Louisiana Department of Natural Resources - Coastal Restoration Division
617 North Third Street, Suite 1078
Baton Rouge, LA 70802

Attention: Chris Williams, Agent for St. Bernard Parish

RE: Water Quality Certification (JP 060118-01/A1 105663/CER 20060001)
Corps of Engineers Permit (MVN-2005-4407-EBB)
St. Bernard Parish

Dear Mr. Williams:

The Department has reviewed your request to dredge waterbottoms and place spoil and fill material for erosion control/bank stabilization project in Lake Borgne near Shell Beach, Louisiana in St. Bernard Parish.

The requirements for Water Quality Certification have been met in accordance with LAC 33:IX.1507.A-E. Based on the information provided in your application, we have determined that the placement of the fill material will not violate the water quality standards of Louisiana provided for under LAC 33:IX.Chapter 11. Therefore, the Department has issued a Water Quality Certification.

Sincerely,

Thomas R. Griggs
Engineer Manager

TRG/ijp

c: Corps of Engineers - New Orleans District
DEPARTMENT OF THE ARMY PERMIT

Permittee: St. Bernard Parish

Permit No. MVN 2005-4407 EBB

Issuing Office: New Orleans District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Dredge an access channel and install and maintain riprap and sheet pile and temporarily place spoil in open water, in accordance with drawings enclosed in thirty five sheets dated November 2005.

Project Location: The Shell Beach site is located at Latitude 29°22'10" North, Longitude 90°19'48" West, and the Bayou Dupree site is located at Latitude 29°25'34" North, Longitude 90°09'36" West, in St. Bernard Parish.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on DECEMBER 31, 2011. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least 1 month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

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(33 CFR 325 (Appendix A))
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions: Page 4.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

   (X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
   (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. Limits of this authorization.
   a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.
   b. This permit does not grant any property rights or exclusive privileges.
   c. This permit does not authorize any injury to the property or rights of others.
   d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
   b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
   c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
   d. Design or construction deficiencies associated with the permitted work.
e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 328.4 and 328.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

X [Signature]
PERMITTEE

X 11/28/2006
DATE

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

[Signature]
Ronald J. Ventola, Chief Regulatory Branch

13 Dec 2006
DATE

for Richard P. Wagenaar, District Commander

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

[Signature]
TRANSFEREE

[Date]
SPECIAL CONDITIONS: MVN 2005-4407 EBB

7. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

8. You must install and maintain at your expense, any safety lights, signs, and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on any equipment utilized in your authorized activity.

9. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.

10. If the proposed project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, you are advised to notify the Eighth Coast Guard District so that a Notice to Mariners, if required, may be prepared. Notification, with a copy of your permit approval and drawings, should be mailed to the Commander (Oan), Eighth Coast Guard District, ATTN: Marine Information Branch, 501 Magazine Street, New Orleans, Louisiana 70130-3396, about 1 month before you plan to start work. Telephone inquiries can be directed to (504) 589-6277.
NOTES:
1. Armor Stone Riprap shall meet Louisiana Department of Transportation and Development Class 250 Round Stone, or owner approved equivalent. Gradation tests of representative stone (15 ton min. sample size) shall be made at the quarry. Certified test results must be submitted and approved prior to placement on the project. The stone placement method shall produce a reasonably well graded rock mass with voids minimized and a vertical tolerance of 6 inches above final grade. Stone shall be placed to full thickness in one lift with a maximum drop of 1 foot to avoid damaging the geotextile fabric. Following a period of settlement, a second operation shall be made to restore the rock due to the required sharp and gravel as directed by engineer.
2. The breakwater shall be constructed within the centerline placed at the locations shown on the plan and profile sheets. Actual alignment may be adjusted by project engineer prior to construction in order to meet changing field conditions. If additional quantities for armor stone and woven geotextile fabric are necessary, they will be paid for at the unit price bid for the FDM.
3. Rock breakwaters created using end-on-construction techniques shall follow the alignment shown in the plan and profile sheets. All construction activities are restricted within the width shown in Section C-C’. Access shall be provided from the adjacent rock breakwaters and flotation channels only.

APPLICATION BY:
U.S. ENVIRONMENTAL PROTECTION AGENCY
1440 ROSS AVE.
DALLAS, TX 75202-2733

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION
617 NORTH 3RD STREET
BATON ROUGE, LOUISIANA 70802

LAKE BORONE SHORELINE PROTECTION

TYPICAL SECTIONS C–C’ AND D–D’

STATE PROJECT NUMBER: PO-30
FEDERAL PROJECT NUMBER: PO-20
DATE: NOVEMBER 2005
SHEET 27 OF 35
NOTES:
1. SEE SHEET 27 FOR SECTIONS A-A' AND B-B'.
2. SEE SHEET 35 FOR DETAIL C.
3. SEE SHEETS 39 FOR DETAILS E, F, G, H AND J.
4. 3' DEPTH HOLE SHALL BE DRILLED INTO THE CENTERLINE OF EACH SHEET PILE AT ELEVATION +2'. GEOTEXTILE LAYER SHALL COVER EACH HOLE.
5. SAND LAYER DENSITY = 115 PSCF
6. SAND LAYER SHALL BE MONITORED FOR SETTLEMENT AND BACKFILLED TO MAINTAIN ELEVATION 0' FOR A MINIMUM OF 30 DAYS PRIOR TO PLACEMENT OF GEOTEXTILE AND STONE LAYER.

