APPENDIX F
Disposal Alternative Report

Inner Harbor Navigation Canal Lock Replacement Project

New Orleans, Louisiana

Assessment of

Off-Site Non-Hazardous Waste Disposal Costs

for the

Excavated Sediment

from

DMMU's 1, 2, 5, and 7

Prepared for:
New Orleans District
US Army Corps of Engineers

Prepared by:
Huntington District
US Army Corps of Engineers

July 2008

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1.0 TECHNICAL ANALYSIS

1.1 INTRODUCTION

This report was prepared to assist the United States Army Corps of Engineers, New Orleans District (MVN) in the development of alternatives for management of the excavated sediment that will be removed during the Inner Harbor Navigation Canal (IHNC) Lock Replacement Project. The Lock Replacement Project consists of replacement of the existing lock on the IHNC and demolition of the existing lock. During construction of the lock, sediment within the IHNC will be removed and will be subject to disposal. Several alternatives for management and disposal of the sediment are under consideration as part of the feasibility phase of the project.

MVN has conceptually divided the sediment of the canal into areas designated as Dredged Material Management Units (DMMUs) 1 – 11, which are shown in Figure 1 of Appendix B. Based on a review of existing and readily available information and investigation of the sediment within the IHNC conducted by MVN, MVN has determined that DMMUs 1, 2, 5, and 7 have the potential of being classified as non-hazardous solid waste, subject to Louisiana's Solid Waste Regulations. For the sediment within DMMUs 1, 2, 5, and 7, the Corps of Engineers Huntington District has been tasked by MVN with providing an assessment of off-site disposal requirements and associated costs for disposal at permitted non-hazardous solid waste landfills.

1.2 SCOPE OF WORK AND OBJECTIVES

The objective of work under this SOW is to provide information on licensed non-hazardous Type I & II landfills and a comparison of costs associated with off-site land disposal as non-hazardous solid waste. The work will include an assessment of regulatory and analytical requirements as well as costs. Information pertaining to sediments to be excavated or dredged from within Dredged Material Management Units (DMMUs) 1, 2, 5, and 7 is utilized in this study.

1.3 REGULATORY REQUIREMENTS

1.3.1 SOLID WASTE REGULATIONS

A review of the Louisiana solid waste (non-hazardous) regulations was made and some of the pertinent regulations that apply to the generating, transporting, and disposal of the sediment from the IHNC project are summarized in Table 1 in Appendix A. The citation for these regulations is: Environmental Regulatory Code (ERC), Title 33 (Louisiana Code), Part VII-Solid Waste, Subpart 1. Solid Waste Regulations. The link to these

regulations are as follows: http://www.deq.louisiana.gov/portal/tabid/1674/Default.aspx (Note: Click on ERC (LAC Title 33), …then click on Part VII Solid Waste).
The regulations include requirements for proper characterization and disposal of non-hazardous waste. The generator must provide a characterization of the waste to show that the waste is not hazardous (Ch. 3, Section 315, J). For waste that is to be disposed as non-hazardous solid waste, the characterization must be documented on the non-hazardous waste profile sheet, which is to be completed by the generator of the waste prior to acceptance of the waste by a disposal facility. The blank profiles can be obtained from the disposal facility and are often available on-line. Examples of a Waste Profile Sheet are included in Appendix G. Material containing free liquids cannot be land disposed.

1.3.2 HAZARDOUS WASTE REGULATIONS

A determination must be made to ensure that the waste is not hazardous. Requirements for hazardous waste determination are included in the Louisiana hazardous waste regulations (LAC 33:V.Subpart 1, Section 1103) and in the Code of Federal Regulations (40 CFR 261). In accordance with LAC 33:V, Subpart I, waste can be considered hazardous waste by the following:

1. By virtue of a listed waste as identified in the lists contained in LAC Title 33:V, Chapter 49, Section 4901. Listed waste under RCRA Subtitle C (hazardous waste regulations) includes waste streams generated from the manufacturing, treatment, or processing of chemicals, raw materials, and intermediates, etc. It is not expected that sediment of the IHNC would fall into the category of a listed hazardous waste. To be considered as a listed waste, the source of the contamination would need to be *directly* attributed to a RCRA hazardous waste treatment, storage, or disposal facility.

2. By virtue of any of the four (4) characteristics listed in LAC Title 33:V, Chapter 49, Section 4903:

- Ignitibility
- Corrosivity
- Reactivity
- Toxicity

1.3.3 PCB REGULATIONS

1. MVN and LADEQ have conducted meetings on the proposed IHNC Project. One of the topics discussed is whether dredged sediment from the IHNC Project would fall into the solid waste category. Further coordination and discussions between MVN and LADEQ are expected. One of the pertinent issues is that of PCBs. It is the opinion of MVN that the dredged sediment from the IHNC is not "PCB Remediation Waste" as defined by 40 CFR 761 and, therefore, the following regulations of 40 CFR 761 pertaining to PCBs are not applicable to IHNC sediment. MVN and LADEQ, during

coordination and negotiations, have determined or will determine the applicability of the following PCB regulations to the IHNC project.

2. The following discussion of 40 CFR 761 regulations is included for the sole purpose of providing information on PCB regulations:

USEPA has codified regulations in 40 CFR 761, commonly referred to as the "Mega Rule", pertaining to the use, disposal, and clean-up of PCBs and PCB containing materials.

According to these regulations, it appears that sediment containing PCBs at any concentration, if the PCBs cannot be directly attributed to a specific source, *could* fall under the category of "PCB remediation waste" as defined by 40 CFR 761.3. Subpart D, Section 61 of these regulations provides cleanup and disposal options for "PCB remediation waste". Three options are included in Section 61 and are as follows:

- Self-implementing on-site cleanup and disposal - CFR 761.61(a). These procedures may not be used for sediments in marine and fresh-water ecosystems.

- Performance-Based Disposal - CFR 761.61(b). Under Section 3 of subpart (b), any person may manage or dispose of material containing <50 ppm PCBs that has been dredged or excavated from waters of the United States in accordance with a Section 404 permit under the Clean Water Act (or the equivalent), or in accordance with a Section 103 permit of the Marine Protection, Research, and Sanctuaries Act (or the equivalent).

- Risk-based disposal approval - CFR 761.61(c). For disposal of PCB remediation waste not conducted by paragraphs (a) or (b) of this section, the generator must apply to the USEPA Regional Administrator (for the New Orleans area) for sampling, cleanup, and disposal. According to this paragraph, USEPA will issue a written decision on the application.

3. April 24-25, 2008 follow-up phone conversations with Louisiana landfill owners on acceptance of sediment containing PCBs are summarized below:

- Glenn Robertson of the Jefferson Parish Landfill in Louisiana indicated in his phone conversation of April 25, 2008 that his facility (solid waste landfill) can accept sediment with PCBs < 50 ppm. According to Mr. Robertson, if the source of the PCBs is not known, it appears that, in accordance with the "Mega Rule", a remediation plan may need to be submitted to USEPA for approval prior to disposal. Mr. Robertson further indicated that if the source is known and the PCB concentration is < 50 ppm, there is no problem.

- Kevin Guidry, of the Coast Guard Landfill, indicated in his phone conversation of April 24, 2008 that his landfill can accept sediment with PCBs < 50 ppm.

- Vic Culpepper of the River Birch Landfill was contacted and a message was left. As of yet, no return call has been received.

4. For applicability of these regulations to the IHNC Project and for PCB disposal, further coordination with the regulatory agencies and the disposal facilities on the issue of PCBs is recommended and/or necessary. Copies of e-mail correspondence from USACE and LDEQ pertaining to the PCB impacted soil are included in Appendix F.

1.3.4 LIQUID WASTE PROHIBITION FROM LAND DISPOSAL

LAC Title 33, Part VII, Subpart I (Solid Waste Regulations) prohibits liquid wastes from land disposal. Liquid waste is defined (LAC 33:VII,1, Section 115) as any waste that is determined to contain free liquids as defined by SW-846 Method 9095B (Paint Filter Liquids Test). Furthermore, the definition of "free liquids" is stated in LAC Title 33, Part V, Subpart 1 (Hazardous Waste Regulations) as liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

1.3.5 LAND BAN RESTRICTIONS UNDER RCRA SUBTITLE C (HAZARDOUS WASTE REGULATIONS)

Any waste characterized as hazardous waste must comply with the land disposal restrictions of 40 CFR Part 268 before it can be land disposed. It is not expected that the sediment from the IHNC will be characterized as hazardous waste.

1.4 ANALYTICAL REQUIREMENTS.

As indicated in Section 3 above, waste characterization is required and is determined by results of analytical testing (unless there is sufficient historical information on generator knowledge or previous data to make a determination, in light of the materials or the processes used). The landfill must review the waste profile prior to acceptance of the waste.

Information needed for determining characteristics of the waste includes analytical testing by approved methods or determination of the nature of the waste by historical information and generator knowledge. Unless there is sufficient historical information about the generation of the waste, analytical testing would be necessary and would include the following:

- Toxicity Characteristics Leaching Procedure (TCLP) testing ;
- Polychlorinatedbiphenyls (PCBs) analytical testing;
- Paint Filter Liquids Test.

Other tests that may be necessary for waste characterization of sediment include:

- Sulfides (in accordance with SW-846);

- Dioxin (or historical knowledge)

According to Glenn Robertson of the Jefferson Parish and Woodside Landfills, the waste must be properly characterized on the Waste Profile Sheet. According to Mr. Robertson, if you suspect that sulfides or dioxins could be present in the sediment, then testing would be needed. On the River Birch Landfill Waste Profile Sheet, there is a specific question that asks if the waste contains regulated concentrations of dioxin as well as a question on sulfide.

1.5 IHNC SEDIMENT WASTE CHARACTERIZATION

Analytical results of tests from the IHNC maintenance dredging project of 2006 and the sampling of the IHNC area conducted by Weston during Fall 2007 and winter 2008 (see Appendices E & F) were used as a basis for preliminary characterization and for contacting the non-hazardous landfills in the Louisiana area. The TCLP test results of 2006 from the maintenance dredging and the PCB results of both the maintenance dredging project and the sampling results from Weston's sampling activities referenced above were reviewed.

Based on these results, the assumption was made that the sediment from DMMUs 1, 2, 5, and 7 would be non-hazardous solid waste, subject to disposal in a permitted non-hazardous solid waste landfill. The TCLP results of the 2007 maintenance dredging indicate that the sediment is not RCRA hazardous for TCLP toxicity. The PCB analyses from the maintenance dredging project and Weston's sampling activities referenced above indicate that PCB levels in sediment are below 50 ppm. From a review of the PCB regulations and talking with landfill disposal companies, it appears that sediment containing <50 ppm can be disposed into a TypeI/II solid waste landfill. However, since the management and disposal of sediment/soil containing PCBs has been a controversial issue, for sediment/soil disposal containing any amount of PCBs, coordination with the LADEQ and disposal facilities is recommended.

If further review and comparison of the latest results to action levels show that the waste is not contaminated - i.e., below the Risk Evaluation Corrective Action Program (RECAP) non-industrial/residential standards, or acceptable for aqueous disposal - disposal in a solid waste Type I & II facility might not be necessary. Also, once the review of the test results are complete for the recent comprehensive sampling and analysis investigation and the evaluation of disposal options/alternatives is completed, the procedures/information included within this report (for sediments unacceptable for aqueous disposal) should provide for a realistic cost for the whole project.

1.6 DISPOSAL FACILITIES

Figure 1 in Appendix B shows the Type I and II solid waste landfills located in Louisiana. Table 1 in Appendix C includes a list of landfills in the Louisiana area that

were contacted. The unit costs/ton, distance from the project are, facility contacts are shown. The list includes:

- River Birch Landfill
- Jefferson Parish Landfill (Jefferson Parish; WM)
- Coast Guard Rd. Landfill (managed by Environmental Operators (Plaquemines Parish)
- Woodside Landfill (Livingston Parish; owned by WM, Inc.)

Colonial Landfill (Ascension Parish; Allied) was contacted and a message was left, but no follow up has been done.

1.7 DEWATERING OF SEDIMENT

Plans for potential dewatering of the sediment need to be in place. Since the landfills cannot dispose of material with free liquids, the sediment may need to be dewatered. It is not certain how MVN will handle dewatering, if it becomes necessary. Some of the landfills can dewater by adding lime. This would increase the unit costs and the total volume and tonnage, however.

The following companies were contacted about disposal of liquids:

1. Todd Ford
   Liquid Environmental Solutions
   250 Gellhorn Drive
   Houston, Texas 77013

   On March 7, 2008, Mr. Ford provided an estimate of unit costs as indicated below. The total volume of water that one could expect from dewatering activities is not known.

   - Transportation from New Orleans to Houston - ˜ $1200 per load plus fuel surcharge
   - Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon

2. Wastewater Disposal
   Reserve, Louisiana
   (985) 536-7448

   On May 1, 2008, Wastewater Disposal was contacted by phone and this company provided an estimate of unit costs as indicated below.

   Transportation costs:
   - 3 hours travel time - round trip to & from disposal site in Reserve, LA
   - Truck holding 3,000 gallons - $72/hour

- Truck holding 5,000 gallons - $90/hour
- Fuel surcharge - 20% of hourly transportation costs (i.e., $72 x 0.20)

Disposal Costs

- Water - $0.15/gallon
- Residual solids - $0.37/gallon

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2.0 COST ANALYSIS

2.1 ALTERNATIVE COMPARISION

A total of 16 alternatives were compared during this analysis as illustrated in Table I. These alternatives are based on various assumptions dependent on the facilities identified in paragraphs 1.6 and 1.7 above. The aggregate of alternatives considers for each of the facilities the follow factors: (1) proximity to the jobsite, (2) type of wastes accepted (i.e., solid vs. liquid), (3) viable means of transporting material from jobsite to facility. The volume of material to be disposed is dependent on the lock construction method – either Float-in-Place or Cast-in-Place.

Table I - Array of Alternatives

				Soil				Water
Alternative	Lock Construction	Soil Condition	Haul Type	River Birch Landfill	Jefferson Parish Landfill	Cost Guard Road Landfill	Woodside Landfill	Liquid Environmental Solutions
1	Float-in-Place	Wet Soil Disposal	Truck	381,700 CY				0 MGal
2	Cast-in-Place	Dry Soil Disposal	Truck	150,200 CY				91 MGal
3	Float-in-Place	Dry Soil Disposal	Truck	95,500 CY				58 MGal
4	Cast-in-Place	Wet Soil Disposal	Truck	601,000 CY				0 MGal
5	Float-in-Place	Dry Soil Disposal	Truck		95,500 CY			58 MGal
6	Cast-in-Place	Dry Soil Disposal	Truck		150,200 CY			91 MGal
7	Float-in-Place	Dry Soil Disposal	Barge			95,500 CY		
			Truck					58 MGal
8	Float-in-Place	Dry Soil Disposal	Truck			95,500 CY		58 MGal
9	Float-in-Place	Wet Soil Disposal	Barge			381,700 CY		
			Truck					0 MGal
10	Cast-in-Place	Dry Soil Disposal	Barge			150,200 CY		
			Truck					91 MGal
11	Cast-in-Place	Dry Soil Disposal	Truck			150,200 CY		91 MGal
12	Cast-in-Place	Wet Soil Disposal	Barge			601,000 CY		
			Truck					0 MGal
13	Float-in-Place	Wet Soil Disposal	Truck				381,700 CY	0 MGal
14	Cast-in-Place	Dry Soil Disposal	Truck				150,200 CY	91 MGal
15	Float-in-Place	Dry Soil Disposal	Truck				95,500 CY	58 MGal
16	Cast-in-Place	Wet Soil Disposal	Truck				601,000 CY	0 MGal

The costs for each of these alternatives are compared in Table II and Figure 1.

