawn by Plaintiffs' declarants based on available survey data, it is unnecessary for the Court to determine whether or not the observed coral stress was caused by past dredging operations because the previously surveyed coral and the coral located within 10m of it will soon be relocated. Def. Exs. 23, 24. Additionally, the contractor has recently implemented adaptive management measures to minimize sediment and turbidity during the remainder of the project. Jordan-Sellers Decl. ¶19; Def. Ex. 11 (Response to DEP Letter 2014-0902) at 5. Specifically, GLDD implemented a series of significant adaptive management measures designed to greatly reduce the turbidity and sedimentation within the Project area. See id. at Attach. 2; Jordan-Sellers Decl. ¶19. Even if dredging operations previously resulted in higher-than-anticipated sediment effects in the past, the Corps has confirmed that implementation of these adaptive management measures has reduced the sedimentation as intended, such that continued dredging operations do

not risk adverse effects on corals beyond what NMFS already analyzed in its 2011 biological opinion. Jordan-Sellers Decl. ¶15. Thus, even assuming for sake of discussion that past dredging has resulted in adverse effects on *Acropora* coral in excess of what was anticipated in the 2011 BiOp, the requested injunctive relief is unnecessary to prevent future adverse effects in light of the adaptive management measures being implemented.¹⁷

Plaintiffs' speculative and inaccurate allegations of possible future harm to staghorn corals during the remaining approximately 30 days of dredging are not sufficient to support a Section 9 claim. Morrill v. Lujan, 802 F. Supp. 424, 432 (S.D. Ala. 1992) (holding that plaintiff failed to prove the "crucial link" between the challenged development project and the predicted habitat destruction); Swan View Coal. v. Turner, 824 F. Supp. 923, 939 (D. Mont. 1992) (noting that the pivotal element of a Section 9 claim is a showing of injury to the listed species). Rather, the Court should defer to NMFS' particular technical expertise¹⁸ in terms of assessing the efficacy of relocating the coral as an appropriate means to avoid potential adverse effects on corals during dredging operations. Def. Ex. 24 (NMFS Relocation Letter) at 3; Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, 462 U.S. 87, 103 (1983); FCC v. Nat'l Citizens Comm.

¹⁷ The facts here differ from the facts in Loggerhead Turtle v. Cnty. Council of Volusia County, 896 F. Supp. 1170 (M.D. Fla. 1995), rev'd on other grounds, 148 F.3d 1231 (11th Cir. 1998), in which the court held that an injunction was necessary in that case to prevent the unpermitted taking of sea turtles. In Loggerhead Turtle, the County did not seriously dispute the fact that takings of sea turtles were occurring; rather, the relevant issue was whether such takings fell within the scope of authorizations that had been obtained by the county. Id. at 1242 ("Volusia County argues that even if it lacks the Service's express permission, it has the Service's implied permission to take sea turtles incidentally through artificial beachfront lighting because the Service expressly conditioned the permit on Volusia County's implementation of detailed lighting-related mitigatory measures."). Here, by contrast, there is no information to support Plaintiffs' assertion that unauthorized taking of corals is presently occurring. The opinions expressed by Plaintiffs' affiants concerning anticipated environmental effects of *future* dredging and sedimentation are speculative and inaccurate because they do not take into account the adaptive management measures or the coral relocation.

¹⁸ NMFS' determination that the dredging may proceed during the coral relocation is owed particular deference, because NMFS is the agency charged by Congress with the authority to administer the ESA. Nat'l Wildlife Fed. v. Coleman, 529 F.2d 359, 375 (5th Cir. 1976). Indeed, under the law of this Circuit, the applicable standard of review in this case must be "exceedingly deferential" to the expert determinations of NMFS with respect to endangered species. Fund for Animals v. Rice, 85 F.3d 535, 541 (11th Cir. 1996).

for Broad., 436 U.S. 775, 813-14 (1978).

The Corps is also entitled to rely on the opinions of its own experts as to the likelihood of potential adverse impacts on corals in light of the implementation of the adaptive management measures. See Jordan-Sellers Decl. ¶18. ¶When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.¶ Marsh v. Oregon Natural Res. Council, 490 U.S. 360, 378 (1989) (citing Citizens to Pres. Overton Park v. Volpe, 401 U.S. 402, 416 (1971)). Here, based on the relocation of the corals that could be impacted and the implementation of adaptive management measures to reduce sedimentation, the Corps has reasonably concluded that unauthorized taking of corals is unlikely to occur as dredging proceeds. In any event, as explained below, the Corps has already obtained a biological opinion conferring incidental take authorization, and any adverse effects resulting from this project would not constitute a violation of ESA Section 9.

2¶ The Corps ¶as Ahead¶Reinitiated ¶SA ¶onsultation and
No Further Relief ¶s Available¶

Because the Corps has already obtained a biological opinion conferring incidental take authorization, any adverse effects resulting from this project would not constitute a violation of ESA Section 9. The NMFS 2011 biological opinion authorized incidental take associated with the relocation of 31 staghorn corals via transplantation, 5 of which were anticipated to suffer mortality associated with transplantation. BiOp at 35. The BiOp included terms and conditions pursuant to Section 7(b) of the ESA, 16 U.S.C. ¶1536(b)(4)(iv) pertaining to the transplantation of the 31 known staghorn coral colonies. Id. at 36-37. An exceedance of the authorized incidental take of the 31 then-known staghorn coral colonies triggered reinitiation of consultation under the terms of the biological opinion, BiOp at 38, and the ESA consultation regulations, 50 C.F.R. ¶402.16; Oregon Natural Res. Council v. Allen, 476 F.3d 1031, 1034-35 (9th Cir. 2007) (¶The agency must immediately reinitiate consultation with the FWS if the amount or extent of incidental taking is exceeded.¶). However, any alleged exceedance of the authorized incidental take (for example, due to greater-than-anticipated adverse effects of sedimentation) of the 31 staghorn coral colonies identified in the 2011 biological opinion does

not constitute an automatic violation of Section 9 of the ESA, but instead triggers reinitiation of consultation under Section 7 of the ESA. As the Eleventh Circuit has held, “[a]n incidental take statement may lawfully authorize harm to an endangered species as long as the statement sets a trigger for further consultation at the point where the allowed incidental take is exceeded, a point at which there is a risk of jeopardizing the species.” Miccosukee Tribe of Indians of Florida v. FWS, 566 F.3d 1257, 1271-72 (11th Cir. 2009) (emphasis added) (citing 50 C.F.R. § 402.14(i)(4)); Defenders of Wildlife v. U.S. Dep’t of Navy, 733 F.3d 1106, 1124 (11th Cir. 2013) (upholding biological opinion that lacked an incidental take statement because a “lack of an incidental take statement for operations means that the Navy *must reinitiate consultation* with the NMFS if even a single take of a listed species occurs” (emphasis added); Center for Marine Conservation v. Brown, 917 F. Supp. 1128, 1149 (S.D. Tex. 1996) (“Takings in excess of an incidental take statement trigger the consultation requirement . . . but do not amount to a prohibited taking as long as the terms and conditions of the incidental take statement are satisfied.”).

Since the appropriate remedy for Plaintiffs’ Section 9 claim is reinitiation of consultation under Section 7 and the Corps reinitiated consultation with NMFS on October 21, 2013, and September 14, 2014 (see Def. Ex. 6 and Pl. Ex. 4) there is no meaningful relief left for the Court to order. See Defenders of Wildlife v. Bureau of Ocean Energy Mgmt., Regulation, & Enforcement, 791 F. Supp. 2d 1158, 1170 (S.D. Ala. 2011) (“Courts in analogous circumstances have deemed ESA claims moot and have declined to order federal agencies to reinitiate consultation when those agencies have already done so.”)

Pursuant to Section 7(o) of the ESA, 16 U.S.C. § 1536(o)(2) “any taking that is in compliance with the terms and conditions specified in a [biological opinion] provided under subsection (b)(4)(iv) of this section shall not be considered to be a prohibited taking of the species concerned.” Section 7(b)(4)(iv) itself provides that the Secretary shall “set[] forth the terms and conditions that must be complied with by the Federal agency to implement the measures specified under clauses (ii) and (iii)”¹⁹; notably, it does *not* reference implementation

¹⁹ Section 7(b)(4) (ii) requires that the incidental take statement “specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact”

of measures under clause (i) which requires the ITS to specify the "impact of such incidental taking on the species." 16 U.S.C. § 1536(b)(4)(iv), (i). Thus, an agency that complies with the terms and conditions of the incidental take statement, as it is undisputed that the Corps has done here, cannot be charged with a violation of the "take" prohibition in ESA § 9 if the agency happens to "take" a member of the species in excess of the take limit. Bennett v. Spear, 520 U.S. 154, 170 (1997) (because of § 7(o) "the Biological Opinion's Incidental Take Statement constitutes a permit authorizing the action agency to "take" the endangered or threatened species so long as it respects the Service's "terms and conditions.")).²⁰

The ESA implementing regulations and legislative history similarly confirm that an agency cannot be liable for take where, as here, the agency has complied with the terms and conditions of an incidental take statement.²¹ Congress clearly recognized that "additional taking" could occur after the specified level of take for reinitiating consultation had been exceeded. Congress expected the action to continue notwithstanding the additional taking, *"unless it was clear that the impact of the additional taking would cause an irreversible and adverse impact on the species."* Id. Congress could not have intended the agency action to continue if the "additional taking" were illegal.

and clause (iii) applies to situations involving marine mammals, not relevant here.

²⁰ The ESA § 7(o) exemption from liability under the "take" prohibition extends to parties (such as GLDD) that are neither federal agencies nor "applicants" as defined under the ESA, "provided the actions in question are contemplated by an incidental take statement issued under Section 7 of the ESA and are conducted in compliance with the requirements of that statement." Ramsey v. Kantor, 96 F.3d 434, 442 (9th Cir. 1996).

²¹ See 50 C.F.R. § 402.14(i)(5) ("Any taking which is subject to a statement as specified in paragraph (i)(1) of this section and which is in compliance with the terms and conditions of that statement is not a prohibited taking under the Act, and no other authorization or permit under the Act is required.") (emphasis added). See also Legislative History of the 1982 Amendments (adding § 7(b)(4) and § 7(o) to the ESA) ("If the specified impact on the species is exceeded, the Committee expects that the Federal agency or permittee or licensee will immediately reinitiate consultation since the level of taking exceeds the impact specified in the initial section 7(b)(4) statement. In the interim period between the initiation and completion of the new consultation, the Committee would not expect the Federal agency or permittee or licensee to cease all operations unless it was clear that the impact of the additional taking would cause an irreversible and adverse impact on the species.") available at H.R. Rep. No. 567, 97th Cong., 2d Sess. 27 reprinted at 1982 USCCAN 2807, 2827 (1982).

Here, the Corps has relocated the 38 staghorn coral colonies within 100 feet north and south of the channel, as provided in the terms and conditions of the 2011 biological opinion. Jordan-Sellers Decl. ¶11. Plaintiffs do not allege that the Corps is not complying, or will not comply, with the terms and conditions of the 2011 biological opinion pertaining to the relocation of those colonies. Accordingly, "any taking" of additional colonies incidental to the dredging operations authorized in the 2011 biological opinion is not actionable "take." The Corps has reinitiated ESA consultation with NMFS to assess new information concerning potential effects of the project on species; however, any incidental taking of additional staghorn corals does not constitute an ESA violation, as matter of law pursuant to 16 U.S.C. §1536(o), because the Corps has proceeded in accordance with the terms and conditions of the 2011 biological opinion.

Even if the Court concluded that, notwithstanding the legislative history and the plain reading of the statute, adverse effects from dredging operations to date have resulted in a violation of ESA Section 9, Plaintiffs would not be entitled to an injunction prohibiting the Corps from completing the remaining 30 days of dredging operations near the corals. At a minimum, issuance of an injunction under Section 9 of the ESA requires a "reasonably certain threat of imminent harm to a protected species." Marbled Murrelet v. Babbitt, 83 F.3d 1060, 1066 (9th Cir. 1996) (citing Forest Conservation Council v. Rosboro Lumber Co., 50 F.3d 781, 786 (9th Cir. 1995)). In light of the relocation that will begin in 7 days on October 27, 2014, and the adaptive management measures implemented by the contractor, Plaintiffs in this case have failed to proffer evidence that could clearly demonstrate actual or imminent harm or injury to the species during the remaining month of dredging. E.g., Am. Bald Eagle v. Bhatti, 9 F.3d 163, 166 (1st Cir. 1993) (noting that courts have granted injunctive relief "only where petitioners have shown that the alleged activity has actually harmed the species or if continued will actually, as opposed to potentially, cause harm to the species"). Thus, Plaintiffs are unlikely to succeed on the merits of their section 9 claims.

Plaintiffs will Not Suffer Irreparable Injury in the Absence of a Preliminary Injunction

It is axiomatic that proof of irreparable injury caused by the alleged violation is an essential prerequisite to obtaining injunctive relief. Amoco Prod. Co. v. Vill. of Gambell, 480

U.S. 531, 542 (1987); Weinberger v. Romero-Barcelo, 456 U.S. 305, 312 (1982).²² With the relocation of coral beginning in seven days, Plaintiffs' claim concerning alleged irreparable harm stemming from the Project has even less merit. On this ground alone, the Court should deny Plaintiffs' motion since the Project, which includes relocation of coral, will actually *benefit* the species by ensuring "the conservation and recovery" of staghorn coral. NMFS Relocation Letter at 3. Plaintiffs may still attempt to argue that enjoining the Project may benefit the species, but this directly contradicts the opinion by the agency with the relevant technical expertise, NMFS, that the relocation can be successfully completed without interrupting the Project. See NMFS Relocation Letter at 2; Florida Keys Citizens Coal., Inc. v. U.S. Army Corps of Engineers, 374 F. Supp. 2d 1116, 1157 (S.D. Fla. 2005) ("The Court finds that the Corps is entitled to rely on, and did reasonably rely on, the considered judgment of other agencies with particular expertise in managing sensitive marine environments"); N. Buckhead Civic Ass'n v. Skinner, 903 F.2d 1533, 1539 (11th Cir. 1990) ("When specialists express contrary views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.") (quoting Marsh, 490 U.S. at 378). In addition to the relocation of coral, continuation of the dredge project is unlikely to result in the incidental taking of staghorn coral since the contractor has implemented adaptive management measures and sedimentation effects are anticipated to be temporary in nature. See generally Jordan-Sellers Declaration.

In light of the current relocation and adaptive management measures, Plaintiffs fail to

²² The burden of proof in justifying an injunction is solely on Plaintiffs; Defendants bear no burden to defeat the motion. Granny Goose Foods, Inc. v. Granny Goose Foods, Inc. v. Brotherhood of Teamsters, 415 U.S. 423, 442-43 (1974). Moreover, irreparable harm must be actual and imminent rather than speculative or remote. United States v. W.T. Grant Co., 345 U.S. 629, 633 (1953); Northeastern Fla. Chapter of Ass'n of Gen. Contractors of Am. v. City of Jacksonville, 896 F.2d 1283, 1285 (11th Cir. 1990). Finally, Plaintiffs must prove that they are likely to suffer the harm that they allege before this matter is fully adjudicated on the merits. See United States v. Lambert, 695 F.2d 536, 540 (11th Cir. 1983) (because the purpose of a preliminary injunction is merely to preserve the status quo pending resolution of the case on the merits, "the harm considered by the district court is necessarily confined to that which might occur in the interval between ruling on the preliminary injunction and trial on the merits").

present the requisite evidence of imminent, irreparable harm to threatened staghorn coral necessary for the Court to grant the requested emergency injunctive relief. However, even if the Court concluded that current, ongoing dredging operations are resulting in sedimentation effects greater than NMFS considered in its 2011 biological opinion, such a finding would not compel the Court to grant injunctive relief requested by Plaintiffs.

The Court is not obligated to fashion an injunctive remedy in all circumstances where an unpermitted taking of protected species occurs. E.g., Water Keeper Alliance v. U.S. Dep't of Defense, 271 F.3d 21, 34 (1st Cir. 2001) (upholding a district court's finding that "assertions concerning irreparable harm stemming from the "death of even a single member of an endangered species" were insufficient to justify granting injunctive relief."). Plaintiffs fail to show harm that would justify granting injunctive relief without "a more concrete showing of probable deaths during the interim period and of how these deaths may impact the species." Id. See also Strahan v. Coxe, 127 F.3d 155, 171 (1st Cir. 1997) (upholding denial of a preliminary injunction to halt activity causing take and holding that such an injunction was mandatory only where activity would have caused eradication of entire species). Considering the persistence of *Acropora* corals throughout their historic range, Plaintiffs do not allege that the challenged dredging operations at the Port of Miami risk the eradication of the entire species (as was presumed in TVA v. Hill), and no preliminary injunction is warranted under these circumstances. Here, NMFS anticipated that corals at this location would be taken, but concluded no jeopardy due to the widespread persistence across its range. BiOp at 31-32. Thus, even if additional take hypothetically occurred at the Project site, the conclusion that the species would persist rangewide remains unaffected. Accordingly, the Project will not cause irreparable harm.

Moreover, Plaintiffs' own delay in commencing this action counsels against a finding of irreparable harm. The Tropical Audubon Society and Dan Kipnis became involved in the Project's development process as early as 2003 when the draft environmental impact statement was publicly issued. Moreover, these two plaintiffs along with Biscayne Bay Waterkeeper, have been continually involved and apprised of the Project's progress over the last decade. Indeed, on November 28, 2011, three Plaintiffs filed administrative petitions challenging the Corps' state DEP permit for the Project that were resolved through a settlement agreement in 2012.

Accordingly, Plaintiffs *could have brought a federal suit to challenge the Project years ago, but declined to do so*. Plaintiffs have waited almost a year after the Project broke ground, with only about 30 days of work adjacent to the corals remaining. Summa Decl. ¶8.²³

The Court should not condone the Plaintiffs' effort, now with only about a month of operations left near the corals, to enjoin the Project. Simply put, Plaintiffs' knowledge of the Project dating back to 2003, their undue delay in bring a federal lawsuit, their previous litigation, and the Project's remaining 30 days of work near coral reefs together indicate that emergency action is not required in this case. Mobile Cnty. Water, Sewer & Fire Prot. Auth., Inc. v. Mobile Area Water & Sewer Sys., Inc., CIV.A. 07-0357-WSM, 2007 WL 3208587 (S.D. Ala. Oct. 29, 2007) (finding a state lawsuit filed two years earlier showed plaintiff's allegations were "not of recent vintage" and weighed against a preliminary injunction).

Accordingly, under the circumstances here, where Plaintiffs have unreasonably delayed for years in bringing suit, the Project has been underway for 11 months with 30 days remaining near coral reefs, there are *more* corals than previously anticipated thereby decreasing harm to the species as a whole, and those corals will soon be moved from the area of any arguable impact, Plaintiffs are unable to show a likelihood of irreparable harm and their motion should be denied.

²³ The time span in delay, while alone not dispositive, weighs strongly against a finding of irreparable harm in this case. Powell v. Home Depot U.S.A., Inc., 07-80435-CIV, 2009 WL 3855174 (S.D. Fla. Nov. 17, 2009). Such unexplained delay may "standing alone, ... preclude the granting of preliminary injunctive relief ... because the failure to act sooner undercuts the sense of urgency that ordinarily accompanies a motion for preliminary relief and suggests that there is, in fact, no irreparable injury." Tough Traveler, Ltd. v. Outbound Prods., 60 F.3d 964, 968 (2nd Cir.1995) (internal quotation marks and citations omitted). See also Ty, Inc. v. Jones Group, Inc., 237 F.3d 891, 903 (7th Cir. 2001) ("Delay in pursuing a preliminary injunction may raise questions regarding the plaintiff's claim that he or she will face irreparable harm if a preliminary injunction is not entered."); Kansas Health Care Ass'n v. Kansas Dep't of Social and Rehab. Servs., 31 F.3d 1536, 1543-44 (10th Cir. 1994) ("As a general proposition, delay in seeking preliminary relief cuts against finding irreparable injury.") (citations omitted); Majorica v. R.H. Macy & Co., 762 F.2d 7, 8 (2nd Cir. 1985) (lack of diligence, standing alone, may preclude issuance of preliminary injunctive relief); Lydo Enters. v. Las Vegas, 745 F.2d 1211, 1213 (9th Cir. 1984) (Preliminary injunction should not issue where plaintiffs had delayed seeking injunctive relief); Mylan Pharm. v. Shalala, 81 F. Supp.2d 30, 44 (D.D.C. 2000) ("Though [plaintiffs' eight-month] delay [in seeking emergency relief] is not dispositive of the issue, it further militates against a finding of irreparable harm.").

An Injunction Would Harm The Public Interest

Finally, the preliminary injunctive relief requested by Plaintiffs would harm the public interest. As explained in the Declaration of Port Director Juan Kuryla (Def. Ex. 16) a delay in the project will result in direct costs to the people of Miami-Dade County and Florida in the amount of \$220,000-\$250,000 per day. *Id.* ¶14. A delay in the project will also have adverse effects on the economy due to lost revenues from shipping at the Port of Miami. *Id.* ¶15. A delay in the project will also have adverse effects on the contractor and approximately 100 employees and subcontractors, who would be laid off, as explained in the Declaration of Christopher Pomfret, Def. Ex. 17.²⁴

CONCLUSION

As explained above, Plaintiffs have no likelihood of success on the merits of their claims. The Corps has complied with the substantive and procedural requirements of the ESA in consultation with NMFS, which has resulted in an agreement to relocate the coral starting on October 27, 2014. Moreover, the challenged dredging has been proceeding for nearly a year, and the dredging near the coral will be completed in 30 days. Plaintiffs have offered no persuasive evidence to suggest that irreparable harm will occur to the corals during that short window of time. To the contrary, the evidence shows that the Corps is actively implementing adaptive management measures, is working collaboratively with NMFS to address potential impacts to the corals, and in any event, will complete its activities shortly. Thus, an injunction is wholly unwarranted.

Moreover, an injunction delaying the completion of improvements to Miami Harbor would clearly disserve the public interest. Entry of a preliminary injunction as requested by Plaintiffs will harm the people of Miami-Dade County and the State of Florida through the

²⁴ Indeed, as the court balances the equities, it should also take into account all of the previously described considerations: the Plaintiffs' delay in filing their motion "almost a year after dredging commenced" See *Quince Orchard Valley Citizens Ass'n v. Hodel*, 872 F.2d 75, 79-80 (4th Cir. 1989); *Sierra Club v. Penfold*, 857 F.2d 1307, 1317-18 (9th Cir. 1988); the fact that Plaintiffs have been aware of the potential environmental effects of the dredge project, and could have commenced this lawsuit much sooner, without waiting until the dredging in the outer channel (the area of staghorn coral) was substantially complete; and the significant financial payments in exchange for foregoing their rights to later challenge the project.

delays and costs that will result from any work stoppage of this nearly-completed dredging project. For all of these reasons, Plaintiffs' Motion for a Preliminary Injunction should be denied.

Respectfully submitted,

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Dated: October 20, 2014

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STATEMENT OF SERVICE

I HEREBY CERTIFY that on October 20, 2014, a true and correct copy of the foregoing was electronically filed with the Clerk of Court using CM/ECF. Copies of the foregoing document will be served upon interested counsel via transmission of Notices of Electronic Filing generated by CM/ECF.

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.Docket No. MPRSA-04-2019-7500

Exhibit RX 81 (B)

DEFENDANT'S EXHIBIT 15

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA**

Case Number: 1:14-cv-23632-FAM

**BISCAYNE BAY WATERKEEPER, INC.,
DAN KIPNIS, MIAMI-DADE REEF GUARD
ASSOCIATION, and TROPICAL AUDUBON
SOCIETY,**

Plaintiffs/Petitioners,

vs.

**UNITED STATES ARMY CORPS OF
ENGINEERS,**

Defendant/Respondent.

DECLARATION OF TERRI JORDAN-SELLERS

I, Terri Jordan-Sellers, hereby declare as follows:

EDUCATION/TRAINING/EXPERIENCE

1. I am a Senior Biologist of the Corps of Engineers, Jacksonville District, Planning Division, Environmental Branch. I obtained a B.S. in Biology and Marine Science (minor in Chemistry) from Texas A&M University in 1992 and a M.S. in Environmental Policy from American University in 2000. From 1994 to 1995, I worked for the National Marine Fisheries Service (NMFS), Southeast Fisheries Science Center, in Miami, Florida, where I served as a Fishery Biologist. In this capacity, I conducted field sampling studies and observations for large pelagic species within the Atlantic Ocean, Gulf of Mexico, and Caribbean, including the collection of morphometric and biological data on large pelagic species, endangered/threatened sea turtles, and marine mammals. I was also responsible for coordinating research related to bottlenose dolphins in Biscayne Bay, Florida. From 1995 to 1997, I worked for the National Marine Fisheries Service, Habitat Conservation Division, in Baton Rouge, Louisiana, where I served as Fishery Biologist. In this capacity, my responsibilities included coordinating and formulating comments and recommendations to regulatory and construction agencies, identifying anticipated impacts to living marine resources and mitigation needed to minimize adverse impacts, and researching issues related to living marine resources, specifically habitat protection and restoration. From 1997 to 2001, I worked for the National Marine Fisheries Service, Office

of Protected Resources, in Silver Spring, Maryland, where I served as a Fishery Biologist. In that capacity, my responsibilities included implementing Endangered Species Act (ESA) programs in accordance with legal requirements and agency regulations and policies. I also served as the Endangered Species Permit Coordinator overseeing the permit program and providing guidance to Division and Regional staff on the permit process and streamlining efforts. Additionally, I reviewed and evaluated applications for scientific research and enhancement under the ESA, as well as prepared permit documentation and biological opinions for permit issuance for listed species under the ESA.

2. Since 2001, I have worked for the Army Corps of Engineers, Jacksonville District. Currently, I serve as the Senior Biologist for the Planning Division, Environmental Branch. My responsibilities include developing and executing environmental documentation (Environmental Impact Statement, Environmental Assessments, and Biological Assessments) containing quality ecosystem analysis, with specific focus on federal navigation (new work & O&M dredging), storm damage reduction (shore protection), ecosystem restoration and flood risk management projects in Peninsular Florida, Puerto Rico and the U.S. Virgin Islands. I also develop coordination and reporting documentation for resource agencies to ensure compliance with statutes & regulations including consultations under the ESA, the Magnuson-Stevens Fishery Management Act, the Marine Mammal Protection Act (MMPA), and the Coastal Zone Management Act (CZMA). In this capacity, I ensure completeness and technical accuracy of all environmental consultation documentation utilizing knowledge of physical, biological, environmental and marine sciences. Specific activities which I undertake in my current capacity include: analysis, investigation, reporting, consultation, and report writing and input into development of Clean Water Act Section 401 water quality certification documentation; lead environmental coordination in project plan development and documentation under the National Environmental Policy Act; and review of plans and specifications. I also serve as a technical expert on Agency Technical Review (ATR) teams for the Deep Draft Planning Center of Expertise (PCX) and the Ecosystem Restoration PCXs in ATR review of other Districts and Divisions. Furthermore, I conduct technical review of products received from contractors hired to perform surveys and analysis, as well as provide support as an expert on estuarine and marine ecology to the District and the USACE Engineering Research and Design Center (ERDC). Finally, I serve as the District/regional expert on listed and non-listed marine mammals and on MMPA compliance issues, such as take authorization and the environmental effects of underwater blasting.

3. My recent training includes: USACE Planning Associates Program; Intermediate GIS; Department of the Army - Environmental Support Team Training; Introduction to the Migratory Bird Treaty Act; Introduction to GIS; Conflict Management; Coastal Planning; Fundamentals of Wetlands; Basic Blast Design; Coastal Ecology; Environmental Law Regulations; Reviewing NEPA Documents; Introduction to ArcView GIS; Intermediate

ArcView GIS; NMFS Mentoring Program; Endangered Species Listing and Candidate Assessment; and Interagency Consultation for the Endangered Species Act. In October 2012, I received the Department of the Army Achievement Medal for Civilian Service. In addition to my position with the Army Corps of Engineers, I have served as an adjunct professor for Biology and Environmental Science at Jacksonville University, Jacksonville, Florida, since 2002. I am currently a member of the Western Dredging Association, the Society of Marine Mammalogy, and the International Sea Turtle Society.

TEMPORARY AND NATURAL EFFECTS OF SEDIMENTATION IN PROJECT AREA: PRE-PROJECT CONDITION

4. Sediment and sand is a normal functional group component of the Project area and was present and observed during the pre-project (i.e. prior to commencement of dredging) assessment. The pre-project assessment consisted of four weeks of examination of adjacent resources, and qualitative and quantitative data was collected to describe overall dynamics. In the outer harbor area of the Project, where dredging work is currently ongoing, the Federal channel cuts perpendicularly through a hardbottom environment and two parallel reefs, known as Reef 2 and Reef 3. See Attachment A. Sediment coverage data was taken near these environments along the side of the Federal channel. Sediment coverage ranged from 8% to more than 90% on the north side (i.e. north of the channel) hardbottom sites and from 5% to approximately 35% on the south side (i.e. south of the channel) hardbottom sites. On the north side of Reef 2, baseline sediment coverage ranged from less than 2% to approximately 20%, and on the south side of Reef 2 baseline sediment coverage was approximately 2%. On the north side of Reef 3, baseline sediment coverage was approximately 50%, and on the south side values ranged from approximately 2% to 30% (Baseline Reports 2014).

5. Images collected during the diver survey of *Acropora* north and south of the channel also conducted pre-project revealed conditions of extensive natural sedimentation on and adjacent to *Acropora* and other resources. 2013 *Acropora* relocation report. Observations made by the Corps team were consistent with literature (Blair & Flynn, 1989) suggesting "...reefs off northern Dade County are affected by various factors such as runoff from upland sources, effluent from northern Biscayne Bay, treated sewage effluent, commercial and recreational shipping and fishing, sport diving activities, costal construction and restoration program." Observations made by the Corps team also documented a pre-project baseline condition of natural sedimentation in the Project area.¹

¹ This documentation included a qualitative and quantitative (including sediment coverage) analysis of the project area. Sediment depth measurements were not taken due to the fact that the high probability of error and incapability of accurately replicating the measurement make such measurements scientifically unreliable. Furthermore, sediment depth measurements were not required by the DEP permit.

6. Sediment plays a large role in the functional group matrix for the hardbottom and reef systems adjacent to the Miami Harbor. There is significant peer reviewed literature discussing burial of reef organisms during hurricanes and other storm events, as well as natural sand wave movements in hardbottom habitats (for example, as seen at the permanent monitoring site, designated as HBN1), and demonstrating that species living in this habitat readily adapt to large, temporary sediment impulses (Dodge et al 1974, Peters and Pilson 1985, Rice 1984, Rogers 1983, Rogers 1990 and Lybolt and Tate 2008). These papers all discuss how varying levels of direct and indirect sedimentation, even leading to complete and total burial of the resource, may not result in death of the coral colony (Lybolt and Tate 2008, Rogers 1983, Rogers 1990).

7. During the installation of the channel side monitoring sites in September and October 2013, scientific divers documented no hardbottom habitat associated with prescribed site location HBS4, (Baseline Report, page 5).² However, this area was documented by Walker et. al., 2008 habitat mapping as “scattered rock and coral in sand.”

ENVIRONMENTAL RESOURCE HEALTH: PRE-PROJECT CONDITION

8. Similar to observations of pre-project natural sedimentation on adjacent resources, the Corps team also observed varying levels of resource health adjacent to the Project. Observations included coral disease symptoms of mottled coloration and necrotic tissues (2013 Baseline Report, page 12, figure 5b) picture of coral with disease and extended polyps), sediment stress, polyp extension, fish bites, excess mucus, and partial mortality of unknown cause (2013 Baseline Report, page 11, figure 5a). Approximately 800 corals of different species were observed for health conditions pre-project, and these observations continued during project construction. At sites on the nearshore hardbottom, 37.0% of scleractinian corals exhibited one or more of the cited health stress conditions, At sites on Reef 2, 53.2% of scleractinian corals exhibited one or more of the cited health stress conditions, and 52.3% of scleractinian corals on Reef 3 exhibited one or more of the cited health stress conditions.

9. Another very large stress factor for all coral species throughout Florida and the Caribbean is thermal stress due to warming oceans. Thermal stress in corals is expressed by a phenomenon referred to as “bleaching” where the coral expels the symbiotic zooxanthellae (algae that live inside the coral which give the coral their color), making the coral transparent, and the white limestone skeleton is visible to the naked eye. Bleaching used to be a rare occurrence. Since the late 1980s, it has become a much more common event across Florida and throughout the Caribbean. NMFS noted in the Draft Recovery Plan for *Acropora* that thermal

² The Baseline Report states, “Divers took photos at each location documenting mostly sand, as well as some attached algae and gorgonians, a type of soft coral. The buried gorgonians observed during baseline suggested this area may experience seasonal burial and exposure during certain times of the year, however, pre-project was completely buried in sand with no resources.”

stress was the #2 threat to the survival of the species across its range. Reasons for increasing stress have been tied to increasing water temperatures associated with Global Climate Change. A recent paper (Kluffner et al 2014) documents the increasing sea surface temperature (SST) in southeast Florida and the resultant increase in bleaching events. Generally, the months of July, August and September were shown to have the highest SST and the highest likelihood for coral bleaching.

10. *Acorpora cervicornis* (*A. cervicornis*), or “staghorn coral,”³ (*Acropora cervicornis*) was listed as “threatened,” pursuant to ESA regulations, on May 9, 2006, (71 FR 26852) based on a status review completed by NMFS in March 2005 (70 FR13151). NMFS published a “4d” rule for these *Acropora* species on October 29, 2008, (73 FR 64264) providing a list of activities that would result in “take” as defined by the ESA. NMFS published a final rule to designate critical habitat for these species on November 26, 2008 (73 FR 72210). On December 7, 2012, NMFS proposed that the two species of *Acropora* already listed under the ESA be reclassified from threatened to endangered (77- FR 73219).

11. On September 4, 2014, NMFS issued a draft Recovery Plan for *Acropora* species, finding that the species’ recovery was subject to multiple threats. Despite this finding, NMFS published a final rule on September 10, 2014, declining to uplist the *Acropora* species from “threatened” to “endangered.” In so doing, NMFS reasoned that relative population abundance and evidence of population expansion did not warrant the species’ uplisting. NMFS estimated that tens of millions of *A. cervicornis* colonies existed in the Florida Keys and the Dry Tortugas alone. While separate populations of *A. cervicornis* may exist throughout the species’ range, under the ESA, NMFS is unable to list distinct population segments for invertebrate species but, rather, must list them based on the status of the entire species throughout its range. NMFS and USFWS published a joint Policy Notice in 1996 specifically clarifying this requirement (61 FR 4722, Feb 7, 1996). While NMFS cannot evaluate an invertebrate species’ distinct population segments (e.g. SE Florida population of *A. cervicornis*), NMFS provided a summary of the status of known “small pockets of remnant robust populations such as southeast Florida...” in the final listing rule (2014). Based on NMFS’ determination that tens of millions of colonies of *A. cervicornis* exist in the Dry Tortugas and Florida Keys, in addition to the mapped colonies in Dade, Broward and Palm Beach Counties (which are an under-estimate as no county-wide surveys have been conducted in any of the three counties) and the remaining colonies mapped

³ Staghorn coral (*Acropora cervicornis*) is a branching species that occurs throughout the wider Caribbean. Staghorn corals have straight or slightly curved, cylindrical branches that look like deer antlers. The species range in color from golden yellow to brown, and the growing tips tend to be lighter or lack color. Individual staghorn coral colonies can reach up to 5 ft (1.5 m) across but may form thickets composed of multiple colonies that are difficult to tell apart. Staghorn corals are reef-building species that provide important habitat for other reef organisms, and other reef-building corals cannot fill the unique structural and ecological role of this coral species (Bruckner 2002a). Staghorn coral commonly grows in water ranging from 15 to 65 ft (5-20 m) in depth and rarely in waters to 196 ft (60 m) (Davis 1982; Jaap 1984; Jaap et al. 1989; Wells 1933). In Florida, staghorn coral has been documented along the east coast as far north as Palm Beach County. It occurs in deeper water (50-100 ft/16-30 m) at its northernmost range (Goldberg 1973; E. Tichenor, Palm Beach County Reef Rescue, pers. comm. to Jennifer Moore, NMFS 2008) and is distributed across its depth range (15-100 ft/5-30 m) off Broward and Miami-Dade Counties, the Florida Keys, and the Dry Tortugas (Jaap 1984).

throughout the remainder of the species' known habitat, it appears that there are likely hundreds of millions of colonies of *A. cervicornis* throughout its range. It is unlikely, then, that indirect effects of localized sedimentation will lead to irreparable harm to the species throughout its range.

DREDGE-RELATED SEDIMENT AND CORAL HEALTH AT MIAMI HARBOR

12. The risks and severity of impact from dredging (and other sediment disturbances) on corals are primarily related to the intensity, duration, and frequency of exposure to increased turbidity and sedimentation. Erftemeijer et al (2012). The sensitivity of a coral reef to dredging impacts and its ability to recover depend on the antecedent ecological conditions of the reef, its resilience, the ambient conditions normally experienced, and the specific make-up of the coral species in the area. Adverse affects from sedimentation are also less likely to occur in the presence of strong oceanographic currents (Rogers 1990) because sediments are swept off corals. The influence of the relatively strong Gulf Stream in the Project area is likely to reduce any permanent adverse affects from sedimentation.

13. A review of U.S. Environmental Protection Agency (USEPA) monitoring reports for disposal plumes at the Port of Miami's Offshore Dredge Material Disposal Site (ODMDS), which occurred during the Miami Harbor Phase II Project (2005-2006) mapped the plumes' travel time and sediment concentration after disposal. USEPA (2008) found that, at the time of initial disposal (1 minute post disposal) in the water column, sedimentation levels (surface TSS) concentration ranged from 34 to 77 mg/l. Despite being visually spectacular (especially by being distinguishable in color from ambient ocean water), the sediment load carried by such turbidity plumes is minimal. As the plume ages it is subject to a cascade of processes which result in a significant diffusion and dispersion as the plume mixes with ocean currents (Bloetscher et al. 2012). Little supporting evidence exists for increased rates of sediment accumulation at reef sites within or near these turbid plumes (CSA 1981, CSA 2007). The scientific literature does not support that higher turbidity values correlate to higher sedimentation rates on adjacent habitats. There is no direct correlation between turbidity and sedimentation rates, or between turbidity and total suspended solids that can be uniformly applied across differing projects (Davies-Colley and Smith 2001; Clarke and Wilber 2008).

14. A review of the monitoring from the Port Everglades channel widening and deepening from 1980-1981 continues this trend in showing little to no effect of dredging operations on corals adjacent to dredging areas (CSA 1981). Similarly, the outer entrance channel of Miami Harbor was deepened as recently as 1993 (Phase I), using similar dredging methods as currently in operation. As little as seven years following completion of this 1993 dredging (which consisted of deepening and widening the channel as it then-existed), coral and hardbottom communities adjacent to the widened and deepened channel show diverse species of coverage (USACE 2001 Baseline Report, p. 21).

15. Depending on the mode of fertilization, coral larvae (called planulae) undergo development either mostly within the mother colony (brooders) or outside in the ocean (broadcast spawners). In either mode of larval development, planula larvae presumably experience considerable mortality (up to 90% or more) from predation or other factors prior to settlement and metamorphosis. Such mortality cannot be directly observed but is inferred from the large amount of eggs and sperm spawned versus the much smaller number of recruits observed later. "Settlement of staghorn larvae is rarely detected in coral recruitment studies" (NMFS 2014 Port Everglades BO). The allegation by the Florida Department of Environmental Protection (DEP) Field Trip Report (DEP July 2014), discussed in more detail below, that the Project has caused direct decrease in coral larvae due to sedimentation is not supported by prevailing scientific literature and lacks supporting documentation. In fact, in its 2011 Biological Opinion, NMFS even suggests that sediments and sediment production may have no negative impact on coral growth.⁴

16. During baseline (pre-project) survey of conditions, it was observed that along the offshore habitats crustose, turf, and bare space (CTB) was the dominant benthos (meaning, the living environment of the lowest level of a body of water) occupier. Since compliance monitoring during construction began, project monitoring has revealed that sand (or sediment) became the predominant category across sites adjacent to active dredging. However, as the dredging has progressed throughout locations, monitored sites are also showing sand recession. These observations are consistent with anticipated impacts, confirming the temporary nature of Project influence (Weekly Coral Stress Monitoring Reports – Appendix A, Weekly Functional Group Analysis).⁵

17. The presence of sediment depth in ephemeral hardbottom habitat is not indicative of an effect of dredging. Rather, variable sediment depth in this habitat is precisely what is anticipated in a hardbottom habitat subject to oscillation between periodic sediment

⁴ NMFS reasons, "In addition to the amount of sedimentation, the source of sediments can affect coral growth. In a study of three sites in Puerto Rico, Torres (2001) found that low-density coral skeleton growth was correlated with increased resuspended sediment rates and greater percentage composition of terrigenous sediment. In sites with higher carbonate percentages and corresponding low percentages of terrigenous sediments, growth rates were higher. This suggests that resuspension of sediments and sediment production within the reef environment does not necessarily have a negative impact on coral growth while sediments from terrestrial sources increase the probability that coral growth will decrease, possibly because terrigenous sediments do not contain minerals that corals need to grow (Torres 2001)." p. 19.

⁵ This observation is consistent with the Corps' Final EIS which anticipated that "[i]ndirect impacts to dredging hardbottom/reef habitat may include temporary changes in adjacent habitats. In particular, hardbottom/reef habitats just outside the Entrance Channel and seaward to the Outer Entrance Channel may be affected. Potential indirect impacts may include the resuspension and deposition of sediments on nearby coral reef assemblages, although hard coral cover is typically <10 percent." Section 4.4.3.

accumulations and hardbottom exposure. Sandy areas between sporadic hardbottom exposures are quite extensive and likely of varying depths.

ADAPTIVE MANAGEMENT STRATEGIES

18. On the basis of information provided in prevailing scientific literature, the observations made and data collected during the baseline studies, and coordination with appropriate state and Federal regulating agencies, the Corps designed the Project to be minimally impactful to protected species. State permit conditions were incorporated into the construction contract, and the Corps' contractor, Great Lakes Dredge and Dock Co. (GLDD), initiated construction in November 2013 with certain anticipated adaptive management strategies in place. Initial dredge work was carried out using with a hopper dredge (a type of dredge that uses suction to remove loose sediments from the seabed) to remove top sediment layers above the rocky floor in the Federal channel. Current dredge work uses cutter-head suction dredging, which consists of a multiblade excavator rotating around a suction intake that looks similar to an eggbeater around a vacuum pipe. The eggbeater cuts into the ocean floor, while the vacuum sucks up the sediment material as well as water. This water and sediment mixture is referred to as "slurry" and is pumped off the ocean floor and through a pipeline into an apparatus behind the dredge called a spider barge (called this due to its many pipes branching off of the main pipe, resembling a spider). The purpose of the spider barge is to distribute the slurry into vessels called "scows" and allows for continuous dredging operation. As the slurry is pumped into the scows, the scows act as settling ponds with weirs which separate the sediment material and water, by discharging the clarified water through skimmers by gravity, in a process known as "decanting" or overflowing. When full of sediment material, the scows then travel to and dump the sediment into an approved dumping site, referred to as an offshore dredge material disposal site (ODMDS), so that it will not impact environmental resources nearby the Project area. To ensure that the turbidity, or suspended sediment in water, is in compliance with the water standards set forth in the Corps' state water permit, turbidity monitoring stations were established that generate reports every four hours for locations that have the highest turbidity concentration. Before and after the adaptive monitoring measures, discussed in more detail below, the Corps has only exceeded the turbidity standards for its state permit twice, both while dredging in between the jetties (i.e. away from reef habitat) on an inflowing tide, thus triggering the turbidity standard of the Outstanding Florida Water, which is lower than the state standard for offshore dredging.

19. Environmental monitoring during construction is required in the state permit, in part, to identify potential environmental concerns and allow the Corps to avoid and/or minimize any permanent impacts which may be attributed to the Project. Though the Corps discussed the possibility of near-channel sedimentation in its Final Environmental Impact Statement, the full extent of those impacts, if any, could not be precisely calculated prior to commencement of

construction. The Corps and GLDD have at all times complied with terms and conditions of the state permit, as amended, and NMFS' 2011 Biological Opinion. However, as required by the permit and for the protection of hardbottom habitat and environmental resources within the Project area, GLDD has proactively implemented adaptive management measures to reduce the possibility or extent of impacts throughout the duration of construction. Important adaptive management measures include:

- a. Elimination of "green valves." "Green valves" are a dredge scow decanting system designed to reduce air diffusion into decanted overflow to reduce turbidity within the water column. The employment and use of green valves were utilized when the dredge Texas began work, during the January and early February 2014 time frame, and discontinued upon evaluation and determination by the Corps that, although the method may reduce surface turbidity, it also seems to enhance translocation of suspended solids (within the decanted dredge water) to the benthos. The green valves were developed by GLDD after the Miami Harbor Phase II Project in 2005-2006.
- b. Suspension of spider barge activity. Spider barge activity ceased from February 9, 2014, to March 6, 2014 to allow time for the southern hard bottom sites to recover from scow filling activity. During this time period the dredge Texas conducted rock chopping operations. In order to reduce sedimentation issues found during weekly reporting, the hopper dredge operated with little or no overflow for significant periods of time prior to its departure on July 3, 2014. This resulted in no additional contribution to turbidity and sedimentation from these operations.
- c. Use of additional scows. Additional scows were brought into rotation to reduce the overflow time and reduce turbidity and sedimentation. These are documented in the weekly compliance monitoring reports. Specifically, in week 39, language was added to the report to indicate that "[a]n additional tug and scow were added to the scow package to allow the Spider Barge to load scows with minimal to no overflow to help reduce possible sedimentation and turbidity." Each of the scows has a capacity of approximately 9,000 cubic yards. The number of scows that can be utilized in the rotation is also dependent on their availability due to periodic maintenance/repair requirements.
- d. Reduced overflow times. The contractor reduced overflow times during each scow load by changing scows as soon as the next empty scow returned from the ODMDS. As overflow is minimized, the total amount of cubic yards per scow load is decreased. While this results in ineffective filling of the barges to capacity, resulting in increased costs associated with inefficiency and increased tug fuel consumption, it also further reduces turbidity and sedimentation near the Project. Operations at the Project

from January 2014 through April 2014 showed an average of approximately 2,000 cubic yards per load (cy/load). From April through July, overflow of the scows was further minimized as an adaptive management strategy to reduce potential sedimentation on adjacent resources which yielded approximately 1,500 cy/load. Further reduction in overflow from August through September 2014 shows production was further decreased to approximately 1,380 cy/load. From September 8 to October 6, 2014, scow loading was again reduced to an average of 631 cy/load.

e. Reduced cutting speed. In order to reduce the amount of water pumped into the scows, GLDD reduced cutting speed, which has the effect of creating a lower water to sediment ratio slurry. Reducing the amount of water to be decanted from the scow, in turn, results in a lower likelihood of water with fine sediment matter being reintroduced into the water, minimizing both turbidity and the volume of sediment matter that may ultimately settle on the ocean floor.

