APPENDIX A

FARMLAND CONVERSION IMPACT RATING FORMS

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 10/30/09
Name Of Project Red River Environmental Products, LLC	Federal Agency Involved Department of Energy
Proposed Land Use Industrial-Main Site	County And State Red River Parish, Louisiana
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 10/21/09

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).*	Yes ☑	No ☐	Acres Irrigated 0	Average Farm Size 447

Major Crop(s) Corn, Cotton, Soybean	Farmable Land In Govt. Jurisdiction Acres: 153,705 % 64	Amount Of Farmland As Defined in FPPA Acres: 153,705 % 64
Name Of Land Evaluation System Used Red River Parish LESA	Name Of Local Site Assessment System None	Date Land Evaluation Returned By NRCS 10/30/09

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	59.4			
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	59.4	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	59.4			
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.040			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	27.0			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	77	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use		10			
2. Perimeter In Nonurban Use		8			
3. Percent Of Site Being Farmed		2			
4. Protection Provided By State And Local Government		0			
5. Distance From Urban Builtup Area		10			
6. Distance To Urban Support Services		0			
7. Size Of Present Farm Unit Compared To Average		10			
8. Creation Of Nonfarmable Farmland		0			
9. Availability Of Farm Support Services		5			
10. On-Farm Investments		1			
11. Effects Of Conversion On Farm Support Services		0			
12. Compatibility With Existing Agricultural Use		0			
TOTAL SITE ASSESSMENT POINTS	160	46	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	77	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	46	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	123	0	0	0

Site Selected: See Map	Date Of Selection 10/21/09	Was A Local Site Assessment Used? Yes ☐ No ☒

Reason For Selection: The main facility site (previously a portion of the Red River Mining Company Oxbow Lignite Surface Mine) was selected primarily for easy access to coal reserves and existing infrastructure. The substation and intake water pump sites were chosen for their locations adjacent to an overhead transmission line and a water source. Construction of the facility, substation, and intake pump sites will result in 59.4 acres, 2.914 acres and 0.15 acres respectively of direct impacts to farmland.

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 10/30/09
Name Of Project Red River Environmental Products, LLC	Federal Agency Involved Department of Energy
Proposed Land Use Industrial-Substation Site	County And State Red River Parish, Louisiana
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 10/21/09

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).*	Yes ☑	No ☐	Acres Irrigated 0	Average Farm Size 447

Major Crop*(s)* Corn, Cotton, Soybean	Farmable Land In Govt. Jurisdiction Acres: 153,705 % 64	Amount Of Farmland As Defined in FPPA Acres: 153,705 % 64
Name Of Land Evaluation System Used Red River Parish LESA	Name Of Local Site Assessment System None	Date Land Evaluation Returned By NRCS 10/30/09

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	2.9			
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	2.9	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	2.9			
B. Total Acres Statewide And Local Important Farmland	0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.0019			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	27.0			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	76	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	76	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	0	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	76	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection: The main facility site (previously a portion of the Red River Mining Company Oxbow Lignite Surface Mine) was selected primarily for easy access to coal reserves and existing infrastructure. The substation and intake water pump sites were chosen for their locations adjacent to an overhead transmission line and a water source. Construction of the facility, substation, and intake pump sites will result in 59.4 acres, 2.914 acres and 0.15 acres respectively of direct impacts to farmland.

(See Instructions on reverse side)

Form AD-1006 (10-83)

This form was electronically produced by National Production Services Staff

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 10/30/09
Name Of Project Red River Environmental Products, LLC	Federal Agency Involved Department of Energy
Proposed Land Use Industrial-Intake Pump Site	County And State Red River Parish, Louisiana
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 10/21/09

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).*	Yes ☑	No ☐	Acres Irrigated 0 / Average Farm Size 447
Major Crop(s) Corn, Cotton, Soybean	Farmable Land In Govt. Jurisdiction Acres: 153,705 % 64		Amount Of Farmland As Defined in FPPA Acres: 153,705 % 64
Name Of Land Evaluation System Used Red River Parish LESA	Name Of Local Site Assessment System None		Date Land Evaluation Returned By NRCS 10/30/09

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	0.15			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	~~0.0~~ 0.15	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	0.15			
B. Total Acres Statewide And Local Important Farmland	0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.000098			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	63.0			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	100	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	100	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	0	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	100	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection: The main facility site (previously a portion of the Red River Mining Company Oxbow Lignite Surface Mine) was selected primarily for easy access to coal reserves and existing infrastructure. The substation and intake water pump sites were chosen for their locations adjacent to an overhead transmission line and a water source. Construction of the facility, substation, and intake pump sites will result in 59.4 acres, 2.914 acres and 0.15 acres respectively of direct impacts to farmland.

(See Instructions on reverse side)

Form AD-1006 (10-83)

This form was electronically produced by National Production Services Staff

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*		3. Date of Land Evaluation Request 10/21/09	4. Sheet 1 of 1
1. Name of Project Red River Environmental Products, LLC		5. Federal Agency Involved Department of Energy	
2. Type of Project Industrial		6. County and State Red River Parish, Louisiana	
PART II *(To be completed by NRCS)*		1. Date Request Received by NRCS 10/21/09	2. Person Completing Form Marc L Bridelin
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☑ NO ☐			4. Acres Irrigated 0 / Average Farm Size 447
5. Major Crop(s) Corn, Cotton Soybeans	6. Farmable Land in Government Jurisdiction Acres: 153,705 % 64		7. Amount of Farmland As Defined in FPPA Acres: 153,705 % 64
8. Name Of Land Evaluation System Used Red River Parish LESA	9. Name of Local Site Assessment System NONE		10. Date Land Evaluation Returned by NRCS 11/06/09

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	0.11			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	3			
C. Total Acres In Corridor	3	0	0	0
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	0.11			
B. Total Acres Statewide And Local Important Farmland	0			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.00007			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	73			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	85			

PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points				
1. Area in Nonurban Use	15	10			
2. Perimeter in Nonurban Use	10	8			
3. Percent Of Corridor Being Farmed	20	0			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	5			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availability Of Farm Support Services	5	5			
8. On-Farm Investments	20	5			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	1			
TOTAL CORRIDOR ASSESSMENT POINTS	160	34	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100				
Total Corridor Assessment (From Part VI above or a local site assessment)	160	34	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260				

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
A	3	10/21/09	YES ☐ NO ☑

5. Reason For Selection:

The proposed ROW corridors were chosen based upon the shortest travel distance, landowner willingness, and environmental factors such as wetlands.

Signature of Person Completing this Part: Clay V. Fischer

DATE 10/21/09

NOTE: Complete a form for each segment with more than one Alternate Corridor

APPENDIX B

USFWS DOCUMENTATION

February 20, 2008

RECEIVED
FEB 21 2008
FISH & WLDL. SERV
LAFAYETTE, LA.

Mr. Jim Boggs
Field Supervisor
U.S. Fish and Wildlife Services
Lafayette Ecological Services Field Office
646 Cajundome Boulevard, Suite 400
Lafayette, LA 70506

Re: Red River Environmental Products, LLC
South Parish Road 604 Site, Coushatta, Red River Parish, Louisiana

Dear Mr. Boggs:

On behalf of our client Red River Environmental Products, LLC (RREP), Zephyr Environmental Corporation (Zephyr) is forwarding this letter to fulfill the requirements of the Nationwide Permitting Process regarding consultation with your agency in regard to the potential occurrence of threatened/endangered species and/or their habitat on the above referenced site.

SITE DESCRIPTION

The applicant proposes to construct an industrial facility on the approximately 59-acre subject site. The facility will include a plant site, access roadway, water intake structure and waterline, gas line, electric line, and potable waterline right-of-ways.

The proposed industrial facility will be located between one-half and one mile west of Armistead (Harmon LA, USGS quadrangle), Louisiana on the south side of Parish Road 604, and approximately three miles west of the current Red River channel (See Figures 1 and 2 in Appendix A). The plant site will be approximately 1/4 mile west of the Missouri Pacific Railroad and State Highway 1. The site is currently within the Red River Mine (RRM) Permit boundary. The plant site consists of flat terrain which was recently mined and reclaimed as part of normal Red River Mine operations (Appendix B, Photographs B-1 and B-2). Currently the plant site exhibits bare ground and clumps of Bermuda grass and Johnson grass. Pig Pen Bayou outlines the northern and eastern boundaries of the plant site. An existing pipeline right-of-way (ROW) (Exxon) bounds the plant site to the west. The current mine pit bounds the site to the south (Appendix B, Photograph B-3). The approximate geographic coordinate of the plant site is latitude 32° 00' 08.87" N and longitude 93° 23' 34.14" W.

Pig Pen Bayou is a relatively open stream corridor. It has a defined bed-and-bank with an ordinary high water mark (OHWM) of approximately 40 feet and is considered perennial/intermittent. Vegetation along the stream channel in the area of South Parish Road 604 consists of cattail (*Typha latifolia*), bushy bluestem (*Andropogon glomeratus*), and black willow (*Salix nigra*) (Appendix B, Photograph B-4). Annual ragweed (*Ambrosia artemisiifolia*) is the dominant species just above the ordinary high water mark. Elsewhere, Pig Pen Bayou exhibits very little vegetation as it has recently been re-routed as a part of normal mine operations (Appendix B, Photograph B-5). An isolated segment of Pig Pen Bayou (Appendix B,

Photograph B-6) will be traversed by a water supply pipeline ROW which will extend approximately two miles south from the plant site to the E6 sediment containment pond and terminate at an intake structure on the containment pond (Appendix B, Photograph B-7).

Threatened and Endangered Species

Federally threatened (T) and endangered (E) species listed by the U.S. Fish and Wildlife Service (USFWS) as having the potential to occur in Red River Parish are *Scaphirhynchus albus* (pallid sturgeon, E) and *Sterna antillarum* (least tern, E).

The ***pallid sturgeon*** is a large, primarily cartilaginous fish with a flattened snout and a long, slender tail base with bony plates. They are toothless and the mouth is located on the underside of the snout. These fish are typically colored gray dorsally and white ventrally and can weigh up to 86 pounds. The pallid sturgeon is similar in appearance to the shovelnose sturgeon; however, the shovelnose sturgeon is typically darker in color with bony plates along the belly.

These fish are generally limited to the Missouri and Mississippi Rivers with some occurrences in the Yellowstone and Atchafalaya rivers. Information on the pallid sturgeon is limited primarily due to their rarity. They are known to prefer the bottoms of large, swift, turbid rivers with a sandy-substrate. They have been found at depths ranging from 1-7 meters. Spawning is believed to occur between June and August depending upon flood events. Pallid sturgeons primarily eat smaller fish and aquatic invertebrates.

Least terns are small shorebirds, measuring about 21-24 cm long with a 51 cm wingspread. Sexes appear similar, with a black-capped crown, white forehead, grayish back and dorsal wing surface, white undersurface; legs are a variation of orange and yellow colors depending on the sex, and a black-tipped bill whose color also varies depending on sex.

The interior least tern is piscivorous, feeding in shallow waters of rivers, streams and lakes. Other least terns also feed on crustaceans, insects, mollusks and annelids. Terns usually feed close to their nesting sites. Terns nesting at sand and gravel pits and other artificial habitats may fly up to 3.2 km to fish.

Breeding colonies or terneries are usually small (up to 20 nests) with nests spaced far apart. Egg-laying and incubation occur from late May to early August, depending on the geographical location and availability of habitat.

The interior least tern is migratory and historically bred along the Mississippi and Red River systems of central Louisiana. Distribution generally is restricted to less altered river segments.

The riverine nesting areas of interior least terns are sparsely vegetated sand and gravel bars within a wide unobstructed river channel, or salt flats along lake shorelines. Nesting locations usually are at the higher elevations and away from the water's edge because

nesting starts when the river flows are high and small amounts of sand are exposed. The size of nesting areas depends on water levels and the extent of associated sandbars.

Zephyr completed a pedestrian survey of the plant site and nearby areas to determine if habitat likely to support the two federally-listed T&E species for Red River Parish exists. The T&E species habitat survey was completed by a qualified wildlife biologist. Data were collected to describe resident vegetation communities and assess the potential for occurrence of T&E species.

The vegetative community observed within the survey area is limited to areas immediately adjacent to Pig Pen Bayou. The majority of the site is bare ground. The site does not possess habitat that supports the pallid sturgeon or the interior least tern. No T&E species were observed within the survey area during the survey. It is Zephyr's opinion that construction of the proposed project will not adversely affect either listed species.

Should you have any questions please contact me at 512-636-0645 (mobile) or 512-879-6629 (office) or contact Ms. Jennifer Seinfeld at 410-312-7915. Construction is scheduled to begin on this project as early as April 4, 2008 unless you contact us with questions or concerns. Thank you for your assistance in this matter.

Sincerely,
Zephyr Environmental Corporation

Clay V. Fischer

Clay V. Fischer
Natural Resources Project Manager

cc: Ms. Jennifer Sharp Seinfeld, P.E., Zephyr Environmental Corporation
Ms. Andrea Adams, ADA-ES, Inc.
Ms. Sheila Glesmann, Emission Strategies, Inc.

This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed,
(✓) Will have no effect on those resources
( ) Is not likely to adversely affect those resources.
This finding fulfills the requirements under Section 7(a)(2) of the Act.

Feb 22, 2008
Date

Acting Supervisor
Louisiana Field Office
U.S. Fish and Wildlife Service

zephyr environmental corporation

zephyr environmental corporation

consulting ♦ training ♦ data systems

December 12, 2008

This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed,
( ) Will have no effect on those resources
(✓) Is not likely to adversely affect those resources.
This finding fulfills the requirements under Section 7(a)(2) of the Act.

Dec 17, 2008

Acting Supervisor Date
Louisiana Field Office
U.S. Fish and Wildlife Service

Mr. Jim Boggs
Field Supervisor
US Fish and Wildlife Service
Lafayette Ecological Services Field Office
646 Cajundome Boulevard
Suite 400
Lafayette, LA 70506

Re: **Red River Environmental Products, LLC, Coushatta, Red River Parish, Louisiana**

Dear Mr. Boggs:

On behalf of our client Red River Environmental Products, LLC, (RREP), Zephyr Environmental Corporation (Zephyr) is submitting this supplemental consultation letter to fulfill the requirements of the Nationwide Permitting process, specifically General Condition 17 regarding consultation with your agency in regards to the potential occurrence of threatened/endangered species and or their habitat on the above referenced site. The applicant proposes to construct a waterline and intake structure associated with an industrial facility which your office has previously reviewed and concurred as unlikely to adversely affect any listed species. The previous approval letter is included in Appendix C.

SITE DESCRIPTION

The proposed Water Line ROW and intake structure will extend from the plant site (immediately south of Parish Road 604) approximately 2.5 miles southeast to Hollingsworth Cutoff (an oxbow of the Red River) (Figures 1 and 2, Appendix A). The proposed Water Line ROW will generally parallel Pig Pen Bayou along the southern bank while traversing southeast towards Hollingsworth Cutoff. Three crossings of Pig Pen Bayou via trenching will be required. Pig Pen Bayou is a relatively open stream corridor. It has a defined bed-and-bank with an ordinary high water mark (OHWM) of approximately 40 feet and is considered perennial/intermittent. Vegetation along the stream channel consists of cattail (*Typha latifolia*), bushy bluestem (*Andropogon glomeratus*), and black willow (*Salix nigra*) (Appendix B, Photograph 1). Annual ragweed (*Ambrosia artemisiifolia*) is the dominant species just above the ordinary high water mark. Recent re-routing of Pig Pen Bayou as a part of normal mine operations at Red River Coal Mine has resulted in certain portions exhibiting very little vegetation (Appendix B, Photograph 2). Approximately 9500 feet southeast of the plant site, the Water Line ROW will initiate an eastern path across Pig Pen Bayou via trenching and the Union Pacific Railroad and Highway 1 ROW's via directional bore. Current conditions exhibited in this portion of the proposed Water Line ROW are described as agricultural hay pasture between Highway 1 and Hollingsworth Cutoff to the east (Photograph 3, Appendix B).

The proposed intake pump will be located on the bank of Hollingsworth Cutoff (Photograph 4, Appendix B). The intake line from the structure reaches approximately 750 feet from the bank into the open water of Hollingsworth Cutoff. Conditions immediately adjacent to the cutoff are

1515 Capital of Texas Highway South, Suite 300 ♦ Austin, Texas 78746 ♦ PH 512.329.5544 ♦ FAX 512.329.8253

www.ZephyrEnv.com ♦ www.HazMatAcademy.com

described as level and dominated by woody species such as hackberry (Celtis laeviegata), American elm (Ulmus americana), and cedar elm (U. crassiafolia) with an understory of Johnsongrass (Sorghum halepense), greenbriar (Smilax bona-nox), goldenrod (Solidago sp.), and poison ivy (Toxicodendron radicans). A steep slope separates the intake pump from the cutoff and below the slope; vegetation becomes less dense and is dominated by herbaceous species. Near normal water level of the oxbow, buttercup (Ranunculus sp.), smartweed (Polygonum sp.), and button bush (Cephalanthus occidentalis) dominate. Below normal water level, butter cup and water hyacinth (Eichornia crassipes) dominate out to a depth of approximately 1 foot at which point floating mats of water hyacinth and open water dominate. The approximate geographic coordinate of the intake pump is latitude 32° 1' 10.86" N and longitude 93° 23' 45.03" W. Hollingsworth Cutoff exhibits steep banks and fairly slow water circulation with a maximum depth of approximately 14-feet at normal water level. Listed species potentially occurring in the area are discussed below.

Threatened and Endangered Species

Federally threatened (T) and endangered (E) species listed by the U.S. Fish and Wildlife Service (USFWS) as having the potential to occur in Red River Parish are *Scaphirhynchus albus* (pallid sturgeon, E) and *Sterna antillarum* (least tern, E).

The ***pallid sturgeon*** is a large, primarily cartilaginous fish with a flattened snout and a long, slender tail base with bony plates. They are toothless and the mouth is located on the underside of the snout. These fish are typically colored gray dorsally and white ventrally and can weigh up to 86 pounds. The pallid sturgeon is similar in appearance to the shovelnose sturgeon; however, the shovelnose sturgeon is typically darker in color with bony plates along the belly.

These fish are generally limited to the Missouri and Mississippi Rivers with some occurrences in the Yellowstone and Atchafalaya rivers. Information on the pallid sturgeon is limited primarily due to their rarity. They are known to prefer the bottoms of large, swift, turbid rivers with a sandy-substrate. They have been found at depths ranging from 1-7 meters. Spawning is believed to occur between June and August depending upon flood events. Pallid sturgeons primarily eat smaller fish and aquatic invertebrates.

Least terns are small shorebirds, measuring about 21-24 cm long with a 51 cm wingspread. Sexes appear similar; with a black-capped crown, white forehead, grayish back and dorsal wing surface, white undersurface, legs are a variation of orange and yellow colors depending on the sex, and a black-tipped bill whose color also varies depending on sex.

The interior least tern is piscivorous, feeding in shallow waters of rivers, streams and lakes. Other least terns also feed on crustaceans, insects, mollusks and annelids. Terns usually feed close to their nesting sites. Terns nesting at sand and gravel pits and other artificial habitats may fly up to 3.2 km to fish.

Breeding colonies or terneries are usually small (up to 20 nests) with nests spaced far apart. Egg-laying and incubation occur from late May to early August, depending on the geographical location and availability of habitat.

The interior least tern is migratory and historically bred along the Mississippi and Red River systems of central Louisiana. Distribution generally is restricted to less altered river segments.

The riverine nesting areas of interior least terns are sparsely vegetated sand and gravel bars within a wide unobstructed river channel, or salt flats along lake shorelines. Nesting locations usually are at the higher elevations and away from the water's edge because nesting starts when the river flows are high and small amounts of sand are exposed. The size of nesting areas depends on water levels and the extent of associated sandbars.

Zephyr completed a pedestrian survey of the waterline route and nearby areas to determine if habitat likely to support the two federally-listed T&E species for Red River Parish exists. The T&E species habitat survey was completed by a qualified wildlife biologist. Data were collected to describe resident vegetation communities and assess the potential for occurrence of T&E species.

The vegetative community observed within the survey area is limited to those areas immediately adjacent to the plant site, waterline ROW, and intake structure. No areas within the project footprint possess habitat that supports the pallid sturgeon or the interior least tern. No T&E species were observed within the survey area during the survey. It is Zephyr's opinion that construction of the proposed project will not adversely affect either listed species.

We believe this letter summarizing our survey fulfills the requirements of General Condition 17 of our Nationwide Permit. Should you have any questions please contact me at 512-636-0645 (mobile) or 512-879-6629 (office) or my colleague Jennifer Seinfeld at 410-312-7915. If you concur with our analysis, please indicate as such by signing below and faxing the signed copy to me at (512) 329-8253. Thank you for you assistance in this matter.