Table II - Alternative Cost Comparison
-PL 1 Oct 2007, $ Thousands-

Alternative	Material Loading	Material Hauling	Material Disposal	Water Disposal	Grand Total
Alternative 1	$ 2,788	$ 7,002	$ 71,164	$ 0	$ 80,954
Alternative 2	$ 1,097	$ 2,755	$ 8,716	$ 64,521	$ 77,089
Alternative 3	$ 697	$ 1,752	$ 5,542	$ 40,981	$ 48,972
Alternative 4	$ 4,389	$ 11,024	$ 112,051	$ 0	$ 127,465
Alternative 5	$ 697	$ 1,536	$ 5,327	$ 40,981	$ 48,542
Alternative 6	$ 1,097	$ 2,416	$ 8,378	$ 64,521	$ 76,411
Alternative 7	$ 697	$ 1,240	$ 4,756	$ 40,981	$ 47,675
Alternative 8	$ 697	$ 5,230	$ 2,854	$ 40,981	$ 49,762
Alternative 9	$ 2,788	$ 4,957	$ 40,730	$ 0	$ 48,475
Alternative 10	$ 1,097	$ 1,951	$ 7,480	$ 64,521	$ 75,049
Alternative 11	$ 1,097	$ 8,225	$ 7,480	$ 64,521	$ 81,323
Alternative 12	$ 4,389	$ 7,805	$ 64,131	$ 0	$ 76,326
Alternative 13	$ 2,788	$ 14,379	$ 66,305	$ 0	$ 83,472
Alternative 14	$ 1,097	$ 5,658	$ 8,378	$ 64,521	$ 79,654
Alternative 15	$ 697	$ 3,598	$ 5,327	$ 40,981	$ 50,603
Alternative 16	$ 4,389	$ 22,641	$ 104,400	$ 0	$ 131,430

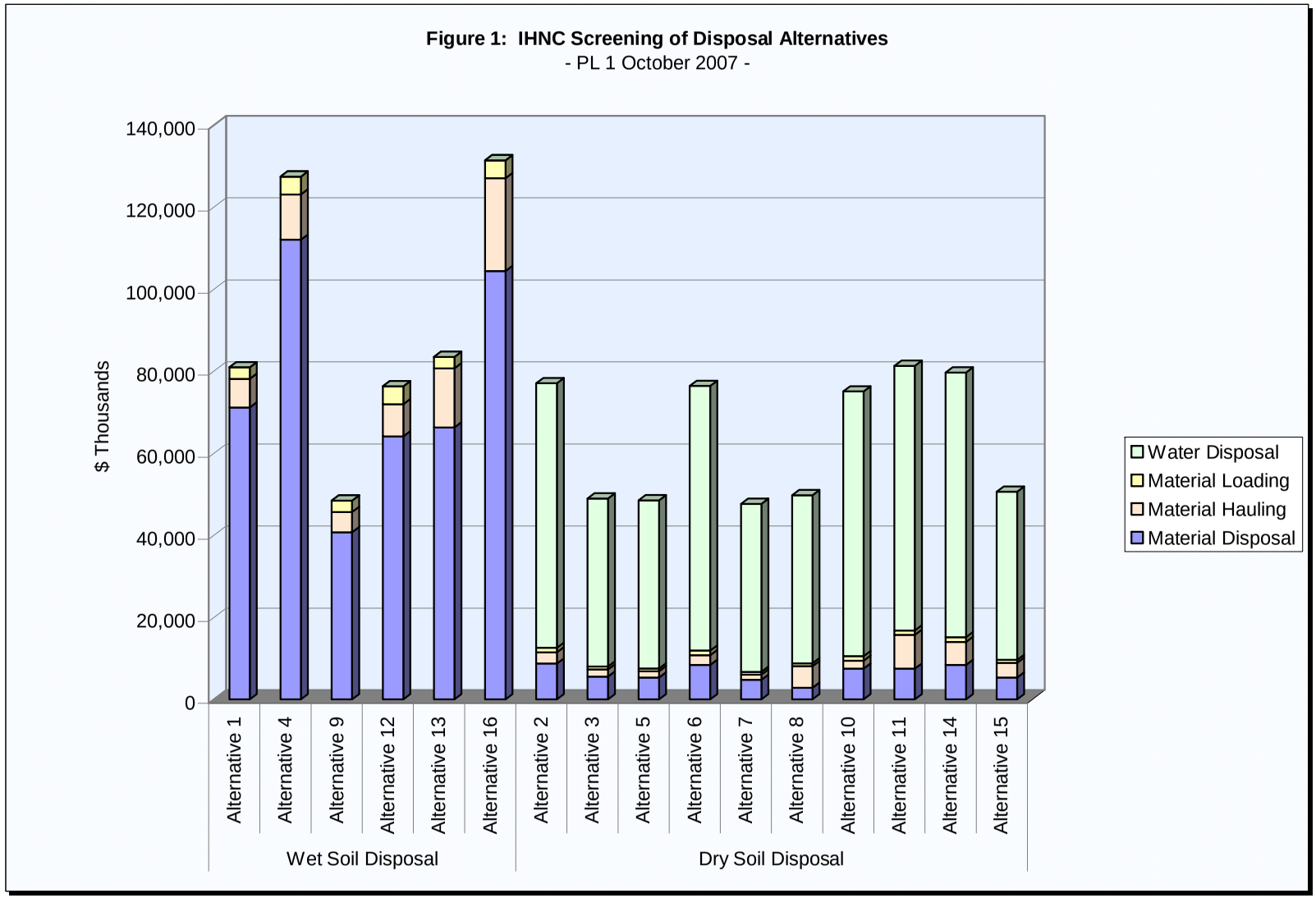

Figure 1 - IHNC Screening of Disposal Alternatives

2.2 COST METHODOLOGY

2.2.1 GENERAL

The Preliminary Cost Estimate of disposal costs for Inner Harbor Navigation Canal Project has been prepared to an equivalent price level of 1 October 2007 (FY08). Conduction scenarios were also developed from conversations with PDT members, contractors, and from the estimator's past experience with specialty work.

2.2.2 8.2.2. DIRECT COSTS

Direct costs were based on anticipated equipment and labor necessary to conduct the alternatives as scoped and were calculated independent of the contractor assigned to perform the tasks. Following formulation of the direct cost, a determination was made as to whether the work would be performed by the prime contractor or a subcontractor.

Labor-Wage Determination

Labor National 2004 library were updated and used for all craft labor. The total labor rate was developed using the base wage, fringe benefits, Federal Insurance Contributions Act (FICA), Federal Unemployment Tax Act (FUTA), and Workman's Compensation rates for each craft, 2.5% is added to cover show up time. The base wage rate and fringe were entered into MII and applied accordingly.

Overtime

Overtime was not anticipated and therefore not included.

Equipment Rates

The Equipment Region 3, 2005 library, based on EP 1110-1-8, Construction Equipment Ownership and Operation Expense Schedule was adjusted for current fuel costs and used for equipments.

Crews

Project specific crews have been developed for use in estimating the direct costs of conduction for those items not estimated using quotes or historical cost information. Crew members consist of selected complements of labor classifications and equipment pieces assembled to perform specific tasks. Productivity has been assigned to each crew reflective of the expected output per unit of measure for the specific activities listed in the cost estimate

Disposal Fee Quotes

Disposal Fee Cost was obtained through telephone solicitations with vendors, Internet suppliers.

Quantities

The quantity takeoffs were developed and provided by the Project Development Team (PDT) members. Quantities were spot-checked and sub-quantities for the project were developed by the estimator.

2.2.3 INDIRECT COSTS

Prime Contractor

Field Office Overhead (FOOH)

The indirect costs for Field Office Overhead (FOOH) were included as a percentage of the direct costs. For this project, 20% was used for FOOH. This value represents the anticipated prime contractor field overhead costs for such items as project supervision, contractor quality control, contractor field office supplies, personal protective equipment, field engineering, and other incidental field overhead costs.

Home Office Overhead (HOOH)

For Home Office Overhead (HOOH) expense, the cost estimate included an allowance applied as a percentage of direct cost plus field overhead. HOOH included items such as office rental/ownership costs, utilities, office equipment ownership/maintenance, office staff (managers, accountants, clerical, etc.), insurance, and miscellaneous. In this case, a value of 5% was assumed for the prime contractor.

Profit

Profit was included as a percentage of the direct and indirect costs at the rate of 10%.

Bond

The performance and payment bond costs were included as percentage of the rate 1.5%.

Subcontractors

Field Office Overhead (FOOH)

All subcontractor overhead costs were set to 15% of direct cost to account for such items as project supervision, contractor quality control, contractor field office supplies, personal protective equipment, field engineering, and other incidental field overhead costs. The exception is where the subcontractor has provided a quoted price including overhead. In that case, no additional markups have been included for subcontractor's overhead.

Home Office Overhead (HOOH)

The cost estimate included an allowance applied as percentage of direct cost plus field overhead for HOOH. HOOH included such items as office rental/ownership costs, utilities, office equipment ownership/maintenance, office staff (managers, accountants, clerical, etc.), insurance, and miscellaneous. In this case, a value of 5% was assumed for the subcontractor.

Profit

All subcontractor profit margins were used a percentage of 10% rate.

2.2.4 ESCALATION

Escalation was not included in this estimate.

2.2.5 CONTINGENCY

Contingencies were assigned by the cost engineer at 20% for most items based on the risk and /or uncertainty in this Preliminary Estimate.

2.3 REVIEW CREDITS

Donald A Whitmore of CELRH-EC-TC performed a QC review of this cost estimate.

2.4 REFERENCES

ER 1110-2-1302 Civil Works Cost Engineering, 31 Mar 94

ER 1110-1-1300 Cost Engineering Policy and General Requirements, 26 Mar 93

RSMeans Site Work & Landscape Cost Data 26th Annual Edition 2007.

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APPENDIX A

REGULATORY REQUIREMENTS

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Table 1 (page 1 of 3)
References to Portions of the Louisiana Solid Waste Regulations:
Environmental Regulatory Code (ERC), Title 33 (Louisiana Code), Part VII-Solid Waste, Subpart 1. Solid Waste Regulations

CHAPTER 3, SCOPE AND MANDATORY PROVISIONS

Exempted Waste — The following sections of the regulations allow for exemptions, etc.

1. Ch. 3, §301, A.1.d. Exempted Waste. Any *uncontaminated* dredge or earthen excavation spoil is exempted from the solid waste regulations.

2. Ch. 3, §303, A.4. Waste *uncontaminated* river silt is not subject to disposal standards.

3. Ch. 3, §303, A.11. Beneficial Use.

Mandatory Provisions — The following are Mandatory Provisions of the Solid Waste Regulations that may be/are applicable to the IHNC project.

1. Ch. 3, §315, A. Generating/Storing/Transporting/Disposal – must be done in accordance with the regulations.

2. Ch. 3, §315, B. Storage, etc. No off-site storage unless at authorized transfer station, or collection, processing, or disposal facility.

3. Ch. 3, §315, C, Disposal, etc. Requires disposal of waste at permitted solid waste facilities.

4. If spills occur during removal of the sediment, the following actions must be taken:

- Ch. 3, §315, F. Reporting of unauthorized discharge (or accident). (i.e., spills leaking, placement of solid waste into or water, air, land in "contravention" of the Act, regulations, etc. Report discharge to the Office of Environmental Compliance in accordance with LAC 33:I.Chapter 39.

- Ch. 3, §315, G. Cleanup of unauthorized discharge. Cleanup shall be conducted in accordance with LAC 33:1.Chapter 13 (RECAP). Or by terms of any issued order.

Table 1 (page 2 of 3)
References to Portions of the Louisiana Solid Waste Regulations
Environmental Regulatory Code (ERC), Title 33 (Louisiana Code), Part VII-Solid Waste, Subpart 1. Solid Waste Regulations

CHAPTER 3, SCOPE AND MANDATORY PROVISIONS (CONT'D)

Mandatory Provisions (cont'd)	5. Ch. 3, §315, J. Hazardous Waste Determination – prior to disposal. Shall determine by approved methods that the waste is not hazardous. Note: In accordance with 40 CFR 261 (hazardous waste regulations), the following tests (or historical information about these parameters) are necessary: Paint Filter Liquids Test (SW 846 Method 9095B).; TCLP testing (SW 846 Method 1311); PCBs (SW 846 Method 8082) Sulfides (or historical knowledge) in accordance with SW-846. *Note: Dioxin could be an applicable test for sediment.* 7. Ch. 3, §315, K. Compliance with other regulations. i.e., Section 404 (Dredge and Fill), Coastal Zone Management Act, etc. 8. Ch. 3, §315, L. Contamination of the Waters of the State. Solid waste not to be disposed in manner that it enters waters of the state.

Table 1 (page 3 of 3)
References to Portions of the Louisiana Solid Waste Regulations
Environmental Regulatory Code (ERC), Title 33 (Louisiana Code), Part VII-Solid Waste, Subpart 1. Solid Waste Regulations

CHAPTER 4, AMININSTRATION, CLASSIFICATIONS, AND INSPECTIONS PROCEDURES FOR SOLID WASTE MGMT SYSTEMS.

9. Ch. 4, §401, Notifications. Persons who transport/dispose of solid waste shall notify the Office of Environmental Services (OES) within 30 days. Notification form can be obtained from OES or from the department's website. (Not required to re-notify, unless there are changes.)

10. Ch. 4, §405. Categorization of Facilities. Need Type I/II facility.

CHAPTER 5, SW MANAGEMENT SYSTEM, Subchapter A. General Standards for non-permitted facilities.

14. Ch. 5, §505.A.1, 2, & 3. Truck for transporting must meet DOT standards and local ordinances on weight, and size; and have a cover. If not dewatered, transport vehicle must be equipped with collection and containment system so waste or water is not discharged in violation or regulations.

15. Ch. 5, §505.B. 2. Leakage and clean-out water from truck must be discharged in accordance with regulations.

16. Ch. 5, §505.C.1. Barge and Ship Transport. Governed by A.2, 3, 4 and B.1, 2 of this section. Loading and unloading facilities shall comply with 507 (Standards governing collection facilities for solid waste), as applicable.

CHAPTER 5, SW MANAGEMENT SYSTEM, Subchapter B. Permit Administration.

Dewatering (processing)	18. Note: S.W. Permit not required if Corps de-waters on-site at Corps property. Ch. 5, §509.A.1. If an off-site facility processes (dewaters) the waste, that facility shall be required to be permitted.

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APPENDIX B

TYPE I & II SOLID WASTE LANDFILLS IN LOUISIANA

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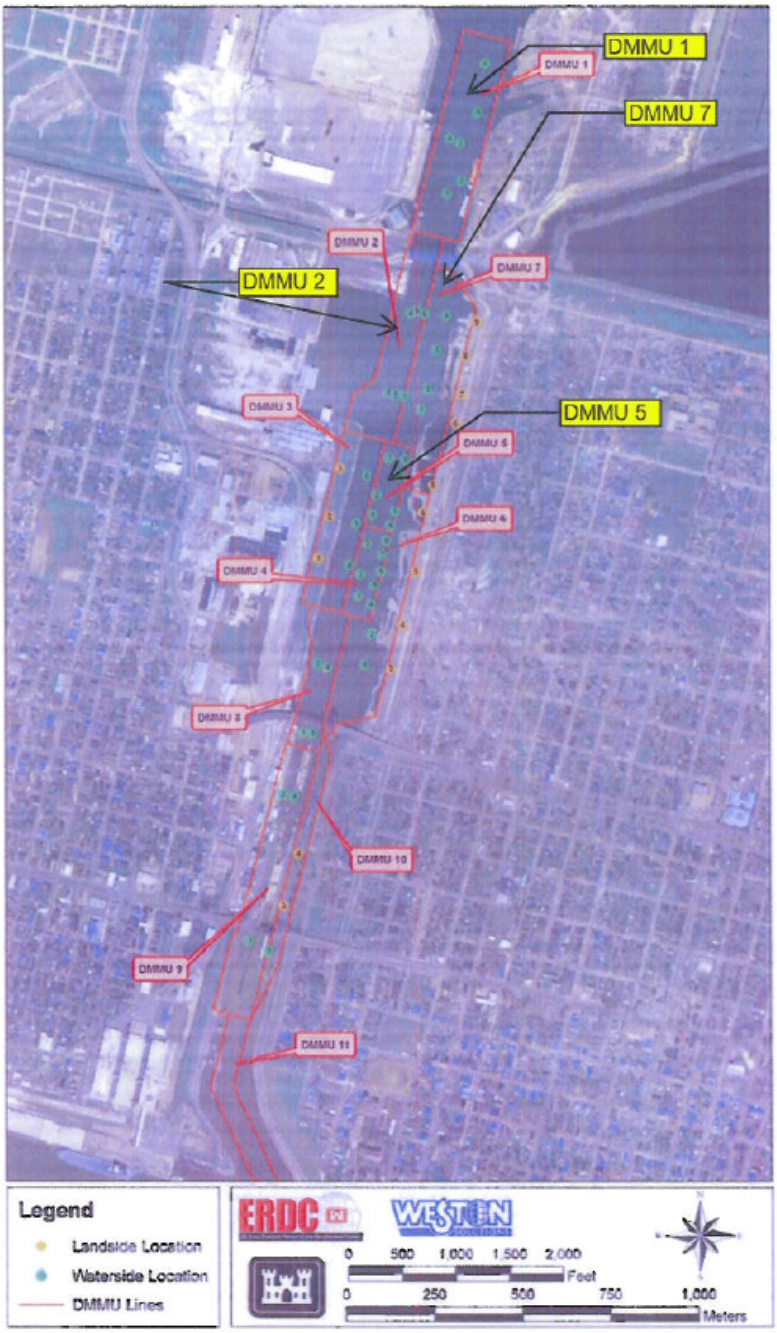