20. Since construction commenced, GLDD employed “adaptive management strategies” in immediate response to data gathered in the field and has continued to adopt adaptive management strategies to ensure minimal impact to adjacent resources. The dredge has been relocated several times to limit the immediate impacts to adjacent habitat between material preparation in Cut 3 and material removal in Cut 2 with the spider barge and scows. This information is documented in the weekly compliance monitoring reports and reflects the extensive steps taken during construction to minimize environmental effects. These weekly monitoring reports indicate that the measures taken to date have significantly reduced sedimentation levels in areas adjacent to active dredging. See Attachment B.

21. The Corps continues to explore additional operational methods to immediately respond to potential event driven sedimentation following discovery.

EVALUATION OF PROJECT EFFECT

22. Both DEP and the Miami -Dade County Department of Environmental Resources Management (DERM) recently conducted project site surveys, recorded observations, and subsequently produced reports related to coral impact and general benthic resource health. DERM conducted its surveys on July 8, 2014 and presented its findings on July 28, 2014 in a report entitled “US Army Corps of Engineers’ Port of Miami Deepening Project Report on Opportunistic Hardbottom/Reef Inspections – July 2014” (DERM Report). Concerned regarding the extent of Project-related sedimentation impact within the Project area, DEP conducted a field survey in late July 2014 and presented its findings to the Corps on August 18, 2014, in a document entitled, “Field notes on impact assessment in Miami Harbor Phase III Federal Channel Expansion Permit # 0305721-001-BI” (DEP Field Notes). Both reports alleged that

observed sedimentation, as well as any and all health impediments to corals, sponges, octocorals, and other environmental resources, are directly attributable to the Project. However, the reports are subjective and draw conclusions based upon surveys conducted over two to three days with no pre-condition visits or baseline data collection against which to compare. In general, neither the DERM Report nor the DEP Field Notes accurately represent potential Project effects.

23. As an example, the DERM report alleges that “[t]urf algae was visible on hardbottom ... Light dusting and moderate sedimentation was observed on hardbottom ... Swollen polyps of *M. cavernosa* colonies observed ... Light sediment dusting observed on *Cliona varians* ... mucus production of *porites asteroids* colonies observed.” The fact that turf algae was visible in some areas conflicts with another allegation that these same areas also reflect moderate levels of sedimentation because the two cannot coexist on the same substrate. The preferred habitat for the encrusting and boring sponge *Cliona varians* is areas that have naturally high-levels of sedimentation. Descriptions of this sponge include “often partly covered by sediment” (NOVA).

24. The fact that there is a minor dusting of sediment on *C. varians* is not surprising given the naturally high levels of natural sedimentation in this area. Many sponge species (including clionids) are found living in these habitats specifically because they use the available sediments for nutrition and structural stability (Cerrano et al., 2007). *Clionid* sponges can also outcompete other organisms that cannot normally tolerate these adverse conditions (Rutzler 2002). Thus, using this species as a proxy for dredge related sediments impacts seems to be misplaced and off-target.

25. In many of DERM’s observations, it is impossible to know whether the sediment identified on the coral surface is from settlement out of the water column or from the bioerosion of the skeleton from above, such as an actively bioeroding boring sponge, *Cliona delitrix*. Acquisition of coral stress data on colonies not previously integrated into the monitoring program does not allow for accurate assessment of their pre-project condition as it relates to their current condition. Without this temporal sequence, a comment such as “the coral has swollen polyps due to dredging” has no basis in scientific fact and is merely speculative.

26. Similarly, the DEP Field Notes make reference to sediment creating anoxic (without oxygen) conditions when no data or laboratory tests regarding oxygen content of the sediment were collected during the field visits, and the author simultaneously notes that benthic infauna (animals that live in the sediment) had created burrows through the sediment. These conclusions are contradictory in that benthic infauna cannot survive in anoxic conditions. DEP’s Field Notes also make the assumption that coral colonies showing dead areas are directly attributable to the dredging whereas pre-project baseline data made note of previously dead areas on many of the corals in the Project area. Further, the DEP Field Notes identify sediment depths

up to 5.5 inches and suggest that these depths are fully attributable to Project dredging. However, lacking baseline data, there is no indication regarding the level of sediment depth that existed pre-project or how this depth might have varied over the course of construction due to natural effects.⁶

27. Partial mortality of resources observed and reported by FDEP and DERM can be related to a number of factors, including disease, predation, sedimentation, or combinations of these factors. Because their observations are not compared to previously collected or assessed data, the conclusions drawn in these reports are based solely on speculation drawn from isolated qualitative data. Based on the natural conditions in the Project area, discussed above, and the lack of comparative data utilized in these reports, I conclude the determinations reached in these reports lack adequate scientific support.

28. On the other hand, the Corps' baseline surveys and weekly project monitoring studies and reports, which have been conducted before and throughout construction, remain the best and most comprehensive record of benthic community dynamics, structure, and record of potential Project effects. Such monitoring efforts include thousands of hours of diving in the Project area, thousands of still photographs, and hundreds hours of high definition video of the Project area. As previously discussed, considerable sedimentation existed in the Project area pre-dredging, as did substantial coral health stress indicators of natural causes.

29. In addition to the weekly monitoring reports, the Corps has recently carried out a sedimentation delineation effort for the nearshore hardbottom habitat and four *A. cervicornis*-specific surveys (a fifth survey is ongoing) since mid-August 2014. The scope of these surveys were coordinated with NMFS and modified based on input from NMFS' scientific research staff. The surveys collected data from permanently marked *A. cervicornis* colonies at sites both north and south of the channel within the Project area, but also from control sites located approximately 5 miles north of the Project which are not affected by the localized Project-related sedimentation. Throughout all surveys, coral stress indicators at the south channel sites and control sites were comparable. Coral stress indicators at the north channel site was higher during the first survey but were comparable to the south channel and control sites in the subsequent surveys. These observations, coupled with current water temperature data, indicate that the predominant influencing stress factor has been thermal stress rather than sedimentation.

30. The Corps' planned methodology for monitoring will continue to assess the health of adjacent resources and conclude if permanent impacts occur. Part of this long term assessment of permanent impact includes a delineation of sedimentation. The delineation is a mapping of the presence/absence of the clay-like material based on visual observation of the scientific dive team on the day(s) of the investigations. Discussions and presentation of data in

⁶ Even if DEP had such data, sediment depth measurements are scientifically unreliable. See fn. 1.

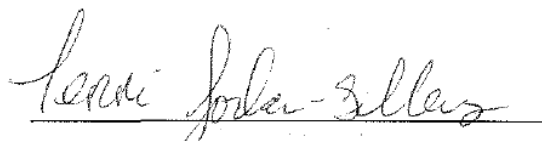
the weekly compliance monitoring reports clearly indicates that the sedimentation and coral stress are variable. A number of environmental factors influence the marine habitats adjacent to the Project area. As with any data collection effort in a dynamic system, conditions change over time. The report documented the presence /absence of the clay-like material based on visual observation of the scientific dive team on the day(s) of the investigations. Monitoring of the established stations clearly demonstrates a highly variable habitat, over which physical (waves, currents, etc.) and biological (i.e. faunal and infaunal) influences manipulate the habitat on a continual basis. At one time, all monitoring sites in the nearshore zone were covered in the clay-like material. The delineation report, however, documents this was a temporary effect, as the material has not persisted at many channel-side sites. Natural physical and biological processes have incorporated the material into the background sediment through bioturbation (biological movement of sediment by animals, e.g. burrowing animals) from infauna. The weekly monitoring reports document an effect on the hardbottom community through time at specific sites. The repetitive monitoring of sites during construction has shown these effects are temporary in nature, with the exception of some partial mortality of non-Acroporid hard corals, which has been documented by the Project monitoring team. Nonetheless, the Corps and NMFS have coordinated to immediately address potential impacts to *A. cervicornis* resulting from Project-related sedimentation by fragmenting known *A. cervicornis* colonies in the Project area and relocating the fragments to a nursery maintained by the University of Miami. *Acropora cervicornis* is an extremely fast-growing branching coral with very high annual productivity rates. In addition to having prolific growth, the species benefits from "high fragment survivorship coupled by the pruning vigor experienced by the parent colonies by fragmentation... Donor colonies that have lost up to 95% of their tissue and skeleton through fragmentation and still have enhanced growth and recovery." (Lirman et al 2014). Therefore, the Corps anticipates that this fragmentation and relocation effort will have a high probability of success and will contribute to the overall health of *A. cervicornis* in the Project area.

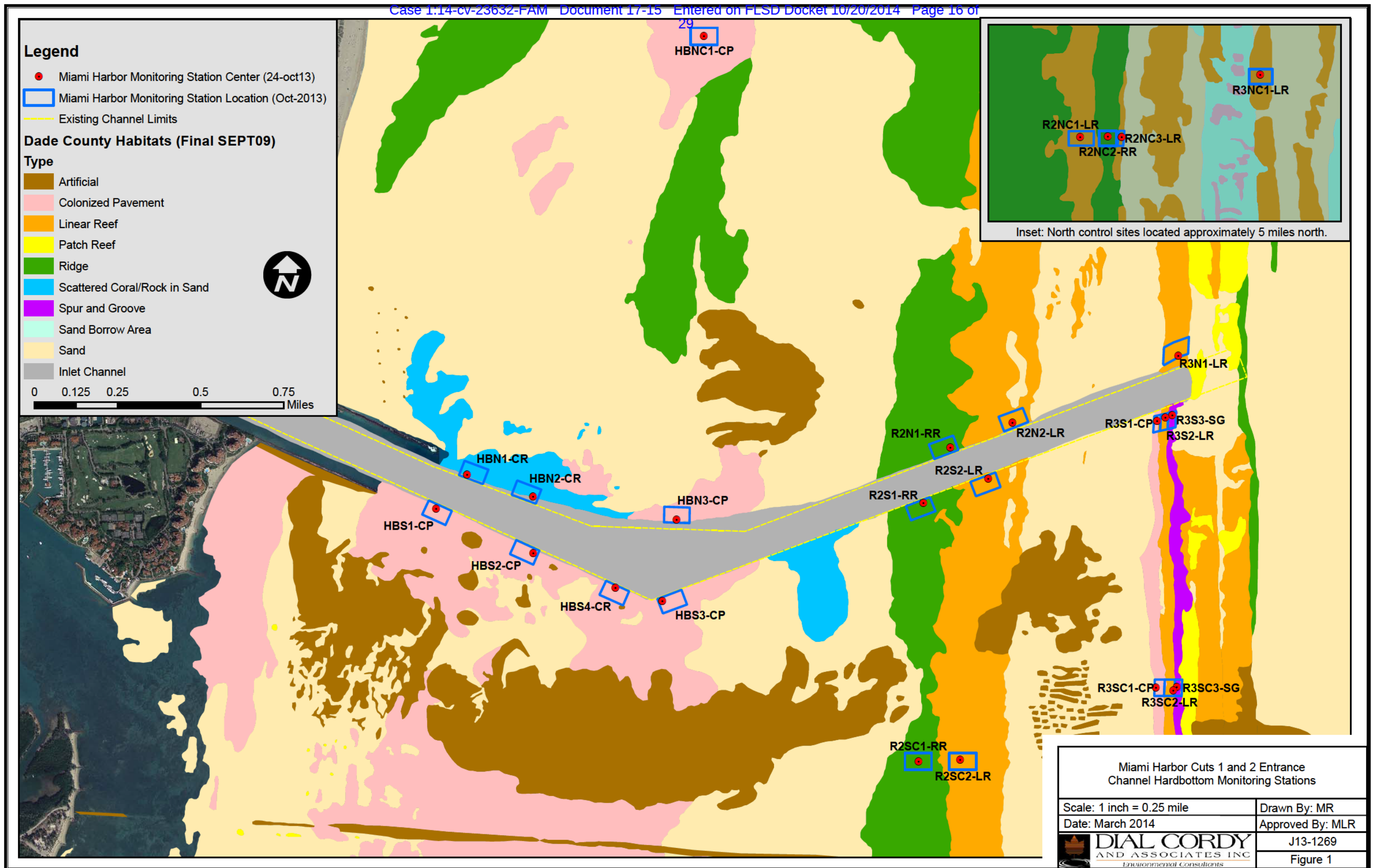
31. The fact that historic monitoring activities have documented sedimentation that is not now present is a testament to the variability of the habitat and changing environmental conditions at these monitoring sites and the importance in the weekly compliance monitoring program to detect such changes. These observations are consistent with the impacts anticipated in the original Final Environmental Impact Statement for the Project and with historic observations detailed in prevailing scientific literature. Additionally, neither the DERM nor DEP Reports demonstrate any quantifiable link between the dredging work and the current depths of sedimentation observed in the Project area. Coupled with the high variability of the benthic environment in the Project area, the adaptive management measures employed by GLDD during construction have effectively eliminated the potential for long-term impact to *Acropora* coral due to Project-related sedimentation. Even if greater than anticipated sedimentation has already occurred, it is unlikely that, due to these adaptive management measures, continued dredging will result in appreciable additional sedimentation loads. It is my professional opinion then that

– given natural processes, the relative abundance of the species throughout its range, the employment of adaptive management measures, and the joint efforts by the Corps and NMFS to fragment and remove remaining *Acropora* corals in the Project area – impacts to protected *Acropora* corals will not significantly exceed those originally contemplated and coordinated with state and Federal resource agencies and will not result in an unauthorized incidental take of the species nor adversely affect its critical habitat.

Pursuant to 28 U.S.C. § 1846, I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information and belief.

Executed this 20th day of October, 2014.

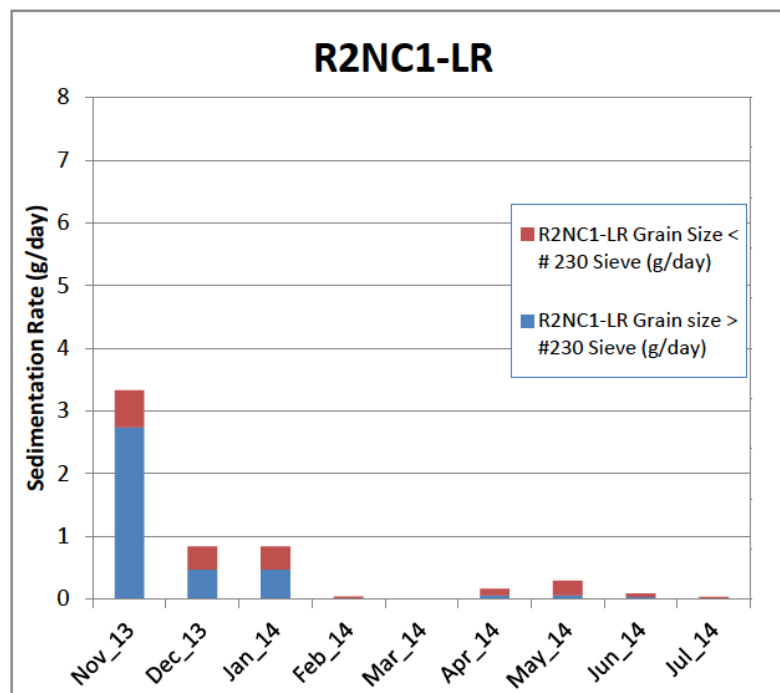
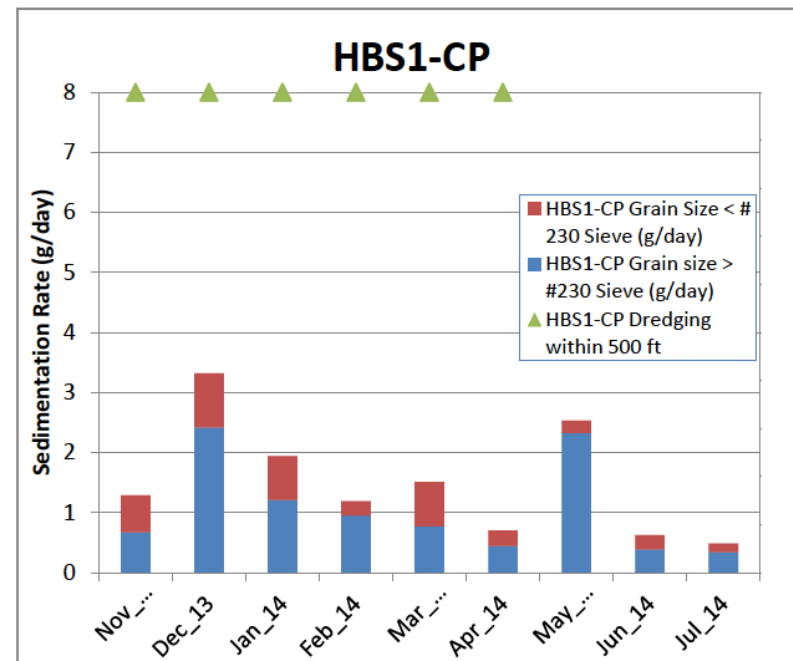
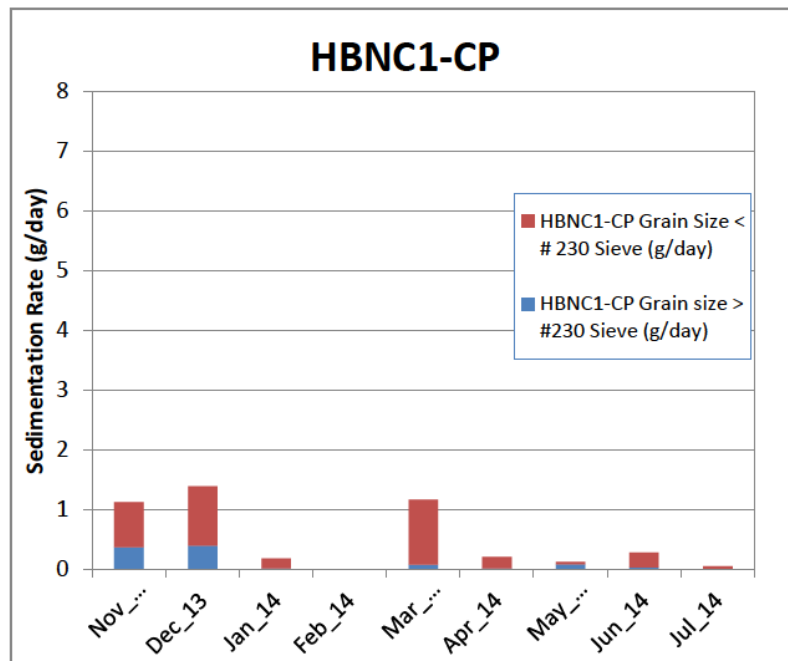
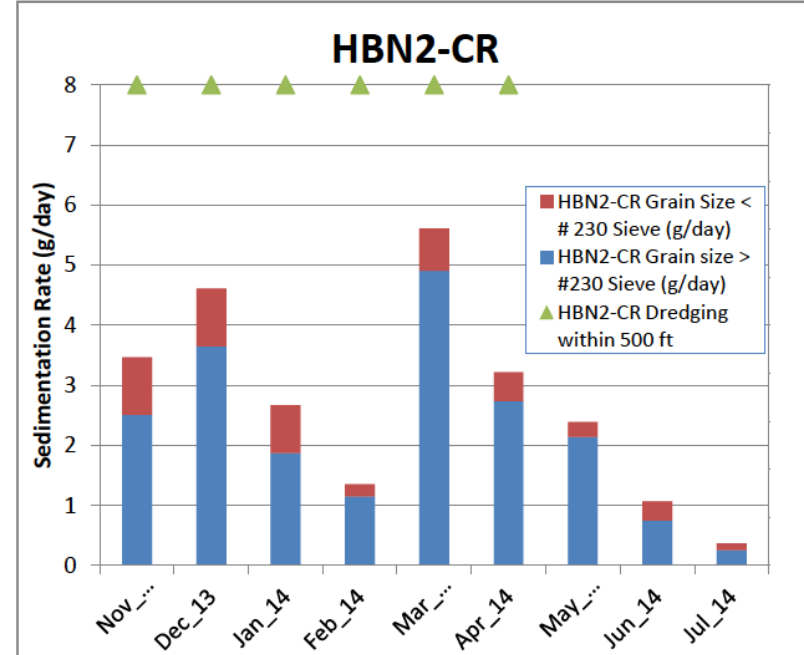
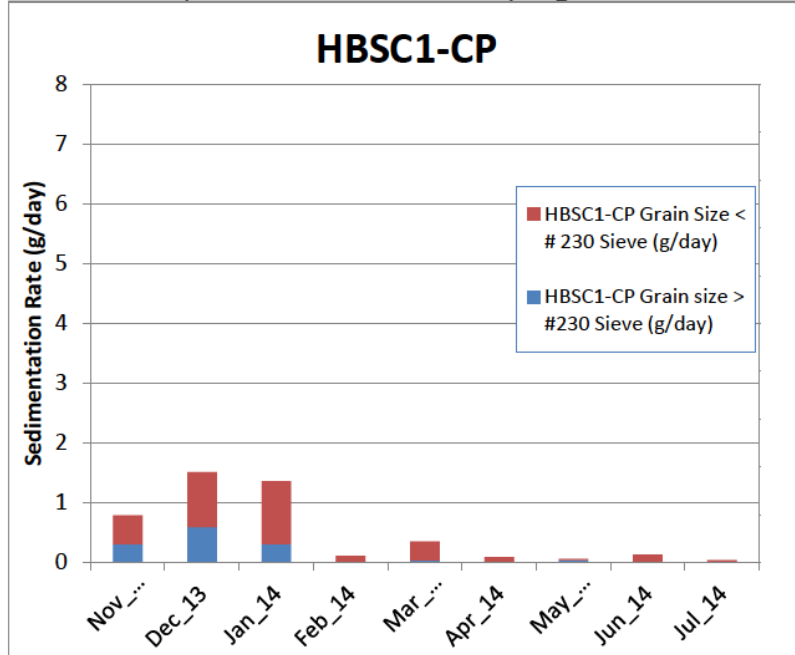

Terri Jordan-Sellers



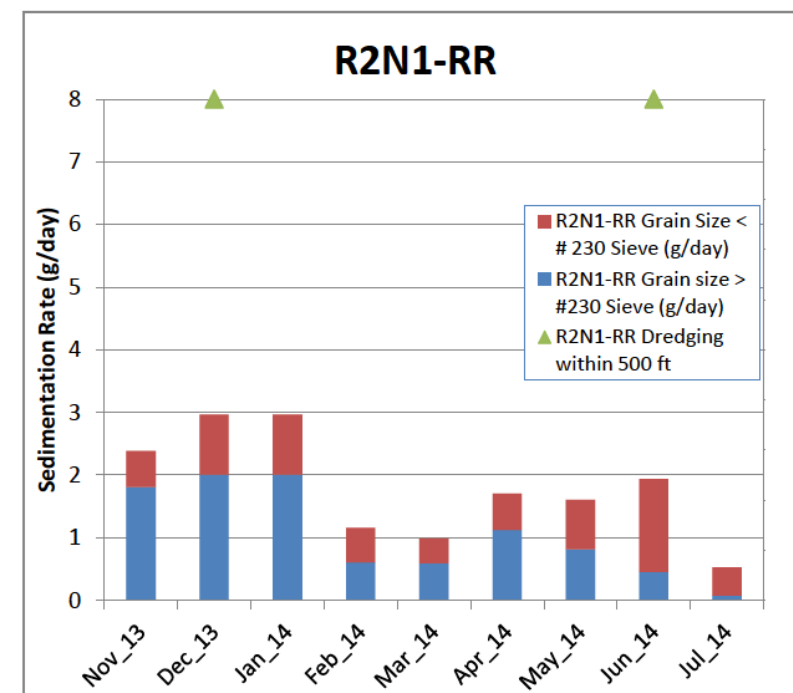
Comparison of Controls vs Channel Stations

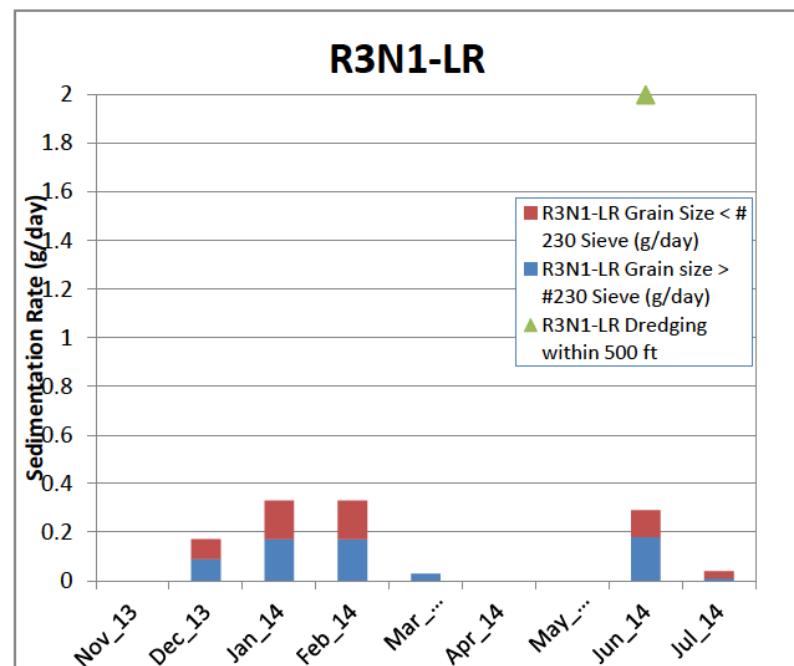
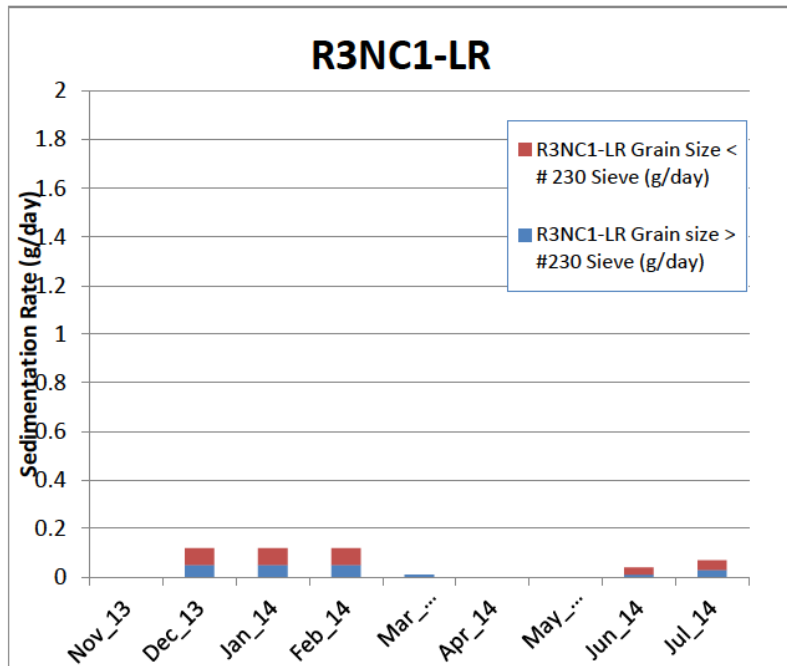
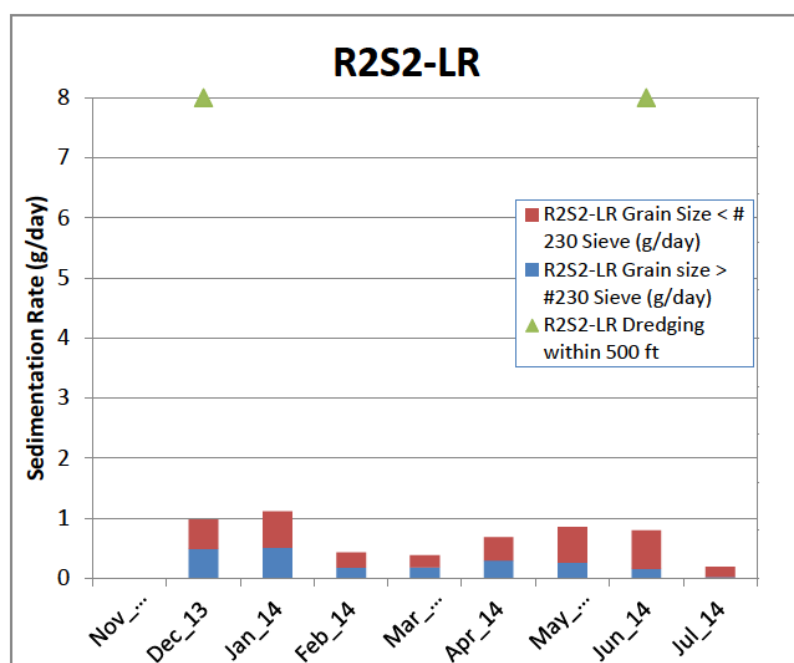
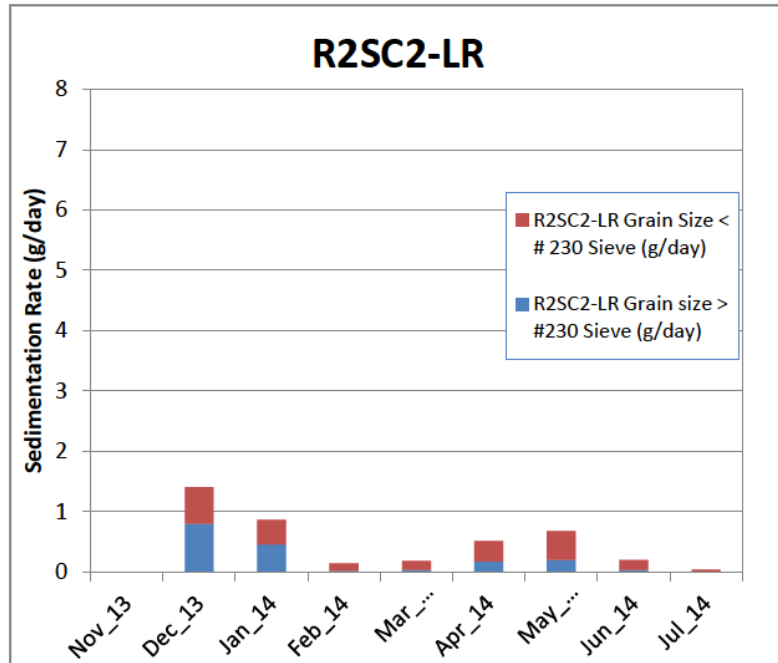
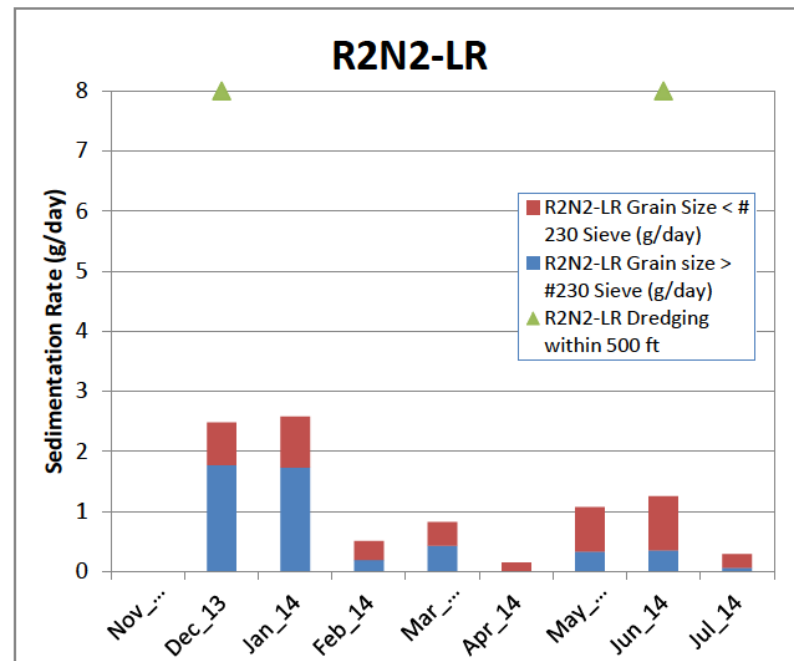
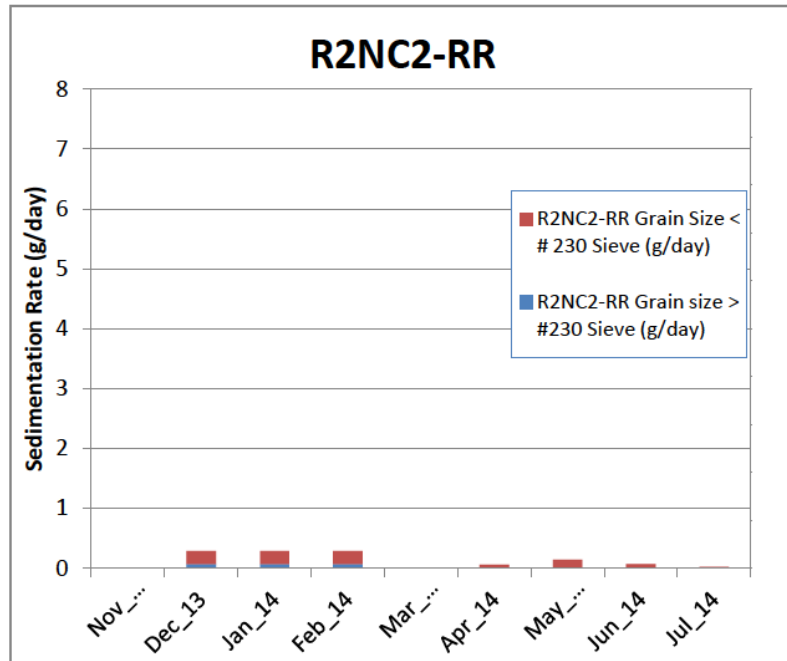
Shows: Channel stations generally have higher sedimentation rates regardless of proximity to dredging activity.

Conclusion: When comparing controls to channel stations, differences in sedimentation cannot solely be attributed to proximity to dredging since much of the sedimentation experienced at channel stations is a result of the local current and bathymetry that are unique to each channel sampling location.



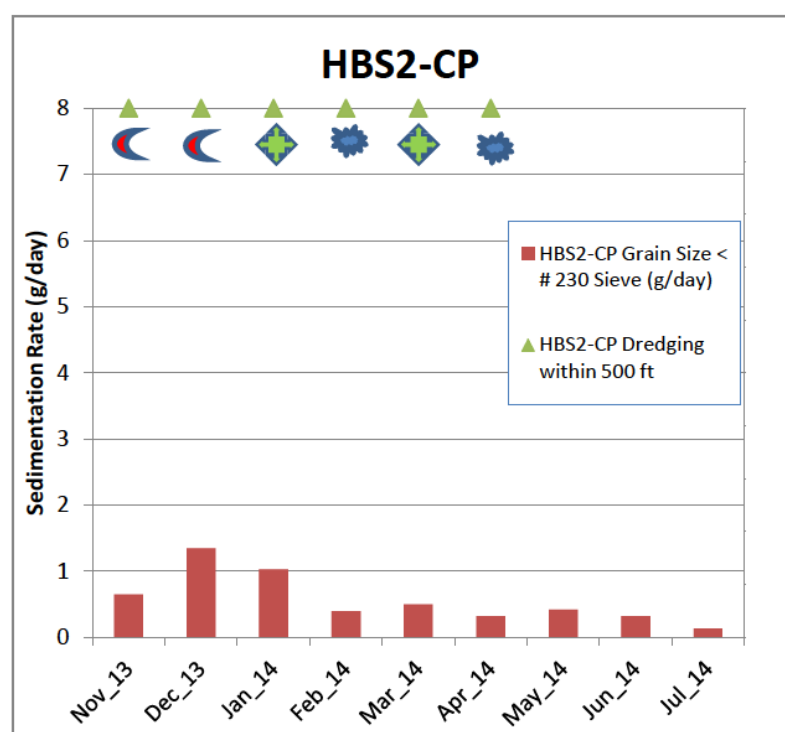
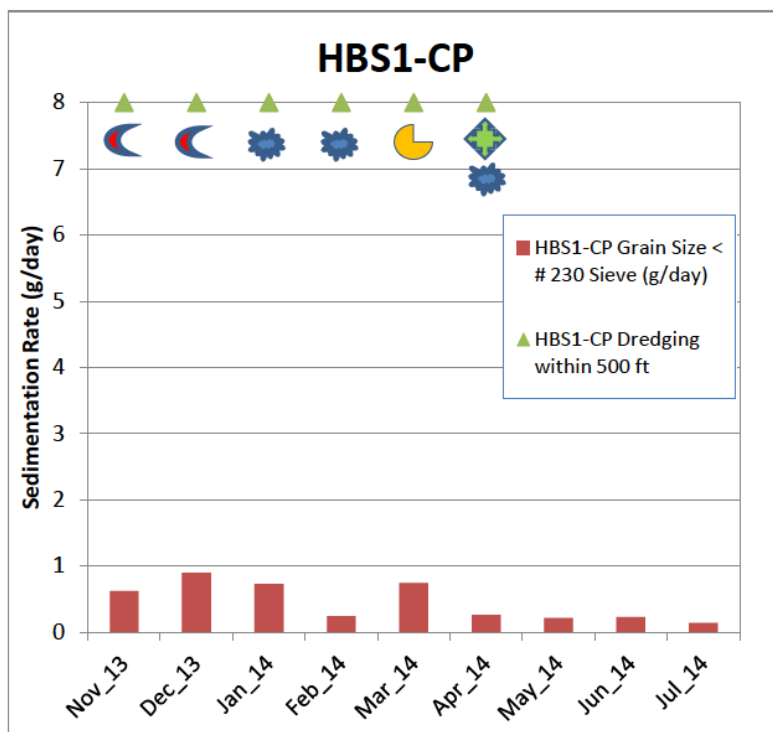
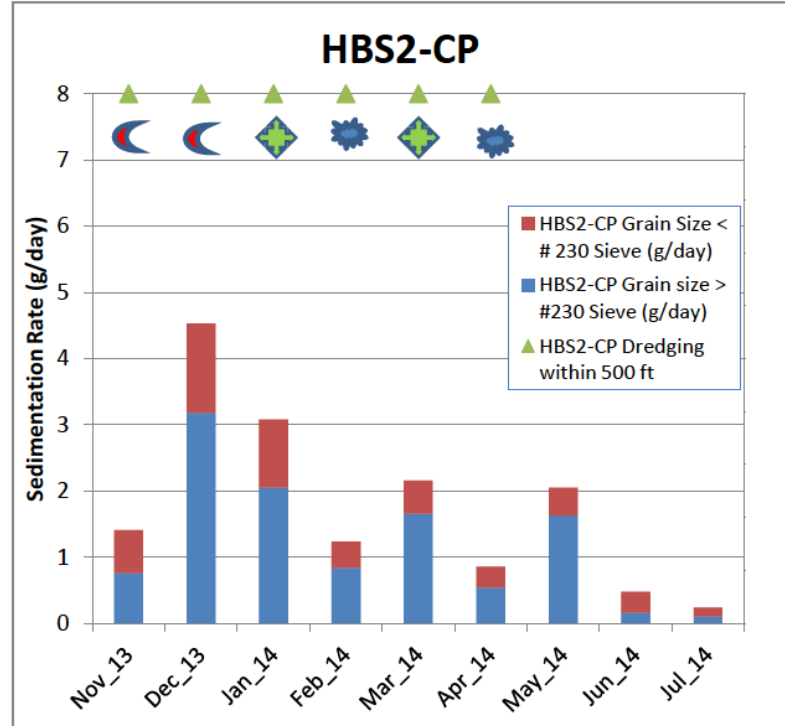
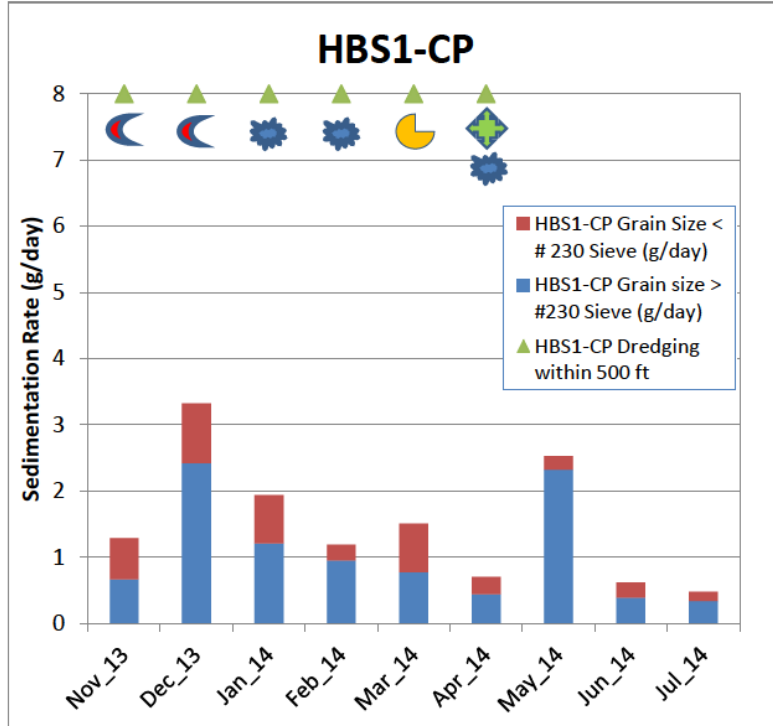
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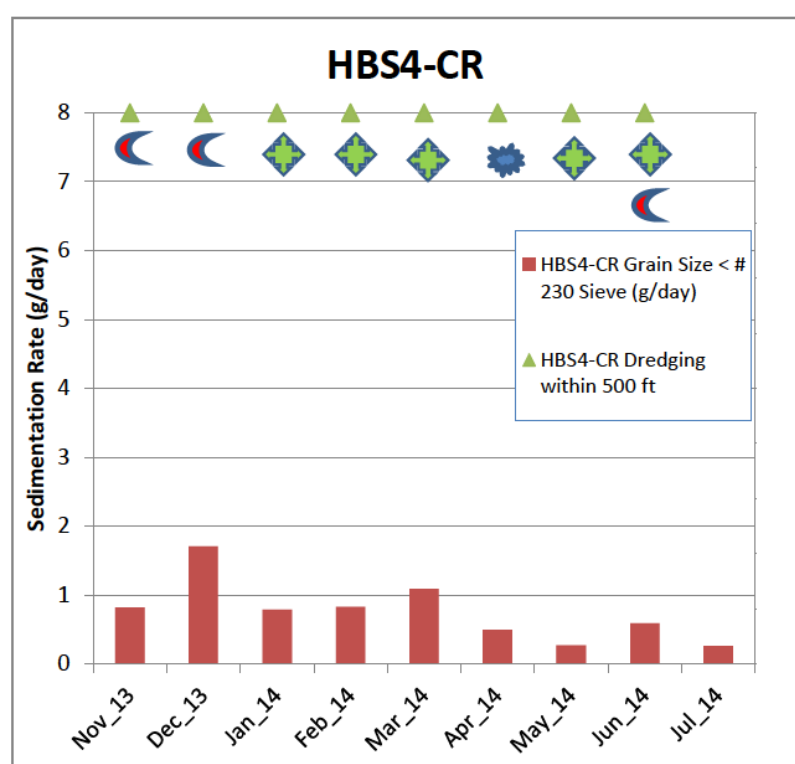
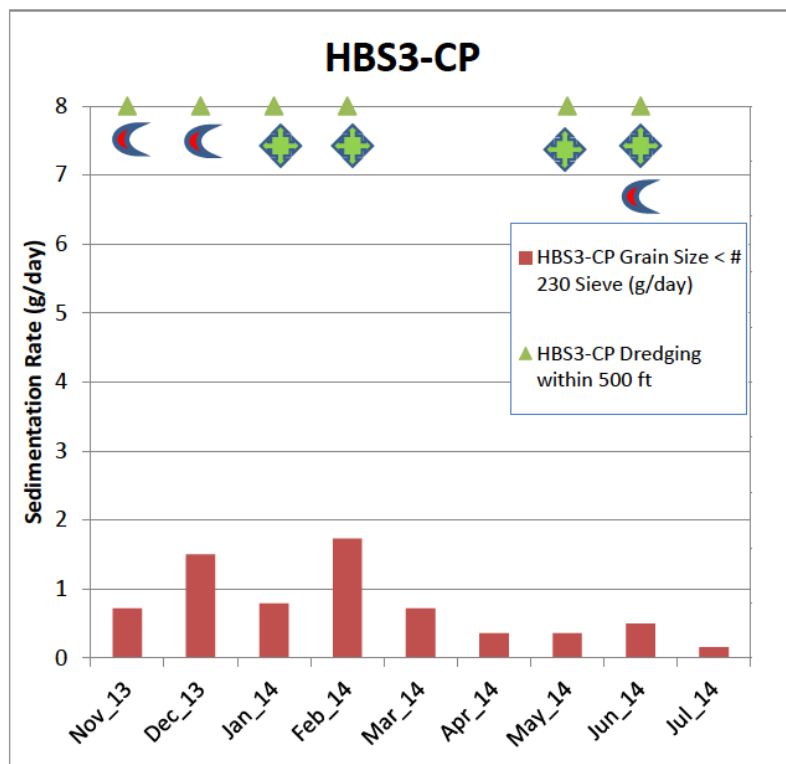
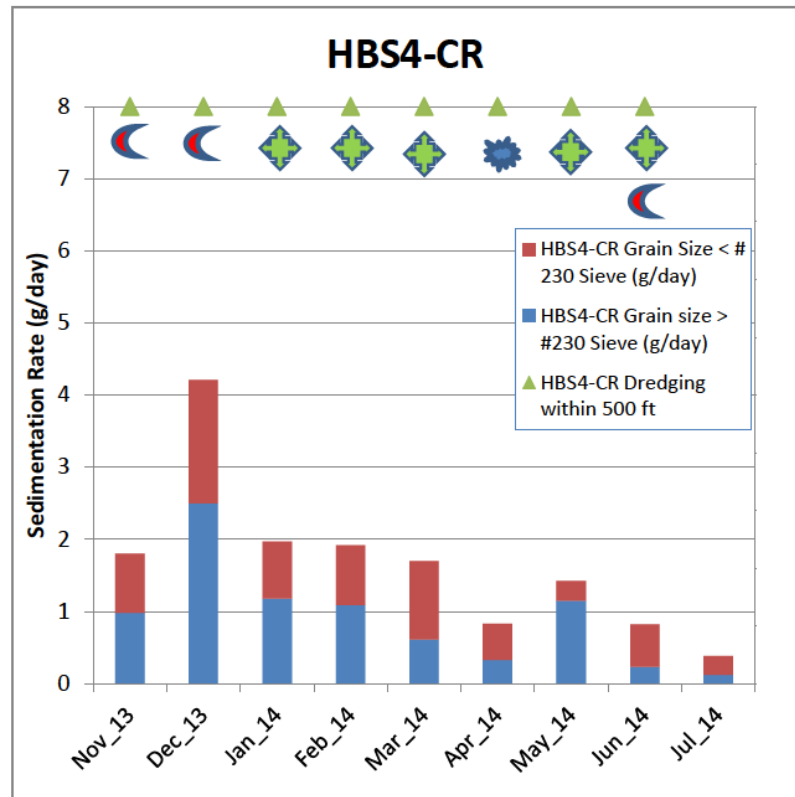
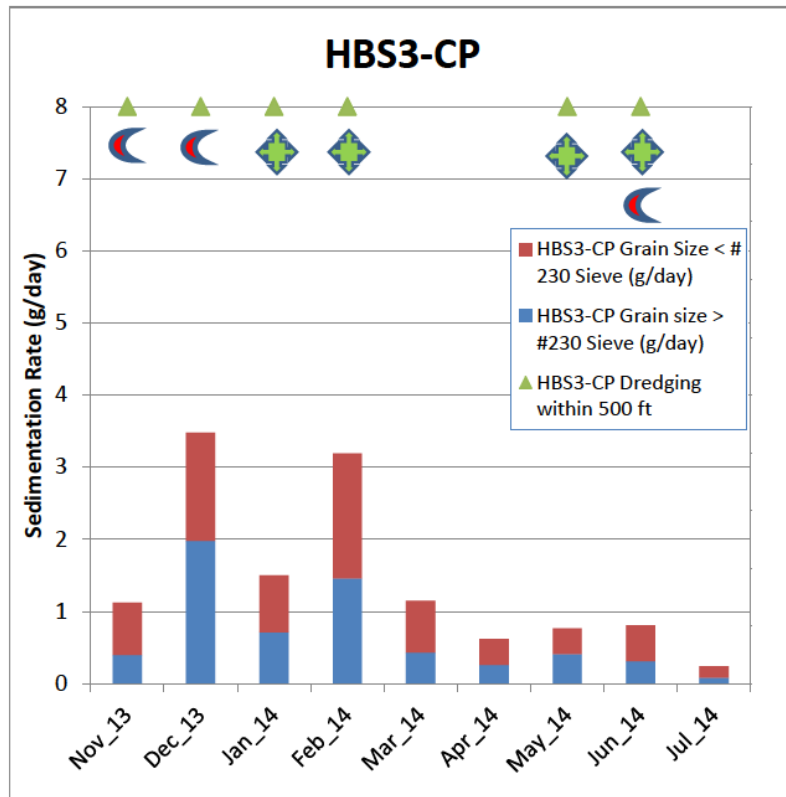
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HB South Stations



