AS-BUILT
BID PACKAGE
FOR

EAST MUD LAKE
MAINTENANCE PROJECT
CS - 20

CAMERON PARISH, LOUISIANA

STATE OF LOUISIANA
OFFICE OF COASTAL
PROTECTION AND RESTORATION

FEBRUARY 2009

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and Associates, Inc.
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Revision Date: 4/04/11
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# SCHEDULE OF BID ITEMS

CS-20 PROJECT MUD LAKE MARSH MANAGEMENT PROJECT

<table>
<thead>
<tr>
<th>ITEM No.</th>
<th>ITEM description</th>
<th>UNIT</th>
<th>AS-BUILT QTY</th>
<th>% FUND DNR</th>
<th>% FUND FEMA</th>
<th>UNIT PRICE</th>
<th>EXTENDED PRICE</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>USING WORDS</td>
<td>USING NUMBERS</td>
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<tr>
<td>1.</td>
<td>Mobilization and Demobilization</td>
<td>Lump Sum</td>
<td>1</td>
<td>70</td>
<td>30</td>
<td>$__________ Dollars $__________ Cents</td>
<td></td>
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<tr>
<td>2.</td>
<td>Step Canal Debris and Silt Removal</td>
<td>Linear Foot</td>
<td>16,762</td>
<td>100</td>
<td>0</td>
<td>$__________ Dollars $__________ Cents</td>
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<td>3.</td>
<td>Repair Structure No. 1</td>
<td>Lump Sum</td>
<td>1</td>
<td>100</td>
<td>0</td>
<td>$__________ Dollars $__________ Cents</td>
<td></td>
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<tr>
<td>4.</td>
<td>Rock Structure 1 30# Class Rock</td>
<td>Ton</td>
<td>300</td>
<td>100</td>
<td>0</td>
<td>$__________ Dollars $__________ Cents</td>
<td></td>
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<tr>
<td>5.</td>
<td>Repair Structure No. 3</td>
<td>Lump Sum</td>
<td>1</td>
<td>50</td>
<td>50</td>
<td>$__________ Dollars $__________ Cents</td>
<td></td>
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<tr>
<td>6.</td>
<td>Rock Structure 3 30# Class Rock</td>
<td>Ton</td>
<td>379</td>
<td>70</td>
<td>30</td>
<td>$__________ Dollars $__________ Cents</td>
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<tr>
<td>7.</td>
<td>Repair Structure No. 5</td>
<td>Lump Sum</td>
<td>1</td>
<td>100</td>
<td>0</td>
<td>$__________ Dollars $__________ Cents</td>
<td></td>
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<tr>
<td>8.</td>
<td>Rock Structure 5 30# Class Rock</td>
<td>Ton</td>
<td>300</td>
<td>40</td>
<td>60</td>
<td>$__________ Dollars $__________ Cents</td>
<td></td>
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<tr>
<td>9.</td>
<td>Repair Structure No. 11</td>
<td>Lump Sum</td>
<td>1</td>
<td>60</td>
<td>40</td>
<td>$__________ Dollars $__________ Cents</td>
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<td>10.</td>
<td>Rock Structure 11 30# Class Rock</td>
<td>Ton</td>
<td>227.31</td>
<td>47</td>
<td>53</td>
<td>$__________ Dollars $__________ Cents</td>
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<td>11.</td>
<td>Replace Structure No. 4</td>
<td>Lump Sum</td>
<td>1</td>
<td>100</td>
<td>0</td>
<td>$__________ Dollars $__________ Cents</td>
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<td>12.</td>
<td>Rock Structure 4 30# Class Rock</td>
<td>Ton</td>
<td>1,834.12</td>
<td>100</td>
<td>0</td>
<td>$__________ Dollars $__________ Cents</td>
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<tr>
<td>13.</td>
<td>Provide Additional Stop Logs</td>
<td>Each</td>
<td>40</td>
<td>100</td>
<td>0</td>
<td>$__________ Dollars $__________ Cents</td>
<td></td>
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<tr>
<td>14.</td>
<td>Provide Additional Locks</td>
<td>Each</td>
<td>40</td>
<td>100</td>
<td>0</td>
<td>$__________ Dollars $__________ Cents</td>
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15. Provide Additional Locking Pins

<table>
<thead>
<tr>
<th>Each</th>
<th>20</th>
<th>100</th>
<th>0</th>
<th>Dollars</th>
<th>$ _________ . _____</th>
<th>$ _________ . _____</th>
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16. Repair Structure No. 9B

<table>
<thead>
<tr>
<th>Lump Sum</th>
<th>1</th>
<th>70</th>
<th>30</th>
<th>Dollars</th>
<th>$ _________ . _____</th>
<th>$ _________ . _____</th>
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TOTAL AMOUNT OF BASE BID: ___________________________________________________________________ Dollars _______________ Cents

1. Where the quantity of Work with respect to any item is covered by a unit price, such quantities are estimated quantities to be used when comparing bids and the right is reserved by the Owner to increase/decrease such quantities as may be necessary to complete the Work or remain within any funding limits. In the event of material under-runs/over-runs, the unit costs will be used to determine payment to the Contractor.

2. Items must be completed by the bidder. The completed sheet must be attached to the bid submitted to the Office of State Purchasing in order for the bid to be considered. Determination of the low bidder shall be on the basis of the sum of the base bid and the alternates accepted. However, the Division of Administration shall reserve the right to accept or reject alternates in any order which does not affect the determination of the low bidder. The low bid, including alternates, will be accepted if that bid is within the construction budget, otherwise the bid will be awarded on the basis of the base bid.
### SCHEDULE OF BID ITEMS - ADDITIVE ALTERNATE “A”

**CS-20 PROJECT MUD LAKE MARSH MANAGEMENT PROJECT**

<table>
<thead>
<tr>
<th>ITEM No.</th>
<th>ITEM</th>
<th>UNIT</th>
<th>AS-BUILT QTY</th>
<th>% FUND DNR</th>
<th>% FUND FEMA</th>
<th>UNIT PRICE ²</th>
<th>EXTENDED PRICE ²</th>
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<tr>
<td>17</td>
<td>Repair Structure No. 6</td>
<td>Lump Sum</td>
<td>1</td>
<td>70</td>
<td>30</td>
<td>____________ Dollars ____________ Cents</td>
<td>$ _______ . ____</td>
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<tr>
<td>18</td>
<td>Rock Structure 6 30# Class Rock</td>
<td>Ton</td>
<td>111.04</td>
<td>95</td>
<td>5</td>
<td>____________ Dollars ____________ Cents</td>
<td>$ _______ . ____</td>
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<td>19</td>
<td>Repair Structure No. 7</td>
<td>Lump Sum</td>
<td>1</td>
<td>70</td>
<td>30</td>
<td>____________ Dollars ____________ Cents</td>
<td>$ _______ . ____</td>
</tr>
<tr>
<td>20</td>
<td>Rock Structure 7 30# Class Rock</td>
<td>Ton</td>
<td>108</td>
<td>97</td>
<td>3</td>
<td>____________ Dollars ____________ Cents</td>
<td>$ _______ . ____</td>
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<td>21</td>
<td>Repair Structure No. 8</td>
<td>Lump Sum</td>
<td>1</td>
<td>70</td>
<td>30</td>
<td>____________ Dollars ____________ Cents</td>
<td>$ _______ . ____</td>
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<td>22</td>
<td>Rock Structure 8 30# Class Rock</td>
<td>Ton</td>
<td>66</td>
<td>93</td>
<td>7</td>
<td>____________ Dollars ____________ Cents</td>
<td>$ _______ . ____</td>
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<td>23</td>
<td>Repair Structure No. 9A</td>
<td>Lump Sum</td>
<td>1</td>
<td>70</td>
<td>30</td>
<td>____________ Dollars ____________ Cents</td>
<td>$ _______ . ____</td>
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<td>24</td>
<td>Repair Structure No. 13</td>
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<td>1</td>
<td>80</td>
<td>20</td>
<td>____________ Dollars ____________ Cents</td>
<td>$ _______ . ____</td>
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</table>

**TOTAL AMOUNT OF ADDITIVE ALTERNATE “A” BID:** ____________ Dollars ____________ Cents

---

1. Where the quantity of Work with respect to any item is covered by a unit price, such quantities are estimated quantities to be used when comparing bids and the right is reserved by the Owner to increase/decrease such quantities as may be necessary to complete the Work or remain within any funding limits. In the event of material under-runs/over-runs, the unit costs will be used to determine payment to the Contractor.

2. All Items must be completed by the bidder. The completed sheet must be attached to the bid submitted to the Office of State Purchasing in order for the bid to be considered. The Owner reserves the right to award all, part, or none of the Add Alternate “A” based on the availability of funds. Determination of the low bidder shall be on the basis of the sum of the base bid and the alternates accepted. However, the Division of Administration shall reserve the right to accept or reject alternates in any order which does not affect the determination of the low bidder. The low bid, including alternates, will be accepted if that bid is within the construction budget, otherwise the bid will be awarded on the basis of the base bid.
PART I  GENERAL PROVISIONS

GP-1  DEFINITION OF TERMS

Whenever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to the singular or plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

1.1  Acceptance: A written approval from the Engineer which certifies that specific items of work in the Contract have been completed and/or obligations have been fulfilled by the Contractor.

1.2  Addenda: Those written or graphic documents which are issued prior to opening of Bids in accordance with the Bidding Requirements and clarify or change the bidding requirements or the proposed Contract Documents.

1.3  Agreement: The written and signed agreement between the Owner and Contractor specifying the Work to be performed and includes the Contract Documents, all addenda pertaining to the Bid, Notice of Award, Bonds, Plans, General Provisions, Special Provisions, and Technical Specifications.

1.4  Application of Payment: That form which is used by the Contractor to request partial and final payment and is deemed acceptable to the Owner. It shall be accompanied by any supporting documentation required by the Contract Documents.


1.6  Bid: An offer or proposal submitted on the prescribed form setting forth the prices for the Work.

1.7  Bidder: The person, association of persons, firm or corporation submitting a proposal for the Work.

1.8  Bidding Requirements: The Advertisement or Invitation to Bid, Instruction to Bidders, Form of Bid Security, if any, and Bid Form with any supplements.

1.9  Change Order: A written order which is submitted to the Contractor, signed by the Owner, and authorizes an addition, deletion or revision in the Work, or an adjustment in the contract price or the contract time issued after the effective date of the Agreement.

1.10  Claim: A written demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both or other relief with respect to the terms of the Contract.

1.11  Contract: The written Agreement between the Owner and the Contractor which defines the work to be completed and shall be understood to include the Plans, Specifications, Information for Bidders, Agreement, Advertisement For Bidders, Affidavit, Bid Form, Bid Bond, Contract Bond, Notice of Award, Notice to Proceed, and Change Orders, and Claims.

1.12  Contract Bond: The approved form of security furnished by the Contractor and Surety for the faithful performance of the Work, and the payment for all labor, materials, and/or obligations incurred by the Contractor in the prosecution thereof.
1.13 **Contract Documents**: The Agreement, all addenda which pertains to the Contract Documents, Bid Documents and specified Attachments accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award, Contractor’s Bid when attached as an exhibit to the Agreement, the Bonds (Bid and Performance/Payment), General Provisions, Special Provisions, Technical Specifications, Plans, and all Field or Change Orders issued after the execution of the Agreement. Shop Drawings and other submittals by the Contractor are not Contract Documents.

1.14 **Contract Price**: The moneys payable by the Owner to the Contractor for the Work in accordance with the Contract Documents as stated in the Agreement.

1.15 **Contract Time**: The number of calendar days specified in the Agreement for completion of the Work, together with any extensions authorized through change orders.

1.16 **Contractor**: The person, association of persons, firm or corporation entering into the duly awarded Contract.

1.17 **Contracting Agency**: The Louisiana Department of Natural Resources (DNR) acting through the Division of Administration.

1.18 **Day**: When any period of time is referred to in the Contract Documents using days, it will be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday, Sunday or a legal holiday, that day will be omitted from the computation. A calendar day is measured as twenty-four (24) hour period starting at midnight and ending the following midnight.

1.19 **Design Report**: A written report by the Engineer which provides the design methodology for the Work.

1.20 **Effective Date of the Agreement**: The date indicated in the Agreement on which it becomes effective.

1.21 **Engineer**: The Louisiana Department of Natural Resources, Coastal Engineering Division, or its designee.

1.22 **Equipment**: All machinery, implements, and power tools, in conjunction with the necessary supplies for the operation, upkeep, maintenance, and all other tools and apparatuses necessary for the proper construction and acceptable completion of the Work.

1.23 **Extension of Contract**: Any extension of time for completion of the Work beyond the Contract Time which is granted by the Owner and recommended by the Engineer.

1.24 **Federal Sponsor**: The federal agency responsible for sponsoring the project.

1.25 **Field Order**: A written order issued by the Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or Contract Time.

1.26 **Inspector**: An authorized representative of the Engineer who is responsible to inspect the Work and materials furnished by the Contractor.

1.27 **Laboratory**: The firm, company or corporation which is used to test materials and is approved for use by the Engineer.

1.28 **Laws and Regulations; Laws or Regulations**: Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

1.29 **Materials**: Any substance used in the Work to build structures, but does not include material used in false work or other temporary structures not incorporated in the Work.

1.30 **Milestone**: A principal event specified in the Contract Documents relating to an intermediated completion date or time prior to the Contract Times.
1.31 **Notice of Award**: A written notice to the successful Bidder stating that the Bid has been accepted by the Owner and that the successful Bidder is required to execute the Contract and furnish the Contract Bond.

1.32 **Notice to Proceed**: The written notice to the Contractor by the Owner which provides the starting date for the Contract Time.

1.33 **Owner**: The Owner is the State of Louisiana (State) which acts through the Contracting Agency.

1.34 **Plans**: That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, intent, and character of the Work to be completed by the Contractor.

1.35 **Project Site**: The location where the Work is to be performed as stated in the Agreement.

1.36 **Right-of-way**: That entire area reserved for constructing, maintaining and protecting the proposed improvement, structures, and appurtenances of the Work.

1.37 **Samples**: Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portions of the Work will be judged.

1.38 **Shop Drawings**: All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for the Contractor and submitted by the Contractor to illustrate some portion of the Work to be performed.

1.39 **Specifications**: That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards and workmanship as applied to the work to be performed and certain administrative details applicable thereto.

1.40 **State**: The State of Louisiana.

1.41 **Structures**: Bridges, plugs, weirs, berms, dams, levees, and other miscellaneous construction encountered during the Work and not otherwise classified herein.

1.42 **Subcontractor**: Any person, association of persons, firm, or corporation who contracts with the Contractor to perform any part of the project covered by the Contract.

1.43 **Submittals**: Certificates, samples, shop drawings and all other project data which are submitted to the Engineer in order to verify that the correct products will be installed on the project.

1.44 **Successful Bidder**: The lowest responsible Bidder whom the Owner makes an award.

1.45 **Special Provisions**: That part of the Contract Documents which amends or supplements these General Provisions.

1.46 **Surety**: The corporate body, licensed to do business in Louisiana, bound with and for the Contractor’s primary liability, and engages to be responsible for payment of all obligations pertaining to acceptable performance of the Work contracted.

1.47 **Temporary Structures**: Any non-permanent structure required while engaged in the prosecution of the Contract.

1.48 **Written Amendment**: A written statement modifying the Contract Documents which is signed by the Owner and the Contractor on or after the Effective Date of the Agreement.

1.49 **Work**: All work specified herein or indicated on the Plans.
1.50  **Work Plan:** A written plan by the Contractor that details how the Work will be provided including layout drawings, projected schedule (Initial Progress Schedule), and a list of labor hours and materials.

**GP-2  BID REQUIREMENTS**

The Contract and Bonds which govern the Work shall be performed in accordance with the Plans and Specifications. The Bidder understands that all quantities for performing the Work have been estimated by the Engineer, and that the Bid shall be the sum of the quantities multiplied by their respective unit rates. The Contract shall be awarded by the Owner through a comparison of all bids. It is the responsibility of each Bidder before submitting a Bid to:

2.1  Examine the Bidding Documents including the Plans and Specifications and any Addenda or related data identified in the Bidding Documents;

2.2  Visit the Project Site to become familiar with the local conditions if they are believed to affect cost, progress or the completion of the Work;

2.3  Become familiar and satisfied with all federal, state, and local Laws and Regulations that may affect cost, progress, or the completion of the Work;

2.4  Study and correlate all information known to the Bidder including observations obtained from Bidder’s visits, if any, to the Project Site, with the Bidding Documents;

2.5  Submit a written notice to the Office of State Purchasing within three (3) days regarding any conflicts, errors, ambiguities, or discrepancies discovered in the Bidding Documents and confirm that the written resolution thereof by the Office of State Purchasing is acceptable to the Bidder; and

2.6  All questions concerning Bid Specifications shall be submitted in writing to the Office of State Purchasing, Attention: Thomas Ketterer by fax to (225) 342-8688 or e-mail thomas.ketterer@la.gov after the Pre-Bid Conference and by the date provided in SP-3. No additional questions shall be received after this date. Oral statements will not be binding or legally effective. The Office of State Purchasing will submit addenda in response to all questions arising at the Pre-Bid Conference and site visit to all prospective Bidders on record. All prospective bidders on record may contact Thomas Ketterer at (225) 342-8022, or via e-mail;

2.7  Determine that the Bidding Documents are generally sufficient to convey an understanding of all terms and conditions for completing the required Work.

The submission of a Bid will constitute an incontrovertible representation that the Bidder has complied with every requirement of Bid Documents. The Bidder shall comply with all other requirements specified in the Notice to Bidders.

**GP-3  AVAILABILITY OF PLANS AND SPECIFICATIONS**

One (1) set of Plans and Specifications shall be furnished to each Bidder. Three (3) sets of the Plans and Specifications shall be furnished to the Contractor upon award of the Contract. Additional sets are available through the Office of State Purchasing by contacting Samantha LeBlanc at (225)-342-8034 of Samantha.Leblanc@la.gov.
Bidders are required to become familiar and remain in compliance with all Federal, State, and local laws, ordinances, permits, and regulations which may affect all employees and execution of the Work. The filing of a bid will be presumptive evidence that the Bidder has complied with this requirement. The Owner will not be responsible for any inaccurate interpretations or conclusions drawn by the Contractor from information and documentation provided by the Owner.

References to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws and Regulations, whether such reference be specific or by implication, in effect at the time of opening the Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents. No provision of any such standard, specification, manual or code, or any instruction of a supplier shall be effective to change the duties or responsibilities of the Owner or Engineer, or any of their Subcontractors, consultants, agents, or employees from those set forth in the Bid Documents. No such provision shall be effective to assign to the Owner or Engineer, or any of their consultants, agents, or employees any duty or authority to supervise or direct the performance of the Contractor’s obligations or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

The Contractor shall indemnify the Owner and its representatives against any claim or liability arising from all violations of any laws, bylaws, ordinances, codes, regulations, orders or decrees. The obligations imposed by these specifications are in addition to and are not to be construed in any way as a limitation of any rights available to the Engineer or Owner which are otherwise imposed by any laws or regulations, or other provisions within the Contract Documents.

A mandatory pre-bid conference will be held at the location and on the date provided in the Notice to Bidders. A site visit may be required, to be held at the Project Site. If a mandatory site visit is required, this will be discussed and a date established at the mandatory pre-bid conference meeting. Bidders will be required to furnish their own transportation to the Project Site. Representatives of the Owner and Engineer will attend the pre-bid conference and site visit, to discuss the work. Bidders are required to attend the pre-bid conference and site visit (if held). Failure to attend will result in a null and void Bid.

All questions shall concerning the bid specifications shall be faxed to the Office of State Purchasing at (225) 342-8688 or emailed to Thomas.Ketterer@la.gov after the pre-bid conference and by the date provided in SP-3. No additional questions shall be received after this date. Oral statements will not be binding or legally effective. The Engineer will submit addenda in response to all questions arising at the Pre-Bid Conference and site visit to all prospective Bidders on record. All prospective bidders on record may contact Thomas Ketterer at (225) 342-8022, or via email thomas.ketterer@la.gov for any additional information.

The Owner shall provide written notice to the Successful Bidder stating that the Owner will sign and deliver the Agreement upon compliance with the conditions enumerated therein and within the time specified.

The Contractor shall start the Work and begin the Contract Time on the dates provided in the Notice to Proceed. The Work shall be conducted using sufficient labor, materials and equipment as necessary to insure completion within the Contract Time. The Contract Time for completion of the Base Bid for the Work is provided in SP-3, unless an extension is granted to the Contract Time as specified in GP-44.
GP-8 WORK PLAN

The Contractor shall develop a written Work Plan which accounts for all of the construction activities required by the Contract Documents. The Work Plan shall include a list of the individual construction tasks to be completed and the estimated dates for beginning and completing the tasks. It shall also include all other items which are applicable to completing the Work such as, but not limited to, the following:

8.1 Typical report form for the Weekly Progress Meetings;
8.2 Typical form for Daily Progress Report;
8.3 Hurricane and Severe Storm Plan;
8.4 Site-specific Health and Safety Plan;
8.5 The delivery method and source(s) of all construction materials (company or producer name, mailing and physical address, phone number, and name of contact person).
8.6 The personnel, material, subcontractors, fabricators, suppliers, and types of equipment the Contractor proposes to use for construction;
8.7 Shop drawings, test results and sample submittals;
8.8 Survey layout and stakeout;
8.9 All supplemental items specified in SP-6.

The Work Plan shall be submitted to the Engineer at the Pre-Construction Conference by the date provided in SP-3. The Engineer shall review the Work Plan and have the Contractor make any necessary revisions prior to acceptance of the plan.

GP-9 PROGRESS SCHEDULE

The Contractor shall develop a written Progress Schedule which provides for an orderly progression of the Work, submittals, tests, and deliveries in order to complete the Work within the specified Milestones and Contract Time. All of the items listed in the Work Plan shall be integrated into the Progress Schedule. The format of the schedule shall be composed using Microsoft Project®, or any other software or methods deemed acceptable by the Engineer. It shall be updated weekly by the Contractor, at a minimum. The Progress Schedule shall also include, but not be limited to the following:

9.1 All of the elements in the Work Plan, including updates;
9.2 A work order issued from Louisiana One Call ordering all their subscribers in the project area to mark their utilities;
9.3 A telephone log verifying that all property owners and utilities have been contacted. This log should list the time, date, and names of the personnel representing the property owners, utilities and Contractor;
The following table defines the monthly anticipated adverse weather days that are expected to occur during the Contract Time and will constitute the baseline monthly weather time for evaluations. The schedule is based upon National Oceanic and Atmospheric Administration (NOAA) or similar data for the regional geographic area.

<table>
<thead>
<tr>
<th>Monthly Anticipated Adverse Weather Calendar Days</th>
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<tr>
<td>5</td>
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The Progress schedule must reflect these anticipated adverse weather delays on all weather dependent activities. Adverse weather days must prevent Work for fifty percent (50%) or more of the work day and delay work critical to the timely completion of the project. The number of actual adverse weather days shall be calculated chronologically from the first to the last day of each month.

The Progress Schedule shall be submitted to the Engineer at the Pre-Construction Conference by the date provided in SP-3. The Engineer shall perform a review and have the Contractor make any necessary revisions prior to acceptance of the schedule. Acceptance will not impose responsibility on the Owner or Engineer for the sequencing, scheduling, or progression of the Work. The Contractor is fully responsible for progression of the Work in order to maintain compliance with the Progress Schedule.

**GP-10 DAILY PROGRESS REPORTS**

The Contractor shall record the following daily information on Daily Progress Reports:

10.1 Date and signature of the author of the report;
10.2 Dollar amount of all bid items that are fabricated, installed, backfilled, pumped, constructed, damaged, replaced, etc. The amount of material shall be expressed in the units stated in the bid;
10.3 Field notes of all surveys;
10.4 Notes on all inspections;
10.5 Details of Health and Safety meetings;
10.6 A brief description of any Change Orders, Field Orders, Claims, Clarifications or Amendments;
10.7 Condition of all navigation aids (I.E., warning signs, lighted marker buoys) and any repairs performed on them;
10.8 Weather conditions (adverse weather day, wind speed and direction, temperature, wave height, precipitation, etc.);
10.9 The amount of time lost to severe weather or personnel injury, etc;
10.10 Notes regarding compliance with the Progress Schedule;
10.11 Visitor log (Instructions for format will be furnished by the Field Engineer)

The daily progress reports shall be submitted to Engineer at the Weekly Progress Meetings specified in GP-13 in both hard copy and digital format (Adobe Acrobat® Format, or approved equal). The typical form for Daily Progress Reports shall be developed by the Contractor and incorporated into the Work Plan.
GP-11  HURRICANE AND SEVERE STORM PLAN

The Contractor shall develop and maintain a written Hurricane and Severe Storm Plan. The Plan shall include, but not be limited to, the following:

11.1 What type of actions will be taken before storm strikes at the Project Site. The plan should specify what weather conditions or wave heights will require shutdown of the Work and removal of equipment, personnel, etc.

11.2 Notes from continuous monitoring of NOAA marine weather broadcasts and other local commercial weather forecasts.

11.3 Equipment list with details on their ability to handle adverse weather and wave conditions.

11.4 List of safe harbors or ports and the distance and travel time required to transfer equipment from the Project Site.

11.5 Hard copies of any written approvals or operations schedules associated with the use of the safe harbors or ports.

11.6 Method of securing equipment at the safe harbors or ports.

11.7 List of tug boats and work boats and their respective length, horsepower, etc. which will adequately transfer the equipment to safe harbor or port under adverse weather conditions.

11.8 Methods which will be used to secure equipment left onsite during adverse weather conditions.

11.9 Evacuation or immediate reaction plans to be taken by personnel for sudden storm occurrences.

11.10 Operations procedures which will be used to secure critical dredging equipment such as spuds, swing wires, anchor wires, or tugs during adverse weather conditions.

11.11 Communications protocol with local law enforcement and fire and rescue agencies.

The Contractor shall incorporate the Hurricane and Severe Storm Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.

GP-12  HEALTH AND SAFETY PLAN AND INSPECTIONS

The Contractor shall develop and maintain a written Health and Safety Plan which is specific to the Project Site and allows the Work to be performed in compliance with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the safety of personnel or property. This includes maintaining compliance with the Code of Federal Regulations, Title 29, Occupational Safety and Health Administration (OSHA) and all applicable Health and Safety Provisions of the State of Louisiana.

The Contractor shall institute a daily inspection program to assure that the requirements of the Health and Safety Plan are being fulfilled. Inspections shall include the nature of deficiencies observed, corrective action taken or to be taken, location of inspection, date, and signature of the person responsible for its contents. The results of the inspections shall be recorded on Daily Progress Reports and kept at the Project Site during the Work.

The Contractor shall incorporate the Health and Safety Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.
GP-13 PROGRESS MEETINGS AND REPORTS

The Engineer shall schedule meetings to review the progress of the Work, coordinate future efforts, discuss compliance with the Progress Schedule and resolve miscellaneous problems. The Engineer or Inspector, Contractor and all Subcontractors actively working at the Project Site shall attend each meeting. Representatives of suppliers, manufacturers and other Subcontractors may also attend at the discretion of the Contractor. The Contractor shall record the details of each meeting in a Progress Report. The format of this report shall be developed by the Contractor, approved by the Engineer and included in the Work Plan. The progress meetings and reports shall be scheduled according to SP-3.

GP-14 PRE-CONSTRUCTION CONFERENCE

A Pre-Construction Conference shall held by the Contractor, Subcontractors, Owner, Engineer, local stakeholders and other appropriate personnel prior to starting construction on the date specified in SP-3. This conference shall serve to establish a mutual understanding of the Work to be performed, the elements of the Progress Schedule and Work Plan, expectations for weekly progress meetings, the Plans and Specifications, processing Applications for Payment, and any other items of concern. If any subcontractors are not present, another pre-construction conference will be required.

GP-15 CONTRACT INTENT

The Bid Documents are complementary; what is called for by one is as binding as if called for by all. Clarifications and interpretations or notifications of minor variations and deviations of the Contract Documents will be issued by Engineer as provided in GP-16. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Bid Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided at no additional cost to the Owner.

GP-16 ENGINEER AND AUTHORITY OF ENGINEER

The Engineer will be the designated representative of the Owner, the initial interpreter of the Contract Documents and the judge over acceptability of all the Work. Claims, disputes, and other matters relating to the acceptability of the Work, performance by the Contractor or the interpretation of the requirements of the Contract Documents must be submitted to the Engineer in writing. Upon written request from the Contractor, the Engineer shall issue written clarifications or interpretations which are consistent with the overall intent of the Contract Documents. Such written clarifications and interpretations will be binding on the Owner and the Contractor. Either the Owner or the Contractor may make a Claim if a written clarification or interpretation justifies an adjustment in the Contract Price or Contract Times.

The Engineer has the authority to suspend the Work in whole or in part due to failure of the Contractor to correct conditions unsafe for workmen or the general public, carry out provisions of the Contract, perform conformance work, or to carry out orders. The Engineer shall submit a written order to the Contractor for work which must be suspended or resumed. Nothing in this provision shall be construed as establishing responsibility on the part of the Engineer for safety which is the responsibility of the Contractor.

The Engineer or Inspector shall keep a daily record of weather and flood conditions and may suspend the Work as deemed necessary due to periods of unsuitable weather, conditions considered unsuitable for execution of the Work, or for any other condition or reason deemed to be in the public interest.

GP-17 CONFORMITY WITH PLANS AND SPECIFICATIONS

All work and materials involved with the Work shall conform to the lines, grades, cross sections, dimensions, and other requirements shown on the Plans or indicated in the Specifications unless otherwise approved by the Engineer.
GP-18 CLARIFICATIONS AND AMENDMENTS TO CONTRACT DOCUMENTS

The Contract Documents may be clarified or amended by the Engineer to account for additions, deletions, and revisions to the Work after the Effective Date of the Agreement. The clarifications and amendments shall be addressed by either a Change Order or a written clarification by the Engineer. The Contractor shall not proceed with the Work until the Change Order or clarification has been issued by the Engineer. The Contractor shall not be liable to the Owner or Engineer for failure to report any such discrepancy unless the Contractor had reasonable knowledge.

The Contractor may request a clarification or amendment for the following:

18.1 Any conflict, error, ambiguity, or discrepancy within the Contract Documents; or

18.2 Any conflict, error, ambiguity, or discrepancy between the Bid Documents and the provision of any Law or Regulation applicable to the performance of the Bid; or

18.3 Any standard, specification, manual or code (whether or not specifically incorporated by reference in the Bid Documents); or

18.4 Instructions by a supplier.

The official form for a written clarification is provided in Appendix A. This form shall be filled out appropriately by the Contractor and submitted to the Engineer. The Engineer shall clarify the issue in writing on either the clarification form or a Change Order and submit it to the Contractor.

GP-19 SUBCONTRACTS

The Contractor shall provide the names of all Subcontractors to the Engineer in writing before awarding any Subcontracts. The Contractor shall be responsible for the coordination of the trades and Subcontractors engaged in the Work. The Contractor is fully responsible to the Owner for the acts and omissions of all of the Subcontractors. The Owner and Engineer will not settle any differences between the Contractor and Subcontractors, or between Subcontractors. The Contractor shall have appropriate provisions in all Subcontracts to bind Subcontractors to the Contractor by the terms of the General Conditions and other Contract Documents, as applicable to the Work of Subcontractors. The provisions should provide the Contractor the same power regarding termination of Subcontracts that the Owner may exercise over the Contractor under any provisions of the Contract Documents.

GP-20 WORKERS, METHODS AND EQUIPMENT

The Contractor shall provide competent, qualified and trained personnel to perform the Work. The Contractor shall provide the names of the Subcontractors to the Engineer in writing before awarding any Subcontracts. The Contractor shall not employ any person found objectionable by the Engineer. Any person employed by the Contractor or any Subcontractor who, in the opinion of the Engineer does not perform the Work in a proper, skillful and orderly manner shall be immediately removed upon receiving a written order by the Engineer. The Engineer may also suspend the Work until the Contractor removes the employee or provides a suitable replacement. Such an employee shall not be re-employed in any portion of the Work without written approval from the Engineer.

The on-site superintendent for the Contractor shall be competent, English-speaking, and qualified to receive orders, supervise, and coordinate all Work for the Contractor and any Subcontractors. The qualifications of the superintendent must be established and approved by the Engineer prior to commencement of the Work. The superintendent shall be furnished by the Contractor regardless of how much Work may be sublet. In the performance of the Work under this Contract, the Contractor shall conduct operations to avoid interference with any other Contractors.
All equipment, products and material incorporated into the Work shall be as specified, or if not specified, shall be new, of good quality and protected, assembled, used, connected, applied, cleaned and conditioned in accordance with the manufacturer’s instructions, except as otherwise may be provided in the Bid Documents. All equipment shall be of sufficient size and mechanical condition to meet the requirements of the Work and produce a satisfactory quality of work. Equipment shall not damage adjacent property throughout the performance of the Work.

The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures used to complete the Work in conformance with the Contract Documents.

The Contractor shall obtain permission from the Engineer if a method or type of equipment other than specified in the Contract is desired. The request shall be in writing and shall include a full description of the methods, equipment proposed, and reasons for the modification. A proposed item of material or equipment may be considered by the Engineer to be functionally equal to an item specified in the Contract if:

20.1 It is at least equal in quality, durability, appearance, strength, and design characteristics;
20.2 There is no increase in any cost including capital, installation or operating to the Owner;
20.3 The proposed item will conform substantially, even with deviations, to the detailed requirements of the item named in the Bid Documents.

If, after trial use of the substituted methods or equipment, the Engineer determines that the Work produced does not meet Contract requirements, the Contractor shall discontinue use of the substituted methods or equipment and shall complete the Work with the specified methods and equipment. The Contractor shall remove the deficient Work and replace it with Work of specified quality or take other corrective action as directed. No change will be made in basis of payment for construction items involved or in Contract Time as a result of authorizing a change in methods or equipment.

GP-21 ACCIDENT PREVENTION, INVESTIGATIONS AND REPORTING

The Contractor shall be responsible to develop and maintain all safeguards and safety precautions necessary to prevent damage, injury, or loss throughout the performance of the Work. All accidents at the Project Site shall be investigated by the immediate supervisor of employee(s) involved and reported to the Engineer or Inspector within one (1) working day. A complete and accurate written report of the accident including estimated lost time days shall be submitted to the Engineer within four (4) calendar days. A follow-up report shall be submitted to the Engineer if the estimated lost time days differ from the actual lost time days.

GP-22 PRESERVATION AND RESTORATION OF PROPERTY, MONUMENTS, ETC.

The Contractor is responsible to comply with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the preservation and protection of public and private property. The Contractor shall install and maintain suitable safeguards and safety precautions during the Work as necessary to prevent damage, injury, or loss to property. This responsibility shall remain with the Contractor until the Work has been completed and accepted. Any damage, injury or loss to property which is caused by the Contractor or Subcontractors shall be repaired or replaced at the expense of the Contractor.

The Contractor shall protect all land monuments, State and United States bench marks, geodetic and geological survey monuments, and property markers from disturbance or damage until an authorized agent has witnessed or otherwise referenced their location. The Contractor shall also provide protection for all public and private property including trees, utilities, pipes, conduits, structures, etc. These items shall not be removed unless directed by the Engineer.
The Contractor shall be responsible to completely repair all damages to public or private property due to any act, omission, neglect or misconduct in the execution of the Work unless it is due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, public enemy’s or governmental authorities. The damage must be repaired at the expense of the Contractor before final acceptance of the Work can be granted by the Engineer. If the Contractor fails to repair the damage within forty-eight (48) hours, the Owner may independently proceed with the repairs at the expense of the Contractor by deducting the cost from the Contract. If the Contractor cannot provide for the cost of repairs, the Surety of the Contractor shall be held until all damages, suits, or claims have been settled.

GP-23 PROTECTION OF THE WORK, MATERIALS AND EQUIPMENT

It shall be the responsibility of the Contractor to protect the Work, materials and equipment from damages or delays due to inflows, tidal rise, and storm water runoff which may occur at the Project Site. The Owner shall not be held liable or responsible for these types of delays or damages.

GP-24 LAND RIGHTS

The Owner has been granted all of the temporary easements, servitudes and right-of-way agreements from public and private landowners in order to perform the Work. A land rights memorandum which lists all known responsible contacts and required stipulations is provided in Appendix B. The Contractor is responsible to notify all of the contacts and abide by stipulations listed in that memorandum.

GP-25 UTILITIES

The Owner has been granted all of the temporary easements, servitudes and right-of-way agreements from public and private utilities in order to perform the Work. The utilities include, but are not limited to telephone, telegraph, power poles or lines, water or fire hydrants, water or gas mains and pipelines, sewers, conduits and other accessories or appurtenances of a similar nature which are fixed or controlled by a city, public utility company or corporation. A land rights memorandum is provided in Appendix B which lists all responsible contacts and required stipulations.

The Contractor shall conduct the Work in such a manner as to cooperate and minimize inconveniences with utilities. Prior to commencement of the Work, the Contractor is responsible to notify all of the utilities, abide by stipulations listed in the land rights memorandum, and make any necessary adjustments. The Contractor shall also call Louisiana One Call® at 1-800-272-3020 a minimum of 48 hours prior to construction to locate existing utilities at the Project Site.

Any damage to utilities that is caused by the Contractor within the Project Site shall be repaired at the expense of the Contractor. The Owner will not be responsible for any delay or damage incurred by the Contractor due to working around or joining the Work to utilities left in place or for making adjustments.

Any unidentified pipes or structures which may be discovered within the limits of the Project Site shall not be disturbed and reported to the Engineer as soon as possible. Construction or excavation shall not be performed around unidentified utilities without prior approval from the Engineer.
GP-26 PERMITS

All Federal and State permits that are required to perform the Work, such as the COE 404 Permit, Coastal Use Permit, and LDEQ Clean Water Permit, have been secured by the Owner. Copies of these permits are provided in Appendix C. These permits will not relieve the responsibility of the Contractor from obtaining any additional permits which may be needed to complete the work. Copies of any special permits that are obtained by the Contractor must be submitted to the Owner. The Contractor shall conform to the requirements therein and display copies of the permits in a public setting at the Project Site at all times.

GP-27 PROJECT SITE CLEAN-UP

The Contractor shall keep the Project Site free from accumulations of waste material or trash at all times. All trash and waste materials shall be removed by the Contractor and disposed off-site in an approved waste disposal facility. In addition, all equipment, tools and non-conforming work shall also be removed prior to the Work being accepted. No materials shall be placed outside of the Project Site.

GP-28 OWNER INSPECTION

The Owner, Inspector and Federal Sponsor shall have the right to perform reasonable inspections and testing of the Work at the Project Site. Access shall be granted to the entire Project Site including all materials intended for use in the Work. The Contractor shall allow reasonable time for these inspections and tests to be performed. The inspections shall not relieve the Contractor from any obligation in accordance with the requirements of the Contract.

The Owner shall notify the Contractor prior to all tests, inspections and approvals of the Work which are to be conducted at the Project Site. The Owner shall also provide the Contractor with the written results of all inspections and tests. Inspections, tests or Payments made by the Owner shall not constitute acceptance of non-conforming Work or prejudice the Owner’s rights under the Contract.

GP-29 DUTIES OF INSPECTOR

An Inspector shall be assigned by the Engineer to the Project Site to observe the Contractor and monitor the progress and manner in which the Work is being performed. The Inspector will also report to the Engineer and Contractor whenever materials or work fail to comply with the Contract. The Inspector is authorized to reject any materials or suspend work which does not comply with the Contract until the issue is resolved by the Engineer.

However, the Inspector is not authorized to revoke, alter, enlarge, relax or release any requirements of the Contract, or to approve or accept any portion of the Work, or to issue instructions contrary to the Plans and Specifications. The Inspector shall not manage or perform duties for the Contractor.

GP-30 CONSTRUCTION STAKES, LINES, AND GRADES

The Engineer shall direct the Contractor to all control points necessary for setting stakes and establishing lines and grades as shown on the Plan Drawings. The Contractor shall be responsible for laying out all of the Work. All layouts shall be witnessed and verified by the Engineer or Inspector prior to beginning the Work. The Contractor shall be responsible for proper execution of the Work according to the layouts after receiving verification from the Engineer.

The Contractor shall be responsible for furnishing and maintaining the stakes such that the Work can be verified for acceptance. The Engineer may suspend the Work at any time if it cannot be adequately verified due to the number, quality or condition of the stakes.
GP-31 CONTRACTOR’S RESPONSIBILITY FOR WORK

The Contractor shall execute all items covered by the Contract, and shall furnish, unless otherwise definitely provided in the Contract, all materials, implements, machinery, equipment, tools, supplies, transportation and labor necessary to complete the Work. The Contractor shall pay constant attention to the progress of the Work and shall cooperate with the Engineer in every way possible. The Contractor shall maintain a complete copy of the Contract at all times, including the Plans, Specifications, and any authorized modifications.

GP-32 CONTROL OF SILTATION AND WATER POLLUTION

The Contractor shall comply with all applicable Federal and State regulations and statutes relating to the prevention and abatement of pollution in the performance of the Contract. The Contractor shall conduct the Work in a manner that will not cause damaging concentrations of silt or pollution to water. The Contractor shall prevent fuels, oils, bituminous materials, chemicals, sewage or other harmful contaminants from entering the land or water.

GP-33 SANITARY PROVISION

The Contractor shall provide and maintain sanitary accommodations for use by all employees and Subcontractors. Facilities shall comply with the requirements of the Louisiana State Board of Health and Hospitals and other authorities having jurisdiction. Committing public nuisance on the Project Site is prohibited.

GP-34 PAYMENT OF TAXES

The Contractor shall be responsible for all taxes and duties that may be levied under existing State, Federal and local laws during the completion of the Work. The Owner will presume that the amount of such taxes is included in the unit prices bid by the Contractor and will not provide additional reimbursement.