Figure 2. Project Site and Station Map

USACE Figure 1 - DMMU locations

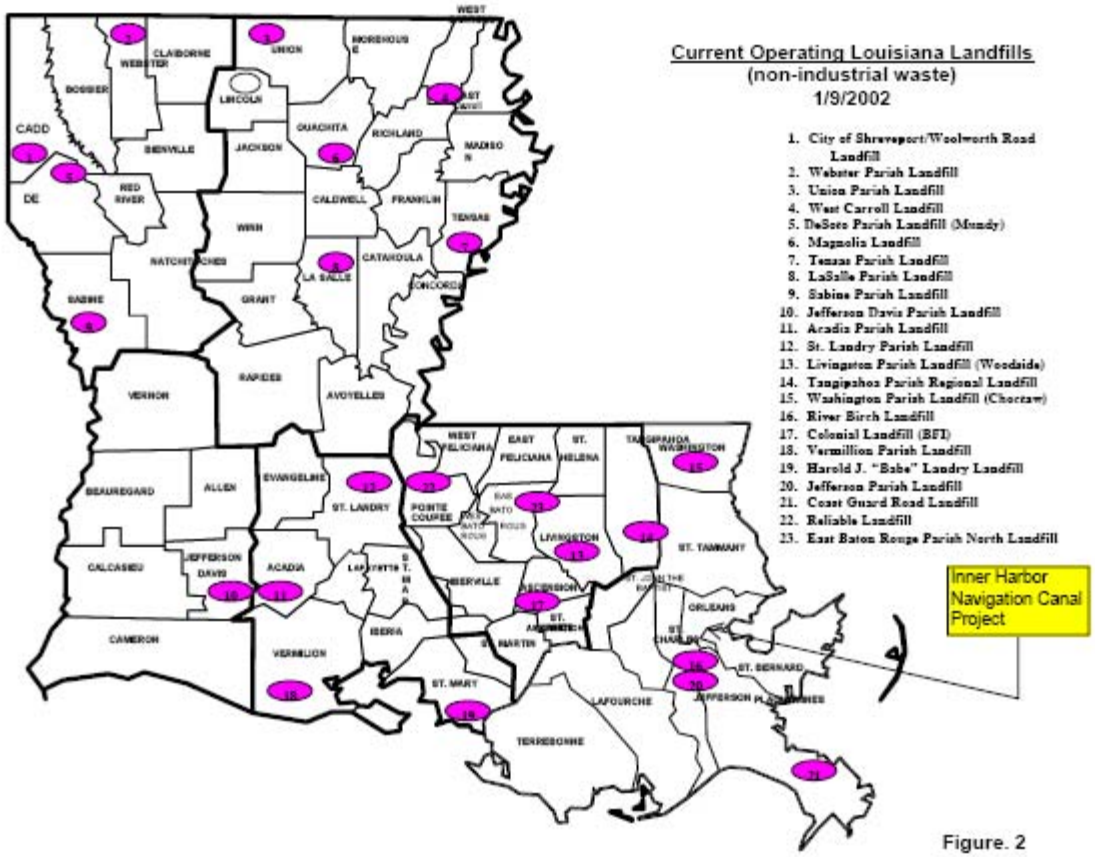
Current Operating Louisiana Landfills
(non-industrial waste)
1/9/2002
1. City of Shreveport/Woolworth Road Landfill
2. Webster Parish Landfill
3. Union Parish Landfill
4. West Carroll Landfill
5. DeSoto Parish Landfill (Mundy)
6. Magnolia Landfill
7. Tensas Parish Landfill
8. LaSalle Parish Landfill
9. Sabine Parish Landfill
10. Jefferson Davis Parish Landfill
11. Acadia Parish Landfill
12. St. Landry Parish Landfill
13. Livingston Parish Landfill (Woodside)
14. Tangipahoa Parish Regional Landfill
15. Washington Parish Landfill (Choctaw)
16. River Birch Landfill
17. Colonial Landfill (BFI)
18. Vermillion Parish Landfill
19. Harold J. "Babe" Landry Landfill
20. Jefferson Parish Landfill
21. Coast Guard Road Landfill
22. Reliable Landfill
23. East Baton Rouge Parish North Landfill
Inner Harbor Navigation Canal Project

Figure. 2

APPENDIX C

UNIT COSTS FOR DISPOSAL OF IHNC SEDIMENT; LIST OF TYPE I & II LANDFILLS CONTACTED; LANDFILL CONTACTS; & DISTANCE FROM IHNC PROJECT

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Table 1: Landfill Sites For Inner Harbor Navigation Canal Project

Landfill Site **(See Figure 2 in Appendix B)**	Address	Contact	State Type	Waste Type	Distance from **2700 N Claiborne Ave**	Fees Tipping / Gate / Disposal Cost, etc.	Remarks (Note: Blank Waste Profile Sheets are obtained from landfill, some are on-line.)
Site 16 - River Birch Landfill	2000 Hwy 90 (cor. So. Kenner Rd) Avondale, LA 70094	Vic Culpepper 504-364-1140	LA Type I & II	A	~23 miles south	$29.13/ton - no dewatering $38.13/ton - $75.13 (based on moisture between 5 – 100 %) dewatering needed	Waste Profile needed if contaminated; sediment has lower disposal cost if dewatered prior to transporting to landfill. Note: $9.00 per ton surcharge for every 25% increase in water content. No maximum capacity limitations monthly/weekly.
Site 20 - Jefferson Parish Landfill (Jefferson Parish; WM)	5800 Hwy 90 Avondale, LA 70094	Glen Robertson (sales) 225-921-8022	LA Type I & II	A	~17 miles south	$28/per ton – no dewatering	Managed by Waste Mgmt, Inc. Waste Profile needed if contaminated. They can take industrial waste outside of Jefferson Parish. No facilities for dewatering. Waste must be dewatered prior to acceptance.
Site 21 - Coast Guard Rd. Landfill (managed by Environmental Operators (Plaquemines Parish)	339 Coast Guard Rd Venice, LA 70091	Kevin Giudry 504-361-0094	LA Type I & II	A	~83 mi south	$25/ton – by barge. $14/ton – by truck. $18.00/cy (addt'l) to dewater. $1600 ea. for movement of every 2nd barge (when one barge moved out & next barge moved in)	Waste Profile needed if contaminated. Can transport. Can accept by land or barge.
Site 13 - Woodside Landfill (Livingston Parish; owned by WM, Inc.)	29375 Woodside Dr. Walker, LA 70785	Glen Robertson (sales) 225-921-8022	LA Type I & II	A	~85 miles northwest	$28/per ton – no dewatering; $70/ton for wet sediment that needs dewatering;	Waste Profile needed if contaminated. Facility can dewater.
Site 17 - Colonial Landfill (Ascension Parish; Allied)	5328 Hwy 70 Sorrento, LA 70778	Mindy Shoze 225-675-8021	LA Type I & II	A	~53 mi west		Left message. Call not returned.
The following tests or historical information are needed for Waste Profiling: Paint Filter Liquids Test (SW 846 Method 9095B); TCLP testing (SW 846 Method 1311); PCBs (SW 846 Method 8082); Sulfides (or historical knowledge) in accordance with SW-846 (At Woodside Landfill, sulfides < 500 ppm can be accepted.); *Note: Dioxin could be an applicable test for sediment.*							

WM – Waste Management; Landfill Type: Type I – industrial solid waste; Type II – residential/commercial solid waste; A – These landfills can accept canal bottom sediment.
Note: Maps & directions from the project area to the disposal sites are available in separate documents.

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APPENDIX D

PHONE LOGS

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PHONE LOG

Inner Harbor Navigation Canal Project
New Orleans, Louisiana
February 2008

To: Glen Robertson, of Waste Management, Inc.

Re: Woodside Landfill and Jefferson Parish Landfill

From: Janet Wolfe

Date: February 14, 2008

Glen Robertson was contacted to obtain information on disposal requirements for non-hazardous sediment that will be removed from the New Orleans Inner Harbor Navigation Canal, as part of construction activities to upgrade the lock. Mr. Robertson provided information on both the Jefferson Parish Landfill, managed by Waste Management (WM) and Woodside Landfill (owned by WM).

1. **Jefferson Parish**

Unit Cost: $28/ton (for dewatered sediment)

This landfill does not dewater. For the material to be accepted, the material must pass a Paint Filter Liquids Test. Other test parameters are included below.

2. **Woodside Landfill**

Unit Cost: $28/ton (for dewatered sediment)
$70/ton (wet sediment)

For the large volume, the landfill may be willing to adjust the unit cost (slightly) to provide a slightly lower unit cost. There are no weekly or monthly maximum capacity limitations on the amount of material that can be accepted. (The only limitations pertain to the trucking that's available). This landfill can accept whatever the Corps can generate.

A waste profile must be completed. See WM's Generator's Nonhazardous Waste Profile Sheet. Test appropriate for the waste sediment, include:

Paint Filter Liquids Test (SW 846 Method 9095B)
TCLP testing (SW 846 Method 1311)
PCBs (SW 846 Method 8082)
Sulfides (or historical knowledge) in accordance with SW-846.
Note: Dioxin could be an applicable test for sediment. Sulfides < 500 ppm can be accepted.
CN < 250 ppm can be accepted.

PHONE LOG

Inner Harbor Navigation Canal Project
New Orleans, Louisiana
February 2008

To: Vic Culpepper, River Birch Landfill

Re: River Birch Landfill

From: Janet Wolfe

Date: February 2008

Unit Cost: $29.13/ton (for dewatered sediment)

(Previous phone conversation). No weekly or monthly maximum capacity limitations that can be accepted. This landfill can accept whatever the Corps can generate. The analytical parameters are as indicated above.

PHONE LOG

Inner Harbor Navigation Canal Project
New Orleans, Louisiana
February 2008

To: Kevin Giudry, Coast Guard Road Landfill

Re: Coast Guard Road Landfill

From: Janet Wolfe

Date: February 14, 2008

Kevin Guidry was contacted to obtain information on disposal requirements for non-hazardous sediment that will be removed from the New Orleans Inner Harbor Navigation Canal, as part of construction activities to upgrade the lock.

Unit Cost: $25/Ton – by barge
$15/ton - by truck
$18/CY - for dewatering (with flyash)
$1600 - for every second barge (to move the 1st barge out and the 2nd one in).
$75/day for barge storage.

Other costs: would be for a barge tug. Can Contact Nolan Burtucci at (504) 835-0333.

The Unit Cost are the minimum costs – so for a large volume, the unit costs won't decrease.

This facility dewaters by adding flyash, *which will add to the total tonnage*. The Corps could contact a dewatering facility to see what outside facilities would charge for dewatering. There are several facilities in the project area that can dewater.

This facility has limitations on how fast the waste can be disposed since, for a barge holding 1600 tons, it takes 2-3 days to unload. Three (3) barges can be stored at $75/day

For the previous dredging work that MVN did, this landfill didn't require testing for sulfide. The analytical parameters for profiling are discussed above.

PHONE LOG

Inner Harbor Navigation Canal Project
New Orleans, Louisiana
January 2008

To: Jonathan McFarland, Louisiana Department of Environmental Quality.

Re: Solid Waste Regulations

From: Janet Wolfe

Date: January 24, 2008

Mr. McFarland was contacted for information on requirements for off-site disposal in non-hazardous solid waste landfills and about limitations on landfill capacity. The Solid Waste regulations do not specify landfill capacity, although limitations on capacity can be spelled out in landfill permits. Mr. McFarland stated that the solid waste landfills closest to New Orleans are the River Birch Landfill, Jefferson Parish Landfill (government owned), and the Woodside Landfill. He expects that these landfills will still be in operation with the next 5-6 years and that they won't reach capacity.

PHONE LOG

Inner Harbor Navigation Canal Project
New Orleans, Louisiana
February 2008

To: Jonathan McFarland, Louisiana Department of Environmental Quality.

Re: Solid Waste Regulations

From: Janet Wolfe

Date: February 11, 2008

Mr. McFarland was contacted to obtain information on whether dewatering constitutes processing of the waste. (Under LADEQ solid waste regulations, "processing" of a waste requires a processing permit.) Mr. McFarland was asked if de-watering of sediment by the Corps at the excavation site would be considered processing. Mr. McFarland stated that if de-watering is done on Corps property, no processing permit would be needed, although other permits (NPDES, Section 404) may be necessary. If de-watering will be contracted out, the off-site facility would be subject to any applicable permits, although this would typically be a commercial facility equipped to handle the waste.

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APPENDIX E

TCLP CHARACTERIZATION

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Wolfe, Janet K LRH

From: Estes, Trudy J ERDC-EL-MS
Sent: Tuesday, January 22, 2008 2:13 PM
To: Wolfe, Janet K LRH
Subject: TCLP RCI Study

Attachments: TCLP and RCI Evaluation 6 9 06.doc

TCLP and RCI Evaluation 6 9 06...

Janet

Attached is the more or less final draft of the TCLP study we did for the maintenance dredging last year.

Trudy

Trudy J. Estes, P.E., Ph.D.
Research Civil Engineer
ERDC Waterways Experiment Station
CEERD-EP-E
3909 Halls Ferry Road
Vicksburg, MS 39180-6199
601-634-2125
601-638-3833 (fax)

TCLP and RCI Evaluation

Management of materials categorized as solid or hazardous waste is addressed under the Resource Conservation and Recovery Act (RCRA). Materials categorized as hazardous are subject to regulation under Subtitle C; solid waste is regulated under Subtitle D. EPA exempts certain solid wastes from the definition of hazardous waste. Among these exempted materials is dredged material regulated under Section 404 (Clean Water Act). Upland disposal of dredged material with a return flow to waters of the United States falls under Section 404. Disposal of the dredged material in a landfill with no return flow is not covered under Section 404, and the material is then subject to solid waste regulations. The recommended alternative for this maintenance dredging event proposes that the dredged material be disposed in a DEQ-permitted Type I landfill (a facility used for disposing of industrial solid waste). Therefore, samples of the proposed maintenance material were evaluated for hazardous waste characteristics as required by Title 33 Part VII Subpart 1 (DEQ Solid Waste Regulations) to ensure the material is suitable for disposal in a Type I facility.

A material is considered hazardous if it is a listed waste or if it demonstrates one or more of four characteristics of hazardous waste (toxicity, reactivity, corrosivity or ignitibility). Listed wastes are wastes from generic industrial processes, wastes from certain sectors of industry and unused pure chemical products and formulations (EPA 2003). Dredged material is not a listed waste. To verify that the dredged material from the proposed maintenance event demonstrates no characteristics of a hazardous waste, and is therefore suitable for disposal at a Type I landfill, samples of the proposed maintenance material were evaluated for the characteristics of toxicity, reactivity, corrosivity and ignitability, as defined in 40 CFR §261.24, §261.23, §261.22, & §261.21 respectively and the guidelines in EPA (2003).

Toxicity – The toxicity characteristic is intended to identify materials likely to leach dangerous concentrations of toxic chemicals into ground water when disposed in a landfill (EPA 2003). Samples of the sediment to be dredged in the emergency dredging action were evaluated for toxicity using the Toxicity Characteristic Leaching Procedure (TCLP). Table 1 summarizes the locations sampled and compares the contaminant concentrations in the prepared extracts for those sediment samples to the criteria provided under 40 CFR §261.24. No exceedances are noted and the material is therefore considered to be non-toxic for the purposes of this rule.

TOXICITY CHARACTERISTIC CONSTITUENTS AND REGULATORY LEVELS														
	DMMU	1	1	2	2	2	3	3	4			5[MSOffice1]	8	8
	Sample Location	1	6	2	2 (dup)	5	4	5	2	2	2 (dup)	3	3	4
Parameter	Criteria (mg/l)	Sample Extract Concentration (mg/l)												
Arsenic	5.00	0.1700	0.1700	0.2000	0.1800	0.1500	0.1800	0.1800	0.1400	0.1600	0.1600	0.1500	0.1600	0.1600
Barium	100.00	0.8500	1.1000	0.9000	0.8500	0.9700	0.8600	0.9300	0.9500	0.7900	0.5600	1.1000	0.7600	0.8600
Benzene	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	1.00	0.0020	0.0019	0.0020	0.0025	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
Carbon tetrachloride	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	100.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	6.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	5.00	ND	ND	ND	0.0032	ND	0.0021	0.0032	ND	0.0043	0.0030	ND	0.0027	ND
o-Cresol*	200.00													
m-Cresol*	200.00													
p-Cresol*	200.00													
Total Cresols*	200.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-D	10.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	7.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	0.70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor (and its epoxide)	0.008	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	3.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	5.00	0.1100	0.0720	0.8000	0.1000	0.0620	0.0370	0.0650	0.0360	0.0430	0.0460	0.0350	0.0430	0.0240
Lindane	0.40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	10.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	200.00													

TOXICITY CHARACTERISTIC CONSTITUENTS AND REGULATORY LEVELS														
	DMMU	1	1	2	2	2	3	3	4			5[MSOffice1]	8	8
	Sample Location	1	6	2	2 (dup)	5	4	5	2	2	2 (dup)	3	3	4
Parameter	Criteria (mg/l)	Sample Extract Concentration (mg/l)												
Nitrobenzene	2.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	100.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyridine	5.00	ND	ND	ND	0.0500	ND	ND	ND	ND	ND	ND	0.1300	ND	ND
Selenium	1.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	5.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	0.70	ND	ND	0.0220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	400.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	2.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-TP (Silvex)	1.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Reactivity – The criteria for reactivity determination under 40 CFR §261.23 is narrative; there are no SW846 tests specified for assessment of reactivity. EPA (2003) specifies a waste as reactive if it meets any of the following criteria:

- It can explode or violently react when exposed to water or under normal handling conditions
- It can create toxic fumes or gases when exposed to water or under normal handling conditions
- It meets the criteria for classification as an explosive under DOT rules
- It generates toxic levels of sulfide or cyanide gas when exposed to a pH range of 2 through 12.5

The IHNC sediments have not been observed to react violently under normal handling conditions, or when in contact with water (they were underwater and saturated at the time of sampling). Dredged material does not meet the criteria for an explosive under DOT rules (49 CFR §175), being composed primarily of inert minerals with small amounts of natural organic materials and trace amounts of anthropogenic organic compounds. The material was not noted to have a strong sulfide odor, and no gas production was observed in column tests conducted with material obtained in August 2005 from two of the same locations sampled for the proposed maintenance dredging.