- Rock Chop
- L/T Dredge
- Texas/Scow
- Bucket Dredge

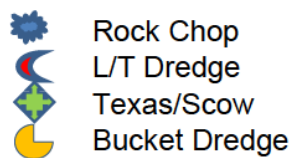
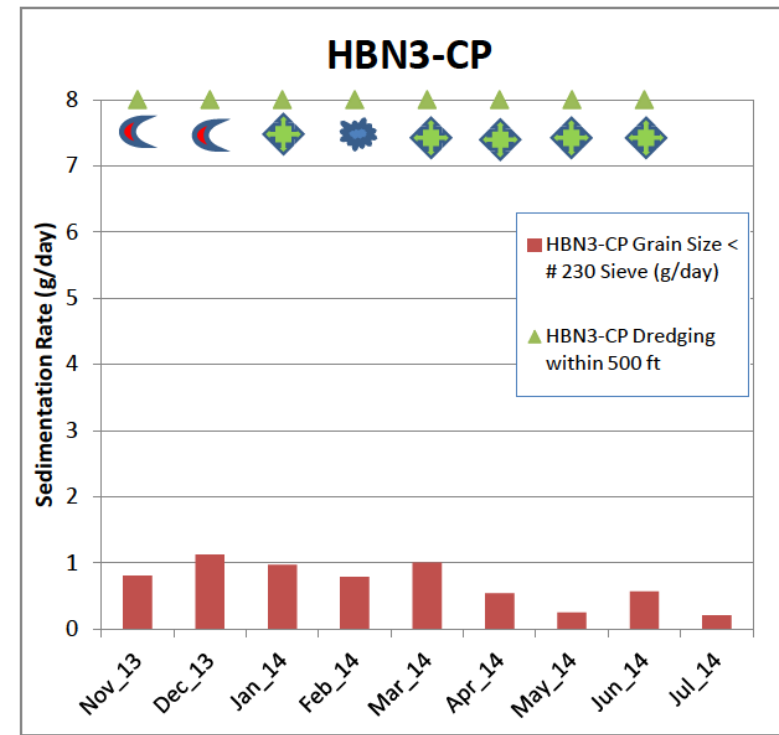
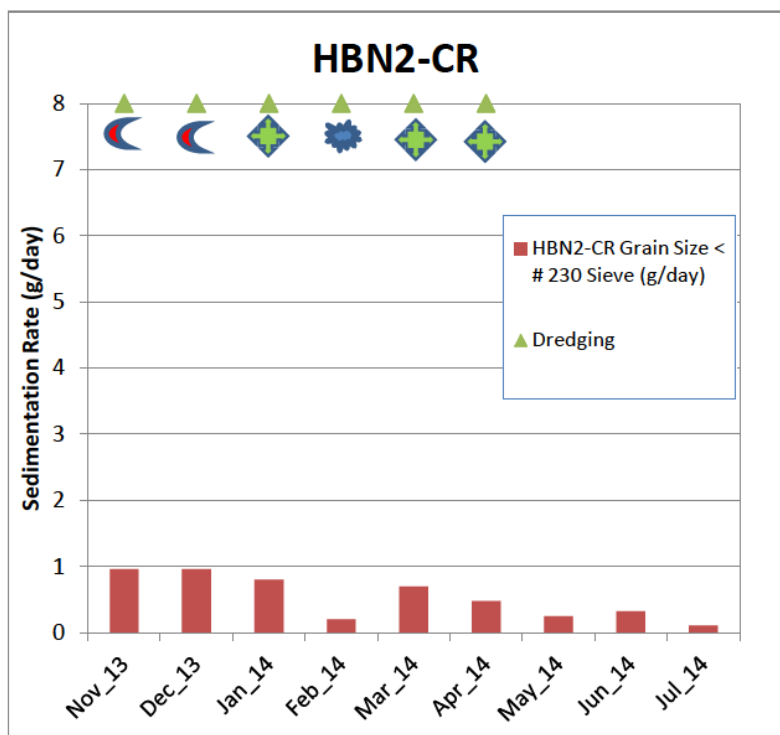
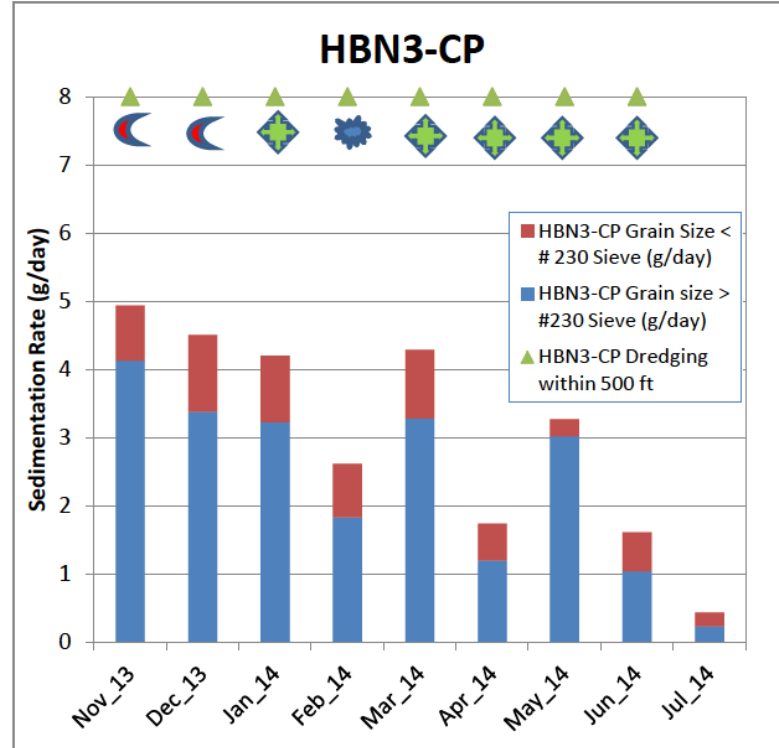
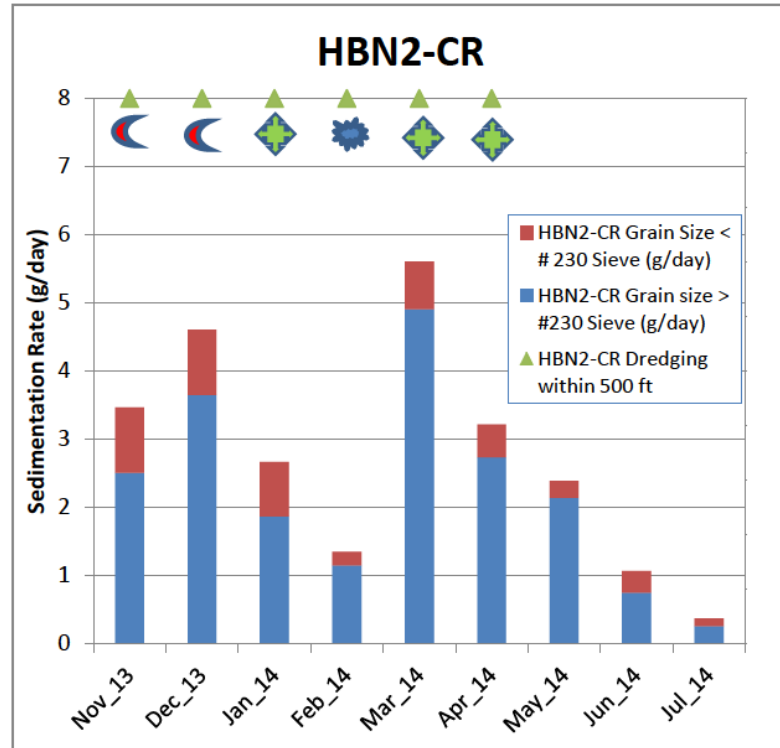
HBSouth 1



- Rock Chop
- L/T Dredge
- Texas/Scow
- Bucket Dredge

HB South 2

HB North Stations

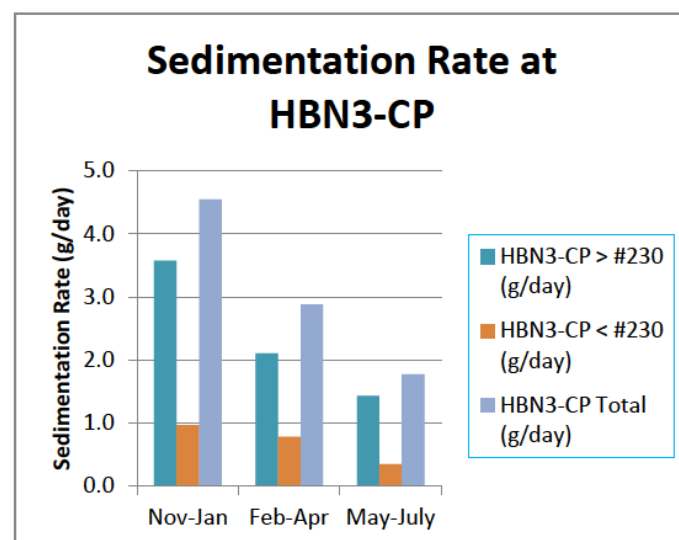
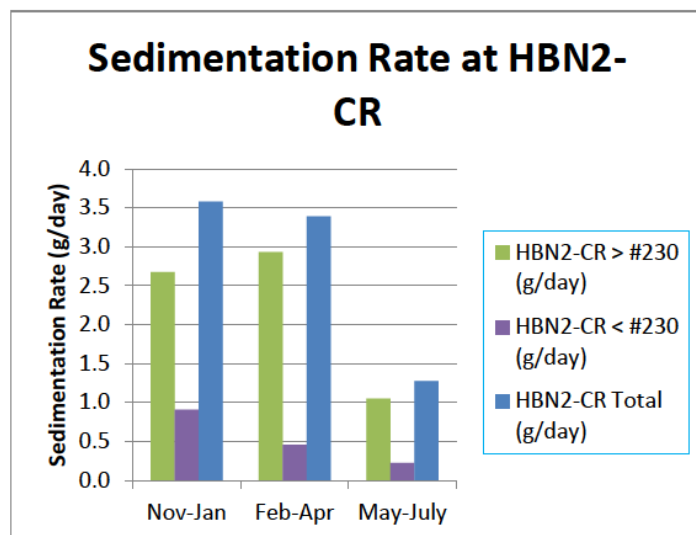
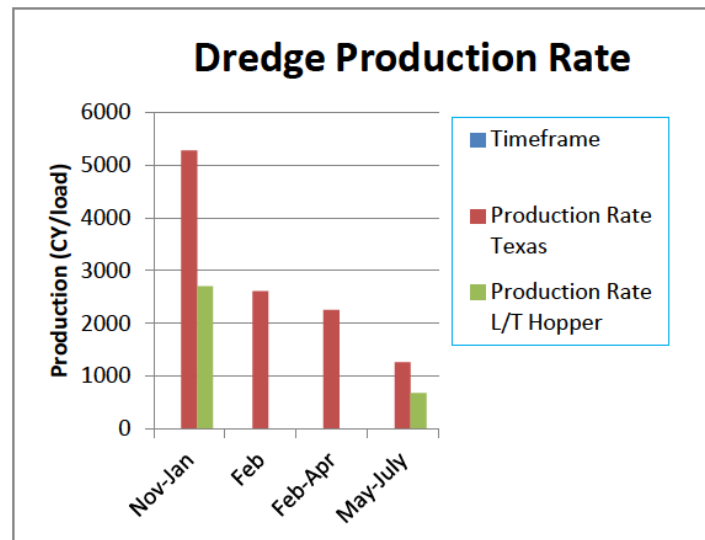


HB North

Sedimentation Rate Assessment HB South Stations

Timeframe	HBN2-CR			HBN3-CP			Production Rate	
	> #230 (g/day)	< #230 (g/day)	Total (g/day)	> #230 (g/day)	< #230 (g/day)	Total (g/day)	Texas	L/T Hopper
Nov-Jan	2.7	0.9	3.6	3.6	1.0	4.6	5,278	2,706
Feb-Apr	2.9	0.5	3.4	2.1	0.8	2.9	2,253	
May-July	1.1	0.2	1.3	1.4	0.3	1.8	1,269	681

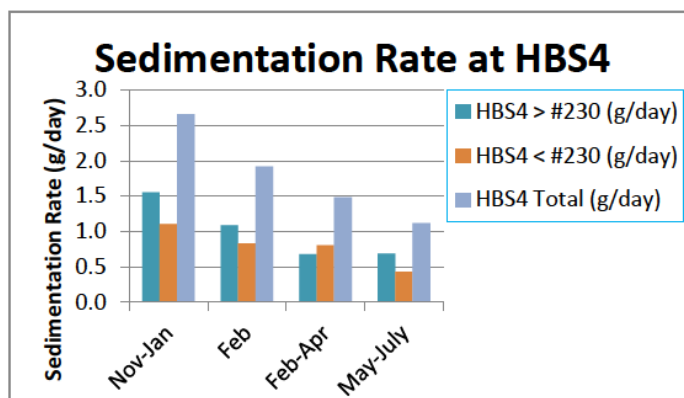
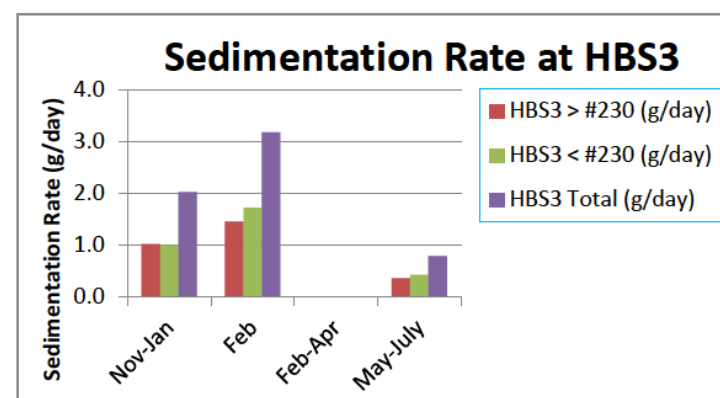
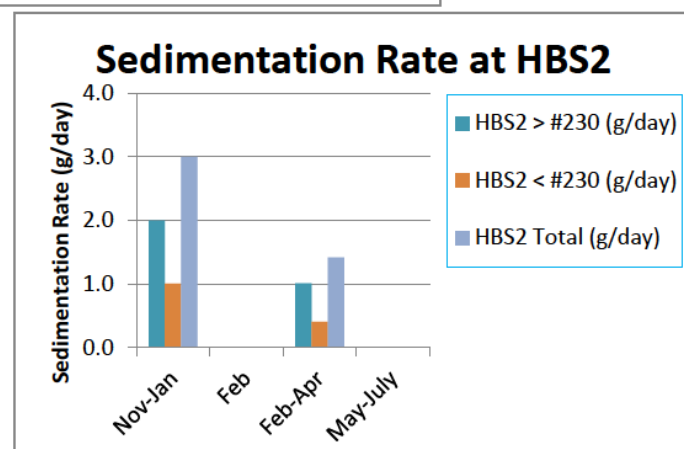
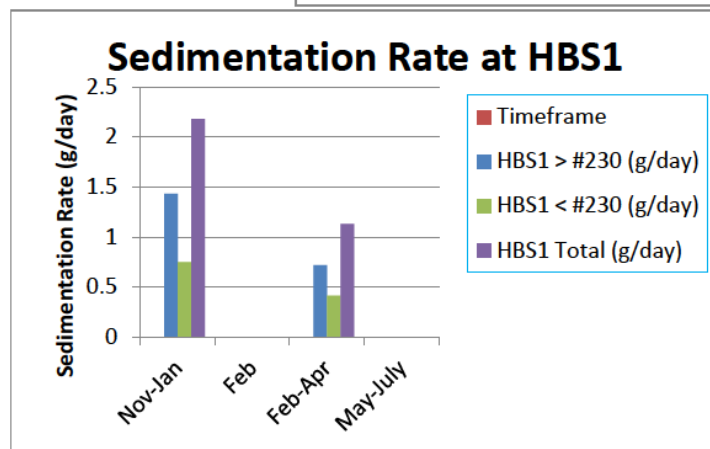
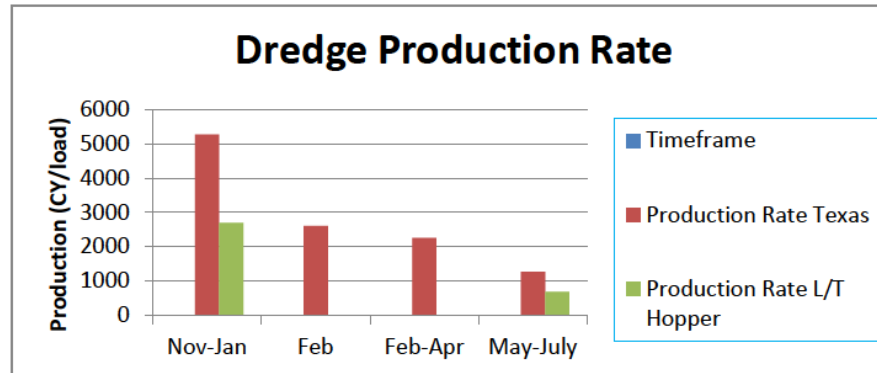
Note: HBN1-CR was buried by sedimentation prior to the initiation of dredging in November. No data collected



Sedimentation Analysis: HB South Stations

Timeframe	HBS1			HBS2			Production Rate	
	> #230 (g/day)	< #230 (g/day)	Total (g/day)	> #230 (g/day)	< #230 (g/day)	Total (g/day)	Texas	L/T Hopper
Nov-Jan	1.4	0.8	2.2	2.0	1.0	3.0	5,278	2,706
Feb							2,612	
Feb-Apr	0.7	0.4	1.1	1.0	0.4	1.4	2,253	
May-July							1,269	681

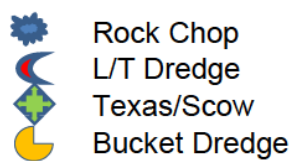
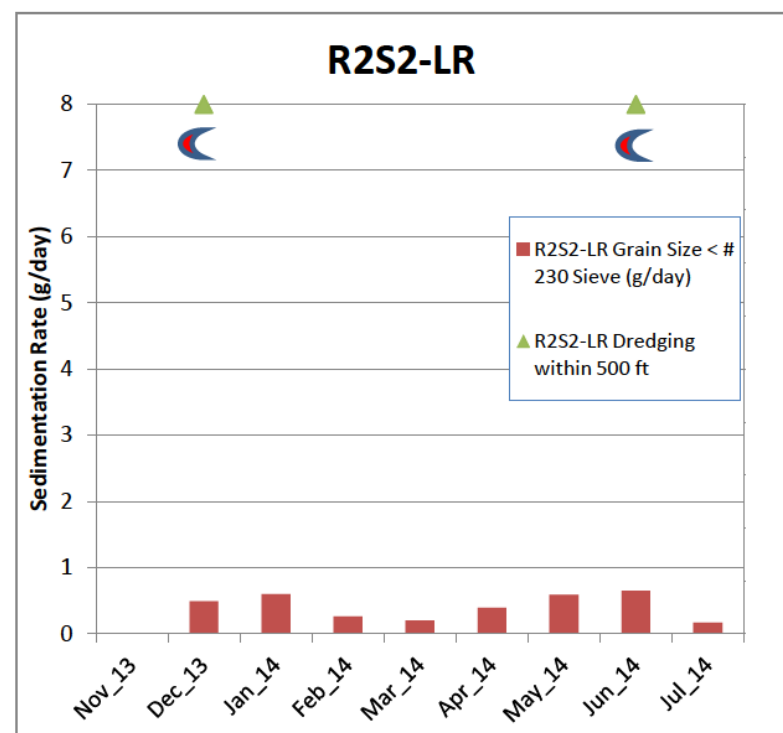
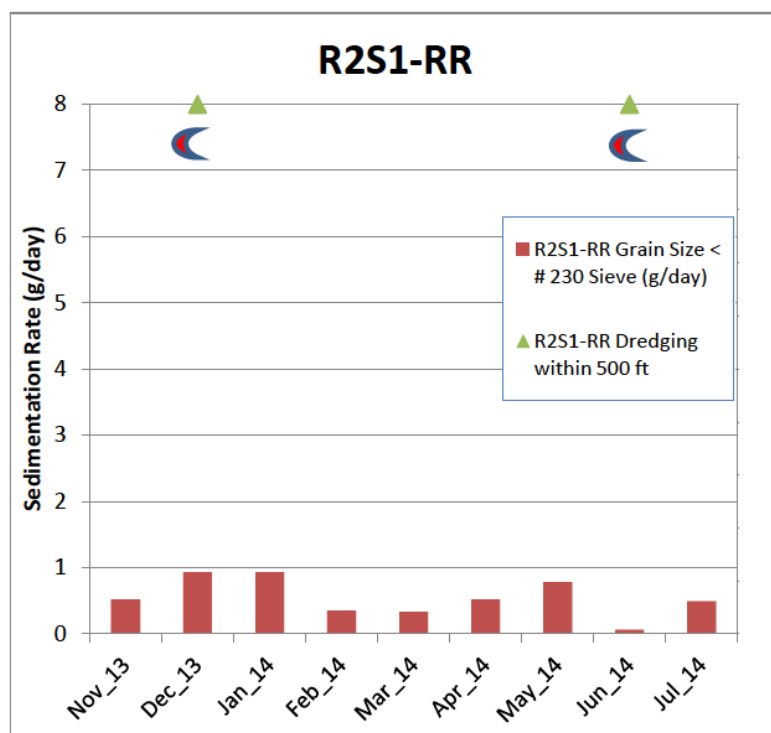
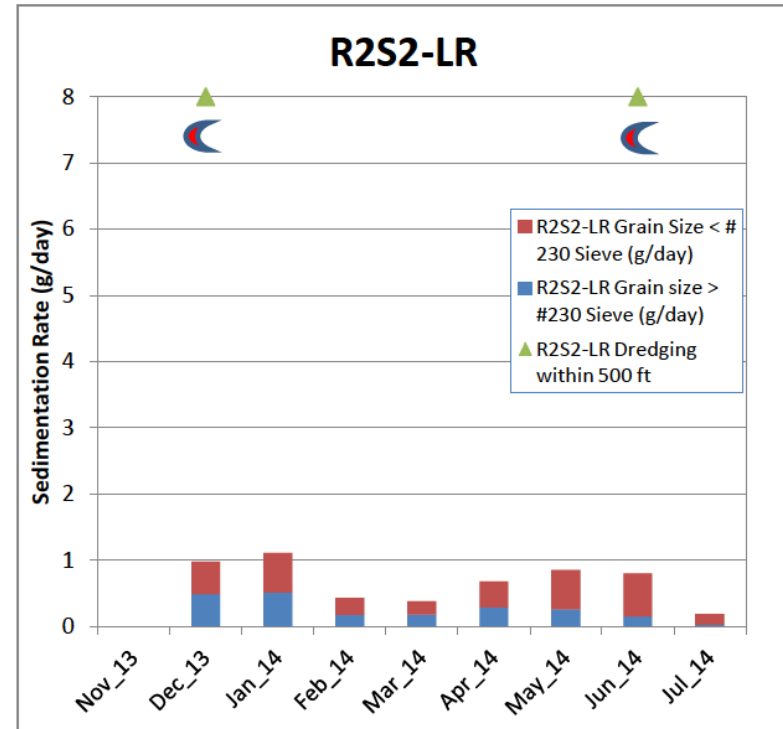
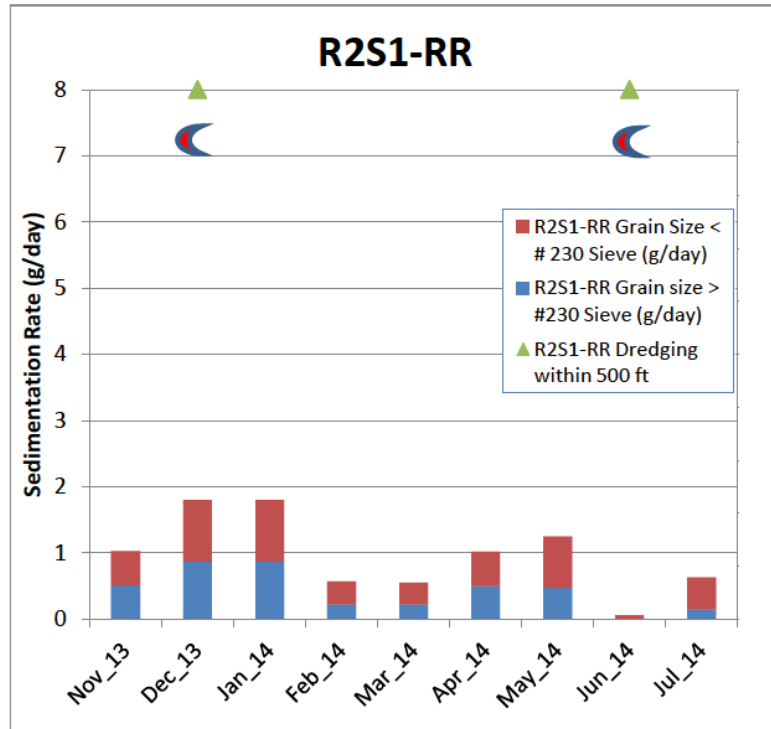
Timeframe	HBS3			HBS4			Production Rate	
	> #230 (g/day)	< #230 (g/day)	Total (g/day)	> #230 (g/day)	< #230 (g/day)	Total (g/day)	Texas	L/T Hopper
Nov-Jan	1.0	1.0	2.0	1.6	1.1	2.7	5,278	2,706
Feb	1.5	1.7	3.2	1.1	0.8	1.9	2,612	
Feb-Apr				0.7	0.8	1.5	2,253	
May-July	0.4	0.4	0.8	0.7	0.4	1.1	1,269	681



Sedimentation Rates decreased from November to May/June. This is likely because:

1. Naturally occurring redistribution of loose bottom sediments appears to vary seasonally and by proximity to channel and shoreline.
2. Sedimentation data likely indicates higher sedimentation in winter months when compared to summer months regardless of proximity to dredging activity.
3. Stations located north of the channel entrance are subject to natural sand bypassing process.
4. Contractor reduced overflow which coincides with reduced sedimentation rate.

Cut 1 Stations



Comparison: Dredge period (December, June) to non-dredge period (February-May).

Timeframe	R2S1-RR			R2S2-LR		
	> #230 (g/day)	< #230 (g/day)	Total (g/day)	> #230 (g/day)	< #230 (g/day)	Total (g/day)
December	0.87	0.93	1.80	0.49	0.49	0.98
June	0.00	0.06	0.06	0.15	0.65	0.8

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.Docket No. MPRSA-04-2019-7500

Exhibit RX 81 (C)

DEFENDANT'S EXHIBIT 17

DECLARATION OF CHRISTOPHER POMFRET

I, Christopher Pomfret, state that I have personal knowledge of the facts set forth in this Declaration and hereby declare as follows:

1. I am a Project Manager for Great Lakes Dredge & Dock Company, LLC ("GLDD"), currently assigned to the Miami Harbor Phase 3 Project (the "Project"). I have worked at GLDD for over 23 years since joining the company as a Field Engineer in 1990. I have served in various capacities in the domestic and international divisions of GLDD, including as a Project Engineer, Quality Control Manager, Estimator, and Contracts Manager. In my career at GLDD, I estimate that I have worked on over 100 projects.
2. As Project Manager, I am the senior on-site GLDD representative and responsible for managing the entire Project. I am familiar with GLDD's progress on the Project and its compliance with the permit requirements. I also have been extensively involved with GLDD's efforts to enact best practices in an effort to reduce environmental impact to the Project area and surrounding natural resources and to engage in adaptive management practices when permit limitations are approached.
3. In May 2013, the U.S. Army Corps of Engineers ("Corps") awarded GLDD an initial \$122 million contract and subsequently awarded two options in early 2014 for an additional \$83 million to fully complete the dredging project. With options, this deepening project is the single largest dredging contract ever awarded by the Corps in United States history.
4. The Project was designed to deepen the Miami Harbor to minus 50-52 feet, including excavation of the offshore entrance channel to the port and deepening of the inner channels, which is necessary to provide access to the Port's berthing areas. The deepening will allow the

port to accommodate the next generation of post-Panamax vessels that will transport cargo through the expanded Panama Canal.

5. Great Lakes has utilized four different dredges on the project, including the hopper dredges *Terrapin Island* and *Liberty Island*, the cutter suction dredge *Texas*, and the clamshell dredge No. 55. In addition to the dredges, the GLDD fleet at the project site consists of a spider barge and seven scows¹ as well as numerous survey and project support vessels. GLDD employs more than 125 employees on the project. GLDD works under a bargaining agreement with the local Operating Engineers Union to provide union crews for our specialized equipment. GLDD directly supports four or five Miami hotel chains with thousands of dollars a month in revenue for temporary housing and conference room facilities. In addition, GLDD rents dozens of apartments and rental houses for its mobile workforce. That workforce, in turn, supports the local economy through each employee's discretionary, personal spending.

6. GLDD employs over 35 subcontractors, service providers and vendors and has spent millions in revenue on the project to-date in support of local businesses. These dozens of local businesses that would be affected by a shutdown of the Project, include several small businesses, include tug and barge providers, port service contractors, welding services, crane services, trucking and transportation services, such as:

<u>Marinas:</u> <ul style="list-style-type: none"> - MIA Marina - Sea Isle Marina - Hurricane Cove Marina 	<u>Port Services:</u> <ul style="list-style-type: none"> - TF Marine - PortMiami
<u>Tug Towing and Barge Services:</u> <ul style="list-style-type: none"> - Inland Marine - Mobro Marine 	<u>Crane Derricks and Dock Services:</u> <ul style="list-style-type: none"> - Ebsary Foundation - Georges Crane

¹ A scow is a large flatbottom boat with square ends used to transport bulk materials, such as sands dredged. (www.thefreedictionary.com)

<u>Diving Services:</u> - Industrial Divers	<u>Security Services:</u> - American Guard
<u>Cable and Rigging:</u> - Miami Cordage	<u>Marine Suppliers:</u> - McCrory & Associates
<u>Heavy Equipment Rental:</u> - Pantropic & Ring Power Caterpillar - United Rentals	

7. GLDD also employs specialized environmental subcontractors Tetra Tech, Dial Cordy & Associates and CSA Ocean Sciences², which were on site at the outset of the project to conduct scientific dives and resource surveys of the area prior to the start of dredging operations. These dives and surveys established baselines for the project, examined coral colonies in the work zone and developed plans for the construction of the Julia Tuttle sea grass bed, north of the dredging site. The work of the environmental subcontractors has continued in relocating over 1000 corals to date from the dredge footprint, constructing over 9 acres of artificial reef, constructing over sixteen acres of seagrass habitat, and monitoring the coral reef and seagrass habitats. In total, the financial portion of the contract sum dedicated to supporting environmental mitigation activities equals tens of millions of dollars.

8. As of October 10, 2014, GLDD has been on-site for over fifteen months. GLDD has removed approximately 2.94 million cubic yards of material. Approximately 291,000 cubic yards of material remain in the outer channel, which GLDD expects will take between 24 and 29 dredge days to remove. After this material is removed, operations in the outer channel will be complete and GLDD will move on to complete the dredging of the inner channel and berths.

² These subcontractors, in turn, also employ additional service providers (including small businesses) and vendors in support of their project activities.

GLDD has engaged in numerous best practice techniques and implemented adaptive management strategies to minimize environmental impact, including but not limited to the following:

- a. Coral was removed from the outer channel prior to dredging in that area.
- b. GLDD does not anchor outside the channel to protect resources that would be damaged by dredge anchor placement and dredge anchor drags.
- c. Following removal of the permit-authorized coral, the Project team contacted area environmental and institutional groups who were permitted to remove additional coral and other species that were smaller than the size class required to be relocated by the regulatory agencies, or that were within the channel alignment and considered exempt.
- d. Survey transects were installed in hard bottom locations, seagrass habitats and coral habitats and are monitored by scientific divers. Forty-five transects measuring 20 meters in length were installed to monitor Reef 2, Reef 3 and the hard bottom. Twenty-four transects measuring 200 meters in length were installed to monitor the seagrass habitats. Control sites located away from the Project site are also monitored for comparison purposes.
- e. Due to the capabilities of GLDD's world class hydraulic dredging equipment, GLDD does not anticipate having to blast during the remaining portion of the Project. GLDD believes it is the only U.S. competitor with the capability to dredge the Project requirements without blasting.
- f. Water quality and turbidity readings are taken every four hours. To date over 9000 samples have been collected with only 4 exceedances since the project started.

9. When water quality readings approach the mandated limits, GLDD engages in the following adaptive management techniques, each implemented in a progressive manner to attempt reduction of sedimentation:

- a. Cutter head rotations per minute (RPMs) are reduced.
- b. Scow overflow time is reduced.
- c. Overflow is eliminated on scows at the Spider Barge.
- d. The dredge is moved to a new location.
- e. The dredge is shut down until currents or other factors allow water quality to improve.

10. GLDD also uses wide funnel skimmers on the scows that can be hydraulically opened and closed to allow GLDD to adjust the amount of ponded water and overflow to each skimmer.

11. On a weekly basis, GLDD is in contact with the Corps and the FDEP to discuss the best practices and adaptive management techniques implemented on the Project. On a daily basis ITS, the turbidity monitoring subcontractor, is in contact with the environmental manager and quality control staff to communicate issues associated with any elevated compliance readings or higher than usual back ground readings to allow project staff to adapt to material changes or natural elements that effect turbidity. Any issues are elevated to the Corps and FDEP within 12 hours through notification by the environmental manager directly to the Corps and FDEP.

12. The adaptive management techniques that will be used to complete the project will not result in increased sedimentation.

13. In my over 23 years of experience at GLDD and in the over 100 dredging projects of which I have been a part, I have never been involved with a foreign or domestic dredging project

that utilized such a wide range of procedures to scientifically monitor environmental impacts or to reduce and mitigate environmental impact.

14. If the Project is suspended, GLDD is obligated to mitigate any continuing project

expenses. As a result, GLDD will lay-off all non-essential personnel and subcontractors. I

estimate that no less than 60 GLDD employees would be laid off as well as 40 subcontractor

employees. These employees will be sent home.

15. In the event of a lengthy suspension, the Corps may cancel the Project. In that event, the

Project would need to be re-bid in order to be completed. There are several other deepening

projects scheduled for completion over the next five years, including Savannah Harbor,

Jacksonville Harbor, Charleston Harbor and Port Everglades (all of which will compete with

PortMiami for Panamax container ships). Depending on the length of the suspension, there is no

guarantee that GLDD will be available to complete the work utilizing its state-of-the-art cutter

suction dredges -- which eliminate the need for blasting on the Project. In addition, depending

on the availability of the U.S. dredging fleet, fuel prices, additional environmental restrictions

and other factors, the cost of the Project may increase.

16. Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true

and correct.

Executed on October 16, 2014

Digitally signed by Christopher Pomfret
DN: cn=Christopher Pomfret, o=Great Lakes Dredge Co LLC,
ou=Project Manager, email=cpomfret@gldd.com, c=US
Date: 2014.10.16 17:45:00 -0400

Christopher Pomfret
Project Manager
Great Lakes Dredge Co Dock Company, LLC

4838-8865-7695, v. 1

.Docket No. MPRSA-04-2019-7500

Exhibit RX 81 (D)

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

Case Number: 1:14-cv-23632-MORENO/O'SULLIVAN

MIAMI-DADE REEF GUARD
ASSOCIATION

Plaintiff,

v.

UNITED STATES ARMY CORPS OF
ENGINEERS,

Defendant.

_____/

**U.S. ARMY CORPS OF ENGINEERS STATEMENT OF MATERIAL FACTS
IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT**

The Court stated that “[j]udicial review in this action is not limited to any administrative record.” D.E. 123 at 1. Nevertheless, the U.S. Army Corps of Engineers (“Corps”) respectfully notes that where, as here, the Court is reviewing Endangered Species Act (“ESA”) claims concerning a federal agency action that has been subject to consultation under Section 7 of the ESA, 16 U.S.C. § 1536, such claims are reviewed based on the agency’s administrative record, D.E. 77, 125, 128, under the Administrative Procedure Act (“APA”)’s “arbitrary and capricious” standard of review. *Fund for Animals v. Rice*, 85 F.3d 535, 541 (11th Cir. 1996).

Accordingly, judicial review of federal agency actions under the APA does not call for this Court to make factual findings on the merits or to determine the existence of genuine issues of disputed material facts on summary judgment. The Corps, however, recognizes that a statement of facts may assist the Court to highlight significant portions of an extensive administrative record. Thus, pursuant to Local Rule 56.1(a) and the Court’s August 17, 2016 Scheduling Order (ECF No. 123), the Corps submits the following Statement of Material Facts.

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1. The Corps: The United States Army Corps of Engineers is a component of the Department of the Army charged with delivering water resource-related engineering solutions throughout the United States and worldwide. The Corps is the largest and most sophisticated civil engineering organization in the world. Comprised of over 37,000 dedicated civilians and soldiers, the Corps operates as an integrated organization, leveraging the education, expertise, and experience of its staff to deliver the highest quality engineering and environmental services for some of the nation's most complex and challenging infrastructure projects.

2. The Project: Enacted on November 9, 2007, Section 1001(17) of the Water Resources Development Act of 2007, H.R. 1495, authorized Phase III of the deepening and widening of Miami Harbor ("Project"). Supp2AR 23793; D.E. 17-2 (Summa Decl.) ¶5. The Project includes widening and deepening portions of the Federal channel from 42 feet to 50 feet in the inner channel, and 44 feet to 52 feet in the outer entrance channel to accommodate larger vessels that will now be able to sail through the expanded Panama Canal. *See* AR 9096; Summa Decl. ¶5. As a result of the public coordination process, the Corps modified the Project proposal to reduce environmental impacts by restoring seagrass beds and creating artificial reefs while also increasing navigation safety. AR 9128-300. After notice and comment, the Corps issued a Record of Decision on May 22, 2006. AR 10023.

3. Prior Lawsuit: In 2012, Dan Kipnis, Tropical Audubon Society, and Biscayne Bay Waterkeeper, represented by Attorney Jim Porter, entered a settlement agreement with the Corps, Miami-Dade County, and the Florida Department of Environmental Protection ("DEP") resolving a challenge to a permit issued by DEP concerning the Project. *See Tropical Audubon Soc'y v. U.S. Army Corps of Eng'rs*, DOAH Case No. 11-6242/OGC Case No. 11-1319 at 7, D.E. 47-1. These Plaintiffs agreed to "waive and release any current or future challenges, appeals, and/or objections to the Project, the Permit, or the Settlement Agreement. D.E. 47-1 at 10-11 (¶4.1). In exchange, Tropical Audubon Society and Biscayne Bay Waterkeeper received \$50,000 each, the County of Miami-Dade donated \$1.31 million to an environmental trust, and the DEP Permit was revised to add significant environmental mitigation measures. *See* 47-1 ¶2.1. On May 22, 2012, the Corps received the final DEP Permit. AR 11596 ("DEP Permit").

4. Staghorn Coral: Staghorn coral (*Acropora cervicornis*) is one of the major reef-building corals in the wider Caribbean and is distributed throughout the Caribbean, and in the western Atlantic.

SuppAR 21266. Staghorn corals still occupy their historic range, but populations have experienced losses from 80-98% of their historic 1970s baseline. AR 11236. Declines in populations over the past 30 years have been attributed to factors including white band disease outbreaks, warming ocean temperatures, and hurricane damage. *Id.* On May 9, 2006, the National Marine Fisheries Service ("NMFS") published a final rule listing staghorn coral as a threatened species under the ESA. 71 Fed. Reg. 26,852 (May 9, 2006), AR 10002. While acknowledging that a decline in the abundance of the species has been observed over the past 30 years, NMFS noted that the total number of colonies remains very large and the species persists across a very large geographic range with no evidence of range contractions. *Id.* Because staghorn coral "retain significant potential for persistence," NMFS concluded that the species is "not currently at risk of extinction throughout all or a significant portion of [its] ranges." 71 Fed. Reg. at 26,853, AR 10003. NMFS designated critical habitat, that included the Florida area, for staghorn corals on November 26, 2008. 73 Fed. Reg. 72,210 (Nov. 26, 2008), AR 10346. NMFS' critical habitat designation identified the "key conservation objective" for the corals as "facilitating increased incidence of successful sexual and asexual reproduction." AR 10347.

5. In 2014, based in part on the abundant number of staghorn coral, NMFS declined to reclassify the species from threatened to endangered because "there are at least tens of millions of colonies present in the Florida Keys and Dry Tortugas combined [and] [a]bsolute abundance is higher than the estimate from these two locations given the presence of this species in many other locations throughout its range." 79 Fed. Reg. 53,852, 53,960 (Sep. 10, 2014).

6. ESA Consultation: The Corps consulted with NMFS pursuant to ESA Section 7, over a period of several years, to ensure that the Project will not jeopardize any threatened or endangered species or adversely modify designated critical habitat. AR 11222; SuppAR 21259-61. The Corps entered into consultation with NMFS in 2002 to consider the impact on Johnson's seagrass and its designated critical habitat, resulting in a February 26, 2003 biological opinion. AR 08938. After staghorn coral was listed as a threatened species under the ESA in 2006, the Corps reinitiated consultation and provided NMFS with a biological assessment dated May 2010 ("2010 BA"), which included an analysis of the potential impact of the Project on staghorn coral and its designated critical habitat. AR 10894. In its 2010 BA, the Corps predicted, in part based on "previous biological opinions issued by NMFS for adverse affects to listed *Acropora sp.* associated with dredging and construction," that the Project may adversely affect staghorn coral and its designated critical habitat. In considering the effects of the Project on staghorn

coral critical habitat, the 2010 BA considered the indirect impact of sedimentation (sediment that has settled on the ocean floor and on benthic organisms) and turbidity (sediment suspended in water), resulting both from use of various dredging equipment as well as from dredged material disposal activities. In its 2010 BA, the Corps took a very "conservative approach" to ensure it did not underestimate potential impacts resulting from the Project. AR 10926-30.

7. May 2010 Survey: On May 2010, the Corps commissioned Dial Cordy and Associates ("DCA") to perform a survey for staghorn coral that was closely tailored to the Project, staying within 150 meters of the Channel (north and south). This survey followed the NMFS-approved staghorn coral survey protocols. AR 11233; *see also* AR 10557. The NMFS survey protocol provides that a sampling methodology is utilized for larger areas, as opposed to a 100% survey. AR 10313. Using NMFS' protocol, this survey found 31 staghorn coral colonies by physically surveying 12% of the Project area. AR 11233; SuppAR 21275. The resulting biological opinion, issued by NMFS on September 8, 2011 ("2011 BiOp"), mistakenly identified the 31 staghorn coral sample size as the total number of staghorn coral that were present in the Project area that would need to be relocated. AR 11233 ("According to the survey, there are 31 colonies of *A. cervicornis* within the action area"); SuppAR 21274. Over five years later, DCA found that the last step of the survey protocol, extrapolating the small sample size to the entire Project area, was missed. SuppAR 21275. If the survey results were extrapolated correctly, NMFS would have calculated that 258 staghorn corals were present throughout the Project area, as opposed to 31 staghorn corals. SuppAR 21275.

8. 2011 BiOp: In addressing staghorn coral in the 2011 BiOp, NMFS noted that sedimentation was among a number of potential threat factors affecting the species. Others included natural and man-caused abrasion and breakage, temperature, nutrients, competition, sea level rise, disease, predation, loss of genetic diversity, contaminants, carbon dioxide, and sponge boring. AR 11238-41. NMFS noted particularly that "one of the stressors with the greatest effect on corals is the increase in sea surface temperatures, which causes increased stress to corals and results in coral bleaching and, often, mortality, due in part to associated reductions in the ability of corals to combat infections and their increased susceptibility to other stressors." AR 11241.

9. In analyzing the Project-related sedimentation, NMFS noted that "effects on designated critical habitat from sedimentation will be temporary in nature" and that, because the Corps "will require continuous monitoring of sedimentation and turbidity levels within the project area in accordance with

the state water quality certification (i.e. the DEP Permit), impacts resulting from Project-related sedimentation would be "insignificant." AR 11253. While NMFS did not precisely define "temporary," NMFS referenced the DEP Permit, which requires one year of post-construction monitoring to determine the Project's long-term effects and, if any, would require mitigation as appropriate. *See* AR 11627. Accordingly, NMFS found that "[s]ediments will return to background levels upon project completion." AR 11253; AR 11256 ("NMFS believes that sedimentation caused by the proposed action is not likely to reduce the chances of *A. cervicornis*' recovery in the wild."). Because impacts to critical habitat were predicted to be "insignificant," NMFS did not consider whether sedimentation impacts would adversely modify staghorn designated critical habitat. AR 11252. Based on these findings, NMFS found the Project was likely to adversely affect one ESA-listed species, staghorn coral and its designated critical habitat, but the Project is not likely to jeopardize its continued existence or destroy or adversely modify its designated critical habitat. AR 11258.

10. In the 2011 BiOp, NMFS concluded that the Project was likely to "adversely affect 31 colonies of [staghorn coral], 168.2 acres of designated critical habitat for elkhorn and staghorn coral." AR 11249. NMFS required the Corps to transplant "all 31 known [staghorn coral] colonies out of the project area to nearby suitable reef sites as a reasonable and prudent measure ("RPM"). AR 11250. NMFS reasoned that "all 31 colonies of [staghorn coral] could be lethally taken during dredging if not relocated[, that] coral transplantation will be highly successful and [that] relocating these corals outside the project area is appropriate to minimize the impact of this take." AR 11251. NMFS predicted that 5 colonies would be lost due to failure to survive transplantation and authorized the "take" of all 31 known colonies through relocation in its incidental take statement. AR 11252.