Sincerely,
Zephyr Environmental Corporation

Clay V. Fischer
Natural Resources Project Manager

cc: Ms. Jennifer Seinfeld, Environmental Corporation, Baltimore, Maryland
Ms. Andrea Adams, ADA-ES, Littleton, Colorado

zephyr environmental corporation

6 March 2009

Mr. Jim Boggs
Field Supervisor
US Fish and Wildlife Service
Lafayette Ecological Services Field Office
646 Cajundome Boulevard
Suite 400
Lafayette, LA 70506

This project has been reviewed for effects to Federal trust resources under our jurisdiction and currently protected by the Endangered Species Act of 1973 (Act). The project, as proposed,
( ) Will have no effect on those resources
(✓) Is not likely to adversely affect those resources.
This finding fulfills the requirements under Section 7(a)(2) of the Act.

Deborah A Sullen March 10, 2009
Acting Supervisor Date
Louisiana Field Office
U.S. Fish and Wildlife Service

Re: Red River Environmental Products, LLC, Coushatta, Red River Parish, Louisiana

Dear Mr. Boggs:

On behalf of our client Red River Environmental Products, LLC, (RREP), Zephyr Environmental Corporation (Zephyr) is submitting this letter to fulfill the requirements of the Nationwide Permitting process, specifically General Condition 17 regarding consultation with your agency in regards to the potential occurrence of threatened/endangered species and or their habitat on the above referenced site. The applicant proposes to construct a substation, electric line and outfall structure associated with an industrial facility which your office has previously reviewed and concurred as unlikely to adversely affect any listed species.

SITE DESCRIPTION

Substation And Electric Line Right-of-Way (Row)

The substation site is located northwest of Armistead, Louisiana on the east side of US Highway 1. Immediately north of the intersection of US Highway 1 and the Cleco Electric main line, a substation with dimensions of approximately 235 x 120-feet will be constructed to route power to the RREP site (Figure 1 Appendix A). Access to the substation will be from US Highway 1 via a 107 x 20-feet paved roadway. The majority of the substation site has been cleared and is actively farmed. The substation site is bounded to the south by an existing Cleco Transmission line and to the west by US Highway 1; a CrossTex pipeline ROW and a transmission line ROW also traverse the substation site along the western boundary. A narrow portion of the substation site situated near the Cleco Transmission Line is densely vegetated with annual ragweed (*Ambrosia annuus*), yankee weed (*Eupatorium compositifolium*), and sunflower (*Helianthus annuus*). A man-made non-jurisdictional swale which carries stormwater from the farm field to the bar-ditch along the east side of US Hwy 1 traverses the substation site from east to west and is located immediately north of the Cleco Transmission Line. The approximate geographic coordinate of the center of the Substation site is N 32.05579 and W 93.41745.

The Substation site is primarily developed for farming with the exception of a narrow portion of the southern boundary which has been graded to allow drainage of stormwaters offsite or is too near the Cleco Transmission Line to farm. At the time of investigation, a majority of the substation site exhibited almost fallow conditions with only recent sprouts of winter wheat and scattered weeds visible. The narrow unfarmed portion of the substation site situated near the

Cleco Transmission Line exhibited dense frost-killed vegetation dominated by annual ragweed (*Ambrosia annuus*), yankee weed (*Eupatorium compositifolium*), and sunflower (*Helianthus annuus*). The man-made non-jurisdictional swale generally exhibits large areas of bare ground with scattered smartweed (*Polygonum* sp.) and dock (*Rumex* sp.) in the vicinity of US Highway 1.

The proposed electric line ROW will begin approximately 4 miles north of the plant site at the substation. From the substation, the proposed electric line ROW will traverse to the west side of US Highway 1, and then parallel an existing electric ROW which generally parallels the Union Pacific Railroad ROW on a 30-foot offset to the west. At Honey Bayou, the electric line ROW will jog slightly west to a natural opening within the canopy in order to avoid the need the removal of cypress trees from the ROW. Approximately 11,500 feet southeast of the starting point, the ROW will re-direct in a more southerly heading to avoid impacts to forested wetlands associated with an unnamed abandoned slough of the Red River. For approximately 2,500 feet, the proposed electric line ROW will skirt the feature to the west. At such point, it will intersect with the previously existing electric line ROW and continue due south on a 30-foot offset to the east of the existing electric line ROW for approximately 6,700 feet to the RREP site.

Outfall Line ROW

As proposed, the outfall line ROW will parallel (within the same trench) the authorized intake water line ROW (proposed in previous submittal) from the RREP facility across Pig Pen Bayou (via trenching) and Parish Road 604 via directional drill, then east along Parish Road 604 and back across Parish Road 604 (via directional drill) Pig Pen Bayou (via trenching), then southeast for approximately 9000 feet along the west bank of Pig Pen Bayou, east across Pig Pen Bayou (via trenching), then east under the Union Pacific Railroad ROW and US Highway 1 (via directional drill) (Figure 2 Appendix A). Pig Pen Bayou exhibits a defined bed and bank condition with an OHWM of 40 feet at all points traversed by the propose ROW. From US Highway 1 the outfall line ROW will continue to parallel the intake water line ROW and traverse Parish Road 601 and the Red River levee via overtopping. Approximately 50 feet east of the levee, the outfall line ROW will jog north across a nearby property line and then continue northeast along the Hollingsworth Cutoff top bank to the Red River.

The proposed outfall ROW traverses areas previously developed for coal mining and farming. Typical vegetation within the ROW consists of Bermudagrass, St. Augustine grass, ragweed, sunflower, and johnsongrass with scattered hackberry, elm, and smilax along fence lines.

Outfall Structure

The proposed outfall station will consist of restrained joint ductile iron (RJDI) piping within the river channel with diffusers to allow discharge. Concrete ballasts will be installed on the bottom of the river channel to prevent floatation of the pipe and to keep it firmly on the bottom.

Trenching will be utilized to install the RJDI through the bank. The trench will be backfilled with the existing excavated material. The excavated material not needed for backfill will be removed to an upland location so the finished ground surface matches the preconstruction surface. A 30-foot permanent easement and two 25-foot temporary construction easements on either side (80 foot wide total) will be provided for the construction of the outfall structure from the normal water surface elevation to the terminus of the outfall structure. From the normal water surface elevation to Parish Road 601, only the 30-foot permanent easement and the 25-foot temporary easement to the north will be needed. The construction will require the vegetation in the permanent easement to be removed. The excavation will be backfilled with excavated soil and after the installation is complete; all areas will be returned to pre-construction contours. No heavy equipment is anticipated to be utilized below the OHWM and/or in sensitive areas. Activities beyond the waters edge will be performed from a floating barge.

Once through the bank, the pipeline will be partially exposed above the bed of the Red River. The underwater trench will be open cut and the same construction techniques discussed above will be employed. The necessary excavation will be performed from the barge as well as the joining and placement of the pipe.

Threatened and Endangered Species

Federally threatened (T) and endangered (E) species listed by the U.S. Fish and Wildlife Service (USFWS) as having the potential to occur in Red River Parish are *Scaphirhynchus albus* (pallid sturgeon, E) and *Sterna antillarum* (least tern, E).

> The ***pallid sturgeon*** is a large, primarily cartilaginous fish with a flattened snout and a long, slender tail base with bony plates. They are toothless and the mouth is located on the underside of the snout. These fish are typically colored gray dorsally and white ventrally and can weigh up to 86 pounds. The pallid sturgeon is similar in appearance to the shovelnose sturgeon; however, the shovelnose sturgeon is typically darker in color with bony plates along the belly.
>
> These fish are generally limited to the Missouri and Mississippi Rivers with some occurrences in the Yellowstone and Atchafalaya rivers. Information on the pallid sturgeon is limited primarily due to their rarity. They are known to prefer the bottoms of large, swift, turbid rivers with a sandy-substrate. They have been found at depths ranging from 1-7 meters. Spawning is believed to occur between June and August depending upon flood events. Pallid sturgeons primarily eat smaller fish and aquatic invertebrates.
>
> ***Least terns*** are small shorebirds, measuring about 21-24 cm long with a 51 cm wingspread. Sexes appear similar; with a black-capped crown, white forehead, grayish back and dorsal wing surface, white undersurface, legs are a variation of orange and yellow colors depending on the sex, and a black-tipped bill whose color also varies depending on sex.
>
> The interior least tern is piscivorous, feeding in shallow waters of rivers, streams and lakes. Other least terns also feed on crustaceans, insects, mollusks and

annelids. Terns usually feed close to their nesting sites. Terns nesting at sand and gravel pits and other artificial habitats may fly up to 3.2 km to fish.

Breeding colonies or terneries are usually small (up to 20 nests) with nests spaced far apart. Egg-laying and incubation occur from late May to early August, depending on the geographical location and availability of habitat.

The interior least tern is migratory and historically bred along the Mississippi and Red River systems of central Louisiana. Distribution generally is restricted to less altered river segments.

The riverine nesting areas of interior least terns are sparsely vegetated sand and gravel bars within a wide unobstructed river channel, or salt flats along lake shorelines. Nesting locations usually are at the higher elevations and away from the water's edge because nesting starts when the river flows are high and small amounts of sand are exposed. The size of nesting areas depends on water levels and the extent of associated sandbars.

Zephyr completed a pedestrian survey of the proposed electric line and outfall line ROWs, as well as the outfall structure location to determine if habitat likely to support the two federally-listed T&E species for Red River Parish exists. The T&E species habitat survey was completed by a qualified wildlife biologist. Data were collected to describe resident vegetation communities and assess the potential for occurrence of T&E species. Photographs of existing vegetation at the substation site and within the proposed electric line and outfall ROWs are provided in Appendix B.

The vegetative community observed within the survey area is limited to those areas immediately adjacent to the plant site, electric line ROW, and outfall line ROW and structure. No areas within the project footprint possess habitat that supports the pallid sturgeon or the interior least tern. No T&E species were observed within the survey area during the survey. It is Zephyr's opinion that construction of the proposed project will not adversely affect either listed species.

As mentioned earlier, portions of the this project have been reviewed by your office previously. This coordination letter is forwarded to update USFWS to recently modified portions of the project. Copies of the two previous coordination letters with stamped concurrence are included in Appendix C.

We believe this letter summarizing our survey fulfills the requirements of General Condition 17 of our Nationwide Permit. Should you have any questions please contact me at 512-636-0645 (mobile) or 512-879-6629 (office) or my colleague Jennifer Seinfeld at 410-312-7915. If you concur with our analysis, please indicate as such by signing below and faxing the signed copy to me at (512) 329-8253. Thank you for you assistance in this matter.

zephyr
environmental corporation

Sincerely,
Zephyr Environmental Corporation

Clay V. Fischer
Natural Resources Project Manager

cc: Ms. Jennifer Sharp Seinfeld, P.E. Zephyr, Baltimore, Maryland
Ms. Andrea Adams, ADA-ES, Littleton, Colorado

Signature of Concurrence

USFWS Representative Signature Date

APPENDIX C

FLOODPLAIN DOCUMENTATION

The Times

PROOF OF PUBLICATION

UNITED STATES DEPARTMENT OF ENERGY
Notice of Floodplain Action RREP Activated Carbon Manufacturing Facility

The Department of Energy (DOE) Loan Guarantee Program Office (LGPO) is providing notice of a proposed DOE action that involves continuation of construction in a floodplain. DOE is considering an energy loan guarantee pursuant to Title XVII of the Energy Policy Act for Red River Environmental Products (RREP) Activated Carbon Manufacturing Facility that would occupy approximately 60 acres of land just west of Armistead, Red River Parish, Louisiana. The site of the facility, which is currently under construction and is seeking a DOE loan guarantee to complete the facility, is in the 100-year floodplain. DOE will prepare a floodplain assessment as required by 10 CFR Part 1022.12, and the floodplain assessment will be included in the Environmental Assessment (EA) being prepared under the National Environmental Policy Act. A notice will be posted when the floodplain assessment is available for public review. Contact Sharon Thomas within 15 days to provide comments on today's notice of floodplain action at 202-586-5335 or via email at sharon.r.thomas@hq.doe.gov.

The Times:
September 21, 2009

STATE OF LOUISIANA

PARISH OF CADDO

Before me, the undersigned authority, personally came and appeared

Altheas Critton personally known to me,

Who being duly sworn, deposes and says that she is the Assistant to the Classified Advertising Manager of The Times, and that the attached Advertisement entitled:

UNITED STATES DEPARTMENT OF ENERGY
Notice of Floodplain Action RREP Activated Carbon Manufacturing Facility

As per copy of advertisement hereto annexed, was published in

The Times on the following dates to wit:

September 21, 2009

(Signed) Altheas Critton

Sworn to and subscribed before me this 21st day of September, 2009

Diana W. Barber

DIANA W. BARBER, NOTARY PUBLIC # 60491
CADDO PARISH, LOUISIANA
MY COMMISSION IS FOR LIFE

(Notary)

GANNETT

AFFIDAVIT OF PUBLICATION

STATE OF LOUISIANA

Parish of Natchitoches

Before me, a Notary Public, personally came and appeared Vickie Feazell

who, being duly sworn, did depose and say that she/he is Bookkeeper of

The *Coushatta Citizen*, a newspaper of general circulation published within the Parish of Red River,

and that United States Department of Energy "Notice of Flood Action" RKEP Activated Carbon Manufacturing Facility

as per copy attached hereto, was published in said newspaper in the issues of September 24, 2009

(S) Vicki Feazell

SWORN AND SUBSCRIBED to before me this 24th day of September

Dianne B. Litton

Notary Public

Dianne B. Litton
#015767

An employee-owned company

11 September, 2009

Darren Meadows, P.E.
Engineering Manager
ADA Carbon Solutions
555 Oppenheimer, Suite 207
Los Alamos, NM 87544

RE: Analysis of Floodplain Issues at RREP Activated Carbon Plant Site

PBS&J Project Number: 100009702

Dear Mr. Meadows:

Red River Environmental Products (RREP) is constructing an activated carbon plant at the Red River Mine in Red River Parish near the city of Coushatta, Louisiana. This letter report presents PBS&J's analyses and findings of the effect of the project on the 100-year floodplain near the site. Our focus is on the effect of the first production line, but an assessment of the effect of the future second production line was also made based on available information.

BACKGROUND

As illustrated in Figure 1, the project area is within a larger former mine site that is enclosed by a levee to the east and a knoll on the west. As part of the mining process, drainage from the north (Pig Pen Bayou) has been diverted to the east of the site in a canal to the north of the levee. Runoff from the area is collected at the south, away from the project area, and removed by pumping. So long as the levee remains intact, it would protect the area within from flooding sources outside, at least up to an elevation of approximately 134 feet. However, since the levee is not certified by FEMA and some portion of it could be removed in the future, this letter report presents the analyses performed to evaluate the effect of the project on the adjacent floodplain assuming there is no levee protection.

According to FEMA's FIRM Panel 220152 B dated May 15, 1985, the project area is completely in Zone A. Therefore, according to FEMA regulations, proposed development cannot result in an increase in the Base Flood Elevation (BFE) by more than one foot. The Floodplain Administrator of Red River Parish has confirmed that the parish does not have regulations more stringent than the requirements of the FEMA National Flood Insurance Program.

Before construction began, RREP contracted with Owen and White Consulting Engineers in Baton Rouge, Louisiana to compute and certify the BFE around the manufacturing site. Owen & White computed the BFE to be 132.6 feet above MSL and recommended that foundation elevations be set at least one foot above the BFE (Owen & White, Inc. 2008). The study calculated BFE values based on data from 4 possible nearby flooding sources - Bayou Pierre, Pigpen Bayou, Shell Bayou and the Red River. The study determined that the Bayou Pierre BFE value of 132.6 feet was the most conservative and appropriate.

ANALYSIS OF FLOODPLAIN IMPACTS

The first step in our evaluation of effects on adjacent properties was to determine the balance between cut and fill in the 100-yr floodplain defined by the computed BFE of 132.6 ft, based on pre-project

topographic survey of the site and construction plan of the first production line provided by ADA. Figure 2 shows the location of seven cross-sections across the site for estimating cut and fill. The cross-sections are shown in Figure 3. The cut and fill calculations are shown in Table 1. The volumes of cut and fill in the floodplain were estimated to be 51,000 CY and 29,000 CY, respectively. There is no net fill in the floodplain below the BFE and therefore no adverse effect on the floodplain storage volume, which would affect routing and hydrology.

Construction of the second production line will require an estimate of additional 25,000 CY of fill to the south of the first production line. Since not all of the fill will be in the existing floodplain, and there is an excess of 22,000 CY of cut over fill volume in the construction of the first production line, no overall net fill is expected even after construction of the second production line. We recommend that this estimate be confirmed when the detailed design of the second production line is available.

Evaluating project effects on the water surface elevation is more complex. Typically, the analyses involve hydrologic and hydraulic (H&H) modeling to determine the flows through the area and the resulting water surface elevations before and after a project. Bayou Pierre has a very large watershed at this location (about 700 square miles). The project involves construction in a relatively small area compared to a large floodplain of the bayou. Intuitively, the project should not have a significant adverse impact on the overall flood elevation. The issue does not seem to warrant an extensive detailed H&H analysis. Instead, a simplified approach as discussed below was used.

The discharge records of USGS stream gages for Bayou Pierre upstream and downstream of the site were reviewed to provide an indication of the magnitude of flow at this location. USGS gage 07351600, Bayou Pierre near Grand Bayou, is upstream of the site and has a drainage area of 661 square miles. The gage has a discharge record from 10/1/1977 to 9/30/1984 and the maximum daily discharge is 7,200 cfs. The gage downstream of the site is 07351750, Bayou Pierre near Lake End. It has a drainage area of 860 square miles. The period of record is from 10/1/1980 to 2/9/2009. The maximum daily discharge is 13,500 cfs. In the vicinity of the project area, flood water would travel from north to south bounded by the railroad embankment to the east and the knoll to the west. Without a detailed analysis, the flow through this area is not known. The entire Bayou Pierre floodplain width at this point is approximately five miles and much wider than the area between the railroad and the knoll, a width of about one mile. Since this is at the edge of the floodplain, a conservative estimate of the flow through this area is 20% of the entire flow of Bayou Pierre. Since the USGS stream records may not encompass a 100-year event, we will assume the 100-year flow to be twice the highest flow recorded or 27,000 cfs. A conservative estimate of the flow from a 100-yr event through the area between the railroad and the knoll could be 20% of this value or 5,400 cfs. A range of flows from 500 cfs to 10,000 cfs was used to bracket the possible flow.

To evaluate the effect of the RREP facility on adjacent property, assuming the levee on the north side parallel to Red River Parish Road 604 were removed, a HEC-RAS model was constructed with the cross-sections shown in Figure 4. USGS quadrangle sheets for Harmon and Evelyn, Louisiana with contours in 10-foot intervals were used to extend the cross-sections to the west. The model cross-sections are shown in Figure 5. Two models were constructed with cross-sections reflecting both pre-project and post-project conditions to compare the differences.

This modeling effort is not intended to determine a specific water surface elevation for the 100-year event, but is a simplified approach to evaluate the relative impact of the project. For consideration of a 100-yr flooding event, the area should be at a water surface elevation similar to the BFE. Therefore, the downstream boundary water surface elevation was assumed to be 132.0 ft. It was found that changing the

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downstream boundary water surface elevation to 131.5 ft or 132.5 ft resulted only in small changes in the differences between pre- and post-project water surface elevations.

A Manning's n value of 0.06 was used for the existing condition. The proposed condition in the project area is expected to have a smoother surface due to either paved area or better maintained grass area. Nevertheless, the same relatively high n value was also used in the proposed condition to be conservative.

The differences in water surface elevation pre- and post-project are shown in Table 2. The water surface elevations at most cross-sections are decreased slightly after the project. There is a slight increase at the north (upstream) end of the site. With a flow of 5,000 cfs, close to the estimated maximum amount at that location for a 100-yr event, the increase is only 0.03 ft. Even if the flow is as high as 10,000 cfs, which is unlikely, the increase is still only 0.10 ft. Therefore, we concluded that the project would not have any significant adverse floodplain impact on the adjacent properties.