GP-35 RADIO TELEPHONES

The Contractor shall furnish and maintain radio and telephone equipment throughout the Contract Time which will allow communication between the Contractor and the Engineer or Inspector.

GP-36 NAVIGATION

All marine vessels shall comply with the following Federal Laws and Regulations:

36.1 The International Navigational Rules Act of 1977 (Public Law 95-75, 91 Stat. 308, or 33 U.S.C. 1601-1608); and


These rules can be found on the Internet at http://www.navcen.uscg.gov/mwv/navrules/navrules.htm. All marine vessels shall display the lights and day shapes required by Part C- Lights and Shapes of the Inland Navigation Rules. The location, type, color, and size of the lights and day shape shall be in accordance with Annex I - Positioning and Technical Details of Lights and Shapes. Any vessel engaged in dredging is considered a “Vessel restricted in her ability to maneuver” and shall display all the lights and shapes required in Rule 27, “Vessel Not Under Control.”
GP-37 OBSTRUCTION TO NAVIGATION

The Contractor shall minimize all obstructions to navigation in compliance with pertinent U. S. Coast Guard regulations while conducting the Work. The Contractor shall promptly move any floating equipment or marine vessels which obstruct safe passage of other marine vessels. Upon completion of the Work, the Contractor shall remove all marine vessels and other floating equipment such as temporary ranges, buoys, piles, and other marks or objects that are not permanent features of the Work.

GP-38 MARINE VESSELS AND MARINE ACTIVITIES

All marine vessels operated by the Contractor shall possess a valid United State Cost Guard (USCG) inspection certificate and current American Bureau of Shipping (ABS) Classification. All officers and crew shall possess valid USCG licenses as required by USCG regulations. These certificates, classifications and licenses shall be posted in a public area on board each vessel.

All marine vessels not subject to USGS certification or American Bureau of Shipping (ABS) Classification shall be inspected annually by a marine surveyor accredited by the National Association of Marine Surveyors (NAMS) or the Society of Accredited Marine Surveyors (SAMS). All inspections shall be documented using an appropriate report format. At a minimum, the inspections shall evaluate the structural integrity of the vessel and comply with the National Fire Protection Association Code No. 302 - Pleasure and Commercial Motor Craft. The most recent inspection report shall be posted in a public area on board each vessel.

GP-39 RECORDKEEPING

The Contractor shall maintain orderly records of the Progress Schedule, Daily Progress Report, Weekly Progress Meetings, correspondence, submittals, reproductions of original Contract Documents, Change Orders, Field Orders, certificates, additional drawings issued subsequent to the executed Contract, clarifications and interpretations of the Contract Documents by the Engineer, and other related documents at the Project Site until all of the Work is accepted by the Engineer.

GP-40 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in three (3) copies. Each certificate shall be certified by an authorized agent of the supplying company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date of shipment. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the testing date. The Contractor shall also certify that all materials and test reports conform to the requirements of the Contract. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material if the material is tested and determined to be in nonconformance.

GP-41 SUBMITTALS

The contractor shall review all Submittals for compliance with the requirements of the Contract prior to delivery to the Engineer. Each Submittal shall contain a signed statement by the Contractor that it complies with the Contract requirements with any exceptions explicitly listed. The Contractor shall comply with these requirements for Submittals from Subcontractors, manufacturers and suppliers.

All Submittals shall include sufficient data to demonstrate that the requirements of the Contract are met or exceeded. All submittals shall be legible and marked with the project title and clearly identify the item submitted. Each submittal package shall include an itemized list of the items submitted.

All submittals shall be reviewed within fourteen (14) days after being received by the Engineer. The Contractor shall allow the Engineer sufficient time for review, corrections and resubmission of all submittals prior to beginning the associated Work. The Contract Time shall not be extended based on incorrect or incomplete Submittals.
GP-42 MODIFICATIONS TO THE WORK

The Engineer may authorize modifications, additions or deductions to the Work using Change Orders, Field Orders or Written Amendments. The requirements and stipulations of these documents shall be binding on the Owner and Contractor throughout the remainder of the Contract.

GP-43 INCREASES TO CONTRACT PRICE

The Contractor shall complete the Work according to the Contract Price specified in the Bidding Documents. Under certain circumstances, the Contractor may request for a legitimate increase to the Contract Price using a Claim. The Claim must justify the request for an increase in Contract Price by providing supporting data and calculations. The Claim must be submitted to the Engineer in writing within fourteen (14) days after the event occurs which necessitates the increase in contract price. If an increase in Contract Price involves an extension of Contract Time, both claims shall be submitted together. The Engineer reserves the right to accept, deny, or negotiate the Claim. If the Claim is accepted, the Engineer shall issue a Change Order. Where a change order is negotiated, the Contractor shall fully document and itemize costs, including material quantities, material costs, taxes, insurance, employee benefits, other related costs, profit and overhead. The requirements and stipulations of Change Order shall be binding on the Owner and Contractor throughout the remainder of the Contract.

The increase in Contract Price shall be determined by the following:

43.1 By application of the unit prices in the Contract to the quantities of the items involved; or

43.2 By mutual acceptance between the Owner and Contractor of a lump sum.

If the Contractor is prevented from completing the Work according to the Contract Price due to the Owner, the Contractor may be entitled to any reasonable and necessary addition of cost as determined by the Engineer. Neither the Owner nor the Contractor shall be entitled to any damages arising from events or occurrences which are beyond their control, including but not limited to fires, floods, epidemics, and abnormal weather conditions, and acts of God, acts of war, and other like matters. The provisions of this section exclude recovery for damages caused by the Contractor and compensation for additional professional services by either party.

GP-44 EXTENSION OF CONTRACT TIME

The Contractor is expected to complete the Work within the Contract Time specified in the Bidding Documents. A legitimate increase of the Contract time may be requested by the Contractor throughout the course of the Work. This Claim must be submitted to the Engineer in writing within fifteen (14) days of the event which caused the time delay to the Contractor. If an extension of Contract Time involves an increase in Contract Price, both claims shall be submitted together. The Contractor shall justify the increase of the Contract Time in the Claim using supporting data and calculations. The Engineer may deny the claim if there is insufficient information to make a determination. If the Claim is approved, the Engineer shall issue a Change Order within thirty (30) days of the Claim. The Contract Time shall be increased on a basis that is commensurate with the amount of additional or remaining Work. For example, the Contract Time can be increased where the number of actual adverse weather days exceeds the number of days estimated in the Contract.

GP-45 DEFAULT AND TERMINATION OF CONTRACT

The Owner shall submit a written notice to the Contractor and Surety which justifies placement of the Contractor in default if:

45.1 The Work is not begun within the time specified in the Notice to Proceed; or

45.2 The Work is performed with insufficient workmen, equipment, or materials to assure prompt completion; or
45.3 The Contractor performs unsuitable, neglected or rejected work, refuses to remove materials; or

45.4 The Work is discontinued; or

45.5 The Work is not completed within the Contract Time or time extension; or

45.6 Work is not resumed within a reasonable time after receiving a notice to continue; or

45.7 The Contractor becomes insolvent, or is declared bankrupt, or commits any act of bankruptcy or insolvency; or

45.8 The Contractor allows any final judgment to stand unsatisfied for a period of ten (10) days; or

45.9 The Contractor makes an assignment for the benefit of creditors; or

45.10 The Work is not performed in an acceptable manner.

If the Contractor or Surety does not remedy all conditions cited in the written notice within ten (10) days after receiving such a notice, the Contractor will be in default and the Owner shall remove the Contractor from the Work. If the Contractor is placed into default, the Owner may obtain the necessary labor, materials and equipment or enter into a new Agreement and Contract in order to complete the Work. All costs incurred by the Owner for completing the Work under the new Contract will be deducted from the payment due the Contractor. If the expense exceeds the sum payable under the Contract, the Contractor and Surety shall be liable to pay the Owner the difference.

GP-46 TEMPORARY SUSPENSION OF WORK

The Engineer shall have the authority to temporarily suspend the Work in whole or in part. A Field Order shall be issued to the Contractor for any of the Work that is suspended for periods exceeding one (1) calendar day. The Field Order shall include the specific reasons and details for the suspension. The Contract Time shall not be extended if the Work is suspended due to failure by the Contractor to comply with a Field Order or with the Plans and Specifications. If the Work is suspended in the interest of the Owner, the Contractor shall make due allowances for the lost time.

GP-47 NON-CONFORMING AND UNAUTHORIZED WORK

Work not conforming to the Plans, Specifications, Field Orders or Change Orders shall not be accepted or compensated. Unacceptable or unauthorized work shall be removed and replaced in an acceptable manner at the expense of the Contractor in order to obtain final acceptance of the Work.

GP-48 CONTRACTOR’S RIGHT TO TERMINATE CONTRACT

The Contractor may terminate the Contract or Work and recover payment from the Owner for labor and materials if the Work is stopped through no act or fault of the Contractor for more than three (3) months. For example, such an occurrence could be caused by a court order or other public authority. In any case, the Contractor shall submit a written notice to the Engineer at the beginning of the occurrence, and a written Claim to the Owner at the end of the occurrence.
GP-49  BREACH OF CONTRACT

The Owner shall submit a written Claim to the Contractor regarding any breach of the Contract. The Contractor must provide a written response to the Owner regarding the breach of Contract within 10 days after the Claim. This response must provide either an admission to the Claim or a detailed denial based on relevant data and calculations. The failure of the Contractor to provide a proper response within 10 days shall result in justification of the Claim by default.

GP-50  NO WAIVER OF LEGAL RIGHTS

The Owner shall not be prevented from recovering costs from the Contractor, Surety or both due to failure of the Contractor to fulfill all of the obligations under the Contract. If a waiver is provided to the Contractor for a breach of Contract by the Owner, it shall not apply to any other breach of Contact. Final acceptance of the Work shall not prevent the Owner from correcting any measurement, estimate, or certificate. The Contractor shall be liable to the Owner without prejudice to the terms of the Contract or any warranty for latent defects, fraud or gross negligence.

GP-51  LIABILITY FOR DAMAGES AND INJURIES

To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner, Engineer and their affiliates from claims, costs, losses, demands and judgments (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) caused by negligence of the Contractor or the Contractor’s affiliates under this Contract, provided that it:

51.1 Is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property including the loss of use resulting there from; or

51.2 Is caused by negligence or omission of the Contractor or Subcontractors to furnish any of the Work in accordance with all Laws and Regulations.

The indemnification obligations of the Contractor shall not extend to the liability of the Owner, Engineer and their affiliates arising out of a cessation of Work under this Contract due to any act or order of any local, state or federal government agency. If this cessation occurs, the Contractor may request an extension of the Contract Time according to the provisions in GP-44.

GP-52  LIABILITY FOR LOSSES BY ACTS OF THE GOVERNMENT

The Owner shall not be liable for any loss or damage suffered by the Contractor arising out of a cessation of Work under this Contract due to any act or order of any local, state or federal government agency. If this cessation occurs, the Contractor may request an extension of the Contract Time according to the provisions in GP-44.
GP-53 FINAL INSPECTION AND ACCEPTANCE

The Engineer, Owner and Contractor shall perform a final inspection after receiving written notice from the Contractor that all of the Work is complete. If the Work is determined to be unsatisfactory, the Engineer shall notify the Contractor in writing of the deficiencies and recommended corrective actions.

Unfulfilled work or damages caused by the negligence of the Contractor or Subcontractors shall be repaired or corrected at the expense of the Contractor. All other damages to the Work which received previous acceptance by the Engineer shall be repaired at the expense of the Owner. Upon completion of the repairs or corrections, the Engineer, Owner and Contractor shall perform another inspection. The Engineer shall submit a written notice of acceptance to the Owner after the Work has been determined to be satisfactorily completed according to the Contract.

GP-54 AS-BUILT DRAWINGS

The contractor shall maintain red line plans and specifications on the job site and shall provide to the engineer for use in the preparation of the as-built drawings.

GP-55 COMPLETION OF CONTRACT

Completion of the Contract requires all of the Work to be complete, inspected by the Engineer, accepted by the Owner as recommended by the Engineer and after final payment is made. After the Contract is complete, the Contractor will then be released from further obligation except as set forth in the Contract Bond and Contractor’s Guarantee.

GP-56 CONTRACTOR’S GUARANTEE

The Contractor is obligated to provide a written guarantee to the Owner that all of the Work conforms to the Contract Documents. The Work shall be guaranteed to survive for a minimum period of 1 year after final acceptance, unless otherwise specified in the Technical Specifications.

56.1 The guarantee shall include:

56.1.1 A written warranty by the manufacturer for each piece of installed project equipment or apparatus furnished under the Contract.

56.1.2 Any necessary repair or replacement of the warranted equipment during the guarantee period at no cost to the Owner.

56.1.3 Satisfactory operation of installed equipment including, but not limited to, any mechanical and electrical systems furnished and constructed under the Contract during the guarantee period. The Contractor shall repair all equipment which fails due to defective materials or faulty workmanship during the guarantee period. The Contractor shall also be liable for all other ancillary expenses incurred by the Owner due to the failure.

56.2 The guarantee shall exclude defects or damage caused by:

56.2.1 Abuse or improper modification, maintenance or operation by anyone other than the Contractor; or

56.2.2 Wear and tear under normal usage.

56.3 This obligation by the Contractor shall be absolute. The following actions will not constitute acceptance of non-conformance work or release the Contractor from obligation to furnish the Work in accordance with the Contract Documents:
56.3.1 Observations by the Owner or Engineer; or

56.3.2 Recommendations by the Engineer or payment by the Owner; or

56.3.3 Use of the Work by the Owner; or

56.3.4 Issuance of a notice of acceptance by the Owner pursuant to the provisions of GP-53, or failure to do so; or

56.3.5 Any inspection, test or approval by others; or

56.3.6 Any correction to non-conforming work by the Owner.
PART II  SPECIAL PROVISIONS

SP-1  LOCATION OF WORK

The Project Site is located in Cameron Parish, Louisiana, the CS-20 project is located approximately five miles northeast of the town of Holly Beach, in Cameron Parish. The western boundary of the project is located approximately five miles east of LA highway 27. The projects southern boundary is located approximately three miles north of LA highway 82. The projects eastern boundary is located approximately nine miles east of LA highway 27. The projects northern boundary is located approximately ten miles north of LA highway 82. The project area extends to the north and east of, and the south and east of, Mud Lake. The project is authorized by the Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA). The United States Natural Resource Conservation Service (NRCS) is the Federal Sponsor with the Louisiana Department of Natural Resources (LDNR) as the local sponsor. LDNR and NRCS will review, comment, and provide input into all phases of the process covered by this document, for the CS-20 Project.

Access to the project site may be gained, by a shallow drafting vessel, from primarily two entrance points. First point of access being a shell road along the south lines of sections 20, 21, 22, 23, 24, and the west line of section 18, located within Township 14 South Range 10 West. This shell road is owned and maintained by the Apache Oil Corporation. The second point of access being a small boat landing located along the East Right of Way of LA HWY 27. The boat launch is adjacent to structure # 13 in approximately the center of section 31, Township 15 South Range 10 West. This boat launch is owned and operated by the Apache Oil Corporation. It is a small landing and is only capable of accepting small vessels. From this launch individuals may access the Step Canal, however, contractors are cautioned that these canals are very shallow and will only permit small crafts to travel. Contractors are encouraged to view the potential access routes prior to bidding.

It is the contractor’s responsibility to contact Apache to verify permission for access, and to inform any land owner of the contractors intended dates of work. The contractor shall be allowed to use any access which may be obtained from Apache Oil or any other land owner within the project area; however, actions must be taken to minimize wetland impact caused by operating equipment.

Contractor will be responsible for any damage caused to the roadway. Contractor shall not block the roadway with equipment or vehicles in any way. This road is frequently used by the Apache Oil Corporation, and shall remain open at all times.

Contractor should contact Apache Oil Corporation to obtain a listing of Commercial Fisherman, leasing fishing grounds within the project area. The contractor should contact all Fisherman, working within the project area, to inform them of the waterways which will be impacted by equipment traveling to and from structures to be maintained. The fisherman should be given notice to remove any Crab pots, or traps to prevent damage caused by equipment and construction.

SP-2  WORK TO BE DONE

Scope: The Contractor shall provide all labor, materials and equipment necessary to perform the Work. The Work shall include, but not be limited to, mobilization and demobilization at the Project Site, maintenance and repair of eleven water structures, complete construction of one water structure, dredging canal and the refurbishment of a levee; which all function to control water levels, and water quality adjacent to the Sabine Refuge.

2.1 The Work shall be performed in accordance with these Specifications and in conformity to lines, grades, and elevations shown on the Plans or as directed by Engineer. Quantity calculations, layouts, shop drawings, and construction sequencing of these items shall be provided in the Work Plan. The major tasks associated with the Work are described as follows:
2.1.1 The structures consist of the following:

**BASE BID**

- ES-1 has one (1) 36” culvert with stop logs and flap gates.
- ES-3 has one (1) 36” culvert with stop logs and flap gates.
- ES-4 has five (5) 48” culverts with stop logs and flap gates.
- ES-5 has one (1) 36” culvert with stop logs and flap gates.
- ES-11 has one (1) 36” culvert with stop logs and flap gates.
- ES-9b has one (1) 48” culvert with sluice gate and flap gate.

**ADDITIVE ALTERNATE**

- ES-6 has two (2) 36” culverts with stop logs and a 4” fish slot.
- ES-7 has two (2) 36” culverts with stop logs and a 4” fish slot.
- ES-8 has two (2) 36” culverts with stop logs and a 4” fish slot.
- ES-9a has one (1) 36” culvert with stop logs and flap gates.
- ES-13 has a sheet pile bulkhead with two (2) variable crested weirs and flap gates.

2.1.2 **STEP CANAL AND LEVEE REFURBISHMENT “SC-1” (BASE BID)**

The step canal was dredged to a depth specified on the project plans. The approximately 13,250 cubic yards of dredged material shall be placed on the existing levee adjacent to the step canal. The length of levee refurbished was approximately 16,762 linear feet.

Payment for this work will be under BASE bid item 2.

2.1.3 **MAINTENANCE FOR STRUCTURES (BASE BID)**

2.1.3.1 **STRUCTURE ES-1**

- Replaced two (2) pile caps.
- Removed sediment and debris from within, and from both ends of all C.A.P.
- Replaced three (3) padlocks on structure, keying shall be as directed by owner.
- Installed 300 tons of 30# class rock along the eroded bank lines adjacent to the existing levee.
- Extended timber boardwalk 8’-0” from structure to bank.
- Replaced 58 SF of grating on the inlet side of the structure.
- Payment for this work will be under BASE bid items 3 and 4.

2.1.3.2 **STRUCTURE ES-3**

- Removed sediment and debris from within, and from both ends of all C.A.P.
- Replaced three (3) padlocks on structure, keying shall be as directed by owner.
- Installed 379 tons of 30# class rock along the eroded bank lines adjacent to the existing levee.
- Replaced timber boardwalks on both sides of the structure 18’-2” from structure to bank on the north side and 18’-2” from structure to bank on the south side.
- Payment for this work will be under BASE bid items 5 and 6.

2.1.3.3 **STRUCTURE ES-5**

- Replaced two (2) pile caps.
- Removed sediment and debris from within, and from both ends of all C.A.P.
- Replaced three (3) padlocks on structure; keying shall be as directed by owner.
- Installed 300 tons of 30# class rock along the eroded bank lines adjacent to the existing levee.
- Extended timber boardwalk 10’-0” from structure to bank.
- Payment for this work will be under BASE bid items 7 and 8.
2.1.3.4 STRUCTURE ES-11
- Replaced two (2) pile caps.
- Removed sediment and debris from within, and from both ends of all C.A.P.
- Replaced three (3) padlocks on structure; keying shall be as directed by owner.
- Installed 227.31 tons of 30# class rock along the eroded bank lines adjacent to the existing levee.
- Extended timber boardwalk 10'-0" from structure to bank.
- Payment for this work will be under BASE bid items 9 and 10.

2.1.3.5 STRUCTURE ES-9B
- Replaced four (4) pile caps.
- Removed sediment and debris from within, and from both ends of all C.A.P.
- Replaced three (3) padlocks on structure; keying shall be as directed by owner.
- Replaced the (1) handle on the flap gate.
- Refurbished one (1) gear box on the sluice gate (includes greasing existing stem, repainting, and checking alignment).
- Installed one (1) stem cover.
- Replaced one (1) seat flange on flap gate.
- Payment for this work will be under BASE bid item 16.

2.1.4 MAINTENANCE FOR STRUCTURES (ADDITIVE ALTERNATE)

2.1.4.1 STRUCTURE ES-6
- Replaced four (4) pile caps.
- Removed debris from within, and from both ends of all C.A.P.
- Replaced four (4) padlocks on structure; keying shall be as directed by owner.
- Installed one-hundred eleven and four hundredths (111.04) tons of 30# class rock along the eroded bank lines, adjacent to the existing roadway.
- Payment for this work will be under ADDITIVE ALTERNATE bid items 17 and 18.

2.1.4.2 STRUCTURE ES-7
- Replaced four (4) pile caps.
- Removed debris from within, and from both ends of all C.A.P.
- Replaced four (4) padlocks on structure; keying shall be as directed by owner.
- Installed one-hundred fourteen (108) tons of 30# class rock along the eroded bank, adjacent to the existing roadway.
- Payment for this work will be under ADDITIVE ALTERNATE bid items 19 and 20.

2.1.4.3 STRUCTURE ES-8
- Replaced four (4) pile caps.
- Removed debris from within, and from both ends of all C.A.P.
- Replaced four (4) padlocks on structure; keying shall be as directed by owner.
- Installed one-hundred fourteen (66) tons of 30# class rock along the eroded bank lines, adjacent to the existing roadway.
- Payment for this work will be under ADDITIVE ALTERNATE bid items 21 and 22.

2.1.4.4 STRUCTURE ES-9A
- Replaced two (2) pile caps.
- Removed sediment and debris from within, and from both ends of all C.A.P.
- Replaced three (3) padlocks on structure; keying shall be as directed by owner.
- Replaced one (1) handle on the flap gate.
- Payment for this work will be under ADDITIVE ALTERNATE bid item 23.

2.1.4.5 STRUCTURE ES-13
- Replaced twelve (12) pile caps.
- Removed sediment and debris from within, and from both ends of all C.A.P.
- Replaced four (4) padlocks on structure, keying shall be as directed by owner.
- Replaced two (2) warning signs.
- Replaced one-hundred seventy-five (175) linear feet of sheet pile wall cap.
- Payment for this work will be under ADDITIVE ALTERNATE bid items 24.

2.1.5 STRUCTURE CONSTRUCTION (BASE BID)

2.1.5.1 STRUCTURE ES-4
- Excavated the existing levee at the proposed structure location.
- Performed the necessary dredging within the inlet and outlet channels.
- Installed the proposed Marine Vessel Barrier.
- Installed one-thousand eight hundred thirty-four and twelve hundredths (1,834.12) TONS of 30# class rock along the bank lines of the upstream and downstream ends of the structure.
- Installed a total of fifty (50) linear feet of steel sheet pile wall.
- Installed the proposed batter piles.
- Installed five (5) 48” diameter 50’ long water control structures complete with flap gates and variable crested weirs.
- Installed the proposed flap gate and stop log assemblies.
- Installed the (5) hoist attachment assemblies with (2) removable hoists.
- Installed all accessories including but not limited to: cables, padlocks, signs, etc.
- Payment for this work will be under bid items BASE bid item 11 and 12.

2.1.6 Access and Flotation Channels – No access or flotation channels are required to construct structure ES-4 other than access through the existing step canal.

2.1.7 Disposal of Dredged Material: Dredged material from inlet and outlet channel excavation shall be deposited on the existing levee to the required shape and elevation as shown on the Plans. Placement in any other location is prohibited without prior written approval from the Engineer. Logs, stumps, snags, debris and other obstructions which are encountered will not receive separate payment for removal and disposal.

2.1.8 Use of Equipment: The equipment used for the Work shall be operated within the boundaries of the Project Site and away from existing vegetated wetlands, or any other sensitive areas. Wheeled and tracked vehicles are only allowed within required construction areas as shown in the Plans. The Contractor shall be responsible for returning all disturbed wetlands to pre-existing conditions at no expense to the Owner.

2.1.9 Navigation Depths: Access and flotation channels shall be dredged and maintained to provide clear and safe navigation of all marine vessels to be used for the Work. Areas containing navigable depths shall not be impaired except as allowed by applicable laws or regulations. It is the responsibility of the Contractor to select equipment that can navigate from a maintained navigation channel to the Project Site without dredging except for the flotation and access channels depicted in the Plans. All equipment shall remain floating at all times during the transit to the Project Site. The Contractor shall obtain NOAA Nautical Charts and/or other charts to become familiar with the depths in the vicinity of the Project Site.

SP-3 BID AND CONTRACT DATES

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<thead>
<tr>
<th>Milestone</th>
<th>Location or Recipient</th>
<th>Date Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid Advertisement</td>
<td>Publications</td>
<td>As advertised</td>
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<tr>
<td>Mandatory Pre-bid</td>
<td>Provided in Notice to Bidders</td>
<td>Provided in Notice to Bidders</td>
</tr>
</tbody>
</table>
Questions on Bid Documents | Provided to OSP | 3 business days after Pre-bid Conference
Questions on Site Visit | To be determined at Pre-bid Conference | Within 3 business days after Site Visit
Questions on Addendum | Stated in Notice of Award | Within 3 business days after Issuance

Mandatory Site Visit, If Applicable | Contractor and Owner | As stated at Pre-bid Conference
Effective Date of Agreement | Contractor and Owner | Stated in Notice of Award
Start of Contract Time | Contractor and Owner | As stated in Notice to Proceed
Work Plan | Submit to Engineer | At Pre-Construction conference
Progress Schedule | Submit to Engineer | At least 14 days prior to starting construction, monthly thereafter

Pre-Construction Conference | Contractor and Engineer | As determined by the Engineer after the Notice to Proceed is issued
Progress Meetings and Reports | At Project Site | As determined at Pre-Construction Conference
End of Contract Time | At Project Site | 120 days after Notice to Proceed

SP-4 DELIVERABLES

4.1 Prior to Construction:

4.1.1 The Contractor shall submit the following documents to the Engineer prior to the Pre-Construction Conference specified in GP-14:

4.1.1.1 Work Plan as specified in GP-8;
4.1.1.2 Progress Schedule as specified in GP-9;
4.1.1.3 Copy of typical Daily Progress Report as specified in GP-10;
4.1.1.4 Hurricane and Severe Storm Plan as specified in GP-11;
4.1.1.5 Health and Safety Plan as specified in GP-12.

4.1.2 The Contractor shall provide the following information to the Engineer at the Pre-Construction Conference specified in GP-14:

4.1.2.1 Updates to all plans and schedules based on comments from the Engineer;
4.1.2.2 Potential access corridors which may be approved on an as needed basis.

4.2 During Construction: The Contractor shall deliver copies of the following documents upon request by the Engineer, or as specified in these provisions:

4.2.1 The results of all surveys and calculations as specified in the Survey Technical Specification;
4.2.2 Progress Schedule as specified in GP-9;
4.2.3 Daily Progress Report as specified in GP-10;
4.2.4 Copies of all inspection reports;
4.2.5 All Change Orders, Field Orders, Claims, Clarifications and Amendments;
4.2.6 Results of any materials testing.

4.3 Post Construction: The Contractor shall contact the Engineer by phone, a minimum of five (5) working days prior to the anticipated completion of the Work in order to schedule the final inspection and gain Acceptance by the Engineer. The following documents shall also be submitted to the Engineer:

4.3.1 Copies of all delivery slips, which shall include the source of construction materials, date of delivery, exact quantity, and size of materials delivered with each shipment to the Project Site;

SP-5 ADDRESSES FOR DOCUMENT DELIVERY

Prior to Bid Opening Date, the contractor shall send all bid questions, and/or clarifications concerning the bid specifications to the attention of Tomas Ketterer, of the Office of State Purchasing, for further processing, and response. The address and contact information is as follows

Thomas Ketterer  
Office of State Purchasing  
Post Office Box 94095  
Baton Rouge, LA 70804-9095  
Phone: (225) 342-8022  
Fax: (225) 342-8688  
Email: thomas.ketterer@la.gov

After award, the contractor shall send all Contract documentation or questions to Lonnie Harper & Associates, Inc., Lonnie Harper, P.E., 2746 LA Hwy 384, Bell City, LA 70630; Phone: (337) 905-1079; Fax: (337) 905-1076; Email: LGHENG@camtel.net

SP-6 WORK PLAN SUPPLEMENTAL

The following items shall be included in the Work Plan in addition to those required by GP-8:

6.1 Barge displacement table;

6.2 Rock staging area;

6.3 Geogrid composite layout.

SP-7 FAILURE TO COMPLETE ON TIME

For each day the Work remains incomplete beyond the Contract Time, as specified in SP-3, or Extension of Contract Time, as specified in GP-44, the sum of one-thousand and five-hundred dollars ($1,500) per calendar day will be deducted from any money due to the Contractor as liquidated damages. The Contractor and Surety shall be liable for any liquidated damages that are in excess of the amount due the Contractor.

SP-8 TRANSPORTATION

The Contractor shall provide a safe and reasonable means of transportation to and from the dock, staging area and Project Site for personnel from LDNR and the Federal Sponsor throughout the Work. The schedule and pickup location shall be arranged by LDNR and the Contractor prior to mobilization. Upon request, overnight room and board shall be provided to these personnel by the Contractor if adequate facilities are available. The Contractor shall provide a boat for the exclusive use of the Engineer and/or Inspector to tour the Project Site during the Work. The boat shall have the following features:

8.1 Capable of maintaining 25 knots (29 mph);
8.2 Six (6) passenger capacity;
8.3 Operable marine radio;
8.4 All safety equipment required by the Coast Guard for the size and type of that boat;
8.5 Draft of two feet (2') or less.

The Contractor shall supply the fuel and maintain the boat. All mechanical malfunctions of the boat shall be repaired within twelve (12) hours. In the event that the Contractor refuses, neglects, or delays compliance with the requirements of this provision, the Owner may obtain and use other necessary boats at the expense of the Contractor. The costs associated with providing the boats shall be included in the lump sum price for Bid Item No. 1.

SP-9 DREDGE DATA SHEET

DELETED

SP-10 BARGE DISPLACEMENT TABLE

The Contractor shall develop a barge displacement table for measurement and payment of rock and include it in the Work Plan. The table shall be approved by the Engineer. It shall show the name and/or number, dimensions, name of owner, and name of fabricator for each barge. The Contractor shall furnish a dimensioned drawing or sketch of each barge that is sufficient enough to verify the barge displacement table. The drawings shall show, at a minimum, the length, width, and depth of the barge, and dimensions of rake(s). All new or modified barges shall be field checked for current dimensions by the Contractor in the presence of the Engineer or the Inspector. Each table shall contain the freeboard of the barge in feet and tenths from zero (0) to the full depth of the barge and the corresponding gross displacement to the nearest ton.

Each barge shall be suitably marked with two displacement gauging lines along each side of the barge. Each gauging line shall be painted perpendicular to the edge of the barge and be no less than four (4) inches wide and one (1) foot long on both the deck and side of the barge. Barges with rakes shall have the displacement gauging lines placed at each corner of the box section between the rakes. If a barge has a box end or ends, the gauging lines shall be placed approximately four (4) feet from the box end. The freeboard will be measured at the four (4) gauging locations and the displacement determined by the use of the "CELMV Standard Barge Tables" from the average of these measurements. The displacement shall be determined before and after the barge is unloaded and the difference between these values shall be the quantity delivered.

If the barge tables were originally furnished for fresh water and the barge displacement measurements are being taken in salt water, the Contractor has the option to obtain water samples and determine the densities or unit weights of the water. Water sampling shall be performed concurrently with the measurements of the barges, both when fully loaded and empty. Water samples shall be taken by the Contractor and witnessed by the Engineer. The water samples shall be taken in accordance with ASTM D 3370 (practice A-Grade Sample) at depths of four (4) and eight (8) feet in the area where measurements are made using a "Polypro" 2000 ml. water sampler, or approved equal.

Densities shall be tested by a certified testing laboratory according to ASTM D 1429 (Method D- Hydrometer Method). After review and approval of the test results by the Engineer, the average of the densities will be used to adjust the measurements. A unit weight of 62.45 pounds/cubic foot is standard for fresh water. If the Contractor does not obtain water samples and densities, then no adjustments will be applied to the displacement table and rock quantities.
SP-11 OYSTER LEASE RESTRICTIONS

DELETED

SP-12 PERMITS, LICENSES, AND TAXES

The Contractor is informed that effective September 11, 1991, Act 1029 of the 1991 Regular Session of the Legislature exempts the state, cities, parishes, and other political subdivisions and their agencies, boards, and commissions from state and local sales and use taxes. The Contractor should be aware that materials and equipment which are affixed to, and made part of, the project such that they become immovable property and permanently incorporated into the project or work may qualify for the exemption. The Contractor shall apply for an exemption from state and local sales and use taxes as an agent of and on behalf of the Contracting Agency. The Contractor shall contact the Department of Revenue and Taxation in advance of the bid opening to obtain prior approval. The contractor is still responsible for payment of all taxes on nonexempt items necessary for the construction of the project.

SP-13 WEATHER CONDITIONS

Data on weather conditions may be obtained from the National Weather Service.

SP-14 OBSTRUCTION OF CHANNEL

The Contractor will be required to conduct the work in such a manner as to obstruct navigation and drainage as little as possible, and in case the Contractor’s plant so obstructs the channel as to make it difficult or endanger the passage of vessels, all plant shall be promptly moved on the approach of any vessel to such an extent as may be necessary to afford a practicable passage. Upon completion of the work, the Contractor shall promptly remove his plant, including ranges, buoys, and other items placed by him under the contract in navigable waters or on shore.

SP-15 OBSTRUCTION OF NAVIGABLE WATERWAYS

15.1 The Contractor shall:

15.1.1 Promptly recover and remove any material, plant, machinery, or appliance that the contractor loses, dumps, throws overboard, sinks, or misplaces, and which, in the opinion of the Engineer, may be dangerous to or obstruct navigation or drainage;

15.1.2 Give immediate notice, with description and locations of any such obstructions, to the Engineer;

15.1.3 When required by the Engineer, mark or buoy such obstructions until the same are removed.

15.2 The Engineer may:

15.2.1 Remove the obstructions by contract or otherwise should the Contractor refuse, neglect or delay compliance with the previous paragraph of this clause; and Deduct the cost of removal from any monies due or to become due to the Contractor; or Recover the cost of removal under the Contractor’s bond.
15.2.2 The Contractor’s liability for the removal of a vessel wrecked or sunk without fault or negligence is limited to that provided in Sections 15, 19, and 20 of the River and Harbor Act of March 3, 1899 (33 U.S.C. 410 et. seq.).

SP-16 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK

16.1 COMMENCEMENT

16.1.1 After contract award and a pre-construction conference, work under this contract shall commence when a notice to proceed for the contract shall be issued.

16.2 PROSECUTION

16.2.1 The work consists of providing all labor, equipment, and materials to perform maintenance on existing water control structures located on Mud Lake in Cameron Parish. The contractor’s work shall consist of purchasing, delivery, labor, equipment, and actual placement and installation of all the project features according to the Plans and Specifications.

16.2.2 The Contractor shall lay out his/her work from the Engineer’s established baselines and benchmarks, and he/she shall be responsible for all measurements in connection with the layout and control of the work. The Contractor shall furnish, at his own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to layout any part of the work.

16.3 COMPLETION

16.3.1 The Contractor shall complete the work required under the contract, including final cleanup and dressing of all work sites, within the time allowed. The contract time will begin with the first date of work or within ten (10) days after receipt of Notice to Proceed, whichever is first.

SP-17 PIPELINES

Known pipelines and utilities are present in the project area. Some of the pipelines and utilities are shown on the project plans. It is possible that some pipelines and/or utilities exists, that have not been shown. The contractor shall be on the alert for such pipelines and utilities, and shall report them immediately to the Engineer. The contractor shall notify Louisiana One Call at 1-800-272-3020, 48 hours prior to digging, spudding, or driving piling in order to locate utility lines.

SP-18 RESPONSIBILITIES OF THE CONTRACTOR CONCERNING PIPELINES.

18.1 Contractor is responsible for any environmental cleanup, repair, mitigation, damages, etc. associated with construction-related damages to wellheads, flow lines, pipelines, or other facilities.

18.2 Contractor is responsible for repair or replacement in like manner of any facilities that may be damaged or destroyed during the construction of the structures and/or appurtenances installed as part of the project.

18.3 Contractor is also responsible for the loss of income by the owner of any wellhead, flow line, pipeline, or other facility due to construction-related damages to wellheads, flow lines, pipelines, or other facilities.

18.4 In some cases, it could be necessary for the pipeline owners to shut down flow lines from active production sites before the contractor can work around such lines, if existing.
18.5 The Contractor shall be aware of the potential for such suspensions in construction activities to assure the safety of all concerned parties. As such, the project engineer has the right to place the contractor on suspend order until such shutdowns and depressurizing of lines is accomplished. The contractor shall keep accurate records of such downtime and coordinate all construction activities with pipeline owners to minimize such downtime. The contractor shall immediately inform the project engineer any time that shut downs are perceived to be excessive because of the actions of the pipeline companies.

18.6 Except where specifically noted elsewhere, there is to be no excavation or placement of any construction materials within 25 feet of any flow line, 50 feet of any pipeline, or within 50 feet of any wellhead.

SP-19 RESPONSIBILITIES OF THE CONTRACTOR

19.1 The contractor shall repair or replace, in like manner, any fences, roads, bridges, launches, trails, waterways, and other facilities which may be damaged or destroyed during the construction of the structures and/or appurtenances installed as part of the project.

19.2 All tools, equipment, and other property (excluding project features) taken upon or placed upon the land or water bottoms by the contractor shall remain the property of the contractor. All such tools, equipment, and other property shall be removed by the contractor within thirty (30) days after completion of the work.

19.3 In the event of surface alterations resulting from activities of the contractor, beyond those alterations absolutely necessary for accessing the sites and conducting project activities, the contractor is responsible for restoring the site, to the greatest extent practicable to conditions existing at commencement of contractor activities, or the contractor or its insurance carrier will be responsible for the cost of such restoration. The contractor shall be responsible for removing all litter from the project sites upon completion of authorized work.

19.4 Access to platforms and well sites by pipeline companies shall not be hindered by the contractor, his employees, or equipment.

19.5 Airboats and small outboards shall be used whenever practical to reduce the usage of marsh buggies. Established trails and access canals shall be utilized whenever possible. Marsh buggy use shall be limited to the construction limits of the project.

19.6 The contractor shall include the State of Louisiana as an additional insured party on any and all pertinent liability insurance policies maintained by the contractor during the construction of the project.

SP-20 TIDAL FLUCTUATIONS

The contractor is advised that tidal fluctuations in this area will vary due to weather and daily tides. Historical tide data can be obtained from the U.S. Army Corps of Engineers or the U.S. Geological Survey. The contractor is responsible for taking the appropriate measures to ensure that tidal fluctuations do not unduly interfere with the prosecution of the contract.

SP-21 SEQUENCE OF CONSTRUCTION EVENTS

21.1 Step Canal Excavation
21.2 Construction of ES-4 Structure
21.3 Repair of Structures
21.4 Project Site Cleanup
PART III  TECHNICAL SPECIFICATIONS

TS – 101  MOBILIZATION AND DEMOBILIZATION

101.1 **Description**: The Contractor shall provide all labor and equipment costs necessary to move personnel, equipment, supplies and incidentals to and from the Project Site, establish offices, buildings, and other facilities necessary for the Work, obtain bonds, required insurance and any other pre-construction expenses necessary to perform the Work. This section shall exclude the cost of construction materials.

101.2 **Arbitrary Mobilization by Contractor**: The Owner shall pay for only one mobilization and demobilization effort. Should the Contractor demobilize prior to completing the Work, subsequent remobilization shall be performed at no cost to the Owner.

101.3 **Ratio of Mobilization (60%) and Demobilization (40%) Effort**: Sixty percent (60%) of the mobilization/demobilization lump sum price will be paid to the Contractor upon complete mobilization to the Project Site. The remaining forty percent (40%) will be paid to the Contractor upon final acceptance of the Work and removal of all equipment and unused materials.

101.4 **Measurement and Payment**

All costs associated with mobilization and demobilization as specified in the Contract Documents shall be paid for at the contract lump sum price for BASE bid Item No.1, “Mobilization and Demobilization”.
TS – 102  APPLICABLE STANDARDS

102.1  DESCRIPTION

Throughout the contract documents, reference is made to codes and standards which establish qualities and types of workmanship and materials, which establish methods for testing and reporting on the pertinent characteristics.

Where workmanship or materials are required by these contract documents to meet or exceed the specifically named code or standard, it is the contractor’s responsibility to provide materials and workmanship, which meet or exceed the specifically named code or standard.

It is also the contractor’s responsibility, when so required by the contract documents or by written request from the engineer, to deliver to the engineer all required proof that the materials or workmanship, or both, meet or exceed the requirements of the specifically named code or standard. Such proof shall be in the form requested in writing by the engineer, and generally will be required to be copies of a certified report of tests conducted by a testing agency approved for that purpose by the engineer.

102.2  QUALITY ASSURANCE

In procuring all items used in this work, it is the contractor’s responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the items procured for use in this work meet or exceed the specified requirements.

The engineer reserves the right to reject all items incorporated into the work that fail to meet the specified minimum requirements. The engineer further reserves the right, and without prejudice to other recourse the engineer may take, to accept non-complying items subject to an adjustment in the contract amount as approved by the engineer and the owner.

Applicable standards listed in these specifications include, but are not necessarily limited to standards promulgated by the following agencies and organizations:


ACI-American Concrete Institute, Box 19150, Redford Station, Detroit, Michigan 48219.


AWS-American Welding Society, Inc., 2501 N. W. 7th Street, Miami, Florida 33125.