11. Terms and Conditions: The 2011 BiOp required the Corps to comply with eight terms and conditions. Terms and conditions 1-5 governed the transplantation of the 31 coral colonies required to be relocated and their subsequent recordation, monitoring, and fragmentation. AR 11259-60. Terms and conditions 6-7 set forth requirements for "sedimentation/turbidity monitoring." AR 11260. Term and condition 8 required the Corps to ensure that best management practices were used throughout implementation of the Project. *Id.* The 2011 BiOp specified that "[u]nder the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of the incidental take statement." AR 11258.

12. Post-Construction Mitigation: The terms and conditions of the 2011 BiOp do not direct the Corps to undertake any post-construction surveys, assessments, or other remedial measures. In drafting the BiOp, NMFS was aware of post-construction requirements required under the DEP Permit. AR 11253. Issued on May 22, 2012 as part of a settlement with three of the Plaintiffs in this case, the terms of the DEP Permit established numerous restrictions with respect to Project-generated turbidity, including setting turbidity exceedance standards, turbidity monitoring during construction (the same monitoring referenced in the 2011 BiOp), and remediation measures for exceedances of turbidity standards. AR 11607-10. The DEP Permit also required the relocation of staghorn coral in accordance with NMFS's 2011 BiOp, as well as the relocation and monitoring of other corals, and the creation and monitoring of an artificial reef site to be created by the Corps as mitigation for Project impacts to coral reefs and hardbottom communities resulting from the Project. AR 11618-31. Additionally, the DEP Permit requires numerous other environmental monitoring and reporting efforts that are both automatically required or that are triggered by observance of a particular impact threshold, including: biological monitoring for direct and indirect impacts to hardbottom and coral reef communities and seagrass beds; coral health monitoring; and sediment impact and/or stress monitoring. *Id.*

13. Project Contract: On August 21, 2012, the Corps and the Project sponsor, Miami-Dade County, Florida, acting through the Port of Miami, executed a Project Partnership Agreement to initiate the construction phase of the Project. *See generally* Supp2AR 23794. Plans and specifications for the construction contract, which incorporated the conditions of the DEP Permit as well as the reasonable and prudent measures required by the NMFS's 2011 BiOp, were completed in late 2012, and a solicitation for the contract was issued in spring 2013. On May 15, 2013, the contract was awarded to Great Lakes Dredge and Dock, Inc. ("GLDD"). SuppAR 21260. The contract called for dredging 2.1 million cubic yards of dredged material from Cuts 1 and 2, which consisted of widening the seaward portion of Cut 1 from 500 to 800 feet and deepening Cut 1 and Cut 2 from 44 to 52 feet. The contract also required the creation of 11.6 acres of artificial reef (5.98 acres low relief and 5.62 acres high relief), creation of 16.6 acres of seagrass, and turbidity and sediment monitoring. Supp2AR 24008, AR 11880, AR 11907-11. The total cost of the contract, including Options A and B, was over \$214 million; of this total approximately \$34 million reflected the environmental mitigation and monitoring components. Supp2AR 24031; Summa Decl. ¶¶6, 12.

14. 2013 Survey: In September 2013, prior to commencement of construction, GLDD

subcontracted Continental Shelf Associates, Inc. ("CSA"), to relocate the 31 staghorn colonies identified in the 2010 survey and to conduct a 100% survey of the entire Project area extending 150 meters to the north and 150 meters to the south of the Miami Harbor Channel. SuppAR 21277-79. CSA conducted its survey of the area south of the Channel on September 24-27, 2013, and conducted the north side survey from September 27 to October 2, 2013. *Id.* After completing approximately 60% of the proposed survey area, CSA reported that it located far more staghorn colonies than the 31 anticipated corals and verified a count of 243 staghorn colonies on October 4, 2013. AR 00743-44; SuppAR 21277. The Corps later identified two reasons for the observed disparity between the two survey results: (1) NMFS's own survey protocol resulted in a significantly lower survey area coverage than the 2013 survey and was not applied correctly; and (2) there was likely a "bloom" of staghorn coral in southeastern Florida between 2010 and 2013. SuppAR 21505.

15. Oct. 2013 - Request for Reinitiation: The next day, Corps staff contacted NMFS seeking guidance on how to best address this new information. SuppAR 21279. The Federal Government, including NMFS, was then in furlough status due to the government shutdown at this time. *Id.* Despite this hurdle, the Corps promptly notified NMFS on October 4, 2013, to share the updated information and develop appropriate protective measures. AR 00763; AR 00796; AR 01037. Both agencies agreed that the staghorn coral located closest to the channel should be relocated, and the remaining corals should be left in place and monitored for potential effects associated with sedimentation and turbidity. AR 00796; AR 01037; AR 12249. In support of its reinitiation request dated October 21, 2013, the Corps provided NMFS with an analysis of the Corps's compliance with ESA Sections 7(a) and 7(d) that analyzed the effects of the ongoing action while NMFS prepared a revised biological opinion. AR 15359. Following reinitiation, the Corps coordinated frequently with NMFS on the parameters of the recommended relocation of staghorn coral colonies. AR 01041-42; AR 01047-48; AR 01049. At this time, NMFS neither requested that the Project stop, nor that the unfinished survey be completed.

16. First Coral Relocation: In response to this first request for reinitiation of consultation, NMFS proposed to provide an amendment to the 2011 BiOp to authorize the relocation of up to 40 staghorn coral colonies located within 100 feet of the channel while requiring the Corps to monitor the remaining staghorn coral. AR 01049; AR 15259, AR 12255-12258. Between November 19 and 21, 2013, the Corps proceeded with the NMFS-recommended relocation, which resulted in the successful relocation of 38 staghorn coral colonies. AR 15363. Twenty-one staghorn colonies were relocated to a site

approximately 412 meters south of the Channel, and 17 colonies were relocated to a site approximately 261 meters north of the Channel. AR12552, AR12561-62. All 38 relocated colonies plus four additional reference colonies at the northern site were tagged for future monitoring. AR 12566. Forty days after the relocation, the 38 relocated colonies "were alive and in good health" only minor bleaching and partial mortality were observed—that were "associated primarily with either previously dead basal areas of colonies or natural fragmentation, and the resultant bleaching or mortality due to the temporary burial of the loose fragments in sediments." *Id.* SuppAR 21353.

17. Terms and Conditions 1-5 Compliance: The relocation and monitoring of these 38 staghorn coral fully complied with terms and conditions 1-5 of the 2011 BiOp, which governed the transplantation of the staghorn coral colonies and their subsequent recordation, monitoring, and fragmentation. AR 11259-60.

18. Sedimentation Monitoring: The Corps submitted a turbidity and sedimentation monitoring plan to NMFS that was modeled on past NMFS-approved monitoring projects and referenced draft terms for the DEP Permit. *See* AR 10902 (turbidity); AR 10933-34 (monitoring during construction activities). A month before construction began, DCA conducted a baseline survey to assess the natural conditions of the Project area. DCA found that, due to a "natural sand transport event," all marked corals at one reference site were buried, and other reference sites "show turbid water and sedimentation during baseline surveys," so it was "apparent that natural sand transport influences the sediment dynamics of the nearshore hardbottom communities." AR 12386. Project construction began on November 20, 2013. DCA provided weekly offshore coral stress monitoring reports during construction. Reference corals were identified and marked prior to construction, and specific sites were monitored when construction occurred within 750 meters of a marked staghorn colony. *See e.g.* AR 18264. Throughout the early months of the Project, DCA reported that "[d]ivers documented increased turbidity, qualitatively increased sedimentation, and constrained times for diving. Winter weather conditions and dredging activities may have confounding effects which may be separated as more data area collected." AR 12549. DCA also reported in Week 12 that "[a] qualitative assessment of the sediment" "documented coarse grain sediment, typical of beach sand used in the recent beach renourishment projects at the adjacent Miami Beach." *Id.* In March 2014, the monitoring reports still lacked sufficient data to distinguish between coral stress and sediment accumulation caused by natural conditions versus Project-related activities. AR 13154. Part of the problem in establishing a causal link

between the dredging and the observed sediment accumulation was the failure of the sediment blocks. Originally installed to capture Project-related sediment, but they failed to actually capture sediment due to a strong current system at Miami Harbor which continuously cleared the blocks of accumulated sediment. SuppAR 21518. However, the reports continued to note that sediment-related coral stress was occurring and that it may be related to dredging-activities.

19. Adaptive Management Measures: In reaction to the increase in sedimentation, the Corps and GLDD undertook multiple steps to implement adaptive management measures to reduce sedimentation and protect staghorn coral and its habitat within the Project area. Jordan-Sellers Decl. (D.E. 17-15) at 9-11; AR 12365; AR 13157; AR 15129. First, during construction, turbidity monitoring stations were established for locations that have the highest turbidity concentrations, and monitoring reports were generated every four hours. Jordan-Sellers Decl. ¶18; Kruempel Decl. (D.E. 17-21) ¶¶25-31. Second, GLDD reduced sedimentation by increasing the number of scows it uses. Jordan-Sellers Decl. ¶19(c). By using more scows, GLDD's scows made more frequent trips with less water in each load, thereby reducing the amount of water containing fine sediment matter being filtered out while still in the Project area. *Id.* See also AR 13912; AR 15098-99 (additional measures). Second, GLDD slowed the cutting speed to reduce the amount of water being pumped into the scows. Jordan-Sellers Decl. ¶19(e). This measure reduced the amount of water that contained fine sediment from being filtered out of the scow in the Project area. *Id.*; AR 01466. Third, GLDD also periodically moved the spider barge and scows to different locations to reduce the risk of a concentration of fine sediment matter in one particular location thereby lessening the impacts on any nearby coral. Jordan-Sellers Decl. ¶19(b); AR 12533; AR 12549. Fourth, GLDD eliminated the use of "green valves." Jordan-Sellers Decl. ¶19(a); AR 13074. Green valves were initially used to reduce surface water turbidity when water was overflowed but, by January 2014, it was found that it may enhance the movement of suspended solids (within the decanted dredge water) to the ocean floor. Jordan-Sellers Decl. ¶19(a).

20. Terms & Conditions 6-8 Compliance: These adaptive management measures, combined with ongoing sediment and turbidity monitoring by the Corps, worked in concert to minimize and mitigate environmental impacts during the Project. Jordan-Sellers Decl. ¶20. By implementing the sedimentation and turbidity monitoring, as well as the best management practices discussed above, the Corps fully complied with terms and conditions 6-8, which set forth requirements to coordinate "sedimentation/turbidity monitoring" and required the Corps to ensure that best management practices

were used throughout Project implementation. AR 11260.

21. DEP Coordination: On August 18, 2014, DEP issued a "warning letter" to the Corps regarding "possible violations and non-compliance issues related to" the DEP Permit. AR 14496. DEP conducted a site inspection of the Project on July 22-23, 2014, and attached a report of its findings. *Id.*; AR 14457. The DEP report suggested these observed impacts were solely attributable to the Project, without having adequate baseline data against which to compare its observations, basing its conclusion instead on "visual qualitative observations" taken over the course of only two days of diving. AR 14457. The Corps, in turn, responded to each of these concerns by letter, dated September 2, 2014, and expressed its continued and shared desire to cooperate. AR 15121-34. The Corps explained its compliance with the DEP Permit, and offered to enhance the existing weekly compliance monitoring by adding bi-weekly meetings with DEP, as well as offering on-site and in-water access to the site whenever requested by DEP. AR 15122. The Corps also suggested specific changes to the DEP Permit for clarity. AR 15121-22. The Corps and DEP have worked cooperatively to address any compliance concerns identified by DEP. AR 15528; AR 15739.

22. DERM Coordination: In July 2014, the Miami-Dade County Department of Environmental Resources Management ("DERM") conducted a site inspection at eight locations of the Miami Harbor entrance channel to "assess the general condition of the corals and reefs immediately north and south of the channel." AR 14135. DERM reported that "[t]hese inspections were initiated as a result of staff observations made on June 27, of signs of coral "stress" and excessive sedimentation" approximately 1500 ft. south of Government Cut on the outer linear reef. *Id.* DERM's conclusions based on Project-related sedimentation appearing within 1,500 feet of the Project were later found by Dr. William Precht to be "sufficiently far afield from direct sediment impacts from the dredging operation." AR 15819. The existence of sediment and coral stress so far from the Project indicates natural factors are significantly contributing to sedimentation and coral stress. AR 15818.

23. Results of 2014 Coral Monitoring: On July 29, 2014, the Corps undertook a voluntary commitment to implement a staghorn monitoring protocol and provided a draft scope of work to NMFS, which consisted of five consecutive bi-weekly staghorn inspections of "25 corals on each side of the channel, as well as 50 reference corals located approximately five miles north of the project area." AR 14226; SuppAR21508. The first survey was conducted August 19-22, 2014, and showed significantly higher coral stress levels at the channel-side sites north of the Channel which, based on the natural

northern flow of the system, appeared to support the hypothesis that coral stress was Project-related. The subsequent four bi-weekly staghorn-specific monitoring efforts between September 1 and October 15, 2014, however, were markedly different from the initial survey. AR 02674. Rather than indicating Project-related sedimentation as a significant stressor, these four surveys demonstrated that natural environmental stressors unrelated to the Project were, in fact, significantly contributing to the decline in coral health in Miami Harbor, specifically, and in the marine ecosystem throughout Broward and Dade Counties, generally.

24. Significant Natural Stressors: These surveys captured multiple natural events that adversely impact staghorn coral. Between July and October 2014, water temperatures in the area rose dramatically, as high as 84° F/29° C. SuppAR 21282. Thermal events of this severity typically result in "bleaching" events which cause significant stress to coral health. *Id.* Over the next four surveys, stress to coral colonies across both the northern and southern sites, as well as the control sites five miles away, normalized, and the data showed, in fact, that stress at the control sites and the southern sites were actually higher than the stress observed closer to the Project at the northern site by late September. *Id.* The bleaching event also occurred almost simultaneously as an outbreak of white band disease throughout Dade and Broward Counties. SuppAR 21284-85. Photographic data of corals marked for monitoring associated with the weekly compliance monitoring demonstrates a rapid progression of white band disease that culminated in August and September 2014. *Id.* While the data from these surveys did not eliminate Project-related sedimentation as a potential stressor to coral in the Project-area, it nonetheless demonstrated that disease and bleaching occurring at the time were significant stressors that the Corps found were not given sufficient weight in DEP's, DERM's, and NMFS' limited surveys analyzing the Project's impacts. SuppAR 21281-87; SuppAR 20648-54.

25. Sept. 2014 Request for Reinitiation of Consultation: Meanwhile, in response to the October 21, 2013, reinitiation request, NMFS originally indicated that it intended to provide a revised take authorization for the additional corals relocated in November via letter to the Corps. AR 01055; AR 01079. On March 28, 2014, NMFS then advised the Corps that it would instead prepare an updated BiOp, rather than an amendment to the 2011 BiOp. AR 01373-74. NMFS staff did not provide an estimate as to how long it would take to complete the updated BiOp. *See id.* NMFS staff did not request the Corps to suspend the dredging. *See id.* On September 10, 2014, Assistant Administrator Bernhart at NMFS provided Corps staff with "Emergency Remediation Recommendations" as background

material for a planned discussion between the Corps and DEP officials. AR 15218; AR 02728. These recommendations entailed relocating additional staghorn corals from the Project area and to a local coral nursery. AR 15218. In response to information from the 2014 surveys indicating that effects of sedimentation may have been greater than NMFS anticipated, the Corps again requested reinitiation of consultation by letter dated September 14, 2014. AR 15259. The Corps also determined that, despite the new survey information, there was no current evidence causally linking that sedimentation to coral stress. AR 15374. The Corps included a revised determination pursuant to Sections 7(a) and 7(d) of the ESA, and showed that the Project was not likely to jeopardize the continued existence of staghorn coral, based on the data collected during the 2014 surveys. AR 15374.

26. Second Relocation of Staghorn Coral: The Corps coordinated with NMFS regarding responses to NMFS emergency recommendations, including the additional staghorn relocation effort. AR02832-35; AR15524; AR03397; P.I. Evid. Hearing Tr. (D.E. 48) at at 272. Because NMFS could not provide a response to the Corps recent reinitiation request, the Corps could not carry out the relocation effort on an emergency timeline as NMFS recommended. AR 15944. The Corps and NMFS, however, executed an Economy Act agreement where the Corps paid NMFS \$400,000 to allow NMFS to relocate the staghorn coral, which occurred from October 26 through November 8, 2014. AR 15938-39; P.I. Evid. Hearing Tr. at 272; AR 16393; AR 17568. In its relocation report, NMFS noted that it located 205 of the 278 colonies identified in the 2013 survey, finding that 138 of those colonies demonstrated some sign of stress. AR 17516. Of the 205 colonies located, NMFS collected tissue from 157 colonies and estimated that, between the original 38 colonies relocated in November and December 2013 and the colonies that NMFS relocated as part of this effort, 86% of all colonies identified in the 2013 survey were relocated or accounted for. AR 17517.

27. The collected tissue was relocated to several coral nurseries near Key Biscayne during the fall and winter of 2014 by scientists from the University of Miami Rosenstiel School of Marine and Atmospheric Science in partnership with NMFS. The collected samples subsequently generated 1,059 fragments, averaging 10 centimeters in diameter. *Id.* Of these fragments, 921 were then outplanted after one year of nursery growth. SuppAR 21261, 21313. The remaining 133 colonies were fragmented again and are set to remain in the nurseries for an additional year. This second year in the coral nursery is anticipated to yield 1,250 new colonies with outplanting and monitoring projected to begin in the winter of 2016/2017. The relocation, fragmentation, and outplanting effort as a whole is anticipated, therefore,

to generate a total of 2,109 new colonies to be re-established in Miami-Dade County waters. SuppAR 23222. This total far surpasses the best scientific estimate for the total number of colonies in the potential area of Project impact present, even in a worst-case impact scenario. *See e.g.* SuppAR 21313-14. In addition, it is possible that the Corps will fund a third year of nursery storage, fragmentation, and outplanting to achieve an even greater benefit to the species. SuppAR 21261.

28. NMFS Relocation Report: In addition to detailing the relocation work, NMFS drafted a report that detailed findings and conclusions regarding the Project's impacts drawn from observations of NMFS divers during the relocation. AR 17512. NMFS documented sediment-covered staghorn colonies suffering partial and total mortality throughout the area, judged the sediment to be Project-related, and attributed coral mortality to Project-related sedimentation. AR 17518-20. However, the relocation effort and NMFS's field observations occurred after the thermal bleaching event and outbreak of white band disease had caused significant mortality to staghorn coral throughout Broward and Dade Counties. The Corps found that NMFS did not provide the appropriate weight to data collected during the bi-weekly staghorn monitoring events or consider the photographic evidence demonstrating the progression of white band disease throughout the Project area. SuppAR 20652.

29. DEP Report: On February 9, 2015, DEP conducted a dive survey at three locations near the Project site to assess the geographic extent of Project-related sedimentation. In its report, DEP noted accumulation of fine sediment at the dive sites and suggested that the entire Middle Reef area north of the channel was under "considerable sediment stress" and that it was a result of "project-related sedimentation." AR 17498. Notably, however, the report provides no methodology for determining any distinction between Project-generated sedimentation and sediment accumulation due to natural movement of sediment or sediment discharged from Biscayne Bay into the Project area, despite the fact that it acknowledges in the same report that a substantial amount of sediment "formed by the tidal outflow from the inlet" flows into and mixes with turbidity generated by dredging equipment used in the Project. AR 17476. Additionally, the report makes assumptions that all sedimentation is "project-related" despite providing no comparisons to qualitative or quantitative pre-Project data. Finally, the report draws conclusions about the impact to the entire Project area based on a single day of diving in three very limited locations, raising questions as to the scientific validity of its assumptions.

30. DCA Report: In August 2015, GLDD provided the Corps with a report to outline the area of Project-related impact, prepared by DCA, based on surveys completed in April and May, 2015. AR

18257. DCA relied on information gathered during baseline surveys (2010 and 2013), experience during the 1.5 years compliance monitoring (over 7,000 monitoring dives) at the project sites, the survey and documentation of impact at adjacent hardbottom resources, and local knowledge, to develop a protocol to document and outline a potential impact area. AR 18264. While acknowledging the presence of sedimentation in the Project area, DCA found the lack of baseline data to be scientifically significant:

Monitoring methods for the construction phase of the project were designed to compare channel-side sites (effect) to more distant reference (no effect) sites in order to measure project-related effects. No data were required to be collected at locations in between FDEP defined channel-side and reference sites during baseline (2013) or compliance monitoring. This dearth of data has created a knowledge gap, the condition of the benthic habitats between channel-side sites and control sites immediately before, during and after the project were not documented in a systematic way. As a result, natural sedimentation effects cannot be separated from project related sedimentation effects in this post-hoc survey approach. For this reason, potential sedimentation effect area is used throughout the document to describe effects or impacts that may be attributed to the project and/or to natural background sedimentation.

AR 18262. The Corps provided this report to NMFS, as a part of the consultation process. AR 18397. In response, NMFS requested additional data that did not yet exist, but the Corps nonetheless considered requests in developing the methodology for the currently ongoing one-year post-construction sediment delineation surveys required by the DEP Permit. AR 18433.

31. Project Completion: Dredging was deemed complete with the Corps' official acceptance, and the Corps accepted areas of the Project as complete at different times based on its official survey results that the areas had been dredged to authorized depths. The Corps accepted the final portion of the Project as complete on September 17, 2015, and formalized by letter dated October 7, 2015. AR 01153.

32. January 2016 Request for Reinitiation of Consultation: As a result of ongoing coordination between the Corps, DEP, and NMFS during 2015 and early 2016, including an after action meeting held between the agencies on January 13, 2016, the Corps reinitiated consultation on January 27, 2016, and provided, in support, a revised biological assessment (2016 BA). SuppAR 21257. The Corps noted that although Project construction is now complete, the intent of the 2016 BA was to update NMFS on the Corps' efforts to avoid and minimize take of staghorn coral, the subsequent fragmentation and outplanting of more than three times the number of colonies collected, as well as the Corps' analysis of sedimentation impacts to critical habitat. SuppAR 21257. In updating its analysis, the Corps

acknowledged potential "project related sedimentation stress" but emphasized that the staghorn colonies in the Project area "have undergone stress due to region wide thermal and disease events," noting that staghorn near the Project had "lower stress levels than control corals located five miles north of the entrance channel." SuppAR 21287.

33. NMFS April 2016 Report: In April 2016 NMFS issued a report assessing Project-related sedimentation damage assessed by NMFS staff during December 2015. SuppAR 22235. This effort was not undertaken in connection with ESA consultation but rather in order to "assist the [Corps]" with development of a compensatory plan to offset sedimentation impacts to coral reef and hardbottom adjacent to "and surrounding the Entrance Channel to the Port of Miami" under the Magnuson-Stevens Act. *Id.* According to the report, NMFS "fieldwork focused "on the Middle Reef north of the Entrance Channel, assessing sites as far as 700 meters north of the channel in addition to control (or reference) sites the USACE established for this portion of the project." *Id.* As with previous NMFS reports, the April 2016 report attributed the majority of coral (generally, not specific to staghorn) stress and mortality to Project-related sedimentation while discounting the impact of disease even though it acknowledges that the impact of the white plague outbreak (which occurred during the summer of 2015 and is not to be confused with the "white band" disease outbreak that affected staghorn corals beginning in the summer of 2014) is not yet fully understood. SuppAR 22268. The Corps notes that the report is based on a limited observation period and does not provide adequate discussion of many significant stressors, such as the 2014 thermal event, subsequent coral bleaching, or the effects of natural sedimentation that occurs within the Project area due to the area's strong currents. *See e.g.* SuppAR 20648-54; SuppAR 21281-87.

34. NMFS June 2016 Paper: In June 2016 NMFS released a sedimentation impact paper considering the effects of the Project on coral reefs adjacent to Miami Harbor. The paper acknowledges that "the precise effects of the dredging on surrounding coral reefs are not well quantified" and that its conclusions are largely drawn from "previously published remote sensing analyses, as well as agency and anecdotal reports." Supp2AR 25002. More than half of the monitoring sites, however, had no paired baseline, thus undermining the attempt to quantitatively attribute subsequent changes in the ecosystem to specific disturbances. *See e.g.* Supp2AR 25013. The Corps notes that the paper does not specify how much dive time occurred to generate its data, the calculation methods utilized, nor information regarding why numerous relevant data sets were excluded. Supp2AR 25007-10.

35. Project-Related Impacts: NMFS, DEP, and DERM have, at various times, all suggested that sediment in the Project area was solely attributable to the Project. The Corps has incorporated that information into its ongoing analysis of Project-related impacts; the Corps disputes, however, any premature conclusions □ which have been drawn based on limited data, no baseline comparison, and the seeming disregard for significant non-Project related stressors occurring during construction □ that all sedimentation and sediment-related coral stress in the Project area are solely attributable to the Project. *See e.g.* Precht Decl. (D.E. 26-6) □□25-27; Supp2AR 24952 (attachment). On the other hand, as a result of extensive monitoring efforts, DCA staff completed approximately 7,000 dives in the Project area by August 2015 to examine, survey, monitor, and/or assess impacts to benthic communities and habitats, with a particular focus on staghorn coral. AR 18264. DCA noted that additional data collection and analysis as well as additional detailed mapping would be required to make those conclusions. AR 18262-63. The effort to collect this data was initiated on August 8, 2016, in connection with the requirement under the DEP Permit to conduct a one-year post-construction sediment delineation and impact survey, which is currently underway.

36. NMFS Terminates Consultation: On February 29, 2016, NMFS issued a letter in response to the 2016 BA, explaining that NMFS □does not perform after-the-fact consultations□and, as such, would □not be providing comments on the [2016] BA.□ SuppAR 21872. Despite receiving this letter concluding consultation for the Project, the Corps was concerned with the lack of clarity as to any ongoing obligations under the ESA. NMFS clarified by letter on September 19, 2016, noting that □despite the continued collaboration of our staffs, the action was completed on September 17, 2015, before we could issue a new opinion.□ Supp2AR 25095. NMFS explained that □[w]ith no ongoing action to consult it concluded the reinitiated consultation□because the Project was completed and the Corps therefore □has no further consultation obligations under the ESA□for the Project. *Id.*

Respectfully submitted,

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STATEMENT OF SER

I HEREBY CERTIFY that on November 14, 2016, a true and correct copy of the foregoing was electronically filed with the Clerk of Court using CM/ECF. Copies of the foregoing document will be served upon interested counsel via transmission of Notices of Electronic Filing generated by CM/ECF.

/s/ Jeremy Hessler

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.Docket No. MPRSA-04-2019-7500

Exhibit RX 82 (A)



October 14, 2014

Great Lakes Dredge & Dock Company
2122 York Road
Oak Brook, IL 60523

Attention: Mr. Brian Barnes

Subject: Quote Request 1: Time and Materials Proposal for ADISS Installation Services during the Freeport Entrance and Jetty Channel Widening Project

Reference: Great Lakes Dredge & Dock Co. – Leidos/SAIC PO Terms and Conditions

Dear Mr. Barnes:

Leidos, Inc. (formerly SAIC) is pleased to provide this Time and Materials (T&M) estimate to Great Lakes Dredge & Dock Company (GLDD) for ADISS installation services on two (2) scows. The cost detail presented below estimates U.S. Army Corps of Engineers Data Quality Management (DQM) compliant equipment. The Period of Performance for this effort shall extend from October 21, 2014 through November 30, 2014.

Leidos' Time and Materials cost estimate for this support is **\$5,710**, detailed as follows:

Quote Request 1

ADISS Installation of Two (2) Split-hull Scows:

Equipment Mobilization and Installation	\$ 4,001
Estimated Travel and Shipping Expenses	\$ 1,709
<u>Installation Subtotal</u>	<u>\$ 5,710</u>

This Time and Materials estimate includes the costs for installation of ADISS equipment in either Miami, Florida; Freeport, Texas; or Staten Island, New York. Subsequent damages and/or loss of monitoring equipment after installation are the responsibility of Great Lakes Dredge & Dock Company. In the interest of confidentiality, we ask that this pricing information above not be shared without the prior written approval of Leidos.

This proposal assumes this work will be authorized as a GLDD Purchase Order (PO) and that the attached GLDD – Leidos/SAIC PO Terms and Conditions previously negotiated will govern any PO issued as a result of this proposal. This proposal shall remain valid for 30 days from the date of this transmittal letter.

Please provide your approval by emailing a PO to jessica.l.mclean@leidos.com or fax at 858.826.6094.

Mr. Brian Barnes, Great Lakes Dredge & Dock Company
October 14, 2014
Page 2 of 3



Technical questions regarding this submission can be directed to either Marc Wakeman at 401.862.0940 or marc.p.wakeman@leidos.com, or Steve Pace at 401.862.4092 or stephen.d.pace@leidos.com. All other business and contractual questions can be directed to me at 858.826.7597 or via email.

Leidos appreciates the opportunity to support Great Lakes Dredge & Dock on this project.

Sincerely,
Leidos, Inc.

A handwritten signature in blue ink that reads "Jessica L. McLean".

Jessica L. McLean
Sr. Contracts Representative

cc: Marc Wakeman, Leidos ADISS Program Manager
Steve Pace, Leidos ADISS Project Manager

Attachment: GLDD-Leidos/SAIC PO Terms and Conditions



ADISS

Time and Materials Rates

Labor Category	Hourly Rate
ADISS Sr. Engineer	\$182.16
ADISS Programmer	\$124.74
ADISS Web Programmer	\$96.97
ADISS Mid-Level Programmer	\$81.99
ADISS Jr. Programmer/ Analyst	\$71.82
ADISS Project Controller/ Administrator	\$83.44

ADISS Equipment Rental	Rate
Unit Cost	As stated in proposal
ADISS Travel/ODCs	Rate
Rate/Various	Cost plus Leidos G&A
Administrative Charges	Rate
General & Administrative (G&A)	5.45%

Labor and Equipment Rental Rates are valid through 15 March 2015.

The estimated number of hours by labor category, estimated costs and expenses, and the Estimated Price are estimates only and may vary. Leidos, in its discretion, may use a greater or lesser number of hours in any labor category, and may incur a greater or lesser amount of costs and expenses, but may not incur or charge more than the total Estimated Price for all labor/materials/ODCs unless the Customer agrees in writing.

TERMS AND CONDITIONS

ACCEPTANCE

This Purchase Order is an offer by the Buyer to the Vendor which will become a binding contract on the terms and conditions contained on both sides of this document when it is accepted by Vendor. Vendor may accept only by signing the acknowledgment copy hereof and returning same to Buyer. Acceptance is expressly limited to the stated terms and conditions on both sides hereof. In no event shall any terms or conditions contained in Vendor's acknowledgment forms, invoices, billing statements or other documents become a part of this contract, whether or not signed by Buyer's representatives, except in accordance with Paragraph 13 under the caption GENERAL below.

REPRESENTATIONS AND WARRANTIES

1. By accepting this Order, Vendor represents and warrants to Buyer, in addition to all warranties implied by law, that each article or service described on the face hereof (the "articles" or "services" as the case may be) shall: (a) be merchantable and fit for Buyer's intended purpose; (b) be free from defects in material, workmanship and design and with respect to services, be performed in a first class, workmanlike manner; (c) conform to all drawings, specifications and other descriptions, if any, referred to or set forth herein and all articles, if any, accepted by Buyer as samples; (d) be suitable for use under, be manufactured or performed, as the case may be, in accordance with and, where required, be registered under all applicable Federal, state and local laws, and all orders and regulations promulgated thereunder, including, without limitation, the Fair Labor Standards Act of 1938, as amended, and the "Equal Opportunity" clause and the "Certification of Non-Segregated Facilities" provision of the Federal Acquisition Regulations in effect as of the date of this contract; and (e) not infringe or encroach upon third parties' personal contractual or proprietary rights. Upon Buyer's request, Vendor shall furnish to Buyer a certified report detailing the materials and workmanship incorporated into the articles or utilized in connection with the performance of the services. Further, upon Buyer's request, Vendor shall provide completed Material Safety Data Sheets (OSHA Form 20) for those substances which have been identified by the U.S. Occupational Safety and Health Administration as hazardous or potentially hazardous chemicals. Vendor's representations and warranties shall survive the performance of the services or the delivery of the articles, or of products containing or incorporating such articles, to Buyer, and any resales thereof by Buyer. The warranties contained herein shall be in addition to, and shall not be construed as restricting or limiting any warranties or remedies of Buyer, express or implied, which are provided by contract or by law. Any attempt by Vendor to limit, disclaim or restrict any such warranties or remedies of Buyer, by acknowledgement or otherwise, in accepting this Order, shall be null and void and ineffective without Buyer's written consent.

2. BUYER MAKES NO REPRESENTATIONS OR WARRANTIES CONCERNING THIS ORDER EXCEPT AS EXPRESSLY CONTAINED HEREIN.

PATENTS

Vendor shall defend any suit or proceeding brought against Buyer or its customers so far as based on a claim that any article or apparatus or any part thereof constituting goods furnished under this Order, as well as any device or process necessarily resulting from the use thereof, constitutes an infringement of any patent of the United States, if notified promptly in writing and given authority, information and assistance (at Vendor's expense) for the defense of same, and Vendor shall pay any damages and costs awarded therein. In case that article or apparatus, any part thereof, or any device or process necessarily resulting from the use thereof, is in such suit held to constitute infringement and the use of said article or apparatus, part or device is enjoined, Vendor shall at its own expense and at its option, either procure for Buyer the right to continue using said article or apparatus, part or device, or replace same with non-infringing article or apparatus, or modify it so it becomes non-infringing; or remove said article or apparatus and refund the purchase price and the transportation and installation costs thereof. The foregoing states the entire liability between Vendor and Buyer with respect to patent infringement involving said article or apparatus or any part thereof.

INDEMNITY & INSURANCE

1. If Vendor's work under this Order involves any operation by Vendor on the premises of Buyer or one of its customers, Vendor shall take all necessary precautions to prevent injury or death to persons or damage to property during such operation. Vendor shall indemnify, defend and hold harmless Buyer and its customers from any and all claims **to the extent of the sole negligence or willful misconduct** by the Vendor, its agents, employees, or subcontractors arising out of any such operation **related to the Vendor's performance of the work under this Purchase Order.**

jm 6/13/13

6/10/12

2. (a) Vendor agrees to indemnify and hold harmless Buyer and Buyer's agents and employees from and against any and all losses or claims for losses, liability, damage or expenses, including counsel and other legal fees, **to the extent of Vendor's negligence** for any of the following: (1) any injury to person or property arising or resulting from any actual alleged defect in any of the articles or services, or any act or omission of Vendor or Vendor's agents or employees, or of any of Vendor's subcontractors, with respect to any of the articles or services; (2) the alleged existence of any state of facts concerning the articles or services which, if true, would constitute a breach of any representation, warranty or other obligation of Vendor under this Agreement; (3) the non-fulfillment of any agreement on the part of Vendor contained in this contract, or (4) any and all actions, suits, proceedings, investigations, demands, assessments or judgments incident to the foregoing.

(b) In the event that any action or proceeding based upon any of the matters referred to in subparagraph (2) (a) above is brought against Buyer or its agents, Buyer will promptly notify Vendor and Vendor shall, if Buyer so requests, resist and defend such action or proceeding by reputable counsel retained at Vendor's expense. In addition, Buyer may appear and be represented of its own choosing at Buyer's expense.

(c) Vendor agrees that any controversy between itself and Buyer concerning Vendor's obligations under this indemnity may be litigated in the same forum as, and concurrently with, any lawsuit against Buyer to which such controversy may relate, and Vendor agrees to voluntarily appear in such forum and submit to the jurisdiction thereof.

3. Vendor agrees to maintain, and when requested by Buyer, to furnish certificates acceptable to Buyer evidencing adequate Worker's Compensation, public liability, comprehensive general liability, product liability, property damages and other applicable insurance coverage. Maintenance of such insurance shall not relieve Vendor of liability under the indemnity provisions set forth herein.

PERFORMANCE SCHEDULE

Time and rate of deliveries are the essence of this contract, and, if delivery of articles or performance of services is not completed by the time provided for in this Order, Buyer reserves the right, without liability, in addition to any other rights and remedies which Buyer may have under this contract or otherwise, to terminate this contract by notice effective when received by Vendor as to articles not yet delivered, or services not yet rendered and to purchase substitute articles or services elsewhere and charge Vendor with any loss incurred, plus incidental expenses. If requested by Buyer, Vendor will use an expedited method of shipment with respect to late deliveries, at Vendor's expense. Articles shipped to Buyer in advance of the scheduled date may be returned by Buyer to Vendor, at Vendor's expense, and Buyer shall not be liable for fabrication or shipment of articles in excess of authorized quantities nor obligated to accept tender thereof.

CHANGES

1. Vendor shall not make any changes in the specifications, physical composition of, or process used to manufacture the goods hereunder without Buyer's prior written consent

2. Buyer shall have the right to make changes in (a) the specifications, drawings and samples, if any; (b) the method of performance, shipment or packaging; (c) the place and time of performance; and (d) the services, articles and material, including the quantities thereof, to be furnished by Vendor. If any such change causes an increase or decrease in the cost or the time required for performance of this contract, an equitable adjustment shall be made in the contract price or performance schedule, or both. Any claim by Vendor for adjustment under this clause must be asserted in writing within thirty (30) days from the date of receipt by Vendor of the notification of change, after which time such claim shall be deemed to have been waived by Vendor.

CANCELLATION

1. Buyer shall have the right to terminate and rescind all, or any part, of this contract, by notice to Vendor, in the event that (a) Vendor breaches or fails to perform any of its obligations hereunder; (b) any of the representations or warranties of Vendor contained herein shall be incorrect or untrue when made or at the time of delivery of any of the articles or rendering of any of the services to Buyer hereunder; or (c) Vendor becomes insolvent or seeks relief under any bankruptcy or insolvency law, or if any bankruptcy, reorganization, arrangement, receivership or other insolvency proceeding shall be commenced by or against Vendor. Such termination shall become effective immediately upon receipt of such notice by Vendor, and Vendor will stop work immediately on the terminated portion of this contract, immediately notify subcontractors to stop work, and protect property in Vendor's possession in which Buyer has, or may acquire, an interest. In the event of such termination, Buyer agrees to pay Vendor the stipulated price for all articles or services which have been completed by Vendor and delivered to and accepted by Buyer, subject to Buyer's rights of revocation of acceptance.

2. Buyer shall also have the right to terminate and rescind all, or any part of this contract, other than as a result of default of Vendor, by giving Vendor notice of its election to do so. Such termination shall become effective immediately upon receipt of such notice by Vendor, and Vendor will stop work immediately on the terminated part of this contract, immediately notify subcontractors to stop work, and protect property in Vendor's possession in which Buyer has, or may acquire, an interest. In the event of such termination, Buyer agrees to pay Vendor the stipulated price for all articles or services which have been completed by Vendor and delivered to and accepted by Buyer, subject to Buyer's right of revocation of acceptance. In addition, with respect only to terminations pursuant to this paragraph 2, Buyer agrees to pay Vendor for Vendor's reasonable out-of-pocket costs necessarily incurred by Vendor in the performance of this contract which are properly allocable to the terminated portion of this contract under recognized commercial accounting practices, provided, however, that Vendor must, in good faith, use its best efforts to mitigate its said out-of-pocket costs by commercially reasonable means. Any claim for payment of such out-of-pocket costs incurred by Vendor must be submitted writing to Buyer within thirty (30) days of receipt of Buyer's notice of termination, thoroughly documented by invoices of other applicable documents, after which time such claim shall be deemed to have been waived by Vendor. Buyer shall have the right to audit all elements of any termination claim and Vendor shall make available to Buyer on request, all books, records and papers relating thereto, in a form readable by Buyer.

3. The remedies provided in paragraphs 1 and 2 above shall be Vendor's exclusive remedies for Buyer's termination and/or rescission of this contract and Vendor shall have no other remedy, including, but not limited to, specific performance or loss of profits. Vendor will deliver to Buyer any property in which Buyer has an interest and for which Buyer shall make written request at or after termination and Buyer will pay Vendor the fair value of any such property so requested and delivered.

PACKAGING AND SHIPPING

Buyer shall have the right, at its option, to control and select the method of transportation of articles ordered. All delivered articles shall be packed and packaged in accordance with the instructions or specifications attached hereto, or referred to in drawings or specifications for the articles hereunder; in the absence of any such instructions or specifications, Vendor shall comply with the best commercial practice for domestic and/or international shipments, adequate for safe arrival at destination and storage, for protection against weather and transportation, for compliance with carrier regulations and for securing the lowest transportation costs. No charge shall be made by Vendor for cartage or packing unless authorized by Buyer in writing. Truck shipments must be made only by carriers authorized under applicable federal and state law or will be subject to rejection. All packages and containers must bear Vendor's name and Buyer's purchase order number, indicate the contents, and show quantity, gross and net weights. Multiple containers must be labeled as such. Country of origin must be clearly marked on each article, box, and carton. Any omission or failure in marking country of origin will be the responsibility of Vendor. A bill of lading or other shipping manifest must be mailed to Buyer the same day that shipment is made by Vendor.

INSPECTION AND RIGHTS OF REPAIR AND REJECTION

1. The articles and services shall be received subject to Buyer's rights of inspection, rejection and revocation of acceptance. Any article or service which is not in conformity with Vendor's representations and warranties set forth in this contract, or implied warranties of Vendor or which is otherwise defective, may be returned by Buyer to Vendor, at Vendor's expense, and will be promptly repaired or replaced by Vendor on demand at no additional cost to Buyer, or, upon Buyer's request and at Vendor's expense, Vendor shall promptly send a repair person to Buyer's premises to repair or replace such articles or services, or, at Buyer's option, such articles or services may be repaired by Buyer, at Vendor's expense. Vendor shall bear all costs of packing, shipping and transporting all defective or nonconforming articles. Payment of the purchase prior to inspection shall not constitute acceptance by Buyer of the articles or services.

2. Vendor, at its own expense, shall furnish any parts price lists, maintenance and repair instructions and sectional drawings requested to Buyer for articles supplied hereunder. Vendor's facilities, materials and equipment and the articles to be shipped hereunder (including adequate data showing the presence in each article of the physical and chemical properties, including all components and raw materials incorporated therein, required by the applicable specifications), shall at all reasonable times and places, be subject to examination by Buyer, and Vendor also shall impose the same requirements on his subcontractors. On orders placed on a time and material basis, Vendor shall retain its cost records, and all ancillary business records, for at least one (1) year following delivery of the articles or completion of the services to Buyer.

and such records shall at all times be subject to inspection by Buyer's representatives. All materials and workmanship incorporated into the articles and/or services shall be subject to Buyer's inspection and testing at all times and places (such inspection and testing to be conducted, when practical, during the manufacture of the articles or the rendering of the services); and, if any such inspection or testing is to be made on the premises of Vendor, Vendor will furnish, without additional charge, all reasonable facilities, testing equipment and assistance for sale and convenient inspection or testing.

BILLING, PRICE AND PAYMENT

1. The articles shipped or services rendered pursuant hereto must not be invoiced at a higher price than that shown on the face of this contract without Buyer's prior written consent. The price on the face of this contract includes packing, crating and freight, express or cartage, unless otherwise shown on the face hereof. Invoices must itemize applicable transportation charges, taxes and custom duties, if any, as separate items. Invoices must be rendered as close to date of shipment of articles, or completion of services, as is possible, but not before such date of shipment or completion.

2. Vendor warrants that the prices for the articles and/or services to be furnished to Buyer hereunder are not less favorable than those currently extended to any other customer for the same or similar articles and/or services in similar quantities. If Vendor's net prices to the other similarly situated for articles and/or services similar to those furnished to Buyer hereunder below the price stipulated herein, Vendor agrees to give Buyer the benefit of such reductions while they are in effect and to notify Buyer promptly of all such changes in prices.

3. Unless specified otherwise on the face hereof, the date of payment will be calculated from the date that acceptable invoices are received by Buyer, or from the date that the articles shipped hereunder are received by, or the services rendered hereunder are completed for Buyer, whichever shall be the later date, both for the calculation of cash discounts and for the scheduling of payment of net invoices. Buyer has the discretion of determining what constitutes an acceptable invoice.

4. Buyer will exercise all discounts provided by Vendor.

5. Buyer may set-off against amounts payable to Vendor hereunder all present and future indebtedness of Vendor to Buyer arising from this or any other transaction or occurrence.

6. Buyer shall not be responsible for any over-time charges unless Buyer provides its written authorization to Vendor.

7. Vendor agrees to withhold and pay to the proper governmental authorities social security taxes and unemployment compensation taxes in any and all jurisdictions, as may be required by law, and to hold Buyer harmless against any claims for non-payment or insufficient payment of same.

MATERIALS, TOOLS AND EQUIPMENT PAID FOR OR FURNISHED BY BUYER

Title to all tools, equipment, dies, jigs or other materials, if any, either paid or furnished by Buyer, as well as replacements therefore and attachments thereto, in connection with this contract, shall at all times remain with Buyer. Such property shall be maintained by Vendor in good and usable condition, reasonable wear and tear excepted, and Vendor shall be responsible for any loss or damage thereto and shall at all times keep the same insured for its full insurable value. Vendor shall not include any charge (including amortization or depreciation) for such property in the price of any article manufactured, or service rendered, by or with the use of said property. Such property shall be plainly marked or otherwise adequately identified by Vendor as the property of Buyer and shall be stored separate and apart from Vendor's property to the extent possible. Said property shall not be removed from Vendor's premises, nor used for any purpose other than that for which furnished or acquired, without the prior written approval of Buyer. Buyer shall have the right, at all reasonable times, to inspect such property and Vendor's records with respect thereto and to take possession of such property on demand with or without legal process and without liability. Vendor agrees to waive, and does hereby waive, any lien that it may have or may hereafter have on such property and agrees to execute one or more Uniform Commercial Code financing statements with respect to such property showing Buyer's title thereto whenever so requested by Buyer. Such property shall be deemed to be moveable chattels and shall not become annexed.

CONFIDENTIALITY

1. Any designs, specification, drawings, reprints, technical information data ("Confidential Information") furnished by Buyer to Vendor hereunder shall remain Buyer's property, shall be kept confidential by Vendor, shall be used only with respect to articles manufactured or services rendered for Buyer and shall be returned to Buyer at Buyer's request. Buyer may use the Confidential Information in articles manufactured and/or services rendered by others and may obtain such legal protection as may be available for the Confidential Information.

2. Vendor shall not, without Buyer's prior written consent, in any manner, divulge the fact that Vendor has a contract to furnish the articles and/or services to Buyer. Vendor shall be responsible for the safeguarding of all secret, confidential, or restricted matters that may be disclosed or developed in connection with the work under this contract.