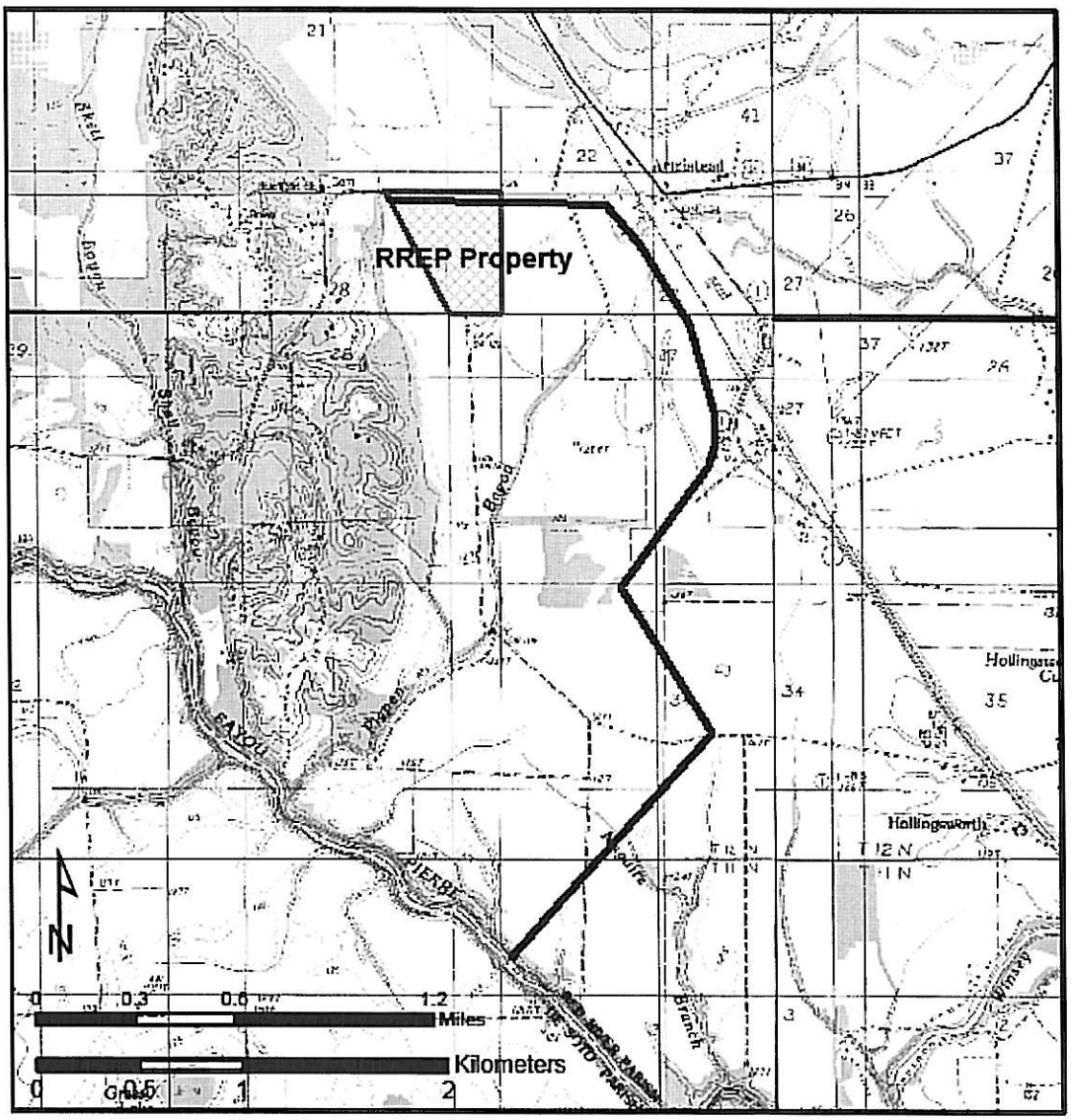
An assessment of the effect of the second production line was made by raising the proposed ground level at River Stations 1664 and 1439 accordingly. At the north end of the site, with a flow of 5,000 cfs the increase in water surface elevation between pre-project and post-project including the second line is still 0.03 ft. With 10,000 cfs, the increase becomes 0.12 ft. Therefore, the effect of the second production line is also expected to be minimal.

If you have any question, please contact me at 512-342-3302 or via email at PAJensen@pbsj.com, or Ka-Leung Lee at 512-342-3303 or klee@pbsj.com.

With regards,

Paul A. Jensen, Ph.D., PE, BCEE
Vice President
Louisiana PE 34040

Figure 1
RREP Property and Levee



Sources: Harmon USGS Quadrangle; 1996.

Armistead, Red River Parish, Louisiana

Date: 6 June 2009

Levee

Site Boundary

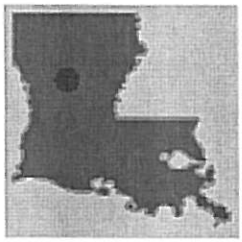


Figure 2
Location of Cross Sections for Cut and Fill Calculations

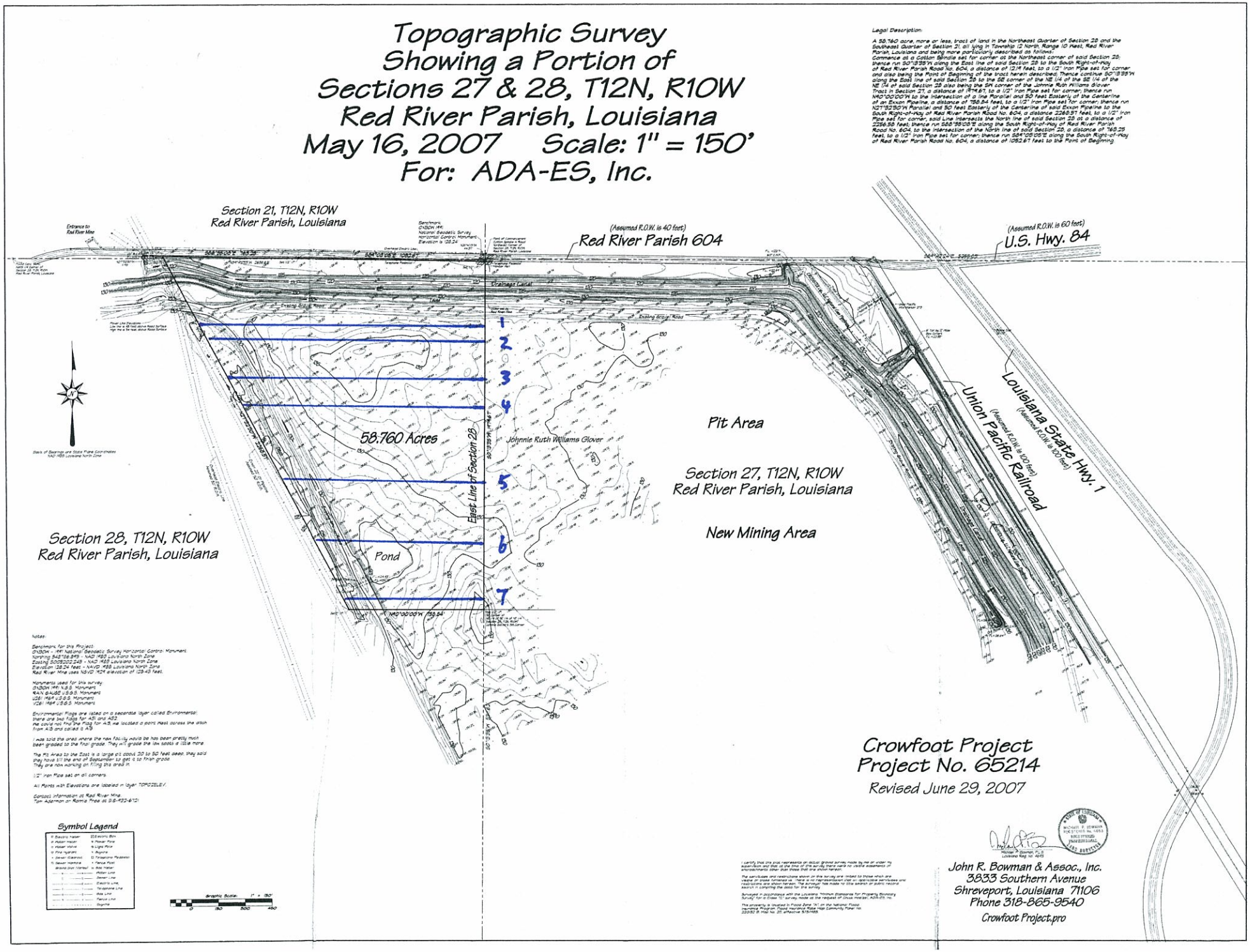


Figure 3
Cross Sections for Cut & Fill Calculations

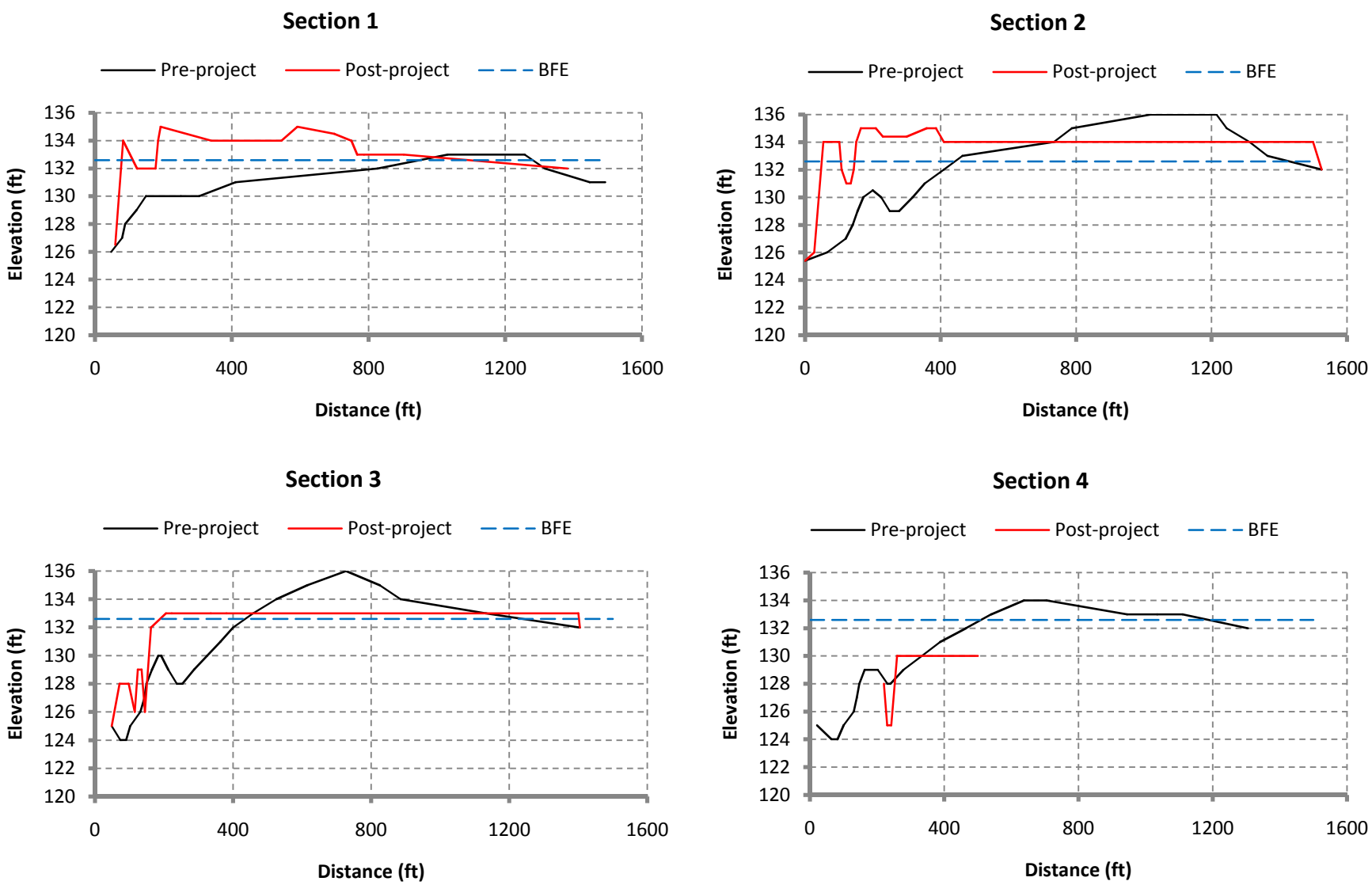
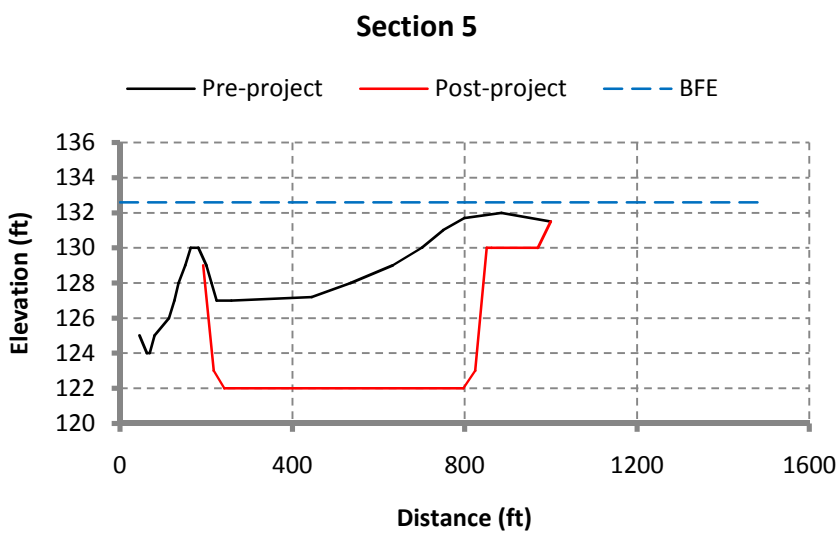
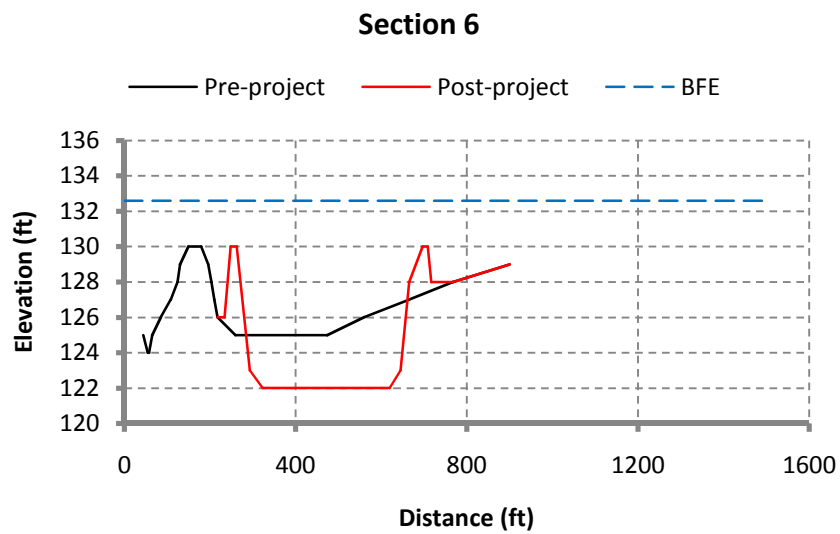


Figure 3 (Cont'd)
Cross Sections for Cut & Fill Calculations





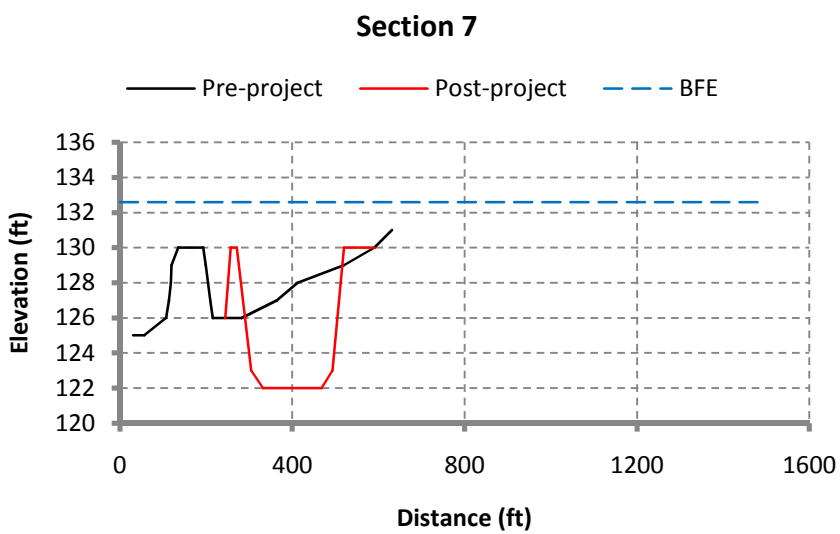


Table 1
Estimates of Cut & Fill in Floodplain Below BFE

Section	Distance ft	Cut Area sq ft	Fill Area sq ft	Cut Vol cu ft	Fill Vol cu ft
End		0	1400		
	160			0	224,000
1		0	1400		
	88			0	116,600
2		0	1250		
	220			0	247,500
3		0	1000		
	158			7,900	86,900
4		100	100		
	20			1,000	1,000
End		0	0		
End		0	0		
	20			43,000	0
5		4300	0		
	345			948,750	43,125
6		1200	250		
	288			338,400	64,800
7		1150	200		
	60			34,500	6,000
End		0	0		
			Total (cu ft)	1,373,550	789,925
			Total (cu yd)	**51,000**	**29,000**