AWWA-American Water Work Association, Inc., 666 West Quincy Avenue, Denver, Colorado 80235.

CRSI-Concrete Reinforcing Steel Institute, 228 North LaSalle Street, Chicago, Illinois 60610.

GMA-Flat Glass Marketing Association, 3310 Harrison, Topeka, Kansas 66611.

NAAMM-The National Association of Architectural Metal Manufacturers, 1033 South Boulevard, Oak Park, Illinois 60302.

NEC-National Electric Code (see NFPA)

NEMA-National Electrical Manufacturer's Association, 155 East 44th Street, New York, New York 10017.

NFPA-National Fire Protection Association, 740 Atlantic Avenue, Boston, Massachusetts 02210

SDI-Steel Deck Institute, 135 Addison Avenue, Elmhurst, Illinois 60125.

SSPC-Steel Structures Painting Council, 4400 5th Avenue, Pittsburgh, Pennsylvania 15213.

TCA-Tile Council of America, Inc., P. O. Box 326, Princeton, New Jersey 08540.

UL-Underwriter's Laboratory, Inc., 207 East Ohio Street, Chicago, Illinois 60611.


UBC-Uniform Building Code, International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601.

Metal Building Manufacturers Association, 2130 Keith Building, Cleveland, Ohio 44115 "Recommended Design Practices Manual".


102.3 Payment

There shall be no direct payment for Applicable Standards.
TS – 103  TEMPORARY SIGNS AND BARRICADES

103.1  SCOPE

This item consist of furnishing, installing and maintaining all temporary construction barricades, suitable lights, traffic control signals, pavement markings and signs; providing watchmen; and complying with all other requirements regarding the protection of the work, workmen and safety of the public (FOR ROAD ACCESS AREAS). Signs and barricades shall conform to the details and specifications shown on the plans, the Manual of Uniform Traffic Control Devices (MUTCD) and these specifications.

Signs and barricades, and the arrangements thereof, as provided for in the MUTCD, are minimum requirements. Special conditions shall be treated as such and appropriate signs shall be furnished and installed as directed. Requirements as to proper signs and barricades, or other insures, are not negated by these specifications. In no way shall these specifications be construed as relieving the contractor of any of his responsibilities for the safety of the traveling public, for any liability in connection therewith, or compliance with State and Local laws or ordinances.

103.2  Measurement and Payment

All costs associated with Temporary Signs and Barricades shall be paid for at the contract lump sum price for BASE bid Item No.1, “Mobilization and Demobilization”.
TS – 104  QUALITY CONTROL

104.1  SCOPE

The work shall consist of developing, implementing, and maintaining a quality control system to ensure that the specified quality is achieved for all materials and work performed.

104.2  EQUIPMENT AND MATERIALS

Equipment and materials used for quality control shall be of the quality and condition required to meet the test specifications cited in the contract. Testing equipment shall be properly adjusted and calibrated at the start of operations and the calibration maintained at the frequency specified. Records of equipment calibration tests shall be available to the Engineer at all times. Equipment shall be operated and maintained by qualified operators, as prescribed in the manufacturer's operating instructions and the references specified. All equipment and materials used in performing quality control testing shall be as prescribed by the test standards referenced in the contract. All equipment and materials shall be handled and operated in a safe and proper manner and shall comply with all applicable regulations pertaining to their use, operation, handling, storage, and transportation.

104.3  QUALITY CONTROL SYSTEM

The Contractor shall develop, implement and maintain a system of quality control to provide the specified material testing and verification of material quality prior to use. The system activities shall include procedures to verify adequacy of completed work, initiate corrective action to be taken and document the final results. The identification of the quality control personnel and their duties and authorities shall be submitted to the Owner in writing within 15 calendar days after notice of award. The Contractor shall develop, implement and maintain a system adequate to achieve the specified quality of all work performed, material incorporated and equipment furnished prior to use. The system established shall be documented in a written plan developed by the Contractor and approved by the Owner. The system activities shall include the material testing and inspection needed to verify the adequacy of completed work and procedures to be followed when corrective action is required. Daily records to substantiate the conduct of the system shall be maintained by the Contractor. The quality control plan shall cover all aspects of quality control and shall address, as a minimum, all specified testing and inspection requirements. The plan provided shall be consistent with the planned performance in the Contractor's approved construction schedule. The plan shall identify the Contractor's on-site quality control manager and provide an organizational listing of all quality control personnel and their specific duties. The written plan shall be submitted to the Owner within 15 calendar days after notice of award. The Contractor shall not proceed with any construction activity which requires inspection until the written plan is approved by the Owner. The quality control system shall include, but not be limited to, a rigorous examination of construction materials, processes and operation, including testing of materials and examination of manufacturer's certifications as required, to verify that work meets contract requirements and is performed in a competent manner.

104.4  QUALITY CONTROL PERSONNEL

Quality control activities shall be accomplished by competent personnel. A competent person is: one who is experienced and capable of identifying, evaluating, and documenting that materials and processes being used will result in work that complies with the contract; and, who has authority to take prompt action to remove, replace, or correct such work or products not in compliance. Off-site testing laboratories shall be certified or inspected by a nationally recognized entity. The Contractor shall submit to the Owner, for approval, the names, qualifications, authorities, certifications, and availability of the competent personnel who will perform
104.5 **Method I**

Quality control activities shall be accomplished by competent personnel who are separate and apart from line supervision and who report directly to management. A competent person is: one who is experienced and capable of identifying, evaluating, and documenting that materials and processes being used will result in work that complies with the contract; and, who has authorization to take prompt action to remove replace, or correct such work or products not in compliance. Off-site testing laboratories shall be certified or inspected by a nationally recognized entity.

104.6 **Method 2**

The Contractor shall submit to the Owner, for approval, the names, qualifications, authorities, certifications, and availability of the competent personnel who will perform the quality control activities. The Contractor shall meet with the Owner prior to the beginning of any work and discuss the Contractor’s quality control system. The Owner and the Contractor shall develop a mutual understanding regarding the quality control system.

104.7 **RECORDS**

The Contractor’s quality control records shall document both acceptable and deficient features of the work and corrective actions taken. All records shall be: on forms approved by the Owner; legible; and dated and signed by the competent person creating the record. Unless otherwise specified in this specification, records shall include:

- Documentation of shop drawings including date submitted to and date approved by the Owner, results of examinations, any need for changes or modifications, manufacturer’s recommendations and certifications, if any, and signature of the authorized examiner.
- Documentation of material delivered including quantity, storage location, and results of quality control examinations and tests.
- Type, number, date, time, and name of individual performing of quality control activities.
- The material or item inspected and tested, the location and extent of such material or item, and a description of conditions observed and test results obtained during the quality control activity.
- The determination that the material or item met the contract provisions and documentation that the Engineer was notified.
- For deficient work the nature of the defects, specifications not met, etc., corrective action taken and results of quality control activities on the corrected material or item.

104.8 **REPORTING RESULTS**

The results of Contractor quality control inspections and tests shall be communicated to the Engineer immediately upon completion of the inspection or test. Unless otherwise specified in these specifications, the original plus one copy of all records, inspections, and tests performed and material testing reports shall be submitted to the Engineer within one working day of completion. The original plus one copy of documentation of materials delivered shall be submitted to the Engineer prior to the use of the material.

104.9 **ACCESS**
The Owner and the Engineer shall be given free access to all testing equipment, facilities, sites and related records for the duration of the contract.

104.10 PAYMENT

There shall be no direct payment for Quality Control.
TS – 105  POLLUTION CONTROL

105.1  CONSTRUCTION SPECIFICATION

The work shall consist of installing measures or performing work to control erosion and minimize the production of sediment and other pollutants to water and air from construction activities.

The contractor shall prepare and implement a SWPPP (storm water pollution prevention plan) prior to the commencement of construction activities. Notice of Intent and Notice of Termination shall be submitted by the contractor to the State of Louisiana, Department of Environmental Quality prior to the commencement of construction and after completion of the project. (NOT APPLICABLE)

Materials: All materials furnished shall meet the requirements listed in this specification.

105.2  EROSION AND SEDIMENT CONTROL MEASURES AND WORKS

The measures and works shall include, but are not limited to, the following:

Staging of Earthwork Activities. The excavation and moving of soil materials shall be scheduled to minimize the size of areas disturbed and unprotected from erosion for the shortest reasonable time.

All spoil embankments and disposal areas impacted with fresh spoil during construction of this project shall be seeded by the contractor to control erosion and slides. The contractor will be responsible for contacting the Natural Resources Conservation Service to determine the type, amount, and method of seeding appropriate for the project location and time of year.

Diversion channels used to discharge water from work areas shall be removed and the area restored to its near original condition when they are no longer required.

Conduct operations in such a way to cause the least amount of turbidity and sediment dispersion into adjacent waters.

105.3  CHEMICAL POLLUTION

All chemical pollutants such as drained lubricating water/oil, grease, soaps, transmission fluid etc. shall be stored in sealed containers and removed from the site. The contractor shall dispose of these containments in an approved facility. All paints and hazardous materials shall be kept in the original containers and tightly sealed with the manufacturer’s label attached. These must be properly stored when not in use. They shall also be stored in a neat orderly manner in their original containers. Disposal of surplus materials shall be in accordance with the manufacturer’s or State and Local regulations and recommended methods.

Containers shall be empty before disposal. Petroleum products such as fuels and lubricants will be stored in tightly sealed containers that are clearly labeled. The storage and dispensing of all petroleum products will be in accordance with part 1926.152 of the OSHA Construction Industry Safety and Health Standards. All spills will be cleaned up on the same workday of the spill occurrence or whenever discovered.

Soils contaminated with petroleum products will be removed from the site and disposed of in accordance with State and Local regulations.

All onsite vehicles and equipment shall be monitored for leaks and receive regular preventive maintenance to reduce the chance for leakage. Leaks shall be repaired as soon as they are identified. Contractor will be re-
sponsible for proper disposal and clean up of all leakage.

105.4 AIR POLLUTION

Contractor shall adhere to all federal, state & local laws concerning air pollution.

Measures should be undertaken to prevent the start and spreading of wild fires that are related to project activities. The contractor shall initiate no burning.

All public or private haul roads used during construction of the project shall be sprinkled as required to fully suppress dust.

105.5 PAYMENT

There shall be no direct payment for Pollution Control.
TS – 106  WARNING SIGNS

106.1  SCOPE

This item shall consist of furnishing all materials and labor necessary to provide Warning Signs on all specified structures, all in accordance with these specifications, as shown on the plans or directed by the engineer.

106.2  MATERIALS

All Signs, shall be constructed using 3/16” Sheet Aluminum, to be sized specified within plans associated with this project. All signs shall have a white reflective background, a fluorescent orange border, and black letters. All boarders and letters shall be sized as specified within plans associated with this project.

106.3  PLACEMENT GUIDELINES

SURFACE PREPARATION: All surfaces in contact with the warning signs shall be free of debris, waste materials and other contaminants. Surface must be clean and dry before installation.

METHODS OF INSTALLATION: All specified signs shall be field drilled and installed onto pre-determined mounting structures specified in plans associated with this project. Signs being installed onto Steel or aluminum structures a neoprene washer shall be placed between the structure and sign.

POST-PLACEMENT PROCEDURES: Inspect finished installation and make adjustments as necessary to conform to Project plans and specification. Normal maintenance involves inspection of the installation periodically to remove any debris and re-secure any screws or bolts that may have become loose or replace any signs that may have become too deteriorated to be seen or legible.

106.4  MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included in at the contract lump sum price for ADDITIVE ALTERNATE bid item 24, “Repair Structure No. 13”.
TS – 301  CHANNEL EXCAVATION

301.1  SCOPE

This item shall consist of channel excavation utilizing a bucket dredge, all in accordance with these specifications, as shown on the plans, or directed by the engineer.

301.2  EXCAVATION TOLERANCES

In no place, along the reach of the excavated channel, shall the cross-section be less than that shown by the net cross-section lines on the drawings. The bank and bottom surfaces shall be left reasonably smooth, so that there are no abrupt humps or hollows in the surfaces. Excessive surface roughness shall be dressed out as directed by the engineer.

301.3  UNDERCUTTING

In case the cross-section of the excavated channel is less than that shown by the net cross-section lines on the drawing, payment will be withheld for the undercut section including a distance of twenty-five (25) feet on each side of the undercut section until such time as the contractor excavates the undercut section or sections to the designed cross-section area. The amount withheld shall be based on an average cost per foot derived by dividing the lump sum bid amount by the total length of the channel to be excavated.

301.4  CLEARING

Where the channel is to be excavated from one side only, the minimum area to be cleared shall be from the outer or landside of the channel on the opposite side to the outer toe of the spoil bank on the side of the channel to which is to be excavated. Where the channel is being excavated from both sides, the minimum area to be cleared shall be from the outer toe of the spoil bank on one side of the channel to the outer toe of the spoil bank on the other side of the channel. Clearing shall consist of completely removing all trees, brush, vines, logs, vegetation and trash. Trees, brush, vines, and vegetation within the area to be cleared shall be cut down flush with the ground. All trees, brush, vines, logs, vegetation, trash and other debris shall be disposed of as directed by the engineer by one of the following methods:

By piling and burning to a state of loose ashes; material that will not burn shall be buried as directed by the engineer; the top elevation of any material which is buried shall be not less than two feet below normal ground elevation and shall have a minimum cover of two feet of earth material. The time, location, and manner of burning of the cleared material shall be subject to the approval of the engineer. Burning operations shall be subject to all public laws governing such operation. The contractor shall be responsible for any damage to life and/or property caused by fires resulting from his operations.

By covering with earth spoil.

By piling behind spoil banks if permission is obtained from landowner.

By removal from the vicinity of the job site and disposal in a manner acceptable to the engineer.

Trees which do not interfere with normal construction operations in the opinion of the engineer, may be left standing if requested by the property owner prior to the commencement of work on his property. The life and condition of the timber left standing will be the responsibility of the property owner.
301.5 DITCH INLETS

Inlets of ditches, tributary drains or canals entering the Channel to be excavated shall be recessed on the same grade as the bottom grade of the main ditch for a distance of at least twenty-five (25) feet, unless a greater distance is specified by the engineer. All inlets shall have a minimum bottom width of six (6) feet and side slopes of one and one-half horizontal to one vertical, unless greater bottom widths and flatter side slopes are specified by the engineer. Payment for each inlet excavated will be made at the contract price for "Channel Excavation."

301.6 DISPOSAL OF EXCAVATED MATERIAL

Excavated material shall be placed in designated spoil disposal areas. No material may be placed in wetland areas where little or no spoil bank exists. Placement of material on spoil embankments shall be performed in accordance with the detailed specification entitled “Spoil Embankment Construction “ contained herein.

No extra compensation shall be paid the contractor for changing the side of spoil disposal if required to satisfy permit requirements. Existing gaps shall be maintained in spoil banks. The cost of maintaining gaps in existing spoil banks shall be included in the price bid for channel excavation. Gaps shall also be left at all ditches, sloughs, drains, canals, or streams and at bridges, roads, or at such places and to such widths as may be directed by the engineer. The end slopes of the spoil banks at all gaps shall not be steeper than 1 on 2.

Adjacent to the channel, the side slopes of the spoil bank shall not be steeper than 1 on 2.

No material shall be deposited in or allowed to enter any ditch or other watercourse or gaps in spoil banks.

The width of berms shall be as shown on the plans. Berms shall be left in a clean and neat condition.

The contractor shall, to the maximum extent practicable, confine all dredged material disposal to existing dredged material embankments.

Contractor is responsible for contacting the Louisiana One Call system at 1-800-272-3020 to coordinate potential work conflicts with existing above-ground or underground facilities in the area. Adequate time to effect the necessary relocation of these facilities shall be allowed prior to construction to minimize disruption of services.

Contractor will be required to maintain existing waterways adjacent to the channel to be excavated in their pre-project condition. The Owner will flag existing channels prior to commencement of dredging activity.

301.7 MEASUREMENT AND PAYMENT

All costs associated with channel excavation on the project site specified in the contract documents shall be paid for at the unit price under BASE bid Item No. 2; “Step Canal Debris and Silt Removal”.

49 Revision Date: 4/04/11
401.1 SCOPE

This item shall consist of construction of a spoil embankment site, all in accordance with these specifications, as shown on the plans, or directed by the engineer.

401.2 CLEARING (BURNING NOT APPLICABLE)

Prior to placement of spoil in any area, contractor shall completely remove all trees, brush, vines, logs, vegetation and trash. Trees, brush, vines, and vegetation within the area to be cleared shall be cut down flush with the ground. All trees, brush, vines, logs, vegetation, trash and other debris shall be disposed of as directed by the engineer by one of the following methods:

- By piling and burning to a state of loose ashes; material which will not burn shall be buried as directed by the engineer; the top elevation of any material which is buried shall be not less than two feet below normal ground elevation and shall have a minimum cover of two feet of earth material. The time, location, and manner of burning of the cleared material shall be subject to the approval of the engineer. Burning operations shall be subject to all public laws governing such operation. The contractor shall be responsible for any damage to life and/or property caused by fires resulting from his operations. **(NO BURNING ALLOWED WITH THIS PROJECT)**

- By covering with earth spoil.

- By piling behind spoil banks if permission is obtained from landowner.

- By removal from the vicinity of the job site and disposal in a manner acceptable to the engineer.

Trees which do not interfere with normal construction operations in the opinion of the engineer, may be left standing if requested by the property owner prior to the commencement of work on his property. The life and condition of the timber left standing will be the responsibility of the property owner.

401.3 SPOIL EMBANKMENT TOLERANCES

In no place along the Spoil Embankment system, shall the cross-section be less than that shown by the net cross-section lines on the drawings. Contractor may be required to over-build the embankment if necessary to satisfy yardage requirements of the contract. The embankment shall be left reasonably smooth, so that there are no abrupt humps or hollows in the surfaces. Excessive surface roughness shall be dressed out as directed by the engineer. Since the restoration will be accomplished utilizing marine-based equipment, bucket-dressing will not be required.

The Contractor shall remove spoil from the water bottom of adjacent borrow areas, as specified on the drawings, unless otherwise directed by the engineer. The berm area, as specified on the drawings, shall be maintained and no spoil shall be removed from the berm area.

401.4 SLIDES

In the case of slides of material which are determined by the engineer to be due to no fault of the contractor, payment shall be made at the contract price for Spoil Embankment Construction for the removal of all such material which is in excess of 15% of the net yardage per station at the location of the slide. The net yardage per station shall be determined by measurement of material, in its original position, using the method of av-
The contractor will be required to remove and replace any fence (without extra compensation, unless otherwise specified on the plans and contract) when in the opinion of the engineer such removal and replacement is necessary for the proper execution of work. The fence shall be replaced in as good or better condition, and in those cases where the fencing was attached to standing trees that have been removed or the original post is not reusable, the contractor shall replace in kind or with not less than 3-1/2 inch treated timber line posts and not less than 6-inch treated corner posts as directed by the engineer.

All fences shall be securely braced and tightly stretched. Contractors bidding on the project shall be responsible for determining the actual linear feet of fencing that may be required to be removed and replaced for the proper execution of the work in preparing their bid prices. No separate payment shall be made for removing and replacing of fences, cost of same shall be included in the unit price bid for the item “Spoil Embankment Construction”, unless otherwise specified on the plans and contract.

The contractor shall be responsible for notifying all public utilities or other interested parties to make necessary adjustment of utility structures or appurtenances affected by the work.

The contractor will be responsible for any damages done by him to any water-control or utility structure owned or controlled by any agency, public or private. He shall perform and carry on the work so as not to interfere with or damage structures mentioned herein or shown on the plans or discovered during construction, which are to be left within the limits of the work.

Contractor shall be responsible for the removal of debris from the project site. Any sticks, pipes, metals, plastics, refuse or discarded materials which are dredged, uncovered, or discovered at any point while performing any task associated with this project, shall be removed, and disposed, thru approved methods by the contractor. Disposal must be at an approved waste site, and trucks or trailers used for transporting materials for disposal shall be in good, clean, safe operating condition. Loads shall be covered and secured during transit at all times. There will not be any additional payment for debris removal and disposal.

All costs associated with spoil embankment construction on the project site specified in the contract documents shall be paid for at the unit price under BASE bid Item No. 2, “Step Canal Debris and Silt Removal”.
TS – 610  GEOTEXTILE FILTER CLOTH

610.1  GENERAL

Plastic filter cloth shall consist of linear polypropylene or polyethylene monofilament yarn woven in sheets of 20 to 30 mils thickness. The lengths and widths of sheets may be varied to suit the manufacturer’s standards. Seams meeting strength requirements of the plastic filter cloth will be permitted. Additional yarn or other material or steel wire may be woven into the cloth to increase overall strength.

The plastic filter cloth shall be approved by the engineer, and the same product shall be used throughout the project.

610.2  REQUIREMENTS

Plastic filter cloth shall conform to the following requirements:

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirements</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>20 – 30 mils</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>5 – 10 oz/yd²</td>
<td>ASTM D1910</td>
</tr>
<tr>
<td>Open Area</td>
<td>20 – 30%</td>
<td></td>
</tr>
<tr>
<td>Equivalent Opening Size (US Sieve)</td>
<td>45 - 35</td>
<td></td>
</tr>
<tr>
<td>Tensile Strength</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warp</td>
<td>200 lbs/in</td>
<td>ASTM D1682</td>
</tr>
<tr>
<td>Fill</td>
<td>200 lbs/in</td>
<td>ASTM D1682</td>
</tr>
<tr>
<td>Burst Strength</td>
<td>500 psi</td>
<td></td>
</tr>
<tr>
<td>Abrasion Resistance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stoll (2# head, 3 psi air, 0 grit)</td>
<td>9000 cycles to failure</td>
<td>ASTM D1175</td>
</tr>
<tr>
<td>Taber (CS-17 abrasive wheels, 1000 grams load per wheel)</td>
<td>4500 cycles to failure</td>
<td>ASTM D1175</td>
</tr>
</tbody>
</table>

Fibers of other composition or steel wire may be woven into the cloth for reinforcing purposes. The durability of these fibers must be equivalent to that of the plastic filter cloth.

610.3  INSTALLATION

The geo-textile filter cloth shall be installed by “tacking down” the cloth using randomly placed stones to ensure that the cloth does not shift out of position during backfill operations. Laps in joining pieces of material shall be a minimum of 2 feet in width. Geo-textile filter cloth shall also extend a minimum of 2 feet beyond the placement limits of the Rip-Rap. The square yardage of geotextile cloth in the Structure Material List on sheet 2 of the Plans does not make an allowance for these overlaps and extensions.
610.4 PERMEABILITY AND FILTRATION

A certified copy of permeability and filtration tests from a qualified laboratory showing the performance of this filter with fine sands and water, citing both particle retention and permeability, shall be included with a sample of the material. All testing methods can be found and must comply with Section 1019 of the 2006 D.O.T.D. Louisiana Standard Specifications for Roads and Bridges.

610.5 MEASUREMENT AND PAYMENT

All costs associated with Geotextile filter cloth on the project site specified in the contract documents shall be paid for at the unit price under BASE bid Item No. 11, "Replace Structure No. 4".
TS – 702  ROCK RIP-RAP

702.1  SCOPE

This item shall consist of placement of rock riprap all in accordance with these specifications, as shown on the plans, or directed by the engineer.

702.2  QUALITY

Individual rock fragments shall be dense, sound and free from cracks, seams and other defects conducive to accelerated weathering. The rock fragments shall be angular to sub-rounded in shape. The least dimension of an individual rock fragment shall not be less than one-third the greatest dimension of the fragment. Except as provided below, the rock shall have the following properties:

- Bulk specific gravity (saturated surface-dry basis): not less than 2.5
- Absorption: not more than 2 percent
- Soundness: weight loss in 5 cycles not more than 10 percent when sodium sulfate is used or 15 percent when magnesium sulfate is used.

The bulk specific gravity and absorption shall be determined by ASTM Method C127. The test for soundness shall be performed by ASTM Method C88 for coarse aggregate modified as follows:

- The test sample shall not be separated into fractions. It shall consist of 5000 ± 300 grams of rock fragments, reasonably uniform in size and shape and weighing approximately 100 grams each, obtained by breaking the rock and selecting fragments of the required size.

- After the sample has been dried, following the completion of the final test cycle and washing to remove the sodium sulfate or magnesium sulfate, the loss of weight shall be determined by subtracting from the original weight of the sample, the final weight of all fragments, which have not been broken into three or more pieces.

- The report shall show the percentage loss of weight and the results of the qualitative examination. Rock that fails to meet the requirements stated in a, b, and c above, may be accepted only if similar rock from the same source has been demonstrated to be sound after 5 years or more of service under conditions of weather, wetting, and drying.

702.3  GRADING

The rock shall conform to the specified grading limits after it has been placed in the riprap.

<table>
<thead>
<tr>
<th>RIP-RAP CLASS</th>
<th>STONE SIZE, LB</th>
<th>SPHERICAL DIAMETER FT²</th>
<th>PERCENT OF STONE SMALLER THAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 LB DOTD SPEC.</td>
<td>140</td>
<td>1.17</td>
<td>100</td>
</tr>
<tr>
<td>60</td>
<td>0.90</td>
<td>42-100</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.72</td>
<td>15-50</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.50</td>
<td>0-15</td>
<td></td>
</tr>
</tbody>
</table>
702.4 EQUIPMENT- PLACED ROCK RIPRAP

The rock riprap shall be placed by water-based equipment on the surfaces and to the depths specified. The rock riprap shall be constructed to the full course thickness in one operation and in such a manner as to avoid serious displacement of the underlying materials. The rock rip-rap shall be delivered and placed in such a manner that will insure that the rip-rap in place shall be reasonably homogenous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks and spalls filling the voids between larger rocks.

Rock riprap shall be placed in a manner to prevent damage to surrounding property and adjacent structures. Hand placing will be required to the extent necessary to prevent damage to the private property nearby.

702.5 MEASUREMENT AND PAYMENT

Measurement and payment for this item shall be under BASE bid Items 4, 6, 8, 10, and 12 as well as ADDITIVE ALTERNATE bid items 18, 20, and 22. Payment shall be according to the amount of Tons. For items of work for which specific unit prices are established in the contract, the volume for each type of rock riprap will be measured by truck load and barge draft tickets delivered to the project engineer.
931.1 **SCOPE**

This item shall consist of furnishing and installation of aluminum gravity drainage structures all in accordance with these specifications, as shown on the plans, or directed by the engineer.

931.2 **SHOP DRAWINGS**

The contractor shall furnish shop drawings of the complete drainage structure as outlined herein and on the plans. Shop drawings shall be submitted for approval in six (6) copies, two (2) copies of which will be returned, approved or corrected. Approval of shop drawings by the engineers shall not relieve the contractor or subcontractor from responsibility for errors or omission therein, and the contractor shall be fully responsible for furnishing materials, devices, and layouts of proper dimensions, size, quantity, quality, and performance characteristics to efficiently perform the requirements and intent of the contract documents.

All dimensions shown on the project drawings associated with alterations of existing structures shall be considered preliminary in nature. Contractor will be required to field verify all dimensions associated with existing structures both above and below the waterline prior to fabrication.

931.3 **SUMMARY OF CONSTRUCTION TASKS**

Contractor shall provide all materials and labor required to furnish and install gravity drainage structure ES-4 in accordance with project plans and specifications:

**ES-4** – Existing structure is to be abandoned in place with sheet piles driven thru the existing culverts to block existing flow. The new structure shall consist of one (1) five barrel water control structure consisting of five (5) 48” diameter x 50 foot long corrugated aluminum pipes, each with flap gate and variable crest weir. Each weir inlet has a total of one (1) 42” x 60” aluminum stop log gate, four (4) 1-5/8” x 4” x 60” long aluminum stop logs, and two (2) 1-1/2” x 1-1/2” x 1/8” thick aluminum locking devices. Contractor shall also construct a Marine Vessel Barrier, and clean out outlet ditch.

931.4 **MATERIALS FOR DRAINAGE STRUCTURE**

All metal products associated with the structures, including flapgate assemblies, variable crest weirs, lifting devices, etc, will be constructed using alloy number 3004-H34, and T6061-T6 aluminum. The stainless steel products will be ANSI type 316.

All bars, tees, angles, channels, I-beams, etc. shall be made of alloy # T6061-T6. The aluminum floor grating shall be made of alloy # T6061-T6 and consist of 1-1/4” x 3/16” bars in accordance with Type 19S-G-4 as manufactured by Ametco, or approved equal. Floor grating shall be securely welded to the half-round risers.

All aluminum structural plate used in the fabrication of the back-flow gates shall be fabricated from alloy #5086-H32 plate.

All extruded aluminum members shall be made of alloy #T6061-T6.

Welding wire filler metal ER5356 shall be used to weld aluminum corrugated metal pipe alloy #3004-H34 pipe and 5086-H32 pipe. Stainless steel bolts, nuts and washers of alloy ANSI type 316 shall be used in the fabrication of all aluminum structures. All welding must be performed in accordance with detailed specification contained in these specification documents entitled “WELDING”.

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**Revision Date:** 4/04/11
All miscellaneous hardware, fasteners and flap gate lifting systems associated with feature ES-4, not specified to be constructed of aluminum or stainless steel, shall be fabricated in accordance with approved shop drawings utilizing A36 carbon steel. All steel surfaces shall be coated after fabrication using the hot dipped galvanized process with a minimum coating thickness of 4 mils, conforming to ASTM A 123. All welding must be performed in accordance with detailed specification contained in these specification documents entitled “WELDING”.

Direct contact between the surfaces of carbon steel and aluminum elements shall be prohibited in this project.

Neoprene washers will be placed between the contact points of any aluminum and carbon steel products.

Sheet pile walls shall be coated in accordance with the “Coal Tar Epoxy” section of the project specifications.

### 931.5 SURFACE PREPARATION

Aluminum and carbon steel sheet and plate to be welded should be carefully stored and handled. If outdoor storage is necessary, plate should be covered and stored on edge to prevent staining.

Care should be taken to remove all oil, hydrocarbons and loose particles from all pieces to be welded that have been sheared, sawed or machined. To reduce the possibility of porosity, and dross in welds, cleanliness of the welding surfaces cannot be overemphasized.

Most oil, grease, moisture and dust can be removed from welding surfaces by wiping with a mild alkaline solution or hydrocarbon solvent such as acetone or alcohol.

Most oxides can be removed from welding surfaces by dipping edges in strong alkaline solution, then water, then nitric acid, then finishing with a water rinse.

The common mechanical cleaning methods used on aluminum plates are wire brushing, scraping, filing and grinding.

Welding shall be done by the inert-gas metal-arc (MIG) process. The MIG-unit shall have a power source of 300 amperes 30 volt DC power, a control unit regulator and water-cooled gun. Steps should be taken to hold porosity and dross in welds to an absolute minimum. Welding must be performed in accordance with Detailed Specification entitled “WELDING”.

### 931.6 HANDLING

Contractor may provide lifting eyes for handling the fabricated units, with the approval of the Engineer for position and type. Nylon slings may be used, but in no case will cable slings be permitted to come in contact with units, other than by a lifting eye. During shipment units should be properly blocked so as to avoid placing undue stress at any point.

### 931.7 INSTALLATION PROCEDURE

The contractor will be responsible for:

Dewatering the site. The contractor shall dewater the site in accordance with the Detailed Specification entitled “DEWATERING”.

Removal of earthen material as necessary for placement of structures and stockpiling same adjacent to project site on the designated spoil disposal sites. This work shall be performed in accordance with the Detailed Spec-
ification contained in these specification documents entitled:

“STRUCTURAL EXCAVATION AND BACKFILL”. The contractor shall use caution while excavating in the vicinity of all existing water control structures.

Installation of water control structures shall be as per plans and specifications. Backfilling the excavated areas, and restoration of the site to pre-project conditions shall be performed in accordance with the Detailed Specification contained in these specification documents entitled “STRUCTURAL EXCAVATION AND BACKFILL”.

Placement of riprap shall be as shown on the plans and contained herein. This work shall be performed in accordance with the Detailed Specification contained in these specification documents entitled “ROCK RIP-RAP.”

Contractor will be responsible for damage to existing structures that are damaged during construction, maintenance, or cleaning.

931.8 PADLOCKS

Padlocks to secure the locking pins in the stop log assembly of the water control structure shall be provided by the contractor. The number of padlocks to be provided is included in the “Proposal” and “Special Provisions” sections of these project specifications. The padlocks are to be Model 6830KA as manufactured by Master Lock Manufacturing, or approved equal. Locks are to be of high security type, with corrosion resistant laminated brass cases and four-pin tumbler locking mechanisms. All locks are to be keyed alike.

931.9 TIMBER PRODUCTS

The timber support system associated with the structures is readily available and commonly used in the project area. All timber products, lumber, and piling, excluding timber decking on walkways, will be treated with Chromated Copper Arsenate injected to refusal, 2.5 lbs of CCA per cubic foot of timber, in accordance with APWA standards for marine treatment. This type of treatment will be used to protect the timber from deterioration. That portion of the timber support system exposed to the atmosphere will receive an additional coating of Northstar 21 Poly Coating, or approved equal, to increase its ability to withstand weathering. All timber decking on walkways shall receive and retain, unless the solution has been injected to refusal, 0.80 lbs of CCA per cubic foot as specified by the APWA. All timber products will be of Southern Yellow Pine.

Unless otherwise specified, all lumber and timber used in the construction of the project shall be Southern Yellow Pine.

Lumber and timber shall not be used in exposed structures without preservative treatment, unless otherwise specified.

Treated timber shall be carefully handled without dropping, breaking of outer fibers, bruising or penetrating the surface with tools. It shall be handled with rope slings. Cant hooks, peaveys, spikes or hooks shall not be used.

Exposed pile heads, after cutting shall be treated to prevent decay. Immediately after making final cut-off on pile heads, the cut area shall be given two liberal applications of preservative followed by a heavy application of coal-tar pitch or other approved sealer. The heads of treated timber piles where the cut-off is exposed shall be protected by a rigid waterproof pile cap capable of withstanding load impacts and penetration as specified in the project plans.

The sawn surface shall be thoroughly brush coated with Karnak No. 83 fibrated damp proofing, then covered with two 14" X 14" layers of heavy canvas (14 oz. min. per square yard) saturated with Karnak No. 83 fibrated dampproofing and capped with ¼” thick aluminum pile covers as detailed on sheet 17 in the Plans.
All lumber and timber shall be accurately cut and framed to a close fit in such manner that the joints will have even bearing over the entire contact surfaces. No shimming will be permitted in making joints nor will open joints be accepted.

All timber products shall conform to the specifications outlined in the “Timber and Timber Preservatives” and the “Treated and Untreated Timber” sections of the project specifications.

931.10 MEASUREMENT AND PAYMENT

All costs associated with Water Control Structure Construction on the project site specified in the contract documents shall be paid for at the unit price under BASE bid Item No. 11, “Replace Structure No. 4”.

932.1 SCOPE

This item shall consist of performing maintenance tasks on existing water control structures all in accordance with these specifications, as shown on the plans, or as directed by the project engineer.

932.2 SHOP DRAWINGS

The contractor shall furnish shop drawings of all the assemblies requiring fabrication as outlined herein, and on the plans. Shop drawings shall be submitted for approval in six (6) copies, two (2) copies of which will be returned, approved or corrected. Approval of shop drawings by the owner’s representative shall not relieve the contractor or subcontractor from responsibility for errors or omission therein, and the contractor shall be fully responsible for furnishing materials, devices, and layouts of proper dimensions, size, quantity, quality, and performance characteristics to efficiently perform the requirements and intent of the contract documents.

932.3 DESCRIPTION OF STRUCTURES

The structures consist of the following:

ES-1 has one (1) 36” culvert with stop logs and flap gates.
ES-3 has one (1) 36” culvert with stop logs and flap gates.
ES-4 has five (5) 48” culverts with stop logs and flap gates.
ES-5 has one (1) 36” culvert with stop logs and flap gates.
ES-6 has two (2) 36” culverts with stop logs and a 4” fish slot.
ES-7 has two (2) 36” culverts with stop logs and a 4” fish slot.
ES-8 has two (2) 36” culverts with stop logs and a 4” fish slot.
ES-9a has one (1) 36” culvert with stop logs and flap gates.
ES-9b has one (1) 48” culvert with sluice gate and flap gate.
ES-11 has one (1) 36” culvert with stop logs and flap gates.
ES-13 has a sheet pile bulkhead with two (2) variable crested weirs and flap gates.

932.4 MAINTENANCE FOR STRUCTURES

STRUCTURE ES-6

Replace pile caps four (4)
Remove debris from within, and from both ends of all C.A.P.
Replace four (4) padlocks on structure with like keyed lock.

Install one-hundred fourteen (114) tons of 30# class rock along the eroded bank lines adjacent to the existing levee.

**STRUCTURE ES-7**

Replace four (4) pile caps.

Remove debris from within, and from both ends of all C.A.P.

Replace four (4) padlocks on structure with like keyed lock.

Install one hundred eight (108) tons of 30# class rock along the eroded bank lines adjacent to the existing levee.

**STRUCTURE ES-8**

Replace four (4) pile caps.

Remove debris from within, and from both ends of all C.A.P.

Replace four (4) padlocks on structure with like keyed lock.

Install sixty-six (66) tons of 30# class rock along the eroded bank lines adjacent to the existing levee.

**STRUCTURE ES-9A**

Replace two (2) pile caps.

Remove debris from within, and from both ends of all C.A.P.

Replace three (3) padlocks on structure with like keyed lock.

Replace the handle on the flap gate.

**STRUCTURE ES-9B**

Replace four (4) pile caps.

Remove debris from within, and from both ends of all C.A.P.

Replace three (3) padlocks on structure with like keyed lock.

Replace the handle on the flap gate.

Refurnish the gear box on the sluice gate.

Install Stem Cover

Replace Seat Flange on Flap Gate

**STRUCTURE ES-11**
Replace two (2) pile caps.

Remove debris from within, and from both ends of all C.A.P.

Replace three (3) padlocks on structure with like keyed lock.

Install two-hundred twenty-eight (228) tons of 30# class rock along the eroded bank lines adjacent to the existing levee.

Extend timber boardwalk 10’-0” from structure to bank.

**STRUCTURE ES-5**

Replace two (2) pile caps.

Remove debris from within, and from both ends of all C.A.P.

Replace three (3) padlocks on structure with like keyed lock.

Install three-hundred (300) tons of 30# class rock along the eroded bank lines adjacent to the existing levee.

Extend timber boardwalk 16’-0” from structure to bank.

**STRUCTURE ES-3**

Remove debris from within, and from both ends of all C.A.P.

Replace three (3) padlocks on structure with like keyed lock.

Install three hundred seventy nine (379) tons of 30# class rock along the eroded bank lines adjacent to the existing levee.

Replace timber boardwalks on both sides of the structure 13’-0” from structure to bank on the north side and 12’-0” from structure to bank on the south side.

**STRUCTURE ES-1**

Replace two (2) metal pile caps.

Remove debris from within, and from both ends of all C.A.P.

Replace three (3) padlocks on structure with like keyed lock.

Install three hundred (300) tons of 30# class rock along the eroded bank lines adjacent to the existing levee.

Extend timber boardwalk 8’-0” from structure to bank.

Replace grating on the inlet side of the structure.

**STRUCTURE ES-13**
Replace twelve (12) pile caps.

Remove debris from within, and from both ends of all C.A.P.

Replace four (4) padlocks on structure with like keyed lock.

Replace two (2) warning signs.

Replace one hundred seventy five (175) linear feet of sheet pile wall cap.

932.5 MATERIALS FOR DRAINAGE STRUCTURE

All bars, tees, angles, channels, I-beams, etc. shall be made of alloy # T6061-T6. The aluminum floor grating shall be made of alloy # T6061-T6 and consist of 1-1/4” x 3/16” bars in accordance with Type 19S-G-4 as manufactured by Ametco, or approved equal. Floor grating shall be securely welded to the half-round risers.

All aluminum structural plate used in the fabrication of the back-flow gates shall be fabricated from alloy #5086-H32 plate.

All extruded aluminum members shall be made of alloy #T6061-T6.

Welding wire filler metal ER5356 shall be used to weld aluminum corrugated metal pipe alloy #3004-H34 pipe and 5086-H32 pipe. Stainless steel bolts, nuts and washers of alloy ANSI type 316 shall be used in the fabrication of all aluminum structures. All welding must be performed in accordance with detailed specification contained in these specification documents entitled “WELDING”.

All miscellaneous hardware, fasteners and flap gate lifting systems associated with feature ES-4, not specified to be constructed of aluminum or stainless steel, shall be fabricated in accordance with approved shop drawings utilizing A36 carbon steel. All steel surfaces shall be coated after fabrication using the hot dipped galvanized process with a minimum coating thickness of 4 mils, conforming to ASTM A 123. All welding must be performed in accordance with detailed specification contained in these specification documents entitled “WELDING”.

All miscellaneous hardware and fasteners associated with the structures for this project, not specified to be constructed of aluminum or stainless steel, shall be fabricated in accordance with approved shop drawings utilizing A36 carbon steel. All steel surfaces shall be coated after fabrication using the hot dipped galvanized process with a minimum coating thickness of 4 mils, conforming to ASTM A 123. All welding must be performed in accordance with “Welding” section of these project specifications.

Direct contact between the surfaces of carbon steel and aluminum elements shall be prohibited in this project.

Neoprene washers will be placed between the union of any aluminum and carbon steel materials.

Sheet pile walls shall be coated in accordance with the “Coal Tar Epoxy” section of the project specifications.

932.6 PADLOCKS

Padlocks to secure the locking pins in the stop log assembly of the water control structure shall be provided by the contractor. The number of padlocks to be provided is included in the “Proposal” and “Special Provisions” sections of these project specifications. The padlocks are to be Model 2KA-X2431 as manufactured by Master Manufacturing, or approved equal. Locks are to be of high security type, with corrosion resistant laminated brass cases and four-pin tumbler locking mechanisms. All locks are to be keyed alike.
932.7 SURFACE PREPARATION

Aluminum and carbon steel sheet and plate to be welded should be carefully stored and handled. If outdoor storage is necessary, plate should be covered and stored on edge to prevent staining.