The levels of sulfide and cyanide in the IHNC maintenance project sediments were compared to the limited data available from other navigation and environmental dredging projects (Table 2). The levels of sulfide and cyanide in the IHNC sediments were generally higher than the sediment reference values found. However, other materials that are often landfilled, including sewage sludge and construction debris (particularly drywall), likely have higher sulfide concentrations. Drywall, a recognized source of H_2S in landfills, is composed of 92% gypsum (Marvin 2000). This is equivalent to a sulfate concentration nearly 4 times higher than the concentration of sulfide in the IHNC sediments.

Generation of toxic gases such as hydrogen sulfide (H_2S) is not normally considered to be a problem with navigation sediments under typical handling conditions where gases generated can freely dissipate, although accumulations may be of concern in confined spaces for some sediments. Highly disturbed surficial sediments such as those found in navigation channels would not be expected to have high levels of gas accumulated in the pore spaces. There may be potential for long-term generation of H_2S following disposal of dredged material under anaerobic, reduced conditions, but no reports of this being problematic were found. Both the Oregon Department of Environmental Quality (2006) and the New York State Department of Environmental Conservation (2006) have proposed rules that specifically provide for landfill disposal of dredged material. Testing requirements vary and may be site-specific, but neither sulfide nor cyanide were listed as standard contaminants of concern in either of these documents, and no numeric criteria were found for existing landfills. Based on the weight of evidence (the observed properties of the sediment during handling, the regulatory provision for landfill disposal of sediments, and the character of other sulfide/sulfate containing materials routinely placed in landfills) the IHNC sediment is considered to be non-reactive as defined in the criteria specified under this rule.

Corrosivity – The corrosivity characteristic is defined under 40 CFR §261.22 and identifies wastes that are acidic or alkaline (EPA 2003). Aqueous wastes with pH $\leq$2 or $\geq$12.5 are considered corrosive. Measured pH of the project sediments (Table 2) is essentially the pH of the porewater associated with the sediments. None of the measured pH values fall within the corrosive range. Further, free water draining from the sediments at the time of disposal will be captured, treated and disposed of separately by the Type I facility operator. Physically solid, non-aqueous wastes are not evaluated for corrosivity (EPA 2003). The sediments are therefore considered to be non-corrosive for the purposes of this rule.

Ignitibility – The ignitibility characteristic is defined under 40 CFR §261.21 and identifies wastes that can readily catch fire and sustain combustion (EPA 2003). Most ignitable wastes are liquid in form and the flash point test is used to evaluate ignitibility. Criteria for non-liquid wastes are narrative, as EPA did not intend to regulate most nonliquid materials as ignitable wastes. A non-liquid waste is considered ignitable if it can spontaneously catch fire or catch fire through friction or adsorption of moisture under normal handling conditions *and* can burn so vigorously that it creates a hazard (EPA 2003). The project sediments are non-liquid in form (approximately 35 to 41 percent solids). (Free water draining from the sediments at the time of disposal will be treated and disposed of separately by the Type I facility operator.) The sediments are composed primarily of inert minerals with small amounts of natural organic materials and trace amounts of anthropogenic compounds. They have not been observed to ignite spontaneously during normal handling, or as a result of contact with moisture (they were under water and saturated at the point of sampling) and are considered unlikely to ignite due to friction. The sediments are therefore considered to be non-ignitable for the purposes of this rule.

Table 2 Sediment Cyanide and Sulfide Concentration, pH and Percent Solids

Project/Sample Location		IHNC Maintenance Dredging Sediments			Guam[1]		Little Creek[2]	NWS[2]	CA[2]	Pearl Harbor[3] Mean Concentrations						New Bedford Harbor[4]	
										Piers S4-S5, S8-S9		Wharf Y-2		Wharves B22-26, M1-M4 & Hawala Stream Mouth			
Parameter		Mean[5]	Max[5]	Min	Mean	Max				Mean	Max	Mean	Max	Mean	Max	Mean	Max
Cyanide	(mg/kg)	6.80	27.80	1.8	<0.2		0.873	ND	ND	ND		ND		ND		2.43	2.8
Reactive Cyanide	(mg/kg)															ND	
Total Sulfide	(mg/kg)	1497.8	3020	64.6	104.6	252				5	10.1	99.9		567	1500	714	3020
Reactive Sulfide	(mg/kg)															223	305
pH		8.01	8.6	7.4													
Percent solids	(%)	43.5	72.3	33.4													

[1] Schroeder et al 2001

[2] Palermo et al 1993

[3] Schroeder and Palermo 2000

[4] Project files

[5] Based on all reported results over the reporting limit

References

EPA 2003. "RCRA Orientation Manual", January 2003, EPA530-R-02-016, United States Environmental Protection Agency, Washington, D.C.

Marvin, Emma 2000. "Gypsum Wallboard Recycling and Reuse Opportunities in the State of Vermont", Waste Management Division, Vermont Agency of Natural Resources, August 4, 2000. http://www.p2pays.org/ref/23/22738.pdf

New York DEC 2006, "Comprehensive Revisions and Enhancements to Title 6 NYCRR Part 360 Regulations - 6 NYCRR Part 360 Solid Waste Management Facilities", http://www.dec.state.ny.us/website/dshm/sldwaste/360rev.htm (June 8, 2006).

Oregon DEQ 2006. "Guidelines for the Upland Disposal of Dredged Sediment", Public Comment Draft, May 1, 2006.

Palermo, Michael R., Zappi, Paul A., Dillon, Tom M., McFarland, Victor A., Reilly, Francis J. Jr., Moore, David W., Myers, Tommy E., Sheffner, Norman W., Hales, Lynn Z. and Thackston, Edward L. (1993), "Long Term Management Strategy for Dredged Material Disposal for Naval Weapons Station, Yorktown, Yorktown, Virginia; Naval Supply Center, Cheatham Annex, Williamsburg, Virginia; and Naval Amphibious Base, Little Creek, Phase II: Formulation of Alternatives", MP EL-93-1, USACE Waterways Experiment Station, Vicksburg, MS.

Schroeder, Paul R. and Palermo, Michael R. (2000). "Long Term Management Strategy for Dredged Material Disposal for Naval Facilities at Pearl Harbor, Hawaii – Phase I: Formulation of Preferred Disposal and Management Alternatives", ERDC/EL SR-00-3, USACE Waterways Experiment Station, Vicksburg, MS.

Schroeder, Paul R., Olin-Estes, Trudy J., Bailey, Susan E., Price, Richard A., Pranger, Stephen A. and Lloyd, Cheryl (2001). "Dredged Material Disposal Management Strategy for Inner Apra Harbor, Guam – Phase II: Evaluation of Environmental Effects", USACE Waterways Experiment Station, Vicksburg, MS.

IHNC Sediment
Analytical Results - June 2006
RCRA Characterization/TCLP
Dredging Maintenance

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	TOXICITY CHARACTERISTIC CONSTITUENTS AND REGULATORY LEVELS																
2																	
3			DMMU #	1	1	2	2	2	3	3	4		4	5	8	8	
4			Sample #	1	6	2	2	5	4	5	2	2	2	3	3	4	
5						(regular)	(dup)				(regular)	(regular)	(dup)				
6	Waste Code	Contaminants / Parameter	Concentration (mg/l or ppm)														
7		**TOXICITY 40 CFR 261.24**															
8	D004	Arsenic	5.00	0.1700	0.1700	0.2000	0.1800	0.1500	0.1800	0.1800	0.1400	0.1600	0.1600	0.1500	0.1600	0.1600	Note: Reporting Limits designated by < #.
9	D005	Barium	100.00	0.8500	1.1000	0.9000	0.8500	0.9700	0.8600	0.9300	0.9500	0.7900	0.5600	1.1000	0.7600	0.8600	
10	D018	Benzene	0.50	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
11	D006	Cadmium	1.00	0.0020	0.0019	0.0020	0.0025	< 0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000	
12	D019	Carbon tetrachloride	0.50	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	
13	D020	Chlordane	0.03	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	
14	D021	Chlorobenzene	100.00	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	
15	D022	Chloroform	6.00	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	
16	D007	Chromium	5.00	< 0.5000	< 0.5000	< 0.5000	0.0032	< 0.5000	0.0021	0.0032	< 0.5000	0.0043	0.0030	< 0.5000	0.0027	0.5000	
17	D023	o-Cresol*	200.00														
18	D024	m-Cresol*	200.00														
19	D025	p-Cresol*	200.00														
20	D026	Total Cresols*	200.00	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
21	D016	2,4-D	10.00	< 0.0400	< 0.0400	< 0.0400	< 0.0400	< 0.0400	< 0.0400	< 0.0400	< 0.0400	< 0.0400	< 0.0400	< 0.0400	< 0.0400	< 0.0400	
22	D027	1,4-Dichlorobenzene	7.50	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
23	D028	1,2-Dichloroethane	0.50	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
24	D029	1,1-Dichloroethylene	0.70	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
25	D030	2,4-Dinitrotoluene	0.13	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
26	D012	Endrin	0.02	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	
27	D031	Heptachlor (and its epoxide)	0.008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	
28	D032	Hexachlorobenzene	0.13	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
29	D033	Hexachlorobutadiene	0.50	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
30	D034	Hexachloroethane	3.00	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
31	D008	Lead	5.00	0.1100	0.0720	0.8000	0.1000	0.0620	0.0370	0.0650	0.0360	0.0430	0.0460	0.0350	0.0430	0.0240	
32	D013	Lindane	0.40	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	
33	D009	Mercury	0.20	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	
34	D014	Methoxychlor	10.00	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	
35	D035	Methyl ethyl ketone	200.00														
36	D036	Nitrobenzene	2.00	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
37	D037	Pentachlorophenol	100.00	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	
38	D038	Pyridine	5.00	< 0.1000	< 0.1000	< 0.1000	0.0500	< 0.1000	0.1000	< 0.1000	< 0.1000	< 0.1000	< 0.1000	0.1300	< 0.1000	< 0.1000	
39	D010	Selenium	1.00	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	< 0.2500	
40	D011	Silver	5.00	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	< 0.5000	
41	D039	Tetrachloroethylene	0.70	< 0.0500	< 0.0500	0.0220	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
42	D015	Toxaphene	0.50	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	< 0.0200	
43	D040	Trichloroethylene	0.50	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
44	D041	2,4,5-Trichlorophenol	400.00	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
45	D042	2,4,6-Trichlorophenol	2.00	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
46	D017	2,4,5-TP (Silvex)	1.00	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0100	
47	D043	Vinyl chloride	0.20	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
48	*If o-, m-, and p-cresols cannot be individually measured, the regulatory level for total																
49	cresols is used.																
50		**REACTIVITY 40 CFR 261.23**	Narrative criteria - best judgement. There are no required SW846 tests for reactivity.														
51	D003	Nnormally unstable, reacting violently with water, potentially explosive in water, or capable of explosion if heated or confined; generates toxic sulfide or cyanide gas when exposed to pH range 2 thru 12.5															
52		**CN (mg/kg)**		0.83	1.40			0.63	no entry	no entry	no entry		1.10	0.79	1.80	no entry	
53		**Total Sulfide (mg/kg)**		35.10	1990.00			2150.00	632.00	568.00	680.00		1370; 1620	2630.00	1420.00	616.00	
54		**CORROSIVITY 40 CFR 261.22**	Physically solid, nonaqueous wastes are not evaluated for corrosivity (RCRA Orientation Manual EPA530-R-02-016 January 2003)														
55	D002	pH of the liquid (less than or equal to 2, greater than or equal to 12.5), or can corrode steel at a specified rate, under certain circumstances															
56		**pH**	</=2;>/=12.5	8.20	8.40			8.30	8.00	7.9;7.8	7.80		7.6; 7.4; 8.0	7.90	7.90	7.70	
57		**IGNITABILITY 40 CFR 261.21**	Flash point applies only to liquid wastes. EPA did not intend to regulate most nonliquid materials as ignitable wastes (EPA RCRA Orientation Manual 2003) Substances meeting DOT definition of oxidizer are classified as ignitable wastes. SW846 1030 can be used to assess ignitibility of solids, but is not required to be used.														
58																	
59	D001	liquids w/ 24% alcohol by volume; solids cause fire on friction or spontaneous change; ignitable gases; oxidizers															
60		**flash point**	<60 deg C; <140 deg F	no entry	no entry			no entry	no entry	no entry	no entry		no entry	no entry	no entry	no entry	
61		**percent solid (%)**		35.00	35.80			34.90					41.1;43.7	37.80	39.00		

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APPENDIX F

PCB ANALYTICAL RESULTS

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Wolfe, Janet K LRH

From: Wolfe, Janet K LRH
Sent: Friday, January 18, 2008 11:28 AM
To: Mathies, Linda G MVN
Subject: RE: Point of Contact in LDEQ to discuss Type I Landfill

Thanks,
Janet

-----Original Message-----
From: Mathies, Linda G MVN
Sent: Friday, January 18, 2008 11:07 AM
To: Wolfe, Janet K LRH
Cc: Boe, Richard E MVN; Corbino, Jeffrey M MVN; Duplantier, Bobby MVN; Estes, Trudy J ERDC-EL-MS; Glisch, Eric J MVN; Lotufo, Guilherme ERDC-EL-MS; Mach, Rodney F MVN; Mathies, Linda G MVN; Northey, Robert D MVN; Nunez, Christie L MVN; Poindexter, Larry MVN; Price, Richard A ERDC-EL-MS; Schroeder, Paul R ERDC-EL-MS; Steevens, Jeffery A ERDC-EL-MS
Subject: FW: Point of Contact in LDEQ to discuss Type I Landfill

Janet,

Bijan Sharafkhani is the POC at Louisiana Department of Environmental Quality with whom I discussed requirements re: PCBs waste at Type I landfills in Louisiana. If you need additional info., let me know. lgm

-----Original Message-----
From: Bijan Sharafkhani [mailto:Bijan.Sharafkhani@LA.GOV]
Sent: Monday, April 10, 2006 6:33 AM
To: Mathies, Linda G MVN
Cc: Wiegand, Danny L MVN; Mach, Rodney F MVN; Robinson, Geri A MVN; Tom Harris; Keith Casanova
Subject: RE: Point of Contact in LDEQ to discuss Type I Landfill

Linda,

It is true that there is a statement in our Solid Waste Regulations that prohibits the disposal of PCB waste at Type I and Type II landfills. However, it is very well understood that the intent of the regulations is TSCA PCB contaminated waste (in excess of 50 ppm from a regulated source). For specific requirements, please contact any of our Type I landfills.

Bijan

From: Mathies, Linda G MVN [mailto:Linda.G.Mathies@mvn02.usace.army.mil]
Sent: Friday, April 07, 2006 4:57 PM
To: Bijan Sharafkhani
Cc: Wiegand, Danny L MVN; Mach, Rodney F MVN; Robinson, Geri A MVN
Subject: RE: Point of Contact in LDEQ to discuss Type I Landfill

Bijan,

Please reference our telephone conversation on 6 April 2006 in which we discussed the USACE, New Orleans District's proposed plans to place sediment dredged from the Inner Harbor Navigation Canal at a Type I landfill. We specifically discussed facility limitations for Type I and Type II Landfills with regard to PCBs. LDEQ's December 2005

1

regulations state that PCB waste is strictly phohibited and prevented at Type I and Type II landfills. Preliminary results from chemical analysis of the dredged material proposed for placement in the Type I landfill indicate levels of PCBs ranging from 0.040 mg/kg to 0.170 mg/kg; 0.032 mg/kg; 0.074 mg/kg; 0.083 to 0.120 mg/kg; and 0.073 mg/kg to 0.6 mg/kg. Request verification that solid waste, i.e., sediment/dredged material, with PCBs concentrations of less that 50 mg/kg may be placed in Type I landfills.

If you have any questions, please call me at (504) 862-2318.

Thank you,

Linda G. Mathies

-----Original Message-----
From: Bijan Sharafkhani [mailto:Bijan.Sharafkhani@LA.GOV]
Sent: Wednesday, April 05, 2006 2:41 PM
To: Dugan Sabins; Tom Griggs; Tom Harris; Steve Aguillard; Keith Casanova
Cc: Mathies, Linda G MVN
Subject: RE: Point of Contact in LDEQ to discuss Type I Landfill

Linda,

Please call me at 225-219-3462 to discuss solid waste related issues.