Figure 4
Location of HEC-RAS Cross Sections

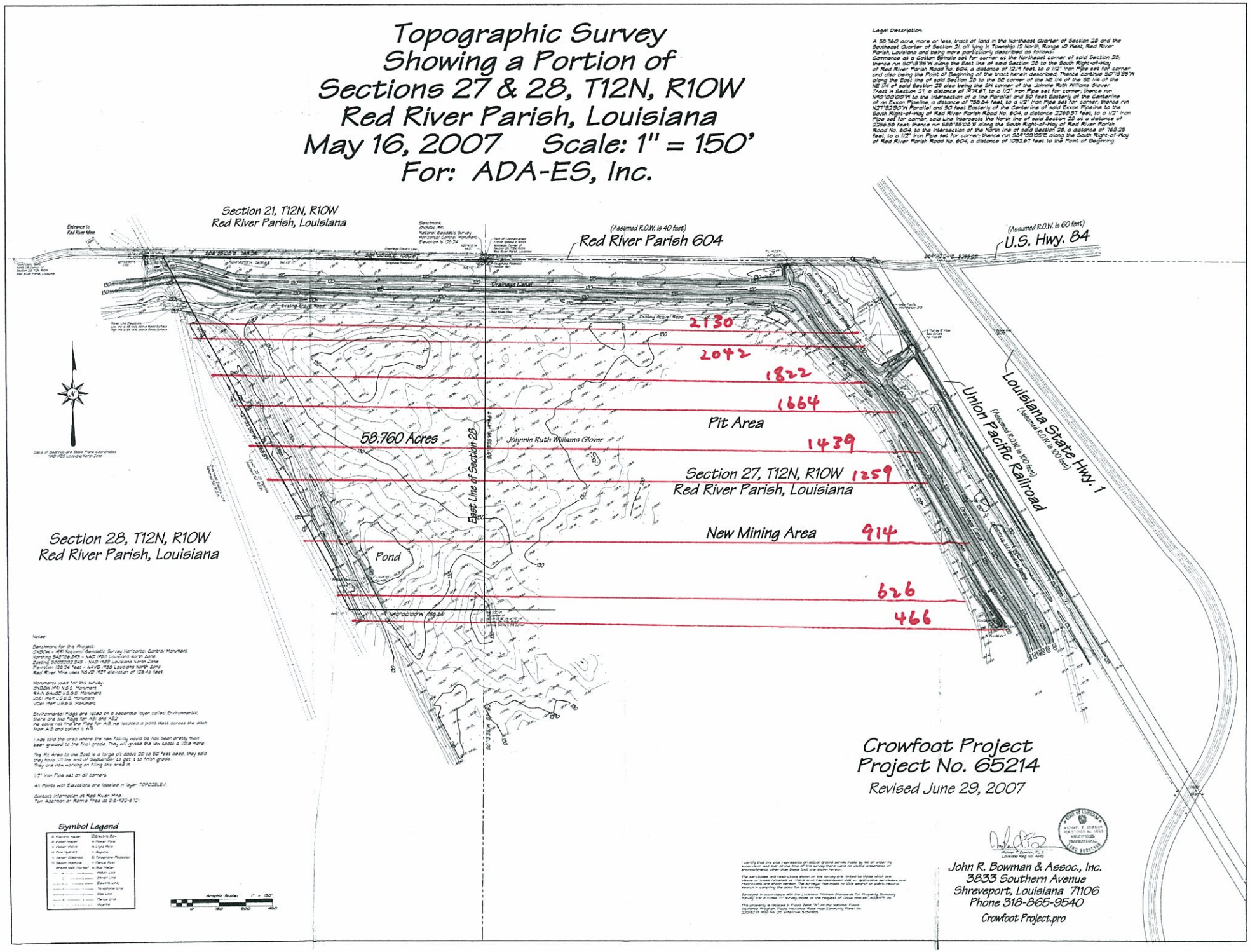


Figure 5
HEC-RAS Cross Sections

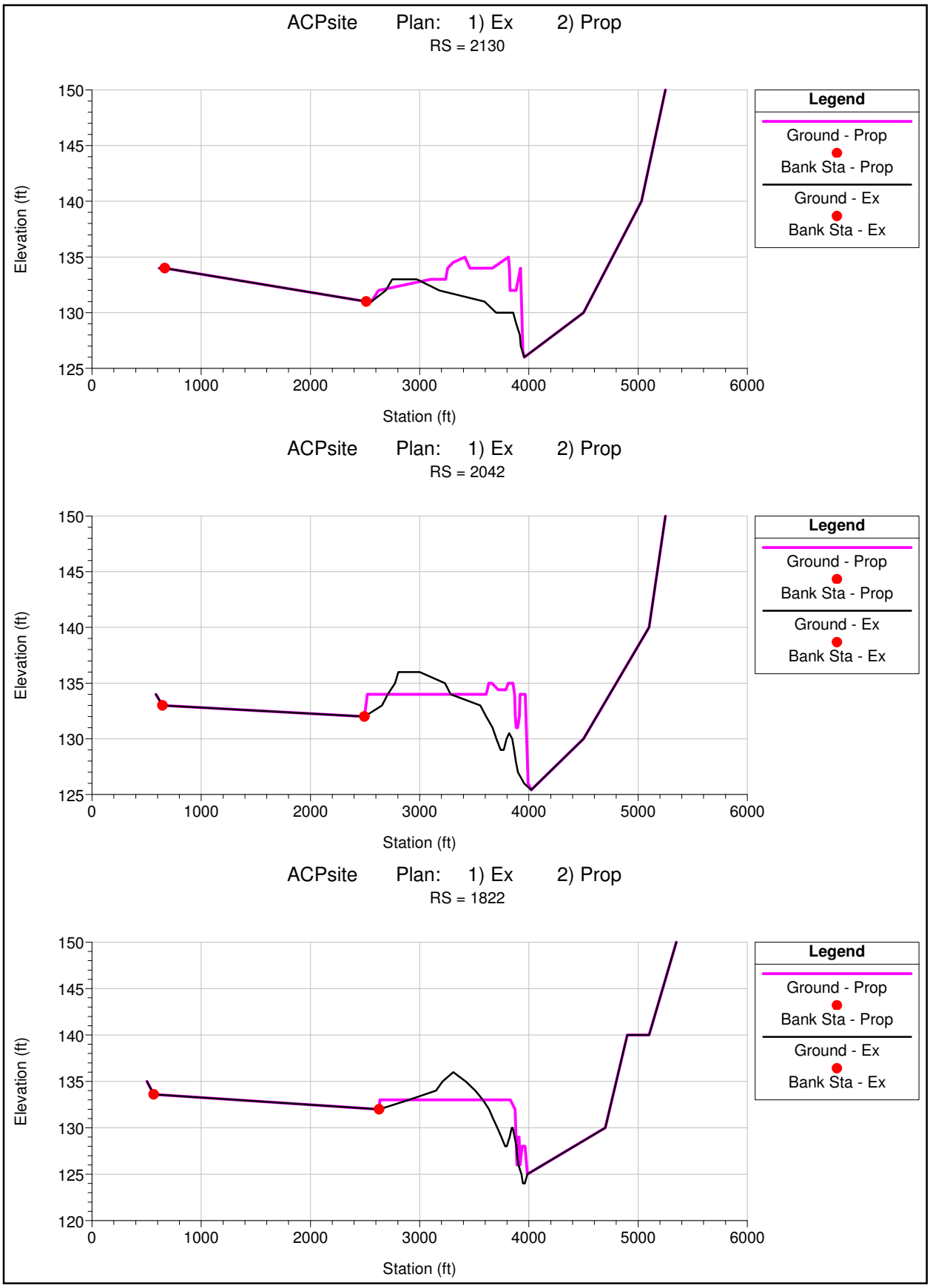


Figure 5 (Cont'd)
HEC-RAS Cross Sections

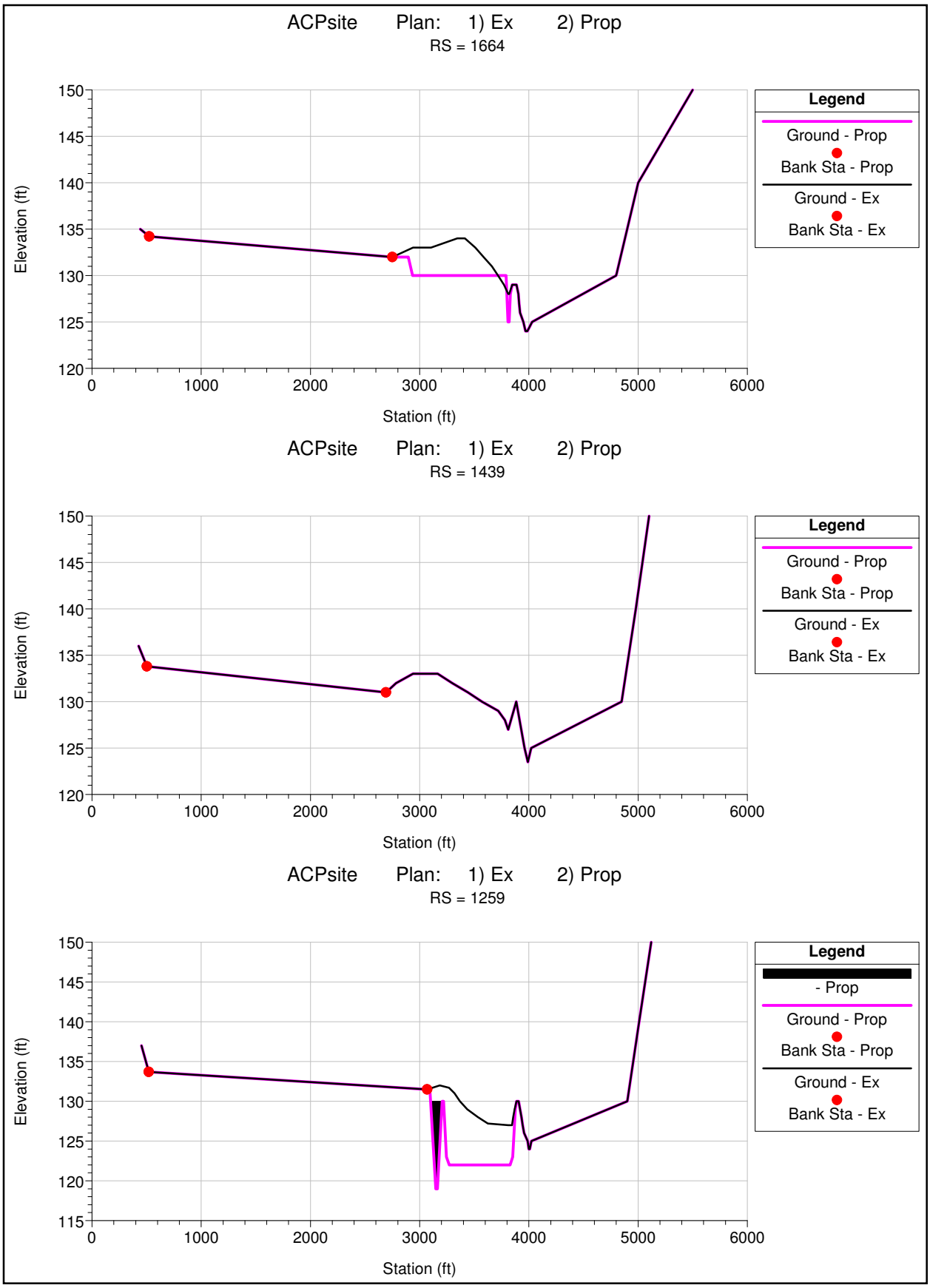


Figure 5 (Cont'd)
HEC-RAS Cross Sections

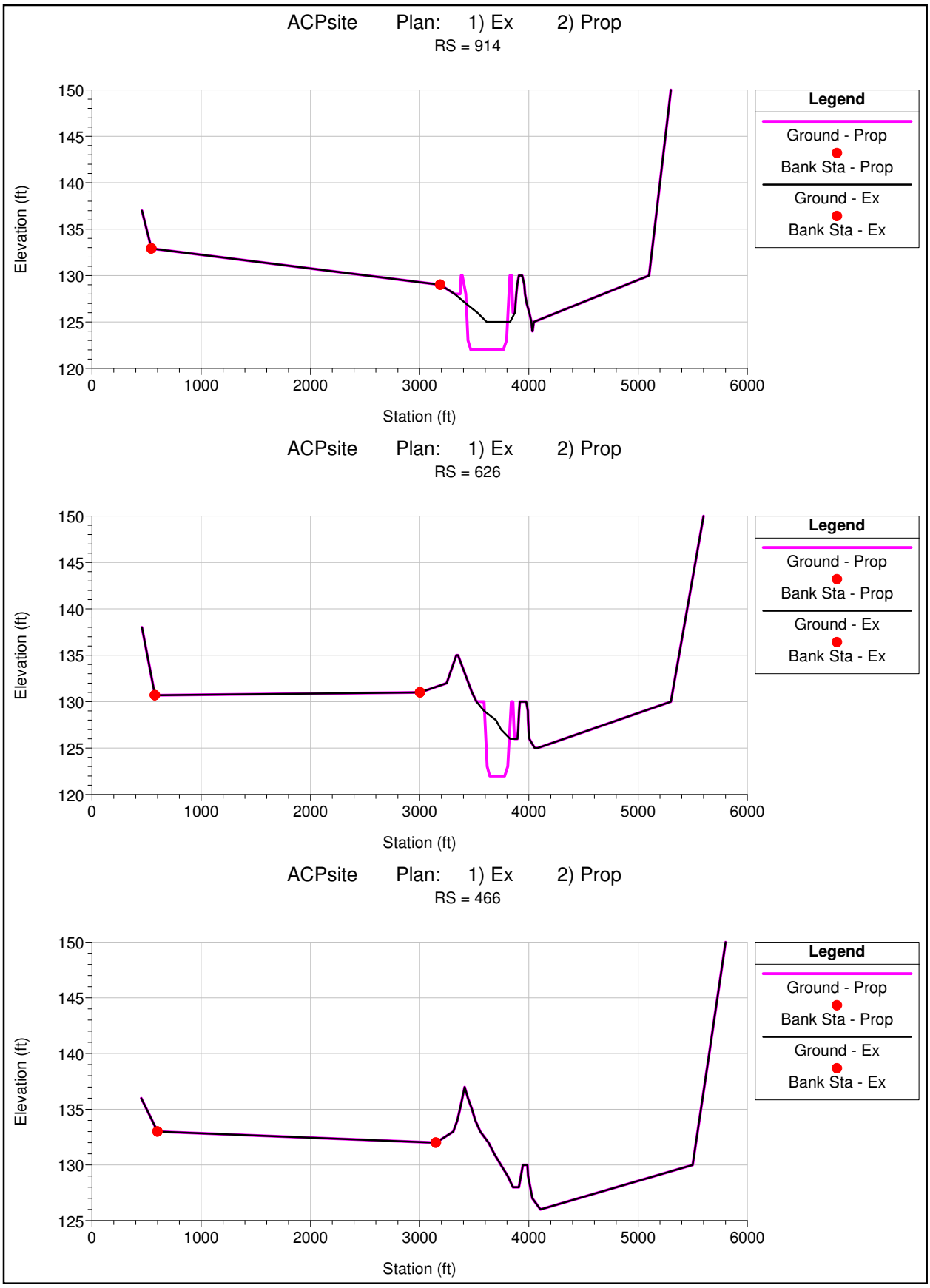


Table 2
Comparison between Pre-Project and Post-Project
Water Surface Elevations

River Sta	Q Total	W.S. Elev		
	(cfs)	Pre-Project (ft)	Post-Project (ft)	Increase (ft)
2130	500	132.00	132.00	0.00
2130	1000	132.01	132.01	0.00
2130	2000	132.05	132.06	0.01
2130	3000	132.11	132.12	0.01
2130	4000	132.20	132.22	0.02
2130	5000	132.30	132.33	0.03
2130	6000	132.41	132.45	0.04
2130	7000	132.53	132.59	0.06
2130	8000	132.66	132.73	0.07
2130	9000	132.79	132.87	0.08
2130	10000	132.92	133.02	0.10
2042	500	132.00	132.00	0.00
2042	1000	132.01	132.01	0.00
2042	2000	132.04	132.04	0.00
2042	3000	132.09	132.09	0.00
2042	4000	132.15	132.15	0.00
2042	5000	132.24	132.23	-0.01
2042	6000	132.33	132.32	-0.01
2042	7000	132.43	132.42	-0.01
2042	8000	132.54	132.52	-0.02
2042	9000	132.65	132.64	-0.01
2042	10000	132.77	132.75	-0.02
1822	500	132.00	132.00	0.00
1822	1000	132.01	132.01	0.00
1822	2000	132.03	132.02	-0.01
1822	3000	132.06	132.04	-0.02
1822	4000	132.11	132.08	-0.03
1822	5000	132.16	132.12	-0.04
1822	6000	132.23	132.17	-0.06
1822	7000	132.30	132.22	-0.08
1822	8000	132.38	132.28	-0.10
1822	9000	132.47	132.35	-0.12
1822	10000	132.56	132.41	-0.15

Table 2 (Cont'd)
Comparison between Pre-Project and Post-Project
Water Surface Elevations

River Sta	Q Total	W.S. Elev		
	(cfs)	Pre-Project (ft)	Post-Project (ft)	Increase (ft)
1664	500	132.00	132.00	0.00
1664	1000	132.01	132.00	-0.01
1664	2000	132.02	132.01	-0.01
1664	3000	132.05	132.03	-0.02
1664	4000	132.08	132.06	-0.02
1664	5000	132.13	132.09	-0.04
1664	6000	132.18	132.13	-0.05
1664	7000	132.24	132.17	-0.07
1664	8000	132.30	132.22	-0.08
1664	9000	132.37	132.27	-0.10
1664	10000	132.45	132.33	-0.12
1439	500	132.00	132.00	0.00
1439	1000	132.00	132.00	0.00
1439	2000	132.01	132.01	0.00
1439	3000	132.03	132.02	-0.01
1439	4000	132.05	132.03	-0.02
1439	5000	132.08	132.04	-0.04
1439	6000	132.12	132.06	-0.06
1439	7000	132.16	132.09	-0.07
1439	8000	132.20	132.11	-0.09
1439	9000	132.25	132.14	-0.11
1439	10000	132.30	132.17	-0.13
1259	500	132.00	132.00	0.00
1259	1000	132.00	132.00	0.00
1259	2000	132.01	132.01	0.00
1259	3000	132.02	132.01	-0.01
1259	4000	132.04	132.03	-0.01
1259	5000	132.06	132.04	-0.02
1259	6000	132.08	132.06	-0.02
1259	7000	132.11	132.08	-0.03
1259	8000	132.14	132.10	-0.04
1259	9000	132.17	132.12	-0.05
1259	10000	132.21	132.15	-0.06

Table 2 (Cont'd)
Comparison between Pre-Project and Post-Project
Water Surface Elevations

River Sta	Q Total	W.S. Elev		
	(cfs)	Pre-Project (ft)	Post-Project (ft)	Increase (ft)
914	500	132.00	132.00	0.00
914	1000	132.00	132.00	0.00
914	2000	132.01	132.00	-0.01
914	3000	132.01	132.01	0.00
914	4000	132.02	132.02	0.00
914	5000	132.04	132.03	-0.01
914	6000	132.05	132.04	-0.01
914	7000	132.07	132.06	-0.01
914	8000	132.09	132.07	-0.02
914	9000	132.11	132.09	-0.02
914	10000	132.14	132.11	-0.03
626	500	132.00	132.00	0.00
626	1000	132.00	132.00	0.00
626	2000	132.00	132.00	0.00
626	3000	132.01	132.01	0.00
626	4000	132.01	132.01	0.00
626	5000	132.02	132.02	0.00
626	6000	132.03	132.03	0.00
626	7000	132.04	132.03	-0.01
626	8000	132.05	132.04	-0.01
626	9000	132.06	132.06	0.00
626	10000	132.08	132.07	-0.01
466	500	132.00	132.00	0.00
466	1000	132.00	132.00	0.00
466	2000	132.00	132.00	0.00
466	3000	132.00	132.00	0.00
466	4000	132.00	132.00	0.00
466	5000	132.00	132.00	0.00
466	6000	132.00	132.00	0.00
466	7000	132.00	132.00	0.00
466	8000	132.00	132.00	0.00
466	9000	132.00	132.00	0.00
466	10000	132.00	132.00	0.00

RED RIVER PARISH

Police Jury

Telephone
318-932-5719

Fax
318-932-5080

P.O. DRAWER 709 **COUSHATTA, LOUISIANA 71019-0709**

BEN TAYLOR
PRESIDENT
P.O. Box 1027
District 6, Coushatta 71019

SAMMY SLEDGE
VICE PRESIDENT
Rt. 5, Box 119
District 7, Coushatta 71019

WILLIAM BROWN
Rt. 3, Box 297
District 1, Coushatta 71019

REGGIE GREEN
Rt. 2, Box 299
District 2, Coushatta 71019

BILLY JOE GAY
Rt. 1, Box 234-B
District 3, Coushatta 71019

JOHN MOORE, JR.
Rt. 4, Box 196
District 5, Coushatta 71019

JESSIE DAVIS
MANAGER
Rt. 1, Box 355
District 4, Shreveport 71115

CAROLYN H. JOHNSON
Secretary/Treasurer

DEBRA ZIMMERMAN
Administrative Assistant

JOHNNY SHARPLEY
Road Superintendent

September 4, 2009

Darren Meadows
ADA engineering department

RE: Flood Plan Management:

Dear Sir,

Red River Parish does not have regulations more stringent than state and federal regulation. We administer and enforce floodplain Management regulations in accordance with the FEMA National Flood Insurance Program regulation.

If we can be of further assistance, please call.

Sincerely,

Jessie Davis
Flood Plain Administrator

SEAL OF THE POLICE JURY
RED RIVER PARISH
LA.

BASE FLOOD ELEVATION

to

HUNT, GUILLOT & ASSOCIATES, LLC
PROJECT MANAGERS & ENGINEERS

for

ADA -ES Facility

at

North American Coal Corporation
Red River Mine
Red River Parish, Louisiana

Prepared by

Owen & White INC.
CONSULTING ENGINEERS

February, 2008

EXECUTIVE SUMMARY

ADA-ES, Inc. plans to construct a processing facility at the Red River Mine in Red River Parish near the city of Coushatta, Louisiana. The proposed facility is located in Zone A on the Flood Insurance Rate Map. It is necessary to compute a Base Flood Elevation for the facility.

There are three potential sources of flooding:

1. Bayou Pierre along the south boundary
2. Pigpen Bayou along the east boundary
3. Shell Bayou along the west boundary

Approximate Base Flood Elevations were developed for Bayou Pierre in a 1999 FEMA study for DeSoto Parish. Since the gauges which provided this data are no longer active, the 1999 analysis remains as the best information available.

Hydrologic and hydraulic analysis have been performed on Pigpen Bayou and Shell Bayou for this report.

To alleviate the concern of flooding from Red River, a profile from the Corps of Engineers Lock and Dam study is provided. This is actually superfluous since flooding from the Red River would need to breach its levee, Louisiana Highway 1 and an elevated railroad before reaching the project site.

The computed Base Flood Elevations for the project site are as follows:

Bayou Pierre	132.6 feet
Pigpen Bayou	129.3 feet
Shell Bayou	125.8 feet
Red River	132.4 feet

It is recommended that foundation elevations be set at least one foot above the computed Base Flood Elevation of **132.6 feet**.

ENGINEER'S CERTIFICATION

This is to certify that Owen and White, Inc., under authorization of Hunt, Guillot and Associates, made an investigation of a 130 acre tract of land located in Sections 27 and 28, Township 12 North, Range 10 West of Red River Parish, LA. This is a Determination of Base Flood Elevations for ADA Environmental Services as part of the Red River Mine of the North American Coal Corporation. To the best of my knowledge and belief, all statements and information in this report are true and correct, and we have not knowingly withheld any significant information.

STATE OF LOUISIANA
THEODORE E. DeBAENE
REG. NO. 12784
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEER

Theodore E. DeBaene, P.E., CFM
Civil Engineer, LA Reg. No. 12784

179201.10 (LC150)

OBJECTIVE

ADA-ES, Inc. plans to construct a processing facility at the North American Coal Corporation's Red River Mine in Red River Parish as presented on the Vicinity Map, Exhibit 1.

The mine property is bounded on the South by Bayou Pierre, on the east by a relocated Pigpen Bayou, on the west by Shell Bayou and on the north by parish road 604. The ADA-ES site is in the north central portion of the mine site as presented in Exhibit 2.

The site is located on the Red River Parish Flood Insurance Rate Map in Zone A (Exhibit 3). There are no established Base Flood Elevations (BFE) in Zone A. It is the responsibility of the developers to determine the appropriate BFE.

It is the objective of this report to determine the BFE for this site.

Three are three potential flood sources that are analyzed:

1. Bayou Pierre
2. Pigpen Bayou
3. Shell Bayou

A fourth consideration, Red River, is also evaluated.

It is further noted that the entire site is surrounded by a levee with a working height of 134.5 feet. However, the levee is not certified so for determination of regulatory Base Flood Elevations, it does not exist.

BAYOU PIERRE

In 1999, a FEMA Flood Insurance Study was performed in DeSoto Parish. The study included the establishment of Enhanced Base Flood Elevations along Bayou Pierre. The area remains a Zone A but elevations are available to establish foundations and as "Community Determined" BFEs on Elevation Certificates.