GENERAL

1. All printed, stamped or written matter appearing on this Purchase Order shall be a part hereof.
2. The failure of Buyer to insist on the performance of any of the terms hereof, or to exercise any right or privilege hereunder, or Buyer's waiver of any breaches by Vendor hereof, shall not thereafter waive any such terms, conditions, rights or privileges that Buyer may have hereunder.
3. All rights and remedies granted to Buyer hereunder shall be cumulative and not exclusive and shall be in addition to and not in lieu of Buyer's rights arising under this contract or in law.
4. All of the terms and conditions hereof shall apply to additional quantities of articles and/or services ordered by Buyer except to the extent covered by a new contract.
5. This contract shall be governed by and construed in accordance with the laws of the State of Illinois.
6. Should any of the provisions of this contract be declared by any court of competent jurisdiction to be invalid, such decision shall not affect the validity of any remaining provisions hereof.
7. None of Vendor's rights or obligations under this Order may be assigned without Buyer's prior written consent. Any attempt by Vendor to make such assignment shall be null and void and any such assignment by operation of law shall give Buyer the option to terminate the Purchase Order without further liability.
8. Vendor shall not be responsible for delays or defaults in deliveries or performance, nor Buyer for failure to receive, if occasioned by wars, strikes, fires, an act of God or the public enemy, labor or transportation difficulties or other causes beyond the control of the affected party.
9. Buyer's complete Order number must appear on all invoices, shipping notices, packing slips, containers, bills of lading, packages, and correspondence pertaining thereto.
10. All notices, requests, demands and other communications which are required to be, or may be, given by either party under this contract shall be in writing and shall be deemed to have been given or made if delivered or mailed by first class mail, postage prepaid, or sent by prepaid telegram, to the other party at the address of such other party indicated on the face of this contract.
11. In the rendering of all services hereunder, Vendor shall be an independent contractor, and Vendor shall not have any right or authority to act for, incur, assume or create any obligation, responsibility or liability, express or implied, in the name of, or on behalf of, Buyer or to bind Buyer in any manner whatsoever.
12. Any waiver of terms and conditions of this Purchase Order by Buyer shall not prevent Buyer from thereafter insisting upon complete compliance with this Purchase Order's terms and conditions with respect to subsequent deliveries of merchandise or services, and shall not constitute a waiver of any other terms and conditions.
13. This purchase Order, and any documents referred to on the face hereof, constitute the entire agreement between the parties regarding the subject matter hereof and supersede all prior agreements, understandings and statements whether oral or written regarding such subject matter. No modification to, change in or departure from the provisions of this Purchase Order shall be valid or binding on Buyer, unless approved in writing by Buyer's authorized representative.

.Docket No. MPRSA-04-2019-7500

Exhibit RX 82 (B)

TERMS AND CONDITIONS

ACCEPTANCE

This Purchase Order is an offer by the Buyer to the Vendor which will become a binding contract on the terms and conditions contained on both sides of this document when it is accepted by Vendor. Vendor may accept only by signing the acknowledgment copy hereof and returning same to Buyer. Acceptance is expressly limited to the stated terms and conditions on both sides hereof. In no event shall any terms or conditions contained in Vendor's acknowledgment forms, invoices, billing statements or other documents become a part of this contract, whether or not signed by Buyer's representatives, except in accordance with Paragraph 13 under the caption GENERAL below.

REPRESENTATIONS AND WARRANTIES

1. By accepting this Order, Vendor represents and warrants to Buyer, in addition to all warranties implied by law, that each article or service described on the face hereof (the "articles" or "services" as the case may be) shall: (a) be merchantable and fit for Buyer's intended purpose; (b) be free from defects in material, workmanship and design and with respect to services, be performed in a first class, workmanlike manner; (c) conform to all drawings, specifications and other descriptions, if any, referred to or set forth herein and all articles, if any, accepted by Buyer as samples; (d) be suitable for use under, be manufactured or performed, as the case may be, in accordance with and, where required, be registered under all applicable Federal, state and local laws, and all orders and regulations promulgated thereunder, including, without limitation, the Fair Labor Standards Act of 1938, as amended, and the "Equal Opportunity" clause and the "Certification of Non-Segregated Facilities" provision of the Federal Acquisition Regulations in effect as of the date of this contract; and (e) not infringe or encroach upon third parties' personal contractual or proprietary rights. Upon Buyer's request, Vendor shall furnish to Buyer a certified report detailing the materials and workmanship incorporated into the articles or utilized in connection with the performance of the services. Further, upon Buyer's request, Vendor shall provide completed Material Safety Data Sheets (OSHA Form 20) for those substances which have been identified by the U.S. Occupational Safety and Health Administration as hazardous or potentially hazardous chemicals. Vendor's representations and warranties shall survive the performance of the services or the delivery of the articles, or of products containing or incorporating such articles, to Buyer, and any resales thereof by Buyer. The warranties contained herein shall be in addition to, and shall not be construed as restricting or limiting any warranties or remedies of Buyer, express or implied, which are provided by contract or by law. Any attempt by Vendor to limit, disclaim or restrict any such warranties or remedies of Buyer, by acknowledgement or otherwise, in accepting this Order, shall be null and void and ineffective without Buyer's written consent.

2. BUYER MAKES NO REPRESENTATIONS OR WARRANTIES CONCERNING THIS ORDER EXCEPT AS EXPRESSLY CONTAINED HEREIN.

PATENTS

Vendor shall defend any suit or proceeding brought against Buyer or its customers so far as based on a claim that any article or apparatus or any part thereof constituting goods furnished under this Order, as well as any device or process necessarily resulting from the use thereof, constitutes an infringement of any patent of the United States, if notified promptly in writing and given authority, information and assistance (at Vendor's expense) for the defense of same, and Vendor shall pay any damages and costs awarded therein. In case that article or apparatus, any part thereof, or any device or process necessarily resulting from the use thereof, is in such suit held to constitute infringement and the use of said article or apparatus, part or device is enjoined, Vendor shall at its own expense and at its option, either procure for Buyer the right to continue using said article or apparatus, part or device, or replace same with non-infringing article or apparatus, or modify it so it becomes non-infringing; or remove said article or apparatus and refund the purchase price and the transportation and installation costs thereof. The foregoing states the entire liability between Vendor and Buyer with respect to patent infringement involving said article or apparatus or any part thereof.

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1. If Vendor's work under this Order involves any operation by Vendor on the premises of Buyer or one of its customers, Vendor shall take all necessary precautions to prevent injury or death to persons or damage to property during such operation. Vendor shall indemnify, defend and hold harmless Buyer and its customers from any and all claims which may result in any way from any act or omission by the Vendor, its agents, employees, or subcontractors arising out of any such operation.

2. (a) Vendor agrees to indemnify and hold harmless Buyer and Buyer's agents and employees from and against any and all losses or claims for losses, liability, damage or expenses, including counsel and other legal fees, which arise out of or result from any of the following: (1) any injury to person or property arising or resulting from any actual alleged defect in any of the articles or services, or any act or omission of Vendor or Vendor's agents or employees, or of any of Vendor's subcontractors, with respect to any of the articles or services; (2) the alleged existence of any state of facts concerning the articles or services which, if true, would constitute a breach of any representation, warranty or other obligation of Vendor under this Agreement; (3) the non-fulfillment of any agreement on the part of Vendor contained in this contract, or (4) any and all actions, suits, proceedings, investigations, demands, assessments or judgments incident to the foregoing.

(b) In the event that any action or proceeding based upon any of the matters referred to in subparagraph (2) (a) above is brought against Buyer or its agents, Buyer will promptly notify Vendor and Vendor shall, if Buyer so requests, resist and defend such action or proceeding by reputable counsel retained at Vendor's expense. In addition, Buyer may appear and be represented of its own choosing at Buyer's expense.

(c) Vendor agrees that any controversy between itself and Buyer concerning Vendor's obligations under this indemnity may be litigated in the same forum as, and concurrently with, any lawsuit against Buyer to which such controversy may relate, and Vendor agrees to voluntarily appear in such forum and submit to the jurisdiction thereof.

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CHANGES

1. Vendor shall not make any changes in the specifications, physical composition of, or process used to manufacture the goods hereunder without Buyer's prior written consent

2. Buyer shall have the right to make changes in (a) the specifications, drawings and samples, if any; (b) the method of performance, shipment or packaging; (c) the place and time of performance; and (d) the services, articles and material, including the quantities thereof, to be furnished by Vendor. If any such change causes an increase or decrease in the cost or the time required for performance of this contract, an equitable adjustment shall be made in the contract price or performance schedule, or both. Any claim by Vendor for adjustment under this clause must be asserted in writing within thirty (30) days from the date of receipt by Vendor of the notification of change, after which time such claim shall be deemed to have been waived by Vendor.

CANCELLATION

1. Buyer shall have the right to terminate and rescind all, or any part, of this contract, by notice to Vendor, in the event that (a) Vendor breaches or fails to perform any of its obligations hereunder; (b) any of the representations or warranties of Vendor contained herein shall be incorrect or untrue when made or at the time of delivery of any of the articles or rendering of any of the services to Buyer hereunder; or (c) Vendor becomes insolvent or seeks relief under any bankruptcy or insolvency law, or if any bankruptcy, reorganization, arrangement, receivership or other insolvency proceeding shall be commenced by or against Vendor. Such termination shall become effective immediately upon receipt of such notice by Vendor, and Vendor will stop work immediately on the terminated portion of this contract, immediately notify subcontractors to stop work, and protect property in Vendor's possession in which Buyer has, or may acquire, an interest. In the event of such termination, Buyer agrees to pay Vendor the stipulated price for all articles or services which have been completed by Vendor and delivered to and accepted by Buyer, subject to Buyer's rights of revocation of acceptance.

2. Buyer shall also have the right to terminate and rescind all, or any part of this contract, other than as a result of default of Vendor, by giving Vendor notice of its election to do so. Such termination shall become effective immediately upon receipt of such notice by Vendor, and Vendor will stop work immediately on the terminated part of this contract, immediately notify subcontractors to stop work, and protect property in Vendor's possession in which Buyer has, or may acquire, an interest. In the event of such termination, Buyer agrees to pay Vendor the stipulated price for all articles or services which have been completed by Vendor and delivered to and accepted by Buyer, subject to Buyer's right of revocation of acceptance. In addition, with respect only to terminations pursuant to this paragraph 2, Buyer agrees to pay Vendor for Vendor's reasonable out-of-pocket costs necessarily incurred by Vendor in the performance of this contract which are properly allocable to the terminated portion of this contract under recognized commercial accounting practices, provided, however, that Vendor must, in good faith, use its best efforts to mitigate its said out-of-pocket costs by commercially reasonable means. Any claim for payment of such out-of-pocket costs incurred by Vendor must be submitted writing to Buyer within thirty (30) days of receipt of Buyer's notice of termination, thoroughly documented by invoices of other applicable documents, after which time such claim shall be deemed to have been waived by Vendor. Buyer shall have the right to audit all elements of any termination claim and Vendor shall make available to Buyer on request, all books, records and papers relating thereto, in a form readable by Buyer.

3. The remedies provided in paragraphs 1 and 2 above shall be Vendor's exclusive remedies for Buyer's termination and/or rescission of this contract and Vendor shall have no other remedy, including, but not limited to, specific performance or loss of profits. Vendor will deliver to Buyer any property in which Buyer has an interest and for which Buyer shall make written request at or after termination and Buyer will pay Vendor the fair value of any such property so requested and delivered.

PACKAGING AND SHIPPING

Buyer shall have the right, at its option, to control and select the method of transportation of articles ordered. All delivered articles shall be packed and packaged in accordance with the instructions or specifications attached hereto, or referred to in drawings or specifications for the articles hereunder; in the absence of any such instructions or specifications, Vendor shall comply with the best commercial practice for domestic and/or international shipments, adequate for safe arrival at destination and storage, for protection against weather and transportation, for compliance with carrier regulations and for securing the lowest transportation costs. No charge shall be made by Vendor for cartage or packing unless authorized by Buyer in writing. Truck shipments must be made only by carriers authorized under applicable federal and state law or will be subject to rejection. All packages and containers must bear Vendor's name and Buyer's purchase order number, indicate the contents, and show quantity, gross and net weights. Multiple containers must be labeled as such. Country of origin must be clearly marked on each article, box, and carton. Any omission or failure in marking country of origin will be the responsibility of Vendor. A bill of lading or other shipping manifest must be mailed to Buyer the same day that shipment is made by Vendor.

INSPECTION AND RIGHTS OF REPAIR AND REJECTION

1. The articles and services shall be received subject to Buyer's rights of inspection, rejection and revocation of acceptance. Any article or service which is not in conformity with Vendor's representations and warranties set forth in this contract, or implied warranties of Vendor or which is otherwise defective, may be returned by Buyer to Vendor, at Vendor's expense, and will be promptly repaired or replaced by Vendor on demand at no additional cost to Buyer, or, upon Buyer's request and at Vendor's expense, Vendor shall promptly send a repair person to Buyer's premises to repair or replace such articles or services, or, at Buyer's option, such articles or services may be repaired by Buyer, at Vendor's expense. Vendor shall bear all costs of packing, shipping and transporting all defective or nonconforming articles. Payment of the purchase prior to inspection shall not constitute acceptance by Buyer of the articles or services.

2. Vendor, at its own expense, shall furnish any parts price lists, maintenance and repair instructions and sectional drawings requested to Buyer for articles supplied hereunder. Vendor's facilities, materials and equipment and the articles to be shipped hereunder (including adequate data showing the presence in each article of the physical and chemical properties, including all components and raw materials incorporated therein, required by the applicable specifications), shall at all reasonable times and places, be subject to examination by Buyer, and Vendor also shall impose the same requirements on his subcontractors. On orders placed on a time and material basis, Vendor shall retain its cost records, and all ancillary business records, for at least one (1) year following delivery of the articles or completion of the services to Buyer.

and such records shall at all times be subject to inspection by Buyer's representatives. All materials and workmanship incorporated into the articles and/or services shall be subject to Buyer's inspection and testing at all times and places (such inspection and testing to be conducted, when practical, during the manufacture of the articles or the rendering of the services); and, if any such inspection or testing is to be made on the premises of Vendor, Vendor will furnish, without additional charge, all reasonable facilities, testing equipment and assistance for sale and convenient inspection or testing.

BILLING, PRICE AND PAYMENT

1. The articles shipped or services rendered pursuant hereto must not be invoiced at a higher price than that shown on the face of this contract without Buyer's prior written consent. The price on the face of this contract includes packing, crating and freight, express or cartage, unless otherwise shown on the face hereof. Invoices must itemize applicable transportation charges, taxes and custom duties, if any, as separate items. Invoices must be rendered as close to date of shipment of articles, or completion of services, as is possible, but not before such date of shipment or completion.

2. Vendor warrants that the prices for the articles and/or services to be furnished to Buyer hereunder are not less favorable than those currently extended to any other customer for the same or similar articles and/or services in similar quantities. If Vendor's net prices to the other similarly situated for articles and/or services similar to those furnished to Buyer hereunder below the price stipulated herein, Vendor agrees to give Buyer the benefit of such reductions while they are in effect and to notify Buyer promptly of all such changes in prices.

3. Unless specified otherwise on the face hereof, the date of payment will be calculated from the date that acceptable invoices are received by Buyer, or from the date that the articles shipped hereunder are received by, or the services rendered hereunder are completed for Buyer, whichever shall be the later date, both for the calculation of cash discounts and for the scheduling of payment of net invoices. Buyer has the discretion of determining what constitutes an acceptable invoice.

4. Buyer will exercise all discounts provided by Vendor.

5. Buyer may set-off against amounts payable to Vendor hereunder all present and future indebtedness of Vendor to Buyer arising from this or any other transaction or occurrence.

6. Buyer shall not be responsible for any over-time charges unless Buyer provides its written authorization to Vendor.

7. Vendor agrees to withhold and pay to the proper governmental authorities social security taxes and unemployment compensation taxes in any and all jurisdictions, as may be required by law, and to hold Buyer harmless against any claims for non-payment or insufficient payment of same.

MATERIALS, TOOLS AND EQUIPMENT PAID FOR OR FURNISHED BY BUYER

Title to all tools, equipment, dies, jigs or other materials, if any, either paid or furnished by Buyer, as well as replacements therefore and attachments thereto, in connection with this contract, shall at all times remain with Buyer. Such property shall be maintained by Vendor in good and usable condition, reasonable wear and tear excepted, and Vendor shall be responsible for any loss or damage thereto and shall at all times keep the same insured for its full insurable value. Vendor shall not include any charge (including amortization or depreciation) for such property in the price of any article manufactured, or service rendered, by or with the use of said property. Such property shall be plainly marked or otherwise adequately identified by Vendor as the property of Buyer and shall be stored separate and apart from Vendor's property to the extent possible. Said property shall not be removed from Vendor's premises, nor used for any purpose other than that for which furnished or acquired, without the prior written approval of Buyer. Buyer shall have the right, at all reasonable times, to inspect such property and Vendor's records with respect thereto and to take possession of such property on demand with or without legal process and without liability. Vendor agrees to waive, and does hereby waive, any lien that it may have or may hereafter have on such property and agrees to execute one or more Uniform Commercial Code financing statements with respect to such property showing Buyer's title thereto whenever so requested by Buyer. Such property shall be deemed to be moveable chattels and shall not become annexed.

CONFIDENTIALITY

1. Any designs, specification, drawings, reprints, technical information data ("Confidential Information") furnished by Buyer to Vendor hereunder shall remain Buyer's property, shall be kept confidential by Vendor, shall be used only with respect to articles manufactured or services rendered for Buyer and shall be returned to Buyer at Buyer's request. Buyer may use the Confidential Information in articles manufactured and/or services rendered by others and may obtain such legal protection as may be available for the Confidential Information.

2. Vendor shall not, without Buyer's prior written consent, in any manner, divulge the fact that Vendor has a contract to furnish the articles and/or services to Buyer. Vendor shall be responsible for the safeguarding of all secret, confidential, or restricted matters that may be disclosed or developed in connection with the work under this contract.

GENERAL

1. All printed, stamped or written matter appearing on this Purchase Order shall be a part hereof.
2. The failure of Buyer to insist on the performance of any of the terms hereof, or to exercise any right or privilege hereunder, or Buyer's waiver of any breaches by Vendor hereof, shall not thereafter waive any such terms, conditions, rights or privileges that Buyer may have hereunder.
3. All rights and remedies granted to Buyer hereunder shall be cumulative and not exclusive and shall be in addition to and not in lieu of Buyer's rights arising under this contract or in law.
4. All of the terms and conditions hereof shall apply to additional quantities of articles and/or services ordered by Buyer except to the extent covered by a new contract.
5. This contract shall be governed by and construed in accordance with the laws of the State of Illinois.
6. Should any of the provisions of this contract be declared by any court of competent jurisdiction to be invalid, such decision shall not affect the validity of any remaining provisions hereof.
7. None of Vendor's rights or obligations under this Order may be assigned without Buyer's prior written consent. Any attempt by Vendor to make such assignment shall be null and void and any such assignment by operation of law shall give Buyer the option to terminate the Purchase Order without further liability.
8. Vendor shall not be responsible for delays or defaults in deliveries or performance, nor Buyer for failure to receive, if occasioned by wars, strikes, fires, an act of God or the public enemy, labor or transportation difficulties or other causes beyond the control of the affected party.
9. Buyer's complete Order number must appear on all invoices, shipping notices, packing slips, containers, bills of lading, packages, and correspondence pertaining thereto.
10. All notices, requests, demands and other communications which are required to be, or may be, given by either party under this contract shall be in writing and shall be deemed to have been given or made if delivered or mailed by first class mail, postage prepaid, or sent by prepaid telegram, to the other party at the address of such other party indicated on the face of this contract.
11. In the rendering of all services hereunder, Vendor shall be an independent contractor, and Vendor shall not have any right or authority to act for, incur, assume or create any obligation, responsibility or liability, express or implied, in the name of, or on behalf of, Buyer or to bind Buyer in any manner whatsoever.
12. Any waiver of terms and conditions of this Purchase Order by Buyer shall not prevent Buyer from thereafter insisting upon complete compliance with this Purchase Order's terms and conditions with respect to subsequent deliveries of merchandise or services, and shall not constitute a waiver of any other terms and conditions.
13. This purchase Order, and any documents referred to on the face hereof, constitute the entire agreement between the parties regarding the subject matter hereof and supersede all prior agreements, understandings and statements whether oral or written regarding such subject matter. No modification to, change in or departure from the provisions of this Purchase Order shall be valid or binding on Buyer, unless approved in writing by Buyer's authorized representative.

.Docket No. MPRSA-04-2019-7500

Exhibit RX 83

2013-2015 Port of Miami GLDD Violation Report w/Cross-Referenced Load Numbers

Date of Transit	Vessel	EPA Reported DQM Load Number	ADISS, Inc./GLDD Load Number
12/17/2013	Terrapin Island	112	Not in ADISS, Inc. Database
4/3/2014	GL701	27	151
6/18/2014	GL702	217	542
7/1/2014	GL701	207	645
8/12/2014	GL64	7	852
8/28/2014	GL701	267	984
9/2/2014	GL64	8	1012
9/28/2014	GL701	312	1334
10/4/2014	GL65	25	1441
10/4/2014	GL701	334	1439
10/16/2014	GL702	458	1538
10/17/2014	GL63	407	1549
10/21/2014	GL702	467	1562
10/22/2014	GL63	411	1580
10/22/2014	GL701	366	1570
10/22/2014	GL702	470	1569
11/10/2014	GL65	47	1696
11/12/2014	GL701	411	1725
12/5/2014	GL66	367	1875
12/17/2014	GL701	489	2025
12/21/2014	GL701	508	2098
1/2/2015	GL701	545	2262
1/3/2015	GL701	547	2274
1/8/2015	GL701	570	2366
3/7/2015	GL66	621	2926
3/7/2015	GL702	681	2922
3/8/2015	GL66	624	2936
4/26/2015	GL64	456	3475
5/16/2015	GL66	762	3570
5/21/2015	GL64	484	3636
6/7/2015	GL66	834	3919
6/10/2015	GL701	846	3968
6/15/2015	GL66	862	4042
6/16/2015	GL66	865	4055
6/17/2015	GL701	868	4060
6/20/2015	GL66	874	4100
6/21/2015	GL701	876	4101
3/13/2014	GL63	49	117
3/19/2014	GL63	52	124
3/30/2014	GL63	53	134
4/2/2014	GL63	55	140
4/2/2014	GL702	65	142

2013-2015 Port of Miami GLDD Violation Report w/Cross-Referenced Load Numbers

Date of Transit	Vessel	EPA Reported DQM Load Number	ADISS, Inc./GLDD Load Number
4/15/2014	GL702	88	194
4/18/2014	GL702	93	205
4/20/2014	GL701	60	209
4/23/2014	GL701	67	226
5/23/2014	GL63	57	290
5/27/2014	GL66	18	340
5/29/2014	GL66	19	344
6/5/2014	GL63	78	407
9/17/2014	GL701	282	1212
10/27/2014	GL65	29	1607
10/28/2014	GL65	30	1611
11/8/2014	GL65	41	1677
11/16/2014	GL701	429	1791
11/25/2014	GL66	356	1832
12/4/2014	GL501	3	1877
12/9/2014	GL501	5	1909
12/10/2014	GL502	1	1930
12/10/2014	GL702	502	1925
12/11/2014	GL502	2	1942
12/17/2014	GL501	7	2024
12/17/2014	GL66	415	2033
12/28/2014	GL702	552	2181
1/30/2015	GL66	536	2561
4/17/2015	GL502	105	3361
5/3/2015	GL66	757	3521
5/21/2015	GL65	69	3625
5/24/2015	GL602	16	3670
5/30/2015	GL602	24	3775
6/7/2015	GL702	898	3918
6/8/2015	GL702	901	3933
7/12/2015	GL702	948	4136
3/6/2014	GL63	31	80
3/7/2014	GL702	41	83
4/18/2014	GL702	93	205
8/28/2014	GL701	267	984
9/17/2014	GL701	282	1212
11/16/2014	GL701	429	1791
12/9/2014	GL501	5	1909
12/10/2014	GL702	502	1962
12/10/2014	GL502	1	1930
12/11/2014	GL502	2	1942
12/16/2014	GL501	6	1997

2013-2015 Port of Miami GLDD Violation Report w/Cross-Referenced Load Numbers

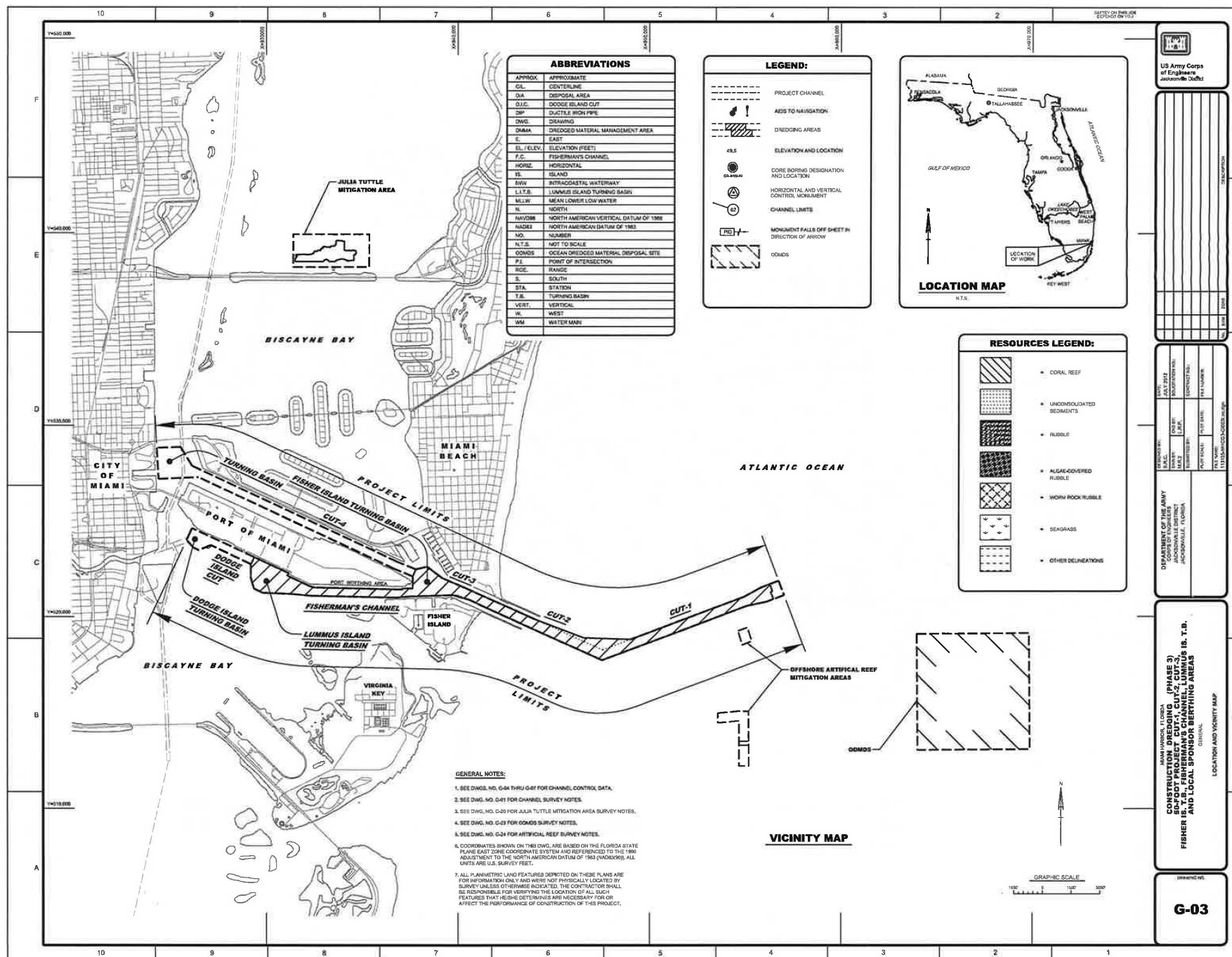
Date of Transit	Vessel	EPA Reported DQM Load Number	ADISS, Inc./GLDD Load Number
12/17/2014	GL66	415	2033
12/17/2014	GL501	7	2024
1/15/2014	GL701	2	1
5/15/2014	Terrapin Island	112	Not in ADISS, Inc. Database
6/17/2014	GL702	212	525
6/20/2014	GL701	191	566
9/28/2014	GL702	402	1333
10/16/2014	GL701	355	1530
10/16/2014	GL702	457	1528
11/13/2014	GL66	331	1743
2/14/2015	GL702	624	2693

Exhibit RX 84
Withheld as CBI

ADISS Webpage Link for Port of Miami Project
Trips at Issue in Case
www.adissdata.com

.Docket No. MPRSA-04-2019-7500

Exhibit RX 85



.Docket No. MPRSA-04-2019-7500

Exhibit RX 86
Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 87



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

SEP 26 2011

Colonel Alfred A. Pantano
District Commander
Jacksonville District
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Colonel Pantano:

Please find enclosed revisions to the Miami Ocean Dredged Material Disposal Site (ODMDS) Site Management and Monitoring Plan (SMMP). Section 102 of the Marine Protection, Research, and Sanctuaries Act (MPRSA) requires that SMMPs be developed by the Environmental Protection Agency (EPA) in conjunction with the U.S. Army Corps of Engineers (USACE) for each ODMDS designated by EPA. This SMMP was originally developed in 1995 and reviewed and revised in 2008 pursuant to the requirements of the MPRSA. The 2008 SMMP recommended that the capacity and behavior of disposed dredged material, with reference to the disposal release zone and ODMDS boundaries, be evaluated prior to approval of disposal of dredged material from the Miami Harbor Phase III deepening project. Based on the modeling results funded by the USACE and completed in March, 2010, EPA has determined that the SMMP warrants revision. It has been determined that the disposal release zone for future projects requires adjustment to contain the spatial distribution of the disposed dredged material on the seafloor within the ODMDS boundaries. The disposal release zone has been moved north 804 feet. The coordinates of the revised release zone are provided in the attached documents. The enclosed revisions supersede the 2008 SMMP.

In revising the SMMPs, EPA and the USACE followed the procedures outlined in the 2007 Memorandum of Understanding (MOU) between USACE South Atlantic Division and EPA Region 4 on Ocean Dredged Material Disposal. EPA coordinated the proposed revisions with the National Marine Fisheries Service and the State of Florida. In addition, in accordance with the MPRSA and the MOU, this document underwent a 30-day public review through publication on May 4, 2011 of a Joint Public Notice of the proposed changes.

The management and monitoring requirements of the SMMPs should be included as permit conditions for all MPRSA Section 103 permits and should be incorporated in the contract language for all federal projects for ocean disposal in the ODMDSs. Templates for permit special conditions and contract specifications implementing these requirements are included with the SMMP revisions as appendices. If you have any questions, please contact Mr. Chris McArthur at (404) 562-9391.

Sincerely,

A handwritten signature in dark ink, appearing to read "GK Fleming", written over a horizontal line.

Gwendolyn Keyes Fleming
Regional Administrator

Enclosures

REVISIONS TO THE MIAMI OCEAN DREDGED
MATERIAL DISPOSAL SITE (ODMDS)
SITE MANAGEMENT AND MONITORING PLAN

September, 2011

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2.8 Disposal Location. Based on the results of monitoring surveys (see section 3.4) and computer modeling simulations (Taylor, 2010), the disposal release zone has been modified from that specified in the 1995 and 2008 SMMPs. This disposal release zone is approximately 2.4 times larger and 481 feet south of the 1995 disposal release zone. The disposal release zone measures 985 feet by 3,895 feet. The disposal release zone coordinates are as follows:

Table 2. Disposal Release Zone

	Geographic (NAD83)		State Plane (FL East 0901 Ft NAD83)	
Center	25°44.943'N	80°03.354'W	515,593 N	966,921 E
NW Corner	25°45.023'N	80°03.709'W	516,064 N	964,969 E
NE Corner	25°45.023'N	80°02.999'W	516,092 N	968,865 E
SW Corner	25°44.863'N	80°03.709'W	515,095 N	964,976 E
SE Corner	25°44.863'N	80°02.999'W	515,123 N	968,872 E

Disposal shall be initiated within the disposal release zone and shall be completed (doors closed) prior to departing the ODMDS.

5.0 REFERENCES

Taylor Engineering Inc. 2010. *Evaluation of Dredged Material Behavior at the Port of Miami Ocean Dredged Material Disposal Site*, for ANAMAR Environmental Consulting, Inc. March, 2010. Jacksonville, FL.

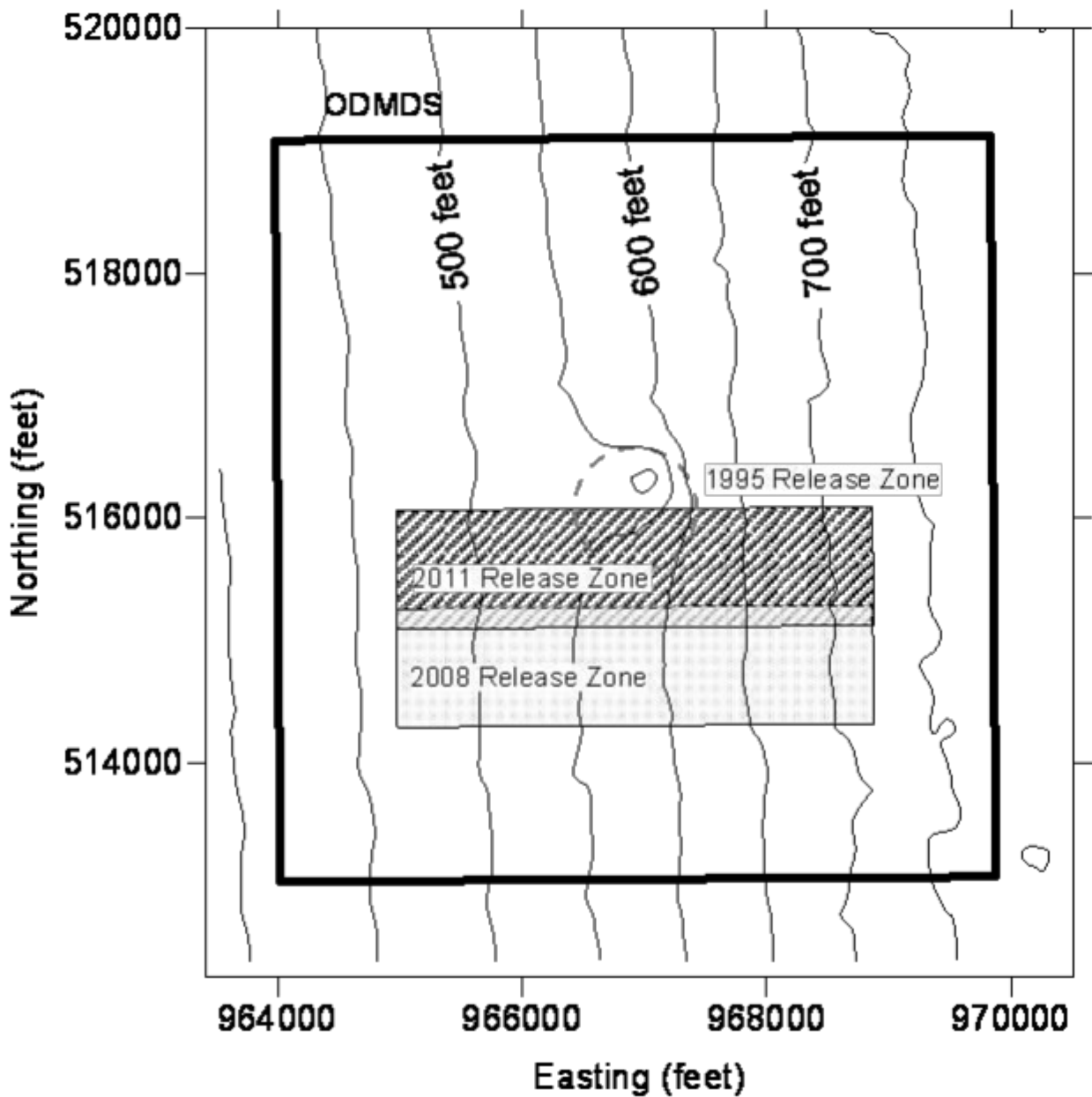


Figure 1: Miami ODMDS Disposal Release Zones (coordinates are in Florida State Plan NAD83 feet)

APPENDIX B

TEMPLATE

GENERIC SPECIAL CONDITIONS

FOR MPRSA SECTION 103 PERMITS

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GENERIC SPECIAL CONDITIONS
FOR MPRSA SECTION 103 PERMITS

I. DISPOSAL OPERATIONS

A. For this permit, the term disposal operations shall mean: navigation of any vessel used in disposal of operations, transportation of dredged material from the dredging site to the Miami ODMDS, proper disposal of dredged material at the disposal area within the Miami ODMDS, and transportation of the hopper dredge or disposal barge or scow back to the dredging site.

B. The Miami ODMDS is defined as the rectangle with center coordinates of 25°45.00'N latitude and 80°03.37'W longitude (NAD 27) or state plane coordinates 516,078 N and 966,926 E (NAD83). The site coordinates are as follows:

	Geographic (NAD27)		Geographic (NAD83)		State Plane (FL East 0901 Ft NAD83)	
Center	25°45.00'N	80°03.37'W	25°45.02'N	80°03.35'W	516,078 N	966,926 E
NW Corner	25°45.50'N	80°03.90'W	25°45.52'N	80°03.89'W	519,086 N	963,978 E
NE Corner	25°45.50'N	80°02.83'W	25°45.52'N	80°02.82'W	519,128 N	969,829 E
SW Corner	25°44.50'N	80°03.90'W	25°44.52'N	80°03.89'W	513,028 N	964,021 E
SE Corner	25°44.50'N	80°02.83'W	25°44.52'N	80°02.82'W	513,070 N	969,874 E

C. No more than [NUMBER] cubic yards of dredged material excavated at the location defined in [REFERENCE LOCATION IN PERMIT] are authorized for disposal at the Miami ODMDS.

D. The permittee shall use an electronic positioning system to navigate to and from the Miami ODMDS. For this section of the permit, the electronic positioning system is defined as: a differential global positioning system or a microwave line of site system. Use of LORAN-C alone is not an acceptable electronic positioning system for disposal operations at the Miami ODMDS. If the electronic positioning system fails or navigation problems are detected, all disposal operations shall cease until the failure or navigation problems are corrected.

E. The permittee shall certify the accuracy of the electronic positioning system proposed for use during disposal operations at the Miami ODMDS. The certification shall be accomplished by direct comparison of the electronic positioning system's accuracy with a known fixed point.

F. The permittee shall not allow any water or dredged material placed in a hopper dredge or disposal barge or scow to flow over the sides or leak from such vessels during transportation to the Miami ODMDS.

G. A disposal operations inspector and/or captain of any tug boat, hopper dredge or other vessel used to transport dredged material to the Miami ODMDS shall insure compliance

with disposal operation conditions defined in this permit.

1. If the disposal operations inspector or the captain detects a violation, he shall report the violation to the permittee immediately.
2. The permittee shall contact the U.S. Army Corps of Engineers, Jacksonville District's Regulatory Branch [TELEPHONE NUMBER] and EPA Region 4 at (404) 562-9391 to report the violation within twenty-four (24) hours after the violation occurs. A complete written explanation of any permit violation shall be included in the disposal summary report.

H. When dredged material is disposed, no portion of the hopper dredge or disposal barge or scow shall be outside of the boundaries of the Miami ODMDS as defined in Special Condition B. Additionally, disposal shall be initiated within the disposal release zone defined by the following coordinates:

	Geographic (NAD83)		State Plane (FL East 0901 Ft NAD83)	
Center	25°44.943'N	80°03.354'W	515,593 N	966,921 E
NW Corner	25°45.023'N	80°03.709'W	516,064 N	964,969 E
NE Corner	25°45.023'N	80°02.999'W	516,092 N	968,865 E
SW Corner	25°44.863'N	80°03.709'W	515,095 N	964,976 E
SE Corner	25°44.863'N	80°02.999'W	515,123 N	968,872 E

I. During transit to and from the Miami ODMDS, the hopper dredge or disposal barge or scow shall remain within the navigation channel until east of the buoy G"1". The hopper dredge or disposal barge or scow shall not transit the Particularly Sensitive Sea Area during transit to or from the ODMDS.

J. The permittee shall use an electronic tracking system (ETS) that will continuously track the horizontal location and draft condition of the disposal vessel (hopper dredge or disposal barge or scow) to and from the Miami ODMDS. Data shall be collected at least every 500 feet during travel to and from the ODMDS and every minute or every 200 feet of travel, whichever is smaller, while approaching within 1,000 feet and within the ODMDS. The permittee shall use Florida State Plane or latitude and longitude coordinates (North American Datum 1983). State Plane coordinates shall be reported to the nearest foot and latitude and longitude coordinates shall be reported as decimal degrees out to 6 decimals. Westerly longitudes are to be reported as negative. Draft readings shall be recorded in feet out to 2 decimals.

K. The permittee shall record electronically for each load the following information:

- a. Load Number
- b. Disposal Vessel or Scow Name
- c. Tow Vessel Name (if scow used)
- d. Captain of Disposal or Tow Vessel
- e. Estimated volume of Load

- f. Description of Material Disposed
- g. Source of Dredged Material
- h. Date, Time and Location at Start at Initiation and Completion of Disposal Event
- i. The ETS data required by Special Condition I.

L. The permittee shall conduct a bathymetric survey of the Miami ODMDS within 3 months prior to project disposal and within 60 days following project completion.

1. The number and length of the survey transects shall be sufficient to encompass the Miami ODMDS and a 500 foot wide area around the site. The transects shall be spaced at 500-foot intervals or less.

2. Vertical accuracy of the survey shall be ± 0.5 feet. Horizontal location of the survey lines and depth sounding points will be determined by an automated positioning system utilizing either microwave line of site system or differential global positioning system. The vertical datum shall be mean lower low water (m.l.l.w) and the horizontal datum shall use Florida State Plane or latitude and longitude coordinates (North American Datum 1983). State Plane coordinates shall be reported to the nearest 0.10 foot and latitude and longitude coordinates shall be reported as decimal degrees to 6 decimal points.

L. Enclosed is the Regional Biological Opinion (RBO) dated [INSERT DATE], for swimming sea turtles, whales, and sturgeon. The RBO contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with “incidental take” that is also specified in the RBO. Your authorization under the Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with the incidental take of the attached RBO, which terms and conditions are incorporated by reference in the permit. Failure to comply with the terms and conditions associated with the incidental take of the RBO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. However, depending on the affected species NMFS is the appropriate authority to determine compliance with the terms and conditions of its RBO and with the Endangered Species Act (ESA). For further clarification on this point, you should contact the appropriate agency. Should they determine that the conditions of the RBO have been violated; normally they will enforce the violation of the ESA, or refer the matter to the Department of Justice.

II. REPORTING REQUIREMENTS

A. All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following addresses: U.S. Army Corps of Engineers (Corps), Regulatory Division, Enforcement Section, P.O. Box 4970, Jacksonville, Florida 32232-0019 and U. S. Environmental Protection Agency (EPA) Region 4's Wetlands, Coastal and Oceans Branch, 61 Forsyth Street, Atlanta, GA 30303. The Permittee shall reference this permit number, [INSERT PERMIT NUMBER], on all submittals.

B. At least 15 days before initiating any dredging operations authorized by this permit, the Permittee shall provide to the Corps and EPA a written notification of the date of commencement of work authorized by this permit.

C. Electronic data required by Special Conditions I.J and I.K shall be provided to EPA Region 4 on a daily basis. Data shall be submitted as an eXtensible Markup Language (XML) document via Internet e-mail to DisposalData.R4@epa.gov. XML data file format specifications are available from EPA Region 4.

D. The permittee shall send one (1) copy of the disposal summary report to the Jacksonville District's Regulatory Branch and one (1) copy of the disposal summary report to EPA Region 4 documenting compliance with all general and special conditions defined in this permit. The disposal summary report shall be sent within 90 days after completion of the disposal operations authorized by this permit. The disposal summary report shall include the following information:

1. The report shall indicate whether all general and special permit conditions were met. Any violations of the permit shall be explained in detail.

2. The disposal summary report shall include the following information: dredging project title; dates of disposal; permit number and expiration date; name of contractor(s) conducting the work, name and type of vessel(s) disposing material in the ODMDS; disposal timeframes for each vessel; volume disposed at the ODMDS (as paid *in situ* volume, total paid and un paid *in situ* volume, and gross volume reported by dredging contractor), number of loads to ODMDS, type of material disposed at the ODMDS; identification of any misplaced material (outside disposal zone or the ODMDS boundaries); dates of pre and post disposal bathymetric surveys of the ODMDS and a narrative discussing any violation(s) of the 103 permit. The disposal summary report should be accompanied by the bathymetry survey results (plot and X,Y,Z ASCII data file).

APPENDIX C

TYPICAL CONTRACT LANGUAGE FOR IMPEMENTING THE MIAMI ODMDS SMMP REQUIREMENTS

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TYPICAL CONTRACT LANGUAGE FOR IMPEMENTING SMMP REQUIREMENTS

3.3 DISPOSAL OF DREDGED MATERIAL

3.3.1 General

All material dredged shall be transported to and deposited in the disposal area(s) designated on the drawings. The approximate maximum and average distance to which the material will have to be transported are as follows:

Disposal Area	Maximum Distance Statute Miles	Average Distance Statute Miles
---------------	-----------------------------------	-----------------------------------

Miami ODMDS

[INSERT DISPOSAL AREA 2]	[XX miles]	[XX miles]
-----------------------------	------------	------------

[IF MATERIAL FROM DIFFERENT PROJECT AREAS GO TO DIFFERENT DISPOSAL AREAS, IT COULD BE SPECIFIED HERE]

3.3.2 Ocean Disposal Notification

- a. The contractor shall notify EPA Region 4 's Wetlands, Coastal and NonPoint Source Branch (61 Forsyth Street, Atlanta, GA 30303) at least 15 calendar days and the local Coast Guard Captain of the Port at least 5 calendar days prior to the first ocean disposal. The notification will be by certified mail with a copy to the Contracting Officer. The following information shall be included in the notification:
 - (1) Project designation; Corps of Engineers' Contracting Officer's name and contract number; and, the Contractor's name, address, and telephone number.
 - (2) Port of departure.
 - (3) Location of ocean disposal area (and disposal zone if required).
 - (4) Schedule for ocean disposal, giving date and time proposed for first ocean disposal.

3.3.3 Ocean Dredged Material Disposal Sites (ODMDS)

The material excavated shall be transported to and deposited in the Miami ODMDS shown on the drawings. When dredged material is disposed, no portion of the hopper dredge or disposal barge or scow shall be outside of the boundaries of the Miami ODMDS as shown on the drawings. Additionally, disposal shall be initiated within the disposal release zone defined by the following coordinates:

	Geographic (NAD83)		State Plane (FL East 0901 Ft NAD83)	
Center	25°44.943'N	80°03.354'W	515,593 N	966,921 E
NW Corner	25°45.023'N	80°03.709'W	516,064 N	964,969 E
NE Corner	25°45.023'N	80°02.999'W	516,092 N	968,865 E
SW Corner	25°44.863'N	80°03.709'W	515,095 N	964,976 E
SE Corner	25°44.863'N	80°02.999'W	515,123 N	968,872 E

During transit to and from the Miami ODMDS, the hopper dredge or disposal barge or scow shall remain within the navigation channel until east of the buoy G"1". The hopper dredge or disposal

barge or scow shall not transit the Particularly Sensitive Sea Area during transit to or from the ODMDS.