Bijan

From: Dugan Sabins
Sent: Wednesday, April 05, 2006 1:53 PM
To: Tom Griggs; Tom Harris; Steve Aguillard; Keith Casanova; Bijan Sharafkhani
Subject: FW: Point of Contact in LDEQ to discuss Type I Landfill
Importance: High

Looks like the Corps need some advice here on some storm related maintenance dredging of the IHNC. They had discussed this issue with us previously. Can somebody answer Linda's question on a Type I Landfill?

Dugan

From: Mathies, Linda G MVN [mailto:Linda.G.Mathies@mvn02.usace.army.mil]
Sent: Wednesday, April 05, 2006 1:03 PM
To: Dugan Sabins
Cc: Broussard, Richard W MVN; Corbino, Jeffrey M MVN; Estes, Trudy J ERDC-EL-MS; Farrar, Daniel ERDC-EL-MS; Glorioso, Daryl G MVN; Mabry, Reuben C MVN; Mach, Rodney F MVN; Merchant, Randall C MVN; O'Donnell, Jessica; Poindexter, Larry MVN; Robinson, Geri A MVN; Steevens, Jeffery A ERDC-EL-MS; Suedel, Burton ERDC-EL-MS; Swanda, Michael L MVN; Wiegand, Danny L MVN
Subject: Point of Contact in LDEQ to discuss Type I Landfill

Importance: High

Dugan,

We have to perform maintenance dredging on the Inner Harbor Navigation Canal since the hurricanes caused loss of authorized channel dimensions. The Port needs the channel dredged "yesterday" because the ships that would normally use the MRGO to access facilities in the industrial corridor along the GIWW-MRGO must now use the IHNC. Companies that must access the New Orleans Cold Storage Facility must light load to traverse the IHNC and they don't like losing money doing this. We are considering placement of the dredged material removed into a Type I Landfill because preliminary data from our analysis of the dredged material indicates that the material is not suitable for placement in the existing open water disposal site within the Mississippi River. We are considering the landfill alternative because we do not have time to design and construct a confined disposal facility and there may be other site available considering the time it would take for us to get real estate/disposal easements in the vicinity. Could you please give a point of contact, i.e., name and phone number, in the Solid Waste Division who could talk with me about the use of a Type I Landfill for placement of this material. Thanks,

<<Mathies, Linda G MVN.vcf>>

APPENDIX G

BLANK WASTE PROFILE SHEETS

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Generator's Nonhazardous Waste Profile Sheet

WASTE MANAGEMENT

Requested Disposal Facility _____ Profile Number

❑ Renewal for Profile Number _____ Waste Approval Expiration Date _____

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: _____
2. Site Address: _____ 7. Email Address: _____
3. City/ZIP: _____ 8. Phone: _____ 9. FAX: _____
4. State: _____ 10. NAICS Code: _____
5. County: _____ 11. Generator USEPA ID #: _____
6. Contact Name/Title: _____ 12. State ID# (if applicable): _____

B. Customer Information ❑ same as above P. O. Number: _____

1. Customer Name: _____ 6. Phone: _____ FAX: _____
2. Billing Address: _____ 7. Transporter Name: _____
3. City, State and ZIP: _____ 8. Transporter ID # (if appl.): _____
4. Contact Name: _____ 9. Transporter Address: _____
5. Contact Email: _____ 10. City, State and ZIP: _____

C. Waste Stream Information

1. DESCRIPTION
   a. Common Waste Name: _____ State Waste Code(s): _____
   b. Describe Process Generating Waste or Source of Contamination:

   c. Typical Color(s): _____
   d. Strong Odor? ❑ Yes ❑ No Describe: _____
   e. Physical State at 70°F: ❑ Solid ❑ Liquid ❑ Powder ❑ Semi-Solid or Sludge ❑ Other: _____
   f. Layers? ❑ Single layer ❑ Multi- layer ❑ NA
   g. Water Reactive? ❑ Yes ❑ No If Yes, Describe: _____
   h. Free Liquid Range (%): _____ to _____ ❑ NA(solid)
   i. pH Range: ❑ ≤2 ❑ 2.1-12.4 ❑ ≥12.5 ❑ NA(solid) ❑ Actual: _____
   j. Liquid Flash Point: ❑ < 140°F ❑ ≥ 140°F ❑ NA(solid) ❑ Actual: _____
   k. Flammable Solid: ❑ Yes ❑ No
   l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ❑ (See Attached)

Constituents *(Total Composition Must be ≥ 100%)*	Concentration %	Constituents *(Total Composition Must be ≥ 100%)*	Concentration %
1. _____	_____	4. _____	_____
2. _____	_____	5. _____	_____
3. _____	_____	6. _____	_____

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION
   a. ❑ Event ❑ Base/Ongoing (Check One)
   b. Estimated Annual Quantity: _____ ❑ Tons ❑ Cubic Yards ❑ Drums ❑ Gallons ❑ Other (specify): _____
   c. Shipping Frequency: _____ Units per ❑ Month ❑ Quarter ❑ Year ❑ One Time ❑ Other
   d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ❑ Yes ❑ No
   e. USDOT Shipping Description (if applicable): _____
3. SAFETY REQUIREMENTS (Handling, PPE, etc.): _____

December 2006

Generator's Nonhazardous Waste Profile Sheet

D. Regulatory Status (Please check appropriate responses)

1. Is this a USEPA (40 CFR Part 261)/State hazardous waste? If yes, contact your sales representative. ❑ Yes ❑ No
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ❑ Yes ❑ No
   - ❑ Delisted Hazardous Waste
   - ❑ Excluded Wastes Under 40 CFR 261.4
   - ❑ Treated Hazardous Waste Debris
   - ❑ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ❑ Yes ❑ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ❑ Yes ❑ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ❑ Yes ❑ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ❑ Yes ❑ No
5. Does the waste represented by this waste profile sheet contain concentrations of regulated Polychlorinated Biphenyls (PCBs)? ❑ Yes ❑ No
   a. If yes, is disposal regulated under TSCA? ❑ Yes ❑ No
6. Does the waste contain untreated, regulated, medical or infectious waste? ❑ Yes ❑ No
7. Does the waste contain asbestos? ❑ Yes ❑ No If Yes, ❑ Friable ❑ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ❑ Yes ❑ No
   If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ❑ Yes ❑ No

E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the Contractor if applicable).
5. Check all that apply:
   - ❑ Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: _____ # Pages: _____
   - ❑ Only the analyses identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
   - ❑ Additional information necessary to characterize the profiled waste has been attached (other than analytical). Indicate the number of attached pages: _____
   - ❑ I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.
   - ❑ By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

Certification Signature: _____ **Title:** _____

Company Name: _____ **Name (Print):** _____

Date: _____

FOR WM USE ONLY

Management Method: ❑ Landfill ❑ Bioremediation **Approval Decision:** ❑ Approved ❑ Not Approved

❑ Non-hazardous solidification ❑ Other: _____ Waste Approval Expiration Date: _____

Management Facility Precautions, Special Handling Procedures or Limitation on approval: _____

_____

_____

- ❑ Shall not contain free liquid
- ❑ Shipment must be scheduled into disposal facility
- ❑ Approval Number must accompany each shipment
- ❑ Waste Manifest must accompany load

WM Authorization Name / Title: _____ **Date:** _____

State Authorization (if Required): _____ **Date:** _____

Profile No.:

1. Generator Information

Generator Name:
Generator Site Address:
City: State: Zip: Parish:

Solid Waste Facility ID No.:

Generator Mailing Address (if different):
City: State: Zip:
Generator Contact Name:
Phone Number: Fax Number:

2. Billing Information

Company:
Contact:
Address:
City: State: Zip:
Phone No.: Fax No.:

3. Waste Stream Information

Name of Waste: Industrial Waste Code:

Process Generating Waste:

Type of Waste: Industrial Waste ☐ Special Waste ☐ Pollution Control Waste ☐ Other (Describe):

Method of Shipment: Bulk ☐ Drum ☐ Bagged ☐ Other (describe)

Estimated Volume: Cubic Yards ☐ Tons ☐ Gallons ☐ Other

Frequency: One Time ☐ Daily ☐ Weekly ☐ Monthly ☐ Other (describe)

RBL Analytical Requirements:

Disposal Rate: Will Waste Require Stabilization? No ☐ Yes ☐

4. Physical Properties of Waste

a) Physical State	☐Solid	☐Semi-Solid	☐Powder	☐Free Liquid	☐Combination	
b) Reactivity	☐Hydrophoric ☐Pyrophoric ☐Autopolymerizable	☐Oxidizer ☐Explosive	☐Alkaline Reactive ☐Thermally Sensitive ☐None of the above	☐Acid Reactive ☐Shock Sensitive		
c) pH	☐≤ 2	☐2.1 – 5.0	☐5.1 – 9.0	☐9.1 – 12.4	☐≥ 12.5	☐N/A or N/D
d) Flash Point ˚F	☐≤ 72	☐73 – 100	☐101 – 140	☐141-200	☐≥ 201	☐N/A or N/D
e) Odor	Describe:					
f) Color	Describe:					
g) Number of Layers	☐Single	☐Bi-Layer	☐Multiple			

Profile No.:

5. Waste Composition

Based upon generator knowledge of the waste, please provide a breakdown of the waste stream.

Components/Contaminants Range (%)

Recommended personal protective equipment and special handling precautions:
none
Is this waste a treatment residue of a waste which was previously characteristically hazardous waste? ☐ Yes ☐ No

If yes, describe the waste, applicable code(s) and the process generating the waste prior to treatment:

Do the waste profile sheets and all attachments contain true and accurate descriptions of the waste material, and has all relevant information within the possession of the Generator regarding known or suspected hazards pertaining to the waste been disclosed to the Contractor?	☐ Yes	☐ No
Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP (Silvex) as defined in 40 CFR 261.33?.	☐ Yes	☐ No
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?	☐ Yes	☐ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes	☐ No
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes	☐ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes	☐ No
Is this a regulated Toxic Material as defined by Federal and/or State regulations?	☐ Yes	☐ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes	☐ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes	☐ No

6. Generator's Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any changes or conditions pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by River Birch Incorporated. The undersigned individual warrants that he/she is authorized to sign this document on behalf of the generator.

Authorized Representative Name and Title (printed) Company Name

Authorized Representative Signature Date

8. River Birch Decision

Approved ☐ Rejected ☐
Analytical Received:
Comments:
Material Code (If waste is not an industrial waste):
Signature Name: Victor C. Culpepper, Sc.D Approval Date:

Title: Technical Director Expiration Date:

APPENDIX H

DISPOSAL COSTS
NON-HAZARDOUS SOLID WASTE LANDFILLS

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Inner Harbor Navigation Canal
New Orleans, LA
River Birch Landfill - 23 miles south of project
Feb-08

WET ALTERNATIVE

DMMU	Cubic Yards	CY to Tons	Cost/Ton	Total Cost	
If sediment doesn't need or will be de-watered prior to shipping to landfill					
DMMU 1	0.00				
DMMU 2	87,660.00				
DMMU 5	142,909.00				
	230,569.00	1.35	$29.13	**$9,067,241.21**	**de-watered**
	(Total CY)				
If sediment will be dewatered by landfill facility					
DMMU 1	0.00				
DMMU 2	87,660.00				
DMMU 5	142,909.00				
	230,569.00	1.35	$75.13	**$23,385,576.11**	**wet (75% moisture)**
	(Total CY)				

DRY ALTERNATIVE

DMMU	Cubic Yards	CY to Tons	Cost/Ton	Total Cost	
If sediment doesn't need or will be de-watered prior to shipping to landfill					
DMMU 1	0.00				
DMMU 2	154,050.00				
DMMU 5	244,740.00				
	398,790.00	1.35	$29.13	**$15,682,616.15**	**de-watered**
	(Total CY)				
If sediment will be dewatered by landfill facility					
DMMU 1	0.00				
DMMU 2	154,050.00				
DMMU 5	244,740.00				
	398,790.00	1.35	$75.13	**$40,447,475.15**	**wet (75% moisture)**
	(Total CY)				

Inner Harbor Navigation Canal
New Orleans, LA
Jefferson Parish Landfill - 17 miles south of project
Feb-08

WET ALTERNATIVE

DMMU	Cubic Yards	CY to Tons	Cost/Ton	Total Cost
For sediment with no free liquids - this facility does not de-water.				
DMMU 1	0.00			
DMMU 2	87,660.00			
DMMU 5	142,909.00			
	230,569.00	1.35	$28.00	**$8,715,508.20**
	(Total CY)			

This facility does not dewater.

DRY ALTERNATIVE

DMMU	Cubic Yards	CY to Tons	Cost/Ton	Total Cost
For sediment with no free liquids - this facility does not de-water.				
DMMU 1	0.00			
DMMU 2	154,050.00			
DMMU 5	244,740.00			
	398,790.00	1.35	$28.00	**$15,074,262.00**
	(Total CY)			

This facility does not dewater.

Inner Harbor Navigation Canal
New Orleans, LA
Coast Guard Road Landfill - 83 miles south of project
Feb-08

WET ALTERNATIVE

	Cubic Yards	CY to Tons	Cost/Ton	No. of barge moves (every 2nd barge)	Cost of barge movement	Cost to dewater	Subtotal	Total Cost	
If sediment doesn't need or will be dewatered prior to shipping to landfill.									
DMMU 1	0.00								
DMMU 2	87,660.00								
DMMU 5	142,909.00								
	230,569.00 (Total CY)	1.35	$25.00				$7,781,703.75		
Barge move.				97	$1,600.00		$155,200.00		
(Based on estimated 97 barge movements.)								**$7,936,903.75**	barge
by truck	230,569.00 (Total CY)	1.35	$15.00					**$4,669,022.25**	truck
Note: Based on trucks provided by landfill									
If sediment will be dewatered by landfill facility.									
DMMU 1	0.00								
DMMU 2	87,660.00								
DMMU 5	142,909.00								
	230,569.00 (Total CY)	1.35	$25.00			$18.00	$13,384,530.45		
Barge move.				97	$1,600.00		$155,200.00		
								$13,539,730.45	**barge**

Note: dewatering is performed by adding flyash; this would add to the tonnage.

Inner Harbor Navigation Canal
New Orleans, LA
Coast Guard Road Landfill - 83 miles south of project
Feb-08

DRY ALTERNATIVE

	Cubic Yards	CY to Tons	Cost/Ton	No. of barge moves (every 2nd barge)	Cost of barge movement	Cost to dewater		Total Cost	
If sediment doesn't need or will be dewatered prior to shipping to landfill.									
DMMU 1	0.00								
DMMU 2	154,050.00								
DMMU 5	244,740.00								
	398,790.00 (Total CY)	1.35	$25.00				$13,459,162.50		
Barge move.				97	$1,600.00		$155,200.00		
(Based on estimated 97 barge movements with 1 barge holding 1600 tons.								**$13,614,362.50**	barge
by truck	398,790.00 (Total CY)	1.35	$15.00					**$8,075,497.50**	truck
Based on trucks provided by landfill.									
If sediment will be dewatered by landfill facility.									
DMMU 1	0.00								
DMMU 2	154,050.00								
DMMU 5	244,740.00								
	398,790.00 (Total CY)	1.35	$25.00			$18.00	$23,149,759.50		
Barge move.				97	$1,600.00		$155,200.00		
(Based on estimated 97 barge movements with 1 barge holding 1600 tons.								**$23,304,959.50**	**barge**

Note: dewatering is performed by adding flyash; this would add to the tonnage.

Inner Harbor Navigation Canal
New Orleans, LA
Woodside Landfill - 85 miles northwest of project
Feb-08

WET ALTERNATIVE

DMMU	Cubic Yards	CY to Tons	Cost/Ton	Total Cost	
If sediment doesn't need or will be dewatered prior to shipping to landfill.					
DMMU 1	0.00				
DMMU 2	87,660.00				
DMMU 5	142,909.00				
	230,569.00 (Total CY)	1.35	$28.00	**$8,715,508.20**	**de-watered**
If sediment will be dewatered by landfill facility.					
DMMU 1	0.00				
DMMU 2	87,660.00				
DMMU 5	142,909.00				
	230,569.00 (Total CY)	1.35	$70.00	**$21,788,770.50**	**wet**

DRY ALTERNATIVE

DMMU	Cubic Yards	CY to Tons	Cost/Ton	Total Cost	
If sediment doesn't need or will be dewatered prior to shipping to landfill.					
DMMU 1	0.00				
DMMU 2	154,050.00				
DMMU 5	244,740.00				
	398,790.00	1.35	$28.00	**$15,074,262.00**	**de-watered**
If sediment will be dewatered by landfill facility.					
DMMU 1	0.00				
DMMU 2	154,050.00				
DMMU 5	244,740.00				
	398,790.00	1.35	$70.00	**$37,685,655.00**	**wet**

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Estimated by	Joseph Pham
Designed by	
Prepared by	Joseph Pham
Preparation Date	3/21/2008
Effective Date of Pricing	10/1/2007
Estimated Construction Time	2,910 Days

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Designed by

Estimated by
Joseph Pham

Prepared by
Joseph Pham

Design Document

Document Date 3/21/2008

District New Orleans, LA
Contact Don Whitmore

Budget Year 2008
UOM System Original

Direct Costs

LaborCost
EQCost
MatlCost
SubBidCost
UserCost1

Timeline/Currency

Preparation Date 3/21/2008
Escalation Date 8/15/2015
Eff. Pricing Date 10/1/2007
Estimated Duration 2910 Day(s)

Currency US dollars
Exchange Rate 1.000000

Costbook CB04aEB: MII English Cost Book 2004b Final

Labor LB04NatFD: Labor National 2004
Note: http://www.wdol.gov/

Labor Rates

LaborCost1
LaborCost2
LaborCost3
LaborCost4

Equipment EP05R03: MII Equipment Region 3 2005
Note: Equipment Region 3, 2005 updated as current oil price in Louisiana state 3/11/08.