The Base Flood Elevations were determined by analyzing six gauging stations along Bayou Pierre. The period of record varied from station to station with a total span from 1939 to 1997. By comparing maximum stages in common years, all missing data and data extensions were established. A flood frequency analysis with Weibull plotting positions was prepared for each station. The resultant base flood elevations were interpolated onto maps of the stream.

The ADA-ES site is located between the Hanna gauge and the Evelyn gauge. The Flood Frequency elevation curve produced Based Flood Elevation as follows:

Gauge	BFE	Drainage Area
Hanna	130.5 feet	729 square miles
Evelyn	133.6 feet	707 square miles

The location of the BFEs extracted into Red River Parish are presented in Exhibit 4. The corresponding BFEs for the site are:

Southern tip	132.3 feet
Northwest corner	132.6 feet

PIGPEN BAYOU

The Red River Mine is constructed on a downstream reach of Pigpen Bayou. The stream has been diverted through a 30 feet bottom width perimeter ditch. The outlet to Bayou Pierre actually flows through another stream "Maguire Branch".

The Pigpen Bayou basin has a drainage area of 6.0 square miles at the confluence of Bayou Pierre. It is quite flat having a slope of 4.2 feet per mile. The Basin Map is presented in Appendix A.

The regression analysis from "Floods in Louisiana, Magnitude and Frequency" is used to determine the discharge at its mouth.

$$Q_{p100} = 10.5\ DA^{0.792}\ SLP^{0.691}\ (AP-35)^{0.783}$$

where

DA – drainage area is in square miles
SLP – channel slope is in feet per mile
AP – annual precipitation is 49 inches

The resultant peak discharge is 714 cfs.

The hydraulic analysis is performed in HECRAS with 12 cross sections at approximately 1000 foot intervals along the perimeter ditch. The reach begins south of the project site at the 90° bend in the perimeter ditch and continues to the northwest corner of the site. The cross sections are developed from LiDAR imagery.

The starting water surface elevation boundary condition is normal depth. Since the drainage area for this basin is only 1% of Bayou Pierre's drainage area, the Pigpen Basin flood condition is independent of Bayou Pierre water surface elevations.

The peak discharge of 714 cfs at the mouth of the stream is conservatively used throughout the model.

The computed water surface elevation for the 100 year event on Pigpen Bayou, at the northwest corner of the project site is 129.3 feet.

SHELL BAYOU

The western boundary of Red River Mine is Shell Bayou. The ridgeline along this boundary varies from 160 to 200 feet. This high ridgeline continues for about 3,600 feet north of the site. It, then, flattens into a wide floodplain with a meandering stream bed. As it meanders northwest, it become known as Susie Bayou and Honey Bayou.

The Shell Bayou Basin has a drainage area of 10.1 square miles at the confluence of Bayou Pierre. It is very flat having a slope of only 1.6 feet/mile. The Basin Map is presented in Appendix A.

The regression analysis from "Floods in Louisiana, Magnitude and Frequency" is again used to determine peak discharge. The resultant peak 100 year discharge at is mouth is 925 cfs.

The hydraulic analysis is performed in HECRAS with 7 cross sections at approximately 1000 foot intervals. The reach begins 555 feet upstream of the confluence with Bayou Pierre and continues to a point opposite the northwest corner of the site. The cross sections are developed from LiDAR imagery.

The starting water surface elevation boundary condition is normal depth. Since the drainage area for this basin is less than 2% of Bayou Pierre's drainage area, the Shell Bayou flood condition is independent of the Bayou Pierre water surface elevations.

The peak discharge of 925 cfs at the mouth of the stream is conservatively used throughout the model.

The computed water surface elevation for the 100 year event on Shell Bayou is 125.8 feet at a point opposite the northwest corner of the project site.

RED RIVER

A major stream, the Red River, meanders near the drainage basin. Its closet penetration to the site is about one mile. The Red River is contained by a levee. Certification of that levee is underway and is anticipated to be completed by the Corps of Engineers in the near future.

If that levee would breach, potential floodwaters would need to also pass through an elevated Louisiana Highway 1 and an elevated railroad. It is highly unlikely that all three would breach. Even if they do, the floodwaters would spread over an extensive area thereby reducing the elevation from that contained within the levee.

To further alleviate the concern of Red River flooding, a copy of 100 year frequency elevations from Design Memorandum No 3 is presented in Exhibit 5. US Highway 84 is located at Post Project River Mile 177.8. The Post Project (current conditions) 100 year water surface elevation at US Highway 84 is 132.4 feet. The water surface elevation is contained within the levees and is lower than the BFE computed for Bayou Pierre.

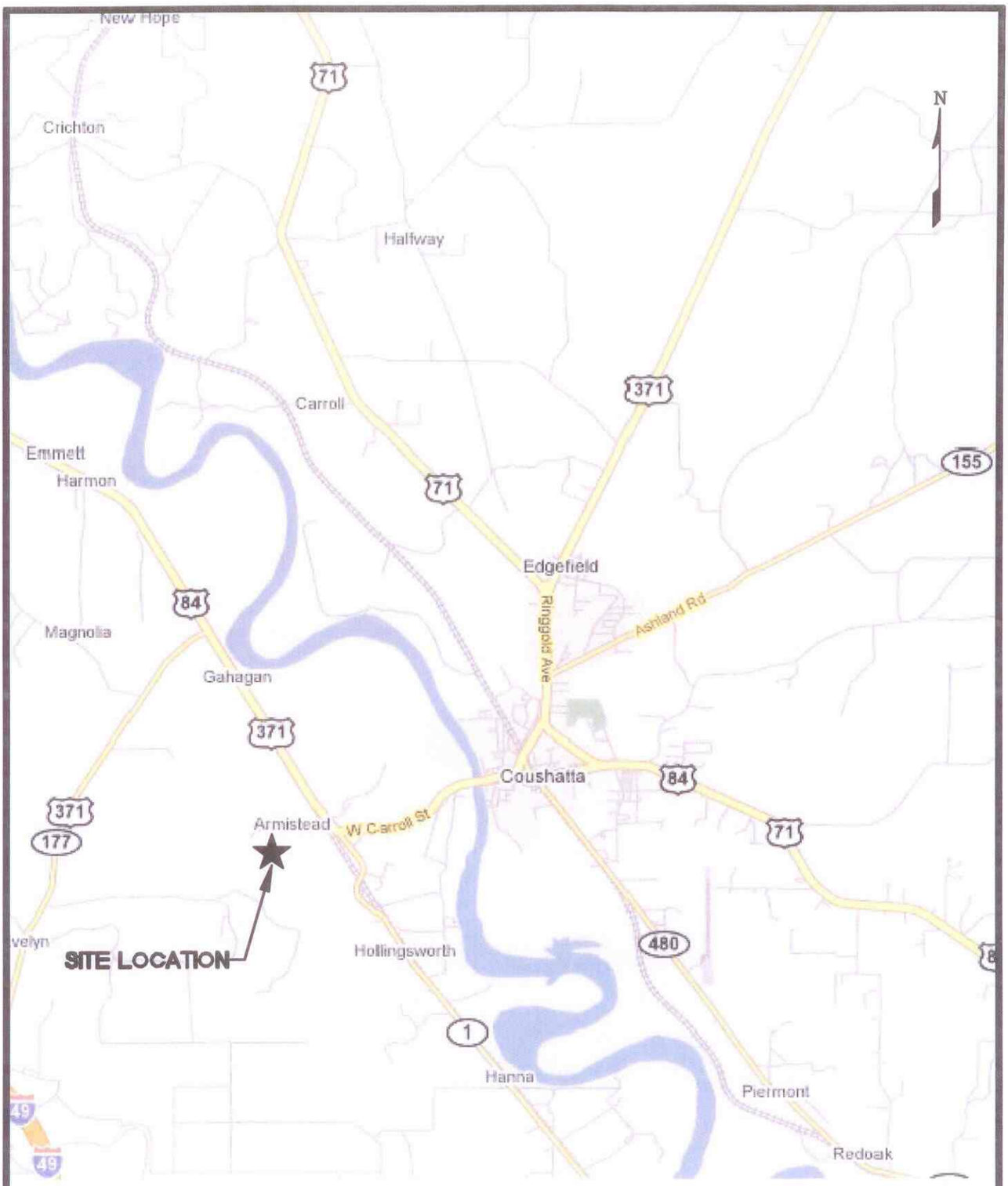


EXHIBIT 1
VICINITY MAP
ADA-ES SITE
RED RIVER PARISH, LOUISIANA
FEBRUARY, 2008

EXHIBIT 2
ADA- ES SITE MAP
ADA-ES SITE
RED RIVER PARISH, LOUISIANA
FEBRUARY, 2008

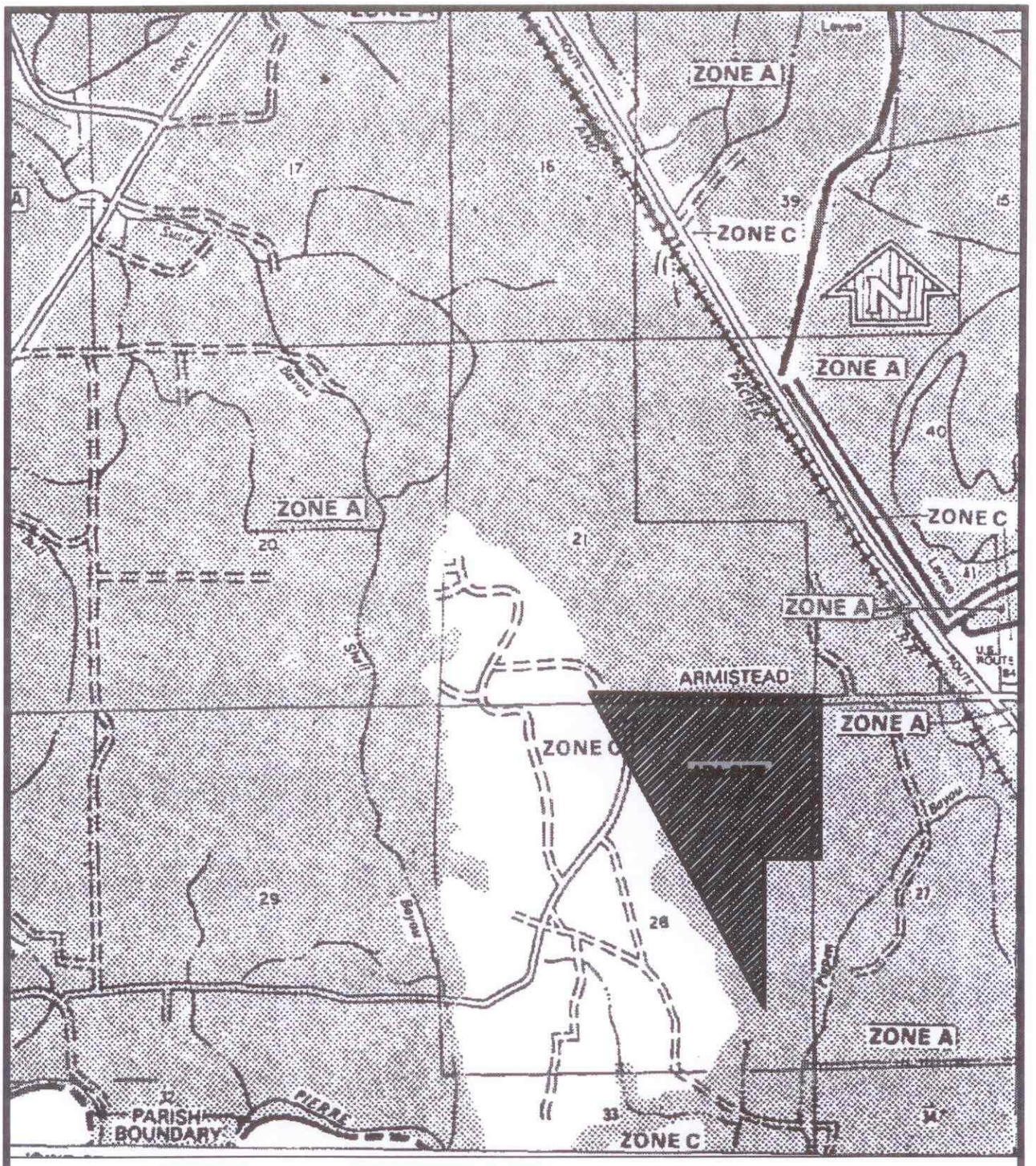


EXHIBIT 3
FIRM MAP
ADA-ES SITE
RED RIVER PARISH, LOUISIANA

EXHIBIT 4
BASE FLOOD ELEVATION
BAYOU PIERRE ANALYSIS
ADA-ES SITE
RED RIVER PARISH, LOUISIANA
FEBRUARY, 2008

APPENDIX A
DRAINAGE BASIN MAP
ABICLE SITE
RED RIVER PARISH, LOUISIANA
FEBRUARY, 2008

APPENDIX D

USACE DOCUMENTATION

DEPARTMENT OF THE ARMY
VICKSBURG DISTRICT, CORPS OF ENGINEERS
4155 CLAY STREET
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

January 6, 2009

Operations Division
Project Resources Management

Honorable Milton Forrest
President, Red River Levee
and Drainage District
Post Office Box 433
Coushatta, Louisiana 71019

Dear Mr. Forrest:

I refer to the permit application of December 8, 2008, from JW Porter and Associates, on behalf of Red River Environmental Products, LLC, to install one 6-inch water line and one 14-inch water line crossing the Red River Levee in Red River Parish, Louisiana. The pipelines will be installed up and over the Red River Levee on the Red River West Bank (right descending bank). The proposed work will cross the Red River Levee in Section 35, Township 12 North, Range 10 West at coordinates 31°59'14.29517" N., 93°21'34.23997" W.

The Vicksburg District has reviewed the application and has no objection to the proposed work provided it is conducted in compliance with Vicksburg District Regulation 1130-2-530. Any pipelines that are to be abandoned must be removed from the levee, and remaining voids grouted and sealed. The up-and-over levee crossing must comply with the enclosed typical buried utility crossing. The proposed air valve, shown on the applicant's drawing, shall be installed in such a way that long-term maintenance of the levee is not compromised. The utility crossing (crown and side slopes) must be covered with a minimum of 2 feet of appropriate fill material. The crown shall be sloped 1 on 20 over the pipeline. The side slopes shall be sloped to 1 on 10 over the pipeline. Bermuda turf must be re-established in any disturbed areas to prevent erosion. If there are any changes to the proposed work, we request you submit them to us for our review and re-evaluation.

It is recommended that you include the standard clause in your permit requiring any future relocation be accomplished by and at the applicant's expense. The applicant should be advised that Federal and state permits other than the local sponsor permit may be required. These might include Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, or state environmental permits.

Please be advised that a Department of the Army Section 10/404 permit may be required if work involves the discharge of dredged or fill material (land clearing, ditching, filling, leveeing, excavation, etc.) into wetlands or other waters of the United States. For work in such areas, plans should be submitted to our Regulatory Branch for a determination of permit requirements prior to starting work. You may contact Mr. Ken Mosley our Regulatory Branch at (601) 631-5289 for additional information.

Please have the applicant coordinate with Mr. David Dupre' of the Corps of Engineers' Red River Project Office prior to commencement and completion of work. Mr. Dupre' can be contacted at (318) 549-3000, extension 25104. If the applicant requires assistance from the Vicksburg District, please have him contact Mr. Neal Lewis of our Project Resources Management Branch at (601) 631-7493.

Sincerely,

Dennis O. Norris, P.E.
Chief, Operations Division

Enclosure

DEPARTMENT OF THE ARMY
VICKSBURG DISTRICT, CORPS OF ENGINEERS
4155 CLAY STREET
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

March 24, 2009

Operations Division
Project Resources Management

Honorable Milton Forrest
President, Red River Levee
and Drainage District
Post Office Box 433
Coushatta, Louisiana 71019

Dear Mr. Forrest:

I refer to the permit application of March 10, 2009, from JW Porter and Associates, on behalf of Red River Environmental Products, LLC, requesting an amendment to a previously approved typical utility crossing on the Red River Levee of December 8, 2008. The applicant has requested to install an 8-inch discharge line crossing the Red River Levee (right descending bank) in Red River Parish, Louisiana. The crossing is located at coordinates N31 59 14.29517, W93 21 34.23997. The applicant has indicated that once the 8-inch line crosses the riverside of the levee embankment, it will meander northward and discharge over the top bank of the Red River and down the slope through Hollingsworth Revetment. The applicant has submitted detailed drawings on how the discharge line will cut through the revetment and how the line will be anchored.

The Vicksburg District has reviewed the application and has no objection to the proposed work provided it is conducted in compliance with our District Regulation 1130-2-530. The up-and-over levee crossing must comply with the enclosed typical buried utility crossing detail. A minimum of 2 feet of material shall be placed over the pipeline along the crown as well as both levee slopes. Once the crossing is completed, all areas shall be properly turfed in order to prevent erosion. Additionally, where the proposed 8-inch waterline passes through or under the existing trench fill revetment, the owner is responsible for repairing any damage to the existing revetment and is required to restore the bank to its original grade by capping the disturbed area with an 18- to 24-inch blanket of graded stone "C". We recommend that adequate signage be placed where the pipeline enters the Red River.

Please be advised that a Department of the Army Section 10/404 permit may be required if work involves the discharge of dredged or fill material (land clearing, ditching, filling,

leveling, excavation, etc.) into wetlands or other waters of the United States. For work in such areas, plans should be submitted to our Regulatory Branch for a determination of permit requirements prior to starting work. You may contact Mr. Ken Mosley of our Regulatory Branch at (601) 631-5289 for additional information.

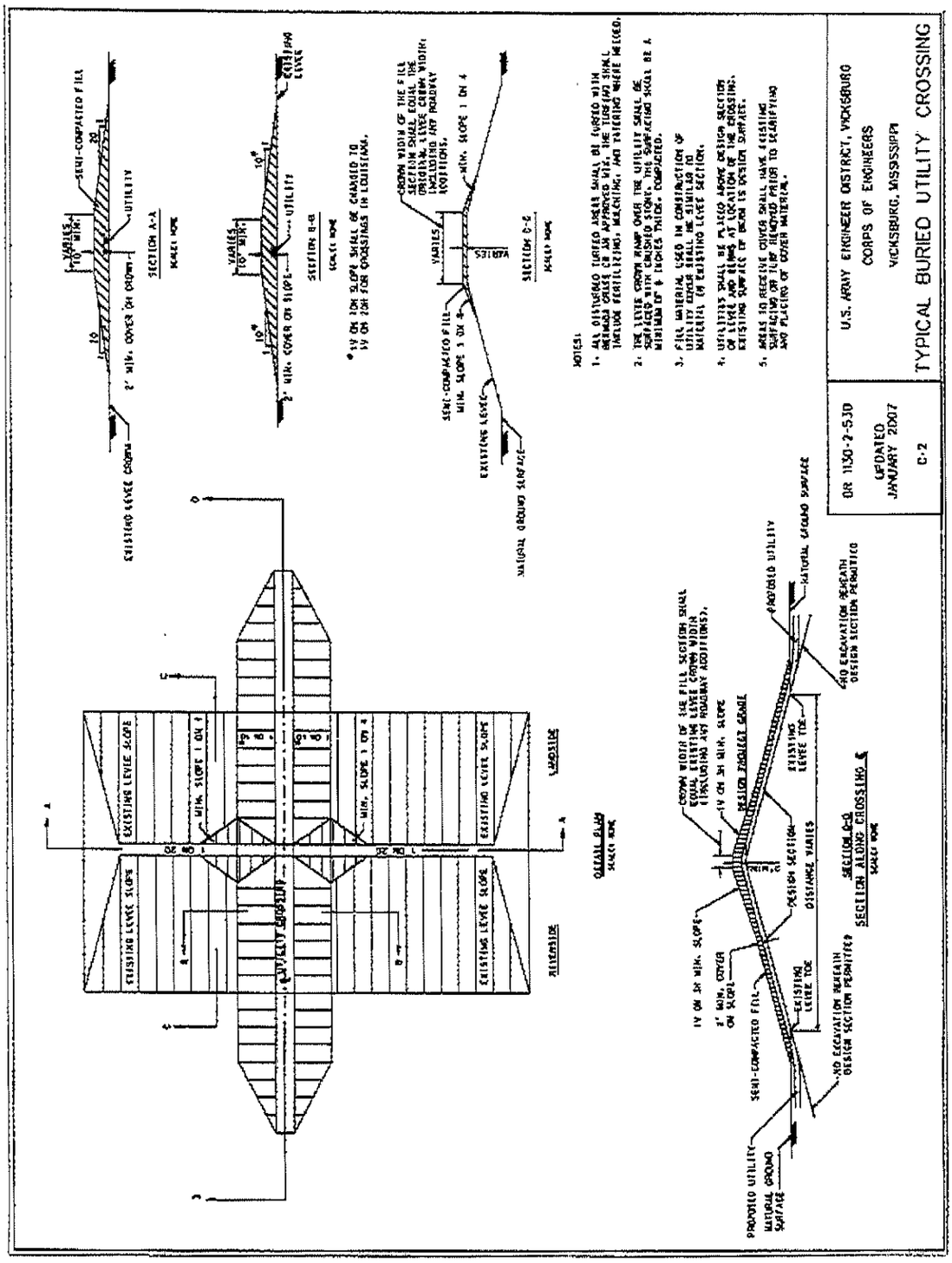
Please have the applicant coordinate with Mr. David Dupre' of the Corps of Engineers' Red River Project Office prior to commencement and completion of any work. Mr. Dupre' can be contacted at (318) 549-3000, extension 25104. If the applicant requires assistance from the Vicksburg District, please have him contact Mr. Neal Lewis of our Project Resources Management Branch at (601) 631-7493. We are forwarding a copy of this letter to Mr. Don R. Maddox, Louisiana Department of Transportation and Development, Post Office Box 38, Shreveport, Louisiana 71161.