3.3.4 Logs

The Contractor shall keep a log for each load placed in the Miami ODMDS. The log entry for each load shall include:

- j. Load Number
- k. Disposal Vessel or Scow Name
- l. Tow Vessel Name (if scow used)
- m. Captain of Disposal or Tow Vessel
- n. Estimated volume of Load
- o. Description of Material Disposed
- p. Source of Dredged Material
- q. Date, Time and Location (coordinates) at Start of Initiation and Completion of Disposal Event

At the completion of dredging and at any time upon request, the log(s) shall be submitted in paper and electronic formats to the Contracting Officer for forwarding to the appropriate agencies.

3.3.5 Overflow, Spills and Leaks

Water and dredged materials shall not be permitted to overflow or spill out of barges, hopper dredges, or dump scows during transport to the disposal site(s). Failure to repair leaks or change the method of operation which is resulting in overflow or spillage will result in suspension of dredging operations and require prompt repair or change of operation to prevent overflow or spillage as a prerequisite to the resumption of dredging.

3.3.6 Electronic Tracking System (ETS) for Ocean Disposal Vessels

The Contractor shall furnish an ETS for surveillance of the movement and disposition of dredged material during dredging and ocean disposal. This ETS shall be established, operated and maintained by the Contractor to continuously track in real-time the horizontal location and draft condition of the disposal vessel (hopper dredge or disposal barge or scow) for the entire dredging cycle, including dredging area and disposal area. The ETS shall be capable of displaying and recording in real-time the disposal vessel's draft and location.

[USE LANGUAGE BELOW FOR NON DQM PROJECTS]

3.3.6.1 ETS Standards

The Contractor shall provide automated (computer) system and components to perform in accordance with COE EM 1110-1-2909. A copy of the EM can be downloaded from the following web site: <http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>. Horizontal location shall have an accuracy equal to or better than a standard DGPS system, equal to or better than plus/minus 10 feet (horizontal repeatability). Vertical (draft) data shall have an accuracy of plus/minus 0.5 foot. Horizontal location and vertical data shall be collected in sets and each data set shall be referenced in real-time to date and local time (to nearest minute), and shall be referenced to the same state plane coordinate system used for the survey(s) shown in the contract plans. The ETS shall be calibrated, as required, in the presence of the Contracting Officer at the work location before disposal operations have started, and at 30-day intervals while work is in progress. The Contracting Officer shall have access to the ETS in order to observe its operation. Disposal operations will not commence until the ETS to be used by the Contractor is certified by the Contracting Officer to be operational and within acceptable accuracy. It is the Contractor's

responsibility to select a system that will operate properly at the work location. The complete system shall be subject to the Contracting Officer's approval.

3.3.6.2 ETS Data Requirements and Submissions

- a. The ETS for each disposal vessel shall be in operation for all dredging and disposal activities and shall record the full round trip for each loading and disposal cycle. (NOTE: A dredging and disposal cycle constitutes the time from commencement of dredging to complete discharge of the material.) The Contracting Officer shall be notified immediately in the event of ETS failure and all dredging operations for the vessel shall cease until the ETS is fully operational. Any delays resulting from ETS failure shall be at the Contractor's expense.
- b. Data shall be collected, during the dredging and disposal cycle, every 500 feet (at least) during travel to the disposal area, and every minute or every 200 feet, whichever is smaller, while approaching within 1,000 feet and within the disposal area.
- c. Plot Reporting (2 types):
 - a. Tracking Plot - For each disposal event, data collected while the disposal vessel is in the vicinity of the disposal area shall be plotted in chart form, in 200-foot intervals, to show the track and draft of the disposal vessel approaching and traversing the disposal area. The plot shall identify the exact position at which the dump commenced. A sample Track and Draft Plot Diagram is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.
 - b. Scatter Plot - Following completion of all disposal events, a single and separate plot will be prepared to show the exact disposal locations of all dumps. Every plotted location shall coincide with the beginning of the respective dump. Each dump shall be labeled with the corresponding Trip Number and shall be at a small but readable scale. A sample Scatter Plot Diagram is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.
 - c. Summary Table – A spreadsheet which contains all of the information in the log(s) [Section 3.3.4] above shall be prepared and shall correspond to the exact dump locations represented on the Scatter Plot. A sample Summary Table spreadsheet is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.
- d. ETS data and log data required by Section 3.3.4 shall be provided to EPA Region 4 on a daily or more frequent basis. Data shall be submitted to EPA Region 4 as an eXtensible Markup Language (XML) document via Internet e-mail to DisposalData.R4@epa.gov. XML data file format specifications are available from EPA Region 4. All digital ETS data shall be furnished to the Contracting Officer within 24 hours of collection. The digital plot files should be in an easily readable format such as Adobe Acrobat PDF file, Microstation DGN file, JPEG, BMP, TIFF, or similar. The hard copy of the ETS data and tracking plots shall be both maintained onboard the vessel and submitted to the Contracting Officer on a weekly basis.

[FOR DQM PROJECTS]

See: <http://dqm.usace.army.mil/Specifications/Index.aspx>

For scows, the monitoring profile, TDS profile or Ullage profile shall be used.

3.3.6.3 Misplaced Materials

Materials deposited outside of the disposal zone specified in 3.3.3 will be classified as misplaced material and will result in a suspension of dredging operations. Redredging of such materials will be required as a prerequisite to the resumption of dredging unless the Contracting Officer, at his discretion, determines that redredging of such material is not practical. If redredging of such material is not required then the quantity of such misplaced material shall be deducted from the Contractor's pay quantity. If the quantity for each misplaced load to be deducted cannot initially be agreed to by both the Contractor and Contracting Officer, then an average hopper/scow load quantity for the entire contract will be used in the determination. Misplaced loads may also be subject to penalty under the Marine, Protection, Research and Sanctuaries Act. Materials deposited above the maximum indicated elevation or outside of the disposal area template shown will require the redredging or removal of such materials at the Contractor's expense. In addition, the Contractor must notify the Contracting Officer and the Environmental Protection Agency Region 4 's Wetlands, Coastal and Oceans Branch (61 Forsyth Street, Atlanta, GA 30303) within 24 hours of a misplaced dump or any other violation of the Site Management and Monitoring Plan for the Miami ODMDs. Corrective actions must be implemented by the next dump and the Contracting Officer must be informed of actions taken.

.Docket No. MPRSA-04-2019-7500

Exhibit RX 88



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

DEC 29 2011

Eric Summa, Chief
Environmental Branch
Planning Division
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Summa:

This letter is in regard to your August 15, 2011, request for concurrence on the suitability for ocean disposal of dredged material from new work and maintenance dredging at Miami Harbor pursuant to Section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA). The new work portion of the project consists of the Miami Harbor Phase III Construction Project including:

1. Widening the seaward portion of Cut 1 from 500 to 800 feet, and deepening Cut 1 and Cut 2 from a project depth of 44 to 52 feet MLLW plus 1 foot of paid allowable overdepth.
2. Adding a turn widener at the southern intersection of Cut 3 with Fisherman's Channel and deepening to a project depth of 50 feet MLLW plus 1 foot of paid allowable overdepth.
3. Increasing the radius of the Fisher Island Turning Basin from 1200 to 1500 feet and deepen from 42 to 50 feet MLLW plus 1 foot of paid allowable overdepth.
4. Widening the Fisherman's Channel by 100 feet to the south and deepening from 42 to 50 feet MLLW plus 1 foot of paid allowable overdepth.
5. Deepening the Lummus Island Turning Basin (LITB) from 42 to 50 feet MLLW plus 1 foot of paid allowable overdepth.

New work disposal volumes are not expected to exceed 5.02 million cubic yards as measured *in situ*. Maintenance dredging includes material in the Main Turning Basin, the Main Channel (Cut 4), and the Main Channel berthing areas to a currently authorized depth of -36 feet MLLW plus 1 foot of paid allowable overdepth. It also includes material from the Dodge Island Cut and the Dodge Island Turning Basin to an authorized depth of 30 to 34 feet MLLW with 2 feet of paid allowable overdepth dredging. Maintenance volumes are not expected to exceed 160,000 cubic yards.

Your August 15 letter included a MPRSA Section 103 Evaluation for this project dated August 2011 and a draft testing report, *Sediment Sampling and Analysis for Miami Harbor New Work and Maintenance Dredging*. Additional water quality modeling information was received on August 31, 2011, via email. In a September 13, 2011, letter we requested additional information pursuant to Section 103(c) of the MPRSA. A response to the request was received in a letter dated October 5, 2011. A revised MPRSA Section 103 Evaluation was received via email on November 2, 2011, that included draft contract specifications. Additional information addressing laboratory quality control issues and water quality modeling methods was also received on November 8, 10 and 14, 2011, via email. A final testing report was received on November 17, 2011.

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

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We have completed our review of the testing report, 103 Evaluation and additional supporting documentation and have completed an independent evaluation of the dredged material and conditionally concur with your determination that the proposed dumping at the Miami Ocean Dredged Material Disposal Sites (ODMDS) will comply with the criteria set forth in 40 Code of Federal Regulations (CFR) Part 227. A brief discussion of the compliance of the material with the criteria is provided below:

1. Exclusionary Criteria - 40 CFR § 227.13(b)

If material meets one of the exclusionary criteria in 40 CFR 227.13(b), additional testing is not required to document compliance with the Criteria. Material in Cuts 1, 2 and 3 were sampled in 2009. In all three cuts, unconsolidated material was characterized according to the Unified Soil Classification System as silty sand, sand with silt or sand. Consolidated material were characterized as limestone or sandstone. Therefore, the material is composed predominately of sand, gravel, rock with particle sizes greater than silt. National Oceanic Atmospheric Administration (NOAA) measured currents in 2008 and found them to average 0.46 meters/second in Cut 2 and 0.53 meters/second in Cut 3. Material in Cut 1 is offshore where waves are present. Therefore, this material is in an area of high current and wave energy. Consequently, dredged material from Cuts 1, 2 and 3 meet the criteria set forth in 40 CFR 227.13(b)(1). This material is therefore environmentally acceptable for ocean disposal without further testing.

2. Water Column and Suspended Phase Determinations - 40 CFR § 227.6(c)(1&2)

Analysis of the sediment water elutriate indicated that only arsenic and selenium exceeded the Federal Water Quality Criteria (WQC) prior to any dilution. Minimal dilution (less than 1:1) is required to meet the WQC for arsenic and selenium. Modeling was conducted for a 13,500 cubic yard (cy) hopper dredge and a 8,900 cy barge fed by a cutterhead dredge and by a mechanical dredge. Dredged material characteristics were adjusted based on the dredging technique. The minimum dilution achieved after 4 hours was 906 to 1. The minimum dilution achieved at the disposal site boundaries was 285 to 1. Tributyl tin (TBT) was also found to be a contaminant of concern with applicable WQC. The contracted laboratory chose to use an experimental unapproved method for analysis. Additional analysis was subsequently conducted utilizing approved methods, but the laboratory could not document that the samples had been properly preserved. Therefore, without the additional information as described at the end of this letter, compliance with 40 CFR 227.6(c)(1) cannot be documented for TBT. All other contaminants of concern were found to be in compliance with 40 CFR 227.6(c)(1).

Bioassays on three appropriate sensitive marine organisms were conducted. There was a statistically significant difference between the control seawater and the elutriate samples for one or more of the three organisms in one or more of the dredging units sampled. Water column effects at the Miami ODMDS were modeled for the various dredging units and potential dredging technologies. The modeling has shown that there is sufficient dilution to meet the Limiting Permissible Concentration (LPC) for all dredging units and all dredging technologies at the Miami ODMDS. Accordingly, it is concluded that the suspended phase of the material is in compliance with 40 CFR 227.6(c)(2).

3. Benthic Determinations - 40 CFR § 227.6(c)(3) and 227.27(b)

Solid phase toxicity evaluation: Ten-day toxicity tests were conducted on the project sediments using the amphipod (*Ampelisca abdida*) and the worm (*Nereis arenaceodentata*). These organisms are good predictors of adverse effects to benthic marine communities. The amphipod toxicity was within 20 percent of the reference and the worm toxicities were within 10 percent of the reference for all samples. The greatest amphipod toxicity was within 4 percent of the reference, and the greatest toxicity in the worms was within 2 percent of the reference. These results show that the solid phase of the material is not likely to cause significant mortality and meets the solid phase toxicity criteria of §227.6(c)(3) and 227.27(b).

Solid phase bioaccumulation evaluation: Twenty-eight day bioaccumulation tests were conducted using two appropriate sensitive benthic marine organisms, *Nereis virens* and *Macoma nasuta*. Tissue concentrations were compared to Food and Drug Administration (FDA) Action Levels. None of the contaminants, for which there are FDA Action Levels, exceed such thresholds in the tissues of organisms exposed to project sediments. Concentrations of contaminants in tissues of organisms exposed to project sediments were then compared to concentrations in tissues of organisms exposed to a reference sediment. The following analytes were found to be statistically higher in some samples than the reference: lead, fluoranthene, benzo(b)fluoranthene, HMW PAHs, total PAHs, total PCBs and TBT. When the bioaccumulation of contaminants in tissues exposed to dredged material exceeds that exposed to reference sediments, general risk-based evaluations must be conducted to evaluate compliance with 227.13(c)(3). The EPA conducted such an evaluation and determined that there is no potential for undesirable effects due to bioaccumulation as a result of the presence of individual chemicals or of the solid phase of the dredged material as a whole. Accordingly, it is concluded that the solid phase of the material proposed for disposal meets the ocean disposal criteria at 40 CFR §227.6(c)(3) and 227.27(b).

Pursuant to MPRSA Section 104(a)(4), ocean disposal permits must be conditioned to assure consistency with approved Site Management and Monitoring Plans (SMMP). In the case of Civil Works Projects, contract specifications must be consistent with the requirements of the SMMP. The Miami ODMDS SMMP was reviewed and revised in September 2008, and further revised in September 2011. Draft contract specifications related to ocean disposal have been submitted. We expect these specifications to be included in the final project specification and any subsequent changes coordinated with the EPA. One requirement of particular concern is the requirement for daily submission of disposal monitoring data. This requirement was included in the SMMP due to concern over protection of the valuable coral reefs between the dredging site and the ODMDS and problems with leaking scows during the Phase II Deepening Project. Pursuant to the joint EPA and USACE 1999 Memorandum to the Field implementing Executive Order 13089 on Coral Reef Protection, any conditions necessary to protect coral reefs from the effects of ocean dumping should be clearly specified. The daily data submittal requirements were determined to be the best way that both agencies can insure that this valuable resource is protected. We expect dredged material ocean disposal operations to cease should there be any delay in submittal of the required data.

This letter of concurrence is conditional upon implementation through contract conditions of the requirements of the Miami ODMDs SMMP as described above. Furthermore, it is conditional upon the USACE documenting compliance with 40 CFR 227.6(c)(1) for TBT prior to project initiation. Documentation should be through an independent verification and validation of the experimental method used and results obtained or through re-sampling and re-analysis of project sediments or other methods with prior approval by the EPA. This condition does not apply to Cuts 1, 2 and 3 which meet the exclusionary criteria.

This determination of compliance is valid for a period of three years from the date of this letter. Considering the quality control and quality assurance issues outlined in previous correspondence, further testing will likely be required after this period. If you have any questions regarding this determination or management of the Miami ODMDs, please contact Mr. Chris McArthur at (404) 562-9391.

Sincerely,

A handwritten signature in cursive script that reads "Daniel F. O'Hare for". The signature is written in dark ink and is positioned above the printed name of the signatory.

James D. Giattina
Director
Water Protection Division

.Docket No. MPRSA-04-2019-7500

Exhibit RX 89



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUN 1 1 2012

Mr. Eric Summa
Chief
Environmental Branch
Planning Division
Jacksonville District
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Summa:

This letter is in regard to your April 10, 2012, request for concurrence on the suitability for ocean disposal of dredged material from new work and maintenance dredging at Miami Harbor pursuant to Section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA). The U.S. Environmental Protection Agency provided a conditional concurrence on December 29, 2011, for this project. This conditional concurrence was based upon the development of contract conditions implementing the requirements of the Miami Ocean Dredged Material Disposal Site (ODMDS) Site Management and Monitoring Plan (SMMP). Additionally, the conditional concurrence required documentation, by the U.S. Army Corps of Engineers, to address that Federal Water Quality Criteria will be met for tributyl tin (TBT) four hours after disposal and at the ODMDS boundaries, including a validation of the TBT analytical technique.

Your April 10, 2012, letter included the results of a data validation effort for the TBT analysis and a discussion of the mechanisms that will be in place to insure that the conditions of the SMMP will be met. Furthermore, draft contract specifications were submitted via email on May 18 and May 21, 2012. Based on these supplementary submittals, the EPA concurs that the proposed dredged material is suitable for ocean disposal, will comply with the criteria set forth in 40 C.F.R. Part 227 and that disposal will occur consistent with the requirements of the Miami ODMDS SMMP.

Pursuant to MPRSA Section 104(a)(4), ocean disposal permits must be conditioned to assure consistency with approved SMMPs. It is our understanding that a permit will be issued for dredging and ocean disposal of dredged material from the Port of Miami berthing areas covered by this evaluation. We request that draft permit conditions be coordinated with this office to insure consistency with the SMMP. If you have any questions regarding this determination or management of the Miami ODMDSs, please contact Mr. Chris McArthur at (404) 562-9391.

Sincerely,

A handwritten signature in black ink, appearing to read "James D. Giattina, for".

James D. Giattina
Director

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

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.Docket No. MPRSA-04-2019-7500

Exhibit RX 90
Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 91

From: Bowell, Shealy C SAJ <Shealy.C.Bowell@usace.army.mil>
Sent: Monday, December 02, 2013 9:19 PM
To: Pomfret, Chris; Loewe, Michelle L; Zimmerman, Kevin
Cc: craig.kruempel@tetrattech.com; Bowell, Shealy C SAJ; Rivera, Nestor A SAJ; Jordan-Sellers, Terri SAJ; Dearing, Christopher; Hungerford, Michael; Reichold, Laurel P SAJ
Subject: FW: W912EP-13-C-0015 Miami Harbor Deepening Phase III Excessive Draft Change (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

All -

Please see email below that USACE (Terri) just sent to Chris McArthur from EPA in regards to his inquiry from this morning. We can discuss further tomorrow when we have a chance.

Thanks.

Shealy C. Bowell
South Florida Area Office
U.S. Army Corps of Engineers
561-308-2116

-----Original Message-----

From: Jordan-Sellers, Terri SAJ
Sent: Monday, December 02, 2013 4:06 PM
To: 'mcarthur.christopher@epa.gov'; Lee-Duffell, Rebecca SAJ; Reichold, Laurel P SAJ; Bowell, Shealy C SAJ; Clouser, Megan L SAJ; Rivera, Nestor A SAJ; 'Bhope@miamidade.gov'; 'Craig.Kruempel@TetraTech.com'
Cc: Conger, Stephen R SAJ; Bearce, John W SAJ
Subject: Fw: W912EP-13-C-0015 Miami Harbor Deepening Phase III Excessive Draft Change (UNCLASSIFIED)

Chris - please see below. Let me know if you have any questions.
Sent from my blackberry.

----- Original Message -----

From: Reichold, Laurel P SAJ
Sent: Monday, December 02, 2013 04:03 PM
To: Bearce, John W SAJ; Jordan-Sellers, Terri SAJ; Jackson, Gavin W SAJ; Conger, Stephen R SAJ; Bowell, Shealy C SAJ
Cc: Lee-Duffell, Rebecca SAJ; Fletcher, Al L SAJ; Rivera, Nestor A SAJ
Subject: RE: W912EP-13-C-0015 Miami Harbor Deepening Phase III Excessive Draft Change (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

We've reviewed the information, the "discharge" is taking place within the dredging area ("work zone"), discharge within the work area is authorized because it is a function of the dredge operation. Transit to the ODMDs does not begin until after the dredge leaves the eastern limit of the dredging area (~ at buoy G-1), and thus the contractor is in compliance with the contract specifications and the permit.

From: McArthur, Chris [mailto:mcarthur.christopher@epa.gov]
Sent: Monday, December 02, 2013 12:00 PM
To: Bearce, John W SAI; Jordan-Sellers, Terri SAI; Jackson, Gavin W SAI
Cc: Verhagen, Joelle SAI; Lee-Duffell, Rebecca SAI; Howell, Shealy C SAI; Rivera, Nestor A SAI; Fletcher, Al L SAI; Reichold, Laurel P SAI; Derby, Jennifer
Subject: [EXTERNAL] RE: W912EP-13-C-0015 Miami Harbor Deepening Phase III Excessive Draft Change (UNCLASSIFIED)

All,

This normal cycle does not appear consistent with the contract specifications (as provided to EPA) or the permit that was issued to the Port for their dredging.

Contract condition 1.4.2 Transportation of Material

Water and dredge material shall not be permitted to overflow or spill out of barges or hopper dredges during transport to the disposal site.

Contract condition 3.4.3 Spillage

Water and excavated material shall not be permitted to overflow or spill out of barges, dump scows, or hopper dredges while in route to the ODMS Release Zone. Failure to repair leaks or change the method of operation which is resulting in the overflow or spillage will result in suspension of dredging operations and require prompt repair or change of operation to prevent overflow or spillage as prerequisite to the resumption of dredging.

These contract conditions seem pretty clear to me regarding overflow. If I am missing something, please advise. Otherwise, please insure that operations are changed so that all excess water overflows are complete before departing the dredge cut for the disposal site and please provide documentation that this has been done.

* Chris

Christopher J. McArthur, P.E.

Environmental Engineer, Ocean Dumping Program Coordinator

U.S. Environmental Protection Agency Region 4

Coastal and Ocean Protection Section

61 Forsyth Street, SW

Atlanta, GA 30303

Phone: (404) 562-9391, Fax: (404) 562-9343

email: mcarthur.christopher@epa.gov

<http://www.epa.gov/region4/water/oceans/>

-----Original Message-----

From: McArthur, Chris [mailto:mcarthur.christopher@epa.gov]

Sent: Monday, December 02, 2013 10:44 AM

To: Jordan-Sellers, Terri SAJ; Jackson, Gavin W SAJ

Cc: Bearce, John W SAJ; Verhagen, Joelle SAJ; Lee-Duffell, Rebecca SAJ; Bowell, Shealy C SAJ; Rivera, Nestor A SAJ

Subject: [EXTERNAL] W912EP-13-C-0015 Miami Harbor Deepening Phase III Excessive Draft Change

Terri,

I hope you had a good holiday. Yes, I agree, the contractor is authorized to have overflow from the dredge while operating in the channel. It was Gavin's statement "While in transit the water inside of the hull shifts to the stern and the clean water is discharging out of the vessel resulting in a decrease in draft" that causes me concern. Any discharges of dredged material (including liquids or solids) while en route to the ODMDS is not permissible. Please confirm that this is not happening or at least will discontinue.

Loads 17, 18 and 19 also had excessive draft changes (3 to 3.6 feet) during transit to the ODMDS. Please also check on the causes for the draft changes for these loads.

Thanks,

Chris

Christopher J. McArthur, P.E.

Environmental Engineer, Ocean Dumping Program Coordinator U.S. Environmental Protection Agency Region 4 Coastal and Ocean Protection Section

61 Forsyth Street, SW

Atlanta, GA 30303

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.Docket No. MPRSA-04-2019-7500

Exhibit RX 92



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

Planning and Policy Division
Environmental Branch

NOV 17 2014

Ms. Jennifer Derby
Chief, Coastal and Oceans Protection Section
U.S. Environmental Protection Agency, Region IV
61 Forsyth Street SW
Atlanta, Georgia 30303

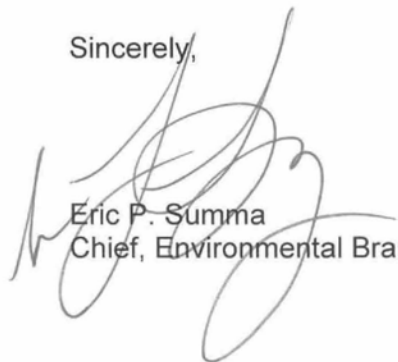
Dear Ms. Derby:

This letter is in regard to your October 23, 2014, request for additional information for the two-year extension request to the Environmental Protection Agency's (EPA) 2011 concurrence on the suitability for ocean disposal of dredged material from new work and maintenance dredging at Miami Harbor pursuant to Section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA). Approval of the request would extend the concurrence to December 29, 2016.

The additional information requested has been incorporated into Sections 1, 3.4, and 7.1.4 of the MPRSA Section 103 Evaluation Report for Miami Harbor (Report). The updated Report and attachments are enclosed.

Additional information regarding this request may be obtained from Ms. Rebecca Lee-Duffell at 904-232-2585.

Sincerely,



Eric P. Summa
Chief, Environmental Branch

Enclosure

MPRSA Section 103 Evaluation Miami Harbor

USACE, Jacksonville District
26 September 2014
Updated 13 November 2014

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1 Dredging and Disposal Project Information

This is a 2014 Marine Protection Research and Sanctuaries Act (MPRSA) Section 103 Tier I evaluation for the dredged material from Miami Harbor. The dredged material is proposed for continued disposal in the Miami Ocean Dredged Material Disposal Site (ODMDS).

This Tier I evaluation was conducted to support the two year concurrence extension request. After review, the U.S. Army Corps of Engineers, Jacksonville District (USACE), has determined the material described herein as suitable for ocean placement without further evaluation, for new work and maintenance dredging up to - 50 feet including advanced maintenance and allowable overdepth, wherever applicable.

1.1 Project Description

The Miami Harbor is located in Miami-Dade County near downtown Miami, FL (Figure 1).

The following components represent new construction for Phase III of the Miami Harbor Deepening Project.

Component 1 of the project will widen the seaward portion of Cut 1 from 500 to 800 feet and deepen Cut 1 and Cut 2 from a project depth of 44 to 52 feet Mean Lower Low Water (MLLW) plus one foot allowable overdepth.

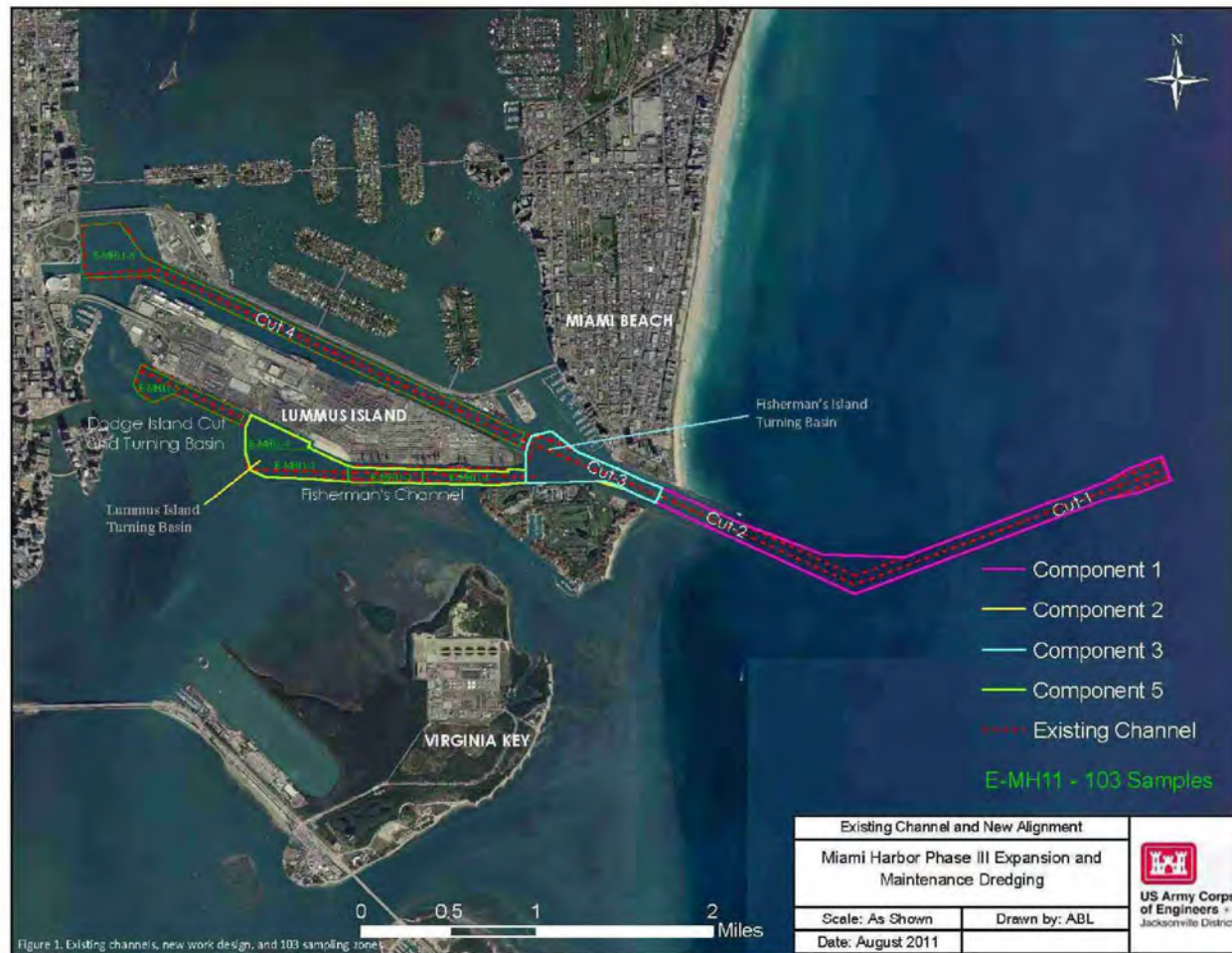
Component 2 of the project will add a turn widener at the southern intersection of Cut 3 with Fisherman's Channel and deepen to a project depth of 50 feet MLLW plus one foot allowable overdepth.

Component 3 of the project will increase the Fisher Island Turning Basin from 1200 to 1500 feet, truncate the northeast section of the turning basin to minimize seagrass impacts, and deepen from 42 feet to a project depth of 50 feet MLLW plus one foot allowable overdepth.

Component 5 will expand the berthing areas in Lummus Cut and the eastern portion of the LITB by 60 feet to the south, for a total of a 160 foot wide berthing area. The Federal Channel will be widened 40 feet to the south, for a 100 foot total width increase in the Lummus Cut. Component 5 will also reduce the LITB to a 1500 foot diameter from the currently authorized 1600 foot diameter and deepen the berthing areas, Lummus Cut and the LITB from 42 feet to a project depth of 50 feet MLLW plus one foot allowable overdepth.

Potential future maintenance dredging includes; the Main Turning Basin, the Main Channel (Cut 4), and the Main Channel berthing areas to a currently authorized depth of 36-feet MLLW plus 1-foot allowable over-depth, maintaining the Dodge Island Cut and DITB and any associated Port berthing areas, to an authorized depth of 30 to 34-feet MLLW with 2-feet of allowable over-depth.

Figure 1. Miami Harbor Phase III Project



The method of dredging is not limited to any one type of dredge and will be determined by the dredging contractors.

The project contract was awarded to Great Lakes Dredge and Dock Company. Construction is currently underway and is expected to be completed in July 2015.

Most of the dredged material will be placed in the Miami ODMDs. A small amount of material <800,000 cy is being used to fill the hole and prepare the 24 acre area near the Julia Tuttle Causeway for seagrass mitigation. Additionally, some rock material may be used for the creation of beneficial use artificial reefs at the dredging contractor's discretion, if the rock meets the size requirements for reef construction, approximately 4 cubic foot sections.

1.2 Historical Evaluations

All previous evaluations concluded the material proposed for disposal met the ocean disposal criteria in 40 CFR Part 227. MPRSA Section 103 concurrences were provided by EPA.

- Tier II and III evaluations were conducted in 1992 and 1998. It was concluded that the material proposed for disposal in these evaluations met the ocean disposal criteria in 40 CFR §227.6(c)(3) and §227.27(b) and MPRSA Section 103 Concurrences were provided by EPA for both evaluations.
- Tier III Miami Harbor sediment testing was conducted beginning in July 2002. It was concluded that the material proposed for disposal in this evaluation met the ocean disposal criteria in 40 CFR §227.6(c)(3) and §227.27(b) and a MPRSA Section 103 Concurrence was provided by EPA on February 11, 2004.
- On December 29, 2011, EPA Region 4 provided a MPRSA Section 103 conditional concurrence letter for the disposal of dredged material from Miami Harbor for new work and maintenance material.
- On June 11, 2012, EPA Region 4 provided an additional letter indicating that the requirements of the December 29, 2011, conditional concurrence were met for the disposal of dredged material from Miami Harbor.

1.3 Compliance Review

USACE has completed a compliance review of the Miami Harbor Phase III Dredging Project. The enclosed spreadsheet in Attachment A includes a summary of all of the compliance concerns as listed in Section 8 of the MPRSA Section 103 Evaluation Report for Miami Harbor as requested.

USACE held a meeting with the contractor on 30 October 2014, regarding ODMDs disposal operations non-compliance. Additional discussions took place on 06 November 2014. In order to adhere to the contract and minimize environmental effects the contractor has significantly reduced scow overflow and is currently not overflowing at all. Due to the overflow minimization, there is less material (from 2,000cy/load down to 600cy/load) and more water in the scows. Although this adaptive management

technique has yielded less sedimentation input into the environment, it has increased the water to sediment ratio causing greater leakage potential. Having less material in the scows means there is less pressure to help close the seals because the seals only close from within. The lack of pressure on the seals increases the chance of water loss which results in draft loss. According to the 1992 ARCS Remediation Guidance Document from EPA, the Buffalo District studied the leakage from hopper barges and concluded that all hopper barges leak to some degree.

<http://www.epa.gov/greatlakes/arcs/EPA-905-B94-003/B94-003.ch5.html#RTFToC11> In addition to the aforementioned pressure impacts from less material in the scows, excess water has also been splashing over the weirs due to rough seas in the early winter months. The contractor indicated that they are working to minimize issues and has conducted numerous water tests to check scow pressures and seals. The contractor plans to bring newer scows onto the project that have new seals. These are scows 500, 501, and 502. They may also bring a brand new scow onto the project.

The Government has not currently withheld payment for any mis-dump or excessive leakage violations. In accordance with the provisions of the contract given in Specification Section 35 20 23, Paragraphs 3.4.2.2, the payment for the violations mentioned above "may be deducted from the Contractor's pay quantity." A determination on how much quantity, if any, is to be deducted from the overall pay of the total contract quantity on unclassified excavation will be made at a later date. The Contractor's overall frequency of violations, response, and any adjustments to methods and operations will be taken into account by the Contracting Officer and recommending team.

2 Exclusionary Criteria 40CFR §227.13(b)

2.1 Exclusionary Material

New work material in the Miami Harbor includes deepening material from the seafloor to authorized project depths in Cut 1, Cut 2, Cut 3 (including Fisherman's Island Turning Basin), Fisherman's Channel, including berthing areas, and LITB. Widening material includes Fisherman's Island Turning Basin, the widener in Cut 3 and Fisherman's Channel.

All material from Cut 1, Cut 2 and Cut 3, including the top sediment layer, rock, and any unconsolidated material under the rock layer, were evaluated for exclusionary criteria set forth in §227.13(b) of the U.S. Environmental Protection Agency Regulations in 2011. This exclusionary material still qualifies under §227.13(b) as evaluated under the 2011 Evaluation.

3 Need for Testing

After consideration of dredging history, historical testing data, evaluations, and concurrences, it has been determined that the material is essentially the same as it was when last sampled and additional testing is not required. The existing information

provides a sufficient basis for making a decision about whether the dredged material complies with § 227.13 of the USEPA regulation.

3.1 Dredging History

Table 1. Historic dredge events at Miami Harbor and disposal in the Miami ODMDS

Year	NW/O&M	Volume (cy)
1957 ¹	O&M	80,000
1960 ^{1,2}	O&M	80,083
1964 ²	NW	2,957,443
1965 ²	O&M	38,935
1966 ²	O&M	54,173
1968 ¹	O&M	210,000
1985 ¹	O&M	15,000
1990	O&M	225,000
1993 ²	O&M	247,000
1995 ²	O&M/NW	3,300
1995-99	NW	2,800,000
2005 ³	NW	1,348,000
2006 ³	O&M	270,000
2013-14	NW	ongoing

NW = New Work, O&M = Operations and Maintenance

¹Data from Miami ODMDS EIS (EPA, 1995)

²Data from the Jacksonville District 1999 Fax to EPA

³Data from the Jacksonville District Post Disposal Monitoring Reports

3.2 Results and Dates of Previous Testing

3.2.1 2011 MPRSA Section 103 Testing

Miami Harbor sediments were tested and evaluated for suitability for ocean disposal in 2011. Refer to the *Final Sediment Sampling and Analysis for Miami Harbor New Work and Maintenance Dredging Report* (2011 Report) and the *MPRSA 103 Evaluation Miami Harbor Phase III New Work and Maintenance Dredging* (2011 Evaluation) for the data.

Chemical Analysis of the Liquid Phase

Table 2. Analyte concentrations for COCs detected above WQC.

Analyte (µg/L) Sample:	Arsenic	Selenium	Cyanide	Mono-butyltin ¹	Di-butyltin ¹	Tri-n-butyltin ¹
WQC - Acute Concentration Levels	69	290	1.0	n/a	n/a	0.42
Background Concentration at Disposal Site ²	1.34	0.2	0.2	n/a	n/a	0.025
E-MH11-SW ³	79	360	<5	<1	<1	<1
Dilution Factor	0.754	0.311	—	—	—	—
E-MH11-1	88	370	<1	<1	<1	<1
E-MH11-2	110	380	<1	<1	<1	<1
E-MH11-2 Dup	98	350	<1	<1	<1	<1
E-MH11-3	92	350	<1	<1	<1	1.8 ⁴

E-MH11-4	92	370	<1	<1	<1	<1
E-MH11-5	110	370	<1	<1	<1	<1
E-MH11-6	120	370	<1	<1	<1	<1

¹Detected with isotopic dilution selective ion monitoring (SIM) method

²Data taken from the Miami ODMS 2008 Site Management and Monitoring Plan (SMMP)

³Miami Harbor Site Water

⁴See 2011 Report, Appendix G for explanation for false positive result and QA/QC data

Values shown as < represent the Laboratory Reporting Limit

Table 3. Tri-butyltin Retest: Analyte concentrations for Miami Harbor WQC

Analyte (µg/L) Sample:	Tri-n-butyltin ¹ Retest
WQC - Acute Concentration Levels	0.42
Background Concentration at Disposal Site ²	0.025
E-MH11-SW ³	<0.04
E-MH11-1	<0.04
E-MH11-2	<0.04
E-MH11-2 Dup	<0.04
E-MH11-3	<0.04
E-MH11-4	<0.04
E-MH11-5	<0.04
E-MH11-6	<0.04

¹Standard Method (SM) 6710B used

²Data taken from the Miami ODMS 2008 Site Management and Monitoring Plan (SMMP)

³Miami Harbor Site Water

Suspended Particulate Phase

The suspended particulate phase of the material was evaluated for compliance with Sections 227.6(c)(2) and 227.27(b).

Table 4. LC₅₀ and EC₅₀ values for Miami Harbor 2011

Sample: Analyte	E-MH11-1	E-MH11-2	E-MH11-3	E-MH11-4	E-MH11-5	E-MH11-6
LC ₅₀ for <i>Americamysis bahia</i>	NC	NC	NC	NC	NC	NC
LC ₅₀ for <i>Menidia beryllina</i>	NC	NC	NC	NC	NC	NC
EC ₅₀ for <i>Strongylocentrotus purpuratus</i>	NC	>100	25.6	22.4	53.9	>100

NC – indicates assay was not statistically more toxic than control or dilution water and LC50 was not calculated.

Solid Phase Toxicity

Table 5. Results for the 10-day solid phase toxicity test using *Leptocheirus plumulosus*.

	Mean % Survival			
Treatment	<i>L. plumulosus</i> (4/23/11)	<i>L. plumulosus</i> (5/14/11- Unfed)	<i>L. plumulosus</i> (5/14/11- Fed)	<i>L. plumulosus</i> (6/13/11)
ARO* Control - 1°	89	72	72	79
RS-MH11	31	21	96	7
E-MH11-1	20	19	99	14
E-MH11-2	30	22	96	14
E-MH11-3	18	21	98	27
E-MH11-4	46	34	99	20
E-MH11-5	69	77	93	89
E-MH11-6	69	85	95	87
ABS** Control - 2°				88
Sequim Bay + Sand - 3°				74
Ampelisca Control - 4°				79

*Aquatic Research Organisms Control

**Aquatic BioSystems

Table 6. Results for the 10-day solid phase toxicity tests using *N. arenaceodentata* and *A. abdita*.

	Mean % Survival	
Sample ID	<i>N. arenaceodentata</i> (4/23/11)	<i>Ampelisca abdita</i> (6/10/11)
Native Control - 1°	96	94
RS-MH11	88	89
E-MH11-1	92	91
E-MH11-2	96	92
E-MH11-3	90	89
E-MH11-4	84	90
E-MH11-5	92	87
E-MH11-6	98	90
Sequim Bay Control - 2°		93

Miami Harbor sediment samples met the solid phase toxicity criteria of Sections 227.6 and 227.27.

Solid Phase Bioaccumulation

Table 7. Survival for *N. virens* and *M. nasuta* bioaccumulation tests.

Sample ID	Mean % Survival	
	<i>N. virens</i>	<i>M. nasuta</i>
Control	96	98
RS-MH11	95	95
E-MH11-1	94	99
E-MH11-2	89	96
E-MH11-3	89	97
E-MH11-4	91	98
E-MH11-5	82	96
E-MH11-6	90	98
11-DA	93	96

3.2.2 2002 MPRSA Section 103 Testing

Miami Harbor sediments were tested for suitability for ocean disposal in 2002. The data for this testing is contained in the Final Report for Miami Harbor 103 Evaluation - 2002 prepared by ANAMAR Environmental, Inc. (ANAMAR) is hereafter referred to as the 2002 Report.

Chemical Analysis of the Liquid Phase

Table 8. Analyte concentrations for COCs detected above WQC.

Analyte (µg/L) Sample:	Arsenic
WQC - Acute Concentration Levels	69
E-MH02-CONTROL	17.1
E-MH02-1	35.3
E-MH02-2	40.0
E-MH02-3	11.4
E-MH02-4	10.9
E-MH02-5	79.8
E-MH02-4 DUP	13.8
E-MHPA02-1	81.6

Suspended Particulate Phase

The suspended particulate phase of the material was evaluated for compliance with Sections 227.6(c)(2) and 227.27(b).

Table 9. LC₅₀ and EC₅₀ values for Miami Harbor 2002.

Sample: Analyte	E-MH02-1	E-MH02-2	E-MH02-3	E-MH02-4	E-MH02-5	E-MHPA02-1
LC ₅₀ for <i>Mysidopsis bahia</i>	>100	>100	>100	>100	>100	>100
LC ₅₀ for <i>Menidia beryllina</i>	>100	>100	>100	>100	>100	>100
EC ₅₀ for <i>Lytechinus variegatus</i>	>100	>100	25.6	>100	>100	>100

Solid Phase Toxicity

Table 10. Results for the 10-day sediment toxicity tests.

Sample ID	Mean % Survival	
	<i>M. bahia</i>	<i>L. plumulosus</i>
CONTROL	94	90
RS-MH02	93	86
E-MH02-1	90	85
E-MH02-2	95	91
E-MH02-3	96	82
E-MH02-4	96	85
E-MH02-5	88	93
E-MHPA02-1	87	87

All of the results show that the solid phase of the material does not cause significant mortality and meets the solid phase toxicity criteria of Sections 227.6 and 227.27.

Solid Phase Bioaccumulation

Table 11. Survival for the *N. virens* and *M. nasuta* bioaccumulation tests.

Sample ID	Mean % Survival	
	<i>N. virens</i>	<i>M. nasuta</i>
Control	98	79
RS-MH02	97	73
E-MH02-1	90	76
E-MH02-2	95	74
E-MH02-3	95	74
E-MH02-4	97	72
E-MH02-5	93	77
E-MHPA02-1	99	71

3.2.3 1998 MPRSA Section 103 Testing

The Miami Harbor project was tested for 103 certification in 1998 in accordance with the *Evaluation of Dredged Material Proposed from Ocean Disposal - Testing Manual* otherwise called the 1991 "Green Book." The data from the 1998 evaluation is contained in the "Final Report for Miami Harbor, Florida 1998 Evaluation of Dredged Material for Ocean Disposal Volumes I and II" (1998 Report). The Jacksonville District of

the U.S. Army Corps of Engineers executed all evaluations in coordination with the U.S. Environmental Protection Agency (EPA), Region 4. A review of the chemical analyses of sediments, elutriates of sediments, bioassays and bioaccumulation studies for 11 stations in Miami Harbor contained in the 1998 report showed that the sediments were acceptable for placement in the Miami ODMDS.

Aluminum and iron were present in the dredged material sediments at higher than concentrations than other heavy metals, but no PCBS, pesticides, PAHs, or organotin were detected. The elutriate analysis showed only low levels of metals. Suspended phase bioassays were performed using *M. bahia*, *M. beryllina*, and *A. punctulata* without significant differences with the control sediment. Benthic bioassays run for 10 days on *M. Bahia* were not significantly different from the control and reference sediments, *L. plumulosus* survival was significantly less than the reference or harbor sediments but were above 90% survival.

3.2.4 1992 MPRSA Section 103 Testing

This project was tested for 103 certification in 1992, in accordance with the "Green Book". The data from the 1992 evaluation is contained in the "Final Consolidated Report for Obtaining and Analyzing Sediment Samples, Water Samples and Bioassay Samples from Miami Harbor" (1992 Report). The Jacksonville District of the U.S. Army Corps of Engineers executed all evaluations in coordination with the EPA, Region 4. A review of the chemical analyses of sediments, elutriates of sediments, bioassays and bioaccumulation studies for 12 stations in Miami Harbor contained in the 1992 report showed that the sediments were acceptable for placement in the Miami ODMDS.

Sediment chemistry results showed low levels of all metals except aluminum and iron and no detectable levels of pesticides, PCBs, or PAHs. Elutriate analysis confirmed the low levels of metals except aluminum. Suspended phase bioassays were performed using *C. virginica*, *M. beryllina*, and *M. bahia*. Only one station, E-MH91-1, in the Lummus Island Turning Basin contained an LC₅₀ of 24.2 for *M. bahia*. Benthic bioassays were run for 10 days on *M. bahia* and *Ampelisca abdita*. Sediments from stations E-MH91-6 in the Lummus Island Turning Basin and E-MH91-9 in Cut 1 were statistically significantly different for *M. bahia*.

Sediment chemistry results showed low levels of all metals except aluminum and iron and no detectable levels of pesticides, PCBs, or PAHs. Elutriate analysis confirmed the low levels of metals except aluminum. Suspended phase bioassays were performed using *C. virginica*, *M. beryllina*, and *M. bahia*. Only one station, E-MH91-1 in the Lummus Island Turning Basin contained an LC₅₀ of 24.2 for *M. bahia*. Benthic bioassays run for 10 days on *M. Bahia* and *Ampelisca abdita*. Sediments from Stations E-MH91-6 in the Lummus Island Turning Basin and E-MH91-9 in Cut 1 were statistically significantly different for *M. bahia*.