17' LONG TE RODS SPACED AT 4' INTERVALS THROUGH CENTERLINE OF WALE (TYP.)
SEE DETAIL C

2' HIGH, 250 LB CLASS ROCK SCOUR PROTECTION BERM (TYP.)
BASE EL. = MUDBOX +2.0'
CROWN EL. = MUDBOX +1.5'

4.0' (TYP.)

GEOTEXTILE BETWEEN ROCK AND SAND LAYERS
SEE DETAIL C

FIBERGLASS WALE (TYP.)
SEE DETAIL D

STAINLESS STEEL WALE SPLICE (TYP.)
SEE DETAIL B

FIBERGLASS SHEETPILE (TOP EL. 45.5')

MEAN WALE EL. 40.5'

WALE CENTERLINE & GEOTEXTILE LAYER EL. 0

EXISTING MUDBOX EL. Varies

FIBERGLASS SHEETPILE (TYP.)
SEE DETAIL E

TYPICAL SECTION G-G'
FRONT VIEW
PROPOSED ROCK BREAKWATER
AND SHEET PILE INTERFACE
(NOT TO SCALE)

APPLICATION BY
U.S. ENVIRONMENTAL PROTECTION AGENCY
1440 ROSS AVE.
DALLAS, TX 75202-2733

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION
817 NORTH 3RD STREET
BATON ROUGE, LOUISIANA 70802

LAKE BORGNHE SHORELINE PROTECTION
ROCK BREAKWATER-SHEET PILE INTERFACE DETAIL

STATE PROJECT NUMBER: PO-30
FEDERAL PROJECT NUMBER: PO-30
DATE: NOVEMBER 2006
SHEET 31 OF 35

DRAWN BY: SHANNON HAYNES, P.E.
DESIGNED BY: SHANNON HAYNES, P.E.
APPROVED BY: LUKE LEBAS, P.E.

G:\UWet\AutoCAD\BASENS\PO-30 Lake Borgne (Permit)\Drawings\November 09\20-32 Ttypical Sections.dwg
GENERAL NOTES:
1. WARNING SIGNS SHALL BE INSTALLED AT 1000 FT. INTERVALS.
2. THE 2" BORDER ON THE WARNING SIGN WILL BE A REFLECTIVE MATERIAL OF ORANGE COLOR. THE LETTERING FIELD WILL BE A REFLECTIVE MATERIAL OF WHITE COLOR. THE LETTERS FOR THE WARNING SIGNS WILL BE BLACK. ALL SIGNS MUST MEET U.S. COAST GUARD STANDARDS. IN ACCORDANCE WITH 33 CFR 330.4 (e) (1) WHICH CAN BE DOWNLOADED AT HTTP://WWW.ECFR.GOVERNMENT.
3. NEOPRENE WASHERS SHALL BE PLACED BETWEEN THE SIGN AND THE PLUG AT ALL POINTS OF CONTACT.
4. HARDWARE FOR TIMBER CONNECTIONS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SECTION 811.6 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS PUBLISHED BY THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, LATEST EDITION.
5. TIMBER PILES SHALL CONFORM TO SECTIONS 804 AND 1014 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS PUBLISHED BY THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT (LADTD), LATEST EDITION. PILES SHALL BE TREATED WITH A CERESIO SOLUTION CONFORMING TO AMPA P2 TO A MINIMUM RETENTION OF 10 PCF AND CAPPED ACCORDING TO LADTD SPECIFICATION 812.06.

DETAIL A
ROCK DIKE SETTLEMENT PLATE
(NOT TO SCALE)

SETTLEMENT PLATE NOTES:
1. SETTLEMENT PLATES SHALL BE INSTALLED ALONG THE CENTERLINE OF THE BREAKWATER.
2. THE SETTLEMENT PLATES SHALL BE SURVEYED DAILY BY THE CONTRACTOR AND WITNESSED BY THE DNR INSPECTOR UNTIL THE ROCK IS ACCEPTED.
3. SETTLEMENT PLATES SHALL BE BUILT USING ASTM A36 STEEL AND HOT-DIPPED GALVANIZED AFTER FABRICATION.

APPLICANT BY:
U.S. ENVIRONMENTAL PROTECTION AGENCY
1445 ROSS AVE
DALLAS, TX. 75201-3733

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION
817 NORTH 3RD STREET
BATON ROUGE, LOUISIANA 70802

LAKE BORGNE SHORELINE PROTECTION TYPICAL DETAILS

STATE PROJECT NUMBER: PD-30
FEDERAL PROJECT NUMBER: PD-30
DATE: NOVEMBER 2005
SHEET 33 OF 35