Care should be taken to remove all oil, hydrocarbons and loose particles from all pieces to be welded that have been sheared, sawed, or machined. To reduce the possibility of porosity, and dross in welds, cleanliness of the welding surfaces cannot be overemphasized.

Most oil, grease, moisture, and dust can be removed from welding surfaces by wiping with a mild alkaline solution or hydrocarbon solvent such as acetone or alcohol.

Most oxides can be removed from welding surfaces by dipping edges in strong alkaline solution, then water, then nitric acid, then finishing with a water rinse.

The common mechanical cleaning methods used on aluminum plates are wire brushing, scraping, filing, and grinding.

Welding shall be done by the inert-gas metal-arc (MIG) process. The MIG-unit shall have a power source of 300 amperes 30 volt DC power, a control unit regulator and water-cooled gun. Steps should be taken to hold porosity and dross in welds to an absolute minimum. Welding must be performed in accordance with Detailed Specification entitled “WELDING”.

932.8 HANDLING

Contractor may provide lifting eyes for handling the fabricated units, with the approval of the Engineer for position and type. Nylon slings may be used, but in no case will cable slings be permitted to come in contact with units, other than by a lifting eye. During shipment units should be properly blocked so as to avoid placing undue stress at any point.

932.9 INSTALLATION PROCEDURE

The contractor will be responsible for:

- Dewatering the site. The contractor shall dewater the site in accordance with the Detailed Specification entitled “DEWATERING”.
- Removal of earthen material as necessary for placement of structures and stockpiling same adjacent to project site on the designated spoil disposal sites. This work shall be performed in accordance with the Detailed Specification contained in these specification documents entitled “STRUCTURAL EXCAVATION AND BACKFILL”. The contractor shall use caution while excavating in the vicinity of all existing water control structures.
- Installation of water control structures shall be as per plans and specifications. Backfilling the excavated areas, and restoration of the site to pre-project conditions shall be performed in accordance with the Detailed Specification contained in these specification documents entitled “STRUCTURAL EXCAVATION AND BACKFILL”.
- Placement of riprap as shown on the plans and contained herein. This work shall be performed in accordance with the Detailed Specification contained in these specification documents entitled “ROCK RIP-RAP”.

Contractor will be responsible for damage to existing structures that are being altered by this project.
932.10 **DEBRIS REMOVAL**

Contractor shall be responsible for the removal of debris from the project site. Any sticks, pipes, metals, plastics, refuse or discarded materials which are dredged, uncovered, or discovered at any point while performing any task associated with this project, shall be removed, and disposed, thru approved methods by the contractor. Disposal must be at an approved waste site, and trucks or trailers used for transporting materials for disposal shall be in good, clean, safe operating condition. Loads shall be covered and secured during transit at all times. There will not be any additional payment for debris removal and disposal.

932.11 **CULVERT CLEANING**

Contractor shall remove debris from the barrel, and from both ends of all existing culverts. The barrel shall be washed clean to remove all sediment, silt, sand, sticks, roots, brush, and any matter obstructing flow. The ends shall also be cleared of all obstructing matter to allow efficient flow. The contractor should be aware of possible damage caused to the structure from cleaning. The contractor should exercise measures to prevent damage to the structures while performing the assigned maintenance. The contractor will be responsible for any damage to the structures, and should repair said damage immediately, as well as notify the project engineer, in writing, as to the damage incurred and the methods employed to repair said damage. Contractor should monitor the structure for any change in position, alignment, elevation, and structural integrity.

932.12 **TIMBER PRODUCTS**

Unless otherwise specified, all lumber and timber used in the construction of the project shall be Southern Yellow Pine.

Lumber and timber shall not be used in exposed structures without preservative treatment, unless otherwise specified.

All timber, lumber and piling, excluding timber decking on walkways, shall be pressure treated with Chromated Copper Arsenate (CCA) in accordance with APWA standards for marine treatment. This material shall receive and retain, unless injected to refusal, 2.5 lbs of CCA per cubic foot of timber. All timber decking on walkways shall receive and retain, unless the solution has been injected to refusal, 0.80 lbs of CCA per cubic foot as specified by the APWA.

Treated timber shall be carefully handled without dropping, breaking of outer fibers, bruising or penetrating the surface with tools. It shall be handled with rope slings. Cant hooks, peaveys, spikes or hooks shall not be used.

Exposed pile heads, after cutting shall be treated to prevent decay. Immediately after making final cut-off on pile heads, the cut area shall be given two liberal applications of preservative followed by a heavy application of coat-tar pitch or other approved sealer. The heads of treated timber piles where the cut-off is exposed shall be protected by the following method, as specified on the plans.

All lumber and timber shall be accurately cut and framed to a close fit in such manner that the joints will have even bearing over the entire contact surfaces. No shimming will be permitted in making joints nor will open joints be accepted.

All timber products shall conform to the specifications outlined in the “Timber and Timber Preservatives” and the “Treated and Untreated Timber” sections of the project specifications.

932.13 **MEASUREMENT AND PAYMENT**
Measurement and payment for this item shall be under **BASE** bid Items 3, 5, 7, 9, 11, and 16 as well as **ADDITIVE ALTERNATE** bid items 17, 19, 21, 23, and 24. Payment shall be according to the lump sum cost.
933.1 GENERAL

The species, grade and treating of structural timber and lumber shall be as specified and shall conform to AASHTO Designation: M 168 and the following requirements.

All lumber and timber, unless otherwise specified, shall be Southern Yellow Pine.

Southern Yellow Pine Timber: Referring to the latest Standard Grading Rules for Southern Pine Lumber, as published by the Southern Pine Inspection Bureau, Southern Yellow Pine Lumber shall be furnished in the following grade: No. 2 or better, Dense SR Timber.

933.2 TIMBER PRESERVATIVES

All timber, lumber and piling, excluding timber decking on walkways, shall be pressure treated with Chromated Copper Arsenate (CCA) in accordance with APWA standards for marine treatment. This material shall receive and retain, unless injected to refusal, 2.5 lbs of CCA per cubic foot of timber. All timber decking on walkways shall receive and retain, unless the solution has been injected to refusal, 0.80 lbs of CCA per cubic foot as specified by the APWA.

933.3 TREATMENT

All materials shall be treated according to current AWPA Standard Specifications for Preservative Treatment by Pressure Processes, modified as follows:

- Timber and Lumber................................. C1 and C2
- Piles.......................................................... C1 and C3

The top 20’ of all timber piles shall also be coated with North Star 21 poly or approved equal.

933.4 INSPECTION

All inspection shall be in accordance with AWPA Standard M2

Quality control shall be in accordance with AWPA Standard M3.

933.5 MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included in at the contract lump sum price for BASE bid Item 11, “Repair Structure No. 4”.

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TS – 934  TREATED AND UNTREATED TIMBER

934.1  SCOPE

This work consists of furnishing lumber of the sizes and grade specified and of furnishing timber of the stress, grade, sizes and dimensions for the different uses specified, treated or untreated, and of preparing, framing, assembling and erecting the same, including painting where specified, as well as all hardware required by the plans and specifications.

934.2  SPECIES OF WOOD

Unless otherwise specified, all lumber and timber used in the construction of the project shall be Southern Yellow Pine.

Lumber and timber shall not be used in exposed structures without preservative treatment, unless otherwise specified.

Temporary structures may be any species and grade of timber, which is satisfactory for the intended purpose.

934.3  HARDWARE FOR TIMBER

Machine bolts, drift-bolts, nails and dowels may be either wrought iron or medium steel. Washers may be cast ogee or malleable castings or they may be cut from medium steel or wrought iron plate, as specified.

Machine bolts shall have square heads and nuts, unless otherwise specified. Nails shall be cut or round wire of standard form. Spikes shall be cut or wire spikes or boat spikes, as specified.

All hardware, including nails, spikes, bolts, dowels, washers and lag screws shall be galvanized unless otherwise specified.

934.4  STORAGE OF MATERIAL

Lumber and timber stored on the site shall be kept in orderly piles or stacks. Untreated material shall be open-stacked on supports at least 12 inches above the ground surface to avoid absorption of ground moisture and permit air circulation and it will be so stacked and stripped as to permit free circulation of air between the tiers and courses. When directed, protection from weather by suitable covering will be required.

934.5  TREATED TIMBER

Workmanship shall be first class throughout. Only competent carpenters shall be employed and all framing shall be true and exact. Unless otherwise specified, nails and spikes shall be driven with just sufficient force to set the heads flush with the surface of the wood. Deep hammer marks in wood surfaces shall be considered evidence of poor workmanship and sufficient cause for removal of the workman causing them.

All lumber and timber shall be nominally sized with rough surfaces, unless otherwise specified.

Treated timber shall be carefully handled without dropping, breaking of outer fibers, bruising or penetrating the surface with tools. It shall be handled with rope slings. Cant hooks, peaveys, spikes or hooks shall not be used.

All cutting, framing and boring of treated timbers shall be done before treatment insofar as practicable.
treated timbers are to be placed in waters infested by marine borers, untreated cuts, borings or other joint framings below high water elevation shall be avoided.

All cuts in creosoted piles or timbers and all abrasions, after having been carefully trimmed, shall be thoroughly brush-coated with Karnak No. 83 fibrated dampproofing.

Cuts and abrasions in timbers treated with waterborne preservatives or pentachlorophenol shall be required with the same preservative.

Holes bored in pressure-treated material shall be filled with preservative.

All unused bore holes and spike holes shall be poured full of preservative and plugged with tight-fitting, treated plugs.

Whenever, with the approval of the engineer, forms or temporary braces are attached to treated timber with nails or spikes, the holes shall be filled by driving galvanized nails or spikes flush with the surface or plugged as required for boltholes.

934.6 TREATMENT OF PILE HEADS

Exposed pile heads, after cutting shall be treated to prevent decay. Immediately after making final cut-off on pile heads, the cut area shall be given two liberal applications of preservative followed by a heavy application of coal-tar pitch or other approved sealer. The heads of treated timber piles where the cut-off is exposed shall be protected by the following method, as specified on the plans.

The sawn surface shall be thoroughly brush coated with Karnak No. 83 fibrated damp proofing, then covered with two 14” X 14” layers of heavy canvas (14 oz. min. per square yard) saturated with Karnak No. 83 fibrated dampproofing and capped with ¼” thick aluminum pile covers as detailed on sheet 17 in the Plans.

All lumber and timber shall be accurately cut and framed to a close fit in such manner that the joints will have even bearing over the entire contact surfaces. No shimming will be permitted in making joints nor will open joints be accepted.

All timber products shall conform to the specifications outlined in the “Timber and Timber Preservatives” and the “Treated and Untreated Timber” sections of the project specifications.

934.7 HOLES FOR BOLTS, DOWELS, RODS AND LAG SCREWS

Holes for round drift-bolts and dowels shall be bored with a bit 1/16 inch less in diameter than the bolt or dowel to be used. The diameter of holes for square drift-holes or dowels shall be equal to the least dimension of the bolt or dowel.

Holes for machine bolts shall be bored with a bit the same diameter as the bolt, except as otherwise provided.

Holes for rods shall be bored with a bit 1/16 inch greater in diameter than the rod.

Holes for lag screws shall be bored with a bit not larger than the body of the screw at the base of the thread. The hole shall be filled with Karnak No. 83 fibrated damp proofing, and after the bolt or screw is in place, shall be filled with the same material.

934.8 BOLTS AND WASHERS

A washer of the size and type specified shall be used under all bolt heads and nuts which would otherwise
come in contact with wood. Stacked washers shall not be permitted and bolts shall not project more than one inch beyond the nut on work securely tightened. Long bolts shall be saw-cut or clipped, ground smooth and repaired as follows. Galvanized surfaces that are abraded or damaged at any time after the application of the zinc coating shall be repaired by thoroughly wire brushing the damaged areas and removing all loose and cracked coating, after which the cleaned areas shall be repaired by the application of a low temperature galvanizing repair compound. The repair compound shall be submitted for approval and shall be in accordance with Federal Specification 0-G-93, 29 November 1949. Zinc coating by the metallizing process may be allowed when approved by the engineer.

934.9 COUNTERSINKING

Countersinking shall be done wherever smooth faces are required. Horizontal recesses formed for countersinking shall be painted with Karnak No. 83 fibrated damp proofing, and after the bolt or screw is in place, shall be filled with the same material.

934.10 FRAMING

All lumber and timber shall be accurately cut and framed to a close fit in such manner that the joints will have even bearing over the entire contact surfaces. No shimming will be permitted in making joints nor will open joints be accepted.

934.11 BRACING

The ends of bracing shall be bolted through the pile, post or cap with a bolt or not less than 5/8-inch diameter. Intermediate intersections shall be bolted or spiked with wire or boat spikes as indicated on the plans. In all cases, spikes shall be used in addition to bolts.

934.12 STRINGERS

Stringers shall be sized at bearings and shall be placed in position so that knots near edges will be in the portions of the stringer.

Outside stringers may have butt joints with the ends cut on a taper, but interior stringers shall be lapped to take bearing over the full width of the floor beam or cap at each end. The lapped ends of untreated stringers shall be separated at least ½ inch for the circulation of air and shall be securely fastened by drift-bolting where specified. When stringers are 2 panels in length, the joints shall be staggered.

934.13 MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included in at the contract lump sum price for BASE bid Item 11, “Repair Structure No. 4”.

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Revision Date: 4/04/11
TS – 935  ROUND PILES

935.1  SCOPE

The work consists of furnishing and driving round timber piles of the type shown on the plans or project specifications.

935.2  MATERIALS

The piles shall be of Southern Yellow Pine and shall meet the requirements of ASTM Designation: D25, "Round Timber Piles". Minimal butt diameter shall be 12" for all piles, and minimal tip diameter shall be 7". Treatment shall be treated in accordance with the section on "Timber and Timber Preservatives".

Treatment must be certified by an approved private testing laboratory.

935.3  LENGTH

The length of piles shall be as shown on the drawings.

935.4  HANDLING

Treated piles shall be handled with rope slings, taking care to avoid dropping, bruising or breaking outer fibers, or penetrating the surface with tools. Sharp pointed tools shall not be used in handling treated piles or turning them in the leads.

The surface of treated piles below cut-off elevation shall not be disturbed by boring holes or driving nails or spikes into them to support temporary materials or staging. Staging may be supported by rope slings carried over the tops of piles or attached to pile clamps of approved design.

935.5  SELECTION AND PREPARATION OF PILES

SIZE: The piles shall be selected for uniformity of size. Minimum butt diameters shall be 12 inches for all piles 40 feet long and longer.

POINTING: The piles shall not be pointed.

PILE SHOES: Pile shoes are not required.

COLLARS: Where the heads of the piles tend to crack or split under the hammer, the heads shall be wrapped with wire, or metal bands attached to obviate this condition.

DRIVING CAP: The heads of all piles shall be protected, while being driven, with a cushion cap of approved design. Care shall be exercised to insure full bearing of the driving cap on the pile for proper distribution of the hammer blow.

935.6  TYPES OF HAMMERS

Pile driving shall not be started until approval is secured from the engineer as to the type and weight of the hammer to be used.

Piles shall be driven with the heaviest hammer that can be used to secure maximum penetration without appre...
ciable damage to a pile.

Where a drop hammer is used, the striking ram shall weigh not less than 3,000 pounds. The fall shall be so regulated as to avoid injury to the pile.

A single-acting diesel hammer may be used in lieu of a drop hammer. The rated energy of the diesel hammer shall be limited to approximately 15,000 foot-pounds to the blow.

935.7 DRIVING

LEADS: Pile driver leads shall be constructed in such manner as to afford freedom of movement of the hammer; they shall be held in position by guys or stiff braces to insure support for the pile during driving. Swinging leads will not be permitted.

FOLLOWERS: The use of followers shall be avoided if practicable and shall be used with the written permission of the engineer.

LINE: Piles shall be driven as accurately as possible in the correct location, true to line both laterally and longitudinally. On sloping ground or under difficult conditions of driving, the pile shall be started in a hole, guiding template or other necessary means provided to insure driving in the proper location. In case a pile works out of line in driving, it shall be properly aligned before it is cut off, and the distance that it may be pulled shall be determined by the engineer. A location tolerance of plus or minus two inches will be allowed for round piles.

PENETRATION: It is expected that piles shall be driven to the full penetration indicated on the plans.

OVERDRIVING: Care shall be exercised not to drive the pile beyond the depth of penetration required. If the piles show increased resistance to driving, the contractor shall guard against injury to the pile. If the resistance is such that 25 to 30 blows per foot penetration are required for driving with a Vulcan No. 1 hammer, or its equivalent, the driving should cease.

GENERAL: No piles shall be driven within 100 feet of concrete less than 7 days old unless authorized by the engineer. It is preferable that timber piles be driven prior to the placing of any poured-in-place concrete.

JETTING: Jetting may be performed with written permission of the engineer. Where jetting is used, the hammer shall be used in conjunction therewith and the final two (2) feet of penetration shall be obtained without the aid of the jet.

OBSTRUCTIONS: Should obstructions be encountered during the pile driving operations which prohibit the driving of the piling to proper grade or which in any way impair the usefulness of piling in the opinion of the engineer, driving shall cease. The contractor will be required to remove the piling and construct a pilot hole of approximately six (6) inches in diameter through the obstruction but not deeper than two feet above the final tip elevation of the piling. Should an obstruction be encountered in the final two feet of driving, driving shall stop and no pilot hole will be required.

935.8 REPLACING

Any pile driven too far out of line, driven below cutoff elevation or so injured in driving or straightening as to impair its structural value as a pile under the conditions of use, shall be pulled and replaced by a new pile at the contractor’s expense.

935.9 CUT-OFF

Cut-off shall be to a true plane as shown on the plans and at the elevation established by the engineer. Piles shall
show a solid head at the plane of the cut-off.

After the cut-off has been made, the tops of the piles, above grade, shall be treated in the following manner: They shall be thoroughly brush coated with Karnak No. 83 fibrated dampproofing, then covered with 2 layers of heavy canvas size 14" x 14" saturated with Karnak No. 83 fibrated dampproofing. Then the tops of the piles shall be covered with galvanized sheet metal as shown on drawings. A cut-off tolerance of plus or minus 1/2 inch shall be allowed for round piles.

935.10 GENERAL FIELD TREATMENT

When it is necessary to disturb the surface of treated piles, or where the surface has been damaged in handling, such surfaces shall be treated with a liberal quantity of Karnak No. 83 fibrated dampproofing. Bolt-holes shall also be swabbed with Karnak No. 83 fibrated dampproofing before bolts are installed.

935.11 MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included in at the contract lump sum price for BASE bid Item 11, “Repair Structure No. 4”.
POLYMER COATING

936.1 POLYMER COATING COMPOUND

The coating shall be a high performance plural component polymer elastomer specifically formulated for the application of treated timber. Coating system shall be based on amine-terminated polyether resins, amine chain extenders and isocyanates. An acceptable coating is 21 POLY™ or equal, as supplied by Northstar Vinyl Products, LLC. Coating shall be applied to all timber wales, piles, and other timber framing that extends above the inlet and outlet channel bottom associated with each water control structure. Minimum physical properties after 48 hours shall be:

<table>
<thead>
<tr>
<th>Property</th>
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<th>Standard</th>
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<tr>
<td>Color</td>
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<td>Nominal Thickness</td>
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<td>Elongation @ 25°C</td>
<td>300%</td>
<td>ASTM D-638</td>
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<tr>
<td>Tensile Strength</td>
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<tr>
<td>Tear Resistance</td>
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<td>ASTM D-624</td>
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<tr>
<td>Pull Off W/106 Elcometer (Adhesion)</td>
<td>300 psi</td>
<td>ASTM D-4541</td>
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<td>Hardness-Shore A</td>
<td>85</td>
<td>ASTM D-2240</td>
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<tr>
<td>Taper Abrasion (CS 18 wheel 1 kg/1000 cycles)</td>
<td>400 mg (max.)</td>
<td>ASTM D-4060</td>
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<tr>
<td>Polymer Field Patch Kit</td>
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936.2 COATING FACILITY

The coating facility shall have a minimum of 3 years experience with the coating of wood with a polymer compound. Exclusive function of the coating facility shall be for the polymer coating of wood members.

936.3 COVERAGE TOLERANCE

Polymer coating is classified as additional treatment above normal pressure treatment (dual treatment). Small breaches in coating shall not necessarily be cause for rejection. Small breaches are defined as wood checks less than ¼” in width, individual breaches less than 0.25 in². Total coating breaches shall not exceed 2% of the theoretical surface to be coated. Certificates of inspection performed by an independent laboratory shall be made available to the engineer. These reports shall verify that all treatment requirements and standards for this project have been met.

936.4 HOLES AND PATCHING

Before installation, inspect wales and piles for large breaches in coating. If large breaches exist, repair with polymer compound patch kit. Shiplap cuts to wales, as well as holes, notches, etc., shall be cleaned and patched with polymer compound patch kit. A minimum of 60 mils shall be applied with spackle knife. In instances where holes are inaccessible, the patch compound may be applied to a steel washer which is placed against the hole then immediately secured to the pile or beam mechanically. All field patches shall be allowed to fully cure prior to installation.

936.5 PILES

When timber and coating of pile tops have been cut after being driven to the required depth, tops of piles shall be coated in accordance with Detailed Specifications for “ROUND PILES” and “SHEET PILES”.

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MEASUREMENT AND PAYMENT

No separate payment will be made for polymer coating, and all costs in connection therewith shall be included in the contract lump sum price for BASE bid Item 11, “Repair Structure No. 4”.

TS – 937  STEEL SHEET PILE WALL SYSTEM

937.1 GENERAL

This specification governs all materials and labor required to furnish and install the steel sheet pile wall system in accordance with the project plans and these specifications.

937.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)


ASTM A 328/A 328M (200) Steel Sheet Piling

ASTM A 572/A 572M (200) High-Strength Low-Alloy Columbium-Vanadium Structural Steel

ASTM A 690/A 690M (1994) High-Strength Low-Alloy Steel H-Piles and Sheet Piling for Use in Marine Environments

ASTM A 857/A 857M (1997el) Steel Sheet Piling, Cold Formed, Light Gage

937.3 SUBMITTALS

The following shall be submitted prior to the commencement of construction:

937.4 Shop Drawings

Metal Sheet Piling: Detail drawings for sheet piling, including fabricated sections, shall show complete piling dimensions and details, driving sequence, and location of installed piling. Detail drawings shall include dimensions of templates and other temporary guide structures for installing piling. Detail drawings shall provide the method of handling piling to prevent permanent deflection, distortion or damage to piling interlocks.

Metal Batter Piling: Detail drawings for batter piling, including fabricated sections, shall show complete piling dimensions and details, driving sequence, and location of installed piling. Detail drawings shall include dimensions of templates and other temporary guide structures for installing piling.

Detail drawings shall provide the method of handling piling to prevent permanent deflection, distortion or damage to piling.

937.5 Product Data

Pile Driving Equipment; Complete descriptions of sheet and batter pile driving equipment including hammers, protection caps, and other installation appurtenances shall be submitted for approval prior to commencement of work.
937.6 **Test Reports**

Material Test Reports; Certified material test reports showing that sheet piling, batter piling, and appurtenant metal materials meet the specified requirements shall be submitted for each shipment and identified with specific lots prior to installing materials. Material test reports shall meet the requirements of the governing ASTM Standards.

937.7 **THE FOLLOWING SHALL BE SUBMITTED DURING CONSTRUCTION:**

**Driving Records**

Records of the sheet and batter piling driving operations shall be submitted after driving is completed. These records shall provide a system of identification which shows the disposition of approved piling, driving equipment performance data, piling penetration rate data, piling dimensions, and top and bottom elevations of installed piling.

937.8 **DELIVERY, STORAGE AND HANDLING**

Materials delivered to the site shall be new, undamaged, and be accompanied by certified test reports. The manufacturer’s logo and mill identification mark shall be provided on the sheet and batter piling, as required by the referenced specifications. Sheet and batter piling shall be stored and handled in the manner recommended by the manufacturer to prevent permanent deflection, distortion or damage to the interlocks. Storage of sheet and batter piling should also facilitate required inspection activities.

**PRODUCTS**

937.9 **METAL SHEET AND BATTER PILING**

Metal sheet piling shall be hot-rolled steel sections conforming to ASTM A572, Grade 50, Type PZ 35 interlocked joint strength in tension in accordance with ShQ ASTM A 690. The interlocks of sheet piling shall be free-sliding, provide a swing angle suitable for the intended installation but not less than 5 degrees when interlocked, and maintain continuous interlocking when installed. Sheet piling including special fabricated sections shall be full-length sections having the dimensions shown on the project drawings. Fabricated sections shall conform to the requirement and the piling manufacturer’s recommendations for fabricated sections. Fabricated sections connecting steel sheet pile walls to batter pile systems shall be constructed using A36 structural steel. Steel batter piles shall have an outside diameter of 18 inches and a wall thickness of 0.562 inches. Batter piles shall also be constructed using A36 steel. Sheet piling shall be provided with standard pulling holes. The top 20 feet of the entire steel sheet pile wall system including all batter piles shall receive a coal tar epoxy coating in accordance with the Detailed Specifications for “Coal Tar Epoxy Coatings”.

937.10 **APPURTENANT METAL MATERIALS**

Metal plates, shapes, and other appurtenant fabrication and installation materials shall conform to manufacturer’s standards and to the requirements specified in the respective metal sheet and batter piling section of this specification.

937.11 **TESTS, INSPECTIONS, AND VERIFICATIONS**

Requirements for material tests, workmanship and other measures for quality assurance shall be as specified.

937.12 **MATERIALS TESTS**
Sheet piling, batter piling, and appurtenant materials shall be tested and certified by the manufacturer to meet the specified chemical, mechanical and section property requirements prior to delivery to the site. Testing of sheet piling for mechanical properties shall be performed after the completion of all rolling and forming operations. Testing of sheet piling shall meet the requirements of ASTM A 6/A 6M.

937.13 INTERLOCKED JOINT STRENGTH IN TENSION TEST

The interlocked joint strength in tension test shall conform to the piling manufacturer's standard test; include testing at least two 3-inch long coupons taken randomly from different as-produced pilings.

INSTALLATION

937.14 PILE DRIVING EQUIPMENT

Pile driving equipment shall conform to the following requirements.

937.15 DRIVING HAMMERS FOR STEEL SHEET PILE

Hammers shall be a vibratory type that is suitable for use with the piling weights and subsurface materials to be encountered in this project.

Hammers shall be a drop type. The driving energy of the hammers shall be approximately 15,000 foot-pounds.

937.16 PLACING AND DRIVING

PLACING: Pileings shall be carefully located in accordance with the project plans. Pileings shall be placed plumb with out-of-plumbness not exceeding 2 inches per length of pile being installed and true to line. Temporary wales, templates, or guide structures shall be provided to insure that the pileings are placed and driven to the correct alignment. At least two templates shall be used in placing each piling and the maximum spacing of templates shall not exceed 20 feet. Pileings properly placed and driven shall be interlocked throughout their length with adjacent pileings to form a continuous diaphragm throughout the length or run of piling wall.

DRIVING: Prior to driving pileings in water, a horizontal line shall be painted on both sides of each piling at a fixed distance from the bottom so that it shall be visible above the water line after installation. This line shall indicate the profile of the bottom elevation of installed pileings. Pileings shall be driven with the proper size hammer and by approved methods to ensure no damage to the piles and proper interlocking throughout their lengths. Driving hammers shall be maintained in proper alignment during driving operations by the use of leads or guides attached to the hammer. The use of unrestrained leads will not be permitted. Caution shall be taken in the sustained use of vibratory hammers when a hard driving condition is encountered to avoid interlock-melt or damages. The use of vibratory hammers should be discontinued and impact hammers employed when the penetration rate due to vibratory loading is one foot or less per minute. A protecting cap shall be employed during driving when using impact hammers to prevent damage to the tops of pileings. Pileings damaged during driving or driven out of interlock shall be removed and replaced at the Contractor's expense.

Adequate precautions shall be taken to insure that pileings are driven plumb. If the forward or leading edge of the piling wall is found to be out-of-plumb, the contractor will be required to remove the defective pileings and replace the defective pileings at his own expense.

If obstructions restrict driving a piling to the specified penetration, the contractor shall notify the Engineer immediately.

Damaged piling or piling driven below cut off elevation
Pilings driven below the specified cut off elevation or damaged during installation shall be removed and replaced by the contractor at no additional expense to the owner.

937.17 INSPECTION OF DRIVEN PILING

The Contractor shall inspect the interlocked joints of driven pilings extending above ground. Pilings found to be out of interlock shall be removed and replaced at the Contractor’s expense. The Contractor shall use divers to inspect underwater interlocked joints of sheet piling. Owner divers may also inspect the interlocked joints.

UNIT PRICES

937.18 STEEL SHEET PILING

Payment

Payment for steel sheet piling wall quantities will be made at the applicable contract price per square foot of surface area for furnished and installed sheet piling. Payment shall cover all cost of furnishing, handling, storing and installing piling including placing, driving, cutting holes and other materials, and work incidental thereto.

Measurement

The length and width of sheet piling installed will be measured to the nearest tenth of a foot. The total square foot of surface area will be calculated using the measured length and width of the installed sheet pile wall. Lengths that are assumed after cutoff to remain in completed structure, at the contractor’s expense, and the pile lengths shall be increased to provide for fresh heading and for such additional length as may be necessary to suit contractor’s method of operation.

Unit of Measure

Unit of measure: square foot.

937.19 STEEL BATTER PILING

Payment

Payment for steel batter piling quantities will be made at the applicable contract price per linear foot of pile for furnished and installed piling. Payment shall cover all cost of furnishing, handling, storing and installing piling and structural steel components necessary to connect batter pile to the steel sheet pile wall system including placing, driving, cutting holes and other materials, and work incidental thereto.

Measurement

The length of piling installed will be measured to the nearest tenth of a foot.

Unit of Measure

Unit of measure: linear foot.

937.20 MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included in at the contract unit price for BASE bid Item 11, “Repair Structure No. 4”.
938.1 GENERAL

Contractor shall provide all labor, material, transportation, supervision, and equipment and perform all work necessary for constructing and maintaining a satisfactory and structurally sound dewatering system. Inasmuch as it is the Contractor’s responsibility to construct the project as specified by the contract documents, it shall be the Contractor’s responsibility to dewater the water control structure site to the degree required.

The proposed dewatering system will require approval from permitting agencies, both State and Federal. Within ten (10) days after the Notice of Award, the Contractor (apparent low bidder) shall submit to the Engineer the required permit drawings depicting in detail the proposed dewatering system. The Notice to Proceed will not be issued until the permit (or revised permit) has been issued. The contractor will not commence dewatering activities until such time as written approval from both the permit agencies and the Engineer is obtained. (NOT APPLICABLE)

Contractor is advised that 45 days or more should be allocated for approval by permit agencies. In the event that extended time delays occur with obtaining permit agency approval, the contract time shall be adjusted accordingly. The Owner and/or Engineer shall not be liable for cost associated with any excessive time delays in obtaining permit agency approval of dewatering system proposed by Contractor. (NOT APPLICABLE)

The Contractor shall use any dewatering method deemed necessary, subject to the review of the Engineer, with the exception of any dewatering system utilizing earthen or granular materials to construct retention dikes. Under no circumstances will these materials be permitted. The Contractor shall dewater each water control structure site so that the bottom wale of the timber bulkhead may be installed above the water surface. After obtaining the Engineer’s approval, the Contractor shall completely and satisfactorily remove each dewatering system so as not to interfere in any way with the operation, usefulness and stability of the permanent structures.

938.2 MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included at the contract lump sum price for BASE bid Item 11, “Repair Structure No. 4”.
939.1 GENERAL

The contractor will be required to heat metals to be welded to a molten state so that they are properly fused together. A filler metal shall be held in the heated zone to add material that will replace metal consumed by the welding process and to produce a slightly raised area that can be dressed down to make a level surface if needed. Welding shall be performed using a non-consumable electrode. Filler metal shall produce welds that have strengths equal to or greater than the base metals to be welded.

939.2 WELDING PROCESSES

The contractor shall use the Gas Metal Arc Welding Process (GMAW) to fuse metal components together unless otherwise denoted. This method is commonly known as the metal inert gas (MIG) process. GMAW uses a mixture of gases during welding to protect the welds from nitrogen and oxygen.

Because of the many variables, such as material to be welded and its thickness, equipment, gases, electrodes, degree of skill, and strength requirements for the finished welds, it is not practicable to set up a complete list of welding recommendations that would have general validity. Instead, the contractor shall employ competent persons who have had experience embracing a wide range of typical welding processes and are capable of fitting the conditions encountered during this project to the specific welding situation.

Two groups of weld types will be allowed, groove and fillet. Each type of weld may be made with the work at any angle from horizontal (flat) to inverted (overhead). In a vertical orientation, the electrode tip may move down the groove of fillet (vertical down), or up (vertical up). In any weld other than flat, skill is needed to prevent the molten metal falling from the weld area. All welding activities shall be performed in accordance the American Welding Society (AWS) codes and recommendations.

939.3 GAS METAL ARC WELDING (GMAW)

PROCESS: Gas metal arc welding modes extend from short-circuit where the consumable electrode wire is melted into the molten pool in a rapid of short circuits during which the arc is extinguished, to pulsed and regular spray transfer, where a stream of fine drops and vaporized weld metal is propelled across the continuous arc gap by electromagnetic forces in the arc.

SELECTION OF ELECTRODE DIAMETER: One of the most important welding decisions is selecting the Optimum GMAW electrode diameter. Selection of electrode diameters should be based on the material type and thickness. For carbon, stainless steel, and aluminum, the two most popular GMAW electrode sizes are 0.035 in. (1.0 mm) and 0.045 in. (1.2 mm). The suggested electrode diameter that corresponds to various material thickness for these material types is as follows:

<table>
<thead>
<tr>
<th>Material Thickness</th>
<th>Electrode Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 to 21 gage (0.020 to 0.032 in.)</td>
<td>0.030 in. (0.8 mm)</td>
</tr>
<tr>
<td>20 gage to V4 in. (0.036 to 0.25 in.)</td>
<td>0.035 in. (1.0 mm)</td>
</tr>
<tr>
<td>3/16 to 7/16 in. flat and horizontal</td>
<td>0.045 in. (1.2 mm)</td>
</tr>
<tr>
<td>1/2 in. and up</td>
<td>0.062 in. (1.6 mm)</td>
</tr>
</tbody>
</table>

SHIELDING GASES: Shielding gases for welding carbon and low-alloy steels as well as stainless steel shall consist of a mixture of argon and oxygen. Helium may also be added to argon if increased weld energy is
required. For GMAW welding of aluminum, helium is added to argon to provide additional weld energy, increase penetration width, and reduce the porosity potential.

**CRITERIA FOR SETTING PARAMETERS:** Welders shall set their parameters by an established mark on the equipment or by the sound of the arc as the weld is being made. The sound of the arc, influenced by the optimum current and voltage set should be a consistent, smooth, and cracking noise. If the sound is harsh, the voltage should be increased slightly. If the sound is soft, the voltage should be decreased until the sound becomes a smooth crackle.

**939.4 MEASUREMENT AND PAYMENT**

This item shall be measured in a lump sum and all costs shall be included in at the contract lump sum price for **BASE** bid Item 11, “Repair Structure No. 4”.
TS – 940  COAL-TAR EPOXY

940.1  SCOPE

This specification shall consist of furnishing all materials, labor, equipment, supervision, etc., to paint the existing structures of this project in conformance with these specifications and as directed by the Project Engineer.

940.2  REFERENCE TEST METHODS AND SPECIFICATIONS

Federal Test Method No. 141, Abrasion, Method 6192, CS-17 Wheel; 1000 grams load TT-C 550 C 4.4.5.2 and 4.4.5.3 Graffiti-resistance.

American Society of Testing and Materials (ASTM)

ASTM D 4541-85; Adhesion - Elcometer Adhesion Tester

ASTM D 3363-74; Hardness

ASTM D 2247-68; Humidity

ASTM B 117-73; Salt Spray (FOG)

ASTM D 149; Dielectric Strength

ASTM D 4585; Humidity (Controlled Condensation)

ASTM D 4060; Abrasion-resistance

ASTM D 522; Method 2; Flexibility

ASTM G 53; QUV

ASTM D 3363; Pencil Hardness

ASTM D 4141-C; EMMAQUA NTW, Weathering

Exterior Exposure

Exposed at 45° facing ocean (South Florida Marine Exposure)

Exposed 18 inches above High tide - splash and spray (Atlantic Sea Coast)

STEEL STRUCTURES PAINTING COUNCIL (SSPC) SURFACE PREPARATION

SSPC SP-1  Solvent Clean

SSPC SP-3  Power Tool Clean

SSPC SP-6  Commercial Blast Cleaning
940.3 SUBMITTALS

Contractor shall submit the following information:

- Product data sheets
- Coating Schedule
- Generic type of coating
- Performance Data
- Material Safety Data Sheets
- Color Samples

List of ten projects that have performed satisfactorily for five years in the gulf coast area.

Bidders, desiring to use coatings other than those specified, shall submit their proposal in writing to the engineer at least ten (10) days prior to the bid opening. Substitutions, which decrease the film thickness, the number of coats applied, change the generic type of coating or fail to meet the performance criteria of the specified materials outlined in this section of the specifications will not be approved. The same manufacturer shall furnish all primers and topcoats to ensure compatibility.

940.4 DELIVERY, STORAGE AND HANDLING

All materials, delivered to job-site, shall be in original sealed and labeled containers of the coal-tar manufacturer,

Store materials in a protected area at a temperature between 40°F and 100°F. All coatings and coal-tar shall be stored in enclosed structures to protect them from weather and excessive heat or cold. Flammable coatings or coal-tar must be stored to conform to Parish, State and Federal safety codes for flammable coating or paint materials. At all times, coatings and coal-tar shall be protected from freezing.

940.5 PROJECT CONDITIONS

Environmental Requirements: Coatings shall be applied during good painting weather. Air and surface temperatures shall be between 40°F and 120°F.

Surface temperature shall be at least 5°F above dew point. Relative humidity shall be below 85%.

940.6 WARRANTY

The contractor shall warranty his work for a period of one year to the extent that he shall repair any defects due to faulty workmanship or materials which may appear on the structure during this period. A first anniversary inspection shall be conducted in accordance with Section 9 of AWWA D-102-97.

940.7 PRODUCTS

940.8 MATERIALS

See coating schedule in this specification.

940.9 REQUIREMENTS

All coating utilized shall be certified “non-lead” (less than 0.06% lead by weight in the dried film) as defined in part 1303 of the consumer Product Safety Act.

Where zinc primer is specified, the submittal data shall include the pounds of zinc per gallon for the proposed material and verification that the zinc primer is suitable for application by brush, roller and spray.

The coating manufacturer shall certify that the zinc dust used in the zinc coatings meets the requirement of ASTM D 520 Type III. The manufacturer of the exterior coating system shall be capable of providing case histories that are a minimum of five (5) years old. The polyurethane color coat shall pass SSPC No.36 standard for urethanes.

940.10 EXECUTION

CONTAINMENT/DISPOSAL Containment / Disposal costs - The painting contractor shall be responsible for all costs associated with containment and waste disposal that may result from the execution of this project.

SURFACE PREPARATION

Prepare surfaces in accordance with coating system’s specifications which may be located at www.Amercoat.com.

Prior to preparation, all surfaces shall be clean and dry and free of dust, dirt, oil, wax, grease and other contaminants. Remove all oil, dirt, grease and all other soluble surface contaminants in accordance with SSPC-SP1. Abrasive blast all surfaces in accordance with SSPC-SP10 to produce an anchor pattern of 2 to 4 mil profile as determined with a Keane-Tator surface profile comparator or a similar device. Verify chlorides are within the limitations of the coating manufacturer, and an anchor pattern from 2-4 Mils has been achieved. If not, consult manufacturer’s representative.

MATERIAL PREPARATION

Materials shall be mixed, thinned and applied according to the manufacturer’s printed instructions and in accordance with the AWWA D 102-97.

APPLICATION

Apply coatings as per manufacturer’s printed instructions and acceptable painting practices. Finish coats shall be uniform in color and sheen without streaks, laps, runs, sags or missed areas. Work areas shall be reasonably free of airborne dust at the time of application and while coating is drying. Spot-primers are to be applied to the failed areas after surface preparations are done.

Exterior coatings applied, must be top coated prior to the expiration of the recoat window. Lettering and/or logos shall be painted with a generically equal coating as the finish coat.

940.11 FIELD QUALITY CONTROL
Inspection

The engineer shall approve all surface preparation, before primer is applied. Request acceptance of each coat before applying next coat.

The contractor will be required to perform random testing of coating thickness and holiday detection, said tests shall be performed after each coat has been applied. Frequency of tests shall be sufficient to ensure that contract plans and specifications are satisfied.

Correct work that is not acceptable and request a re-inspection.

Any damaged areas shall be repaired as to manufactures specifications.

940.12 CLEANING

Removal of Trash

Remove and dispose of, in a legal manner, all rubbish or other unsightly material leaving the premises pre-project condition.

940.13 COATING SCHEDULE

Surface Preparation

Remove all visible oil, grease, soil, dirt and other soluble contaminants in accordance with SSPC SP1. All surfaces shall be abrasive blast cleaned to a Near White Metal Blast Cleaning in accordance with the recommended methods outlined in the Steel Structures Painting Council’s Specification SSPC SP10.