3.3 Locations, Quantities and Types of Pollutants Discharged Upstream and Within the Dredging Area

Miami Harbor is a major cruise ship home port and containerized freight terminal. There are no facilities for large scale storage or handling of fuel oil. Storage of

hazardous and toxic materials (HTM is primarily confined to minor amounts of petroleum product including #2 fuel oil, diesel fuel, gasoline and lubricants). All of the HTM confinement areas are sufficient to contain any spills. Miami Harbor is part of Biscayne Bay but is partially isolated from the Bay by the MacArthur causeway to the north and the Rickenbacker causeway to the south. The Harbor is hydraulically linked to the Atlantic Ocean through Government Cut and Norris Cut. Numerous small streams enter the bay, the largest of which is the Miami River. Biscayne Bay is also influenced by the Atlantic Intracoastal Waterway (AIWW) which enters the bay at the northern end and passes to the west of Miami Harbor. With the exception of the Miami River, the areas draining into Biscayne Bay are primarily urban/residential and it is unlikely that contaminants could enter the harbor area from these streams. The Miami River is heavily developed and has been shown to be contaminated with arsenic, copper, lead, mercury and silver. Previous testing (USACE 2000) of harbor sediments in the area south of Lummus Island however, indicate that contaminated material from the Miami River has not migrated north into the Miami Harbor area.

3.4 Changes since Last Dredging Event

The Miami Harbor Phase III dredging event is currently underway. As of 3 October 2014, the following areas have had dredging activity and the associated dredged volumes are listed. None of the cuts have been completed.

Cut 1 - 1,228,229 CY

Cut 2 - 1,186,277 CY

Cut 3 (Option A) - 134,260 CY

FITB (Option B) - 218,434 CY

FC/LITB (Option A) - 110,480 CY

Total dredged to date - 2,877,680 CY

Approximately 2,300,000 CY have been placed at the ODMDS as of 3 October 2014. Events that may have influenced sediment chemistry or bioassay results since the last sampling which occurred in March-April 2011 will be considered. The Port of Miami Tunnel construction was the only significant landside change. Construction began in 2010 and was recently completed in 2014. An environmental protection plan was used for the project and no significant spills occurred due to this project. A review of the National Response Center (NRC) database indicates that only a few spills occurred since 2011 in the Miami Harbor area.

Table 12. National Response Center incidents in Miami Harbor.

Date	Incident Number	Material	Quantity	Response Action
12/6/11	997344	OIL, MISC: LUBRICATING	2 Liters	CLEANING THE MATERIAL UP ON THE DECK.
8/10/12	1020631	OIL, MISC: MOTOR	Unknown	CALLER STATES ABSORBENTS & BOOMS WERE APPLIED AND CLEANUP IS UNDERWAY.

2/23/12	1003748	Hydraulic Oil	32 Oz.	BOOMS AND PADS APPLIED, RELEASE SECURED
1/6/12	999920	Hydraulic Oil	2 Liters	CLEANED UP THE DOCK WITH ABSORBENTS, SAND, AND SAUSAGE BOOMS WERE USED IN THE WATER. THEY ALSO REPAIRED THE BROKEN HOSE ON THE UNIT.
2/4/14	1072939	Hydraulic Oil	5 Gal	N/A
7/7/14	1088256	Hydraulic Fluid	1 Gal	Dissipate Naturally
9/21/2014	1096009	Hydraulic Oil	5 Gal	ABSORBENTS WERE DEPLOYED IMMEDIATELY FOLLOWING THE RELEASE.

4 Water Column Determinations for Current Sediment Testing

Water column testing was not conducted for this evaluation.

5 Benthic Screen

A benthic screening for theoretical bioaccumulation potential was not used for this evaluation.

6 Benthic Determinations

Benthic testing was not conducted for this evaluation.

7 Non-Testing Related Regulatory Issues: Subparts B, C, D and E of 40 CFR §227

7.1 Compliance with Part 227 Subpart B-Environmental Impact

7.1.1 §227.4 Criteria for Evaluation Environmental Impact

The applicable prohibitions, limits, and conditions set forth in 227.4 have been satisfied as described in Sections 2 and 3 this evaluation.

7.1.2 §227.5 Prohibited Materials

The material to be placed is dredged material that has been evaluated and found to meet the criteria of the ocean dumping regulations. The material approved for placement is not:

- high level radioactive waste;

- material used for radiological, chemical, or biological warfare;
- materials whose composition and properties have been insufficiently described to enable application of 40 CFR Part 227, Subpart B;
- inert synthetic or natural materials which may float or remain in suspension so as to materially interfere with fishing, navigation, or other use of the ocean;
- medical waste as prohibited by §102(a) of MPRSA.

7.1.3 §227.7 *Limits established for specific wastes or waste constituents*

The material to be placed has been evaluated and found that the constituents listed in this section are not present other than trace amounts as described in Sections 2 and 3 of this evaluation.

7.1.4 §227.9 *Limitations on Quantities of Waste Materials*

Section 227.9 provides that substances that may cause damage to the ocean environment due to the quantities in which they are placed or seriously reduce amenities may be placed only when the quantities to be placed at a single time and place are controlled to prevent long-term damage to the environment or amenities. The proposed dredged material would not result in long-term damage to amenities or the environment due to the quantities and locations, based on the scenarios described in Sections 2 and 3 of this evaluation, in which it would be placed. The material would be placed at the Miami ODMDs.

The site was given final designation by EPA 40 CFR 228.15(h)(19) for the Miami ODMDs following preparation of an Environmental Impact Statement (EIS) and determination that they met the environmentally based site selection criteria of 40 CFR Part 228, including those related to amenities (see §228.6(a)(2), (3), (8), and (11)). The proposed dredged material has been found to meet the requirements of 40 CFR 227.6 and 227.27, as described in Sections 2 and 3 of this evaluation. In addition, placement operations will be managed to assure placement takes place within the site boundaries in accordance with the current Miami ODMDs Site Management and Monitoring Plan (SMMP). It is concluded that the proposed placement would not cause long-term damage to amenities or the environment due to the quantities in which it would be placed. The current project is estimated to produce approximately 5 million cubic yards (mcy) of dredged material. Short-Term Fate (STFATE) and Multi-Dump Fate (MDFATE) simulations with the Automated Dredging and Disposal Alternatives Modeling System (ADDAMS) determined sufficient site capacity for up to 6 mcy of dredged material as reported in the *Evaluation of the Dredged Material Behavior at the Port of Miami Ocean Dredged Material Disposal Site* (USACE 2010). The modeling report included recommendations for disposal operations for this project. The model used approximately 6 mcy as an input volume, whereas the actual ODMDs placement volume will be approximately 4 mcy due to some of the material being placed elsewhere for beneficial use, and overall less material in the dredging prism to be excavated. The report recommended relocating the disposal release zone 804 feet north which was a change that USACE included in the construction project plans. The report also recommended that the dredged material be placed along the entire area

of the release zone. Although the report provided this recommendation, USACE believes that the current disposal method predominately in the western portion of the ODMDS is appropriate and is in compliance with the SMMP and Section 103 concurrence. To provide additional assurance, USACE performed a bathymetric survey of the Miami ODMDS in July 2014, and compared it to the pre-dredge survey. A copy of the survey comparison sheet is attached. Although the modeling showed that predominately western disposal zone placement would result in material moving north and west exceeding the 5 cm threshold on the western portion of the ODMDS, the recent bathymetric survey comparison indicates that that material is moving predominately northeast. USACE will continue to conduct quarterly surveys of the ODMDS to provide additional assurance to EPA on this matter.

7.1.5 §227.10 Hazards to Fishing, Navigation, Shorelines, or Beaches

40 CFR Section 227.10 provides that with regard to the placement of dredged material, the site and conditions must be such that there is no unacceptable interference with fishing or navigation and no unacceptable danger to shorelines or beaches resulting from dredged material placement. The project material proposed for placement would not interfere with fishing, navigation, or pose unacceptable danger to shorelines or beaches. The EIS for the Miami ODMDS designation and information previously outlined in this report fully support compliance of the project material within this section.

7.2 Compliance with Part 227, Subpart C - Need for Ocean Placement

The Miami-Dade County Seaport Department of the Port of Miami (Port) requested the U.S. Army Corps of Engineers, Jacksonville District, study the feasibility of widening and deepening portions of the Port, Miami-Dade County, Florida. A resolution from the Committee on Transportation and Infrastructure, United States House of Representatives, adopted October 29, 1997, provides the study authority as follows:

"Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, that the Secretary of the Army is requested to review the report of the Chief of Engineers on Miami Harbor published as Senate, Document 90-93, 90th Congress, 2nd Session, and other pertinent reports, with a view to determining the feasibility of providing channel improvements in Miami Harbor and channels."

Additional authorization appeared in a subsequent appropriations bill for Miami Harbor, Florida, which provided funding to initiate a General Reevaluation Report (GRR) to determine the feasibility of further Port deepening.

The Final GRR, "MIAMI HARBOR MIAMI-DADE COUNTY, FLORIDA NAVIGATION STUDY, Final General Reevaluation Report and Environmental Impact Statement", which provides an assessment of alternatives, was completed in 2004.

A study titled "Preliminary Assessment Miami Harbor, Florida," was completed July 1997 and approved by the Major Subordinate Command, August 1997. The recommended disposal plan for Miami Harbor dredged material is the Miami ODMDS. The study is available in Appendix E of the 2004 Final GRR.

The GRR references the former confined disposal site (CDF) on Virginia Key as a disposal option. However, plans to reopen the CDF, now bordered by Outstanding Florida Waters (OFW), go against current proposals to use the land as a wildlife sanctuary in addition to concerns that the pipe for pumping material into the site may disrupt both sea grass beds and manatees.

The sea grass mitigation site near Julia Tuttle Causeway may take approximately 900,000 cy of material. The artificial reef beneficial use site for mitigation may take an estimated 40,000 cy of rock material if rock can be found that meets the size and quality requirements.

7.3 Compliance with Part 227, Subpart D - Impact of the Proposed Placement on Aesthetic, Recreational and Economic Values

40 CFR Section 227, Subpart D, sets forth the factors to be considered when evaluating the impact of proposed placement on aesthetic, recreational, and economic values, including the potential for affecting recreational and commercial uses and values of living marine resources.

The factors specifically considered include recreation and commercial uses, water quality, the nature and extent of placement operations, visible characteristics of the material to be disposed, presence of pathogens, toxic chemicals, bioaccumulation potential, or any other constituent which can affect living marine resources of recreational or commercial value. These would be used in an overall assessment of the proposed placement on aesthetic, recreational, or economic values and possible alternative methods of placement or recycling. See 40 CFR §227.17, §227.18, and §227.19.

The EIS for the Miami ODMDs designation discuss the potential impacts on recreational fisheries, commercial fisheries, shore recreation, and cultural resources in regard to placement of dredged material at the sites. On the basis of the discussion in the EISs and the findings of this evaluation, it is not expected that adverse impacts to the above amenities would occur.

With respect to Section 227.17(b)(2), if the dumping were not authorized there would be an adverse economic impact, as the larger Post-Panamax vessels require deeper and wider channels to maintain vessel traffic efficiency. According to the General Reevaluation Report (GRR) for the deepening of Miami Harbor dated February 2004, the benefits of dredging this project and the associated improvements are maximized at 49 feet. The National Economic Development (NED) Plan has a benefit cost ratio (BCR) of 1.6 and net benefits of more than 6 million dollars. Failure to dredge this project would not adversely impact recreational boating or aesthetic values.

7.4 Compliance with Part 227, Subpart E - Impact of the Proposed Placement on Other Uses of the Ocean

40 CFR Section 227, Subpart E sets forth the factors to be considered in evaluating the impacts of the proposed placement on other uses of the ocean, including long-range impacts on other uses of the ocean. Specifically, the uses

considered include, but are not limited to, commercial and recreational fishing in open ocean areas, coastal areas, and estuarine areas; recreation and commercial navigation; actual or anticipated exploitation of living and non-living marine resources; and scientific research and study. An overall assessment of the proposed placement on the temporary and long-range effects of other uses of the ocean would not include irreversible or irretrievable commitment of resources that would result from the proposed placement.

The Miami ODMDS EIS address the effects of dredged material placement on public health and safety (including navigational hazards) and the effects on the ecosystem (biota and water column). They also address the environmental effects and mitigative measures that are short-term, long-term, or involve the irreversible or irretrievable commitment of resources. Based upon the discussion in the EISs and the findings in this evaluation, it is concluded that there would be no adverse impact on the uses to be considered under 40 CFR Part 227, Subpart E, incorporating considerations of long-term impacts (§227.20(a)) and an evaluation on an individual basis for effects on uses of the ocean for purposes other than ocean placement (§227.20(b)).

8 MPRSA Contract Specification Language

8.1 Disposal of Dredged Material

8.1.1 General

Material excavated shall be transported to and deposited in the disposal areas designated on the drawings. The approximate maximum and average distances to which the material will have to be transported are as follows:

<u>Disposal Area</u>	<u>Maximum Distance</u>	<u>Average Distance</u>
ODMDS	8.0 statute miles	4.5 statute miles
Artificial Reef	5.5 statute miles	2.4 statute miles
Seagrass Mitigation Area	10.0 statute miles	7.0 statute miles

8.1.2 Ocean Dredged Material Disposal Site (ODMDS)

All excavated material, except that material used by the Contractor for construction of either the Julia Tuttle Seagrass Mitigation site or the Offshore Artificial Reef areas, shall be placed in the Miami ODMDS designated on the drawings. Disposal shall be initiated within the vessel is completely within the disposal release zone as shown on the drawings, and the disposal vessel shall not leave the ODMDS boundary until the release doors or split-hull sections are fully closed. Dredged material shall not be placed higher than elevation -30 feet MLLW in the ODMDS.

8.1.3 *Spillage/Leakage*

Water and excavated material shall not be permitted to overflow, leak out, or spill out of barges, dump scows, or hopper dredges while in route to the ODMDs Release Zone. Failure to repair leaks or change the method of operation which is resulting in the overflow, leakage, or spillage will result in suspension of dredging operations and require prompt repair or change of operation to prevent overflow, leakage, or spillage as prerequisite to the resumption of dredging. Excessive leakage is defined by average loss of draft during transit from the dredging area to the disposal area (forward draft loss plus aft draft loss divided by 2) in excess of 1 foot. Excessive leakage may be classified as a mis-dump.

8.1.4 *Mis-dump*

Any scow load or hopper dredge load that is released outside the boundaries of the release zone, or restricted release zone, as shown on the plans will be classified as a mis-dump and will result in a suspension of dredging operations. Redredging of such materials will be required as a prerequisite to the resumption of dredging unless the Contracting Officer, at his discretion, determines that redredging of such material is not practical. If redredging of such material is not required, then the quantity of the mis-dumped load may be deducted from the Contractor's pay quantity. If the quantity for each mis-dumped load to be deducted cannot initially be agreed to by both the Contractor and Contracting Officer, then an average hopper/scow load quantity for the entire contract will be used in the determination. In addition, the Contractor shall notify the Contracting Officer within 24 hours of a misplaced dump or any other violation of the Site Monitoring and Management Plan for respective ODMDs. Corrective actions shall be implemented by the next dump, and the Contracting Officer shall be informed of actions taken.

8.1.5 *Vessel Doors*

All hopper doors, dump scow doors, or split hull dumping mechanisms shall be closed and sealed prior to exiting the ODMDs. In the event that a dump vessel exits the ODMDs with open doors, then the Contractor shall notify the COR immediately of the occurrence.

8.1.6 *Maximum Placement Elevation*

The Contractor shall manage disposal operations such that the maximum placement elevation shown in the drawings is not exceeded at any point in the ODMDs. The Contractor shall distribute dump locations as evenly as possible across the ODMDs release zone so that mounding of material will be minimized. If the Contractor has reason to believe that exceedance of the maximum placement elevation has occurred, he shall immediately notify the Contracting Officer as to the location of the exceedance and shall provide any other pertinent information necessary for the Contracting Officer to prepare and issue a Notice to Mariners. Placement of dredged material above the maximum elevation may require bed leveling of material to below the maximum elevation by the Contractor at the discretion of the Contracting Officer.

8.2 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SYSTEM (HOPPER DREDGES AND DUMP SCOWS)

NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SCOW - and NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM HOPPER DREDGE will be used. However, in the event of NDQMP System failure (not fully operational), the Contractor shall notify the Contracting Officer and continue tracking using ETS (see paragraph "Electronic Tracking System (ETS) for Ocean Disposal Vessels" below) for up to 48 hours until the NDQMP System is fully operational and in use. If, upon NDQMP System failure, the Contractor cannot use ETS or cannot use the NDQMP System within 48 hours of failure, all dredging operations for the vessel shall cease until the NDQMP System is fully operational. Any delays resulting from NDQMP System failure shall be at the Contractor's expense.

8.3 Electronic Tracking System (ETS) for Ocean Disposal Vessels

The Contractor shall furnish an ETS for surveillance of the movement and disposition of dredged material during excavation and ocean disposal. This ETS shall be established, operated and maintained by the Contractor to continuously track in real-time the horizontal location and draft condition of the disposal vessel for the entire dredging cycle, including dredging area and disposal area. The ETS shall be capable of displaying and recording in real-time the disposal vessel's draft and location.

8.3.1 ETS Standards

The Contractor shall provide automated (computer) system and components to perform in accordance with EM 1110-1-2909. A copy of the EM can be downloaded from the following web site: <http://140.194.76.129/publications/eng-manuals/>. Horizontal location shall have an accuracy equal to or better than a standard DGPS system, equal to or better than plus/minus 10 feet (horizontal repeatability). Vertical (draft) data shall have an accuracy of plus/minus 0.5 foot. Horizontal location and vertical data shall be collected in sets and each data set shall be referenced in real-time to date and local time (to nearest minute), and shall be referenced to the same state plane coordinate system used for the survey(s) shown in the contract plans. The ETS shall be calibrated, as required, in the presence of the Contracting Officer at the work location before disposal operations have started, and at 30-day intervals while work is in progress. The Contracting Officer shall have access to the ETS in order to observe its operation. Disposal operations will not commence until the ETS to be used by the Contractor is certified by the Contracting Officer to be operational and within acceptable accuracy. It is the Contractor's responsibility to select a system that will operate properly at the work location. The complete system shall be subject to the Contracting Officer's approval.

8.3.2 ETS Data Requirements and Submissions

a. The ETS for each disposal vessel shall be in operation for all dredging and disposal activities and shall record the full round trip for each loading and disposal cycle. (NOTE: A dredging and disposal cycle constitutes the time from commencement

of dredging to complete discharge of the material.) The Contracting Officer shall be notified immediately in the event of ETS failure and all dredging operations for the vessel shall cease until the ETS is fully operational. Any delays resulting from ETS failure shall be at the Contractor's expense.

b. All data shall be collected and stored on CD-ROM(s) in ASCII format and shall be readable by MS Windows compatible software. Each dredging and disposal cycle shall be a separate and distinct ASCII file, labeled by the trip number. More than one file may be stored on the disc(s) or CD-ROM(s).

c. Data shall be collected, during the dredging and disposal cycle, every 500 feet (at least) during travel to the disposal area, and every minute or every 200 feet, whichever is smaller, while approaching within 1,000 feet and within the disposal area.

d. The additional required digital data to be collected for each dredging and disposal cycle includes the following:

- (1) Trip Number
- (2) Date
- (3) Time
- (4) Vessel ID
- (5) Vessel Captain
- (6) State Plane X Coordinate - in accordance with subparagraph c. above
- (7) State Plane Y Coordinate - in accordance with subparagraph c. above
- (8) Vessel Draft
- (9) Type of Disposal Vessel
- (10) Exact State Plane X and Y coordinate at start of disposal initiation and completion of disposal event
- (11) Estimated Volume of Material Disposed
- (12) Description of Material Disposed
- (13) Source of Dredged Material (Channel Cut and Station)

e. Plot Reporting (2 types):

Tracking Plot - For each disposal event, all data collected while the disposal vessel is transiting to and from the disposal area shall be plotted in chart form, in 200-foot intervals, to show the track and draft of the disposal vessel approaching and traversing the disposal area. The plot shall identify the exact position at which the dump commenced. A sample Track and Draft Plot Diagram is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.

Scatter Plot - Following completion of all disposal events, a single and separate plot will be prepared to show the exact disposal locations of all dumps. Every plotted location shall coincide with the beginning of the respective dump. Each dump shall be labeled with the corresponding Trip Number and shall be at a small but readable scale. A sample Scatter Plot Diagram is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.

Summary Table - A spreadsheet which contains all of the information described in subparagraph d. above shall be prepared and shall correspond to the exact dump locations represented on the Scatter Plot Diagram. A sample Summary Table

spreadsheet is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.

f. All digital ETS data shall be furnished to the Contracting Officer within 24 hours of collection. The digital plot files should be in an easily readable format such as Adobe Acrobat PDF file, Microstation DGN file, JPEG, BMP, TIFF, or similar. The hard copy of the ETS data and tracking plots shall be both maintained onboard the vessel and submitted to the Contracting Officer on a weekly basis.

9 Determination

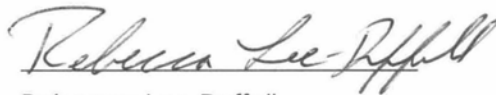
The proposed project is not expected to significantly degrade or endanger human health, welfare or amenities, the marine environment, ecological systems, or economic potential.

There is no available upland disposal capacity that is economically or environmentally feasible. There is no alternative disposal site other than the Miami ODMS.

The material for Miami Harbor was found to be acceptable for ocean disposal.

The proposed action is in compliance with the requirements of 40 CFR Parts 220-227, and may be implemented.

Jacksonville District Section 103 Coordination:

A handwritten signature in cursive script, reading "Rebecca Lee-Duffell".

Rebecca Lee-Duffell

Technical Manager

ATTACHMENT A

W912EP-13-C-0015 Miami Harbor Deepening Phase III

Date	Scow	DQM Load #	KTR Load #	Non-Compliance Item	Draft Loss (feet)	EPA Notified with explanation	Incident Description and remedy
11/23/2013	Terrapin Island	18	5	Leakage, 3.5'	3.5	EPA notified USACE. USACE does not believe this was a violation.	The Terrapin Island finished up Load #5 in Cut 2. They needed to perform operations in the inflow boxes during the run to the ODMDS. They dropped the skimmer right then to skim off the excess water, at the completion of dredging, because they needed to do work around the inflow boxes, which were under water before skimming down. See attached drawing. The initial drop right after completion of dredging is due to the skimmer drop. This is the 21.9ft. to 18.7ft drop in draft right after completion, while they are still in the channel, at the channel angle. They picked up speed and the draft drops to about 18.4 or 18.3ft. They approach the ODMDS and slow down and the draft comes back to 18.9ft of draft. There was no draft loss from the hopper during the disposal run.
12/17/2013	Terrapin Island	112	112	Loss of Draft > 1'	3	12/17/2013	With reference to the details of Load No.112 below, the Terrapin exited the Channel at approx. 4:55am for traffic. The dredge sailed north to wait for the traffic to clear and had planned to return to digging that load. During the traffic delay, the crew had to conduct a routine check of the dragarms and dragheads. Due to 4ft to 5ft seas offshore, the spill deck was taking waves, flooding the deck and compromising the safety of personnel being able to work on the spill deck. In order to safely check the gear, at approx. 0707hrs the Mate lowered the skimmers to approx. 17.3ft in order to dry the deck for the crew to check the gear. At this point, the traffic delay duration had been longer than anticipated, and the Dredge decided to go to the disposal. The draft remained around 17.3ft until right before the Terrapin entered the ODMDS Release Zone. The Captain and crew have been instructed that under no circumstances can the Terrapin lower the skimmers when outside of the Channel. The Dredge crew have been instructed that in the future, if a skimmer drop is needed, that the Terrapin shall sail back into the Channel or into the ODMDS before lowering the skimmer.
1/25/2014	GL701	7	7	Loss of Draft > 1'	7	1/29/2014	There appears to be an error with the Aft draft sensor. I have included the pages of data that show the sensor error. Page 1 shows where the draft instantaneously dropped from 18.28ft to 5.5ft at 00:04 for approx. 4mins. Page 2 shows that at 00:08 the draft reading was back at 18.28ft for just a couple of seconds and then fell again to 5.86ft. Page 3 shows the disposal event and a couple of draft readings bouncing back up during the disposal. The 701 scow was due into the dock after this load for welding work and has not had another load since Load 7. When the welding work is complete, we will be testing the scow and checking the draft sensor prior to its next load.
2/5/2014	GL702	30	30	Left ODMDS with hull open		2/7/2014	During the dumping of Scow 702 Load 30, the Tug Pacific Dawn lost (radio) connection with the scow due to the generator on the scow overheating. The generator has a safety switch built in to shut down when this over heat sensor goes off; the result was that the tug could not restart the generator to close the scow until the generator cooled down and could be remotely restarted. The wind during this dump was 10-15 MPH with gusts up to 25 MPH out of the SSE, this, in conjunction with the generator tripping, out resulted in the scow drifting outside the ODMDS limits before closed. The attached plot displays the open/close and the draft of the scow. As you mentioned in your message, the scow draft remained constant during the time that the scow drifted outside of the ODMDS.
3/6/2014	GL63	31	80	Initiation of disposal outside of release zone		3/20/2014	In reference to GL63 load # 31 and GL702 load # 41: The Contractor has indicated that after these loads were completed, they checked the computer and antenna. "The offsets were correct and the position correct on that system. The tugboat's company GPS tracking system also was found to have the ODMDS and release zone entered into it by the tug captain, at some stage after startup. Upon review, this system was found to have an error in its plot location for the release zone. The captain apparently was using this other system screen to dictate when to release the load. He should not have been following this system for disposal, he should have been following the ODMDS disposal system." The Tug captain was then put through site environmental orientation training for a second time after these incidents with the release zones. The USACE is currently considering deducting payment for these two loads, but a final decision has not yet been made.
3/7/2014	GL702	41	83	Initiation of disposal outside of release zone		3/20/2014	
3/13/2014	GL63	49	117	Left ODMDS with hull open		3/17/2014	At 1458hrs on Thursday March 13, 2014 the disposal initiation of Load No. 117 (Scow GL63) was started inside of the Release Zone of the ODMDS. As shown in the attached draft plot, the material was completely disposed of within the Release Zone limits; however, during the departure of the ODMDS limits the haul was not completely closed. Haul status sensors indicate closure at 1524hrs at a location approximately 2,000 feet north of the ODMDS boundary. As of this afternoon, the tug Captain has been notified of this violation and is scheduled to be removed from the project.
3/19/2014	GL63	52	124	Left ODMDS with hull open		4/4/2014	After successfully disposing material in the Release Zone of the ODMDS, the scow GL63 encountered hydraulic problems with the closing mechanism. As instructed by GLDD, the towing tug made attempts to circle inside of the ODMDS limits while concurrently resolving the hydraulic problem. Due to adverse weather conditions (5-7 foot swells and high winds) acting on the light scow, the GL63 transited outside of the ODMDS limits two times before the hull was completely closed.
3/30/2014	GL63	53	134	Left ODMDS with hull open		4/1/2014	On Sunday March 30, 2014 at approx. 1346hrs the scow GL63 exited the ODMDS with the hull status reading 'OPEN.' The scow was fully closed at approx. 1348hrs. The Tug was headed North to exit the ODMDS when the Tug realized that the scow was not completely closed. The Tug turned west and then south to return to the ODMDS. The scow completely closed approx. 2mins after exiting the ODMDS. Load 134 was the first disposal since the completion of hydraulics repair on the GL63. The issue was not related to the scow hydraulics and appears to have been an issue with the signal communication between the tug and scow. The attached draft plot shows that the draft decreased approx. 0.9ft while outside of the ODMDS. This is attributed to the scow completely closing and resting higher in the water.
4/2/2014	GL63	55	140	Left ODMDS with hull open		4/25/2014	Wednesday April 2, 2014, the Scow 63 (Load 140) and Scow 702 (Load 142) returned from the ODMDS with the scow in the open position. After the disposal, the scows were not able to be closed and the conditions at the ODMDS were too rough to get personnel on board the scow to manually close the scow. Both scows sailed around the ODMDS multiple times and were empty upon transiting back to the Channel. Scow 63 is currently at the dock to have the hydraulic oil changed. Valves in the engine were clogged causing the malfunction that would not allow the scow to close.

Note: Draft loss calculated between time when the dredge left the channel limits and the highest point of draft loss before disposal.

Note: Avg. draft changes from 17.3 to 11.2 between 05:04 and 05:05 GMT because of aft draft sensor.

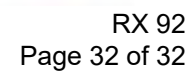
4/2/2014	GL702	65	142	Left ODMDS with hull open		4/4/2014	Wednesday April 2, 2014, the Scow 63 (Load 140) and Scow 702 (Load 142) returned from the ODMDS with the scow in the open position. After the disposal, the scows were not able to be closed and the conditions at the ODMDS were too rough to get personnel on-board the scow to manually close the scow. Both scows sailed around the ODMDS multiple times and were empty upon transiting back to the Channel. Scow 702 appears to have had an intermittent engine issue preventing the engine from starting remotely in order to close the scow.
4/3/2014	GL701	27	151	Loss of Draft > 1'	1.2	4/8/2014	Yesterday April 3, 2014 during the transit of Load 151 Scow 701 to the ODMDS, the scow draft changed approx. 1.2'. The scow departed the Channel at approx. 1202hrs with an average draft of 14.3' and entered the release zone at the ODMDS at approx. 1508hrs with a draft of 13.1'. We have reviewed this incident and determined that the draft loss was water lost through the green valves. Our updated filling procedures (limited overflow) result in slightly more ponded water in the scow when it is shipped to the ODMDS. Rougher seas outside of the Channel occasionally cause some water to escape through the skimmer's. Subsequent loads yesterday and today have not had any issues. The scow 701 was tested and inspected today and has checked out.
4/6/2014	GL701	35	?	Loss of Draft > 1'		4/8/2014	Confusion with KTR Load 151. It is either DQM 22 or 35
4/15/2014	GL702	88	194	Left ODMDS with hull open		4/17/2014	Yesterday, Tuesday April 15, 2014 after the disposal of Load No.194, Scow 702 had to be towed back into the Channel in the open position so that personnel could safely board in order to manually close the scow. We requested that the tug and scow circle the ODMDS several times to ensure that no residual material remained in the scow prior to transiting back to the channel. We have determined that there is a programming issue with the communications in the scow PLC that is causing the computer to reset after the scow is open. Resetting of the computer requires the scow to be boarded in order to be closed.
4/16/2014	GL64	1	?	Left ODMDS with hull open		8/7/2014	NEED CTR INPUT
4/18/2014	GL702	93	205	Left ODMDS with hull open		4/23/2014	The hull status and draft readings indicate successful placement of material in the ODMDS Release Zone limits. After placement, the towing tug Captain was unable to close the scow 702 remotely. Thinking the issue needed to be resolved with personnel boarding the scow, the towing tug Captain began towing the scow to calmer water for safe boarding. While in transit to calmer water, the towing tug Captain remotely cycled through the closing procedures again. The additional attempt(s) reset the system and the scow closed completely. As shown in the attached plot, the drafts leaving the ODMDS remain consistent with an open scow maneuvering at slow speeds in offshore conditions. When the scow finally closes and seals tighten (indicated by the red dot), the tug and scow pick up speed which changes the draft and heave characteristics again.
4/20/2014	GL701	60	209	Left ODMDS with hull open		4/23/2014	After successfully disposing material in the ODMDS Release Zone at 2:58 a.m., the tug Sarah Damm crew thought the scow was completely closed and exited the ODMDS limits. The crew considered the level of pressure in the hydraulic system as enough to ensure a completely closed scow. At this time, the tug Sarah Damm towed the scow 701 back to the Spider Barge. While the method of monitoring scow pressure is typically a good indicator of a closed hull, it was not in this case. The limit switch, which indicates the hull status per DQM, was not triggered under the target pressure observed by the tug crew. The crew has been instructed to utilize the DQM hull status indicator instead of the scow's hydraulic pressure from now on. Looking at the attached draft plots, the material was successfully released in the ODMDS Release Zone. The draft values after disposal are consistent with a partially open and empty scow maneuvering at various speeds back to the Channel.
4/23/2014	GL701	66	?	Loss of Draft > 1'		4/25/2014	NEED CTR INPUT
4/23/2014	GL701	67	?	Left ODMDS with hull open		4/25/2014	NEED CTR INPUT
4/28/2014	GL702	110	242	Loss of Draft > 1' & hull open		5/1/2014	Due to the 1 foot of draft loss, the GL 702 was briefly taken out of service yesterday, April 28, 2014. The hydraulic system was checked out and, as an additional precaution, the scow was water tested at the Spider Barge. Both system checks yielded normal results. Upon further review of this trip, please note the OPEN hull status outside of the ODMDS limits. After successfully disposing the material within the ODMDS Release Zone limits, the towing tug captain attempted to tow in a circular pattern. This circle pattern has become a policy initiated by GLDD to ensure tugs have enough time and space to close the scow given an unexpected circumstance could arise (i.e. dump box communication loss, PLC issue, etc.). While attempting this pattern, the towing tug captain noticed the towing bridle was in danger of being caught between the hull of the tug and the hull of the scow. To prevent any damage to the bridle or either vessel, the captain altered his course to the North. Upon doing so, the towing tug and scow left the ODMDS limits. As soon as the tug captain had safely repositioned the two vessel, the scow was closed. As shown in the attached draft plot, the load was completely disposed within the ODMDS Release Zone limits. Draft
5/23/2014	GL63	57	290	Left ODMDS with hull open		6/3/2014	After successfully disposing the scow load in the Release Zone of the ODMDS, the towing tug made a large loop while trying to close the scow GL 63. The Tug followed the required troubleshooting procedures but could not regain communications between the scow and the dump box. The tug towed the GL 63 to dock 154 at Port Miami for further investigation. It has been determined that there was a malfunction with the dump box. The dump box has been taken out of service until the issue can be repaired.

USACE Email to EPA 4/25/2014: As a result of multiple non-compliance loads, the Contractor was notified via serial letter dated April 23, 2014 that the scows require immediate attention and correction to the contractual and permit requirements or receive an unsatisfactory interim performance. Subsequently, this item was discussed with the Contractor at a meeting on 04/24, where they admitted their concern with the amount of non-compliant loads as well. They presented their plan to pull the scows out one by one and verify if their mechanical and electrical systems are operating as required. They also are going to start circling within the ODMDS boundary after release to ensure the doors are closed before exiting the ODMDS. They plan on removing the scows GL64 and GL701 to check on skimmers and other mechanical items this weekend. The Corps will monitor the plan of action to correct these deficiencies, and take further steps possibly penalizing the Contractor if non-compliance keeps reoccurring. I will keep you informed as I receive information.

5/27/2014	GL66	18	340	Left ODMDS with hull open		6/3/2014	After successfully disposing the scow GL66 in the Release Zone of the ODMDS, the Tug Indian Dawn was not able to remotely close the scow prior to exiting the ODMDS. In order to service an open scow, it must be brought inside to calmer waters in order to safely get personnel on board to look into the issue. The scow GL 66 was immediately towed to the dock at Port Miami for examination. It was discovered that the magnetic pick-up on the engine had come unplugged, causing the engine to shut down. The connection was secured and the scow was tested remotely by the Indian Dawn and operated normally.
5/29/2014	GL63	59	?	Left ODMDS with hull open		6/10/2014	Could not find email.
5/29/2014	GL66	19	344	Left ODMDS with hull open		6/10/2014	After successfully disposing the scow GL66 in the Release Zone of the ODMDS, the Tug Indian Dawn was not able to remotely close the scow prior to exiting the ODMDS. In order to service an open scow, it must be brought inside to calmer waters in order to safely get personnel on board to look into the issue. No resource impacts are anticipated. The GL66 was light upon exiting the ODMDS limits. The towing Tug circled within the ODMDS limits after opening the scow in the Release Zone, ensuring that the scow was clear of material. The attached draft track plot shows that the GL 66 draft upon exiting the ODMDS limits and entering the Channel limits remained constant. It has been determined that the limit switch malfunctioned, preventing the scow to close, and some additional wiring became loose. The scow GL 66 was immediately removed from service and towed to the dock at Port Miami for examination. The malfunctioned limit switch is currently being replaced. Also, the loosened wiring is being reinstalled and secured. Upon completion of repairs, the scow will be open/close tested and emergency open/closed several times. Once the scow proves to consistently open and close it will return to service.
6/5/2014	GL63	78	407	Left ODMDS with hull open		6/10/2014	After successfully disposing the scow GL63 in the Release Zone of the ODMDS, the towing Tug was not able to gain communications with the scow to remotely close the scow prior to exiting the ODMDS. In order to service an open scow, it must be brought inside to calmer waters in order to safely get personnel on-board to look into the issue. The communications box on the scow was not connecting with the communications box on the Tug. It appears that there was a charging issue with the batteries for the communication box on the scow. The scow GL 63 was immediately removed from service and towed to the dock at Port Miami for examination. The batteries have been recharged, the scow has been cycled with the remote dump box and is working properly.
6/12/2014	Liberty Island	30	?	Initiation of disposal outside of release zone			Liberty Island Load # 66 appears to have an open hull status within the ODMDS boundary, but outside of the release zone. It appears to have happened after a compliant release, and may have been a ballast occurrence. (from Gavin's email)
6/18/2014	GL702	217	542	Loss of Draft > 1'	1.2	6/19/2014	This morning, June 18, 2014 during the transit of Load 542 (Scow 702) to the ODMDS, the scow draft changed approx. 1.2'. The scow departed the Channel with an average draft of 14.8' and entered the release zone at the ODMDS with an average draft of 13.6'. We have reviewed this incident and determined that the draft loss was water lost through the green valves. Our filling procedure (limiting overflow) result in slightly more ponded water in the scow when it is shipped to the ODMDS. Rougher seas outside of the Channel, as encountered this morning, occasionally cause some water to escape through the skimmers. Previous and subsequent loads yesterday and today have not had any issues. Sea state during the tow (00:00 to 04:00) as reported by the towing tug was 4-6ft.
6/21/2014	GL65	7	582	Left ODMDS with hull open		6/25/2014	After successfully disposing the scow GL65 in the Release Zone of the ODMDS, the towing Tug Indian Dawn called north on the typical route to exit the ODMDS limits while engaging the scow dump box to the "close" position. Upon approaching the limits of the ODMDS, the Captain realized that even though the dump box read "close" that the scow tracking computer did not yet read "closed." The Captain immediately turned back into the ODMDS until the scow tracking computer read "closed." The time to close the GL 65 seems to be longer than the time to close the GL63 and therefore, the Tug Captain cannot rely on average time to close the scow as an indication of sail time to the ODMDS limits. The Captain has been instructed that he must use the indication from the scow tracking computer that reads that a scow is "closed," as his indication that the scow can exit the ODMDS limits. The close reading will only occur when the pressure limit switch in the scow has reached the setting that confirms that the scow is completely closed.
7/1/2014	GL701	207	645	Loss of Draft > 1'	~1.5	7/8/2014	Please find attached the draft track plot for Load No. 127 (consecutive Load No.645) on 07/01/14. This load was not reported as the draft loss in transit did not exceed 1ft. The last point at the end of the Channel is ~13.4ft and the first point at the Release Zone is ~12.4ft.
7/12/2014	GL701	242	751	Loss of Draft > 1'	1.1	7/16/2014	The scow departed the Channel with an average draft of 10.6' and entered the release zone at the ODMDS with an average draft of 9.5'. We have reviewed this incident and determined the draft loss was water lost through the skimmers. Our filling procedure (limiting overflow) results in more ponded water in the scow when it is shipped to the ODMDS. Rougher seas outside of the Channel occasionally cause some water to escape through the skimmers. Due to the "Supermoon" this weekend the seas were unusually adverse. Previous and subsequent loads have not had any issues.
8/4/2014	GL64	5	785	Loss of Draft > 1'	1.1	8/7/2014	The scow departed the Channel with an average draft of 15.5' and entered the release zone at the ODMDS with an average draft of 14.4'. We have reviewed this incident and determined the draft loss was water lost through the skimmers. Our filling procedure (limiting overflow) results in more ponded water in the scow when it is shipped to the ODMDS. Rougher seas outside of the Channel occasionally cause some water to escape through the skimmers. Seas were reportedly 3-4' and building. Previous and subsequent loads have not had any issues. On August 4, 2014 during the transit of Load 785 to the ODMDS Release Zone, the draft of the scow 64 changed by approximately 1.1'. Due to this trip occurring at night, additional investigation will be held with night managers this evening to determine the root cause of the draft loss. Previous and subsequent loads have not had any issues.
8/12/2014	GL64	7	852	Loss of Draft > 1'	2.3	8/13/2014	The scow departed the Channel with an average draft of 15.3' and entered the release zone at the ODMDS with an average draft of 13.0'. The scow was immediately taken out of service for assessment. While at the dock today, the scow seal was evaluated and no issues found. It is suspected that the hydraulic issue may have been caused by a leaking valve or an obstruction in a check valve in the hydraulic system. We are continuing to investigate the cause of the draft loss and will update with our findings. The previous load for scow GL64 was Load No.788, which was disposed without any issues.
8/28/2014	GL701	267	984	Loss of Draft > 1'	1.1	9/3/2014	Load No.267: Draft was 12.8' upon exiting the Channel and 11.8' upon entering the ODMDS Release Zone. Average draft loss was 1.0'. Please also note, that even though draft loss was not in excess of 1.0' while in transit to the disposal during these loads, the scow 701 was immediately pulled out of service on 8/29/14 upon analysis of the tracking data from the previous day. A dive plan was submitted on 8/29/14 for investigation of the seal of the scow 701. The dive revealed that a portion of the seal on the stern of the scow was damaged. The scow GL 701 departed the site yesterday (9/2/14) for shipyard repairs.

9/2/2014	GL64	8	1012	Loss of Draft > 1' & hull open	1.7	9/4/2014	After successfully disposing the scow GL64 in the Release Zone of the ODMDS, the towing Tug Kendall Hebert was towing the scow from south to the north in the ODMDS while attempting to close the scow. The Tug Kendall Hebert was experiencing interruption of the ODM positioning system which displays the ODMDS limits and tug/scow real-time position. The Tug was in contact with the system administrator to correct the update issue. During this time, as the tug and scow were sailing north, the Tug Indian Dawn and the scow GL 63 entered the ODMDS headed for disposal in the Release Zone. The Tug Kendall Hebert was maneuvering to ensure avoidance with the Tug Indian Dawn and GL 63. As the Tug Kendall Hebert completed this maneuver, the scow was caught by current and pushed outside of the ODMDS limits. Due to the issue with the positioning update, the Tug Captain did not have his real-time position as the Tug and scow approached the ODMDS limits.	The scow departed the Channel with an average draft of approx.9.7' and entered the Release Zone of the ODMDS with an average draft of 8.0'. The scow was immediately taken out of service for assessment. This is the first load for scow GL 64 since it was taken out of service on 8/12/14. Since that time, the scow has been undergoing evaluation, repair and water testing to determine the cause of draft loss. New check valves for the hydraulic system were installed and the scow was water tested again on Monday, September 01, 2014. The tow to the disposal area from the Spider Barge is approx. 1.5 hours to 2 hours. The water test was duration was approx. 3 hours during which the scow held draft and pressure, so the scow was put back in service.
9/17/2014	GL701	282	?	Left ODMDS with hull open		9/22/2014	NEED CTR INPUT	
9/28/2014	GL701	312	1334	Loss of Draft > 1'	1.49	9/30/2014	The scow departed the Channel with an average draft of approx.11.92' and entered the Release Zone of the ODMDS with an average draft of 10.43'. It is believed that rock debris may have been stuck in the seal of the scow during this load. Recent previous loads and subsequent loads (attached) did not have any issues. The scow maintained the required hydraulic pressure during all loads. The towing tug nor the Spider Barge reported any problems. Visual inspection of the scow seal did not reveal any concerns.	
10/4/2014	GL65	24	?	Loss of Draft > 1'		10/9/2014	NEED CTR INPUT	
10/4/2014	GL65	25	1441	Loss of Draft > 1'	1.7	10/6/2014	The scow departed the Channel with an average draft of approx. 12.64' and entered the Release Zone of the ODMDS with an average draft of 10.93'. It is believed that rock debris may have been stuck in the seal of the scow during this load. Previous loads and subsequent loads did not have any issues. Visual inspection of the scow seal did not reveal any concerns.	
10/4/2014	GL701	334	1439	Loss of Draft > 1'	2.1	10/9/2014	Please find attached draft track plot for Scow 701 GLDD Load No.1439 (DDM Load No.334) disposed on 10/04/14. The draft reading upon exiting the Channel was 6.09'. The draft reading upon entering the ODMDS Release Zone was 5.22'. The draft loss while in transit did not exceed 1ft (draft change was .88').	
10/16/2014	GL702	458	?	Loss of Draft > 1'		10/22/2014	NEED CTR INPUT	
10/17/2014	GL63	407	1549	Loss of Draft > 1'	1.45	10/20/2014	The scow departed the Channel with an average draft of approx.14.52' and entered the Release Zone of the ODMDS with an average draft of 13.07'. Previous loads on October 17, 2014 did not have any issues (attached). After Load No.1549, scow GL 63 was sent to the Dredge 55 as a relief scow. The scow is currently at the Dredge 55 and will be taken immediately to the ODMDS for disposal after ship traffic this evening. After disposal of material currently loaded in the scow, GL 63 will be taken out of service for inspection. While at the Dredge 55, the GL 63 has been holding the required hydraulic pressure and draft. It is unclear at this time the cause of the draft loss for Load No.1549.	
10/21/2014	GL701	366	1570	Loss of Draft > 1'	1.08	10/24/2014	The scow departed the Channel with an average draft of approx.13.28' and entered the Release Zone of the ODMDS with an average draft of approx.12.20'. Initial investigation has determined the scow was shipped earlier than normal due to upcoming ship traffic. Ponded water in the scow had not been drained all the way to the skimmer level. During transit, the excess ponded water was lost through the skimmers and resulted in the 1.08' of average draft loss. Previous and subsequent loads do not show draft loss in excess of 1'. Since the draft loss, site management has reminded the Spider Barge operators to allow for adequate time to skim ponded water from the scow prior to departing for the ODMDS.	
10/22/2014	GL63	411	1580	Loss of Draft > 1'	1.31	10/24/2014	During load no. 1580, the scow departed the Channel with an average draft of approx.15.32' and entered the Release Zone of the ODMDS with an average draft of 14.01'. Previous, intermediate and subsequent loads did not exceed 1' in draft loss. Hydraulic systems, mechanical systems and seals were inspected and checked out. The draft loss for loads 1580 and 1586 has been determined to be caused by loss of ponded water through the skimmers during transit.	
10/22/2014	GL702	470	1569	Loss of Draft > 1'	1.9	10/24/2014	At the end of the day (load no. 1569), the scow departed the Channel with an average draft of 11.63' and entered the Release Zone of the ODMDS with an average draft of 9.73'. Once the data was analyzed and determined to be out of compliance again, the scow was taken out of service for inspection. Inspections continue at the time of this notification. No cause for draft loss has been identified at this time.	
10/21/2014	GL702	467	1562	Loss of Draft > 1'	2.03	10/22/2014	The scow departed the Channel (load no. 1562) with an average draft of approx.10.57' and entered the Release Zone of the ODMDS with an average draft of 8.54'. Prior to QA'd data becoming available, the scow was again loaded (load no. 1564) and transited to the ODMDS for disposal. Draft loss during the next two loads (no. 1564 & 1566) did not exceed 1', so the scow remained in rotation as the previous draft loss seemed to be resolved or was due to loss of ponded water through the skimmers in offshore seas.	
10/23/2014	GL63	414	1586	Loss of Draft > 1'	1.12	10/24/2014	During load no. 1586, the scow departed the Channel with an average draft of approx. 15.22' and entered the Release Zone of the ODMDS with an average draft of 14.10'. Previous, intermediate and subsequent loads did not exceed 1' in draft loss. Hydraulic systems, mechanical systems and seals were inspected and checked out. The draft loss for loads 1580 and 1586 has been determined to be caused by loss of ponded water through the skimmers during transit.	
10/27/2014	GL65	28	1607	Left ODMDS with hull open		10/27/2014	After successfully disposing the scow GL65 in the Release Zone of the ODMDS, the towing tug reported that the scow hull closed, but that the scow engine shut off before the scow hydraulic pressure had reached the limit that triggers the hull sensor to read "CLOSED." The scow hull status read "OPEN" during transit back to the Spider Barge. The scow GL 65 was towed alongside the Spider Barge for assessment. The assessment revealed a loose connection between the engine and the scow PLC computer which relays the pressure readings to the hydraulic system. With the connection loose, the scow engine was receiving intermittent readings and would time out and shut down. While alongside the Spider Barge, the scow GL 65 was cycled several times and properly pressured up to reach the "CLOSED" status on the sensor reading.	
10/28/2014	GL65	30	1611	Left ODMDS with hull open		10/31/2014	After successfully disposing the scow GL65 in the Release Zone of the ODMDS, the towing tug reported that the scow hull closed, but that the scow engine shut off before the scow hydraulic pressure had reached the limit that triggers the hull sensor to read "CLOSED." The scow hull status read "OPEN" during transit back to the Spider Barge. No resource impacts are anticipated as the scow was in the closed position and was light with a constant draft of approx. 4.6ft. Scow 65 taken out of rotation for assessment for Open Hull Notification of Load No.1607. Loose connection preventing scow from fully pressuring up to trigger limit switch to read "CLOSED."	