Sincerely,

Dennis C. Norris, P.E.
Chief, Operations Division

Enclosure

DR 1130-2-530
17 Dec 06



DEPARTMENT OF THE ARMY
VICKSBURG DISTRICT, CORPS OF ENGINEERS
4155 CLAY STREET
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

April 28, 2008

Operations Division

SUBJECT: Red River Environmental Products, LLC, South Parish Road 604 Site, Coushatta, Red River Parish, Louisiana

Ms. Andrea Adams
Red River Environmental Products, LLC
C/O ADA-ES, Incorporated
8100 South Park Way, Unit B
Littleton, Colorado 80120

Dear Ms. Adams:

Based upon the information provided, it appears that Department of the Army permit requirements for the proposed work will be authorized by Nationwide Permit No. 39, as specified in the March 12, 2007, Federal Register, Issuance of Nationwide Permits; Notice (72 FR 11092-11198), provided the activity complies with the Nationwide Permit Special Conditions (enclosure 1), the Nationwide Permit General Conditions (enclosure 2), and the Regional Conditions (enclosure 3). It is your responsibility to read and become familiar with the enclosed conditions in order for you to ensure that the activity authorized herein complies with the Nationwide Permits.

This verification is valid for a period of 2 years, or until the Nationwide Permit is modified, suspended, or revoked. Activities which are under construction or that are under contract to commence in reliance upon a Nationwide Permit will remain authorized, provided the activity is completed within 12 months of the date of any subsequent modification, expiration, or revocation of the Nationwide Permit. Upon completion of the activity authorized by this Nationwide Permit, please fill out the enclosed certification of compliance (enclosure 4) and return it to our office.

This authorization was based upon a preliminary determination that there appear to be jurisdictional areas on the property subject to regulation pursuant to Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act. For your information, I have enclosed a copy of the appeals form for your review (enclosure 5).

Thank you for advising us of your plans. If you change your plans for the proposed work, or if the proposed work does not comply with the conditions of the Nationwide Permit, please contact Mr. Kevin Philley of this office, telephone (601) 631-5607, fax (601) 631-5459, or e-mail address: regulatory@usace.army.mil. In any future correspondence concerning this project, please refer to Identification No. MVK-2008-234.

I am forwarding a copy of this letter to Mr. Clay V. Fischer, Zephyr Environmental Corporation, 2600 Via Fortuna, Suite 450, Austin, Texas 78746.

The Vicksburg District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the Customer Service Survey found on our web site at http://per2.nwp.usace.army.mil/survey.html, or if more convenient, complete the enclosed survey form (enclosure 6) and return it in the envelope provided.

Sincerely,

Anthony R. Lobred
Acting Chief, Permit Section
Regulatory Branch

Enclosures

SPECIAL CONDITIONS

NATIONWIDE PERMIT No. 39

COMMERCIAL and INSTITUTIONAL DEVELOPMENTS

1. Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of commercial and institutional building foundations and building pads and attendant features that are necessary for the use and maintenance of the structures. Attendant features may include, but are not limited to, roads, parking lots, garages, yards, utility lines, storm water management facilities, and recreation facilities such as playgrounds and playing fields. Examples of commercial developments include retail stores, industrial facilities, restaurants, business parks, and shopping centers. Examples of institutional developments include schools, fire stations, government office buildings, judicial buildings, public works buildings, libraries, hospitals, and places of worship. The construction of new golf courses, new ski areas, or oil and gas wells is not authorized by this NWP. (Section 10 and 404)

2. The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States, including the loss of no more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds this 300 linear foot limit is waived in writing by the district engineer. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

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

4. Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 27.) (Sections 10 and 404)

2007 NATIONWIDE PERMIT GENERAL CONDITIONS

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

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

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

Enclosure 2

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species. (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively.

18. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity

is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate

Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to

authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

22. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S.

EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:
"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____

(Transferee)

_____

(Date)

26. Compliance Certification. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete

and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity:

(1) Until notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) If 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective

permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic

environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

D. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

STATE OF LOUISIANA
NATIONWIDE PERMIT (NWP) REGIONAL CONDITIONS
May 12, 2007, Final NWPs

PART I - REGIONAL CONDITIONS FOR ALL NWPS:

Regional Condition 1. No activity may cause the permanent loss of greater than 1/2 acre of seasonally inundated cypress swamp and/or cypress-tupelo swamp.

Regional Condition 2. No activity may cause the permanent loss of greater than 1/2 acre of pine savanna, pine flatwoods and/or pitcher plant bogs.

Regional Condition 3. No activity is authorized under any NWP permit which has been determined to have an adverse impact upon a federal or state designated rookery and/or bird sanctuary.

Regional Condition 4. No existing den or candidate den trees may be felled within areas known to be occupied by the threatened Louisiana black bear. (Candidate den trees are defined as bald cypress and/or tupelo gum with visible cavities, having a minimum diameter-at-breast-height of 36 inches, and associated with rivers, lakes, streams, bayous, sloughs or other waterbodies.)

Regional Condition 5. Due to the occurrence of threatened or endangered species, **Pre-Construction Notification** shall be required for **ALL** instream activities in the following waterways: Bayou Boeuf Tributaries in Rapides Parish: (Brown Creek, Mack Branch, Clear Creek, Little Brushy Creek, Loving Creek, Little Loving Creek, Long Branch, Bayou Clear, Castor Creek, Valentine Creek, and Little Bayou Clear), Amite River (LA Highway 37 at Grangeville to Port Vincent), Bogue Falaya River and Tributaries, Abita River and Tributaries, Bayou Chinchuba (between U.S. 190 and Louisiana Highway 59), West Pearl River, Bogue Chitto River and Tributaries, and Red River tributaries in Grant Parish (Black Creek, Swafford Creek, Cypress Creek, Beaver Creek, Cress Creek, Jordon Creek, Hudson Creek, Gray Creek, Moccosin Branch and James Branch).

Regional Condition 6. The Department of the Army (DA) authorization shall be conditioned to require that any excavated and/or fill material placed within wetlands must be free of contaminants, to the best of the applicant's knowledge.

Regional Condition 7. For work within the Louisiana Coastal Zone and/or the Outer Continental Shelf off Louisiana;

a. An application for work must first be submitted to the Louisiana Department of Natural Resources, Coastal Management Division who will then forward the request to the Corps of Engineers.

b. NWP requests that have not received a Coastal Use Permit or other consistency determination from the CMD would be processed by the Corps but granted authorization would be conditioned to require the applicant to obtain appropriate authorization from CMD before the NWP is valid.

c. The New Orleans District's Programmatic General Permit generally supersedes the Nationwide Permit authorization for activities located within the Louisiana Coastal Zone as

incorporated within the New Orleans Corps District boundaries. Projects will not qualify for a Nationwide Permit if they qualify for the Programmatic General Permit.

Regional condition 8. A Pre-Construction Notification, as defined under nationwide general condition 27, will be provided for all activities (except those covered by the **pipeline safety program designated time-sensitive inspections and repairs – NWP 47**) that meet one or both of the following criteria;

a. Adversely affects greater than 1/10 acre of wetlands, and/or

b. Adversely impacts a designated Natural and Scenic River, a state or federal wildlife management area and/or refuge.

PART II - REGIONAL CONDITIONS FOR SPECIFIC NWPS

NWP 1. *Aids to Navigation*:

No additional regional conditions are in effect.

NWP 2. *Structures in Artificial Canals*:

No additional regional conditions are in effect.

NWP 3. *Maintenance*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 4. *Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities*:

No additional regional conditions are in effect.

NWP 5. *Scientific Measurement Devices*:

A Pre-Construction Notification, as defined under nationwide general condition 27, is required for all weirs and flumes in any water of the United States.

NWP 6. *Survey Activities*:

Pre-Construction Notification, as defined under nationwide general condition 27, is required for all **seismic survey activities.** The state and federal resource agencies will be forwarded a copy of the Pre-Construction Notification regardless of acreage impact.

NWP 7. *Outfall Structures and Maintenance*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

Activities that include the construction of intake structures must include adequate fish screening devices.

NWP 8. *Oil and Gas Structures*:

No additional regional conditions are in effect.

NWP 9. *Structures in Fleeting and Anchorage Areas*:

No additional regional conditions are in effect.

NWP 10. *Mooring Buoys*:

No additional regional conditions are in effect.

NWP 11. *Temporary Recreational Structures*:

No additional regional conditions are in effect.

NWP 12. *Utility Line Activities*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

A 50-foot gap shall be required for every 500 linear feet of sidecast material resulting from trench excavation activities associated with utility line construction. Under certain circumstances the gap intervals may be modified. Additionally, no fill shall be placed in a manner which would impede natural watercourses.

Pre-Construction Notification, as defined under nationwide general condition 27, is required for **utility line activities** regardless of impact acreage. The U.S. Fish and Wildlife Service and National Marine Fisheries Service will be forwarded a copy of the Pre-Construction Notification.

NWP 13. *Bank Stabilization*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 14. *Linear Transportation Projects*:

Pre-Construction Notification, as defined under nationwide general condition 27, is required for all **linear transportation crossings** regardless of impact acreage. The U.S. Fish and Wildlife Service and National Marine Fisheries Service will be forwarded a copy of the Pre-Construction Notification for all NWP #14 activities.

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 15. *U.S. Coast Guard Approved Bridges*:

No additional regional conditions are in effect.

NWP 16. *Return Water from Upland Contained Disposal Areas*:

No additional regional conditions are in effect.

NWP 17. *Hydropower Projects*:

No additional regional conditions are in effect.

NWP 18. *Minor Discharges*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 19. *Minor Dredging*:

No additional regional conditions are in effect.

NWP 20. *Oil Spill Cleanup*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 21. *Surface Coal Mining Activities*:

This NWP, via disavowal of water quality certification by the Louisiana Department of Environmental Quality, is considered **denied** without prejudice. Individual requests for approval under this NWP will be considered on a case-by-case basis only after receipt by the appropriate Corps district of an individual water quality certification, waiver, or other approval by the Louisiana Department of Environmental Quality.

NWP 22. *Removal of Vessels*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 23. *Approved Categorical Exclusions*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 24. *State Administered Section 404 Programs*:

Not applicable in the state of Louisiana.

NWP 25. *Structural Discharges*:

No additional regional conditions are in effect.

NWP 26. *(RESERVED)*

NWP 27. *Stream and Wetland Restoration Activities*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

No activities shall be authorized that would convert tidal wetlands to another aquatic habitat type.

NWP 28. *Modifications of Existing Marinas*:

No additional regional conditions are in effect.

NWP 29. *Single-Family Housing*:

This NWP, via disavowal of water quality certification by the Louisiana Department of Environmental Quality, is considered **denied** without prejudice. Individual requests for approval under this NWP will be considered on a case-by-case basis only after receipt by the appropriate Corps district of an individual water quality certification, waiver, or other approval by the Louisiana Department of Environmental Quality.

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 30. *Moist Soil Management for Wildlife*:

Pre-Construction Notification, as defined under nationwide general condition 27, is required for all activities regardless of the impact acreage. The U.S. Fish and Wildlife Service and the Louisiana Wildlife and Fisheries will be forwarded a copy of the complete Pre-Construction Notification. A copy of the water-level management plan must be submitted as part of the Pre-Construction Notification.

NWP 31. *Maintenance of Existing Flood Control Facilities*:

This NWP, via disavowal of water quality certification by the Louisiana Department of Environmental Quality, is considered **denied** without prejudice. Individual requests for approval under this NWP will be considered on a case-by-case basis only after receipt by the appropriate Corps district of an individual water quality certification, waiver, or other approval by the Louisiana Department of Environmental Quality.

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 32. *Completed Enforcement Actions*:

No additional regional conditions are in effect.

NWP 33. *Temporary Construction, Access and Dewatering*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 34. *Cranberry Production*:

Not applicable within the state of Louisiana.

NWP 35. *Maintenance Dredging of Existing Basins*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 36. *Boat Ramps*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 37. *Emergency Watershed Protection and Rehabilitation*:

No additional regional conditions are in effect.

NWP 38. *Cleanup of Hazardous and Toxic Waste*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 39. *Residential, Commercial and Institutional Developments*:

This NWP, via disavowal of water quality certification by the Louisiana Department of Environmental Quality, is considered **denied** without prejudice. Individual requests for approval under this NWP will be considered on a case-by-case basis only after receipt by the appropriate

Corps district of an individual water quality certification, waiver, or other approval by the Louisiana Department of Environmental Quality.

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

Work which would result in the resuspension of dredged material shall be prohibited in Bayou d'Inde, the Inner Harbor Canal, Calcasieu River at the mouth of Bayou d'Inde, Harvey Canal, California Canal, and Bayous Trepagnier, Rigaud, Olsen and Verdine, Capitol Lake, Coon Island Loop, Devil's Swamp, and Tensas River (areas within and upstream of Tensas National Wildlife Refuge), Ouachita River (areas within and upstream of the Upper Ouachita National Wildlife Refuge), Wham Brake drainage (Staulkinghead Creek, Little Bayou Boeuf, Bayou Lafourche and Lake Irwin).

NWP 40. *Agricultural Activities*:

This NWP, via disavowal of water quality certification by the Louisiana Department of Environmental Quality, is considered **denied** without prejudice. Individual requests for approval under this NWP will be considered on a case-by-case basis only after receipt by the appropriate Corps district of an individual water quality certification, waiver, or other approval by the Louisiana Department of Environmental Quality.

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 41. *Reshaping Existing Drainage Ditches*:

No discharges shall be allowed under this NWP that would adversely impact mature riparian corridors.

Work which would result in the resuspension of dredged material shall be prohibited in Bayou d'Inde, the Inner Harbor Canal, Calcasieu River at the mouth of Bayou d'Inde, Harvey Canal, California Canal, and Bayous Trepagnier, Rigaud, Olsen and Verdine, Capitol Lake, Coon Island Loop, Devil's Swamp, and Tensas River (areas within and upstream of Tensas National Wildlife Refuge), Ouachita River (areas within and upstream of the Upper Ouachita National Wildlife Refuge), Wham Brake drainage (Staulkinghead Creek, Little Bayou Boeuf, Bayou Lafourche and Lake Irwin).

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 42. *Recreational Facilities*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual

requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

Work which would result in the resuspension of dredged material shall be prohibited in Bayou d'Inde, the Inner Harbor Canal, Calcasieu River at the mouth of Bayou d'Inde, Harvey Canal, California Canal, and Bayous Trepagnier, Rigaud, Olsen and Verdine, Capitol Lake, Coon Island Loop, Devil's Swamp, and Tensas River (areas within and upstream of Tensas National Wildlife Refuge), Ouachita River (areas within and upstream of the Upper Ouachita National Wildlife Refuge), Wham Brake drainage (Staulkinghead Creek, Little Bayou Boeuf, Bayou Lafourche and Lake Irwin).

NWP 43. *Stormwater Management Facilities*:

This NWP, via disavowal of water quality certification by the Louisiana Department of Environmental Quality, is considered **denied** without prejudice. Individual requests for approval under this NWP will be considered on a case-by-case basis only after receipt by the appropriate Corps district of an individual water quality certification, waiver, or other approval by the Louisiana Department of Environmental Quality.

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

Work which would result in the resuspension of dredged material shall be prohibited in Bayou d'Inde, the Inner Harbor Canal, Calcasieu River at the mouth of Bayou d'Inde, Harvey Canal, California Canal, and Bayous Trepagnier, Rigaud, Olsen and Verdine, Capitol Lake, Coon Island Loop, Devil's Swamp, and Tensas River (areas within and upstream of Tensas National Wildlife Refuge), Ouachita River (areas within and upstream of the Upper Ouachita National Wildlife Refuge), Wham Brake drainage (Staulkinghead Creek, Little Bayou Boeuf, Bayou Lafourche and Lake Irwin).

NWP 44. *Mining Activities*:

This NWP, via disavowal of water quality certification by the Louisiana Department of Environmental Quality, is considered **denied** without prejudice. Individual requests for approval under this NWP will be considered on a case-by-case basis only after receipt by the appropriate Corps district of an individual water quality certification, waiver, or other approval by the Louisiana Department of Environmental Quality.

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

Work which would result in the resuspension of dredged material shall be prohibited in Bayou d'Inde, the Inner Harbor Canal, Calcasieu River at the mouth of Bayou d'Inde, Harvey Canal, California Canal, and Bayous Trepagnier, Rigaud, Olsen and Verdine, Capitol Lake, Coon Island Loop, Devil's Swamp, and Tensas River (areas within and upstream of Tensas National Wildlife

Refuge), Ouachita River (areas within and upstream of the Upper Ouachita National Wildlife Refuge), Wham Brake drainage (Staulkinghead Creek, Little Bayou Boeuf, Bayou Lafourche and Lake Irwin).

NWP 45. *Emergency Repair Activities*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 46. *Discharges into Ditches and Canals*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 47. *Pipeline Safety Program Designated Time Sensitive Inspections and Repairs:*

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 48. *Commercial Shellfish Aquaculture Activities*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 49. *Coal Remining Activities*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

NWP 50. *Underground Coal Mining Activities*:

This NWP, via disavowal of Coastal Zone certification by the Louisiana Department of Natural Resources, is considered **denied** without prejudice within the Louisiana Coastal Zone. Individual requests for approval under this NWP will ***be conditioned to require the applicant to obtain a Louisiana Department of Natural Resources determination/certification before the NWP is valid.***

PART III - WATER QUALITY REGIONAL NWPS CONDITIONS FOR "INDIAN COUNTRY" LANDS

The Environmental Protection Agency (EPA) is the agency required to address water quality certification of the 2007 nationwide permits (NWPs) in Indian country[1] where a tribe has not received treatment in the same manner as a state for the Clean Water Act (CWA) Section 401 program. Tribes which have received treatment in the same manner as a state (TAS) for the water quality standards and §401 certification programs and which have EPA-approved water quality standards will be contacted by the Corps of Engineers for the water quality certification process. EPA is the agency required to address water quality certification for tribes that have not received TAS for the water quality standards and 401 certification programs. At this time, no Indian tribes in Louisiana have CWA Section 401 authority.

1. The permittee shall conduct all work in such a manner to comply with all U.S. Army Corps of Engineers §404 permit conditions.

2. The permittee shall keep a copy of this certification with conditions at the project site during all phases of construction. All contractors or subcontractors involved in the project must be provided a copy of this certification prior to commencement of activities.

3. All heavy equipment used in the project areas shall be steam cleaned before the start of the project and inspected daily for leaks. Leaking equipment must not be used in or near surface water or in a wetland area. Equipment shall be parked outside the waterbody when not in use.

4. All fuels, oil, hydraulic fluid, or other substances of this nature must not be stored, temporarily or otherwise, within the normal floodplain or the wetland. A secondary containment system for these items shall be used in the event the primary containment system leaks. Refueling or servicing of equipment must not take place within 100 feet of any watercourse or within the wetland area.

5. The construction area shall be protected such that a runoff event will not move soil or contaminants to surface water or away from the construction site. These measures shall be in place prior to the commencement of activities and inspected daily.

6. Temporary mats must be placed on stream banks, riparian areas, and wetlands, to minimize impacts to soil and vegetation from heavy equipment. Temporary access roads must be restored to pre-project conditions.

7. All asphalt, concrete, and other construction materials must be properly handled and contained to prevent releases to the stream channels. All concrete that is to be poured must be fully contained in mortar-tight forms to prevent accidental releases to surface water or ground

[1] "Indian Country", as defined in 18 U.S.C. 1151, means: (1) all land within the limits of any Indian reservation under the jurisdiction of the United States government, not withstanding the issuance of any patent, and including rights-of-way running through the reservation; (2) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State; and (3) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

water. No discharge of any concrete to surface water or ground water may occur. Dumping of waste materials near watercourses is strictly prohibited.

8. Work in a stream channel should be limited to periods of no flow when practicable, and must be limited to periods of low flow. Avoid working within the channel during spring runoff or summer thunderstorm season.

9. When working in a stream channel, flowing water must be temporarily diverted around the work area to minimize sedimentation and turbidity problems. Acceptable diversion structures are non-erosive and include (but are not limited to) sand bags, water bladders, concrete barriers lined with plastic, and flumes.