Coating System requirement in dry mils

<table>
<thead>
<tr>
<th>Layer</th>
<th>Description</th>
<th>Thickness Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Coat</td>
<td>Ameron 78HB, or approved equal</td>
<td>7.0-10.0</td>
</tr>
<tr>
<td>2nd Coat</td>
<td>Ameron 78HB, or approved equal</td>
<td>7.0-10.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>14.0-20.0 mils</strong></td>
</tr>
</tbody>
</table>

940.14 BASIS OF PAYMENT

This item shall be measured in a lump sum and no separate payment for painting will be made, all costs shall be included in at the contract lump sum price for BASE bid Item 11, “Repair Structure No. 4”.
TS – 941  STRUCTURAL EXCAVATION AND BACKFILL

941.1  SCOPE

This work consists of the removal of all materials, of whatever nature, necessary for the construction of retaining walls, foundations and substructures. It shall include the furnishing of all necessary equipment and the construction of all cribs, cofferdams, caissons, dewatering, etc., which may be necessary for the execution of the work. It shall also include the subsequent removal of cofferdams and cribs and the placement of all necessary backfill as hereinafter specified. It shall also include the wasting of excavation material, which is not required for backfill in a manner and in locations so as not to affect the carrying capacity of the channel and not be unsightly, all as directed by the engineer. All work shall be performed in accordance with these specifications and in reasonably close conformity to the lines, grades and dimensions shown on the plans or established by the engineer.

941.2  EXCAVATION

Excavations for substructures shall be shored, braced or protected by cofferdams where necessary. All excavation shall be completed to the lines, grades and limits shown on the drawings or as directed by the engineer. Material excavated under this item and suitable for use in the backfill shall be separated and placed in an appropriate place on the project site as directed by the engineer. It shall be the contractor's responsibility to conduct his operations in such a way that suitable excavated material to be used as backfill remains separate from unsuitable excavated material.

941.3  BACKFILL

The unfilled portion of the area excavated for construction shall be backfilled with suitable excavated material approved by the engineer. All material used for backfill shall be free from lumps, debris, and foreign matter. The backfill shall be placed in six (6) inch horizontal layers distributed uniformly over the full area to be backfilled, and thoroughly compacted to 90% standard Proctor density in accordance with ASTM D698. Excess excavated material not suitable for use as backfill shall be disposed of as directed by the engineer.

941.4  MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included in at the contract unit price for BASE bid Item 11, “Repair Structure No. 4”.
TS – 942  BIRD EXCLUDER DEVICES

942.1  SCOPE

This item shall consist of furnishing all materials and labor necessary to provide bird excluder devices on all stem covers and electric boxes, all in accordance with these specifications, as shown on the plans or directed by the engineer.

942.2  MATERIALS

The bird excluder devices, including strip barriers, shall be constructed using alloy 316 stainless steel, Model “H” as manufactured by Nixalite, or approved equal, to be placed along the perimeter of objects, and Model “S” to be used to fill the interior space within the perimeter.

942.3  PLACEMENT GUIDELINES

SURFACE PREPARATION: All surfaces in contact with the bird excluder devices shall be free of debris, waste materials and other contaminants. Remove all closely overhanging foliage, if any. Surface must be clean and dry before installation.

METHODS OF INSTALLATION: The architectural bird control devices shall be installed in accordance with manufacturer’s written instructions. The entire surface should be covered with the installation strips, not just the outer edges. Bird control strips must follow the angles and contours closely. There should be no gaps in the coverage. Fasten the mounting hardware to the surface as recommended by the manufacturer. All mounting hardware shall be constructed of alloy 316 stainless steel. The Nixalite strips, or approved equal, should then be inserted into the mounting clips.

POST-PLACEMENT PROCEDURES: Inspect finished installation and make adjustments as necessary to conform to manufacturer’s written recommendations. Normal maintenance involves inspection of the installation periodically to remove any debris and re-secure any strips that may have become loose.

942.4  MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included in at the contract lump sum price for BASE bid item 16, “Repair Structure No. 9b”.
STEM COVERS

943.1 SCOPE

This item shall consist of furnishing all materials and labor necessary to provide all actuator stem covers in accordance with these specifications, as shown on the plans or directed by the engineer.

943.2 MATERIALS

The stem covers shall be constructed using 4 ½” schedule 40 transparent PVC pipe with UV protection, pipe cap and 4 ½” PVC to male thread adapter. All are to be assembled and attached to actuators specified by the plans and specifications associated with this project.

943.3 PLACEMENT GUIDELINES

SURFACE PREPARATION: All surfaces in contact with the Stem covers shall be free of debris, waste materials and other contaminants. Remove all closely overhanging foliage, if any. Surface must be clean and dry before installation.

METHODS OF INSTALLATION: The architectural bird control devices shall be installed in accordance with plans and specifications. Fasten the mounting hardware to the surface as specified by the plans and specifications.

POST-PLACEMENT PROCEDURES: Inspect finished installation and make adjustments as necessary to conform to plans and specifications. Normal maintenance involves inspection of the installation periodically to remove any debris and re-secure any parts that may have become loose.

943.4 MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included in at the contract lump sum price for BASE bid item 16, “Repair Structure No. 9b”.
TS – 944  TRENCH SAFETY SYSTEMS

944.1 DESCRIPTION

This specification shall apply specifically to all trenches or other structural excavation extending more than five feet below adjacent ground. For purposes of this specification, the depth includes any undercut performed for installing bedding, geotextile filter cloth, grade beams, support wales, or for any other purpose, whether required or at the contractor’s option. This definition of trench safety shall in no way relieve the contractor of his responsibility for providing adequate safety measures for excavation not covered by this specification. Excavation of channels with sloping sides is not generally covered by this specification.

The Contractor shall comply with the minimum requirements of this specification. Maintenance and inspection of any shoring and related equipment shall be the responsibility of the contractor. Owner and/or Engineer reserves the rights to require the Contractor to remove repair and/or replace any portions of the shoring system deemed unsafe, but the final responsibility for workers’ safety remains with the Contractor.

The Contractor shall determine the safety system needed for the project within the minimum requirements for this specification. The Contractor shall submit to the Owner’s Engineer a certified submittal from a Registered Professional Engineer from the State of Louisiana that the Contractor’s Trench Safety System meets the minimum requirements of this specification, and shall make adjustments as required by the Owner and/or Engineer to meet minimum requirements at the Contractor’s expense. Approval of a trench safety system by the Owner and/or Engineer shall not relieve the Contractor of his responsibility to provide a safe working place for his employees. The Contractor agrees to hold harmless and defend the Owner and/or Engineer against any claim resulting from failure of the trench system or lack of one.

944.2 REGULATORY REQUIREMENTS

Conform to applicable Occupational Safety and Health Administration OSHA) Standards as contained in 29 CFR, Part 1926, Subpart P - Excavations, as revised October 31, 1989 and published in the Federal Register Vol. 54, #209, latest revision.

The Contractor’s Trench Safety System shall be designed by a "registered professional engineer" or "a qualified person or a qualified engineer"; such a person shall be a Professional Engineer registered in the State of Louisiana.

The Contractor’s "Engineer" shall develop a specific trench safety system design for the project in general compliance to the requirements set forth by House Bills 662 and 665 of the 70th Legislature, and in accordance with Part 1926 Subpart P of current OSHA Standards.

944.3 DEFINITIONS

Angle of Repose: The greatest angle above the horizontal plane at which a material will lie without sliding.

Bank: A mass of soil rising above a digging level.

Braces: The horizontal members of the shoring system whose ends bear against the uprights or stringers.

Excavation: Any man-made cavity or depression in the earth’s surface, including its sides, walls, or faces, formed by earth removal and producing unsupported earth conditions by reasons of the excavation. If installed forms or similar structures reduce the depth-to-width relationship, an excavation may become a trench.
Hard Compact Soil: All earth materials not classified as running or unstable.
Kick outs: Accidental release or failure of a shore or brace.

Sheet Pile: A pile, or sheeting, that may form one of a continuous interlocking line, or a row of timber, concrete, or steel piles, driven in close contact to provide a tight wall to resist the lateral pressure of water, adjacent earth, or other materials.

Sides, Walls, Faces: The vertical or inclined earth surfaces formed as a result of excavation work.
Slope: The angle with the horizontal at which a particular earth material will stand indefinitely without movement.
Stringers, Wales: The horizontal members of a shoring system whose sides bear against the uprights or earth.
Trench: A narrow excavation made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet.
Trench Jack: Screw or hydraulic type jacks used in cross bracing in a trench shoring system.
Trench Shield: A shoring system composed of steel plates and bracing, welded or bolted together, which support the walls of a trench from the ground level to the trench to the trench bottom and which can be moved along as work progresses.
Unstable Soil: Earth material, other than running, that because of its nature or the influence of related conditions, cannot be depended upon to remain in place without extra support, such as would be furnished by a system of shoring.
Uprights: The vertical members of a shoring system.

944.4 MATERIALS

Materials used for sheeting, sheet piling, cribbing, bracing, shoring, and underpinning shall be in good serviceable condition, and timbers shall be sound, free from large or loose knots, and of proper dimensions as called for in the latest revision of OSHA Construction Standards, Subpart P, "Table P-2 - Trench Shoring - Minimum Requirements", which is made by reference a part of these specifications. All materials which are found to be defective in any way shall be immediately removed from the job site. It shall be the responsibility of the Contractor to regularly check all trench safety equipment for soundness and adequacy.

Steel trench shields shall be constructed of steel plate sides, welded to a steel framework. All shields shall be constructed in order to provide protection equivalent to or greater than sheeting or shoring required for the trench. The contractor shall provide written certification from the manufacturer's engineer to the Owner's engineer of adequacy before using any trench shield. Adjustable jacks may be used in order to adjust the shield to varying trench widths.

944.5 IMPLEMENTATION

Prior to construction, a written plan for a Trench Safety System, specifically for construction of trench excavation, together with the general safety program required by OSHA standards governing the presence and activities of individuals in and around trench excavations, shall be submitted for review by owner. The Trench Safety System submittal shall be all inclusive of specific requirements required by OSHA and the Owner's Engineer.

The Contractor shall provide a trench safety system for all trench excavations which exceed a depth of five feet (5'). The Trench Safety System shall conform to the Occupational Safety and Health Administration (OSHA)
standards, latest revision, the same of which is made a part of these specifications, along with the following additions and revisions. The types of trench safety systems currently allowed include shoring, bracing, solid shoring, sloping of the ground, and trench shields.

The Contractor may submit an alternative method of trench safety, but may not implement until a sealed submittal by a Registered Professional Engineer from the State of Louisiana is approved by the Owner's Engineer. At a minimum, the Contractor's design for sloping of the trench sides shall conform to the latest revision of OSHA Construction Standards, Subpart P, "Table P-1-Approximate angle of Repose For Sloping of Sides of Excavations", which is made by reference a part of these specifications.

Each Contractor shall be responsible and liable for this own Trench Safety System, including self-inspections, whether or not a project representative is present on the job site. The Contractor shall install additional safety equipment if requested to do so by the Owner's Engineer. The Owner's Engineer's decision shall be final. The cost of additional trench safety equipment required shall be the responsibility of the Contractor.

Before beginning any excavation the Contractor shall make an inspection of the job site. He shall pay special attention to the type of soil or soils in which he will be working, any adjacent roads, highways, and railroads, and any previous excavations. All underground installations shall be located, including utility lines, pipelines, etc., before any excavation begins.

The Contractor shall provide a trench safety system in every trench exceeding five feet in depth. The trench safety system shall be installed in a true horizontal position, be spaced vertically and shall be secured to prevent sliding, falling, or kick outs. The trench safety system shall be effective to the bottom of the excavation. All trenches shall be provided with an adequate means of exit at all times with spacing of 25 feet or less.

These means of exit shall be anchored in place in order to aid in the event a quick exit is necessary. During trench excavation, the excavated material shall be placed a minimum of two feet (2') away from the edge of the trench.

944.6 MAINTENANCE

The Contractor shall inspect all trench excavations daily and after every rain storm. This inspection shall be documented and performed by a competent person. He shall check for any evidence of cave-ins, slides, etc. If any changes in soil conditions, failure of the trench, or other defects are found, the contractor shall remedy same before construction activities are resumed.

944.7 BASIS FOR PAYMENT

No separate payment will be made for trench safety systems, and all costs in connection therewith shall be included in the contract unit price for BASE bid Item 11, “Repair Structure No. 4".
TS – 945  GRATING

945.1 GENERAL

This item shall consist of furnishing all materials and labor necessary to provide all metal grating walkways in accordance with these specifications, as shown on the plans or as directed by the engineer.

945.2 MATERIALS

Metal grating for walkways shall be constructed using 15W4 type and shall be one inch (1") tall. All are to be installed as specified by the plans and specifications associated with this project.

945.3 PLACEMENT / INSTALLATION

SURFACE PREPARATION: All surfaces which grating shall be placed on shall be free of any debris or other materials which may cause misalignment or improper installation.

METHODS OF INSTALLATION: The grating shall be installed in accordance with the plans and specifications. Grating shall be secured as specified in the plans.

POST-PLACEMENT PROCEDURES: Inspect finished installation and make adjustments as necessary to conform to plans and specifications.

945.4 MEASUREMENT AND PAYMENT

This item shall be measured in a lump sum and all costs shall be included in at the contract lump sum price for BASE bid item 3, “Repair Structure No. 1”.
APPENDIX A: INTERPRETATION OR CLARIFICATION BY ENGINEER FORM
MUD LAKE MAINTENANCE PROJECT CS-20
Interpretation or Clarification by Engineer
Number (____)
December 8, 1994

Mr. Don Gohmert
State Conservationist
Soil Conservation Service
3737 Government Street
Alexandria, Louisiana 71302

RE: East Mud Lake Hydrologic Restoration Project C/S-20: CWPPRA Section 303(e) Approval

Dear Mr. Gohmert:

By this letter, I am transmitting to you a copy of the Temporary Easement, Servitude, and Right-of-way Agreement (with maps and exhibits attached) that has been executed by Louisiana Department of Natural Resources (DNR) and Fina Oil and Chemical Company as of December 6, 1994.

This document fulfills several of the requirements outlined in Section 5(h) of the Standard Operating Procedures Manual for CWPPRA projects: the agreement is the "Language of Landrights," and the maps and exhibits attached to the agreement describe the "Plan" and the "Project Limits".

This letter and document may be forwarded under cover letter from Soil Conservation Service (SCS) to the U. S. Army Corps of Engineers as part of your request for CWPPRA Section 303(e) approval. DNR has been informed that SCS has completed another element required for approval: its overgrazing determination. These items may be sent to the following address:

Mr. Clyde H. Sellers
Chief, Real Estate Division
U. S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267
If you need further assistance or have any questions regarding this matter, please contact Ms. Kay Stamey of CRD at (504) 342-9420.

Sincerely,

Ivor Ll. van Heerden, Ph. D.
Assistant Secretary

ILivH/KS

Enclosures

cc (with enclosures): Warren Fleet, Office of General Counsel
Darryl Clark, CRD Project Manager

cc (no enclosures): Bill Good, CRD
Quin Kinler, OCRM
Kay Stamey, CRD
Project File C/S-20
TEMPORARY EASEMENT AND RIGHT-OF-WAY AGREEMENT

East Mud Lake Hydrologic Restoration Project C/S-20, Cameron Parish, Louisiana

STATE OF LOUISIANA

PARISH OF Cameron Parish

THIS TEMPORARY EASEMENT AND RIGHT-OF-WAY AGREEMENT (Agreement), made and entered into this 15th day of May, 1995, by and between: MATILDA GRAY STREAM, HAROLD H. STREAM, III, and SANDRA GRAY STREAM MILLER, herein collectively referred to as "GRANTOR", and the STATE OF LOUISIANA, through its Department of Natural Resources, herein represented by Jack McLaren, its Secretary, hereinafter referred to as the "STATE".

WITNESSETH:

For and in consideration of the promises and undertakings by STATE to GRANTOR herein, and further for the sum of Ten and No/100 ($10.00) Dollars and other good and valuable consideration, including the potential benefits to GRANTOR's lands resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto STATE, its successors, assigns or transferees, the necessary temporary easement and right-of-way, together with the right to enter in, on, and over, GRANTOR's property, for the purposes of planning, construction, operation, maintenance, and monitoring of conservation and restorative measures, structures and/or appurtenances as part of the East Mud Lake Hydrologic Restoration Project C/S-20 (the Project) located on said GRANTOR's property. Such restorative measures, structures and/or appurtenances shall be located on the following described property, including expressly, but not limited to, any lands or water covered lands which might be owned by GRANTOR (said Lands), to wit:

Lands in Sections 27, 28, 33 (also called 34), and 34 (also called 35), T14S-R11W, Cameron Parish, Louisiana, more fully described below:

Section 27, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 2 miles and 2520 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1 mile, then East 1/4 mile, thence South 1 mile, thence West 1/4 mile to a point of commencement; 160 acres.

Section 28, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 2 miles and 2520 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1 mile, then West 1/4 mile, thence South 1 mile, then East 1/4 mile to point of commencement; 160 acres.

Section 33, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 1 mile and 5160 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1/2 mile, then West 1/4 mile, thence South 1/2 mile, then East 1/4 mile to point of commencement; 80 acres.

Section 34, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 1 mile and 5160 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1/2 mile, then East 1/4 mile, thence South 1/2 mile, then West 1/4 mile to point of commencement; 80 acres.
STATE hereby represents that it has disclosed to GRANTOR all known material aspects and features of the Project and all known material anticipated impacts thereof to said Lands. Grantor hereby represents that GRANTOR understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the Project, including any impairment, alteration or interference with the natural servitude of drain provided for by Louisiana Law, including expressly but not limited to, Louisiana Civil Code Article 655-658 and/or La. R.S. 38:218.

I. This Agreement includes the rights to perform the following activities for the purposes authorized by Federal (P.L. 101-646) and State (R.S. 49:213-214) law and at the sites or locations identified in attached exhibits and within the limits and bounds therein described:

a. The right to plant or cause the growth of vegetation in, on, over and across said Lands, including the right to nourish, replenish and maintain said vegetation at locations along the shoreline of Mud Lake as determined by site evaluation of lands shown on Exhibit A (see detail on Exhibit B);

b. The right to post signs or notices on or near appropriate project features on said Lands, as may be deemed necessary by STATE;

c. The right to alter or remove structures and/or appurtenances constructed on said Lands by STATE pursuant to the Project;

d. The right to enter said Lands for the purpose(s) of monitoring, conducting surveys, inspections and investigations required by STATE to evaluate the effectiveness of the Project and project features, including maintaining/improving wetland and/or restored land quantity and quality;

e. The right to enter and traverse said Lands to access project features located on adjacent lands, and

f. The right to make modifications to the above, including changes in materials for project features and minor changes to project feature locations, as may be deemed necessary by STATE to fully and properly implement the Project.

II. STATE agrees to give reasonable notice to GRANTOR prior to initiation of work, or the need for ingress or egress, for the purposes required in implementing, constructing, maintaining and monitoring the Project.

III. STATE agrees to indemnify and hold GRANTOR harmless against and from any loss or liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney's fees and court costs, arising wholly or in part from or in connection with the Project except to the extent that GRANTOR's loss is due to GRANTOR's gross negligence. In the event any suit is brought against GRANTOR in connection with any activity for which indemnity is owed hereunder, STATE shall, at GRANTOR's written request, appear and defend said suit at STATE's sole cost, risk and expense, and STATE shall be responsible for any final judgment that may be entered against GRANTOR therein, except for such judgment(s) allocable to GRANTOR's fault or gross negligence. GRANTOR shall have no liability to STATE for any damage done to structures or to the project as a result of the activities of third persons.

IV. STATE shall be responsible for repair or replacement in like manner of any fences, roads, bridges, and other facilities located on said Lands which may be damaged or destroyed by STATE, or its designated representatives or contractors, during the construction, operation and maintenance of the structures and/or appurtenances installed as part of the project, and STATE shall remove or dispose of all debris associated with construction, operation and maintenance of the project.

V. STATE acknowledges that La. R.S. 49:213.7E(2) provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund. Further, said statute provides that in the event legal proceedings
are instituted by any person seeking recognition of a right of ownership, servitude, or use in or over private property solely on the basis of the expenditure of funds from the Wetlands Conservation and Restoration Fund, the state shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney fees. STATE and GRANTOR agree that this Agreement shall not be construed as being prohibited by the provisions of R.S. 49:213.7E(2).

VI. It is understood GRANTOR shall retain title and all property rights (subject to the rights of STATE herein) in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures and/or appurtenances constructed hereunder pursuant to the Project on said Lands shall be adjusted, removed and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR, without prior written approval of STATE, which such prior written approval will not be unreasonably delayed or refused.

VII. Subject to the above, in its exercise of the rights herein granted, STATE agrees not to unreasonably interfere with (a) oil and gas operations, (b) agricultural operations, and (c) hunting, trapping and alligator egg operations presently occurring, or authorized to occur, on said Lands. STATE specifically acknowledges the continuing right of GRANTOR, its heirs, successors, assigns, transferees or lessees, to use, occupy and enjoy all of said Lands, for all purposes, in such manner at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of conducting oil, gas or other mineral operations on any of said Lands, for the exploration, discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under oil, gas and mineral leases or otherwise, and for the purpose of farming, grazing, hunting and trapping fur-bearing animals and alligator egg operations thereon provided, however, that such use, occupation, and enjoyment shall not unreasonably and unduly interfere with the lawful activities of STATE pursuant to this Agreement.

VIII. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said Lands. This Agreement is executed by GRANTOR without any warranty or recourse whatsoever. If at any time any questions or litigation should arise as to the ownership of any part of said Lands, or as to any boundary or limit of said Lands covered by this Agreement, this Agreement shall not be construed to be, or permitted to serve as, evidence or as a basis of estoppel against any party hereto, or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

IX. STATE acknowledges that it has been given the opportunity to inspect said Lands and GRANTOR'S other property which may be used by STATE, and/or its designated representatives and contractors, to access the said Lands and accepts the condition of same for all purposes.

X. STATE may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the said Lands.

XI. This Agreement shall become effective upon the date of the signature of the STATE, and shall remain in effect for a term of twenty (20) years unless sooner released by STATE; and, provided further, that if STATE should fail to commence work or improvements on said Lands to implement the Project within five (5) years of GRANTOR'S execution hereof, this Agreement shall automatically terminate and STATE shall have no further rights hereunder.

XII. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XIII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon the parties executing same.

XIV. This Agreement does not confer or waive any rights except as expressly provided herein.

XV. The STATE and GRANTOR acknowledge that operation of the project shall conform to the terms of the Memorandum of Agreement entered into among GRANTOR, Department of Natural

IN WITNESS WHEREOF, GRANTOR has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

GRANTORS:

Matilda Gray Stream

By: [Signature]

Date: 6/26/95

Harold H. Stream-III

By: [Signature]

Date: 11/2/95

Sandra Gray Stream Miller

By: [Signature]

Harold H. Stream, III, Attorney-in-fact

Date: 11/2/95

IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

DNR General Counsel: [Signature]

STATE OF LOUISIANA

DEPARTMENT OF NATURAL RESOURCES

By: [Signature]

Title: Secretary, Department of Natural Resources

Date: May 1, 1995

4
STATE OF Louisiana

PARISH/COUNTY OF Colfax

BEFORE ME, the undersigned authority, on this 12th day of April, 1995, personally appeared Matilda Gray Stream, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed it as his free act and deed.

Kaye M. Dennis
NOTARY PUBLIC

My commission expires: [Signature]
(SEAL)

STATE OF Louisiana

PARISH/COUNTY OF Colfax

BEFORE ME, the undersigned authority, on this 12th day of April, 1995, personally appeared Harold H. Stream III, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed it as his free act and deed.

Kaye M. Dennis
NOTARY PUBLIC

My commission expires: [Signature]
(SEAL)
PARISH/COUNTY OF

BEFORE ME, the undersigned authority, on this ___ day of ___ , 1995, personally appeared Harold H. Stream III, to me known, who declared and acknowledged to me, Notary, that he is the Attorney-in-fact for Sandra Gray Stream Miller, and that as such he signed and executed the foregoing instrument as the free and voluntary act and deed of Sandra Gray Stream Miller, for and on behalf of Sandra Gray Stream Miller, and for the object and purposes herein set forth.

My commission expires: ____________
(SEAL)

STATE OF Louisiana
PARISH OF E.B.R.

BEFORE ME, the undersigned authority, on this ___ day of ___ , 1995, personally came and appeared Jack McElhanon, to me known, who declared that he/she is the Secretary of the Department of Natural Resources, State of Louisiana, that he/she executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him/her by said State Agency and that he/she acknowledged the instrument to be the free act and deed of said State Agency.

My commission expires: ____________
(SEAL)
EXHIBIT A

EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT
CAMERON PARISH, LOUISIANA
TEMPORARY EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT

East Mud Lake Hydrologic Restoration Project C/S-20, Cameron Parish, Louisiana

STATE OF LOUISIANA §

PARISH OF CAMERON §

THIS AGREEMENT, made and entered into this 20th day of September, 1994, by and between FINA OIL AND CHEMICAL COMPANY, a Delaware corporation, whose address is P.O. Box 62102, Houston, Texas 77205-2102, LMD INVESTMENTS LIMITED PARTNERSHIP, a Texas limited partnership of which Los Corralitos Incorporated is its General Partner, whose address is 5075 Westheimer, Suite 1290, Houston, Texas 77056, BETSY M. MULLINS, whose address is 5075 Westheimer, Suite 1290, Houston, Texas 77056, and LANNIE MECOM MOSES, whose address is Wichita Ranch, Route 7, Box 7012A, Brenham, Texas 77833-9012, herein collectively referred to as “GRANTOR”, and the STATE OF LOUISIANA, through its Department of Natural Resources, herein represented by Jack McClahan, its Secretary hereinafter called “GRANTEE”.

WITNESSETH:

For and in consideration of the promises and undertakings by GRANTEE (SPONSOR) to GRANTOR herein, and further for the sum of Ten and No/100 ($10.00) Dollars and other good and valuable consideration, including the potential benefits to GRANTOR’S lands resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto GRANTEE (SPONSOR), its successors, assigns or transferees, the necessary temporary rights-of-way, servitudes and easements (hereinafter "said servitude"), together with the right to enter in, on, and over, GRANTOR’S property, for the purposes of planning, construction, operation, maintenance, and monitoring of conservation and restorative measures, structures and/or appurtenances as part of the East Mud Lake Hydrologic Restoration Project C/S-20 (hereinafter referred to as the Project) located on said (GRANTOR’S) property. Such restorative measures, structures and/or appurtenances shall be located on the following described property, including expressly, but not limited to, any lands, waterbottoms or water covered Lands which might be owned by GRANTOR (hereinafter "said Lands") as described in the attached Exhibit A, and shown on Exhibit A-1.

GRANTOR hereby warrants that GRANTOR has read and understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the project, including any impairment, alteration or interference with the natural servitude of drain provided for by Louisiana Law, including expressly but not limited to, Louisiana Civil Code Article 655-658 and/or La. R.S. 38:218.

I. Said servitude includes the rights to perform the following activities for the purposes authorized by federal (P.L. 101-646) and State (R.S. 49:213-214) law and at the sites or locations identified in the Project and exhibits attached and within the limits and bounds therein described:

a. The right to construct (including the necessary excavation and/or filling), operate, maintain and monitor water control structures including all appurtenances thereto, in, over and across the said Lands at Sites 1, 5, 6, 7, 8, 9a, 9b, 11, 13, 17, 19, 20, 21, 22, and 29 as shown on Exhibit B hereto (see detail on Exhibit C);

b. The right to plant or cause the growth of vegetation in, on, over and across said Lands, including the right to nourish, replenish and maintain said vegetation at locations along the shoreline of Mud Lake as determined by site evaluation of lands shown on Exhibit B (see detail on Exhibit H);

c. The right to plug, close or fill selected channels, canals, ditches, streams or waterbodies located on said Lands at Sites 16 and 29 as shown on Exhibit B (see detail on Exhibit L);
d. The right to construct (including the necessary borrow areas) maintain and monitor overflow banks/no channelized water exchanged on, over and across said Lands between Sites 14 and 15 as shown on Exhibit B. (See detail on Exhibit L);

c. The right to borrow, excavate, grade, and remove soil, vegetation and associated materials from the said Lands between Sites 14 and 15 as shown on Exhibit B. (see detail on Exhibit L);

d. The right to post signs or notices on or near appropriate project features on said Lands, as may be deemed necessary by GRANTEE (SPONSOR);

e. The right to construct, locate, maintain and service required monitoring devices and equipment on said Lands as shown in the Project;

f. The right to alter or remove structures and/or appurtenances placed on said Lands by GRANTEE (SPONSOR) pursuant to the Project;

g. The right to enter said Lands for the purpose(s) of conducting surveys, inspections and investigations required by GRANTEE (SPONSOR) to evaluate the effectiveness of project features in maintaining/improving wetland and/or restored land quantity and quality on said Lands;

h. The right to enter and traverse said Lands to access project features located on adjacent Lands; and

i. The right to make modifications to the above, including changes in materials for project features and minor changes to project feature locations, and to perform such other activities or work on said Lands as may be deemed necessary by GRANTEE (SPONSOR) to fully and properly implement the Project.

II. GRANTEE (SPONSOR) agrees to give reasonable notice to GRANTOR prior to initiation of work, or the need for ingress or egress, for the purposes required in implementing, constructing, maintaining and monitoring the project.

III. GRANTEE (SPONSOR) agrees to indemnify and hold GRANTOR harmless against and from any loss or liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney’s fees, arising wholly or in part from or in connection with GRANTEE (SPONSOR) operations hereunder on said Lands except for any loss or liability on account of injuries resulting from the gross negligence or willful misconduct of GRANTOR. In the event any suit is brought against GRANTOR to recover for or on account of any such damage, injury or death, resulting wholly or in part from GRANTEE (SPONSOR) operations hereunder, GRANTEE (SPONSOR) will, at GRANTOR’S written request, appear and defend said suit at GRANTEE (SPONSOR’S) own sole cost, risk and expense, and GRANTEE (SPONSOR) will be responsible for any judgment that may be entered against GRANTOR therein when said suit(s) is (are) finally determined, except for such judgment(s) allocable to GRANTOR’S gross negligence or willful misconduct. Should GRANTEE (SPONSOR) contract out work to be performed on said Lands or waterbottoms, GRANTEE (SPONSOR) shall require the contractor to list GRANTOR as an additional insured on policies required by GRANTEE (SPONSOR). Such insurance policies shall provide that GRANTOR is, and will be, protected from and defended and insured against, without costs or expense to GRANTOR, any liability or loss (including loss of life), including damages, penalties and attorney’s fees, on account of injuries to persons (including death), or damage to property of any kind, arising wholly or in part from or in connection with GRANTEE (SPONSOR) operations hereunder on said land, except for any loss or liability on account of injuries resulting from the gross negligence or willful misconduct of GRANTOR. GRANTOR shall have no liability to GRANTEE (SPONSOR) for any damage done to structures or to the project as a result of the activities of third persons.

IV. GRANTEE (SPONSOR) shall be responsible for repair or replacement in like manner of any fences, roads, bridges, and other facilities located on said Lands which may be damaged or destroyed by GRANTEE (SPONSOR), or its designated representatives or contractors, during
the construction, operation and maintenance of the structures and/or appurtenances installed as part of the project, and GRANTEE (SPONSOR) shall remove or dispose of all debris associated with construction, operation and maintenance of the project.

V. GRANTEE (SPONSOR) acknowledges that La. R.S. 49:213.7.E.(2) provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund. Further, said statute provides that in the event legal proceedings are instituted by any person seeking recognition of a right of ownership, servitude, or use in or over private property solely on the basis of the expenditure of funds from the Wetlands Conservation and Restoration Fund, the state shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney fees. However, to the maximum extent permitted by La. R.S. 49:213.7.E.(2), the servitude and right-of-way rights granted herein shall be considered real rights and covenants running with the land.

VI. It is understood GRANTOR shall retain title and all property rights (subject to the rights of GRANTEE (SPONSOR) herein) in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures and/or appurtenances constructed hereunder pursuant to the Project on said Lands shall be adjusted, removed and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR, without prior written approval of GRANTEE (SPONSOR), which such prior written approval will not be unreasonably delayed or refused.

VII. Subject to the above, in its exercise of the rights herein granted, GRANTEE (SPONSOR) agrees not to unduly interfere with (a) oil and gas operations, (b) agricultural operations, and (c) hunting, trapping and alligator egg operations presently occurring, or authorized to occur, on said Lands. GRANTEE (SPONSOR) specifically acknowledges the continuing right of GRANTOR, its heirs, successors, assigns, transferees or lessees, to use, occupy and enjoy all of said Lands, for all purposes, in such manner at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of conducting oil, gas or other mineral operations on any of said Lands, for the exploration, discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under oil, gas and mineral leases or otherwise, and for the purpose of farming, grazing, hunting and trapping fur-bearing animals and alligator egg operations thereon provided, however, that such use, occupation, and enjoyment shall not unreasonably and unduly interfere with the lawful activities of GRANTEE (SPONSOR) pursuant to this Agreement.

VIII. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said Lands. If at any time any questions or litigation should arise as to the ownership of any part of the property covered hereby, or as to any boundary or limit of any part of the separate and various Lands covered by this Agreement, this Agreement shall not be construed to be, or permitted to serve as, evidence or as a basis of estoppel against any party hereto, or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

IX. GRANTEE (SPONSOR) acknowledges that is has been given the opportunity to inspect the servitude premises and GRANTOR’S other property which may be used by GRANTEE (SPONSOR), and/or its designated representatives and contractors, to access the servitude premises and accepts the condition of same for all purposes.

X. GRANTEE (SPONSOR) may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the servitude premises.

XI. This Agreement shall become effective upon the date of the signature of the GRANTEE (SPONSOR), and shall remain in effect for a term of forty (40) years unless sooner released by GRANTEE (SPONSOR); and, provided further, that if GRANTEE (SPONSOR) should fail to commence work or improvements on said Lands to implement the Project within five (5) years...
of GRANTOR’S execution hereof, this servitude shall automatically terminate and GRANTEE (SPONSOR) shall have no further rights hereunder.

XII. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XIII. This agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon the parties executing same.

XIV. This agreement does not confer or waive any rights except as expressly provided herein.

XV. All notices required hereunder shall be delivered by U.S. Mail to:

GRANTOR: Fina Oil and Chemical Company
Post Office Box 62102
Houston, Texas 77205-2102
Attention: Mr. Thomas M. Wadsworth
Attorney-in-fact
Division Manager, Eastern Division

GRANTEE: State of Louisiana
Department of Natural Resources
Post Office Box 94396
Baton Rouge, Louisiana 70804-9396
Attention: Dr. Bill Good
Administrator
Coastal Restoration Division
IN WITNESS WHEREOF, this GRANTOR(S) has hereunto signed his/her name this 20th day of September, 1994, in the presence of the two (2) undersigned competent witnesses.

WITNESSES:

GRANTOR(S):

FINA OIL AND CHEMICAL COMPANY

BY: Thomas M. Wadsworth
Thomas M. Wadsworth
TITLE: Attorney-In-Fact

LMD INVESTMENTS LIMITED PARTNERSHIP

BY: Betsy M. Mullins
Betsy M. Mullins
TITLE: President Of Los Corralitos Incorporated,
General Partner

BY: Betsy M. Mullins
Betsy M. Mullins

BY: Laurie Mecom Moses
Laurie Mecom Moses
IN WITNESS WHEREOF, the GRANTEE (SPONSOR) has hereunto signed his name this 6th day of December, 1994, in the presence of the two (2) undersigned competent witnesses.

WITNESSES:

[Signatures]

GRANTEE (SPONSOR):
STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES

BY: [Signature]
TITLE: Secretary

STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this 20th day of September, 1994, before me personally appeared THOMAS M. WADSWORTH to me personally known, who being by me duly sworn, did say that he is Attorney-In-Fact of FINA OIL AND CHEMICAL COMPANY, and that the foregoing instrument was signed in behalf of said corporation by authority of its Board of Directors, and that he acknowledged the instrument to be the free act and deed of said corporation.

[Signature]
NOTARY PUBLIC - STATE OF TEXAS

My commission expires: 5-16-96
(SEAL)

STATE OF TEXAS §
COUNTY OF HARRIS §

On this 25th day of October, 1994, before me appeared BETSY M. MULLINS to me known, who declared and acknowledged to me, Notary, that she is the President of LOS CORRALITOS INCORPORATED, General Partner of LMD INVESTMENTS LIMITED PARTNERSHIP, a Texas limited partnership, and that the foregoing instrument was signed in behalf of said limited partnership by authority of the Board of Directors of Los Corralitos Incorporated, and that she acknowledged the instrument to be the free act and deed of said limited partnership.

[Signature]
NOTARY PUBLIC - STATE OF TEXAS

My commission expires: 4-19-95
(SEAL)
STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared BETSEY M. MULLINS, personally known to be the person who executed the foregoing instrument and acknowledged to me that she executed the same as her free and voluntary act and deed for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 12th day of OCTOBER, 1994.

[Signature]

NOTARY PUBLIC - STATE OF TEXAS

My commission expires: 4-19-95
(SEAL)

ROBERT VALENCIA
Notary Public, State of Texas
My Commission Expires

STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared LANNIE MECOM MOSES, personally known to be the person who executed the foregoing instrument and acknowledged to me that she executed the same as her free and voluntary act and deed for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 17th day of OCTOBER, 1994.

[Signature]

NOTARY PUBLIC - STATE OF TEXAS

My commission expires: 5-30-96
(SEAL)

KATHLEEN D. BROWN
Notary Public, State of Texas
My Commission Expires
STATE OF Louisiana
PARISH OF East Baton Rouge

BEFORE ME, the undersigned authority, on this 6th day of December, 1994, personally came and appeared Jack McGoogan, to me known, who declared that he/she is the Secretary of the Department of Natural Resources, State of Louisiana, that he/she executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him/her by said State Agency and that he/she acknowledged the instrument to be the free act and deed of said State Agency.

[Signature]
NOTARY PUBLIC

My commission expires: [Signature]
(SEAL)
EXHIBIT A

Attached to and made a part of that certain Easement, Servitude and Right-Of-Way Agreement between Fina Oil and Chemical Company, et al, as Grantor and the State of Louisiana, as Grantee, dated September 20, 1994.

That portion of Fina Oil and Chemical Company, et al, property located in Cameron Parish, Louisiana and lying East of Louisiana Highway 27 falling partially or entirely in the following sections:

T14S-R10W
Sections 17, 18, 19, 20, 29, 30, 31 and 32

T14S-R11W
Sections 22, 23, 24, 25, 26, 27, 34, 35 and 36

T15S-R11W
Section 2 and 3

NOTE: The above description is based upon the record title of the property and refers to the original full government call sections.
EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT WITHIN PROPERTIES BELONGING TO FINA OIL AND CHEMICAL COMPANY, ET AL CAMERON PARISH, LOUISIANA.
EXHIBIT B

Composite Map Showing Locations of All Evaluation Sites (E.S.).

EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT
CAMERON PARISH, LOUISIANA
PROFILE DETAIL

Typical Variable Crest weir

EXHIBIT E
BOUNDARY LEVEE REPAIR

MUD LAKE SHORELINE REPAIR

EXHIBIT J
MEMORANDUM OF AGREEMENT

EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT

On this 10th day of August, 1995, the U.S. Natural Resources Conservation Service, the Louisiana Department of Natural Resources, the Cameron Parish Gravity Drainage District No. 7, Fina Oil and Chemical Company, Matilda Gray Stream, Harold H. Stream, III (individually and as Attorney-in-Fact for Sandra Gray Stream Miller), W.F. Henry, Jr., Gene Constance, and Cecil Peveto did enter into this Memorandum of Agreement regarding the operation of the East Mud Lake Hydrologic Restoration Project (CS-20), Cameron Parish, Louisiana.

INTRODUCTION

The U.S. Natural Resources Conservation Service (NRCS), pursuant to P.L. 101-646, and the Louisiana Department of Natural Resources (LDNR), pursuant to R.S. 49:213-214, are authorized to construct the East Mud Lake Hydrologic Restoration Project (Project) in Cameron Parish, Louisiana. Construction of this Project is scheduled to commence in Spring/Summer 1995. The Project would be located on property owned in part and managed by Fina Oil and Chemical Company (Fina) and on property owned by Matilda Gray Stream, Harold H. Stream, III, and Sandra Gray Stream Miller (Stream Owners). Such property is located within Cameron Parish Gravity Drainage District No. 7 (Drainage District No. 7) and is located adjacent to property owned in part by W.F. Henry, Jr., property owned in part by Gene Constance, and property owned in part by Cecil Peveto.

The Project includes, among other features, the construction, operation, maintenance, and monitoring of water control structures. Such water control structures are to be operated in accordance with State Coastal Use Permit P900448 and Federal Section 404 Permit SW(Cameron Parish Wetlands)923. All signatories to this Agreement are aware of, and have been provided copies of, these permits. Two purposes of monitoring the Project are 1) to determine the potential need to modify operation of the water control structures, pursuant to necessary permit modifications, to achieve greater wetland resource benefits and 2) to assess potential impact to water conditions on adjacent properties.

PURPOSE AND INTENT

Each signatory to this Agreement has a well-founded interest in operation of the Project's water control structures. The purpose and intent of this Agreement is to ensure that all signatories will be provided the opportunity to participate in Project reviews and evaluations and in the decision making process which may lead to a modification of structure operation.

AGREEMENT

NRCS, LDNR, Drainage District No. 7, Fina, Stream Owners, W.F. Henry, Jr., Gene Constance, and Cecil Peveto hereby agree that all signatories to this Agreement shall be provided the opportunity to participate in Project reviews and evaluations, and, in the event that modification of structure operation may be warranted pursuant to Project monitoring, all signatories to this Agreement shall be provided the opportunity to participate in the decision making process which may lead to a modification of structure operation. Participation in the decision making process means that the views, concerns, and recommendations of all signatories shall be solicited and considered, but in the event that a consensus regarding operation can not be reached, the final decision regarding operation shall rest with NRCS and LDNR in accordance with the March 24, 1994, Cost Sharing Agreement entered into by these two agencies regarding this project. In the event of any emergency modifications, all signatories shall be notified within ten days of such modification, and upon cessation of emergency conditions, the water control structures shall be returned to pre-emergency operation, unless all signatories are allowed to participate in the decision making process which may lead to a modification of structure operation.