10/28/2014	GL65	32	1620	Loss of Draft > 1'	1.1	10/31/2014	The scow departed the Channel with an average draft of approx.14.6' and entered the Release Zone of the OODMDS with an average draft of 13.5'. Previous load on October 28, 2014 did not have any issues (attached). After Load No. 1620, the scow was taken out of rotation for assessment. Connections from scow PLC computer to the engine were in order and no hydraulic leaks were found. Further investigation into the forward compartment revealed two check valves on the hydraulic system which were 3/4" and 1/2" open. The valves were secured in the fully open position to allow more pressure in the hydraulic system to seal the scow. These valves are typically held open with wire so that they cannot vibrate closed during scow operations. Two worn hydraulic fittings were also changed on the one of the valves. The scow was then successfully water tested and placed back in to service.
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.Docket No. MPRSA-04-2019-7500

Exhibit RX 93



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

DEC 19 2014

Mr. Eric Summa
Environmental Branch Chief
Planning Division
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Summa:

This letter is in regard to your September 26, 2014, request for a two-year extension to the Environmental Protection Agency's 2011 concurrence on the suitability for ocean disposal of dredged material from new work and maintenance dredging at Miami Harbor pursuant to Section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA). Your letter included a MPRSA Section 103 Evaluation Report for Miami Harbor (Report) that included a Tier I review of historical sediment testing of the project, spills since the testing was conducted and non-dredging changes in the harbor. On October 23, 2014, the EPA requested additional information on the status of dredging operations, compliance history, and disposal operations at the Miami Ocean Dredged Material Disposal Site (ODMDS). In response to this request, the EPA received a revised Report from your office by letter dated November 17, 2014.

Based on the review of the information provided by the U.S. Army Corps of Engineers (USACE), the EPA conditionally concurs with the suitability of the material for ocean disposal for a six-month period. The information you provided indicates multiple instances of violations of the Construction Dredging Phase III Contract Specifications (Contract Specifications) for the disposal operations underway for the Miami Harbor Phase III Deepening and maintenance dredging projects. While the EPA recognizes that the USACE is requesting concurrence for a two-year period, our concurrence is limited to a six-month period during which the USACE and the EPA can evaluate whether the compliance issues have been addressed and whether additional conditions or other appropriate measures may be warranted prior to the completion of the project.

Per the information provided in your revised Report, the USACE has identified forty-nine instances of non-compliance related to disposal operations at the Miami ODMDS. We understand that many of these instances violated sections 3.4.2.1, 3.4.2.2, 3.4.2.3 and 3.4.9 of the Contract Specifications. Violations include misplaced materials, excessive leakage from disposal vessels and leaving disposal doors open following departure from the ODMDS. A majority of the non-compliance events involve excessive leakage from the disposal vessel. The EPA is concerned about these violations in consideration of the valuable live bottom resources in the vicinity, including federally-listed species protected under the Endangered Species Act. We understand and appreciate from the information provided that your contractor plans to take steps to address the non-compliance issues. The EPA's concurrence is conditioned on compliance with all of the requirements of the Contract Specifications, including the specific provisions referenced above.

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The information provided in the revised Report also indicates that disposal operations for this project are not being implemented as modeled. Per section 7 of the revised Report, we appreciate that the USACE's plans to continue conducting quarterly bathymetric surveys of the Miami ODMDS. The EPA's concurrence is conditioned upon the continuation of the quarterly bathymetric surveys. We anticipate these surveys will provide the data necessary for the USACE to manage the dredging contractor's disposal operations to achieve a more even distribution of dredged material throughout the release zone. Adherence with the modeled disposal operations will help ensure achieving success in our joint management objective of potentially isolating the area within the ODMDS with elevated PCB sediment concentrations and limiting impacts from disposal to the seafloor within the ODMDS boundaries.

Pursuant to MPRSA section 104(a)(4), ocean disposal permits (and contracts in the case of federal permits) must be conditioned to assure consistency with the approved Site Management and Monitoring Plans (SMMP). The Miami ODMDS SMMP was revised in September 2011, and specifies among other requirements the USACE's reporting requirements for non-compliance events. We request your cooperation in bringing any additional non-compliance issues to our attention consistent with the SMMP.

In addition, the EPA recommends the USACE convene a technical committee (e.g., represented by industry, regulatory agencies, and the USACE's Engineer Research and Development Center) to discuss how to improve scow operations and other aspects of the project to help ensure compliance with the requirements of MPRSA. We would be pleased to participate in this effort, and suggest you convene such a group before the end of January.

The EPA's concurrence with the suitability of the material for ocean disposal is valid for six months from the date of this letter. During this six-month period, we are committed to work cooperatively with your office to monitor compliance and ensure the successful implementation of MPRSA for the Miami ODMDS. If you have any questions or there are any issues you wish to discuss, please contact me at (404) 562-9345, or have a member of your staff contact Mr. Chris McArthur of my staff at (404) 562-9391.

Sincerely,



James D. Giattina
Director
Water Protection Division

.Docket No. MPRSA-04-2019-7500

Exhibit RX 94



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

Planning and Policy Division
Environmental Branch

FEB 04 2015

Mr. James D. Giattina
Water Protection Division Director
U.S. Environmental Protection Agency
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303

Mr. Giattina,

Thank you for your recent letter regarding the dredged material management practices and associated concurrence pursuant to Section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA). The U.S. Army Corps of Engineers (Corps) understands that the Environmental Protection Agency (EPA) has granted a 6-month conditional concurrence for the ocean disposal of Miami Harbor Deepening dredged material which will be valid through June 19, 2015. During this time, both agencies are evaluating whether the compliance issues have been addressed and whether additional conditions are necessary for further extension of the concurrence. The Corps and the contractor, Great Lakes Dredge & Dock Company, LLC (GLDD), take non-compliance concerns seriously and have daily communications regarding ocean disposal issues. The compliance concerns include misplaced materials, leakage from disposal vessels, and leaving disposal doors open following departure from the Offshore Dredged Material Disposal Site (ODMDS). The Corps' perspective regarding the compliance concerns are discussed below.

Misplaced Materials: There were two instances where the Dredging Quality Management (DQM) tracking indicates that disposal of material was initiated outside of the release zone, but within the boundaries of the ODMDS in March of 2014. Situations such as these are characterized as "misdumps" per the contract specifications for this project which have been coordinated with your office. All tug boat captains responsible for disposal actions at the ODMDS went through additional environmental and procedural training to address performance deficiencies and certain captains were subsequently removed from the project by GLDD. There have not been any other non-compliance events regarding misplaced materials. The Corps believes GLDD appropriately handled misplacement and that the incidents were isolated events that have been remedied.

Monitoring for Excessive Leakage (>1 foot): As previously coordinated, the Corps is tracking all incidents and requires detailed explanations from the contractor for every event where draft loss is recorded in excess of one foot. The attached spreadsheet is an updated version from the one transmitted to your office in November of 2014 and contains all instances of draft loss from scows recorded in excess of one foot while in transit to the ODMDS from the dredging area. Monitoring for this requirement begins at the end of the dredging area, or buoy

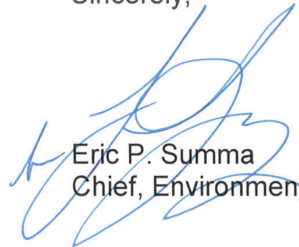
G-1. During evaluation of project compliance, it became apparent that the Corps' definition of excessive leakage varied among dredging projects throughout the South Atlantic Division of the Corps. The Jacksonville District office, in coordination and cooperation with your office, developed a conservative notification threshold for the Miami Deepening Construction project for transits demonstrating draft loss in excess of 1 foot. Such incidents also trigger review of additional load specific information, weather conditions, and disposal logs for potential issues. The contractor has taken a multitude of actions to address the draft loss incidents, and the Corps has requested the contractor provide a more detailed compilation of such measures in our January 30, 2015, letter to GLDD also attached for reference, and a response is expected by February 11, 2015. Currently no overflow occurs when filling the scows with material, and as a result these scows have an increased quantity of water. The Contractor implemented this measure as a result of observed sediment deposition on adjacent resources suspected to be from fine grained materials remaining in dredge slurry suspension and being subsequently overflowed during scow loading. The reduction in overflow is an adaptive management technique implemented to protect the environment during dredging operations and minimize the fine grained sediment from disbursement outside of the dredging area. The increase in water per scow load has led to many of the draft loss incidents reported. As a result, the contractor has taken additional measures including; removing scows from service and inspecting scow seals, diver checks of the scows' seals, closing skimmer valves during transit, modifying skimmer heights, changing tug-scow combinations, transiting during minimal traffic interference, holding scows until offshore weather conditions improve, replacing seals, and adding newer scows to the project. Our continued goal is to share all relevant information with your office and our Engineer Research and Development Center (ERDC) so that we might collectively examine the occurrences and corrective measures implemented to gain a better understanding of the issues and perhaps offer improved practices which minimize leakage.

The Site Management and Monitoring Plan (SMMP) requires the user to notify EPA within 24 hours of a potential draft loss in excess of one foot. Our contract specifications require notification from the contractor within 12 hours to ensure a timely turnaround by the Corps to EPA. We have had multiple discussions with the contractor regarding this requirement and their unsatisfactory performance to date. We have every expectation that timeliness will be improved.

Disposal Doors Open After Leaving ODMDS: As you are aware, our contract specifications require that all contractors close hull doors prior to leaving the ODMDS boundaries. This requirement stems from various safety and environmental protection measures. Through careful examination of the contractors operations during this project, we have found that the monitoring equipment has indicated non-compliance with this contract specification 33 times out of the approximate 2,958 loads since the project began. Although examination of each incident shows no potential environmental impact from misplacement of material outside the boundaries of the release zone, compliance is essential. As communicated by the contractor, many of these incidents are a result of operator error, hydraulic failure, mechanical issues, and/or computer signaling issues with remote closure devices. As with all incidents, detailed explanations are provided in the updated tracking spreadsheet. During hydraulic or mechanical failures, a remote close feature referred to as "Emergency Close" or "E-Dump" is initiated. Remote closure of hull doors is observed to be working, but does not allow for full pressurization of hull doors to the 3,000psi to 5,000psi, which as a result does not signal a "closure". DQM tracking of such events therefore indicates the hull doors remain open upon exiting the ODMDS. The Corps has requested further assessment of past incidents which also correlate with E-Dumps and future tagging of such instances.

Our goal on this project continues to be compliance with all contract and permit requirements and all applicable laws and regulations, in particular those related to environmental protection. We intend to continue to examine all relevant information in coordination with your office and continue to work closely with the contractor to ensure improved performance and contract compliance.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Eric P. Summa', is written over the typed name and title.

Eric P. Summa
Chief, Environmental Branch

Enclosure

.Docket No. MPRSA-04-2019-7500

Exhibit RX 95
Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 96
Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 97
Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 98

Pearce, Jennifer

From: Summa, Eric P SAJ <Eric.P.Summa@usace.army.mil>
Sent: Friday, May 29, 2015 1:05 PM
To: McGill, Thomas
Subject: RE: Miami Harbor Spec Excerpts Pertaining to Scow Draft Loss.docx (UNCLASSIFIED)
Attachments: 13-C-0015 Miami Harbor Plan Sheets G-03 and C-01.pdf

Classification: UNCLASSIFIED

Caveats: NONE

Tom,

Please see the attached project plan and the legend which documents dredging areas. I hope you find this helpful. We begin to measure at the buoy labeled "GLB1" on the second page.

This historical application of the term has been adopted by our contractor and contractors throughout SAD.

We can go over this in greater detail when we discuss Monday.

We will see you at 3:30PM in your office.

Very Respectfully,

Eric P. Summa
Chief, Environmental Branch
Jacksonville District
(904)232-1665

-----Original Message-----

From: McGill, Thomas [mailto:McGill.Thomas@epa.gov]
Sent: Thursday, May 28, 2015 5:52 PM
To: Summa, Eric P SAJ
Subject: [EXTERNAL] RE: Miami Harbor Spec Excerpts Pertaining to Scow Draft Loss.docx (UNCLASSIFIED)

Thanks Eric. From our conversation I understand there may be additional information you provided the contractor that defined "dredging area", perhaps a "polygon" or some other type of visual. Have you been able to get your hands on that?

-----Original Message-----

From: Summa, Eric P SAJ [mailto:Eric.P.Summa@usace.army.mil]
Sent: Thursday, May 28, 2015 10:50 AM
To: McGill, Thomas
Subject: Miami Harbor Spec Excerpts Pertaining to Scow Draft Loss.docx (UNCLASSIFIED)

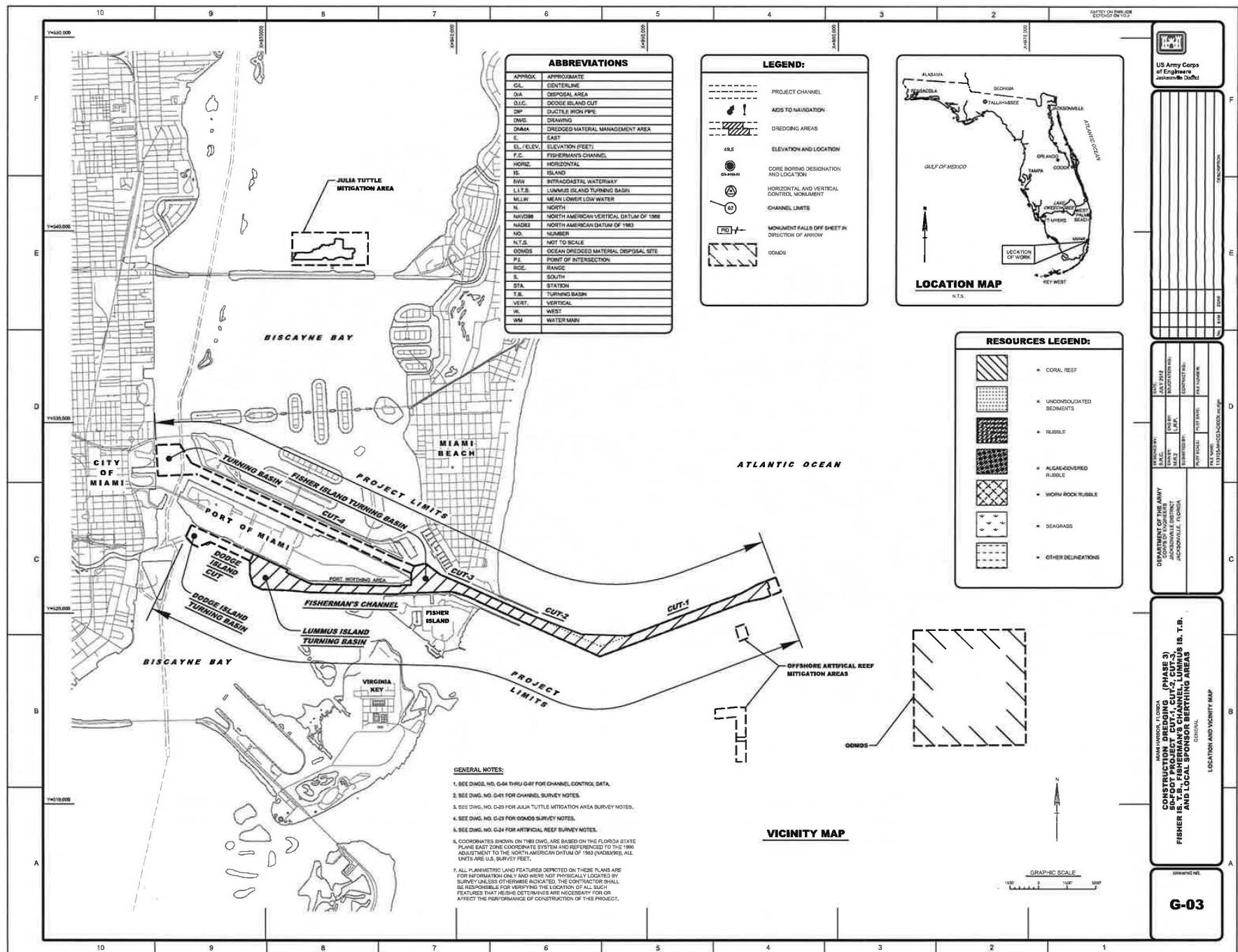
Classification: UNCLASSIFIED

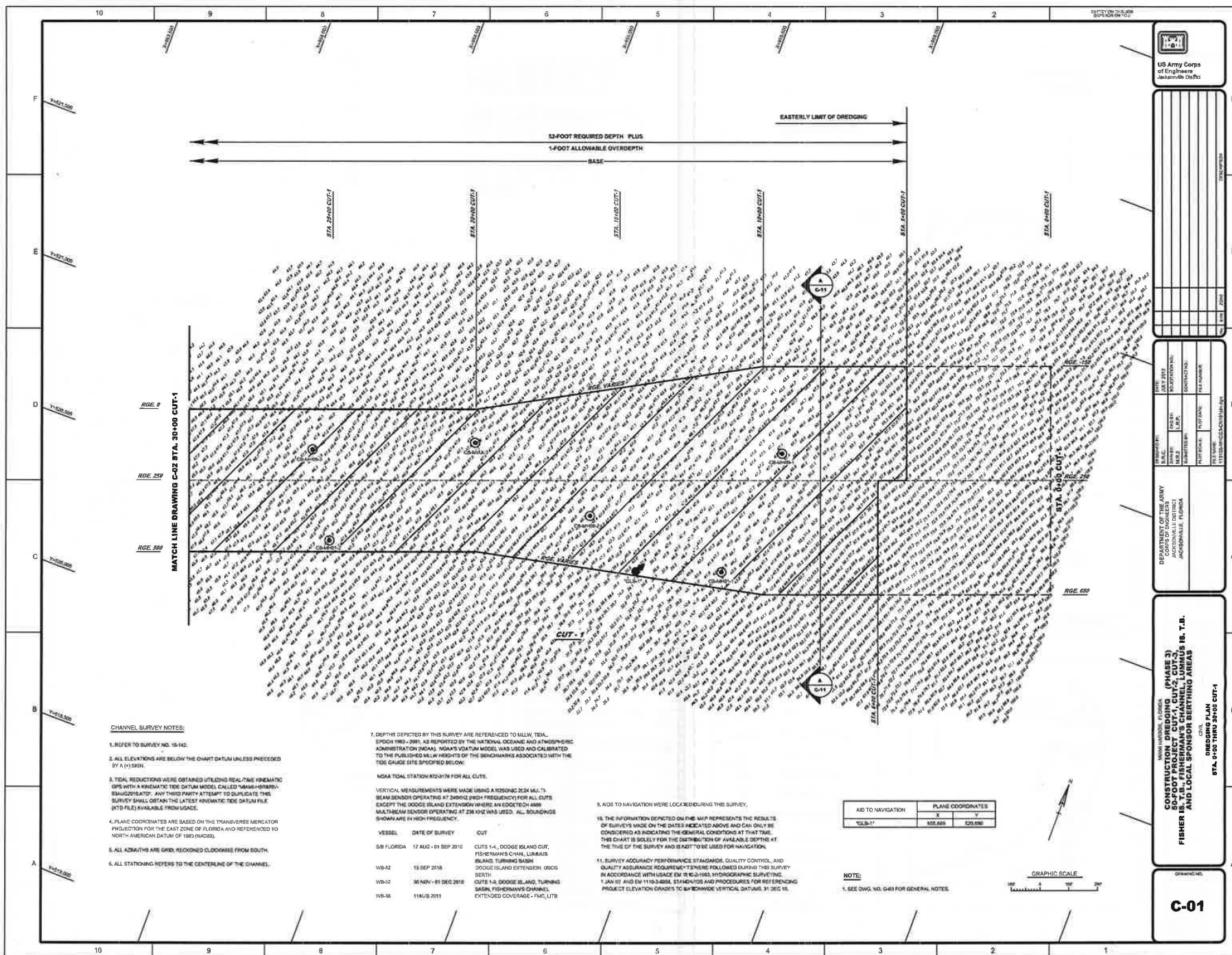
Caveats: NONE

See specs

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE





.Docket No. MPRSA-04-2019-7500

Exhibit RX 99

From: Montone, Michael G. SAD
Sent: Monday, June 01, 2015 11:26 PM
To: Summa, Eric P SAJ; Scerno, Deborah HQ
CC: Davis, Richard D (Dylan) SAD; Altera, Barbara B HQ@SAD; Paynes, Wilbert V SAD; Spinning, Jason J SAJ; Moore, Brooks W SAJ; Donaldson, Matthew B (Matt) SAJ; Bush, Eric L SAJ
Subject: Re: SAD seeking feedback from your meeting with EPA R4 (UNCLASSIFIED)

Eric,

Thank you for the thorough report! Mr. Lee had hoped to run into you at the social this evening. Earlier today he had stated his intention to reconnect with Mr. Giattina tomorrow (Tuesday) at 1530.? ? If that call is still on and if Mr. Lee needs additional perspective, is there a good time to catch you tomorrow?

Thanks!

Mike

Original Message

From: Summa, Eric P SAJ

Sent: Monday, June 1, 2015 11:02 PM

To: Montone, Michael G. SAD; Scerno, Deborah HQ

Cc: Davis, Richard D (Dylan) SAD; Altera, Barbara B HQ@SAD; Paynes, Wilbert V SAD; Spinning, Jason J SAJ; Moore, Brooks W SAJ; Donaldson, Matthew B (Matt) SAJ; Bush, Eric L SAJ

Subject: RE: SAD seeking feedback from your meeting with EPA R4 (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Hi Mike,

Interesting meeting with EPA, R-4 today. Meeting was in reference to a request for an extension of our 103 concurrence for the Miami Deepening project which is due to expire on 6/19/15.

Two issues of significance were discussed:

1. Whether or not an scow inspection protocol was necessary and appropriate for deployment -over the remaining life of the project- for those scows which lost one foot of draft or more (leaked) from the edge of the project out to the ODMDS. If a scow leaks over 1-foot beyond the project limits, just once, the contractor must perform an independent protocol inspection.

Background:

-Contractor bid on project which required no leaking and no overflow. Miami is an environment with coral and hard bottoms unique to mainland U.S.

-When dredged by the Texas cutter head, this project has a very high water-to-sediment ratio to reduce impacts on benthic resources.

-Dredging methodology of this sort cannot be performed without some leakage as the scows are not waterproof

-Scows are leaking in excess of 1% of the trips with over 3600 trips documented.

Action: Expressed discomfort with inspection of all scows after just once instance of leakage. Sought a "get well" plan for scows where a certain number of inspections could demonstrate reasonable assurance that leakage issue was resolved.

Resolution (tentative): Agreed with EPA that requirement for inspections for all future trips of each "Problematic Scow" MAY provide discretion to the contractor. It is interpreted by the EPA and the Corps that the contractor is required "to provide, on each subsequent trip for a problematic scow, an independent determination of what

approach they choose to take with regard to implementation of the protocol (inspections)". There is no requirement for how or how long. Documentation of this approach is to occur on the Daily Quality Report required pursuant to the contract specs.

2. The EPA would like the loss of draft measurement by the DQM system to begin at the point of loading and when the loaded scow begins to transit to the ODMS. Current interpretation of the spec is that the loss of draft measurement begin at the end of the project area. This interpretation results in many vessels losing their draft before leaving the project area. The approach should be re-visited.

Action: Cannot agree with the change at this stage. As the current project is underway with the interpretation of measurement at the end of the project area, changing now, (more than 3/4 through with the project), would likely result in a modification with change in costs by the contractor and could lead to termination for convenience as the sponsor could not bear the additional costs.

The change in this late stage could be very difficult to enforce as the contractor has been operating under different circumstances.

May lead to appearance that two federal entities are not in agreement.

Resolution (tentative): The Corps will not require different point of DQM measurement of the contractor, but will independently monitor draft loss at the point of transit to the ODMS rather than the limit of project area to learn how different dredging methodologies result in different draft losses through the remainder of the project, (the project has three dredges working simultaneously on-site, a clamshell, an excavator and a cutterhead). The collected information will be used to collaborate between R-4, SAD and ERDC to modify future dredged material transportation specs to:

- Allow the measurement at the point of scow loading (rather than the project limits sometimes miles from that location)

- Provide a reasonable expectation for draft loss dependent upon dredge methodologies, (the collaborative effort will focus on expected draft loss per methodology and expected water-to-sediment ratio. One foot loss is too arbitrary.

- Require a focused consideration on environmental harm, (as surrounding benthic environments matter and as lost material often ends up back in the channel)

The tentative resolutions above will be briefed to Mr. Giattina Tues, June 2nd.

Very Respectfully,

Eric P. Summa
Chief, Environmental Branch
Jacksonville District
(904)232-1665

-----Original Message-----

From: Montone, Michael G. SAD

Sent: Monday, June 01, 2015 5:23 PM

To: Summa, Eric P SAJ; Scerno, Deborah HQ

Cc: Davis, Richard D (Dylan) SAD; Altera, Barbara B HQ@SAD; Paynes, Wilbert V SAD

Subject: SAD seeking feedback from your meeting with EPA R4 (UNCLASSIFIED)

Importance: High

Classification: UNCLASSIFIED

Caveats: NONE

Eric/Deborah,

Any chance you are out of the meeting and will have a chance to back brief the SAD team this evening?

Thanks!

Mike

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

.Docket No. MPRSA-04-2019-7500

Exhibit RX 100

Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 101

Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 102

Withheld as CBI

.Docket No. MPRSA-04-2019-7500

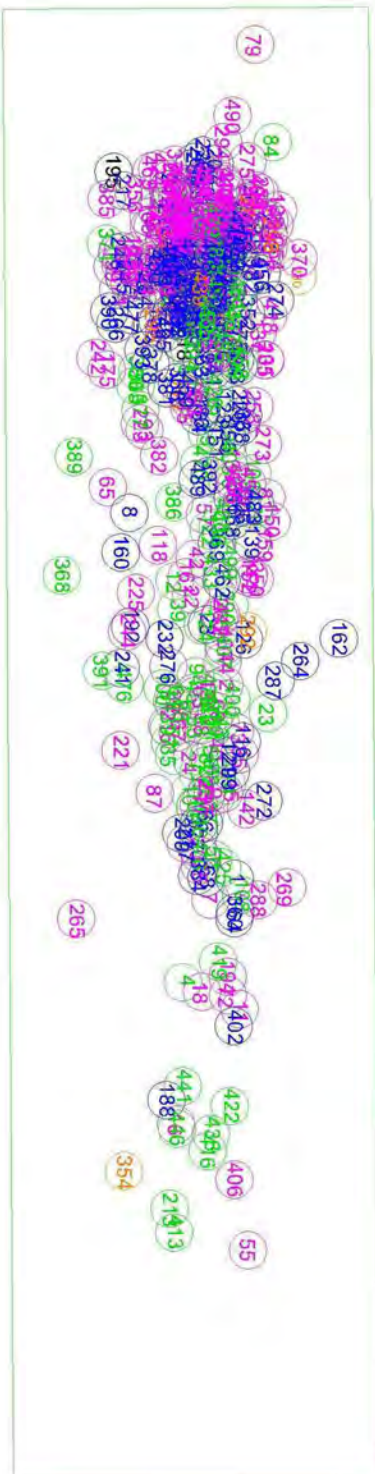
Exhibit RX 103

Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 104

Release Zone



Color Key

Scow 701	Scow 702	Scow 63	Scow 64	Scow 66
Blue	Magenta	Green	Black	Orange



PROJECT Miami Harbor Deepening Phase III Dredging		 GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING/ SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1515	DATE: _____ DRAWN BY: _____ CHECKED BY: _____ APPROVED BY: _____	
TITLE/SURVEY TITLE Release Zone Scatter Loads 1 - 499			SCALE: _____ SHEET: _____ TOTAL SHEETS: _____	

Release Zone



Color Key

- Scow 701
- Scow 702
- Scow 63
- Scow 64
- Scow 66
- Scow 65



PROJECT Miami Harbor Deepening Phase III Dredging		 GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING / SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1515	DATE TIME
TITLE/SURVEY TITLE Release Zone Scatter Loads 500-1000			DRAWN BY CHECKED BY APPROVED BY
1			

Release Zone



Color Key

Scow 701	Scow 702	Scow 63	Scow 64	Scow 66	Scow 65



PROJECT Miami Harbor Deepening Phase III Dredging		 GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING/ SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1515	DATE 11/11/03
TITLE/SURVEY TITLE Release Zone Scatter Load 1000 - 1500			DRAWN BY J. J. J.
SHEET 1	TOTAL SHEETS 1	CHECKED BY J. J. J.	DATE 11/11/03

Release Zone



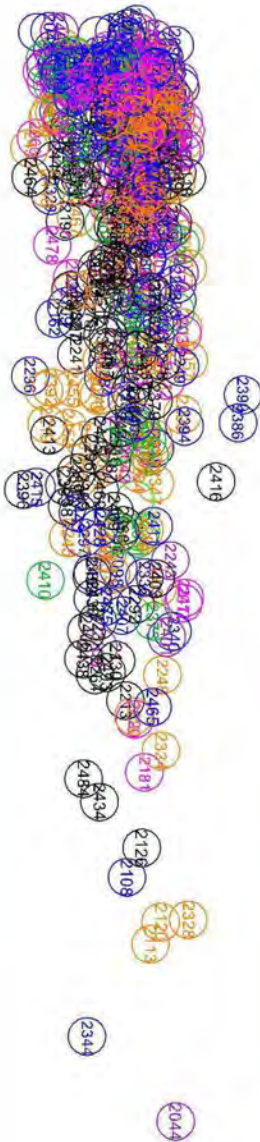
Color Key

Scow 501	Scow 502	Scow 701	Scow 702
Scow 63	Scow 64	Scow 66	



PROJECT Miami Harbor Deepening Phase III Dredging		 GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING / SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1515
TITLE/SURVEY TITLE Release Zone Scatter Loads 1501-1999		
DATE 1/1/00	BY J. J. J.	DATE 1/1/00
PROJECT NO. 1	PROJECT NO. 1	PROJECT NO. 1

True



Scow 501	Scow 502	Scow 701	Scow 702	Scow 64	Scow 66
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1	PROJECT Miami Harbor Deepening Phase III Dredging	 GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING/ SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1516	10-10-00 10-10-00
	TITLE/SURVEY TITLE Release Zone Scatter Loads 2000-2500		10-10-00 10-10-00

True

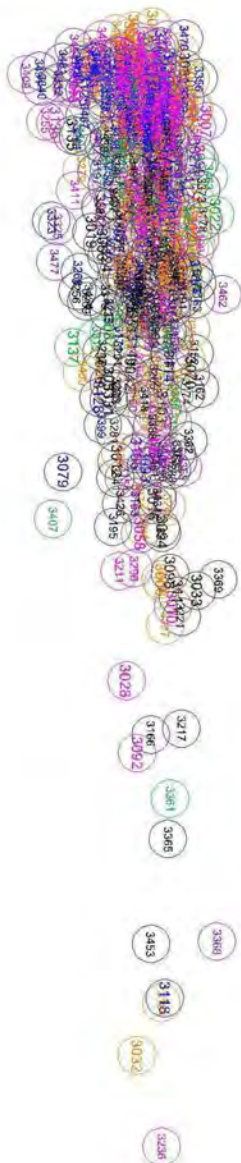


Color Key

Scow 501	Scow 502	Scow 701	Scow 702	Scow 64	Scow 66
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DATE 06-07-2008	DRAWN BY JANIS L. BROWN	PROJECT Miami Harbor Deepening Phase III Dredging	 GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING / SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1515	SHEET NO. 00471	TOTAL SHEETS 00471

True



Scow 501	Scow 502	Scow 701	Scow 702	Scow 64	Scow 66
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1	PROJECT Miami Harbor Deepening Phase III Dredging	TITLE/SURVEY TITLE Release Zone Scatter Loads 3001-3500	 GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING / SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1515	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Release Zone



Color Key

Scow 63	Scow 501	Scow 502	Scow 701	Scow 702	Scow 64	Scow 66	Scow 602	Scow 65
Scow 501	Scow 502	Scow 701	Scow 702	Scow 64	Scow 66	Scow 602	Scow 65	
Scow 502	Scow 701	Scow 702	Scow 64	Scow 66	Scow 602	Scow 65		
Scow 701	Scow 702	Scow 64	Scow 66	Scow 602	Scow 65			
Scow 702	Scow 64	Scow 66	Scow 602	Scow 65				
Scow 64	Scow 66	Scow 602	Scow 65					
Scow 66	Scow 602	Scow 65						
Scow 602	Scow 65							
Scow 65								

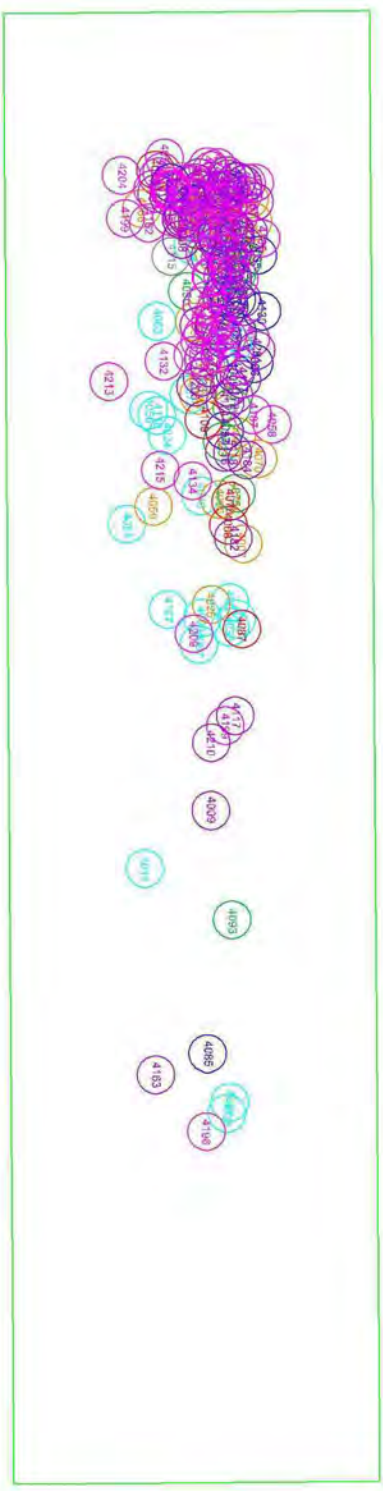


PROJECT Miami Harbor Deepening Phase III Dredging		GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING/ SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1515	
TITLE/SURVEY TITLE Release Zone Scatter Loads 3501-4000		1 1	

Release Zone

Color Key

Scow 63	Scow 65
Scow 501	Scow 66
Scow 502	Scow 701
Scow 702	Scow 602
Scow 64	Scow 601
Scow 602	Scow 603
Scow 603	Scow 604
Scow 604	Scow 605
Scow 605	Scow 606
Scow 606	Scow 607
Scow 607	Scow 608
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Scow 618	Scow 619
Scow 619	Scow 620
Scow 620	Scow 621
Scow 621	Scow 622
Scow 622	Scow 623
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Scow 624	Scow 625
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Scow 626	Scow 627
Scow 627	Scow 628
Scow 628	Scow 629
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Scow 630	Scow 631
Scow 631	Scow 632
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Scow 639	Scow 640
Scow 640	Scow 641
Scow 641	Scow 642
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Scow 671	Scow 672
Scow 672	Scow 673
Scow 673	Scow 674
Scow 674	Scow 675
Scow 675	Scow 676
Scow 676	Scow 677
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Scow 678	Scow 679
Scow 679	Scow 680
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Scow 694	Scow 695
Scow 695	Scow 696
Scow 696	Scow 697
Scow 697	Scow 698
Scow 698	Scow 699
Scow 699	Scow 700



PROJECT Miami Harbor Deepening Phase III Dredging		 GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING/ SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1515	SHEET NO. 1
TITLE/SURVEY TITLE Release Zone Scatter Load 4001 - 4215			OF 1 SHEET

Release Zone

4215

Color Key

Scow 63	Scow 501	Scow 502	Scow 701	Scow 702	Scow 64	Scow 66	Scow 602	Scow 65
Scow 63	Scow 501	Scow 502	Scow 701	Scow 702	Scow 64	Scow 66	Scow 602	Scow 65



PROJECT Miami Harbor Deepening Phase III Dredging		 GREAT LAKES DREDGE AND DOCK COMPANY 2122 York Road Oak Brook IL 60521 CIVIL ENGINEERING/ SURVEYING DIVISION Phone: 630 574-3000 Fax: 630 574-1515	OF 1 SHEET SHEET NO. 12751	
TITLE/SURVEY TITLE Release Zone Scatter Load 4215			1	

.Docket No. MPRSA-04-2019-7500

Exhibit RX 105 (A)

Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 105 (B)

Withheld as CBI

.Docket No. MPRSA-04-2019-7500

Exhibit RX 105 (C)

Withheld as CBI

Exhibit RX 106

Withheld as CBI

Video of Scow Opening and Closing

.Docket No. MPRSA-04-2019-7500

Exhibit RX 107

Withheld as CBI

Port Jersey 60 Series Scow Video 1

.Docket No. MPRSA-04-2019-7500

Exhibit RX 108

Withheld as CBI

Port Jersey 60 Series Scow Video 2

.Docket No. MPRSA-04-2019-7500

Exhibit RX 109

Withheld as CBI

Scow 64 Video 1

.Docket No. MPRSA-04-2019-7500

Exhibit RX 110

Withheld as CBI

Scow 64 Video 2

.Docket No. MPRSA-04-2019-7500

Exhibit RX 111

Withheld as CBI

Scow 64 Video 3

Exhibit RX 112

Withheld as CBI

Scow 64 Video 4

Exhibit RX 113

Withheld as CBI

Scow 64 Video 5

.Docket No. MPRSA-04-2019-7500

Exhibit RX 114

Withheld as CBI

Scow 64 Video 6

.Docket No. MPRSA-04-2019-7500

Exhibit RX 115

Andrew F. LARKIN

Mechanical Dredge Fleet Manager



NATIONALITY

American

EDUCATION

Bachelor of Science
Civil & Environmental Engineering
University of Wisconsin, 2009

LANGUAGES

English - Native

CERTIFICATIONS

OSHA Construction Safety and Health 30hr Training – 2010
LEED Accredited Professional - 2008

EXPERIENCE

2020 – Present

Mechanical Dredge Fleet Manager

Great Lakes Dredge & Dock Company, LLC (GLDD) - Oak Brook, IL

Responsible for managing the processes, policies, and controls to ensure that all Mechanical Dredge Fleet operations are executed safely, efficiently and consistent with Company operating and site procedures. Lead, promote, and prioritize transformative safety and Incident and Injury Free culture in all facets of Company operations. Mentor and guide division managers and staff to ensure that all GLDD transformative safety initiatives and procedures are 100% executed. Strive for personal safety contact.

Provide overall leadership and direction to insure Mechanical Fleet Dredge and Scow readiness, reliability, and productivity -- including preventative maintenance, repair efforts, mobilization and demobilization, production optimization, inventory control and crewing.

Notable Mechanical Dredging Projects:

- Jacksonville Deepening Reach B 2020 – Jacksonville, FL
- Baltimore Harbor Maintenance 2020 – Baltimore, MD
- Charleston Deepening Contract 2020 – Charleston, SC

2015 - 2020

Dredge Manager – Mechanical Division

Great Lakes Dredge & Dock Company, LLC (GLDD) - Oak Brook, IL

Responsible for the management and maintenance of Mechanical Fleet dredges and scows. Promote Safety and IIF Culture on all Mechanical Fleet Vessel. Provide crew and optimally configured equipment to the site based on the specific requirements of the project. Manage and improve the safety, condition and preventative maintenance of Mechanical Dredges and Scows. Work with Dredge Captains and Chief Engineers to ensure maintenance of scows assigned to their dredges.

Coordinate equipment mobilizations between projects with Site Management and Area Sponsors. Review project plans, material types, plant selections, pipe, and production assumptions to plan mobilizations. Ensure the dredge and attendant plant are optimally configured for the specific project requirements. Work with the Maintenance Superintendents to develop and manage the plant budgets and coordinate dry-docking and scheduled maintenance periods.

Notable Mechanical Dredging Projects:

- Jacksonville Deepening Reach B 2018 through 2020 – Jacksonville, FL
- Charleston Deepening Contract 2 2018 through 2020 – Charleston, SC
- Delaware River Reach B Deepening B 2016 through 2020 – Philadelphia, PA
- Baltimore Harbor Maintenance 2017 & 2016 – Baltimore, MD
- Miami Harbor Deepening 2015 – Miami, FL

2014 - 2015

Assistant Hopper Dredge Manager – Middle East Division

Great Lakes Dredge & Dock Company, LLC (GLDD) – Manama, Bahrain

Responsible for the management and maintenance of three Middle East Division Hopper Dredges. Promote Safety and IIF Culture on all Mechanical Fleet Vessel. Provide crew and optimally configured equipment for all Middle East Division hopper dredge projects. Focus on continually improving the level of safety on all dredges. Responsible for the condition and preventative maintenance of three hopper dredges.

Coordinate equipment mobilizations between projects with the Site and Maintenance Managers. Review project plans, material types, plant selections, pipe, and production assumptions to plan mobilizations. Ensure the dredge and attendant plant are optimally configured for the specific project requirements. Work with the Maintenance Superintendents to develop and manage the plant budgets and coordinate dry-docking and scheduled maintenance periods.

Notable Hopper Dredging Projects:

- Diyar Al Muharraq Land Reclamation – Manama, Bahrain
- Hidd Port Land Reclamation – Manama, Bahrain
- Suez Canal Expansion – Suez Canal, Egypt

2012 - 2014

Project Engineer – Middle East Division

Great Lakes Dredge & Dock Company, LLC (GLDD) – Manama, Bahrain

Responsible for the final quality control and quality assurance verification of all engineering deliverables to include: hydrographic survey data collection, land survey data collection, bathymetry maps, topography maps, cross sections, volume calculations, daily construction reports, and daily dredge production analysis. Confirming presentation of survey data meets or exceeds project specifications or EM 1110-2-1003.

Responsible for the management and scheduling of all site engineering activities in support of maintenance dredging and land reclamation projects utilizing trailing suction hopper dredges and cutter suction hydraulic dredges.

Responsible for the installation, operational status, quality control and quality assurance checks on the guidance systems for the dredges, tugs, material barges, and any other equipment on site that requires positioning tracking.

Notable projects include:

Hydraulic Dredging

- Island Project Rock Dredging – Al Khor, Qatar

Hopper Dredging

- Diyar Al Muharraq Land Reclamation – Manama, Bahrain
- Manama Lagoon Land Reclamation – Manama, Bahrain
- Hidd Port, Manama, Bahrain

2011 - 2012

Assistant Project Engineer – Middle East Division

Great Lakes Dredge & Dock Company, LLC (GLDD) – Manama, Bahrain

Responsible for the final quality control and quality assurance verification of all engineering deliverables to include: hydrographic survey data collection, land survey data collection, bathymetry maps, topography maps, cross sections, volume calculations, daily construction reports, and daily dredge production analysis. Confirming presentation of survey data meets or exceeds project specifications or EM 1110-2-1003.

Responsible to assist in the development of the engineering project layout, dredge cut operational plans, disposal operational plans, construction staking, pipeline positioning and status tracking, the preparation of submittals in accordance with client's contractual requirements, and the quality assurance for each phase of work while assisting the Project Engineer.

Responsible for the installation, operational status, quality control and quality assurance checks on the guidance systems for the dredges, tugs, material barges, and any other equipment on site that requires positioning tracking in the absence of the Project Engineer.

Notable projects include:

Hopper Dredging

- Diyar Al Muharraq Land Reclamation – Manama, Bahrain
- Abu Dhabi Corniche Beach Reclamation – Abu Dhabi, United Arab Emirates
- HH Saif Island Reclamation – Abu Dhabi, United Arab Emirates

2009 - 2011

Site Engineer

Great Lakes Dredge & Dock Company, LLC (GLDD) –

Responsible for the daily quality control quality assurance checks of the hydrographic survey systems, land survey equipment, dredge guidance systems, positioning information systems on material barges and/or spill barges.

Responsible for carrying out multi-beam hydrographic surveys, single beam hydrographic surveys, and land surveys in support of the dredge and support equipment on beach fill, land reclamation, channel maintenance, and capital improvement projects.

Responsible for the preparation of daily dredge production reports; daily construction progress reports, and the preparation of submittals in accordance with client's contractual requirements.

Notable projects include:

Backhoe & Clamshell Dredging

- Van Kull Navigation Improvement Project – New York, NY
- Global Terminal Maintenance Dredging – Philadelphia, PA

Cutter Suction Dredging

- Bayou DuPont Marsh Restoration – Belle Chasse, LA
- Van Kull Navigation Improvement Project – New York, NY

Multi-beam Survey Operations

- New York Harbor Deepening – New York, NY

2007 - 2008

Project Manager Co-op

Opus NW Construction, LLC – Minneapolis, MN

Participated in LEED documentation for a proposed LEED Gold office building, led weekly construction meetings, managed day-to-day operations of the project's site work, completed bid document/analysis, and acted independently as the direct company contact for all neighbor relations.

Led owner construction meetings, negotiated and developed subcontracts and subcontract change orders, assisted in coordinating design disciplines, reviewed shop drawings, performed estimating duties, and acted as the jobsite superintendent during the actually superintendent's absence.

.Docket No. MPRSA-04-2019-7500

Exhibit RX 116

Withheld as CBI