03 SOUTHEAST

Sales Tax	7.40
Working Hours per Year	1,530
Labor Adjustment Factor	0.82
Cost of Money	4.25
Cost of Money Discount	25.00
Tire Recap Cost Factor	1.50
Tire Recap Wear Factor	1.80
Tire Repair Factor	0.15
Equipment Cost Factor	1.00
Standby Depreciation Factor	0.50

Fuel

Electricity	0.070
Gas	3.516
Diesel Off-Road	3.442
Diesel On-Road	3.912

Shipping Rates

Over 0 CWT	2.45
Over 240 CWT	2.55
Over 300 CWT	3.18
Over 400 CWT	4.02
Over 500 CWT	4.43
Over 700 CWT	3.36
Over 800 CWT	3.23

Date	Author	Note

3/26/2008 Joseph Pham

1. COST METHODOLOGY

1.1 GENERAL
The Preliminary Cost Estimate of disposal costs for Inner Harbor Navigation Canal Project has been prepared to an equivalent price level of 1 October 2007 (FY08). Construction scenarios were also developed from conversations with PDT members, contractors, and from the estimator's past experience with specialty work.

1.2. DIRECT COSTS
Direct costs were based on anticipated equipment, labor necessary to conduct the project as scoped and were calculated independent of the contractor assigned to perform the tasks. Following formulation of the direct cost, a determination was made as to whether the work would be performed by the prime contractor or a subcontractor.

1.2.1 Labor-Wage Determination
Labor National 2004 library were updated and used for all craft labor . The total labor rate was developed using the base wage, fringe benefits, Federal Insurance Contributions Act (FICA), Federal Unemployment Tax Act (FUTA), and Workman's Compensation rates for each craft, 2.5% is added to cover show up time. The base wage rate and fringe were entered into MII and applied accordingly.

1.2.1.1. Overtime
Overtime was not anticipated and therefore not included.

1.2.2 Equipment Rates
The Equipment Region 3, 2005 library, based on EP 1110-1-8, Construction Equipment Ownership and Operation Expense Schedule was adjusted for current fuel costs and used for equipments.

1.2.3. Crews
Project specific crews have been developed for use in estimating the direct costs of conduction for those items not estimated using quotes or historical cost information. Crew members consist of selected complements of labor classifications and equipment pieces assembled to perform specific tasks. Productivity has been assigned to each crew reflective of the expected output per unit of measure for the specific activities listed in the cost estimate

1.2.3. Disposal Fee Quotes
Disposal Fee Cost were obtained through telephone solicitations with vendors, Internet suppliers.

1.2.4. Quantities
The quantity takeoffs were developed and provided by the Project Development Team (PDT) members. Quantities were spot-checked and sub-quantities for the project were developed by the estimator.

1.3. INDIRECT COSTS

1.3.1. PRIME CONTRACTOR

1.3.1.1. Field Office Overhead (FOOH)
The indirect costs for Field Office Overhead (FOOH) were included as a percentage of the direct costs. For this project, 20% was used for FOOH. This value represents the anticipated prime contractor field overhead costs for such items as project supervision, contractor quality control, contractor field office supplies, personal protective equipment, field engineering, and other incidental field overhead costs.

1.3.1.2. Home Office Overhead (HOOH)
For Home Office Overhead (HOOH) expense, the cost estimate included an allowance applied as a percentage of direct cost plus field overhead. HOOH included items such as office rental/ownership costs, utilities, office equipment ownership/maintenance, office staff (managers, accountants, clerical, etc.), insurance, and miscellaneous. In this case, a value of 5% was assumed for the prime contractor.

13.1.3. Profit
Profit was included as a percentage of the direct and indirect costs at the rate of 10%.

1.3.1,4. Bond
The performance and payment bond costs were included as percentate of the rate 1.5%.

1.3.2.. SUBCONTRACTORS

1.3.2.1. Field Office Overhead (FOOH)
All subcontractor overhead costs were set to 15% of direct cost to account for such items as project supervision, contractor quality control, contractor field office supplies, personal protective equipment, field engineering, and other incidental field overhead costs. The exception is where the subcontractor has provided a quoted price including overhead. In that case, no additional markups have been included for subcontractor's overhead.

1.3.2.2. Home Office Overhead (HOOH)
The cost estimate included an allowance applied as percentage of direct cost plus field overhead for HOOH. HOOH included such items as office rental/ownership costs, utilities, office equipment ownership/maintenance, office staff (managers, accountants, clerical, etc.), insurance, and miscellaneous. In this case, a value of 5% was assumed for the subcontractor.

1.3.2.3. Profit
All subcontractor profit margins were used a percentage of 10% rate.

2. ESCALATION
Escalation was calculated in this Preliminary Estimate start 1/10/07 and end 8/15/15 at 19.46 %.

3. CONTINGENCY
Contingencies were assigned by the cost engineer at 20% for most items based on the risk and /or uncertainty in this Preliminary Estimate.

4. REVIEW CREDITS

Date	Author	Note

Donald A Whitmore of CELRH-EC-TC performed a QC review of this cost estimate.

5. REFERENCES

5.1 ER 1110-2-1302 Civil Works Cost Engineering, 32 Mar 94

5.2 ER 1110-1-1300 Cost Engineering Policy and General Requirements, 26 Mar 93

5.3 RSMeans Site Work & Landscape Cost Data 26th Annual Edition 2007.

Direct Cost Markups

Category

Productivity
Overtime

	Days/Week	Hours/Shift	Shifts/Day
Standard	*5.00*	*8.00*	*2.00*
Actual	*6.00*	*8.00*	*2.00*

Day	*OT Factor*	*Working*
Monday	*1.50*	*Yes*
Tuesday	*1.50*	*Yes*
Wednesday	*1.50*	*Yes*
Thursday	*1.50*	*Yes*
Friday	*1.50*	*Yes*
Saturday	*1.50*	*Yes*
Sunday	*2.00*	*No*

1 Shift

Overtime

	Days/Week	Hours/Shift	Shifts/Day
Standard	*5.00*	*8.00*	*1.00*
Actual	*6.00*	*8.00*	*1.00*

Day	*OT Factor*	*Working*
Monday	*1.50*	*Yes*
Tuesday	*1.50*	*Yes*
Wednesday	*1.50*	*Yes*
Thursday	*1.50*	*Yes*
Friday	*1.50*	*Yes*
Saturday	*1.50*	*Yes*
Sunday	*2.00*	*No*

Method

Productivity
Overtime

	1st Shift	2nd Shift	3rd Shift
Standard	*8.00*	*8.00*	*0.00*
Actual	*10.00*	*10.00*	*0.00*

OT Percent	*FCCM Percent*
16.67	*(66.67)*

Overtime

	1st Shift	2nd Shift	3rd Shift
Standard	*8.00*	*0.00*	*0.00*
Actual	*10.00*	*0.00*	*0.00*

OT Percent	*FCCM Percent*
16.67	*(33.33)*

Contractor Markups

JOOH (Small Tools)
JOOH
JOOH %
HOOH
Profit
Bond
Excise Tax

Category

Allowance
JOOH
JOOH
HOOH
Profit
Bond
Excise

Method

% of Labor
JOOH (Calculated)
Running %
Running %
Running %
Running %
Running %

Owner Markups

Escalation

StartDate
1/10/2007

Contingency
SIOH

Category

Escalation

StartIndex	*EndDate*
648.45	*8/15/2015*

Contingency
SIOH

Method

Escalation

EndIndex	*Escalation*
774.63	*19.46*

Running %
Running %

Description	Quantity	UOM	ContractCost	Contingency	ProjectCost
Owner Costs			**986,036,890**	**197,207,378**	**1,183,244,268**
Alternative 1	**1.00**	**LS**	**67,461,532**	**13,492,306**	**80,953,838**
Alternative 2	**1.00**	**LS**	**64,240,718**	**12,848,144**	**77,088,862**
Alternative 3	**1.00**	**LS**	**40,810,295**	**8,162,059**	**48,972,354**
Alternative 4	**1.00**	**LS**	**106,220,542**	**21,244,108**	**127,464,650**
Alternative 5	**1.00**	**LS**	**40,451,290**	**8,090,258**	**48,541,548**
Alternative 6	**1.00**	**LS**	**63,676,084**	**12,735,217**	**76,411,300**
Alternative 7	**1.00**	**LS**	**39,731,527**	**7,946,305**	**47,677,832**
Alternative 8	**1.00**	**LS**	**41,470,809**	**8,294,162**	**49,764,971**
Alternative 9	**1.00**	**LS**	**40,395,952**	**8,079,190**	**48,475,143**
Alternative 10	**1.00**	**LS**	**62,540,514**	**12,508,103**	**75,048,617**
Alternative 11	**1.00**	**LS**	**67,797,757**	**13,559,551**	**81,357,308**
Alternative 12	**1.00**	**LS**	**63,604,840**	**12,720,968**	**76,325,807**
Alternative 13	**1.00**	**LS**	**69,560,201**	**13,912,040**	**83,472,242**
Alternative 14	**1.00**	**LS**	**66,378,236**	**13,275,647**	**79,653,884**
Alternative 15	**1.00**	**LS**	**42,171,623**	**8,434,325**	**50,605,948**
Alternative 16	**1.00**	**LS**	**109,524,970**	**21,904,994**	**131,429,964**

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Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
Direct Costs				**844,972.51**	**27,692,628**	**50,897,446**	**0**	**622,322,564**	**700,912,638**
1 Alternative 1	**1.00**	**LS**		**67,416.89**	**2,107,840**	**3,691,023**	**0**	**42,155,368**	**47,954,231**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
1.1 Material Loading	**381,700.00**	**LCY**		**5,047.61**	**558,580**	**1,092,719**	**0**	**0**	**1,651,299**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
1.1.1 USR Loading Dredging Material from Barge (Note: Prorate from RSMeans Sitework 07p67)	381,700.00	CY	IHNCL	5,047.61	558,580	1,092,719	0	0	1,651,299
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
1.2 Water Disposal	**0.00**	**GAL**		**0.00**	**0**	**0**	**0**	**0**	**0**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
1.2.1 USR Transport Water	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
1.2.2 USR Disposal Fee	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
1.2.3 USR Separate Water at Jobsite	0.00	GAL		0.00	0	0	0	0	0
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.16	*4.06*	*6.81*	*0.00*	*0.00*	*10.87*
1.3 Material Hauling	**381,700.00**	**LCY**		**62,369.28**	**1,549,260**	**2,598,304**	**0**	**0**	**4,147,564**
				0.16	*4.06*	*6.81*	*0.00*	*0.00*	*10.87*
1.3.1 USR Haul Dredging Material to Landfill Site	381,700.00	CY	IHNCHT	62,369.28	1,549,260	2,598,304	0	0	4,147,564
				0.00	*0.00*	*0.00*	*0.00*	*110.44*	*110.44*
1.4 Material Disposal	**381,700.00**	**LCY**		**0.00**	**0**	**0**	**0**	**42,155,368**	**42,155,368**
				0.00	*0.00*	*0.00*	*0.00*	*75.13*	*75.13*
1.4.1 USR Dispsal Fee Wet Soil Or Mud	561,099.00	TON		0.00	0	0	0	42,155,368	42,155,368
(Note: Price quote by Vic Culpepper of River Birch Landfill, 2000 Hwy 90 Avondale, LA 70094. Tel. 504364-1140.)									
2 Alternative 2	**1.00**	**LS**		**26,528.73**	**829,441**	**1,452,428**	**0**	**43,382,885**	**45,664,753**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
2.1 Material Loading	**150,200.00**	**LCY**		**1,986.25**	**219,803**	**429,988**	**0**	**0**	**649,791**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
2.1.1 USR Loading Dredging Material from Barge (Note: Prorated from RSMeans Sitework 07p67)	150,200.00	CY	IHNCL	1,986.25	219,803	429,988	0	0	649,791
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
2.2 Water Disposal	**91,000,000.00**	**GAL**		**0.00**	**0**	**0**	**0**	**38,220,000**	**38,220,000**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
2.2.1 USR Transport Water	91,000,000.00	GAL		0.00	0	0	0	6,370,000	6,370,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
2.2.2 USR Disposal Fee	91,000,000.00	GAL		0.00	0	0	0	13,650,000	13,650,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
2.2.3 USR Separate Water at Jobsite	91,000,000.00	GAL		0.00	0	0	0	18,200,000	18,200,000
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.16	*4.06*	*6.81*	*0.00*	*0.00*	*10.87*
2.3 Material Hauling	**150,200.00**	**LCY**		**24,542.48**	**609,638**	**1,022,440**	**0**	**0**	**1,632,078**
				0.16	*4.06*	*6.81*	*0.00*	*0.00*	*10.87*
2.3.1 USR Haul Dredging Material to Landfill Site	150,200.00	CY	IHNCHT	24,542.48	609,638	1,022,440	0	0	1,632,078
				0.00	*0.00*	*0.00*	*0.00*	*34.37*	*34.37*
2.4 Material Disposal	**150,200.00**	**LCY**		**0.00**	**0**	**0**	**0**	**5,162,885**	**5,162,885**
				0.00	*0.00*	*0.00*	*0.00*	*29.13*	*29.13*
2.4.1 USR Disposal Fee Dry Soil	177,236.00	TON		0.00	0	0	0	5,162,885	5,162,885
(Note: Price quote by Vic Culpepper of River Birch Landfill, 2000 Hwy 90 Avondale, LA 70094. Tel. 504364-1140.)									
3 Alternative 3	**1.00**	**LS**		**16,867.47**	**527,374**	**923,481**	**0**	**27,558,660**	**29,009,515**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
3.1 Material Loading	**95,500.00**	**LCY**		**1,262.89**	**139,755**	**273,394**	**0**	**0**	**413,149**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
3.1.1 USR Loading Dredging Material from Barge (Note: Prorated from RSMeans Sitework 07p67)	95,500.00	CY	IHNCL	1,262.89	139,755	273,394	0	0	413,149
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
3.2 Water Disposal	**57,800,000.00**	**GAL**		**0.00**	**0**	**0**	**0**	**24,276,000**	**24,276,000**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
3.2.1 USR Transport Water	57,800,000.00	GAL		0.00	0	0	0	4,046,000	4,046,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
3.2.2 USR Disposal Fee	57,800,000.00	GAL		0.00	0	0	0	8,670,000	8,670,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
3.2.3 USR Separate Water at Jobsite	57,800,000.00	GAL		0.00	0	0	0	11,560,000	11,560,000
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.16	*4.06*	*6.81*	*0.00*	*0.00*	*10.87*
3.3 Material Hauling	**95,500.00**	**LCY**		**15,604.58**	**387,619**	**650,087**	**0**	**0**	**1,037,706**
				0.16	*4.06*	*6.81*	*0.00*	*0.00*	*10.87*
3.3.1 USR Haul Dredging Material to Landfill Site	95,500.00	CY	IHNCHT	15,604.58	387,619	650,087	0	0	1,037,706
				0.00	*0.00*	*0.00*	*0.00*	*34.37*	*34.37*
3.4 Material Disposal	**95,500.00**	**LCY**		**0.00**	**0**	**0**	**0**	**3,282,660**	**3,282,660**
				0.00	*0.00*	*0.00*	*0.00*	*29.13*	*29.13*
3.4.1 USR Disposal Fee Dry Soil	112,690.00	TON		0.00	0	0	0	3,282,660	3,282,660
(Note: Price quote by Vic Culpepper of River Birch Landfill, 2000 Hwy 90 Avondale, LA 70094. Tel. 504364-1140.)									