This Agreement shall become effective upon the date it is signed by the Secretary of LDNR.
and shall have a term of twenty years.

This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon the parties executing same.

All communications and correspondence which occur pursuant to this Agreement shall be directed to the following:

For the Stream Owners:  
David Richard  
Stream Property Management, Inc.  
P.O. Box 40  
Lake Charles, LA 70602  
Telephone: 318-439-1055  
Fax: 318-439-2170

For Fina:  
John Woodard  
Fina LaTerre Manager  
P. O. Box 206  
Houma, LA 70361  
Telephone: 504-879-3528  
Fax: 504 876-9267  

Thomas Wadsworth, Attorney-in-Fact  
Division Manager - Eastern Division  
Fina Oil and Chemical Company  
P. O. Box 62102  
Houston, TX 77205-2102  
Telephone: 713-986-6089  
Fax: 713-986-6019

For W.F. Henry, Jr.:  
W.F. Henry, Jr.  
Rt. 1 Box 139  
Cameron, LA 70631  
Telephone: 318-775-5545

For Gene Constance:  
Gene Constance  
H.C. 69 Box 99  
Cameron, LA 70631  
Telephone: 318-569-2162

For Cecil Peveto:  
Cecil Peveto  
6839 Choupique Road  
Sulphur, LA 70663  
Telephone: 318-583-7234

For Drainage District No. 7:  
Rodney Guilbeau  
Cameron Parish Gravity Drainage District No. 7  
205 Little Ridge  
Cameron, LA 70631  
Telephone: 318-569-2159  
Fax: 318-569-2250
For NRCS:
State Conservationist
USDA Natural Resources Conservation Service
3737 Government Street
Alexandria, LA 71302
Telephone: 318-473-7751
Fax: 318-473-7771

For LDNR:
Secretary
Louisiana Department of Natural Resources
P.O. Box 94396
Baton Rouge, LA 70804-9396
Telephone: 504-342-4303
Fax: 504-342-2707

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates below, in the presence of the undersigned witnesses:

WITNESSES:

STREAM OWNERS

BY: ____________________________  ____________________________
Matilda Gray Stream

DATE: ______________

HAROLD H. STREAM, III

BY: ____________________________  ____________________________
Harold H. Stream, III

DATE: ______________

SANDRA GRAY STREAM MILLER

BY: ____________________________  ____________________________
Harold H. Stream, III, Attorney-In-Fact

DATE: ______________

FINA OIL AND CHEMICAL COMPANY

BY: ____________________________  ____________________________
Thomas M. Wadsworth, Attorney-in-Fact

DATE: ______________

___________________________  ____________________________
E. Scott Henry

DATE: ______________
WITNESSES:

G. Gene Constanc
Date: 7/20/34

Gene Constanc

Cecil Peveto

Cecil Peveto
Date: 4/25/34

Cameron Parish Gravity
Drainage District No. 7

By: Margaret Martin
Title: President
Date: 6/1/95

U.S. Natural Resources
Conservation Service

By: Donald Gohmert
Donald Gohmert, State Conservationist
Date: 9/1/95

Louisiana Department of
Natural Resources:

DNR General Counsel: Warren A.

Date: 8/10/95

Pamela Crain
RIGHT-OF-PASSAGE AGREEMENT
EAST MUD LAKE MARSH MANAGEMENT PROJECT CS-20
CAMERON PARISH, LOUISIANA

STATE OF LOUISIANA
PARISH OF CAMERON

THIS AGREEMENT, made and entered into this 30th day of June, 2014, by and between THE NATHANIEL VINCENT ESTATE, Tax I.D. No. 72-1072755, represented herein by Earl J. Ellender, Jr., its Manager, whose mailing address is 1521 Cypress Street, Sulphur, Louisiana 70663; (hereinafter collectively referred to as "Grantor"); and the STATE OF LOUISIANA, through its DEPARTMENT OF NATURAL RESOURCES ("State") herein represented by Scott A. Angelle, its Secretary.

WITNESSETH:

In consideration of the mutual promises and covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and of the obligations herein undertaken by State, Grantor hereby grants unto State, upon the terms and conditions hereinafter set forth, (hereinafter called the Agreement), a right and privilege to pass over and across, via an existing road, the following described property belonging to Grantor and located in Cameron Parish, Louisiana (hereinafter called said Lands), to-wit:

TOWNSHIP 14 SOUTH – RANGE 10 WEST

SECTION 18: The Southwest Quarter (SW/4)

I. Grantor does not warrant or represent the correctness of any survey or of any plats attached hereto purporting to show the location of the said Lands.

II. In this Agreement, Grantor conveys the right of ingress, egress and passage across the said Lands, including passage through existing roads and/or canals, by the State, its agents, representatives, contractors and employees for the purposes of planning, constructing, inspecting, maintaining, and monitoring of the East Mud Lake Marsh Management Project CS-20, and for no other purpose.

III. State shall be responsible for repair of any damages to the said Lands resulting from ingress, egress or passage over said Lands by the State or its representatives, contractors or assigns to conditions existing prior to access by State.

IV. State agrees to indemnify and hold Grantor harmless against and from any loss or liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney’s fees; provided that such indemnity is limited to loss or liability that results from State’s operations hereunder on said Lands. In the event any suit is brought against Grantor to recover for or on account of any such damage, injury or death, resulting from State’s operations hereunder, State will, at Grantor’s written request, appear and defend said suit at State’s own sole cost, risk and expense, and State will be responsible for any judgment that may be entered against Grantor therein when said suit is finally determined, but only to the extent that such judgment is attributable to liability that results from State’s operations hereunder on said Lands.

V. The State may assign or transfer this Agreement, in whole or in part, any or all of its rights hereunder.

VI. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

VII. This Agreement shall be in effect for twenty (20) years from the date of the signature of the State, unless sooner released by the State.
VIII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon any of the parties executing same.

IX. This Agreement does not confer or waive any rights except as expressly provided herein.

IN WITNESS WHEREOF, GRANTOR has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

Cathy Norwood
Print Name: Cathy Norwood

THE NATHANIEL VINCENT ESTATE
By: Earl J. Ellender, Jr.
Title: Manager
Date: June 29, 2004

IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES

By: Jack C. Caldwell
Title: Secretary
Date: 

IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

Adeline C. Smiley
Print Name: Adeline C. Goudes

Barnett Lege Jr.
Print Name: Barnett Rege Jr.

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES

DNR General Counsel: [Signature]

By: Scott A. Angelle
Title: Secretary

Date: 6-30-04
ACKNOWLEDGMENTS

STATE OF LOUISIANA

PARISH OF CALCASIEU

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this ______ day of ______, 20___, personally came and appeared ________________________, to me known, who, being by me duly sworn, declared and acknowledged to me, Notary, that he is the MANAGER of ________________, that as such duly authorized Manager, he signed and executed the foregoing instrument, as the free and voluntary act and deed of said Estate, for and on behalf of said Estate, and for the object and purposes therein set forth.

__________________________
Print Name: __________________
NOTARY PUBLIC

Notary Number: ____________
My commission expires: ________
(SEAL)

STATE OF LOUISIANA

PARISH OF EAST BATON ROUGE

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this ______ day of ______, 20___, personally came and appeared ________________________, me known, who declared that he is the Secretary of the ____________________________, that he executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he acknowledged the instrument to be the free act and deed of said State Agency.

__________________________
Print Name: __________________
NOTARY PUBLIC

Notary Number: ____________
My commission expires: ________
(SEAL)
STATE OF LOUISIANA
PARISH OF EAST BATON ROUGE

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this __________ day of ______________, 20__; personally came and appeared Scott A. Angelle, to me known, who declared that he is the Secretary of the Department of Natural Resources, State of Louisiana, that he executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he acknowledged the instrument to be the free act and deed of said State Agency.

Print Name: John F. Parker
NOTARY PUBLIC

Identification Number: 01117
My commission expires: at death
(SEAL)
September 29, 2003

Memorandum

To: Jack Caldwell, Secretary

Through: Randy Hanchev, OCRM Assistant Secretary

Through: Bill Good, CRD Administrator

From: Helen Hoffpaur, CRD Land Section Manager

RE: East Mud Lake Hydrologic Restoration Project CS-20

The referenced project, CS-20, involves construction of a water control structure located at the interface of Mud Bayou and a pipeline canal in Section 20 and/or 21, T14S-R10W in Cameron Parish. There is a tract owned by the Russell Vincent Heirs (“Heirs”), a very large group of owners (~200) located along a portion of the access route (See Exhibit A, shown in green), which will be used for access to construct, operate, maintain and monitor the feature for the twenty (20) year project life. We are currently in communication with Mr. Earl J. Ellender, Jr., who is the apparent signing party on behalf of the Heirs, and is in favor of the project. He is willing to execute a servitude agreement to grant authority for access to construct the project. Although Mr. Ellender could not provide documentation regarding his capacity to sign for the Heirs, he was able to provide an agreement that he signed on behalf of same on Feb 9, 1984 (attached).

For the lands of the Heirs, an initial title investigation revealed a very complex ownership situation, and it was decided that, because Project activities require little immediate contact with the tract, a complete title investigation was impractical and cost-prohibitive. Therefore, DNR obtained informal ownership information on the subject lands, which was supplied by Mr. Ellender. These efforts do not confirm title, but do provide a reasonable basis for moving forward with the project. NRCS was informed of and generally supports this decision at the working level very early in the landrights process. Although the list of Heirs provided by Mr. Ellender does not represent a single legal entity, it does represent an informal collection of most, if not all, of the possible final owners.
While there is a risk involved in having only Mr. Ellender sign the agreement on behalf of the Heirs, considering the complexity of the title, evidence of his being a sole signing party for the property, and the limited degree of direct impact on the property regarding access to the project, we recommend taking this action. We request your concurrence regarding this recommendation at your earliest convenience.

Should you have any questions, please call me at 3-9420.

CONCUR WITH RECOMMENDATION

[Signature]
Jack C. Caldwell
Secretary, Department of Natural Resources

HH/VJM/ER

Attachment

c: Patrick Landry, CRD Project Manager
   V. J. Marretta, CRD Land Specialist III
   Quin Kinler, NRCS

cs-20\russell vincent heirs recommendation (ellender sign) to jcer 9-24-03.wpd
ROAD RIGHT-OF-WAY AGREEMENT

STATE OF LOUISIANA
PARISH OF CAMERON

CLERK OF COURT
CAMERON PARISH

THIS AGREEMENT made and entered into as of February 1984, by and between The Nathaniel Vincent Estate (hereinafter called "Grantor"), and May Petroleum, Inc., a Delaware corporation (hereinafter called "Grantee"),

WITNESSETH:

1. For and in consideration of the sum of Two Thousand Dollars ($2,000.00), cash in hand paid, the receipt of which is hereby acknowledged, and of the terms and conditions contained herein, Grantor hereby grants unto Grantee the right to construct, maintain, and use a road, for the purposes hereinafter set forth, The said road right-of-way outlined in Exhibit "A", attached hereto and made a part hereof for all purposes.

2. Grantee does hereby grant unto Grantee its sole and exclusive use and that of its agents and/or employees, subject to the limitations and for the term herein provided.

(a) A thirty foot (30') surface easement and right-of-way across Grantor's property for the purpose of constructing and maintaining a board road to said well.

(b) A non-exclusive surface easement and right-of-way for the purpose of using, improving, and maintaining any existing roadway.

3. Grantee shall be obligated to rebuild, repair, and maintain in good repair all roads and/or bridges now or hereafter situated on Grantor's property during Grantee's use of it and to keep the same clean and free of trash and debris and shall, when the same are completed, restore such roads and bridges used by Grantee and leave them in as good condition as they were in, or as they existed when built, if hereafter constructed. Where extra fill or gravel is needed to be added, to any road used by Grantee, Grantee shall cause it to be added. If culverts or drainage pipe under the roads used by Grantor are access to the surface estate will not be interfered with. When Grantor's own otherwise than when this Agreement terminates, if Grantee builds, constructs, or places any bridges or culverts on Grantor's property during the term hereof, the same shall, at Grantee's option, be left on Grantor's property as the property of Grantor and in the same condition as when built or placed therein, normal wear and tear excepted.

4. Grantee agrees to pay to Grantor the sum of $2,000.00 per year for the continued use thereof, such sum being payable on or before the anniversary date of this agreement. Grantee shall pay such sum so long as this agreement is maintained in force through operations on or maintenance of such well.

5. May Petroleum, Inc. agrees to hold grantor harmless from causes of action arising out of its operations.
IN WITNESS WHEREOF, this instrument has been executed by the parties hereto as of the day and date hereinafore first written, in the presence of the undersigned competent witnesses.

WITNESSES:

THE NATHANIEL VINCENT ESTATE

BY: Betty M. Clark
Manager of Land
Gulf Coast Division

MAY PETROLEUM INC.

BY: Betty M. Clark
Manager of Land
Gulf Coast Division

THE STATE OF LOUISIANA
PARISH OF

On this day of , 1984, appeared to me personally known, who, being duly sworn did say that he is the of The Nathaniel Vincent Estate, and that said instrument was signed in behalf of said estate and that said appearer acknowledged said instrument to be the free act and deed of said estate.

My commission expires: Notary Public

THE STATE OF TEXAS
COUNTY OF DALLAS

On this day of February, 1984, appeared Betty M. Clark, to me personally known, who, being duly sworn did say that she is the Manager of Land, Gulf Coast Division, of May Petroleum Inc., a Delaware corporation, and that said instrument was signed in behalf of said corporation by authority of its Board of Directors and that said appearer acknowledged said instrument to be the free act and deed of said corporation.

My commission expires: August 31, 1985

Notary Public in and for the State of Texas
STATE OF LOUISIANA
PARISH OF LAFAYETTE

BEFORE ME, the undersigned Notary Public, on this day personally appeared ULYSSES L. BREAUX, who, being by me duly sworn, stated under oath that he was one of the subscribing witnesses to the foregoing instrument and that the same was signed by EARL J. ELLENDER, Jr. in his presence and in the presence of the other subscribing witness.

[Signature]

SWORN TO AND SUBSCRIBED before me this 14th day of February, 1994.

[Signature]
Notary Public in and for Lafayette Parish, Louisiana.
AMENDMENT OF TEMPORARY EASEMENT, SERVITUDE
AND RIGHT-OF-WAY AGREEMENT

EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT CS-20

CAMERON PARISH, LOUISIANA

STATE OF LOUISIANA

PARISH OF CAMERON

THIS AGREEMENT, made and entered into by and between: APACHE LOUISIANA MINERALS, INC., a Delaware corporation, Tax I.D. No. 45-0498052, represented herein by John W. Woodard, its Agent and Attorney-in-Fact, with a business address of Post Office Box 206, Houma, Louisiana 70361-0206; BETSY MECOM, born Mecom, SS# 461-78-7838, whose mailing address is 6916 Broadnec Road, Avondale, Colorado 81022; LMD INVESTMENTS LIMITED PARTNERSHIP, a Texas Limited Partnership, Tax I.D. No. 76-0337626, represented herein by Los Corralitos, Inc., its General Partner, herein represented by Betsy Mecom, its President, whose address is 6916 Broadnec Road, Avondale, Colorado 81022; and WICHITA PARTNERSHIP, LTD., a Texas Limited Partnership, Tax I.D. No. 76-0615924, represented herein by LANNIE MECOM, its duly authorized General Partner, with a business address of P. O. Box 460, Chappell Hill, Texas 77426-0460; hereinafter called the "GRANTOR", (whether one or more) as owner of the below described property; and the STATE OF LOUISIANA through its DEPARTMENT OF NATURAL RESOURCES ("DNR"), herein represented by Scott A. Angelle, its Secretary, hereinafter called the "STATE".

WITNESSETH:

WHEREAS, the STATE entered into a Temporary Easement, Servitude, And Right-Of-Way Agreement (hereinafter called the “Agreement”) dated September 20, 1994, with FINA OIL AND CHEMICAL COMPANY, LMD INVESTMENTS LIMITED PARTNERSHIP, BETSY M. MULLINS and LANNIE MECOM MOSES, therein collectively referred to as GRANTOR, recorded in Conveyance Book 807, Page 452, under File No. 238834 of the conveyance records of the Clerk of Court of Cameron Parish, Louisiana, in which the STATE was granted the right to construct the East Mud Lake Hydrologic Restoration Project CS-20, ("Project"), covering the following described lands:

That portion of Fins Oil and Chemical Company, et al property located in Cameron Parish, Louisiana and lying East of Louisiana Highway 27 falling partially or entirely in the following sections:

T14S-R10W
Sections 17, 18, 19, 20, 29, 30, 31 and 32

T14S-R11W
Sections 22, 23, 24, 25, 26, 27, 34, 35 and 36

T15S-R11W
Section 2 and 3

WHEREAS, the interest of Fina Oil And Chemical Company in and to the above described lands is now owned by Apache Louisiana Minerals, Inc.;

WHEREAS, the interest of Lannie Mecom Moses in and to the above described lands is now owned by Wichita Partnership, Ltd.;
WHEREAS, GRANTOR and the STATE desire to amend the original Agreement to provide for the replacement of an existing water control structure located in the vicinity of the intersection of Mud Bayou and the North-South line separating Sections 20 and 21, T14S-R10W.

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein and in the Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Agreement is hereby modified and amended as follows:

GRANTOR and the STATE agree to add the attached Exhibit A, revise Federal law to read: (16 U.S.C. 3951, et seq.), State law to read: (R.S. 49:213-214), and add Article I.1. to the original Agreement, as follows:

Add:

I.1. The right to replace and/or construct (including the necessary excavation and/or filling), maintain and monitor a water control structure including all appurtenances thereto, in, over and across the said Lands as shown on Exhibit A; (see detail on Exhibit B attached herewith)

This amendment shall be incorporated into the original Agreement and become a part thereof as if originally written. Except as modified herein, all provisions of the original Agreement shall remain in full force and effect. This amendment shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

This amendment becomes effective upon the date of the signature of the STATE and shall remain in effect for the life of the Agreement. This amendment may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon any of the parties executing same. To facilitate recordation of this agreement, the parties hereto agree that individual signature and acknowledgment pages from the various counterparts may be merged and combined with signature and acknowledgment pages from other counterparts.

IN WITNESS WHEREOF, the undersigned has signed these presents on the dates set forth below and in the presence of the undersigned witnesses after due reading of the whole.

GRANTOR:

APACHE LOUISIANA MINERALS, INC.

By: ________________________________

JOHN W. WOODARD

Title: Agent and Attorney-in-Fact

Date: __/__/04

By: ________________________________

BETSY MECOM

Date: ________________________________

Witnesses:

___________________________

Witness Signature

___________________________

Print Name: Nancy Rawles

Witness Signature

___________________________

Print Name: Archie Domenour

Witness Signature

___________________________

Print Name: ________________________________

Witness Signature

___________________________

Print Name: ________________________________
WHEREAS, GRANTOR and the STATE desire to amend the original Agreement to provide for the replacement of an existing water control structure located in the vicinity of the intersection of Mud Bayou and the North-South line separating Sections 20 and 21, T14S-R10W.

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein and in the Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Agreement is hereby modified and amended as follows:

GRANTOR and the STATE agree to add the attached Exhibit A, revise Federal law to read: (16 U.S.C. 3951, et seq.), State law to read: (R.S. 49:213-214), and add Article 11 to the original Agreement, as follows:

Add:

II. The right to replace and/or construct (including the necessary excavation and/or filling), maintain and monitor a water control structure including all appurtenances thereto, in, over and across the said Land as shown on Exhibit A; (see detail on Exhibit B attached herewith)

This amendment shall be incorporated into the original Agreement and become a part thereof as if originally written. Except as modified herein, all provisions of the original Agreement shall remain in full force and effect. This amendment shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

This amendment becomes effective upon the date of the signature of the STATE and shall remain in effect for the life of the Agreement. This amendment may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon any of the parties executing same. To facilitate recordation of this agreement, the parties hereto agree that individual signature and acknowledgment pages from the various counterparts may be merged and combined with signature and acknowledgment pages from other counterparts.

IN WITNESS WHEREOF, the undersigned has signed these presents on the dates set forth below and in the presence of the undersigned witnesses after due reading of the whole.

GRANTOR:

APACHE LOUISIANA MINERALS, INC.

By: ______________________________

Title: Agent and Attorney-in-Fact

Date: ______________________________

By: ______________________________

Date: __________________

WITNESSES:

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LMD INVESTMENTS LIMITED PARTNERSHIP
By: LOS CORRALITOS, INC., its General Partner
By: BETSIE MECOM
Title: President of Los Corralitos, Inc.
Date: June 22, 2004

WICHITA PARTNERSHIP, LTD
By: LANNIE MECOM
Title: General Partner
Date:

IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
DNR General Counsel

By: Scott A. Angelle
Title: Secretary
Date:
LMD INVESTMENTS LIMITED PARTNERSHIP
By: LOS CORRALITOS, INC., its General Partner

By: __________________________

BETSY MECOM
Title: President of Los Corralitos, Inc.

Date: __________________________

WICHITA PARTNERSHIP, LTD

By: __________________________

ANNIE MECOM
Title: General Partner

Date: 6/29/04

IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the
undersigned witnesses on the date below:

WITNESSES:

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES

DNR General Counsel __________________________

By: __________________________

Print Name: Scot A. Angelle
Title: Secretary

Date: __________________________
ACKNOWLEDGEMENTS

STATE OF LOUISIANA §

PARISH OF TERREBONNE §

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this 15th day of Feb., 2021, personally came and appeared John W. Woodard, to me known, who, being by me duly sworn, declared and acknowledged to me, Notary, that he is the Agent and Attorney-in-Fact of APACHE LOUISIANA MINERALS, INC., that as such duly authorized officer, by and with authority of the Board of Directors of said corporation, he signed, and executed the foregoing instrument, as the free and voluntary act and deed of said corporation, for and on behalf of said corporation, and for the object and purposes therein set forth.

Identification Number: 33513
My commission expires: At death

(SEAL)
STATE OF COLORADO  §

COUNTY OF PUEBLO §

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said County and State aforesaid, on this ___. 1st day of ___, 2004, before me personally appeared BETSY MECOM, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed it as her free act and deed.

[Signature]
Print name: JAKE R. MICHIEL
NOTARY PUBLIC

Identification Number: ___________
My commission expires: ___.02.07
(SEAL)

STATE OF TEXAS  §

COUNTY OF PUEBLO §

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said County and State aforesaid, on this ___. 1st day of ___, 2004, personally came and appeared BETSY MECOM, to me known, who, being by me duly sworn, declared and acknowledged to me, Notary, that she is the President of Los Corralitos, Inc., the General Partner of LMD INVESTMENTS LIMITED PARTNERSHIP, that as such duly authorized officer, by and with authority of its Partners, she signed, and executed the foregoing instrument, as the free and voluntary act and deed of said partnership, for and on behalf of said partnership, and for the object and purposes therein set forth.

[Signature]
Print name: JAKE R. MICHIEL
NOTARY PUBLIC

Identification Number: ___________
My commission expires: ___.08.07
(SEAL)
STATE OF TEXAS

COUNTY OF Washington

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said County and State aforesaid, on this 26th day of June, 2004, personally came and appeared LANNIE MECOM, to me known, who, being by me duly sworn, declared and acknowledged to me, Notary, that she is the General Partner of WICHITA PARTNERSHIP, LTD., that as such duly authorized officer, by and with authority of its Partners, she signed, and executed the foregoing instrument, as the free and voluntary act and deed of said partnership, for and on behalf of said partnership, and for the object and purposes therein set forth.

Identification Number: __________________________
My commission expires: ________________
(SEAL)

STATE OF LOUISIANA

PARISH OF EAST BATON ROUGE

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this _______ day of ____________, 20____, personally came and appeared Scott A. Angelle, to me known, who declared that he is the Secretary of the DEPARTMENT OF NATURAL RESOURCES, STATE OF LOUISIANA, that he executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he acknowledged the instrument to be the free act and deed of said State Agency.

Print name: ____________
John F. Parker
NOTARY PUBLIC

Notary Number: __01117
My commission expires: with life
(SEAL)
Apache Louisiana Minerals, Inc. ("Apache Louisiana Minerals"), a Delaware corporation, with offices at 2000 Post Oak Blvd., Suite 100, Houston, Texas 77056-4400, nominates, constitutes and appoints John W. Woodard as its true and lawful attorney in fact. The attorney in fact is authorized from time to time to execute and deliver, in the name of Apache Louisiana Minerals the following documents and instruments and any amendments or revisions thereto, in connection with the use of the surface lands owned by Apache Louisiana Minerals and located in the State of Louisiana, up to, but not exceeding, a monetary value of $50,000:

(1) fishing leases;
(2) hunting leases;
(3) rights of entry;
(4) rights of way;
(5) surface leases; and
(6) such other documents and instruments as may be needed to effectuate any of the above.

Any act, representation, or thing lawfully done by the attorney in fact shall be binding on Apache Louisiana Minerals, in its corporate capacity, and in its capacity as general partner or managing partner of any other entity or affiliate, its successors and assigns. Execution of this power of attorney shall automatically revoke and terminate, without further act or notice, any other valid and existing power of attorney granted by Apache Louisiana Minerals to the attorney in fact named herein. The power of attorney granted herein shall continue in full force until revoked by Apache Louisiana Minerals and shall have the same force and effect as though special authority was granted to the attorney in fact to do each act and to execute each document or instrument separately. If the attorney in fact ceases to be an employee of Apache Corporation, a Delaware corporation with offices at the same address as set forth above for Apache Louisiana Minerals, this power of attorney shall be automatically revoked and terminated without further act or notice.

Executed this 8th day of September 2003.

ATTEST:

Cheri L. Peper
Corporate Secretary

Jon A. Jeppesen
Senior Vice President

STATE OF TEXAS
COUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 8th day of September 2003 by Jon A. Jeppesen, Senior Vice President, Apache Louisiana Minerals, Inc. Witness my hand and official seal.
TEMPORARY EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT

East Mud Lake Hydrologic Restoration Project C/S-20, Cameron Parish, Louisiana

STATE OF LOUISIANA §

§

PARISH OF CAMERON §

THIS AGREEMENT, made and entered into this 20th day of September, 1994, by and between FINA OIL AND CHEMICAL COMPANY, a Delaware corporation, whose address is P.O. Box 62102, Houston, Texas 77205-2102, LMD INVESTMENTS LIMITED PARTNERSHIP, a Texas limited partnership of which Los Corralitos Incorporated is its General Partner, whose address is 5075 Westheimer, Suite 1290, Houston, Texas 77056, BETSY M. MULLINS, whose address is 5075 Westheimer, Suite 1290, Houston, Texas 77056, and LANNIE MECOM MOSSES, whose address is Wichita Ranch, Route 7, Box 7012A, Brenham, Texas 77833-9012, herein collectively referred to as "GRANTOR", and the STATE OF LOUISIANA, through its Department of Natural Resources, herein represented by Jack McLellan, its Secretary hereinafter called "GRANTEE".

WITNESSETH:

For and in consideration of the promises and undertakings by GRANTEE (SPONSOR) to GRANTOR herein, and further for the sum of Ten and No/100 ($10.00) Dollars and other good and valuable consideration, including the potential benefits to GRANTOR'S lands resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto GRANTEE (SPONSOR), its successors, assigns or transferees, the necessary temporary rights-of-way, servitudes and easements (hereinafter "said servitude"), together with the right to enter in, on, and over, GRANTOR'S property, for the purposes of planning, construction, operation, maintenance, and monitoring of conservation and restorative measures, structures and/or appurtenances as part of the EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT C/S-20 (hereinafter referred to as the Project) located on said (GRANTOR'S) property. Such restorative measures, structures and/or appurtenances shall be located on the following described property, including expressly but not limited to, any lands, waterbottoms or water covered Lands which might be owned by GRANTOR (hereinafter "said Lands") as described in the attached Exhibit A and shown on Exhibit A-I.

GRANTOR hereby warrants that GRANTOR has read and understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the project, including any impairment, alteration or interference with the natural servitude of drain provided for by Louisiana Law, including expressly but not limited to, Louisiana Civil Code Article 655-658 and/or La. R.S. 38:218.

I. Said servitude includes the rights to perform the following activities for the purposes authorized by federal (P.L. 101-646) and State (R.S. 49:213-214) law and at the sites or locations identified in the Project and exhibits attached and within the limits and bounds therein described:

a. The right to construct (including the necessary excavation and/or filling), operate, maintain and monitor water control structures including all appurtenances thereto, in, over and across the said Lands at Sites 1, 2, 3, 4, 5, 6, 7, 8, 9a, 9b, 11, 13, 17, 19, 20, 21, 22, and 29 as shown on Exhibit B hereeto (see detail on Exhibit(s) C, D, E, F, G);

b. The right to plant or cause the growth of vegetation in, on, over and across said Lands, including the right to nourish, replenish and maintain said vegetation at locations along the shoreline of Mud Lake as determined by site evaluation of lands shown on Exhibit B (see detail on Exhibit H);

c. The right to plug, close or fill selected channels, canals, ditches, streams or waterbodies located on said Lands at Sites 16 and 29 as shown on Exhibit B (see detail on Exhibit I);
d. The right to construct (including the necessary borrow areas) maintain and monitor overflow banks/no channelized water exchanged on, over and across said Lands between Sites 14 and 15 as shown on Exhibit B (See detail on Exhibit I);

e. The right to borrow, excavate, grade, and remove soil, vegetation and associated materials from the said Lands between Sites 14 and 15 as shown on Exhibit B (see detail on Exhibit I);

f. The right to post signs or notices on or near appropriate project features on said Lands, as may be deemed necessary by GRANTEE (SPONSOR);

g. The right to construct, locate, maintain and service required monitoring devices and equipment on said Lands as shown in the Project;

h. The right to alter or remove structures and/or appurtenances placed on said Lands by GRANTEE (SPONSOR) pursuant to the Project;

i. The right to enter said Lands for the purpose(s) of conducting surveys, inspections and investigations required by GRANTEE (SPONSOR) to evaluate the effectiveness of project features in maintaining/improving wetland and/or restored land quantity and quality on said Lands;

j. The right to enter and traverse said Lands to access project features located on adjacent Lands; and

k. The right to make modifications to the above, including changes in materials for project features and minor changes to project feature locations, and to perform such other activities or work on said Lands as may be deemed necessary by GRANTEE (SPONSOR) to fully and properly implement the Project.

II. GRANTEE (SPONSOR) agrees to give reasonable notice to GRANTOR prior to initiation of work, or the need for ingress or egress, for the purposes required in implementing, constructing, maintaining and monitoring the project.

III. GRANTEE (SPONSOR) agrees to indemnify and hold GRANTOR harmless against and from any loss or liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney’s fees, arising wholly or in part from or in connection with GRANTEE (SPONSOR) operations hereunder on said Lands except for any loss or liability on account of injuries resulting from the gross negligence or willful misconduct of GRANTOR. In the event any suit is brought against GRANTOR to recover for or on account of any such damage, injury or death, resulting wholly or in part from GRANTEE (SPONSOR) operations hereunder, GRANTEE (SPONSOR) will, at GRANTOR’S written request, appear and defend said suit at GRANTEE (SPONSOR’S) own sole cost, risk and expense, and GRANTEE (SPONSOR) will be responsible for any judgment that may be entered against GRANTOR therein when said suit(s) is (are) finally determined, except for such judgment(s) allocable to GRANTOR’S gross negligence or willful misconduct. Should GRANTEE (SPONSOR) contract out work to be performed on said Lands or waterbottoms, GRANTEE (SPONSOR) shall require the contractor to list GRANTOR as an additional insured on policies required by GRANTEE (SPONSOR). Such insurance policies shall provide that GRANTOR is, and will be, protected from and defended and insured against, without costs or expense to GRANTOR, any liability or loss (including loss of life), including damages, penalties and attorney’s fees, on account of injuries to persons (including death), or damage to property of any kind, arising wholly or in part from or in connection with GRANTEE (SPONSOR) operations hereunder on said land, except for any loss or liability on account of injuries resulting from the gross negligence or willful misconduct of GRANTOR. GRANTOR shall have no liability to GRANTEE (SPONSOR) for any damage done to structures or to the project as a result of the activities of third persons.

IV. GRANTEE (SPONSOR) shall be responsible for repair or replacement in like manner of any fences, roads, bridges, and other facilities located on said Lands which may be damaged or destroyed by GRANTEE (SPONSOR), or its designated representatives or contractors, during
the construction, operation and maintenance of the structures and/or appurtenances installed as part of the project, and GRANTEE (SPONSOR) shall remove or dispose of all debris associated with construction, operation and maintenance of the project.

V. GRANTEE (SPONSOR) acknowledges that La. R.S. 49:213.7.E.(2) provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund. Further, said statute provides that in the event legal proceedings are instituted by any person seeking recognition of a right of ownership, servitude, or use in or over private property solely on the basis of the expenditure of funds from the Wetlands Conservation and Restoration Fund, the state shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney fees. However, to the maximum extent permitted by La. R.S. 49:213.7.E.(2), the servitude and right-of-way rights granted herein shall be considered real rights and covenants running with the land.

VI. It is understood GRANTOR shall retain title and all property rights (subject to the rights of GRANTEE (SPONSOR) herein) in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures and/or appurtenances constructed hereunder pursuant to the Project on said Lands shall be adjusted, removed and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR, without prior written approval of GRANTEE (SPONSOR), which such prior written approval will not be unreasonably delayed or refused.

VII. Subject to the above, in its exercise of the rights herein granted, GRANTEE (SPONSOR) agrees not to unduly interfere with (a) oil and gas operations, (b) agricultural operations, and (c) hunting, trapping and alligator egg operations presently occurring, or authorized to occur, on said Lands. GRANTEE (SPONSOR) specifically acknowledges the continuing right of GRANTOR, its heirs, successors, assigns, transferees or lessees, to use, occupy and enjoy all of said Lands, for all purposes, in such manner at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of conducting oil, gas or other mineral operations on any of said Lands, for the exploration, discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under oil, gas and mineral leases or otherwise, and for the purpose of farming, grazing, hunting and trapping fur-bearing animals and alligator egg operations thereon provided, however, that such use, occupation, and enjoyment shall not unreasonably and unduly interfere with the lawful activities of GRANTEE (SPONSOR) pursuant to this Agreement.

VIII. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said Lands. If at any time any questions or litigation should arise as to the ownership of any part of the property covered hereby, or as to any boundary or limit of any part of the separate and various Lands covered by this Agreement, this Agreement shall not be construed to be, or permitted to serve as, evidence or as a basis of estoppel against any party hereto, or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

IX. GRANTEE (SPONSOR) acknowledges that it has been given the opportunity to inspect the servitude premises and GRANTOR'S other property which may be used by GRANTEE (SPONSOR), and/or its designated representatives and contractors, to access the servitude premises and accepts the condition of same for all purposes.

X. GRANTEE (SPONSOR) may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the servitude premises.

XI. This Agreement shall become effective upon the date of the signature of the GRANTEE (SPONSOR), and shall remain in effect for a term of fifteen (15) years unless sooner released by GRANTEE (SPONSOR); and, provided further, that if GRANTEE (SPONSOR) should fail to commence work or improvements on said Lands to implement the Project within five (5) years
of GRANTOR'S execution hereof, this servitude shall automatically terminate and GRANTEE (SPONSOR) shall have no further rights hereunder.

XII. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XIII. This agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon the parties executing same.

XIV. This agreement does not confer or waive any rights except as expressly provided herein.

XV. All notices required hereunder shall be delivered by U.S. Mail to:
GRANTOR:  Fina Oil and Chemical Company
          Post Office Box 62102
          Houston, Texas  77205-2102
          Attention:  Mr. Thomas M. Wadsworth
                      Attorney-in-fact
                      Division Manager, Eastern Division

GRANTEE:  State of Louisiana
          Department of Natural Resources
          Post Office Box 94396
          Baton Rouge, Louisiana  70804-9396
          Attention:  Dr. Bill Good
                      Administrator
                      Coastal Restoration Division
IN WITNESS WHEREOF, this GRANTOR(S) has hereunto signed his/her name this 20th day of September, 1994, in the presence of the two (2) undersigned competent witnesses.

WITNESSES:

[Signatures]

GRANTOR(S):

FINA OIL AND CHEMICAL COMPANY

BY: Thomas M. Wadsworth
    Thomas M. Wadsworth
    TITLE: Attorney-In-Fact

LMD INVESTMENTS LIMITED
PARTNERSHIP

BY: Betsy M. Mullins
    Betsy M. Mullins
    TITLE: President Of Los Corralitos Incorporated,
            General Partner

BY: Betsy M. Mullins
    Betsy M. Mullins

BY: Lannie Mecom Moses
    Lannie Mecom Moses
IN WITNESS WHEREOF, the GRANTEE (SPONSOR) has hereunto signed his name this 30th day of December, 1994, in the presence of the two (2) undersigned competent witnesses.

WITNESSES:

Kay Stormy

Dorothy Schreider

GRANTEE (SPONSOR):
STATE OF LOUISIANA
DEPARTMENT OF
NATURAL RESOURCES

BY: Jim Cleland

TITLE: Secretary

STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this 20th day of September, 1994, before me personally appeared THOMAS M. WADSWORTH to me personally known, who being by me duly sworn, did say that he is Attorney-In-Fact of FINA OIL AND CHEMICAL COMPANY, and that the foregoing instrument was signed in behalf of said corporation by authority of its Board of Directors, and that he acknowledged the instrument to be the free act and deed of said corporation.

Delilah K. Bullock
NOTARY PUBLIC - STATE OF TEXAS

My commission expires: 5-16-96
(SEAL)

STATE OF TEXAS §
COUNTY OF HARRIS §

On this 12th day of October, 1994, before me appeared BETSY M. MULLINS to me known, who declared and acknowledged to me, Notary, that she is the President of LOS CORRALITOS INCORPORATED, General Partner of LMD INVESTMENTS LIMITED PARTNERSHIP, a Texas limited partnership, and that the foregoing instrument was signed in behalf of said limited partnership by authority of the Board of Directors of Los Corralitos Incorporated, and that she acknowledged the instrument to be the free act and deed of said limited partnership.

NOTARY PUBLIC - STATE OF TEXAS

My commission expires: 4-19-95
(SEAL)
STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared BETHANY M. MULLINS, personally known to be the person who executed the foregoing instrument and acknowledged to me that she executed the same as her free and voluntary act and deed for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 12th day of October, 1994.

NOTARY PUBLIC - STATE OF TEXAS

My commission expires: 4-19-95
(SEAL)

STATE OF TEXAS §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared LANNIE MICOM MOSES, personally known to be the person who executed the foregoing instrument and acknowledged to me that she executed the same as her free and voluntary act and deed for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 15th day of October, 1994.

NOTARY PUBLIC - STATE OF TEXAS

My commission expires: 4-30-95
(SEAL)
STATE OF Louisiana,
PARISH OF East Baton Rouge

BEFORE ME, the undersigned authority, on this 6th day of December, 1994, personally came and appeared Jack McClanahan, to me known, who declared that he/she is the Secretary of the Department of Natural Resources, State of Louisiana, that he/she executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him/her by said State Agency and that he/she acknowledged the instrument to be the free act and deed of said State Agency.

[Signature]
NOTARY PUBLIC

My commission expires: at death
(SEAL)
EXHIBIT A

Attached to and made a part of that certain Easement, Servitude and Right-Of-Way Agreement between Fina Oil and Chemical Company, et al, as Grantor and the State of Louisiana, as Grantee, dated September 20, 1994.

That portion of Fina Oil and Chemical Company, et al, property located in Cameron Parish, Louisiana and lying East of Louisiana Highway 27 falling partially or entirely in the following sections:

**T14S-R10W**
Sections 17, 18, 19, 20, 29, 30, 31 and 32

**T14S-R11W**
Sections 22, 23, 24, 25, 26, 27, 34, 35 and 36

**T15S-R11W**
Section 2 and 3

NOTE: The above description is based upon the record title of the property and refers to the original full government call sections.
EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT
WITHIN PROPERTIES BELONGING TO
FINA OIL AND CHEMICAL COMPANY, ET AL
CAMERON PARISH, LOUISIANA.
EXHIBIT B

Composite Map Showing Locations of All Evaluation Sites (E.S.).

EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT
CAMERON PARISH, LOUISIANA
PROFILE DETAIL

Typical Variable Crest weir

EXHIBIT F
EXHIBIT H

Typical Grass Planting

PL-646 Project
Hydrologic Restoration
Mud Lake

MLT - Mean Low Tide
MHT - Mean High Tide

NOT TO SCALE

2' AVG.
EXHIBIT 1

Typical Earth Plug

Note: Barrage material will be inserted between the two holes in the earth plug for ease of installation.
Mr. Charles Stuckey  
P.O. Box 157  
Simpson, LA 71474

RE:  East Mud Lake Marsh Management Project CS-20  
Temporary Easement, Servitude, and Right-of-Way Agreement

Dear Mr. Stuckey:

Enclosed for your records is a original of the captioned document between yourself and the State of Louisiana for the above referenced project.

If I can be of further assistance, or if you have any questions, please do not hesitate to contact me at (225) 342-7329. Thank you for your continued cooperation in our coastal restoration efforts.

Sincerely,

Eric D. Roth  
CRD Land Specialist II

EDR  
Attachment

cc (w/o attachment): Quint Kinler, NRCS, Baton Rouge  
Greg Grandy, CRD Project Manager
MEMORANDUM

June 24, 2004

TO: Karen Lewis, Contracts and Grants Administrator

FROM: Eric D. Roth, Land Specialist II

RE: East Mud Lake Marsh Management Project CS-20
Temporary Easement, Servitude, and Right-of-Way Agreement
Charles Edward Stuekey, et ux

Attached for your records is a original of the document referenced above between Charles Edward Stuekey, et ux and the Louisiana Department of Natural Resources for the captioned project.