10. The permittee shall restore all areas disturbed by construction activities to pre-project conditions. This shall include restoration of surface contours, stabilization of the soil, and restoration of appropriate native vegetation to establish permanent cover.

Certification of Compliance
With Department of the Army Permit

Nationwide Permit Number:	NW 39
Identification Number:	MVK-2008-234
Name of Permittee:	Red River Environmental Products, LLC
Issued Date:	04/28/2008
Evaluator name:	Kevin Philley
Expiration Date:	04/28/2010

Upon completion of the activity authorized by this permit, sign this certification and return it to the following address:

USACE, Vicksburg District
ATTN: Regulatory Branch
4155 Clay Street
Vicksburg, Mississippi 39183-3435

Please note that your permitted activity is subject to a compliance inspection by an Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit modification, suspension, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit including any required mitigation.

Date work was completed: _____

_____ _____
Signature of Permittee Date Signed

Exhibit 4

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Red River Environmental Products, LLC	File Number: MVK-2008-234	Date: April 28, 2008
Attached is:		See Section Below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

• ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations (JD) associated with the permit.

• OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

• ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

• APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

• ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

• APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Kevin Philley U.S. Army Corps of Engineers Regulatory Branch 4155 Clay Street Vicksburg, MS 39183-3435 (601) 631-5607	Division Engineer Attn: Appeals Review Officer Mississippi Valley Division Post Office Box 80 Vicksburg, MS 39181-0080 (601)634-5820

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
Signature of appellant or agent.		

Approved: 9 May 2006
OMB No.: 0710-0012
Expires: 31 May 2009

The Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0710-0012), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that nonwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE ADDRESS. RETURN COMPLETED APPLICATION TO THE ADDRESS SHOWN ON THE APPLICATION INSTRUCTION SHEET .

CUSTOMER SERVICE SURVEY - REGULATORY PROGRAM
US ARMY CORPS OF ENGINEERS

We at the U.S. Army Corps of Engineers Regulatory Branch are committed to improving service to our customers and would like to know how well we have been doing. Who are our customers? You are our **customers** if you submitted a permit application, requested a jurisdictional determination or wetland delineation, or scheduled a pre-application meeting with us. **Other customers** include those of you who receive our Public Notice and/or commented on a particular project or our work in general, because of your interest in the Regulatory Program. To identify how we can better serve you, we need your help. Please take the time to fill out this brief survey and mail it back to us. Your honest opinions will help us determine areas in which we need to improve. For each question, please indicate the level of service you received by marking the appropriate number on a scale from 1-5, with 1 being low (dissatisfied) and 5 being high (very satisfied). If the question does not apply to you, simply mark N/A. Thank you for your time and comments! Response to this survey is **VOLUNTARY**. If you choose not to respond, it will not affect any current or future dealings you may have with the USACE in any way.

I. FOR APPLICANTS & OTHERS REQUIRING AUTHORIZATIONS	***LOW SATISFACTION***			***HIGH SATISFACTION***		
1. Do you think you received your Corps permit decision in a reasonable amount of time?	O 1	O 2	O 3	O 4	O 5	O NA
2. Do you think you received your Corps jurisdictional determination in a reasonable amount of time?	O 1	O 2	O 3	O 4	O 5	O NA
3. If we recommended/required project changes/modifications to reduce impacts, did we clearly explain the reasons why?	O 1	O 2	O 3	O 4	O 5	O NA
4. If we recommended/required project changes/modifications to reduce impacts, did the changes seem reasonable to you?	O 1	O 2	O 3	O 4	O 5	O NA
5. If we denied your permit, did we clearly explain the reasons why?	O 1	O 2	O 3	O 4	O 5	O NA
6. For enforcement cases, did our office clearly and professionaly explain the basis for the enforcement action (e.g., what work we believe you performed without authorization?	O 1	O 2	O 3	O 4	O 5	O NA
7. For enforcement cases, did our office include options for resolution?	O 1	O 2	O 3	O 4	O 5	O NA
II. FOR "OTHER" CUSTOMERS						
1. For permitted actions, was the permit effective in achieving appropiate protection/mitigation for impacts to aquatic resources?	O 1	O 2	O 3	O 4	O 5	O NA
2. For enforecement actions, did the Corps require appropiate compensation/ restoration for impacts to aquatic resources?	O 1	O 2	O 3	O 4	O 5	O NA
III. FOR APPLICANTS & "OTHER" CUSTOMERS						
1. Did the Corps representative act professionally and treat you with courtesy?	O 1	O 2	O 3	O 4	O 5	O NA
2. Did the Corps provide sufficient information to allow you to complete an application form, comment on public notice, or otherwise evaluate our work?	O 1	O 2	O 3	O 4	O 5	O NA
3. Did the Corps respond to your letters and telephone calls in a reasonable amount of time?	O 1	O 2	O 3	O 4	O 5	O NA
4. Did the Corps representative answer your questions clearly, giving you accurate information about our Regulatory Program?	O 1	O 2	O 3	O 4	O 5	O NA

5. What is your OVERALL rating of the level of service provided by the Corps of Engineers Regulatory Program?	O 1	O 2	O 3	O 4	O 5	O NA

Note: DATA FROM THIS QUESTIONNAIRE WILL BE USED BY THE DISTRICT TO IMPROVE SERVICE. ALSO, INFORMATION WILL BE
TABULATED NATIONALLY BY SERVICE AREA. RESPONDENTS WILL NOT BE IDENTIFIED BY NAME OR ORGANIZATION FOR ANY REPORT DERIVED FROM THE SURVEY.

PLEASE COMPLETE THE FOLLOWING QUESTIONS BY GIVING US ANY COMMENTS OR SUGGESTIONS FOR HOW WE CAN IMPROVE

Please indicate the nature of your business *(if applicable, check more than one)*:

- ☐ Property Developer
- ☐ Public Agency Applicant
- ☐ Civic or Trade Organization
- ☐ Member of Legislature
- ☐ Federal/State/Local
- ☐ Conservation Organization
- ☐ Flood/Water Control District
- ☐ Consultant
- ☐ Farming/Ranching
- ☐ Public Agency
- ☐ Personal/Private Project
- ☐ Adjacent Property Owner
- ☐ Sand & Gravel
- ☐ Law Office
- ☐ Silviculture
- ☐ Mining
- ☐ Media
- ☐ Native American

Other *(describe)*:

What Service(s) Did You Seek From the Corps? *(if applicable, check more than one)*:

- ☐ General Information
- ☐ Pre-application Consultation
- ☐ Nationwide General Permit
- ☐ Regional or Programmatic Permit
- ☐ Standard Individual Permit
- ☐ Letter of Permission
- ☐ Jurisdictional/Wetland Determination
- ☐ Resolution of Violation/Non-compliance
- ☐ Regulatory Program Presentation
- ☐ Commented on Public Notice/Permit Application

Other *(describe)*:

Which Corps office did you deal with? Vicksburg - District Office

Name of person you contacted in that office *(optional)*:

Do you have any comments or suggestions on the Regulatory Program?

Information about you *(optional)*:

Name/Title:

Address:

Telephone *(include area code)*:

May we contact you? YES ○ NO ○

Authorities: The government Performance and Results Act of 1993 and Executive Order (EO) 12862, "Setting Customer Service Standards", dated September 11, 1993. Purpose: To determine the qualify of services our customers expect, as well as their satisfaction with USACE's existing services. Information provided on this form will be used in evaluating the performance of the Corps Regulatory Program. Routine Uses: This information may be shared with the Office of Management and Budget, members of Congress, and other federal, state, and local government agencies. Disclosure: Providing requested information is voluntary. Failure to provide this information will not result in an adverse action.
(Reverse of Eng Form 5065)

Send Form

Andrea Adams

Subject: FW: Red River Environmental MVF-2008-234

-----Original Message-----
From: Lobred, Anthony R MVK [mailto:Anthony.R.Lobred@usace.army.mil]
Sent: Tuesday, January 20, 2009 7:39 AM
To: Clay Fischer
Subject: RE: Red River Environmental MVF-2008-234

Mr Fischer,

Based upon the information gathered from the Mr. Jamie Phillipe of LDEQ, the oxbow location for the intake is not in the navigable channel nor within a revetment area and the Levee board's approval for the project, your NW39 is
still valid for the project as you have proposed. NO further coordination is required with this office unless you change your plans further.
If there are any questions about this action, please forward all calls to me.

Sincerely

Anthony R Lobred
Biologist/Senior Environmental Specialist Compliance Officer Regulatory Branch Vicksburg District Corps of Engineers
Phone: (601) 631-5470
Fax: (601) 631-5459
In order to assist us in improving our service to you, please complete the survey found at http://per2.nwp.usace.army.mil/survey.html

-----Original Message-----
From: Clay Fischer [mailto:cfischer@zephyrenv.com]
Sent: Monday, January 19, 2009 9:57 AM
To: Lobred, Anthony R MVK
Subject: RE: Red River Environmental MVF-2008-234

Mr. Lobred,

Hope you had a great weekend and all is well.

I have spoken with the client again and they indicated that an email indicating the project is still authorized under NWP 39 with a signature block would be satisfactory in lieu of a letter.

Please contact me with any questions or needs.

Regards,

Clay

Clay V. Fischer
Natural Resources Project Manager
Zephyr Environmental Corp.
2600 Via Fortuna

DEPARTMENT OF THE ARMY
VICKSBURG DISTRICT, CORPS OF ENGINEERS
4155 CLAY STREET
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

April 7, 2009

Operations Division

SUBJECT: Modification Request for Authorization Under Nationwide Permit No. 39, MVK-2008-234

Ms. Andrea Adams
Red River Environmental Products, LLC
c/o ADA-ES, Incorporated
8100 South Park Way, Unit B
Littleton, Colorado 80120

Dear Ms. Adams:

I refer to the March 18, 2009, letter from Mr. Clay V. Fischer, Zephyr Environmental Corporation, requesting modifications to your Department of the Army permit for the proposed Red River Environmental Products, LLC, South Parish Road 604 Site, Coushatta, Red River Parish, Louisiana, to reflect the changes as described in your letter and as shown on the enclosed drawings (enclosure 1).

The requested modification of the subject permit is hereby approved. Please retain this letter and enclosure with your permit file, since it will become a part of the original authorization (enclosure 2). Also, the General and Special Conditions of the Permit still apply to your modified project.

Please be advised that any deviation from the plans or location of the modified work must be approved by this office prior to the commencement of any work.

Thank you for advising us of your plans. If you change your plans for the proposed work or if the proposed work does not comply with the conditions of the Nationwide Permit, please contact Mr. Kevin Philley, telephone (601) 631-5607 or fax (601)631-5459. In any future correspondence concerning this project, please refer to Identification No. MVK-2008-234.

I am forwarding a copy of this letter to Mr. Clay V. Fischer, Zephyr Environmental Corporation, 2600 Via Fortuna, Suite 450, Austin, Texas 78746.

The Vicksburg District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the Customer Service Survey found on our web site at http://per2.nwp.usace.army.mil/survey.html. If it is more convenient for you, please complete and return the enclosed postage-paid post card (enclosure 3).

Sincerely,

David Lofton

David Lofton
Chief, Permit Section
Regulatory Branch

Enclosures

March 18, 2009

Mr. Kevin Philley
Project Manager
U.S. Army Corps of Engineers, Vicksburg District
Attention: CEMVK-OD-F
Regulatory Branch
4155 Clay Street
Vicksburg, Mississippi 39183-3435

RE: Second Supplemental Pre-Construction Notification Submittal
Red River Environmental Products, LLC
Coushatta, Red River Parish, Louisiana
Identification No. MVK-2008-234

Dear Mr. Philley:

On behalf of our client (applicant):

Red River Environmental Products, LLC
8100 South Park Way, Unit B
Littleton, Colorado 80120
(303) 339-8847
Attn: Andrea Adams

Zephyr Environmental Corporation (Zephyr) submits this second supplemental pre-construction notification (PCN) to explain and detail changes to the above-mentioned project for Red River Environmental Products, LLC (RREP). Previously, this project was authorized under Nationwide Permit (NWP) 39 (MVK 2008-234) on April 28, 2008. Subsequent changes to the project were authorized under the same permit by your office on January 20, 2009. Construction of the previously approved portions of the project has proceeded. However, due to unanticipated design requirements and unexpected changes in potential electric service options, additional revisions to the project are necessary. As such, a wastewater outfall on the Red River is now necessary, as well as a substation and electric line from an existing Cleco Electric main line approximately four miles north of the facility site. Zephyr, the applicant, and project engineers have worked during the planning process to avoid and minimize impacts to the maximum extent practicable. The newly proposed Red River outfall line right-of-way (ROW) and discharge will require impacts to Rivers and Harbors Act Section 10 (Section 10) and additional Clean Water Act Section 404 (Section 404) areas. The newly proposed electric line ROW is anticipated to span several Section 404 areas but not to be constructed in or impact any of these areas. This supplemental PCN details the anticipated impacts to Section 10 and Section 404 areas within the proposed outfall water line and electric line ROWs. All anticipated impacts are below the current NWP 39 limitations.

Ex. 1

SITE DESCRIPTION

The northern portion of the proposed electric line ROW will begin approximately four miles north of the facility site (see Figures 1 and 3 in Appendix A). Immediately north of the intersection of US Highway 1 and the existing Cleco Electric main line, a substation will be constructed to route power to/from the RREP site. From the substation, the proposed electric line ROW will traverse to the west side of US Highway 1. From this point, the proposed electric line ROW will parallel an existing electric line ROW which generally parallels US Highway 1 to the west. The proposed electric line ROW will parallel the existing electric line ROW southeast (30-foot offset to the west) for approximately 14,000 feet at which point the ROW will continue in a more southerly heading (30-foot offset to the east) for approximately 4,200 feet to the RREP site. In general, the proposed electric line ROW exhibits improved pasture conditions dominated by introduced grasses with a few interspersed native trees. However, the northernmost portion of the electric line ROW traverses approximately 3000 feet of planted red oak woodland. The approximate geographic coordinates of the electric line ROW termini are latitude 32° 3' 21.3" N and longitude 93° 25' 1.7" W and latitude 32° 0' 15.9" N and longitude 93° 23' 34.9" W.

The proposed outfall line ROW will parallel (within the same trench) the previously proposed and authorized water intake line ROW along Pig Pen Bayou from the facility site approximately 2.5 miles southeast to Parish Road 601. Approximately 50 feet east of Parish Road 601, the outfall ROW will divert northeast and generally follow the top bank line of Hollingsworth Cutoff to the Red River (Figures 2 and 4 in Appendix A). Current conditions exhibited over the proposed ROW are described as agricultural hay pasture between US Highway 1 and the Red River to the east. Conditions exhibited on the section of the ROW across Red River Mine (RRM) are described as dense herbaceous vegetation.

The proposed discharge will be located on the bank of the Red River and extend approximately 143 feet from the top bank into the river Conditions immediately adjacent to the Red River are described as level to gently sloping and dominated by woody species. The approximate geographic coordinate of the discharge is latitude 31° 59' 29.5" N and longitude 93° 21' 22.3" W.

SECTION 404 AND SECTION 10 JURISDICTIONAL DETERMINATION/DELINEATION

The jurisdictional determination consisted of a pre-field literature review and field reconnaissance efforts conducted to characterize onsite hydric features and determine the presence or absence of Section 10 and 404 jurisdictions. The location of waters of the US and other features associated with the newly proposed electric line and outfall line ROW's were documented using a Trimble ProXrs GPS system with a TS-C1 Trimble data collector. The unit was configured to work with Omnistar satellite and to only plot fixed positions when at least four satellites were available and Position Dilution of Precision was below 6 to assure sub-meter accuracy. The datum used for the collection of GPS points was Universal Transverse Mercator North American Datum 83, Zone 15 North. Hydric feature location points were overlain on United States Geological Survey (USGS) topographic maps and acreage of impacts was determined with ArcGIS 9, ArcMap Version 9.2.

Literature Review

The pre-field evaluation for the entire site included a review of the USGS 1-meter Digital Orthophotograph Quarter Quadrangle: Harmon (southeast) aerial photography (2004); as well as aerial photography obtained by RRM from a private contractor. Aerial photography provided by RRM included parts of Evelyn and Hanna USGS quadrangles: USGS 7.5-minute Digital Raster Graphic Evelyn, Hanna, and Harmon quadrangle (1998); and the web-based soils survey information from the Natural Resources Conservation Service (NRCS). Data for the National Wetland Inventory map and a Federal Emergency Management Agency Flood Insurance Rate Map are not available for the site.

According to the USGS quadrangle map, the project area terrain is generally flat with on-site elevations ranging from approximately 125 feet above mean sea level (MSL) to 130 feet above MSL. Pig Pen Bayou provides drainage for the area. However, Pig Pen Bayou has been re-routed east towards an unnamed tributary as part of normal RRM operations. The re-route is not indicated in the USGS quadrangle map. According to the USGS quadrangle map, potential waters of the US impacted by the proposed electric line and outfall line ROW's include Honey Bayou, an unnamed abandoned slough of the Red River, Pig Pen Bayou, an unnamed tributary of Pig Pen Bayou, and the Red River. The Red River is classified as a Section 10 regulated water of the US.

The 2004 aerial photograph indicates that the subject site was being utilized for agricultural purposes (most likely hay farming). Honey Bayou, an unnamed abandoned slough of the Red River, Pig Pen Bayou, an unnamed tributary of Pig Pen Bayou, and the Red River are evident in the aerial photograph in their pre-mining condition.

As mapped by the NRCS, the proposed electric line and outfall line ROW's traverse several soil types. The soil types most often encountered by either ROW are the Coushatta silty clay loam, and Moreland clay. These soil types are generally described as moderately deep to deep, clay and silty clay layers and usually associated with natural levees. Other soil types traversed by the proposed Water Line include Armistead clay, Buxin clay, Caspiana silt loam, Coushatta silt loam, Coushatta silty clay loam, Moreland silt loam, and Perry clay. Only Buxin and Perry clays (traversed by the proposed electric line and substation) are listed as hydric on the county or National Hydric Soils of the United States list.

Field Reconnaissance

Zephyr has conducted a field reconnaissance of both ROW's (see site photos in Appendix B). Field reconnaissance efforts included a preliminary jurisdictional determination and a habitat assessment for the pallid sturgeon and interior least tern. Portions of all "waters of the US" impacted by the proposed electric line and outfall line ROW's have been flagged and located using the Trimble gps unit. Figures 5 - 17 in Appendix A indicate the jurisdictional extent of "waters of the US" as determined from field reconnaissance efforts.

Data for vegetation, hydrology, and soils were recorded on Data Forms for Routine Wetland Determination (1987 *Corps of Engineers Wetlands Determination Manual, Technical Report Y-87-1*)

for each community, with representative forms attached in Appendix C. Figures 5 – 17 in Appendix A detail the locations of all data sites obtained for the project.

Honey Bayou is a wooded stream corridor. It exhibits a defined bed-and-bank with an ordinary high water mark (OHWM) of approximately 200 feet in width and is considered perennial/intermittent. Vegetation inside the stream channel is sparse and dominated by scattered bald cypress (*Taxodium distichium*). Vegetation on the banks of Honey Bayou is dominated by St. Augustine (*Stenotaphrum secundatum*) and bushy bluestem (*Andropogon glomeratus*) with large scattered bald cypress (*Taxodium distichium*) and black willow (*Salix nigra*). According to USGS topographical maps, Honey Bayou is an abandoned channel of the Red River. During the site investigation, the feature appeared to exhibit normal water levels. Observable flow was very slow to non-existent.

An unnamed forested wetland slough extends from the Red River near Armistead approximately 8,200 feet northwest to the proposed electric line ROW. At the point of first intersection, the feature exhibits channelized conditions with an OHWM of approximately 15 feet. Further southeast, the feature widens and begins to exhibit regularly inundated conditions. Vegetation along the edge of the feature is dominated by St. Augustine, bushy bluestem, and scattered clumps of rush (*Juncus effuses*). The feature is dominated by large scattered bald cypress and black willow. According to USGS topographical maps, this feature is an abandoned channel of the Red River. During the site investigation, the feature appeared to exhibit above normal water levels. Observable flow was evident.

Pig Pen Bayou is a relatively open stream corridor. It exhibits a defined bed-and-bank with an OHWM of approximately 40 feet and is considered perennial/intermittent. Vegetation inside the stream channel in the area of South Parish Road 604 consists of cattail (*Typha latifolia*), bushy bluestem and black willow. Annual ragweed (*Ambrosia artemisiifolia*) is the dominant species just above the OHWM. Elsewhere, Pig Pen Bayou exhibits very little vegetation as it has recently been re-routed as a part of normal RRM operations. The unnamed tributary of Pig Pen Bayou which joins Pig Pen immediately south of Parish Road 604 and west of the Union Pacific Railroad ROW exhibits an OHWM of approximately 15 feet and is dominated by vegetation identical to that described for Pig Pen Bayou. Maguire Branch indicated on the USGS quadrangle map as being in the extreme southern portion of the project area, has been impacted by normal RRM operations and no longer extends into the project area.