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
4 Alternative 4	**1.00**	**LS**		**106,150.25**	**3,318,868**	**5,811,644**	**0**	**66,375,101**	**75,505,613**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
4.1 Material Loading	**601,000.00**	**LCY**		**7,947.63**	**879,504**	**1,720,524**	**0**	**0**	**2,600,027**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
4.1.1 USR Loading Dredging Material from Barge (Note: Prorate from RSMeans Sitework 07p67)	601,000.00	CY	IHNCL	7,947.63	879,504	1,720,524	0	0	2,600,027
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
4.2 Water Disposal	**0.00**	**GAL**		**0.00**	**0**	**0**	**0**	**0**	**0**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
4.2.1 USR Transport Water	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
4.2.2 USR Disposal Fee	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
4.2.3 USR Separate Water at Jobsite	0.00	GAL		0.00	0	0	0	0	0
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.16	*4.06*	*6.81*	*0.00*	*0.00*	*10.87*
4.3 Material Hauling	**601,000.00**	**LCY**		**98,202.61**	**2,439,364**	**4,091,121**	**0**	**0**	**6,530,485**
				0.16	*4.06*	*6.81*	*0.00*	*0.00*	*10.87*
4.3.1 USR Haul Dredging Material to Landfill Site	601,000.00	CY	IHNCHT	98,202.61	2,439,364	4,091,121	0	0	6,530,485
				0.00	*0.00*	*0.00*	*0.00*	*110.44*	*110.44*
4.4 Material Disposal	**601,000.00**	**LCY**		**0.00**	**0**	**0**	**0**	**66,375,101**	**66,375,101**
				0.00	*0.00*	*0.00*	*0.00*	*75.13*	*75.13*
4.4.1 USR Dispsal Fee Wet Soil Or Mud	883,470.00	TON		0.00	0	0	0	66,375,101	66,375,101
(Note: Characteristics of Materials: Wet, Mud Soil Material LCY : 2940LB/CY or 1.47TON/CY. Price quote by Vic Culpepper of River Birch Landfill, 2000 Hwy 90 Avondale, LA 70094. Tel. 504364-1140.)									
5 Alternative 5	**1.00**	**LS**		**14,944.84**	**479,616**	**843,384**	**0**	**27,431,320**	**28,754,320**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
5.1 Material Loading	**95,500.00**	**LCY**		**1,262.89**	**139,755**	**273,394**	**0**	**0**	**413,149**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
5.1.1 USR Loading Dredging Material from Barge (Note: Prorated from RSMeans Sitework 07p67)	95,500.00	CY	IHNCL	1,262.89	139,755	273,394	0	0	413,149
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
5.2 Water Disposal	**57,800,000.00**	**GAL**		**0.00**	**0**	**0**	**0**	**24,276,000**	**24,276,000**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
5.2.1 USR Transport Water	57,800,000.00	GAL		0.00	0	0	0	4,046,000	4,046,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
5.2.2 USR Disposal Fee	57,800,000.00	GAL		0.00	0	0	0	8,670,000	8,670,000

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
5.2.3 USR Separate Water at Jobsite	57,800,000.00	GAL		0.00	0	0	0	11,560,000	11,560,000
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.14	*3.56*	*5.97*	*0.00*	*0.00*	*9.53*
5.3 Material Hauling	**95,500.00**	**LCY**		**13,681.95**	**339,861**	**569,990**	**0**	**0**	**909,851**
				0.14	*3.56*	*5.97*	*0.00*	*0.00*	*9.53*
5.3.1 USR Haul Dredging Material to Landfill Site	95,500.00	CY	IHNCHT	13,681.95	339,861	569,990	0	0	909,851
				0.00	*0.00*	*0.00*	*0.00*	*33.04*	*33.04*
5.4 Material Disposal	**95,500.00**	**LCY**		**0.00**	**0**	**0**	**0**	**3,155,320**	**3,155,320**
				0.00	*0.00*	*0.00*	*0.00*	*28.00*	*28.00*
5.4.1 USR Disposal Fee Dry Soil	112,690.00	TON		0.00	0	0	0	3,155,320	3,155,320
(Note: Price quote by Glen Robertson of Jefferson Parish Landfill, 5800 Hwy 90, Avondale, LA 70094, Tel.225-9218022.)									
6 Alternative 6	**1.00**	**LS**		**23,504.87**	**754,328**	**1,326,454**	**0**	**43,182,608**	**45,263,389**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
6.1 Material Loading	**150,200.00**	**LCY**		**1,986.25**	**219,803**	**429,988**	**0**	**0**	**649,791**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
6.1.1 USR Loading Dredging Material from Barge (Note: Prorated from RSMeans Sitework 07p67)	150,200.00	CY	IHNCL	1,986.25	219,803	429,988	0	0	649,791
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
6.2 Water Disposal	**91,000,000.00**	**GAL**		**0.00**	**0**	**0**	**0**	**38,220,000**	**38,220,000**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
6.2.1 USR Transport Water	91,000,000.00	GAL		0.00	0	0	0	6,370,000	6,370,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
6.2.2 USR Disposal Fee	91,000,000.00	GAL		0.00	0	0	0	13,650,000	13,650,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
6.2.3 USR Separate Water at Jobsite	91,000,000.00	GAL		0.00	0	0	0	18,200,000	18,200,000
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.14	*3.56*	*5.97*	*0.00*	*0.00*	*9.53*
6.3 Material Hauling	**150,200.00**	**LCY**		**21,518.62**	**534,525**	**896,466**	**0**	**0**	**1,430,991**
				0.14	*3.56*	*5.97*	*0.00*	*0.00*	*9.53*
6.3.1 USR Haul Dredging Material to Landfill Site	150,200.00	CY	IHNCHT	21,518.62	534,525	896,466	0	0	1,430,991
				0.00	*0.00*	*0.00*	*0.00*	*33.04*	*33.04*
6.4 Material Disposal	**150,200.00**	**LCY**		**0.00**	**0**	**0**	**0**	**4,962,608**	**4,962,608**
				0.00	*0.00*	*0.00*	*0.00*	*28.00*	*28.00*
6.4.1 USR Disposal Fee Dry Soil	177,236.00	TON		0.00	0	0	0	4,962,608	4,962,608
(Note: Price quote by Glen Robertson of Jefferson Parish Landfill, 5800 Hwy 90, Avondale, LA 70094, Tel.225-9218022)									
7 Alternative 7	**1.00**	**LS**		**2,954.06**	**334,400**	**813,434**	**0**	**27,094,852**	**28,242,685**

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
				0.02	*2.04*	*5.65*	*0.00*	*0.00*	*7.69*
7.1 Material Hauling	**95,500.00**	**LCY**		**1,691.16**	**194,645**	**540,039**	**0**	**0**	**734,684**
				0.02	*2.04*	*5.65*	*0.00*	*0.00*	*7.69*
7.1.1 USR Haul Dredging Material to Landfill Site	95,500.00	CY	IHNCHB	1,691.16	194,645	540,039	0	0	734,684
(Note: Barge and Tug boat running Hr/3.125Mile X 83 Mile = 26.56Hrs oneway X 2way = 53.12 Hrs. 3000Cy /53.12 Hrs = 56.47 CY/Hr Quote by RSMeans Sitework 07p127)									
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
7.2 Water Disposal	**57,803,814.00**	**GAL**		**0.00**	**0**	**0**	**0**	**24,277,602**	**24,277,602**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
7.2.1 USR Transport Water	57,803,814.00	GAL		0.00	0	0	0	4,046,267	4,046,267
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
7.2.2 USR Disposal Fee	57,803,814.00	GAL		0.00	0	0	0	8,670,572	8,670,572
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
7.2.3 USR Separate Water at Jobsite	57,803,814.00	GAL		0.00	0	0	0	11,560,763	11,560,763
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
7.3 Material Loading	**95,500.00**	**LCY**		**1,262.89**	**139,755**	**273,394**	**0**	**0**	**413,149**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
7.3.1 USR Unload Dredging Material to Landfill	95,500.00	CY	IHNCL	1,262.89	139,755	273,394	0	0	413,149
				0.00	*0.00*	*0.00*	*0.00*	*29.50*	*29.50*
7.4 Material Disposal	**95,500.00**	**LCY**		**0.00**	**0**	**0**	**0**	**2,817,250**	**2,817,250**
				0.00	*0.00*	*0.00*	*0.00*	*25.00*	*25.00*
7.4.1 USR Disposal Fee Dry Soil	112,690.00	TON		0.00	0	0	0	2,817,250	2,817,250
(Note: Price quote by Kevin Giudry of Cost Guard Road Landfill, 339 Coast Guard Rd, Venice, LA 70091.Tel. 504-3610094.)									
8 Alternative 8	**1.00**	**LS**		**47,848.26**	**1,296,940**	**2,214,141**	**0**	**25,967,952**	**29,479,033**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
8.1 Material Loading	**95,500.00**	**LCY**		**1,262.89**	**139,755**	**273,394**	**0**	**0**	**413,149**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
8.1.1 USR Loading Dredging Material from Barge	95,500.00	CY	IHNCL	1,262.89	139,755	273,394	0	0	413,149
(Note: Prorated from RSMeans Sitework 07p67)									
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
8.2 Water Disposal	**57,803,814.00**	**GAL**		**0.00**	**0**	**0**	**0**	**24,277,602**	**24,277,602**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
8.2.1 USR Transport Water	57,803,814.00	GAL		0.00	0	0	0	4,046,267	4,046,267
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
8.2.2 USR Disposal Fee	57,803,814.00	GAL		0.00	0	0	0	8,670,572	8,670,572
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
8.2.3 USR Separate Water at Jobsite	57,803,814.00	GAL		0.00	0	0	0	11,560,763	11,560,763
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.49	*12.12*	*20.32*	*0.00*	*0.00*	*32.44*
8.3 Material Hauling	**95,500.00**	**LCY**		**46,585.37**	**1,157,186**	**1,940,746**	**0**	**0**	**3,097,932**
				0.49	*12.12*	*20.32*	*0.00*	*0.00*	*32.44*
8.3.1 USR Haul Dredging Material to Landfill Site	95,500.00	CY	IHNCHT	46,585.37	1,157,186	1,940,746	0	0	3,097,932
				0.00	*0.00*	*0.00*	*0.00*	*17.70*	*17.70*
8.4 Material Disposal	**95,500.00**	**LCY**		**0.00**	**0**	**0**	**0**	**1,690,350**	**1,690,350**
				0.00	*0.00*	*0.00*	*0.00*	*15.00*	*15.00*
8.4.1 USR Disposal Fee Dry Soil	112,690.00	TON		0.00	0	0	0	1,690,350	1,690,350
(Note: Price quote by Kevin Giudry of Cost Guard Road Landfill, 339 Coast Guard Rd, Venice, LA 70091.Tel. 504-3610094.)									
9 Alternative 9	**1.00**	**LS**		**11,806.95**	**1,336,548**	**3,251,179**	**0**	**24,127,257**	**28,714,984**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
9.1 Material Loading	**381,700.00**	**LCY**		**5,047.61**	**558,580**	**1,092,719**	**0**	**0**	**1,651,299**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
9.1.1 USR Unload Dredging Material to Landfill	381,700.00	CY	IHNCL	5,047.61	558,580	1,092,719	0	0	1,651,299
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
9.2 Water Disposal	**0.00**	**GAL**		**0.00**	**0**	**0**	**0**	**0**	**0**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
9.2.1 USR Transport Water	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
9.2.2 USR Disposal Fee	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
9.2.3 USR Separate Water at Jobsite	0.00	GAL		0.00	0	0	0	0	0
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.02	*2.04*	*5.65*	*0.00*	*0.00*	*7.69*
9.3 Material Hauling	**381,700.00**	**LCY**		**6,759.34**	**777,968**	**2,158,460**	**0**	**0**	**2,936,428**
				0.02	*2.04*	*5.65*	*0.00*	*0.00*	*7.69*
9.3.1 USR Haul Dredging Material to Landfill Site	381,700.00	CY	IHNCHB	6,759.34	777,968	2,158,460	0	0	2,936,428
(Note: Barge and Tug boat running Hr/3.125Mile X 83 Mile = 26.56Hrs oneway X 2way = 53.12 Hrs. 3000Cy /53.12 Hrs = 56.47 CY/Hr Quote by RSMeans Sitework 07p127)									
				0.00	*0.00*	*0.00*	*0.00*	*63.21*	*63.21*
9.4 Material Disposal	**381,700.00**	**LCY**		**0.00**	**0**	**0**	**0**	**24,127,257**	**24,127,257**
				0.00	*0.00*	*0.00*	*0.00*	*43.00*	*43.00*
9.4.1 USR Dispsal Fee Wet Soil Or Mud	561,099.00	TON		0.00	0	0	0	24,127,257	24,127,257
(Note: Characteristics of Materials: Wet, Mud Soil Material LCY : 2940LB/CY or 1.47TON/CY. Price quote by Kevin Giudry of Cost Guard Road Landfill, 339 Coast Guard Rd, Venice, LA 70091.Tel. 504-3610094.)									
10 Alternative 10	**1.00**	**LS**		**4,646.07**	**525,935**	**1,279,348**	**0**	**42,650,900**	**44,456,183**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
10.1 Material Loading	**150,200.00**	**LCY**		**1,986.25**	**219,803**	**429,988**	**0**	**0**	**649,791**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
10.1.1 USR Unload Dredging Material to Landfill	150,200.00	CY	IHNCL	1,986.25	219,803	429,988	0	0	649,791
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
10.2 Water Disposal	**91,000,000.00**	**GAL**		**0.00**	**0**	**0**	**0**	**38,220,000**	**38,220,000**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
10.2.1 USR Transport Water	91,000,000.00	GAL		0.00	0	0	0	6,370,000	6,370,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
10.2.2 USR Disposal Fee	91,000,000.00	GAL		0.00	0	0	0	13,650,000	13,650,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
10.2.3 USR Separate Water at Jobsite	91,000,000.00	GAL		0.00	0	0	0	18,200,000	18,200,000
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.02	*2.04*	*5.65*	*0.00*	*0.00*	*7.69*
10.3 Material Hauling	**150,200.00**	**LCY**		**2,659.82**	**306,132**	**849,360**	**0**	**0**	**1,155,493**
				0.02	*2.04*	*5.65*	*0.00*	*0.00*	*7.69*
10.3.1 USR Haul Dredging Material to Landfill Site	150,200.00	CY	IHNCHB	2,659.82	306,132	849,360	0	0	1,155,493
(Note: Barge and Tug boat running Hr/3.125Mile X 83 Mile = 26.56Hrs oneway X 2way = 53.12 Hrs. 3000Cy /53.12 Hrs = 56.47 CY/Hr Quote by RSMeans Sitework 07p127)									
				0.00	*0.00*	*0.00*	*0.00*	*29.50*	*29.50*
10.4 Material Disposal	**150,200.00**	**LCY**		**0.00**	**0**	**0**	**0**	**4,430,900**	**4,430,900**
				0.00	*0.00*	*0.00*	*0.00*	*25.00*	*25.00*
10.4.1 USR Disposal Fee Dry Soil	177,236.00	TON		0.00	0	0	0	4,430,900	4,430,900
(Note: Price quote by Kevin Giudry of Cost Guard Road Landfill, 339 Coast Guard Rd, Venice, LA 70091.Tel. 504-3610094.)									
11 Alternative 11	**1.00**	**LS**		**75,254.54**	**2,039,795**	**3,482,345**	**0**	**42,671,092**	**48,193,232**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
11.1 Material Loading	**150,200.00**	**LCY**		**1,986.25**	**219,803**	**429,988**	**0**	**0**	**649,791**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
11.1.1 USR Loading Dredging Material from Barge	150,200.00	CY	IHNCL	1,986.25	219,803	429,988	0	0	649,791
(Note: Prorated from RSMeans Sitework 07p67)									
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
11.2 Water Disposal	**91,048,076.00**	**GAL**		**0.00**	**0**	**0**	**0**	**38,240,192**	**38,240,192**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
11.2.1 USR Transport Water	91,048,076.00	GAL		0.00	0	0	0	6,373,365	6,373,365
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
11.2.2 USR Disposal Fee	91,048,076.00	GAL		0.00	0	0	0	13,657,211	13,657,211
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
11.2.3 USR Separate Water at Jobsite	91,048,076.00	GAL		0.00	0	0	0	18,209,615	18,209,615
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.49	*12.12*	*20.32*	*0.00*	*0.00*	*32.44*
11.3 Material Hauling	**150,200.00**	**LCY**		**73,268.29**	**1,819,992**	**3,052,357**	**0**	**0**	**4,872,350**
				0.49	*12.12*	*20.32*	*0.00*	*0.00*	*32.44*
11.3.1 USR Haul Dredging Material to Landfill Site	150,200.00	CY	IHNCHT	73,268.29	1,819,992	3,052,357	0	0	4,872,350
				0.00	*0.00*	*0.00*	*0.00*	*29.50*	*29.50*
11.4 Material Disposal	**150,200.00**	**LCY**		**0.00**	**0**	**0**	**0**	**4,430,900**	**4,430,900**
				0.00	*0.00*	*0.00*	*0.00*	*25.00*	*25.00*
11.4.1 USR Disposal Fee Dry Soil	177,236.00	TON		0.00	0	0	0	4,430,900	4,430,900
(Note: Price quote by Kevin Giudry of Cost Guard Road Landfill, 339 Coast Guard Rd, Venice, LA 70091.Tel. 504-3610094.)									
12 Alternative 12	**1.00**	**LS**		**18,590.45**	**2,104,441**	**5,119,095**	**0**	**37,989,210**	**45,212,746**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
12.1 Material Loading	**601,000.00**	**LCY**		**7,947.63**	**879,504**	**1,720,524**	**0**	**0**	**2,600,027**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
12.1.1 USR Unload Dredging Material to Landfill	601,000.00	CY	IHNCL	7,947.63	879,504	1,720,524	0	0	2,600,027
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
12.2 Water Disposal	**0.00**	**GAL**		**0.00**	**0**	**0**	**0**	**0**	**0**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
12.2.1 USR Transport Water	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
12.2.2 USR Disposal Fee	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
12.2.3 USR Separate Water at Jobsite	0.00	GAL		0.00	0	0	0	0	0
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.02	*2.04*	*5.65*	*0.00*	*0.00*	*7.69*
12.3 Material Hauling	**601,000.00**	**LCY**		**10,642.82**	**1,224,938**	**3,398,571**	**0**	**0**	**4,623,509**
				0.02	*2.04*	*5.65*	*0.00*	*0.00*	*7.69*
12.3.1 USR Haul Dredging Material to Landfill Site	601,000.00	CY	IHNCHB	10,642.82	1,224,938	3,398,571	0	0	4,623,509
(Note: Barge and Tug boat running Hr/3.125Mile X 83 Mile = 26.56Hrs oneway X 2way = 53.12 Hrs. 3000Cy /53.12 Hrs = 56.47 CY/Hr Quote by RSMeans Sitework 07p127)									
				0.00	*0.00*	*0.00*	*0.00*	*63.21*	*63.21*
12.4 Material Disposal	**601,000.00**	**LCY**		**0.00**	**0**	**0**	**0**	**37,989,210**	**37,989,210**
				0.00	*0.00*	*0.00*	*0.00*	*43.00*	*43.00*
12.4.1 USR Dispsal Fee Wet Soil Or Mud	883,470.00	TON		0.00	0	0	0	37,989,210	37,989,210
(Note: Characteristics of Materials: Wet, Mud Soil Material LCY : 2940LB/CY or 1.47TON/CY. Price quote by Kevin Giudry of Cost Guard Road Landfill, 339 Coast Guard Rd, Venice, LA 70091.Tel. 504-3610094.)									
13 Alternative 13	**1.00**	**LS**		**133,134.85**	**3,740,282**	**6,428,833**	**0**	**39,276,930**	**49,446,045**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
13.1 Material Loading	**381,700.00**	**LCY**		**5,047.61**	**558,580**	**1,092,719**	**0**	**0**	**1,651,299**