If you have any questions, please do not hesitate to contact me.

EDR

Attachment

cc: Quin Kinler, NRCS, Baton Rouge
Greg Grandy, CRD Project Manager

NRCS KL LO final transmission.wpd
TEMPORARY EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT

EAST MUD LAKE MARSH MANAGEMENT PROJECT CS-20

CAMERON PARISH, LOUISIANA

STATE OF LOUISIANA

PARISH OF CAMERON

THIS AGREEMENT, made and entered into this 14th day of April, 2004, by and between: CHARLES EDWARD STUCKEY (SSN 435-76-8201) and VIRGINIA SMITH STUCKEY (SSN 439-94-9168), born Smith, husband and wife, whose mailing address is P. O. Box 157, Simpson, Louisiana 71474; hereinafter called the "GRANTOR" (whether one or more), as owner of the below described property; and the STATE OF LOUISIANA through its DEPARTMENT OF NATURAL RESOURCES ("DNR"), hereinafter represented by its agent, hereinafter called the "STATE".

WITNESSETH: For and in consideration of the promises and undertakings by STATE to GRANTOR herein, and further for other good and valuable consideration, including the potential benefits to GRANTOR'S lands resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto STATE, its successors, assigns or transferees, the temporary rights-of-way, servitudes and easements (hereinafter called "the Agreement"), together with the right to enter in, on, and over, GRANTOR'S property, for the purpose of planning, constructing, operating, maintaining, and monitoring of conservation and restorative measures, structures and/or appurtenances as part of the East Mud Lake Marsh Management Project CS-20 (hereinafter called "the Project") located on GRANTOR'S property. The Project will be publicly funded and shall be located on the following described property located in Cameron Parish, Louisiana, including expressly, but not limited to, any lands or water-covered lands which might be owned by GRANTOR (hereinafter called "said Lands"), to-wit:

TOWNSHIP 14 SOUTH – RANGE 10 WEST

SECTION 21: The West Half (W/2)

I. GRANTOR hereby warrants that GRANTOR understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the Project.

II. This Agreement includes the rights to enter said Lands at the sites or locations identified on the attached Exhibit A map to perform construction, operation, modification, monitoring, and maintenance activities for the purposes authorized by Federal (16 U.S.C. 3951, et seq.) and State (R.S. 49:213-214) law pursuant to the Project, which activities are described on Exhibit B, attached hereto.

III. STATE agrees to give reasonable notice to GRANTOR prior to initiation of access to the said Lands which is required to implement, construct, operate, modify, monitor, and maintain the Project.

IV. STATE agrees to indemnify and hold GRANTOR harmless against and from any loss or liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney's fees; provided that such indemnity is limited to loss or liability that results from STATE'S operations hereunder on said Lands. In the event any suit is brought against GRANTOR to recover for or on account of any such damage, injury or death, resulting from STATE'S operations hereunder, STATE will, at GRANTOR'S written request, appear and defend said suit at STATE's own sole cost, risk and expense, and STATE will be responsible for any judgment that may be entered against GRANTOR herein when said suit is finally determined to the extent that such judgment is attributable to loss or liability that results from STATE'S operations hereunder on said Lands. GRANTOR shall have no liability to STATE for any damage done to structures or to the Project as a result of the activities of third persons.
V. STATE shall be responsible for repair in like manner of any fences, bridges, roads, and other similar facilities and appurtenances located on said Lands which may be damaged or destroyed by STATE, or its designees while on said Lands, but such repair shall be to that condition which existed immediately prior to STATE’s activities. STATE shall remove or dispose of all debris associated with construction, operation and maintenance of the Project.

VI. STATE acknowledges that La. R.S. 49:213.8 provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund.

VII. It is understood GRANTOR shall retain the limits of its title and all property rights (subject to the rights of STATE herein) in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures and/or appurtenances constructed hereunder pursuant to the Project on said Lands shall be adjusted, removed and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR.

VIII. Subject to the above, in its exercise of the rights herein granted, STATE agrees not to unreasonably interfere with lawful activities now occurring, or authorized to occur, on said Lands, provided, however, that such use, occupation, and enjoyment shall not unreasonably interfere with the lawful activities of STATE pursuant to this Agreement.

IX. GRANTOR does not warrant title. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said lands.

X. STATE may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the said Lands.

XI. This Agreement shall become effective upon the date of the signature of STATE, and shall remain in effect for a term of ten (10) years unless sooner released by STATE, and, provided further, that if STATE should fail to commence work or improvements on said Lands to implement the Project within five (5) years of STATE’s execution hereof, this servitude shall automatically terminate and STATE shall have no further rights hereunder. The State shall have the option of extending this Agreement for an additional ten (10) year period, provided that there is mutual consent between the parties hereto.

XII. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XIII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon any of the parties executing same.

XIV. This Agreement does not confer or waive any rights except as provided herein.

IN WITNESS WHEREOF, GRANTOR(S) has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

[Signature]

Print Name: Richard C. Vincent

[Signature]

Print Name: [Signature]

GRANTOR(S):

[Signature]

By: [Signature]

CHARLES EDWARD STUCKEY

Date: 3/23/04
IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES

DNR General Counsel

By: __________________________
    Scott A. Angelle
    Title: Secretary

Date: _______________________

Print Name: ______________________

Print Name: ______________________
ACKNOWLEDGMENTS

STATE OF LOUISIANA $§$
PARISH OF Vernon $§$

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this $23^{rd}$ day of March, 2004, before me personally appeared CHARLES EDWARD STUCKEY, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed it as his free act and deed.

[Signature]

Print Name: $[Signature]$ NOTARY PUBLIC

Notary Number: 62251
My commission expires: with death
(SEAL)

STATE OF LOUISIANA $§$
PARISH OF Vernon $§$

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this $23^{rd}$ day of March, 2004, before me personally appeared VIRGINIA SMITH STUCKEY, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that she executed it as her free act and deed.

[Signature]

Print Name: $[Signature]$ NOTARY PUBLIC

Notary Number: 62251
My commission expires: with death
(SEAL)
IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
DNK General Counsel

By: 

Title: Secretary

Date:

STATE OF LOUISIANA
PARISH OF EAST BATON ROUGE

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this ___ day of __________, 20___, personally came and appeared ____________________________, to me known, who declared that he is the ______________________ of the Department of Natural Resources, State of Louisiana, that he executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he acknowledged the instrument to be the free act and deed of said State Agency.

My commission expires: ______ with life ______
(SEAL.)

John F. Parker
Bar #01117
Exhibit B

a. The right to construct (including the necessary excavation and/or filling), operate, maintain and monitor a water control structure including all appurtenances thereto, in, over and across the said Lands as shown on Exhibit A:

b. The right to construct a barricade east of the water control structure (described in a. above) to restrict access to same:

c. The right to borrow, excavate, grade, and remove soil, vegetation and associated materials from the said Lands and to deposit same on portions of an existing levee and lands adjacent to water control structure (described in a. above);

d. The right to construct, locate, maintain and service required monitoring devices and equipment on said Lands and on other lands as may be owned by GRANTOR;

e. The right to post warning signs or notices on or near appropriate Project features on said Lands, as may be deemed necessary by STATE;

f. The right to alter or remove structures and/or appurtenances constructed on said Lands by STATE pursuant to the Project;

g. The right to enter said Lands for the purpose(s) of conducting surveys, inspections and investigations required by STATE to evaluate the effectiveness of the Project and Project features, including maintaining/improving wetland and/or restored land quantity and quality;

h. The right to enter and traverse said Lands to access Project features located on adjacent Lands;

i. The right, to permanently overflow, flood and submerge the said Lands, including the right to deposit dredged or sediment material on, over and across said Lands in connection with the operation and maintenance of the Project, and the continuing right to clear and remove any brush, debris and natural obstructions on said Lands which may be detrimental to the Project as determined by DNR, its successors and assigns, provided that no excavation shall be conducted and no landfill placed on said Lands without GRANTOR’S approval as to the said location and method of excavation and/or placement of landfill; and

j. The right to make modifications to the above, but only insofar as changes pertain to materials for Project features and minor changes to project feature locations, as may be deemed necessary by STATE to fully and properly implement and maintain the Project.
TEMPORARY EASEMENT AND RIGHT-OF-WAY AGREEMENT

East Mud Lake Hydrologic Restoration Project C/S-20, Cameron Parish, Louisiana

STATE OF LOUISIANA

PARISH OF East Baton Rouge

THIS TEMPORARY EASEMENT AND RIGHT-OF-WAY AGREEMENT (Agreement), made and entered into this 15th day of May, 1995, by and between: MATILDA GRAY STREAM, HAROLD H. STREAM, III, and SANDRA GRAY STREAM MILLER, herein collectively referred to as "GRANTOR", and the STATE OF LOUISIANA, through its Department of Natural Resources, herein represented by Jack McCleman, its Secretary, herinafter referred to as the "STATE".

WITNESSETH:

For and in consideration of the promises and undertakings by STATE to GRANTOR herein, and further for the sum of Ten and No/100 ($10.00) Dollars and other good and valuable consideration, including the potential benefits to GRANTOR'S lands resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto STATE, its successors, assigns or transferees, the necessary temporary easement and right-of-way, together with the right to enter in, on, and over, GRANTOR'S property, for the purposes of planning, construction, operation, maintenance, and monitoring of conservation and restorative measures, structures and/or appurtenances as part of the East Mud Lake Hydrologic Restoration Project C/S-20 (the Project) located on said GRANTOR'S property. Such restorative measures, structures and/or appurtenances shall be located on the following described property, including expressly, but not limited to, any lands or water covered lands which might be owned by GRANTOR (said lands), to wit:

Lands in Sections 27, 28, 33 (also called 34), and 34 (also called 35), T14S-R11W, Cameron Parish, Louisiana, more fully described below:

Section 27, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 2 miles and 2520 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1 mile, then East 1/4 mile, thence South 1 mile, thence West 1/4 mile to a point of commencement; 160 acres.

Section 28, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 2 miles and 2520 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1 mile, thence West 1/4 mile, thence South 1 mile, thence East 1/4 mile to point of commencement; 160 acres.

Section 33, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 1 mile and 5160 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1/2 mile, thence West 1/4 mile, thence South 1/2 mile, thence East 1/4 mile to point of commencement; 80 acres.

Section 34, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 1 mile and 5160 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1/2 mile, thence East 1/4 mile, thence South 1/2 mile, thence West 1/4 mile to point of commencement; 80 acres.
STATE hereby represents that it has disclosed to GRANTOR all known material aspects and features of the Project and all known material anticipated impacts thereof to said Lands. Grantor hereby represents that GRANTOR understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the Project, including any impairment, alteration or interference with the natural servitude of drain provided for by Louisiana Law, including expressly but not limited to, Louisiana Civil Code Article 655-658 and/or La. R.S. 38:218.

I. This Agreement includes the rights to perform the following activities for the purposes authorized by Federal (P.L. 101-646) and State (R.S. 49:213-214) law and at the sites or locations identified in attached exhibits and within the limits and bounds therein described:

a. The right to plant or cause the growth of vegetation in, on, over and across said Lands, including the right to nourish, replenish and maintain said vegetation at locations along the shoreline of Mud Lake as determined by site evaluation of lands shown on Exhibit A (see detail on Exhibit B);

b. The right to post signs or notices on or near appropriate project features on said Lands, as may be deemed necessary by STATE;

c. The right to alter or remove structures and/or appurtenances constructed on said Lands by STATE pursuant to the Project;

d. The right to enter said Lands for the purpose(s) of monitoring, conducting surveys, inspections and investigations required by STATE to evaluate the effectiveness of the Project and project features, including maintaining/improving wetland and/or restored land quantity and quality;

e. The right to enter and traverse said Lands to access project features located on adjacent lands; and

f. The right to make modifications to the above, including changes in materials for project features and minor changes to project feature locations, as may be deemed necessary by STATE to fully and properly implement the Project.

II. STATE agrees to give reasonable notice to GRANTOR prior to initiation of work, or the need for ingress or egress, for the purposes required in implementing, constructing, maintaining and monitoring the Project.

III. STATE agrees to indemnify and hold GRANTOR harmless against and from any loss or liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney's fees and court costs, arising wholly or in part from or in connection with the Project except to the extent that GRANTOR's loss is due to GRANTOR's gross negligence. In the event any suit is brought against GRANTOR in connection with any activity for which indemnity is owed hereunder, STATE shall, at GRANTOR's written request, appear and defend said suit at STATE's sole cost, risk and expense, and STATE shall be responsible for any final judgment that may be entered against GRANTOR therein, except for such judgment(s) allocable to GRANTOR's fault or gross negligence. GRANTOR shall have no liability to STATE for any damage done to structures or to the project as a result of the activities of third persons.

IV. STATE shall be responsible for repair or replacement in like manner of any fences, roads, bridges, and other facilities located on said Lands which may be damaged or destroyed by STATE, its designated representatives or contractors, during the construction, operation and maintenance of the structures and/or appurtenances installed as part of the project, and STATE shall remove or dispose of all debris associated with construction, operation and maintenance of the project.

V. STATE acknowledges that La. R.S. 49:213.7E(2) provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund. Further, said statute provides that in the event legal proceedings
are instituted by any person seeking recognition of a right of ownership, servitude, or use in or over private property solely on the basis of the expenditure of funds from the Wetlands Conservation and Restoration Fund, the state shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney fees. STATE and GRANTOR agree that this Agreement shall not be construed as being prohibited by the provisions of R.S. 49:213.7E(2).

VI. It is understood GRANTOR shall retain title and all property rights (subject to the rights of STATE herein) in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures and/or appurtenances constructed hereunder pursuant to the Project on said Lands shall be adjusted, removed and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR, without prior written approval of STATE, which such prior written approval will not be unreasonably delayed or refused.

VII. Subject to the above, in its exercise of the rights herein granted, STATE agrees not to unreasonably interfere with (a) oil and gas operations, (b) agricultural operations, and (c) hunting, trapping and alligator egg operations presently occurring, or authorized to occur, on said Lands. STATE specifically acknowledges the continuing right of GRANTOR, its heirs, successors, assigns, transferees and licensees, to use, occupy and enjoy all of said Lands, for all purposes, in such manner at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of conducting oil, gas or other mineral operations on any of said Lands, for the exploration, discovery, production, storage, transportation, and disposition of oil, gas, sulphur or other minerals, under oil, gas and mineral leases or otherwise, and for the purpose of farming, grazing, hunting and trapping fur-bearing animals and alligator egg operations thereon provided, however, that such use, occupation, and enjoyment shall not unreasonably and unduly interfere with the lawful activities of STATE pursuant to this Agreement.

VIII. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said Lands. This Agreement is executed by GRANTOR without any warranty or recourse whatsoever. If at any time any questions or litigation should arise as to the ownership of any part of said Lands, or as to any boundary or limit of said Lands covered by this Agreement, this Agreement shall not be construed to be, or permitted to serve as, evidence or as a basis of estoppel against any party hereto, or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

IX. STATE acknowledges that it has been given the opportunity to inspect said Lands and GRANTOR'S other property which may be used by STATE, and/or its designated representatives and contractors, to access the said Lands and accept the condition same for all purposes.

X. STATE may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the said Lands.

XI. This Agreement shall become effective upon the date of the signature of the STATE, and shall remain in effect for a term of twenty (20) years unless sooner released by STATE; and, provided further, that if STATE should fail to commence work or improvements on said Lands to implement the Project within five (5) years of GRANTOR'S execution hereof, this Agreement shall automatically terminate and STATE shall have no further rights hereunder.

XII. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XIII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon the parties executing same.

XIV. This Agreement does not confer or waive any rights except as expressly provided herein.

XV. The STATE and GRANTOR acknowledge that operation of the project shall conform to the terms of the Memorandum of Agreement entered into among GRANTOR, Department of Natural

IN WITNESS WHEREOF, GRANTOR has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

GRANTORS:
Matilda Gray Stream
By: [Signature]
Date: 8/10/95

Harold H. Stream, III
By: [Signature]
Date: 8/1/95

Sandra Gray Stream Miller
By: [Signature]
Harold H. Stream, III, Attorney-in-fact
Date: 8/1/95

IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

DNR General Counsel: [Signature]

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES

By: [Signature]
Title: Secretary, Department of Natural Resources
Date: May 1, 1995
STATE OF LA
PARISH/COUNTY OF Calcasieu

BEFORE ME, the undersigned authority, on this 14th day of April, 1995, personally appeared Matilda Gray Stream, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed it as his free act and deed.

Keanee M. Desson
NOTARY PUBLIC

My commission expires: (SEAL)

STATE OF LA
PARISH/COUNTY OF Calcasieu

BEFORE ME, the undersigned authority, on this 14th day of April, 1995, personally appeared Harold H. Stream, III, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed it as his free act and deed.

Keanee M. Desson
NOTARY PUBLIC

My commission expires: (SEAL)
PARISH/COUNTY OF Calcasieu

BEFORE ME, the undersigned authority, on this 12th day of April, 1995, personally appeared Harold H. Stream, III, to me known, who declared and acknowledged to me, Notary, that he is the Attorney-in-fact for Sandra Gray Stream Miller, and that as such he signed and executed the foregoing instrument as the free and voluntary act and deed of Sandra Gray Stream Miller; for and on behalf of Sandra Gray Stream Miller, and for the object and purposes herein set forth.

[Signature]
NOTARY PUBLIC

My commission expires: 12/31/1995
(SEAL)

STATE OF Louisiana
PARISH OF E.B.R.

BEFORE ME, the undersigned authority, on this 1st day of May, 1995, personally came and appeared Jack McIvor, to me known, who declared that he/she is the Secretary of the Department of Natural Resources, State of Louisiana, that he/she executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him/her by said State Agency and that he/she acknowledged the instrument to be the free act and deed of said State Agency.

[Signature]
NOTARY PUBLIC

My commission expires: 12/31/1995
(SEAL)
EXHIBIT A

EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT
CAMERON PARISH, LOUISIANA
TEMPORARY EASEMENT AND RIGHT-OF-WAY AGREEMENT

East Mud Lake Hydrologic Restoration Project C/S-20, Cameron Parish, Louisiana

STATE OF LOUISIANA
PARISH OF East Baton Rouge

THIS TEMPORARY EASEMENT AND RIGHT-OF-WAY AGREEMENT (Agreement), made and entered into this 12th day of May, 1995, by and between: MATILDA GRAY STREAM, HAROLD H. STREAM, III, and SANDRA GRAY STREAM MILLER, herein collectively referred to as "GRANTOR", and the STATE OF LOUISIANA, through its Department of Natural Resources, herein represented by Jack McElman, its Secretary, hereinafter referred to as the "STATE".

WITNESSETH:

For and in consideration of the promises and undertakings by STATE to GRANTOR herein, and further for the sum of Ten and No/100 ($10.00) Dollars and other good and valuable consideration, including the potential benefits to GRANTOR'S lands resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto STATE, its successors, assigns or transferees, the necessary temporary easement and right-of-way, together with the right to enter in, on, and over, GRANTOR'S property, for the purposes of planning, construction, operation, maintenance, and monitoring of conservation and restorative measures, structures and/ or appurtenances as part of the East Mud Lake Hydrologic Restoration Project C/S-20 (the Project) located on said GRANTOR'S property. Such restorative measures, structures and/or appurtenances shall be located on the following described property, including expressly, but not limited to, any lands or water covered lands which might be owned by GRANTOR (said Lands), to wit:

Lands in Sections 27, 28, 33 (also called 34), and 34 (also called 35), T14S-R11W, Cameron Parish, Louisiana, more fully described below:

Section 27, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 2 miles and 2520 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1 mile, then East 1/4 mile, thence South 1 mile, thense West 1/4 mile to a point of commencement; 160 acres.

Section 28, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 2 miles and 2520 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1 mile, thense West 1/4 mile, thense South 1 mile, thense East 1/4 mile to point of commencement; 160 acres.

Section 33, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 1 mile and 5160 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1/2 mile, thense West 1/4 mile, thence South 1/2 mile, thense East 1/4 mile to point of commencement; 80 acres.

Section 34, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 1 mile and 5160 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1/2 mile, thense East 1/4 mile, thense South 1/2 mile, thense West 1/4 mile to point of commencement; 80 acres.
STATE hereby represents that it has disclosed to GRANTOR all known material aspects and features of the Project and all known material anticipated impacts thereof to said Lands. Grantor hereby represents that GRANTOR understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the Project, including any impairment, alteration or interference with the natural servitude of drain provided for by Louisiana Law, including expressly but not limited to, Louisiana Civil Code Article 655-658 and/or La. R.S. 38:218.

I. This Agreement includes the rights to perform the following activities for the purposes authorized by Federal (P.L. 101-646) and State (R.S. 49:213-214) law and at the sites or locations identified in attached exhibits and within the limits and bounds therein described:

   a. The right to plant or cause the growth of vegetation in, on, over and across said Lands, including the right to nourish, replenish and maintain said vegetation at locations along the shoreline of Mud Lake as determined by site evaluation of lands shown on Exhibit A (see detail on Exhibit B);

   b. The right to post signs or notices on or near appropriate project features on said Lands, as may be deemed necessary by STATE;

   c. The right to alter or remove structures and/or appurtenances constructed on said Lands by STATE pursuant to the Project;

   d. The right to enter said Lands for the purpose(s) of monitoring, conducting surveys, inspections and investigations required by STATE to evaluate the effectiveness of the Project and project features, including maintaining/improving wetland and/or restored land quantity and quality;

   e. The right to enter and traverse said Lands to access project features located on adjacent lands, and

   f. The right to make modifications to the above, including changes in materials for project features and minor changes to project feature locations, as may be deemed necessary by STATE to fully and properly implement the Project.

II. STATE agrees to give reasonable notice to GRANTOR prior to initiation of work, or the need for ingress or egress, for the purposes required in implementing, constructing, maintaining and monitoring the Project.

III. STATE agrees to indemnify and hold GRANTOR harmless against and from any loss or liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney's fees and court costs, arising wholly or in part from or in connection with the Project except to the extent that GRANTOR's loss is due to GRANTOR's gross negligence. In the event any suit is brought against GRANTOR in connection with any activity for which indemnity is owed hereunder, STATE shall, at GRANTOR's written request, appear and defend said suit at STATE's sole cost, risk and expense, and STATE shall be responsible for any final judgment that may be entered against GRANTOR therein, except for such judgment(s) allocable to GRANTOR's fault or gross negligence. GRANTOR shall have no liability to STATE for any damage done to structures or to the project as a result of the activities of third persons.

IV. STATE shall be responsible for repair or replacement in like manner of any fences, roads, bridges, and other facilities located on said Lands which may be damaged or destroyed by STATE, or its designated representatives or contractors, during the construction, operation and maintenance of the structures and/or appurtenances installed as part of the project, and STATE shall remove or dispose of all debris associated with construction, operation and maintenance of the project.

V. STATE acknowledges that La. R.S. 49:213.7(2) provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund. Further, said statute provides that in the event legal proceedings
are instituted by any person seeking recognition of a right of ownership, servitude, or use in or over private property solely on the basis of the expenditure of funds from the Wetlands Conservation and Restoration Fund, the state shall indemnify and hold harmless the owner of such property for any costs, expenses, or loss related to such proceeding, including court costs and attorney fees. STATE and GRANTOR agree that this Agreement shall not be construed as being prohibited by the provisions of R.S. 49:213.75(2).

VI. It is understood GRANTOR shall retain title and all property rights (subject to the rights of STATE herein) in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures and/or appurtenances constructed hereunder pursuant to the Project on said Lands shall be adjusted, removed and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR, without prior written approval of STATE, which such prior written approval will not be unreasonably delayed or refused.

VII. Subject to the above, in its exercise of the rights herein granted, STATE agrees not to unreasonably interfere with (a) oil and gas operations, (b) agricultural operations, and (c) hunting, trapping and alligator egg operations presently occurring, or authorized to occur, on said Lands. STATE specifically acknowledges the continuing right of GRANTOR, its heirs, successors, assigns, transferees or lessees, to use, occupy and enjoy all of said Lands, for all purposes, in such manner at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of conducting oil, gas or other mineral operations on any of said Lands, for the exploration, discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under, gas and mineral leases or otherwise, and for the purpose of farming, grazing, hunting and trapping fur-bearing animals and alligator egg operations thereon provided, however, that such use, occupation, and enjoyment shall not unreasonably and unduly interfere with the lawful activities of STATE pursuant to this Agreement.

VIII. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said Lands. This Agreement is executed by GRANTOR without any warranty or recourse whatsoever. If at any time any question or litigation should arise as to the ownership of any part of said Lands, or as to any boundary or limit of said Lands covered by this Agreement, this Agreement shall not be construed to be, or permitted to serve as, evidence or as a basis of estoppel against any party hereto, or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

IX. STATE acknowledges that it has been given the opportunity to inspect said Lands and GRANTOR'S other property which may be used by STATE, and/or its designated representatives and contractors, to access the said Lands and accepts the condition of same for all purposes.

X. STATE may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the said Lands.

XI. This Agreement shall become effective upon the date of the signature of the STATE, and shall remain in effect for a term of twenty (20) years unless sooner released by STATE; and, provided further, that if STATE should fail to commence work or improvements on said Lands to implement the Project within five (5) years of GRANTOR'S execution hereof, this Agreement shall automatically terminate and STATE shall have no further rights hereunder.

XII. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XIII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon the parties executing same.

XIV. This Agreement does not confer or waive any rights except as expressly provided herein.

XV. The STATE and GRANTOR acknowledge that operation of the project shall conform to the terms of the Memorandum of Agreement entered into among GRANTOR, Department of Natural
IN WITNESS WHEREOF, GRANTOR has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

GRANTORS:

Matilda Gray Stream

By:

Date: 4/2/95

Harold H. Stream, III

By:

Date: 4/2/95

Sandra Gray Stream Miller

By:

Harold H. Stream, III, Attorney-in-fact

Date: 4/2/95

IN WITNESS WHEREOF, STATE has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

DNR General Counsel:

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES

Title: Secretary, Department of Natural Resources

Date: May 1, 1995
STATE OF LA

PARISH/COUNTY OF Calcasieu

BEFORE ME, the undersigned authority, on this 12th day of April, 1995, personally appeared Matilda Gray Stream, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed it as his free act and deed.

[Signature]
NOTARY PUBLIC

My commission expires: 1999
(SEAL)

STATE OF LA

PARISH/COUNTY OF Calcasieu

BEFORE ME, the undersigned authority, on this 12th day of April, 1995, personally appeared Harold H. Stream, III, to me known to be the person described in and who executed the foregoing instrument, and acknowledged that he executed it as his free act and deed.

[Signature]
NOTARY PUBLIC

My commission expires: 1999
(SEAL)
PARISH/COUNTY OF

BEFORE ME, the undersigned authority, on this 16th day of April, 1995, personally appeared Harold H. Stream, III, to me known, who declared and acknowledged to me, Notary, that he is the Attorney-in-fact for Sandra Gray Stream Miller, and that as such he signed and executed the foregoing instrument as the free and voluntary act and deed of Sandra Gray Stream Miller, for and on behalf of Sandra Gray Stream Miller, and for the object and purposes herein set forth.

NOTARY PUBLIC

My commission expires:
(SEAL)

STATE OF Louisiana
PARISH OF E.B. R

BEFORE ME, the undersigned authority, on this 1st day of May, 1995, personally came and appeared,beck McCormack, to me known, who declared that he/she is the Secretary of the Department of Natural Resources, State of Louisiana, that he/she executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him/her by said State Agency and that he/she acknowledged the instrument to be the free act and deed of said State Agency.

NOTARY PUBLIC

My commission expires: at death
(SEAL)
EXHIBIT A

EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT
CAMERON PARISH, LOUISIANA
EXHIBIT B

TYPICAL GRASS PLANTING

MHT - Mean High Tide
MLT - Mean Low Tide

NOT TO SCALE

2', AVG.

MUD L. R.,
HYDROLOGIC M. N.
PL-646 PROJ.
December 6, 2004

Memorandum

To: Patrick Landry, CED Project Manager/Construction/Operation & Maintenance Manager/Engineer

From: Eric D. Roth, CRD Landrights Project Landrights Specialist

RE: Completion of Landrights on the East Mud Lake Project CS-20 Additional Features for Operations and Maintenance

The CRD Land Section has completed all landrights necessary to proceed to construction of additional features under the operations and maintenance component regarding the above referenced project. The following information has already been forwarded to you under separate memorandum:

- X Servitude Agreement (Stuckey et ex)
- Pipeline Agreement(s)
- Oil/Gas Operator Agreement(s)
- Memorandum(s) of Agreement
- CWPPRA Section 303(e) approved
- Right(s) of Entry for Construction
- Mineral Operations Agreement(s)

- Grant of Particular Use
- State Land Office Letter of No Objection
- Assignment of Rights to Federal Sponsor
- Landrights Certification Letter
- Other: Servitude Amend. (Apache et al)
- Other: Right of Passage Agreement (Nathaniel Vincent Estate)

Please note the following information that will need to be included in the contract specifications and/or for future monitoring, operations and maintenance site visits:

I. Landowner Special Terms

A. The landowner servitude agreements have the following standard notice language: "STATE agrees to give reasonable notice to GRANTOR prior to initiation of access to the said Lands which is required to implement, construct, operate, modify, monitor, and maintain the Project."
B. Charles Edward Stuckey et ux. has the following language regarding the duration of the agreement:

XI. This Agreement shall become effective upon the date of the signature of STATE, and shall remain in effect for a term of ten (10) years unless sooner released by the STATE; and, provided further that if STATE should fail to commence work or improvements on said Lands to implement the Project within another five (5) years of STATE'S execution hereof, this servitude shall automatically terminate and STATE shall have no further rights hereunder. The State shall have the option of extending this Agreement for an additional ten (10) year period, provided that there is mutual consent between the parties hereto.

II. Pipelines

A. Based on DNR field reconnaissance, contacts with LaOneCall/pipeline companies, GIS data, and review of the 1990 Design Technics Pipeline Atlas, neither oil and gas operations nor pipelines should be adversely impacted by this component of the project. The assumption resulting from current investigations does not include oil and gas operations that might commence at some future date.

Provided herein is contact information for landowners that will be affected by the additional feature/s, including access by DNR and its contractor, which will be on or near their property (see attached landowner tract map):

Apache Louisiana Minerals Inc., et al. (Access and Project Feature/Tracts 1 and 3)
P.O. Box 206
Houma, LA 70361
Contact: John Woodard
Phone: (504) 879-3528

Charles Edward Stuckey et ux (Access and Project Feature/Tract 2)
P.O. Box 157
Simpson, LA 71474
Phone: (337) 383-6132

The Nathaniel Vincent Estate (Access Route only/Tract 4)
1521 Cypress Street
Sulphur, LA 70663
Contact: Earl J. Ellender, Jr.
Phone: (337) 527-3603
Note: As per our discussions with you and Quin Kinler/NRCS, the additional features will be constructed under the operations and maintenance component (State funding only). No assignment to the federal sponsor is needed.

This land rights completion memo will be sent to you in “.pdf” electronic format, which we request that you forward to project team members and any federal partners you deem necessary. Please include the land specialist in the “CC” section of the e-mail as well.

In cases where the federal sponsor is the contracting party, please notify the agency project manager of the completion of land rights. I will contact you and the monitoring manager to schedule a wrap-up meeting to discuss the requirements in the document which may have an impact on contracting specifications. Thank you for your attention to this matter.

Eric D. Roth, CRD Project Land Rights Specialist

Attachments:

c(\text{with attachments}): David Castellanos, CRD Project Biological Monitoring Manager, Lafayette
SURFACE USE REPORT
EAST MUD LAKE HYDROLOGIC PROJECT CS-20
CAMERON PARISH, LOUISIANA

KNOW ALL MEN BY THESE PRESENTS:

That I, RICHARD C. VINCENT, Dan S. Collins, CPL & Associates, Inc. for and on behalf of the Coastal Restoration Division, Department of Natural Resources, State of Louisiana, do hereby offer the following information, compiled from information obtained by telephone interview with MR. CHARLES E. STUCKEY, surface owner of Tract 2 described below (Phone: 337-383-9999); MR. JOHN WOODARD, Land Manager for Apache Louisiana Minerals, Inc., the surface owner of Tract 1 and 3 below (Phone: 985-879-3528); and MR. EARL J. ELLENDER, JR., an undivided interest owner and caretaker for the Nathaniel Vincent Estate, et al., the surface owner of Tract 4 below (Phone: 337-527-3603); concerning the surface use of those lands delineated on the attached plat and situated the Parish of Cameron, State of Louisiana, and described as follows:

TRACT-1: owned by Apache Louisiana Minerals, Inc.

TOWNSHIP 14 SOUTH - RANGE 10 WEST

SECTION 17: All
SECTION 18: SE/4
SECTION 19: ALL
SECTION 20: ALL

TRACT-2: owned by Charles E. Stuckey, et al

TOWNSHIP 14 SOUTH - RANGE 10 WEST

SECTION 21: W/2

TRACT-3: owned by Apache Louisiana Minerals, Inc.

TOWNSHIP 14 SOUTH - RANGE 11 WEST

SECTION 22: All
SECTION 23: All
SECTION 24: ALL

TRACT-4: owned by Nathaniel Vincent Heirs, et al

TOWNSHIP 14 SOUTH - RANGE 10 WEST

SECTION 18: SW/4

Mr. Stuckey stated that Tract 2 above was formerly owned by Amoco Production Company who sold the property to Barry Hunt sometime in the year 2000, and he purchased the property from Barry Hunt in November 2002. Mr. Stuckey did not know if there were any active oil and gas leases currently affecting the property. The property is mostly marshland and is not suitable for cultivation and is used personally for hunting, fishing and crabbing. There are no roads leading to the property. Mr. Stuckey accesses the property by boat from Calcasieu Lake located on the north of the property and by a series of natural bayous. There are no fences or other improvements located on the property.
Mr. Woodard stated that Apache Louisiana Minerals, Inc. (Apache) purchased an undivided seven-ninths (7/9ths) interest in Tracts 2 and 3 in December 2002. The other two-ninths (2/9ths) interest is owned by Lunnie and Betsy Mecon, two sisters, who have owned their interest for many years. Apache manages the property for itself and for the Mecon sisters. All of the property is marshland, with some parts under water, and some covered with marsh grass. There are several producing oil and gas wells located throughout the property. Tract 3 is bordered on its west boundary by Louisiana Highway 27. An existing private shell road traverses both Tracts 2 and 3 at the approximate location delineated on the attached plat. That road was constructed in the late 1940's or early 1950's by an oil and gas exploration company to be used to access this property and other properties for oil and gas operations. The property is also used for hunting waterfowl, alligators and alligator egg capture. There are no fences located on the property and is also used to graze free-range cattle.

Mr. Ellender stated the heirs of Nathaniel Vincent (Vincent Estate) have owned Tract 4 for over 50 years. He is currently and has been the caretaker and/or overseer of the property for many years. He stated that the Vincent Estate consists of over 200 undivided interest owners. The property is mostly marshland, covered in part by open water and in part by marsh grass. An existing private shell road traverses Tract 4 at the approximate location delineated on the attached plat. That road was constructed in the late 1940's or early 1950's by an oil and gas exploration company to be used to access this property and other properties for oil and gas operations. There are two (2) producing oil and gas wells located on the property, accessed by the private shell road. Mr. Ellender stated that he also leases the road to Gene Constance for access to his cattle grazing operations in the area. There are no fences or other improvements located on the property.

THAT, I, RICHARD C. VINCENT, herein set forth those facts as stated to me by MR. CHARLES E. STUCKEY, MR. JOHN WOODARD and MR. EARL J. ELLENDER, d/o, asserted to be true and correct to the best of their knowledge, concerning the surface use of the lands described above.

Signed and submitted this 9th day of September, 2003.

By: _______________________________________

Richard C. Vincent, CPL
Dan S. Collins, CPL & Associates, Inc.
ROAD RIGHT-OF-WAY AGREEMENT

STATE OF LOUISIANA
PARISH OF CAMERON

THIS AGREEMENT made and entered into as of the 1st day of February, 1984, by and between Nathaniel Vincent Estate (hereinafter called "Grantor"), and May Petroleum Inc., a Delaware corporation (hereinafter called "Grantee").

WITNESSETH:

1. For and in consideration of the sum of Two Thousand Dollars ($2,000.00), cash in hand paid, the receipt of which is hereby acknowledged, and of the terms and conditions contained herein, Grantor hereby grants unto Grantee the right to construct, maintain, and use a road, for the purposes hereinafter set forth. The said road right-of-way outlined in Exhibit "A", attached hereto and made a part hereof for all purposes.

2. Grantor does hereby grant unto Grantee for its sole and exclusive use and that of its agents and/or employees, subject to the limitations and for the term herein provided.

   (a) A thirty foot (30') surface easement and right-of-way across Grantor's property for the purpose of constructing and maintaining a board road to said well.

   (b) A non-exclusive surface easement and right-of-way for the purpose of using, improving, and maintaining any existing roadway.

3. Grantee shall be obligated to rebuild, repair, and maintain in good repair all roads and/or bridges now or hereafter situated on Grantor's property during Grantee's use thereof and to keep the same clean and free of trash and debris and shell, when Grantee's operations are completed, restorers such roads and bridges used by Grantee and leave them in as good condition as they now exist, or as they existed when built, if hereafter constructed. Where extra shell or gravel is needed to be added to any road used by Grantee, Grantee shall cause it to be added. If culverts or drainage pipes under the roads used by Grantee are damaged, they shall be promptly repaired so that Grantor's own access to the surface estate will not be interfered with. Grantee's use of roads and bridges shall terminate when this Agreement terminates. If Grantee builds, constructs, or places any bridges or culverts on Grantor's property during the term hereof, the same shall, at Grantor's option, be left on Grantor's property as the property of Grantor and in the same condition as when built or placed thereon, normal wear and tear excepted.

4. Grantee agrees to pay to Grantor the sum of $2,000.00 per year for the continued use thereof, such sum being payable on
ROAD RIGHT-OF-WAY AGREEMENT

STATE OF LOUISIANA
PARISH OF CAMERON

THIS AGREEMENT made and entered into as of the 1st day of February, 1984, by and between The Nathanial Vineyard Estate (hereinafter called "Grantor"), and May Petroleum Inc., a Delaware corporation (hereinafter called "Grantee").

WITNESSETH:

1. For and in consideration of the sum of Two Thousand Dollars ($2,000.00), cash in hand paid, the receipt of which is hereby acknowledged, and of the terms and conditions contained herein, Grantor hereby grants unto Grantee the right to construct, maintain, and use a road, for the purposes hereinafter set forth. The said road right-of-way outlined in Exhibit "A", attached hereto and made a part hereof for all purposes.

2. Grantor does hereby grant unto Grantee for its sole and exclusive use and that of its agents and/or employees, subject to the limitations and for the term herein provided.

   (a) A thirty foot (30') surface easement and right-of-way across Grantor's property for the purpose of constructing and maintaining a board road to said well.

   (b) A non-exclusive surface easement and right-of-way for the purpose of using, improving, and maintaining any existing roadway.

3. Grantee shall be obligated to rebuild, repair, and maintain in good repair all roads and/or bridges now or hereafter situated on Grantor's property during Grantee's use of it and to keep the same clean and free of trash and debris and shall, when Grantee's operations are completed, restore such roads and bridges used by Grantee and leave them in as good condition as they now exist, or as they existed when built, if hereafter constructed. Where extra shell or gravel is needed to be added to any road used by Grantee, Grantee shall cause it to be added. If culverts or drainage pipes under the roads used by Grantee are damaged, they shall be promptly repaired so that Grantor's own access to the surface estate will not be interfered with. Grantee's use of roads and bridges shall terminate when this Agreement terminates. If Grantee builds, constructs, or places any bridges or culverts on Grantor's property during the term hereof, the same shall, at Grantor's option, be left on Grantor's property as the property of Grantor and in the same condition as when built or placed thereon, normal wear and tear excepted.

4. Grantee agrees to pay to Grantor the sum of $2,000.00 per year for the continued use thereof, such sum being payable on
While there is a risk involved in having only Mr. Ellender sign the agreement on behalf of the Heirs, considering the complexity of the title, evidence of his being a sole signing party for the property, and the limited degree of direct impact on the property regarding access to the project, we recommend taking this action. We request your concurrence regarding this recommendation at your earliest convenience.

Should you have any questions, please call me at 3-9420.

CONCUR WITH RECOMMENDATION

[Signature]

Jack C. Caldwell
Secretary, Department of Natural Resources

HH/VJM/ER

Attachment

c: Patrick Landry, CRD Project Manager
   V. J. Marretta, CRD Land Specialist III
   Quin Kindler, NRCS

cs-20/russell vincent heirs recommendation (ellender sign) to jec 9-24-03.wpd
RIGHT-OF-PASSAGE AGREEMENT
EAST MUD LAKE MARSH MANAGEMENT PROJECT CS-20
CAMERON PARISH, LOUISIANA

STATE OF LOUISIANA
PARISH OF CAMERON

THIS AGREEMENT, made and entered into this 24th day of June, 2004, by
and between THE NATHANIEL VINCENT ESTATE, Tax I.D. No. 72-1072175, represented
herein by Earl J. Ellender, Jr., its Manager, whose mailing address is 1521 Cypress Street, Sulphur,
Louisiana 70663; (hereinafter collectively referred to as “Grantor”); and the STATE OF
LOUISIANA, through its DEPARTMENT OF NATURAL RESOURCES (“State”) herein
represented by Scott A. Angelle, its Secretary.

WITNESSETH:

In consideration of the mutual promises and covenants contained herein, and for other good and
valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and of the
obligations herein undertaken by State, Grantor hereby grants unto State, upon the terms and
conditions hereinafter set forth, (hereinafter called the Agreement), a right and privilege to pass over
and across, via an existing road, the following described property belonging to Grantor and located in
Cameron Parish, Louisiana (hereinafter called said Lands), to-wit:

TOWNSHIP 14 SOUTH – RANGE 10 WEST
SECTION 18: The Southwest Quarter (SW/4)

I. Grantor does not warrant or represent the correctness of any survey or of any plats attached hereto
purporting to show the location of the said Lands.

II. In this Agreement, Grantor conveys the right of ingress, egress and passage across the said Lands,
including passage through existing roads and/or canals, by the State, its agents, representatives,
contractors and employees for the purposes of planning, constructing, inspecting, maintaining, and
monitoring of the East Mud Lake Marsh Management Project CS-20, and for no other purpose.

III. State shall be responsible for repair of any damages to the said Lands resulting from ingress,
egress or passage over said Lands by the State or its representatives, contractors or assigns to
conditions existing prior to access by State.

IV. State agrees to indemnify and hold Grantor harmless against and from any loss or liability on
account of injuries to (including the death of) persons or to the property of others, including
reasonable attorney’s fees; provided that such indemnity is limited to loss or liability that results from
State’s operations hereunder on said Lands. In the event any suit is brought against Grantor to
recover for or on account of any such damage, injury or death, resulting from State’s operations
hereunder, State will, at Grantor’s written request, appear and defend said suit at State’s own sole
cost, risk and expense, and State will be responsible for any judgment that may be entered against
Grantor therein when said suit is finally determined, but only to the extent that such judgment is
attributable to liability that results from State’s operations hereunder on said Lands.

V. The State may assign or transfer this Agreement, in whole or in part, any or all of its rights
hereunder.

VI. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs,
successors in interest, transferees and assigns.

VII. This Agreement shall be in effect for twenty (20) years from the date of the signature of the
State, unless sooner released by the State.
TEMPORARY EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT

East Mud Lake Hydrologic Restoration Project C/S-20, Cameron Parish, Louisiana

STATE OF LOUISIANA §

PARISH OF CAMERON §

THIS AGREEMENT, made and entered into this 20th day of September, 1994, by and between FINA OIL AND CHEMICAL COMPANY, a Delaware corporation, whose address is P.O. Box 62102, Houston, Texas 77205-2102, LMD INVESTMENTS LIMITED PARTNERSHIP, a Texas limited partnership of which Los Corralitos Incorporated is its General Partner, whose address is 5075 Westheimer, Suite 1290, Houston, Texas 77056, BETSY M. MULLINS, whose address is 5075 Westheimer, Suite 1290, Houston, Texas 77056, and LANNIE MECOM MOSES, whose address is Wichita Ranch, Route 7, Box 7012A, Brenham, Texas 77833-9012, herein collectively referred to as "GRANTOR", and the STATE OF LOUISIANA, through its Department of Natural Resources, herein represented by Jack McClaranahan, its Secretary hereinafter called "GRANTEE".

WITNESSETH:

For and in consideration of the promises and undertakings by GRANTEE (SPONSOR) to GRANTOR herein, and further for the sum of Ten and No/100 ($10.00) Dollars and other good and valuable consideration, including the potential benefits to GRANTOR'S lands resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto GRANTEE (SPONSOR), its successors, assigns or transferees, the necessary temporary rights-of-way, servitudes and easements (hereinafter "said servitude"), together with the right to enter in, on, and over, GRANTOR'S property, for the purposes of planning, construction, operation, maintenance, and monitoring of conservation and restorative measures, structures and/or appurtenances as part of the East Mud Lake Hydrologic Restoration Project C/S-20 (hereinafter referred to as the Project) located on said (GRANTOR'S) property. Such restorative measures, structures and/or appurtenances shall be located on the following described property, including expressly but not limited to, any lands, waterbottoms or water covered Lands which might be owned by GRANTOR (hereinafter "said Lands") as described in the attached Exhibit A, and shown on Exhibit A-1.

GRANTOR hereby warrants that GRANTOR has read and understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the project, including any impairment, alteration or interference with the natural servitude of drain provided for by Louisiana Law, including expressly but not limited to, Louisiana Civil Code Article 655-658 and/or La. R.S. 38:218.

I. Said servitude includes the rights to perform the following activities for the purposes authorized by federal (P.L. 101-646) and State (R.S. 49:213-214) law and at the sites or locations identified in the Project and exhibits attached and within the limits and bounds therein described:

a. The right to construct (including the necessary excavation and/or filling), operate, maintain and monitor water control structures including all appurtenances thereto, in, over and across the said Lands at Sites 1, 5, 6, 7, 8, 9a, 9b, 10, 11, 13, 17, 19, 20, 21, 22, and 29 as shown on Exhibit B hereto (see detail on Exhibit(s) C. D. E. F. G);

b. The right to plant or cause the growth of vegetation in, on, over and across said Lands, including the right to nourish, replenish and maintain said vegetation at locations along the shoreline of Mud Lake as determined by site evaluation of lands shown on Exhibit B (see detail on Exhibit B);

c. The right to plug, close or fill selected channels, canals, ditches, streams or waterbodies located on said Lands at Sites 16 and 29 as shown on Exhibit B (see detail on Exhibit B).
AMENDMENT OF TEMPORARY EASEMENT, SERVITUDE
AND RIGHT-OF-WAY AGREEMENT

EAST MUD LAKE HYDROLOGIC RESTORATION PROJECT CS-20

CAMERON PARISH, LOUISIANA

STATE OF LOUISIANA §

PARISH OF CAMERON §

THIS AGREEMENT, made and entered into by and between: APACHE LOUISIANA MINERALS, INC., a Delaware corporation, Tax I.D. No. 45-0498052, represented herein by John W. Woodard, its Agent and Attorney-in-Fact, with a business address of Post Office Box 206, Houma, Louisiana 70361-0206; BETSY MECOM, born Mecom, SS# 461-78-7838, whose mailing address is 6916 Broadacre Road, Avondale, Colorado 81022; LMD INVESTMENTS LIMITED PARTNERSHIP, a Texas Limited Partnership, Tax I.D. No. 76-0337026, represented herein by Los Corralitos, Inc., its General Partner, herein represented by Betsy Mecom, its President, whose address is 6916 Broadacre Road, Avondale, Colorado 81022; and WICHITA PARTNERSHIP, LTD., a Texas Limited Partnership, Tax I.D. No. 76-0615924, represented herein by LANNIE MECOM, its duly authorized General Partner, with a business address of P. O. Box 460, Chappell Hill, Texas 77426-0460; hereinafter called the "GRANTOR", (whether one or more) as owner of the below described property; and the STATE OF LOUISIANA through its DEPARTMENT OF NATURAL RESOURCES ("DNR"), herein represented by Scott A. Angelle, its Secretary, hereinafter called the "STATE".

WITNESSETH:

WHEREAS, the STATE entered into a Temporary Easement, Servitude, And Right-Of-Way Agreement (hereinafter called the "Agreement") dated September 20, 1994, with FINA OIL AND CHEMICAL COMPANY, LMD INVESTMENTS LIMITED PARTNERSHIP, BETSY M. MULLINS and LANNIE MECOM MOSES, therein collectively referred to as GRANTOR, recorded in Conveyance Book 807, Page 452, under File No. 238834 of the conveyance records of the Clerk of Court of Cameron Parish, Louisiana, in which the STATE was granted the right to construct the East Mud Lake Hydrologic Restoration Project CS-20 ("Project"), covering the following described lands:

That portion of Fina Oil and Chemical Company, et al property located in Cameron Parish, Louisiana and lying East of Louisiana Highway 27 falling partially or entirely in the following sections:

T14S-R10W
Sections 17, 18, 19, 20, 29, 30, 31 and 32

T14S-R11W
Sections 22, 23, 24, 25, 26, 27, 34, 35 and 36

T15S-R11W
Section 2 and 3

WHEREAS, the interest of Fina Oil And Chemical Company in and to the above described lands is now owned by Apache Louisiana Minerals, Inc.;

WHEREAS, the interest of Lannie Mecom Moses in and to the above described lands is now owned by Wichita Partnership, Ltd.;
TEMPORARY EASEMENT, SERVITUDE AND RIGHT-OF-WAY AGREEMENT

EAST MUD LAKE MARSH MANAGEMENT PROJECT CS-20

CAMERON PARISH, LOUISIANA

STATE OF LOUISIANA

PARISH OF CAMERON

THIS AGREEMENT, made and entered into this 4th day of MARCH, 2002, by and between: CHARLES EDWARD STUCKEY (SSN 435-76-8301) and VIRGINIA SMITH STUCKEY (SSN 439-94-9168), both of Smith, husband and wife, whose mailing address is P. O. Box 157, Simpson, Louisiana 71474; hereinafter called the "GRANTOR" (whether one or more), as owner of the below described property; and the STATE OF LOUISIANA through its DEPARTMENT OF NATURAL RESOURCES ("DNR"), hereinafter represented by its , its , hereinafter called the "STATE".

WITNESSETH: For and in consideration of the promises and undertakings by STATE to GRANTOR herein, and further for other good and valuable consideration, including the potential benefits to GRANTOR's lands resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto STATE, its successors, assigns or transferees, the temporary rights-of-way, servitudes and easements (hereinafter called "the Agreement"), together with the right to enter in, on, and over, GRANTOR'S property, for the purposes of planning, constructing, operating, maintaining, and monitoring of conservation and restorative measures, structures and/or appurtenances as part of the East Mud Lake Marsh Management Project CS-20 (hereinafter called "the Project") located on GRANTOR'S property. The Project will be publicly funded and shall be located on the following described property located in Cameron Parish, Louisiana, including expressly, but not limited to, any lands or water-covered lands which might be owned by GRANTOR (hereinafter called "said Lands"), to wit:

TOWNSHIP 14 SOUTH – RANGE 10 WEST

SECTION 21: The West Half (W/2)

I. GRANTOR hereby warrants that GRANTOR understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the Project.

II. This Agreement includes the rights to enter said Lands at the sites or locations identified on the attached Exhibit A map to perform construction, operation, modification, monitoring, and maintenance activities for the purposes authorized by Federal (16 U.S.C. 3951, et seq.) and State (R.S. 49:213-214) law pursuant to the Project, which activities are described on Exhibit B, attached hereto.

III. STATE agrees to give reasonable notice to GRANTOR prior to initiation of access to the said Lands which is required to implement, construct, operate, modify, monitor, and maintain the Project.

IV. STATE agrees to indemnify and hold GRANTOR harmless against and from any loss or liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney's fees; provided that such indemnity is limited to loss or liability that results from STATE's operations hereunder on said Lands. In the event any suit is brought against GRANTOR to recover for or on account of any such damage, injury or death, resulting from STATE's operations hereunder, STATE will, at GRANTOR's written request, appear and defend said suit at STATE's own sole cost, risk and expense, and STATE will be responsible for any judgment that may be entered against GRANTOR herein when said suit is finally determined to the extent that such judgment is attributable to loss or liability that results from STATE's operations hereunder on said Lands. GRANTOR shall have no liability to STATE for any damage done to structures or to the Project as a result of the activities of third persons.
V. STATE shall be responsible for repair in like manner of any fences, bridges, roads, and other similar facilities and appurtenances located on said Lands which may be damaged or destroyed by STATE, or its designees while on said Lands, but such repair shall be to that condition which existed immediately prior to STATE's activities. STATE shall remove or dispose of all debris associated with construction, operation and maintenance of the Project.

VI. STATE acknowledges that La. R.S. 49:213.8 provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund.

VII. It is understood GRANTOR shall retain the limits of its title and all property rights (subject to the rights of STATE herein) in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures and/or appurtenances constructed hereunder pursuant to the Project on said Lands shall be adjusted, removed and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR.

VIII. Subject to the above, in its exercise of the rights herein granted, STATE agrees not to unreasonably interfere with lawful activities now occurring, or authorized to occur, on said Lands, provided, however, that such use, occupation, and enjoyment shall not unreasonably interfere with the lawful activities of STATE pursuant to this Agreement.

IX. GRANTOR does not warrant title. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereeto which purport to show the location of said Lands.

X. STATE may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the said Lands.

XI. This Agreement shall become effective upon the date of the signature of STATE, and shall remain in effect for a term of ten (10) years unless sooner released by STATE; and, provided further, that if STATE should fail to commence work or improvements on said Lands in implement the Project within five (5) years of STATE'S execution hereof, this servitude shall automatically terminate and STATE shall have no further rights hereunder. The State shall have the option of extending this Agreement for an additional ten (10) year period, provided that there is mutual consent between the parties hereto.

XII. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assignees.

XIII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon any of the parties executing same.

XIV. This Agreement does not confer or waive any rights except as provided herein.

IN WITNESS WHEREOF, GRANTOR(S) has executed this Agreement in the presence of the undersigned witnesses on the date below:

WITNESSES:

Print Name: Richard C. Vincent

Print Name: Patricie James

GRANTOR(S):

By: Charles Stuckey

Date: 3/23/64
TEMPORARY EASEMENT AND RIGHT-OF-WAY AGREEMENT

East Mud Lake Hydrologic Restoration Project C/S-20, Cameron Parish, Louisiana

STATE OF LOUISIANA

PARISH OF East Baton Rouge

THIS TEMPORARY EASEMENT AND RIGHT-OF-WAY AGREEMENT (Agreement), made and entered into this ________ day of ________, 1995, by and between:
MATILDA GRAY STREAM, HAROLD H. STREAM, III, and SANDRA GRAY STREAM MILLER, herein collectively referred to as "GRANTOR", and the STATE OF LOUISIANA, through its Department of Natural Resources, herein represented by Jack B. Gramham, its Secretary, hereinafter referred to as the "STATE".

WITNESSETH:

For and in consideration of the promises and undertakings by STATE to GRANTOR herein, and further for the sum of Ten and No/100 ($10.00) Dollars and other good and valuable consideration, including the potential benefits to GRANTOR'S lands resulting from the hereinafter described project, the receipt and adequacy of which are hereby acknowledged, GRANTOR hereby grants unto STATE, its successors, assigns or transferees, the necessary temporary easement and right-of-way, together with the right to enter in, on, and over, GRANTOR'S property, for the purposes of planning, construction, operation, maintenance, and monitoring of conservation and restorative measures, structures and/or appurtenances as part of the East Mud Lake Hydrologic Restoration Project C/S-20 (the Project) located on said GRANTOR'S property. Such restorative measures, structures and/or appurtenances shall be located on the following described property, including expressly, but not limited to, any lands or water covered lands which might be owned by GRANTOR (said Lands), to wit:

Lands in Sections 27, 28, 33 (also called 34), and 34 (also called 35), T14S-R11W, Cameron Parish, Louisiana, more fully described below:

Section 27, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 2 miles and 2520 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1 mile, then East 1/4 mile, thence South 1 mile, thence West 1/4 mile to a point of commencement; 160 acres.

Section 28, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 2 miles and 2520 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1 mile, thence West 1/4 mile, thence South 1 mile, thence East 1/4 mile to point of commencement; 160 acres.

Section 33, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 1 mile and 5160 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1/2 mile, thence West 1/4 mile, thence South 1/2 mile, thence East 1/4 mile to point of commencement; 80 acres.

Section 34, T14S-R11W: Commencing at a point (marked by a 1" galvanized iron pipe) 1 mile and 5160 feet North and 1-1/2 miles West of the meander corner on the range line between Ranges 10 and 11 in Township 15 South (which meander corner is on the Gulf shore 2520 feet South of the NE corner of Section 12, T15S-R11W); thence North 1/2 mile, thence East 1/4 mile, thence South 1/2 mile, thence West 1/4 mile to point of commencement; 80 acres.
STATE hereby represents that it has disclosed to GRANTOR all known material aspects and features of the Project and all known material anticipated impacts thereof to said Lands. Grantor hereby represents that GRANTOR understands the Project and accepts any and all impacts to said Lands resulting from construction and implementation of the Project, including any impairment, alteration or interference with the natural servitude of drain provided for by Louisiana Law, including expressly but not limited to, Louisiana Civil Code Article 655-658 and/or La. R.S. 38:218.

I. This Agreement includes the rights to perform the following activities for the purposes authorized by Federal (P.L. 101-646) and State (R.S. 49:213-214) law and at the sites or locations identified in attached exhibits and within the limits and bounds therein described:

a. The right to plant or cause the growth of vegetation in, on, over and across said Lands, including the right to nourish, replenish and maintain said vegetation at locations along the shoreline of Mud Lake as determined by site evaluation of lands shown on Exhibit A (see detail on Exhibit B);

b. The right to post signs or notices on or near appropriate project features on said Lands, as may be deemed necessary by STATE;

c. The right to alter or remove structures and/or appurtenances constructed on said Lands by STATE pursuant to the Project;

d. The right to enter said Lands for the purpose(s) of monitoring, conducting surveys, inspections and investigations required by STATE to evaluate the effectiveness of the Project and project features, including maintaining/improving wetland and/or restored land quantity and quality;

e. The right to enter and traverse said Lands to access project features located on adjacent lands, and

f. The right to make modifications to the above, including changes in materials for project features and minor changes to project feature locations, as may be deemed necessary by STATE to fully and properly implement the Project.

II. STATE agrees to give reasonable notice to GRANTOR prior to initiation of work, or the need for ingress or egress, for the purposes required in implementing, constructing, maintaining and monitoring the Project.

III. STATE agrees to indemnify and hold GRANTOR harmless against and from any loss or liability on account of injuries to (including the death of) persons or to the property of others, including reasonable attorney's fees and court costs, arising wholly or in part from or in connection with the Project except to the extent that GRANTOR's loss is due to GRANTOR's gross negligence. In the event any suit is brought against GRANTOR in connection with any activity for which indemnity is owed hereunder, STATE shall, at GRANTOR's written request, appear and defend said suit at STATE's sole cost, risk and expense, and STATE shall be responsible for any final judgment that may be entered against GRANTOR therein, except for such judgment(s) allocable to GRANTOR's fault or gross negligence. GRANTOR shall have no liability to STATE for any damage done to structures or to the project as a result of the activities of third persons.

IV. STATE shall be responsible for repair or replacement in like manner of any fences, roads, bridges, and other facilities located on said Lands which may be damaged or destroyed by STATE, or its designated representatives or contractors, during the construction, operation and maintenance of the structures and/or appurtenances installed as part of the project, and STATE shall remove or dispose of all debris associated with construction, operation and maintenance of the project.

V. STATE acknowledges that La. R.S. 49:213.7E(2) provides that no rights whatsoever shall be created in the public, whether such rights be in the nature of ownership, servitude or use, with respect to any private lands or waters utilized, enhanced, created, or otherwise affected by activities of any governmental agency, local, state, or federal, or any person contracting with same for the performance of any activities, funded in whole or in part, by expenditures from the Wetlands Conservation and Restoration Fund. Further, said statute provides that in the event legal proceedings
are instituted by any person seeking recognition of a right of ownership, servitude, or use in or over private property solely on the basis of the expenditure of funds from the Wetlands Conservation and Restoration Fund, the state shall indemnify and hold harmless the owner of such property for any costs, expense, or loss related to such proceeding, including court costs and attorney fees. STATE and GRANTOR agree that this Agreement shall not be construed as being prohibited by the provisions of R.S. 49:213.7E(2).

VI. It is understood GRANTOR shall retain title and all property rights (subject to the rights of STATE herein) in and to said Lands, and all minerals in, on and under said Lands are not affected in any way hereby. However, no structures and/or appurtenances constructed hereunder pursuant to the Project on said Lands shall be adjusted, removed and/or interfered with by GRANTOR, or anyone holding rights by, through or under GRANTOR, without prior written approval of STATE, which such prior written approval will not be unreasonably delayed or refused.

VII. Subject to the above, in its exercise of the rights herein granted, STATE agrees not to unreasonably interfere with (a) oil and gas operations, (b) agricultural operations, and (c) hunting, trapping and alligator egg operations presently occurring, or authorized to occur, on said Lands. STATE specifically acknowledges the continuing right of GRANTOR, its heirs, successors, assigns, transferees or lessees, to use, occupy and enjoy all of said lands, for all purposes, in such manner at such times as they, or any of them, shall desire to use same, including, but without limitation, for the purpose of conducting oil, gas or other mineral operations on any of said Lands, for the exploration, discovery, production, storage, transportation and disposition of oil, gas, sulphur or other minerals, under oil, gas and mineral leases or otherwise, and for the purpose of farming, grazing, hunting and trapping fur-bearing animals and alligator egg operations thereon provided, however, that such use, occupation, and enjoyment shall not unreasonably and unduly interfere with the lawful activities of STATE pursuant to this Agreement.

VIII. GRANTOR specifically does not warrant or represent the correctness of any survey, or any of the plats attached hereto which purport to show the location of said Lands. This Agreement is executed by GRANTOR without any warranty or recourse whatsoever. If at any time any questions or litigation should arise as to the ownership of any part of said Lands, or as to any boundary or limit of said Lands covered by this Agreement, this Agreement shall not be construed to be, or permitted to serve as, evidence or as a basis of estoppel against any party hereto, or prevent any party hereto from establishing its ownership, or having the boundaries or limits of its property determined, in any lawful manner, anything herein contained to the contrary notwithstanding.

IX. STATE acknowledges that it has been given the opportunity to inspect said Lands and GRANTOR'S other property which may be used by STATE, and/or its designated representatives and contractors, to access the said Lands and accepts the condition of same for all purposes.

X. STATE may assign or transfer, in whole or in part, any or all of its rights hereunder, but only to the extent necessary to implement the purposes of the Project on the said Lands.

XI. This Agreement shall become effective upon the date of the signature of the STATE, and shall remain in effect for a term of twenty (20) years unless sooner released by STATE; and, provided further, that if STATE should fail to commence work or improvements on said Lands to implement the Project within five (5) years of GRANTOR'S execution hereof, this Agreement shall automatically terminate and STATE shall have no further rights hereunder.

XII. This Agreement shall be binding upon, and inure to the benefit of, the parties hereto, their heirs, successors in interest, transferees and assigns.

XIII. This Agreement may be executed in any number of counterparts, each of which shall constitute an original document which shall be binding upon the parties executing same.

XIV. This Agreement does not confer or waive any rights except as expressly provided herein.

XV. The STATE and GRANTOR acknowledge that operation of the project shall conform to the terms of the Memorandum of Agreement entered into among GRANTOR, Department of Natural
APPENDIX C: GOVERNMENT PERMITS
DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

MAR 3 0 2007

REPL Y TO
ATTENTION OF:

Operations Division
Western Evaluation Section

SUBJECT: MVN 2006-4923 WDD

Apache Louisiana Minerals, Inc.
Attn: Mr. Tim Allen
Post Office Box 206
Houma, Louisiana 70361

Dear Mr. Allen:

The proposed work, to perform maintenance activities on levees and water control structures for the existing East Mud Lake Marsh Management CWPPRA Project (CS-20), in Cameron Parish, as shown on the enclosed drawings, is authorized under Category II of the Programmatic General Permit provided that all conditions of the permit are met.

Prior to commencing work on your project, you must obtain approvals from state and local agencies as required by law and by terms of this permit. These approvals include, but are not limited to, a permit or waiver from the Coastal Management Division of the Louisiana Department of Natural Resources and a water quality certification from the Louisiana Department of Environmental Quality, Office of Water Resources.

Replacement of water control structures does not include a revision to the operational schedule previously permitted for the East Mud Lake Marsh Management (CS-20) CWPPRA Project. Any modification to the operational schedule is subject to review by the Corps of Engineers in coordination with federal and state resource agencies.

If the work is initiated within two (2) years of the date of this letter, the authorization remains valid for a total of five (5) years from the date of this letter. If the work is not initiated within two (2) years, this authorization becomes null and void.

Should you have any further questions concerning this matter, please contact Timmy M. Lacoste of this office at (504) 862-2663.

Sincerely,

Ronald J. Ventola
Chief, Regulatory Branch

Enclosures:
NOTE: THESE DRAWINGS ARE TO BE USED EXCLUSIVELY FOR ACQUISITION OF REGULATORY PERMITS.

CAMERON PARISH, LOUISIANA

NOTE: THIS APPLICATION IS FOR A PERMIT REVISION TO PERMIT NO. 923 ISSUED TO APACHE MINERALS, INC. THE PURPOSE OF THIS REVISION IS TO ALLOW ACCOMPLISHMENT OF SOME NECESSARY MAINTENANCE WORK TO REPAIR / REPLACE SOME OF THE STRUCTURAL FEATURES CONSTRUCTED BY THE PERMIT HOLDER CITED ABOVE.

PREPARED BY:

LONNIE G. HARPER
and Associates, Inc.
POST OFFICE BOX 229 GRAND CHEROKEE, LOUISIANA 70631
PHONE: (337) 382-2561 FAX: (337) 382-2564

EAST MUD LAKE MARSH MANAGEMENT (CS-20)
PROPOSED STRUCTURE REPLACEMENT
AND MAINTENANCE ACTIVITIES

APPLICATION BY: APACHE MINERALS, INC
DATE: 06/22/2006
HOUMA, LOUISIANA

PROJECT LOCATION

SCALE: 1' = 5000'

REVISED:

SHEET 2 OF 28
SECTION 19, T. 14 S., R. 10 W.,
CAMERON PARISH, LOUISIANA

LANDOWNERS

EXISTING BANKLINE (TYP.)

EXISTING CANAL

EXISTING CANAL

SHELL ROAD

SHELL ROAD

EXISTING STRUCTURE "S9"

EXISTING BANKLINE

EXISTING BANKLINE

PREPARED BY:

EAST MUD LAKE MARSH MANAGEMENT (CS-20)
PROPOSED STRUCTURE REPLACEMENT
AND
MAINTENANCE ACTIVITIES

APPLICATION BY:

DATE: 06/22/2006

HOUMA, LOUISIANA

SCALE: 1" = 20'

LONNIE G. HARPER
and Associates, Inc.
POST OFFICE BOX 229, GRAND CHEROKEE, LOUISIANA 70443
PHONE: (337) 388-3561 FAX: (337) 388-2366

APACHE MINERALS, INC
NOTE: THESE DRAWINGS ARE TO BE USED EXCLUSIVELY FOR ACQUISITION OF REGULATORY PERMITS.

SECTION 31, T. 15 S., R. 10 W., CAMERON PARISH, LOUISIANA

NOTE: GENERAL MAINTENANCE AND DEBRIS REMOVAL REQUIRED ON THIS STRUCTURE.

PREPARED BY:
LONNIE G. HARPER and Associates, Inc.
POST OFFICE BOX 219, GRAND CHEROKEE, LOUISIANA 70353
PHONE (318) 583-5161 FAX (318) 583-5164

EAST MUD LAKE MARSH MANAGEMENT (CS-20)
PROPOSED STRUCTURE REPLACEMENT AND MAINTENANCE ACTIVITIES

APPLICATION BY: APACHE MINERALS, INC
DATE: 06/22/2006
HOUMA, LOUISIANA

SCALE: 1" = 15'

DETAIL "S13-1"
MARINE VESSEL BARRIER DETAIL
MARINE VESSEL BARRIER SIGN DETAIL

MARINE VESSEL BARRIER DETAIL

MANUAL STAFF GAUGE DETAIL

NOTE: THESE DRAWINGS ARE TO BE USED EXCLUSIVELY FOR ACQUISITION OF REGULATORY PERMITS.

EAST MUD LAKE MARSH MANAGEMENT (CS-20)
PROPOSED STRUCTURE REPLACEMENT AND
MAINTENANCE ACTIVITIES

APPLICATION BY: APACHE MINERALS, INC
DATE: 06/22/2006
HOUMA, LOUISIANA

MARINE VESSEL BARRIER DETAILS
SCALE: N.T.S.
CAMERON PARISH, LOUISIANA

GENERAL NOTES:


ELEMENTS OF THE PROJECT INCLUDE EARTHEN PLUGS, FLAP-GATED CULVERTS, VARIABLE CREST VISORS AND GATED CULVERTS. THESE WERE CONSTRUCTED TO MANAGE THE FLOW OF WATER INTO AND OUT OF THE PROJECT AREA. AT THE PRESENT TIME, DETERIORATION IN MANUFACTURED MAINTENANCE ON STRUCTURES 1, 3, 5, 6, 7, 8, 9, 11, 13, AND 17; AS WELL AS REPLACEMENT OF STRUCTURE 4.


PROJECT FEATURES ARE AS FOLLOWS:

STRUCTURE "S1" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE. APPROXIMATELY 120 CUBIC YARDS OF MAN SIZED STONE WILL BE TRANSPORTED TO THE PROJECT SITE BY BARGE AND DISCHARGED ALONG APPROXIMATELY 210 FEET OF ADJACENT BANKLINE TO CONSTRUCUT AN EROSION CONTROL MAT.

STRUCTURE "S2" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE. APPROXIMATELY 180 CUBIC YARDS OF MAN SIZED STONE WILL BE TRANSPORTED TO THE PROJECT SITE BY BARGE AND DISCHARGED ALONG APPROXIMATELY 210 FEET OF ADJACENT BANKLINE TO CONSTRUCUT AN EROSION CONTROL MAT.

PREPARED BY:

LONNIE G. HARPER
and Associates, Inc.
POST OFFICE BOX 219 - GRAND CHENIER, LOUISIANA 70643
PHONE (337) 588-2161 FAX (337) 588-2166

EAST MUD LAKE MARSH MANAGEMENT (CS-20)
PROPOSED STRUCTURE REPLACEMENT AND
MAINTENANCE ACTIVITIES

APPLICATION BY: APACHE MINERALS, INC
DATE: 06/22/2006

HOUМА, LOUISIANA

GENERAL NOTES

SCALE: N.T.S.
GENERAL NOTES:

STRUCTURE "S9" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE.

STRUCTURE "S3" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE. APPROXIMATELY 110 CUBIC YARDS OF MAN SIZED STONE WILL BE TRANSPORTED TO THE PROJECT SITE BY BARGE AND DISCHARGED ALONG APPROXIMATELY 133 FEET OF ADJACENT BANKLINE TO CONSTRUCT AN EROSION CONTROL MAT.

STRUCTURE "S1" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE. APPROXIMATELY 247 CUBIC YARDS OF MAN SIZED STONE WILL BE TRANSPORTED TO THE PROJECT SITE BY BARGE AND DISCHARGED ALONG APPROXIMATELY 225 FEET OF ADJACENT BANKLINE TO CONSTRUCT AN EROSION CONTROL MAT.

STRUCTURE "S4" - ABANDON AN EXISTING WATER CONTROL STRUCTURE IN PLACE THAT CONSISTS OF FIVE 48 INCH DIAMETER CORRUGATED ALUMINUM PIPE WITH FLAP GATE AND VARIABLE CREST WEIR INLETS. THE PRESENT STRUCTURE HAS A FLOW AREA OF 62.83 SQUARE FEET. CONSTRUCT A REPLACEMENT WATER CONTROL STRUCTURE CONSISTING OF THREE SEVEN FOOT BY FIVE FOOT RECTANGULAR BAYS WITH FLAP GATE AND VARIABLE CREST WEIR INLETS. THE REPLACEMENT STRUCTURE WILL HAVE A FLOW END AREA OF 94.50 SQUARE FEET. APPROXIMATELY 470 CUBIC YARDS OF NATIVE MATERIAL WILL BE REMOVED FROM APPROXIMATELY 400 FEET OF AN ADJACENT WATER BOTTOM AND PLACED IN SPOIL DISPOSAL AREAS LOCATED ON EXISTING SPOIL EMBANKMENTS ADJACENT TO THE STRUCTURE. THESE CHANNEL IMPROVEMENTS WILL PROVIDE AN ACCEPTABLE HYDRAULIC CONNECTION ON THE UPSTREAM AND DOWNSTREAM END OF THE STRUCTURE. APPROXIMATELY 685 CUBIC YARDS OF MAN SIZED STONE WILL BE TRANSPORTED TO THE PROJECT SITE BY BARGE AND DISCHARGED AlONG APPROXIMATELY 820 FEET OF ADJACENT BANKLINE TO CONSTRUCT AN EROSION CONTROL MAT.

STRUCTURE "S6" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE. APPROXIMATELY 60 CUBIC YARDS OF MAN SIZED STONE WILL BE TRANSPORTED TO THE PROJECT SITE BY BARGE AND DISCHARGED ALONG APPROXIMATELY 70 FEET OF ADJACENT BANKLINE TO CONSTRUCT AN EROSION CONTROL MAT.

STRUCTURE "S7" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE. APPROXIMATELY 35 CUBIC YARDS OF MAN SIZED STONE WILL BE TRANSPORTED TO THE PROJECT SITE BY BARGE AND DISCHARGED ALONG APPROXIMATELY 40 FEET OF ADJACENT BANKLINE TO CONSTRUCT AN EROSION CONTROL MAT. MANUAL STAFF GAUGE ON INSIDE OF STRUCTURE WILL BE REPLACED. DEBRIS AND SILT WILL BE REMOVED FROM AN AREA(40' X 15') ADJACENT OF THE STRUCTURE.

STRUCTURE "S8" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE. APPROXIMATELY 35 CUBIC YARDS OF MAN SIZED STONE WILL BE TRANSPORTED TO THE PROJECT SITE BY BARGE AND DISCHARGED ALONG APPROXIMATELY 40 FEET OF ADJACENT BANKLINE TO CONSTRUCT AN EROSION CONTROL MAT. MANUAL STAFF GAUGES ON BOTH SIDES OF STRUCTURE WILL BE REPLACED. DEBRIS AND SILT WILL BE REMOVED FROM AN AREA(20' X 15') ADJACENT OF THE STRUCTURE.

STRUCTURE "S13" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE. WARNING SIGNS WILL BE REPLACED. MANUAL STAFF GAUGES WILL BE REPLACED ON INSIDE OF STRUCTURE. ALL DEBRIS PREVENTING NORMAL OPERATION OF THE STRUCTURE WILL BE REMOVED.

STRUCTURE "S17" - PERFORM GENERAL MAINTENANCE ON THE WATER CONTROL STRUCTURE. WARNING SIGNS WILL BE REPLACED. PILE CAPS WILL BE REPLACED. MANUAL STAFF GAUGE ON INSIDE OF STRUCTURE WILL BE REPLACED.

STEP CANAL AND LEVEE "S1" - REPAIR WASHOUTS ON THE LEVEES ASSOCIATED WITH THE STEP CANAL. APPROXIMATELY 51,362 CUBIC YARDS OF SILT AND DEBRIS WILL BE REMOVED FROM THE EXISTING STEP CANAL WATER BOTTOM AND PLACED ON 40,824' OF ADJACENT LEVEE.

4. IN ORDER TO INSURE THE SAFETY OF ALL PARTIES INVOLVED, THE PERMITTEE OR ITS AGENTS WILL CONTACT THE LOUISIANA DOTTIE SYSTEM (1-800-272-1020) A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY ACTIVITY.

LANDOWNERS LIST:

1. ALLAN F. HOUSE
2. APACHE CORPORATION
3. ARLEEN E. GOODE ET AL
4. BETSY MECOM
5. CANDACE LEE VINCENT
6. CAROLYN R. BUNCH
7. CATHERINE V. MCINTYRE
8. CHARLES STUCKEY
9. CHARLES VINCENT
10. CHARLES W. VINCENT II
11. CLIFF E. LABORDE III
12. DOROTHY BROOKE
13. DOROTHY HAMES
14. GARRETT B. VINCENT
15. GLORIA A. LITTLE
16. HATTON W. VINCENT
17. JANET J. JEANES
18. KERRY A. HOUSE
19. LAWTON J. COMPANY
20. LINDA L. WEST
21. LOUISE G. KENT
22. LYDIA R. STOKES
23. MARGARET R. LABORDE
24. MARION C. BROOKE TRUST
25. MARION WEST
26. RUSSELL VINCENT EST.
27. STREAM FAMILY LTD PARTNERSHIP
28. TOWEL LAND COMPANY INC.
29. WAYLAND VINCENT ET AL
30. WESTLANDS CORP.
31. WICHITA PARTNERSHIP
32. WILLIAM L. VINCENT
33. WILLIAM W. RUCKS III

PREPARED BY:

LONNIE G. HARPER
and Associates, Inc.
POST OFFICE BOX 229 - GRAND CHENE, LOUISIANA 70541
PHONE (337) 588-2641 FAX (337) 588-2396

EAST MUD LAKE MARSH MANAGEMENT (CS-20)
PROPOSED STRUCTURE REPLACEMENT
AND
MAINTENANCE ACTIVITIES

APPLICATION BY: APACHE MINERALS, INC
DATE: 06/22/2006
HOUINA, LOUISIANA

GENERAL NOTES
Directions to Launch at Shell Beach

From the intersection of La Highway 82 and La Highway 27 at Holly Beach Louisiana, located in Cameron Parish, proceed North along La Highway 27 for approximately 4.3 miles to a gravel oil field service road, then travel East along service road for approximately 2.4 miles and follow curve to the North, then travel North for approximately 0.5 miles along service road reaching Station 0+00.00 which is located at the boat launch.
APPENDIX E: SURVEY CONTROL
VICINITY MAP  Scale: 1" = 2000'  Reproduced from USC&GS "HOLLY BEACH" Quadrangle

Station Name: CS20-SM-01

Monument Location: From the drawbridge in Hackberry, La., proceed south on State Highway 27 for 15.9 miles to an entrance gate to a limestone field road for Castex and the monument on left. The monument is located southeast of the road intersections and behind a yellow pipe guardrail.

Description: NGS Style Floating Sleeve Monument; datum point set on 9/16" stainless steel rods driven 40 feet to refusal, set in sand filled 6" PVC pipe with access cover and set in concrete 2 inches above ground.

Stamping: "CASTEX"

Date: February 2002

Monument Established By: John Chance Land Surveys, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 (1992) Geodetic Position
Lat. 29° 49' 49.243301" N
Long. 93° 28' 03.526039" W

Adjusted NAD 1983 Datum LSZ (1702) Ft
N = 490,098.39
E = 2,604,146.24

Adjusted NAVD88 Height
Elevation = 2.46 feet / 0.750m
Ellipsoid Height = -26.112m
Geoid99 Height = -26.862m

Adjusted Position Established by John Chance Land Surveys, Inc. for Louisiana Department of Natural Resources, CRD
Station Name: CS20-SM-02

Monument Location: From the draw bridge in Hackberry, La., proceed south on State Highway 27 for 15.9 miles to a limestone field road on left. Turn left on field road and proceed easterly for approximately 2.5 miles to a limestone field road leading north and the monument on the right. The monument is located south-southeast of the road intersections.

Monument Description: NGS Style Floating Sleeve Monument; datum point set on 9/16" stainless steel rods driven 56 feet to refusal, set in sand filled 6" PVC pipe with access cover and set in concrete 8 inches above ground.

Stamping: "CASTEX 1"

Date: February 2002

Monument Established By: John Chance Land Surveys, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 (1992) Geodetic Position
Lat. 29° 49' 46.958099" N
Long. 93° 25' 40.738711" W

Adjusted NAD 1983 Datum
LSZ (1702) Feet
N = 489,635.54
E = 2,616,714.88

Adjusted NAVD88 Height
Elevation = 2.15 feet / 0.657m
Ellipsoid Height = -26.185m
Geoid99 Height = -26.842m

Adjusted Position Established by John Chance Land Surveys, Inc. for Louisiana Department of Natural Resources, CRD
VICINIY MAP  Scale: 1" = 2000'  Reproduced from USC&GS "HOLLY BEACH" Quadrangle

Station Name: CS20-SM-03

Monument Location: From the drawbridge in Hackberry, La., proceed south on State Highway 27 for 15.9 miles to a limestone field road on left. Turn left on the field road and proceed easterly for approximately 2.5 miles to a limestone field road, thence north on the limestone field road to a boat launch at Step Canal. Thence proceed in Step Canal, by boat, easterly for approximately 1.7 miles and southerly for 1 mile to a flood control structure at the Mud Bayou crossing and the monument on the left. The monument is located south of the flood control structure.

Monument Description: NGS Style Floating Sleeve Monument datum point set on 9/16" stainless steel rods driven 84 feet to refusal, set in sand filled 6" PVC pipe with access cover and set in concrete 12 inches above ground.

Stamping: "MUD BAYOU"

Date: February 2002

Monument Established By: John Chance Land Surveys, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 (1992) Geodetic Position
Lat.  29° 49' 17.016104" N
Long.  93° 23' 56.574856" W

Adjusted NAD 1983 Datum LSZ (1702) Ft
N=  486,444.90
E=  2,625,833.15

Adjusted NAVD88 Height
Elevation = 4.15 feet / 1.264m
 Ellipsoid Height = -25.543m  Geoid98 Height = -26.805m

Adjusted Position Established by John Chance Land Surveys, Inc. for Louisiana Department of Natural Resources, CRD
VICINITY MAP  Scale: 1' = 2000'  Reproduced from USC&GS "HOLLY BEACH" Quadrangle

Station Name:  CS20-SM-04

Monument Location:  From the drawbridge in Hackberry, La., proceed south on State Highway 27 for 18 miles to an entrance to a limestone field road for Castex just north of the First Bayou bridge.  Turn right and proceed southwesterly to a sign and mailbox on a timber post and the monument on the right.  The monument is located immediately behind the sign and mailbox.

Monument Description:  NGS Style Floating Sleeve Monument; datum point set on 9/16" stainless steel rods driven 40 feet to refusal, set in sand filled 6" PVC pipe with access cover and set in concrete 2 inches above ground.

Stamping:  "FIRST BAYOU"

Date:  February 2002

Monument Established By:  John Chance Land Surveys, Inc.

For:  Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 (1992) Geodetic Position
Lat.  29° 48' 03.358539" N
Long.  93° 28' 33.522699" W

Adjusted NAD 1983 Datum LSZ (1702) Ft
N=  479,453.63
E=  2,601,303.75

Adjusted NAVD88 Height
Elevation = 1.72 feet / 0.528m
Ellipsoid Height = -26.263m
Geoid99 Height = -26.789m