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
13.1.1 USR Loading Dredging Material from Barge (Note: Prorate from RSMeans Sitework 07p67)	381,700.00	CY	IHNCL	5,047.61	558,580	1,092,719	0	0	1,651,299
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
13.2 Water Disposal	**0.00**	**GAL**		**0.00**	**0**	**0**	**0**	**0**	**0**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
13.2.1 USR Transport Water	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
13.2.2 USR Disposal Fee	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
13.2.3 USR Separate Water at Jobsite	0.00	GAL		0.00	0	0	0	0	0
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.34	*8.34*	*13.98*	*0.00*	*0.00*	*22.32*
13.3 Material Hauling	**381,700.00**	**LCY**		**128,087.25**	**3,181,701**	**5,336,115**	**0**	**0**	**8,517,816**
				0.34	*8.34*	*13.98*	*0.00*	*0.00*	*22.32*
13.3.1 USR Haul Dredging Material to Landfill Site	381,700.00	CY	IHNCHT	128,087.25	3,181,701	5,336,115	0	0	8,517,816
				0.00	*0.00*	*0.00*	*0.00*	*102.90*	*102.90*
13.4 Material Disposal	**381,700.00**	**LCY**		**0.00**	**0**	**0**	**0**	**39,276,930**	**39,276,930**
				0.00	*0.00*	*0.00*	*0.00*	*70.00*	*70.00*
13.4.1 USR Dispsal Fee Wet Soil Or Mud	561,099.00	TON		0.00	0	0	0	39,276,930	39,276,930
(Note: Characteristics of Materials: Wet, Mud Soil Material LCY : 2940LB/CY or 1.47TON/CY. Price quote by Glen Robertson of Woodside Landfill owned by WM, Inc, 29375 Woodside Dr. Walker, LA 70785. Tel. 225-921-8022.)									
14 Alternative 14	**1.00**	**LS**		**52,388.93**	**1,471,811**	**2,529,764**	**0**	**43,182,608**	**47,184,183**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
14.1 Material Loading	**150,200.00**	**LCY**		**1,986.25**	**219,803**	**429,988**	**0**	**0**	**649,791**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
14.1.1 USR Loading Dredging Material from Barge (Note: Prorated from RSMeans Sitework 07p67)	150,200.00	CY	IHNCL	1,986.25	219,803	429,988	0	0	649,791
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
14.2 Water Disposal	**91,000,000.00**	**GAL**		**0.00**	**0**	**0**	**0**	**38,220,000**	**38,220,000**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
14.2.1 USR Transport Water	91,000,000.00	GAL		0.00	0	0	0	6,370,000	6,370,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
14.2.2 USR Disposal Fee	91,000,000.00	GAL		0.00	0	0	0	13,650,000	13,650,000
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
14.2.3 USR Separate Water at Jobsite	91,000,000.00	GAL		0.00	0	0	0	18,200,000	18,200,000
(Note: Allow $0.05 / gallon to separate water from soil.)									

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
				0.34	*8.34*	*13.98*	*0.00*	*0.00*	*22.32*
14.3 Material Hauling	**150,200.00**	**LCY**		**50,402.68**	**1,252,008**	**2,099,776**	**0**	**0**	**3,351,784**
				0.34	*8.34*	*13.98*	*0.00*	*0.00*	*22.32*
14.3.1 USR Haul Dredging Material to Landfill Site	150,200.00	CY	IHNCHT	50,402.68	1,252,008	2,099,776	0	0	3,351,784
				0.00	*0.00*	*0.00*	*0.00*	*33.04*	*33.04*
14.4 Material Disposal	**150,200.00**	**LCY**		**0.00**	**0**	**0**	**0**	**4,962,608**	**4,962,608**
				0.00	*0.00*	*0.00*	*0.00*	*28.00*	*28.00*
14.4.1 USR Disposal Fee Dry Soil	177,236.00	TON		0.00	0	0	0	4,962,608	4,962,608
(Note: Price quote by Glen Robertson of Woodside Landfill owned by WM, Inc, 29375 Woodside Dr. Walker, LA 70785. Tel. 225-921-8022.)									
15 Alternative 15	**1.00**	**LS**		**33,309.87**	**935,805**	**1,608,472**	**0**	**27,432,922**	**29,977,199**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
15.1 Material Loading	**95,500.00**	**LCY**		**1,262.89**	**139,755**	**273,394**	**0**	**0**	**413,149**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
15.1.1 USR Loading Dredging Material from Barge (Note: Prorated from RSMeans Sitework 07p67)	95,500.00	CY	IHNCL	1,262.89	139,755	273,394	0	0	413,149
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
15.2 Water Disposal	**57,803,814.00**	**GAL**		**0.00**	**0**	**0**	**0**	**24,277,602**	**24,277,602**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
15.2.1 USR Transport Water	57,803,814.00	GAL		0.00	0	0	0	4,046,267	4,046,267
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
15.2.2 USR Disposal Fee	57,803,814.00	GAL		0.00	0	0	0	8,670,572	8,670,572
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
15.2.3 USR Separate Water at Jobsite	57,803,814.00	GAL		0.00	0	0	0	11,560,763	11,560,763
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.34	*8.34*	*13.98*	*0.00*	*0.00*	*22.32*
15.3 Material Hauling	**95,500.00**	**LCY**		**32,046.98**	**796,051**	**1,335,077**	**0**	**0**	**2,131,128**
				0.34	*8.34*	*13.98*	*0.00*	*0.00*	*22.32*
15.3.1 USR Haul Dredging Material to Landfill Site	95,500.00	CY	IHNCHT	32,046.98	796,051	1,335,077	0	0	2,131,128
				0.00	*0.00*	*0.00*	*0.00*	*33.04*	*33.04*
15.4 Material Disposal	**95,500.00**	**LCY**		**0.00**	**0**	**0**	**0**	**3,155,320**	**3,155,320**
				0.00	*0.00*	*0.00*	*0.00*	*28.00*	*28.00*
15.4.1 USR Disposal Fee Dry Soil	112,690.00	TON		0.00	0	0	0	3,155,320	3,155,320
(Note: Price quote by Glen Robertson of Woodside Landfill owned by WM, Inc, 29375 Woodside Dr. Walker, LA 70785. Tel. 225-921-8022.)									
16 Alternative 16	**1.00**	**LS**		**209,625.49**	**5,889,204**	**10,122,423**	**0**	**61,842,900**	**77,854,527**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
16.1 Material Loading	**601,000.00**	**LCY**		**7,947.63**	**879,504**	**1,720,524**	**0**	**0**	**2,600,027**
				0.01	*1.46*	*2.86*	*0.00*	*0.00*	*4.33*
16.1.1 USR Loading Dredging Material from Barge	601,000.00	CY	IHNCL	7,947.63	879,504	1,720,524	0	0	2,600,027

Description	Quantity	UOM	CrewTag	Duration	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectCost
(Note: Prorate from RSMeans Sitework 07p67)									
				0.00	*0.00*	*0.00*	*0.00*	*0.42*	*0.42*
16.2 Water Disposal	**0.00**	**GAL**		**0.00**	**0**	**0**	**0**	**0**	**0**
				0.00	*0.00*	*0.00*	*0.00*	*0.07*	*0.07*
16.2.1 USR Transport Water	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 Transportation from New Orleans to Houston – approx. $1200 per load plus fuel surcharge. The fuel surcharge for Liquid Environmental Solutions is based on the weekly retail on-highway diesel prices as published by the Energy Information Administration on their webste. For the Gulf Coast, the weekly average for on-road diesel is $3.928 per gallon as of 3/24/2008. According to Liquid Environmental Solutions' website, this equates to a surcharge of 4%. Assume that 5000 gallon tanker trucks will be used. Therefore, price per gallon = $1200 / 5000 gallon x 1.04 = $0.2496/gallon. SAY = $0.25/gal)									
				0.00	*0.00*	*0.00*	*0.00*	*0.15*	*0.15*
16.2.2 USR Disposal Fee	0.00	GAL		0.00	0	0	0	0	0
(Note: The following company was contacted about disposal of liquids: Todd Ford Liquid Environmental Solutions 250 Gellhorn Drive Houston, Texas 77013 •Disposal for Non Haz Liquid – less than 5% solids - $.08 per gallon)									
				0.00	*0.00*	*0.00*	*0.00*	*0.20*	*0.20*
16.2.3 USR Separate Water at Jobsite	0.00	GAL		0.00	0	0	0	0	0
(Note: Allow $0.05 / gallon to separate water from soil.)									
				0.34	*8.34*	*13.98*	*0.00*	*0.00*	*22.32*
16.3 Material Hauling	**601,000.00**	**LCY**		**201,677.85**	**5,009,700**	**8,401,899**	**0**	**0**	**13,411,599**
				0.34	*8.34*	*13.98*	*0.00*	*0.00*	*22.32*
16.3.1 USR Haul Dredging Material to Landfill Site	601,000.00	CY	IHNCHT	201,677.85	5,009,700	8,401,899	0	0	13,411,599
				0.00	*0.00*	*0.00*	*0.00*	*102.90*	*102.90*
16.4 Material Disposal	**601,000.00**	**LCY**		**0.00**	**0**	**0**	**0**	**61,842,900**	**61,842,900**
				0.00	*0.00*	*0.00*	*0.00*	*70.00*	*70.00*
16.4.1 USR Dispsal Fee Wet Soil Or Mud	883,470.00	TON		0.00	0	0	0	61,842,900	61,842,900
(Note: Characteristics of Materials: Wet, Mud Soil Material LCY : 2940LB/CY or 1.47TON/CY. Price quote by Glen Robertson of Woodside Landfill owned by WM, Inc, 29375 Woodside Dr. Walker, LA 70785. Tel. 225-921-8022.)									

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Description	MemberType	ManHours	EQHours	CrewHours	CrewCost
Crew Summary		**1,075,926.21**	**1,689,945.03**	**844,972.51**	**71,487,221**
USR IHNCHB Barge Haul Dredging Material Crew		*4.00* 87,012.57	*2.00* 43,506.29	21,753.14	*405.78* 8,826,990
MIL X-LABORER4 Outside Laborers, Group 4 Skilled	Journeyman	2.00			
MIL X-LABORER4 Outside Laborers, Group 4 Skilled	Foreman	1.00			
MIL X-EQOPRHVY Outside Equip. Operators, Heavy (Group1)	Journeyman	1.00			
MAP XX0XX600 WORK TUG, UNDER 500 HP 0	Non-EP / Average		1.00		
NON XX0XX810 DUMP SCOW BARGE, 3,000 CY APPROX. 250'x 50' x 20'	Non-EP / Average		1.00		
USR IHNCHT Truck Haul Dredging Material Crew		*1.00* 767,987.95	*2.00* 1,535,975.90	767,987.95	*60.04* 46,109,997
MIL X-TRKDVRHV Outside Truck Drivers, Heavy Group 4	Journeyman	1.00			
GEN T40Z6860 TRUCK OPTION, DUMP BODY, REAR, 16-23.5 CY (12.2-18 M3) (ADD 45,000 LB (20,412 KG) GVW TRUCK)	EP / Average		1.00		
GEN T50Z7420 TRUCK, HIGHWAY, 45,000 LB (20,412 KG) GVW, 6X4, 3 AXLE (ADD ACCESSORIES)	EP / Average		1.00		
USR IHNCL Crane Load/Unload Dredging Crew		*4.00* 220,925.68	*2.00* 110,462.84	55,231.42	*299.65* 16,550,234
MIL X-EQOPRHVY Outside Equip. Operators, Heavy (Group1)	Journeyman	1.00			
MIL X-EQOPROIL Outside Equip. Oilers & Other Sm. Eq.(Group 4)	Journeyman	1.00			
MIL X-LABORER4 Outside Laborers, Group 4 Skilled	Foreman	1.00			
MIL X-LABORER4 Outside Laborers, Group 4 Skilled	Journeyman	1.00			
MAP C85MA003 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 7.0 CY, 140' BOOM (ADD BUCKET)	EP / Average		1.00		
EP B25HB014 BUCKET, CLAMSHELL, 5.50 CY, HEAVY DUTY/DIGGING	EP / Average		1.00		

Description	ManHours	BaseWage	TaxableFringe	Payroll	WCI	NonTaxFringe	Subsistence	Total	LaborType
Labor Rates	**1,075,926.2050**	**20,208,701.41**	**0.00**	**2,562,867.51**	**4,539,985.87**	**381,073.59**	**0.00**	**27,692,628.37**	
		24.5100	*0.0000*			*4.9500*	*0.0000*	*38.0747*	
MIL X-EQOPRHVY Outside Equip. Operators, Heavy (Group1)	76,984.5635	1,886,891.65	0.00	239,295.60	423,899.65	381,073.59	0.00	2,931,160.49	Journeyman
		15.0500	*0.0000*			*0.0000*	*0.0000*	*20.3397*	
MIL X-EQOPROIL Outside Equip. Oilers & Other Sm. Eq.(Group 4)	55,231.4203	831,232.87	0.00	105,416.95	186,740.62	0.00	0.00	1,123,390.45	Journeyman
		18.3300	*0.0000*			*0.0000*	*0.0000*	*24.7725*	
MIL X-LABORER4 Outside Laborers, Group 4 Skilled	98,737.7068	1,809,862.17	0.00	229,526.72	406,594.59	0.00	0.00	2,445,983.47	Journeyman
		20.3300	*0.0000*			*0.0000*	*0.0000*	*27.4755*	
MIL X-LABORER4 Outside Laborers, Group 4 Skilled	76,984.5635	1,565,096.18	0.00	198,485.50	351,606.69	0.00	0.00	2,115,188.36	Foreman
		18.3800	*0.0000*			*0.0000*	*0.0000*	*24.8401*	
MIL X-TRKDVRHV Outside Truck Drivers, Heavy Group 4	767,987.9510	14,115,618.54	0.00	1,790,142.74	3,171,144.32	0.00	0.00	19,076,905.60	Journeyman

Equipment Rates		**1,689,945.0289**	**50,897,445.71**
EP B25HB014 BUCKET, CLAMSHELL, 5.50 CY, HEAVY DUTY/DIGGING	Average	55,231.4203	*12.4960* 690,173.55
GEN T40Z6860 TRUCK OPTION, DUMP BODY, REAR, 16-23.5 CY (12.2-18 M3) (ADD 45,000 LB (20,412 KG) GVW TRUCK)	Average	767,987.9510	*1.9997* 1,535,782.00
GEN T50Z7420 TRUCK, HIGHWAY, 45,000 LB (20,412 KG) GVW, 6X4, 3 AXLE (ADD ACCESSORIES)	Average	767,987.9510	*39.6603* 30,458,595.98
MAP C85MA003 CRANES, MECHANICAL, LATTICE BOOM, CRAWLER, DRAGLINE/CLAMSHELL, 7.0 CY, 140' BOOM (ADD BUCKET)	Average	55,231.4203	*203.9865* 11,266,462.95
MAP XX0XX600 WORK TUG, UNDER 500 HP 0	Average	21,753.1433	*185.8700* 4,043,256.74
NON XX0XX810 DUMP SCOW BARGE, 3,000 CY APPROX. 250'x 50' x 20'	Average	21,753.1433	*133.4600* 2,903,174.50

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