The Red River is the site of the proposed discharge. Vegetation on the bank of the Red River is dominated by hackberry (*Celtis laeviegata*), American elm (*Ulmus americana*), and cedar elm (*U. crassiafolia*) with an understory of Johnsongrass (*Sorghum halepense*), greenbriar (*Smilax bona-nox*), goldenrod (*Solidago sp.*), and poison ivy (*Toxicodendron radicans*).

SUBSTATION AND ELECTRIC LINE ROW

The proposed substation will be located northwest of Armistead, Louisiana on the east side of US Highway 1. Immediately north of the intersection of US Highway 1 and the Cleco Electric main line, a substation with dimensions of approximately 360 x 360-feet will be constructed to route power to/from the RREP site. The majority of the site has been cleared and is actively farmed (Photograph 1, Appendix B). The site is bounded to the south by an existing Cleco Transmission line and to the

west by US Highway 1; a CrossTex pipeline ROW and a transmission line ROW also traverse the property along the western boundary. A narrow portion of the site situated near the Cleco Transmission Line is densely vegetated with annual ragweed (*Ambrosia artemsiifolia*), yankee weed (*Eupatorium compositifolium*), and sunflower (*Helianthus annuus*). The approximate geographic coordinate of the center of the site is N 32.05579 and W 93.41745. A man-made non-jurisdictional swale with a width of 3 feet forms a portion of the southern boundary and carries storm water east to west from the farm field to the bar-ditch along the east side of US Highway 1. Access to the substation will be via a 20-foot wide x 107-foot long paved roadway with culvert from US Highway 1 east to the substation. The 3 foot wide bar ditch along the east side of the highway will be traversed with a 24-inch culvert or larger to minimize and avoid loss of function to the feature.

The Property is primarily developed for farming with the exception of a narrow portion of the southern boundary which has been graded to allow drainage of storm waters offsite or is too near the Cleco transmission line to farm. At the time of investigation, a majority of the site exhibited almost fallow conditions with only recent sprouts of winter wheat and scattered weeds visible. The narrow unfarmed portion of the property situated near the Cleco transmission line exhibited dense frost-killed vegetation dominated by annual ragweed, yankee weed, and sunflower. The man-made non-jurisdictional swale generally exhibits large areas of bare ground with scattered smartweed (*Polygonum* sp.) and dock (*Rumex* sp.) in the vicinity of US Highway 1 and will not require re-routing or be impacted by the project.

From the substation, the proposed electric line ROW will traverse US Highway 1 to the west side, and then parallel the existing Cleco electric line ROW which generally parallels the Union Pacific Railroad ROW (30-foot offset to the west). The proposed electric line ROW will generally parallel the existing electric line ROW southeast with a 30-foot offset to the west (Photograph 2, Appendix B). At Honey Bayou, the electric ROW will jog slightly west to a natural opening within the canopy to avoid removal of cypress trees from the ROW. Approximately 11,500 feet southeast of the starting point, the ROW will re-direct in a more southerly heading to avoid impacts to forested wetlands associated with an unnamed abandoned slough of the Red River. For approximately 2,500 feet, the proposed electric line ROW will skirt the feature to the west. At such point, it will intersect the previously referenced existing electric ROW and continue due south with a 30-foot offset to the east for approximately 6,700 feet to the RREP site (Photograph 3, Appendix B). All of the Waters of the US indicated near or adjacent to the proposed electric line ROW as Data Sites are proposed to be avoided. Construction of the electric line and substation will result in less than 0.01 acres of impacts to the section 404 jurisdictional drainage along US Highway 1 associated with construction of the substation access roadway.

OUTFALL LINE ROW AND DISCHARGE

As proposed, the outfall line ROW will parallel (within the same trench) the authorized intake water line ROW (proposed in previous submittal) from the RREP facility across Pig Pen Bayou (via trenching) and Parish Road 604 via directional drill. It will then head east along Parish Road 604, crossing it via directional drill, and Pig Pen Bayou (via trenching), then southeast for approximately 9000 feet outside of and along the west bank of Pig Pen Bayou, east across Pig Pen Bayou (via trenching), then east under the Union Pacific Railroad ROW and US Highway 1 (via directional drill). Pig Pen Bayou exhibits a defined bed-and-bank condition with an OHWM of 40 feet at all points traversed by the proposed ROW. From US Highway 1 the outfall line ROW will continue to parallel

the intake water line ROW and traverse Parish Road 601 and the Red River levee via overtopping. Approximately 50 feet east of the levee, the outfall line ROW will jog north and continue northeast along the Hollingsworth Cutoff top bank to the Red River (Photographs 4 and 5, Appendix B). Construction of the ROW through Pig Pen Bayou will result in temporary impacts to less than 0.01 acres of Section 404 jurisdictional waters.

RREP is proposing to construct an eight (8") inch effluent discharge line into the Red River southeast of Armistead, Louisiana near river mile 176. According to information available, a rip rap stone revetment is located along the bank of the Red River in the area of the proposed discharge. The revetment is a trench revetment installed by the USACE in the 1960s and consists of 18 to 24-inches of Graded Stone "C" Rip Rap. The proposed design was developed through coordination with the USACE River and Stabilization personnel. Restoration of the revetment will result in permanent impacts to 8 linear feet of river bank due to trenching, and less than 0.01 acres of impact from 26.66 cubic yards of permanent fill to a Section 10 jurisdictional water.

Beginning approximately 65 feet west of the top bank of the Red River, the discharge will be constructed of restrained joint ductile iron pipe and will be installed by open cutting the existing bank for approximately 100 feet with some trench excavation under water. The trench will have varying depths and widths dependent on the ground surface. The trench on land and not under the revetment will be backfilled with job excavated material. The excavated material not needed for backfill will be removed to an upland location. The excavation of the underwater trench, placement of the pipe, and required backfill will be performed from a barge. The trench under the revetment will be backfilled with crushed stone to a point with the last 18 to 24-inches of backfill consisting of Graded Stone "C" Rip Rap so as to restore the existing trench revetment (purportedly 18 to 24-inches of rip rap). The excavated material not needed for backfill will be removed to an upland location. A thirty (30') foot permanent easement and twenty-five (25') foot temporary construction easement to the north will be utilized for construction above the normal water surface elevation. After reaching the normal water surface elevation, an additional twenty five (25') foot easement to the south will also be utilized for the construction. The construction will require the vegetation in the permanent and temporary easement to be removed. The excavation will be backfilled as described and the replaced stone revetment will stabilize the bank.

Approximately fifty (50') feet into the river from the normal elevation line, the pipeline will not be trenched but will be installed along the river bottom with 3' x 3' concrete ballasts installed at six foot intervals to prevent flotation and to hold the pipe firmly in place. Approximately 12-inches of crushed stone will be placed along the bottom as bedding material for the pipe. Approximately 20 feet of pipe will be installed between the end of the trench and the effluent diffuser. The effluent diffuser consists of approximately 36 feet of 8-inch restrained joint ductile iron pipe with nine 4-inch diffuser ports consisting of a Tideflex Rubber Diffuser Check Valve. The pipeline, diffuser, and necessary concrete ballasts will be assembled on a barge and installed with the assistance of divers along the bottom. Construction of the discharge will result in permanent impacts to 1 linear foot of river bank below normal water elevation with less than 0.01 acres of impact due to 7.39 cubic yards of permanent fill to a Section 10 jurisdictional water. Temporary impacts associated with the discharge include approximately 0.19 acres of Section 10 open water. Drawings detailing the proposed discharge and impacts to the revetment wall are provided in Appendix D.

INTAKE STRUCTURE

As described in a previous submittal forwarded to Mr. Lobred, RREP proposes to construct a water intake structure on Hollingsworth Cutoff (oxbow of the Red River). Design criteria provides for gravel rip rap to be placed along portions of the bank, shore, and bottom to stabilize the bank during construction and minimize impacts during and after the structure is placed. Placement of the rip rap is anticipated to result in impacts to less than 0.01 acres of Section 10 jurisdictional open water with 8.33 cubic yards of permanent fill and less than 0.01 acres of Section 10 jurisdictional herbaceous wetlands with 4.17 cubic yards or permanent fill.

ANTICIPATED PROJECT IMPACTS

Table 1 below summarizes proposed permanent impacts to "waters of the US" for the entire project. Note that those shaded in gray indicate previously authorized impacts.

TABLE 1
SUMMARY OF PERMANENT IMPACTS TO WATERS OF THE US

"Waters of the US"	Type	Purpose of Impact	Length (linear feet) of Stream Impact	Jurisdictional Area (feet^2)	Jurisdictional Area (Acres)	Fill (Cubic Yards)
Pig Pen Bayou (PPB1)	Section 404 Perennial/Intermittent stream	road crossing	105[1]	105 x 40 = 4,200	0.10	----------
Pig Pen Bayou (PPB2)	Section 404 Perennial/Intermittent stream	road crossing	105[1]	105 x 40 = 4,200	0.10	----------
Hollingsworth Cutoff	Section 10 Open water	Intake structure and piping	----------	650 x 1.67 = 10,855	0.02	----------
Hollingsworth Cutoff	Section 10 Open water	concrete ballasts and gravel pads	----------	650 x 25 = 1,625 (45.14 yds^3)	0.04	----------
US Highway 1 bar ditch	Section 404 Perennial/Intermittent stream	Substation access roadway	20	3	<0.01	----------
Hollingsworth Cutoff[2]	Section 10 Herbaceous wetland fringe	Intake structure bank rip rap	50 (non-stream)	50 x 3 = 150	<0.01	4.17
Hollingsworth Cutoff	Section 10 open water	Channel bottom rip rap	----------	50 x 6 = 300	<0.01	8.33
Red River	Section 10 Open water	Discharge	1	116 x 1 = 116	<0.01	----------
Red River	Section 10 Open water	Concrete ballasts and gravel pads	----------	(3 x 3 x .75 x 8) + (1 x 4.75 x 42) = 138	<0.01	7.39
Red River	Section 10 Open water	Restore revetment	8	8 x 45 = 360	<0.01	26.66
Totals	----------	----------	293	----------	0.32	46.55

Gray background indicates previously authorized impacts.
"1" Impacts previously reported as144 linear feet.
"2" Impacts previously anticipated as temporary. Permanent rip rap was not previously proposed.

zephyr environmental corporation

Permanent impacts associated with the discharge are proposed for Section 10 waters. These include less than 0.01 acres of impact to Section 10 areas of Hollingsworth Cutoff associated with the bank and shore rip rap (12.50 cubic yards), less than 0.01 acres of impacts associated with installing the discharge on the bottom of the Red River as well as less than 0.01 acres (7.39 cubic yards) of impacts associated with concrete ballasts and gravel padding for the discharge. Additional impacts include 26.66 cubic yards of fill associated with restoring the revetment along the Red River. No additional impacts are anticipated for the outfall ROW, discharge, electric line ROW, and substation.

Table 2 below summarizes proposed temporary impacts to "waters of the US" for the entire project (gray shading indicates previously authorized impacts).

TABLE 2
SUMMARY OF PROPOSED TEMPORARY IMPACTS TO WATERS OF THE US

"Waters of the US"	Feature	Purpose of Impact	Length (linear feet) of Stream Impact	Jurisdictional Width (feet)	Acres
Pig Pen Bayou	Section 404 Perennial/Intermittent stream	water line and outfall line	4.5	40	<0.01
Pig Pen Bayou	Section 404 Perennial/Intermittent stream	water line and outfall line	4.5	40	<0.01
Pig Pen Bayou	Section 404 Perennial/Intermittent stream	water line and outfall line	4.5	40	<0.01
Pig Pen Bayou	Section 404 Perennial/Intermittent stream	gas utility crossing	3	40	<0.01
Unnamed Tributary of Pig Pen Bayou	Section 404 Intermittent/Ephemeral stream	gas utility crossing	3	15	<0.01
Hollingsworth Cutoff	Section 10 Open water	Intake structure	4	90 (non-stream)	<0.01
Red River	Section 10 Open water	Discharge	4	116 (non stream)	0.01
Red River	Section 10 Open water	Discharge (temporary workspace)	80	100 (non stream)	0.18
Totals	----------	----------	107.5	481	0.22

Gray background indicates previously authorized impacts.

Temporary impacts associated with the discharge are proposed for the Red River. These include less than 0.01 acres of impacts associated with trenching of the riverbank to install the discharge as well as 0.18 acres associated with temporary workspace to construct the outfall line. Upon completion of the work effort, the trenches will be back-filled to pre-construction contours. All

impacted areas will be allowed to re-vegetate naturally. No additional impacts are anticipated for the outfall ROW, discharge, electric line ROW, and substation.

THREATENED AND ENDANGERED SPECIES

Federally threatened (T) and endangered (E) species listed by the U.S. Fish and Wildlife Service (USFWS) as having the potential to occur in Red River Parish are *Scaphirhynchus albus* (pallid sturgeon, E) and *Sterna antillarum* (least tern, E). The Louisiana Department of Wildlife and Fisheries considers the least tern to be the only state-listed T&E species as having the potential to occur in Red River Parish.

Zephyr completed a pedestrian survey of the proposed substation, electric line and outfall line ROW's and adjacent areas to determine if habitat likely to support the two federally-listed T&E species for Red River Parish exists. The T&E species habitat survey was completed by a qualified wildlife biologist. Data were collected to describe resident vegetation communities and assess the potential for occurrence of T&E species.

The vegetative communities observed within the survey areas were documented by a qualified wildlife biologist. The majority of the project footprint consists of mowed or grazed pasture grasses (Bermuda and Johnson grass). Portions of the proposed electric line ROW exhibit various wetland species, however the site does not possess habitat that supports the pallid sturgeon or the interior least tern. No T&E species were observed within the survey area during the survey.

A letter explaining these results and Zephyr's opinion that construction of the proposed substation, electric line, and outfall line ROWs will not adversely affect either species was forwarded to the USFWS's Lafayette Ecological Field Office. A copy of the signed concurrence letter received from USFWS is included in Appendix E.

CULTURAL RESOURCES

AR Consultants was contracted to accomplish the cultural resource literature review for the proposed substation, electric line, and outfall line ROWs. Based upon AR Consultant's report and recommendation, along with previous negative survey results within and near the proposed work areas, it is our conclusion that additional cultural resource investigations for this area are unnecessary. A copy of the AR Consultants Report with signed concurrence from the Louisiana State Historic Preservation Office (SHPO) is provided in Appendix E.

LEVEE CROSSING COORDINATION

RREP has initiated coordination regarding traversing the Red River levee with the Red River Parish Levee Board and Drainage District, the Department of Transportation and Development (DOTD), and USACE. Previously, RREP received confirmation that proposed work efforts in regard to the Red River Levee and Parish Road 601 were acceptable. A copy of that letter as well as a more recently received Letter of No Objection from DOTD regarding the above-mentioned modification (adding the 8" discharge line) related to crossing Parish Road 601 and the levee is included in Appendix E. Approval of planned work efforts from others agencies involved is anticipated in the near future.

SUMMARY

As proposed, the entire project will require permanent impacts to approximately 293 linear feet (0.27 acres) of Section 404 perennial/intermittent streams and less than 0.15 acres of impacts to Section 10 wetlands and open waters. Temporary impacts associated with the project include approximately 20 linear feet (<0.05 acres) of Section 404 perennial/intermittent streams. Additionally, approximately 88 linear feet (<0.2 acres) of non-stream Section 10 open water will be temporarily impacted by the construction of the facility, roadways, gas lines, water line, outfall line, electric line, and substation. These proposed impacts have been limited to the maximum extent practicable by location and construction techniques. The total area of proposed impacts to USACE jurisdictional waters for the whole project is below the current NWP 39 limitations; therefore, the applicant is applying to have the additional electric line ROW and outfall line ROW included in the original NWP 39 authorization. As stated above, construction has commenced on portions (access roadway and facility site) of the project originally authorized by your office to be conducted under NWP 39.

As previously mentioned, the applicant has initiated contact with other regulatory agencies including USFWS, State Historic Preservation Office, and DOTD concerning this project. Additionally, the design of the discharge and restoration of the existing revetment wall was coordinated with personnel at the River and Stabilization Department of the USACE-Vicksburg District. A copy of this supplemental PCN letter is also being forwarded to the Louisiana Department of Environmental Quality for their review. We are requesting your expeditious review of this submittal and written notification as to your agreement that the proposed impacts are authorized under NWP 39.

If you have any questions or need additional information, please call me at 512-879-6629. Thank you for your assistance in this matter.

Sincerely,
Zephyr Environmental Corporation

Clay V. Fischer
Natural Resources Project Manager

Attachments

cc: Jennifer Sharp Seinfeld, P.E., Zephyr Environmental Corporation
Andrea Adams, ADA-ES, Inc.
Sheila Glesmann, ADA-ES, Inc.

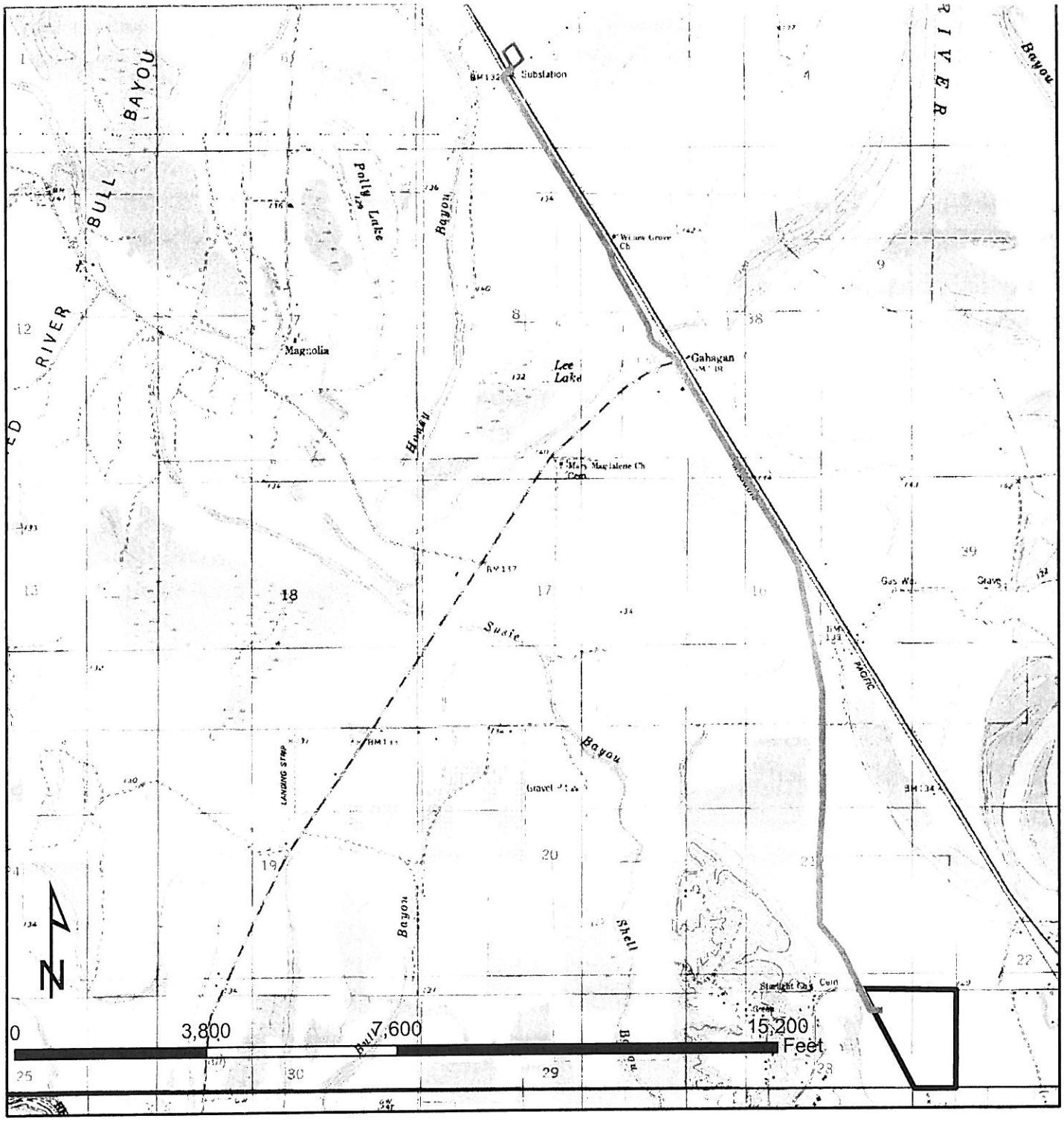


Figure 1
Site Location Map
Proposed Substation and Electric Line ROW
Red River Environmental Products,
Armistead, Red River Parish, Louisiana

Sources: Harmon USGS Quadrangle; 1996.

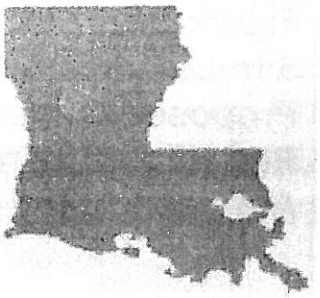
Drawn by: C. Fischer
Checked by: B. Walson

Date: 26 February 2009

Substation

Proposed Electric Line ROW

Site Boundary



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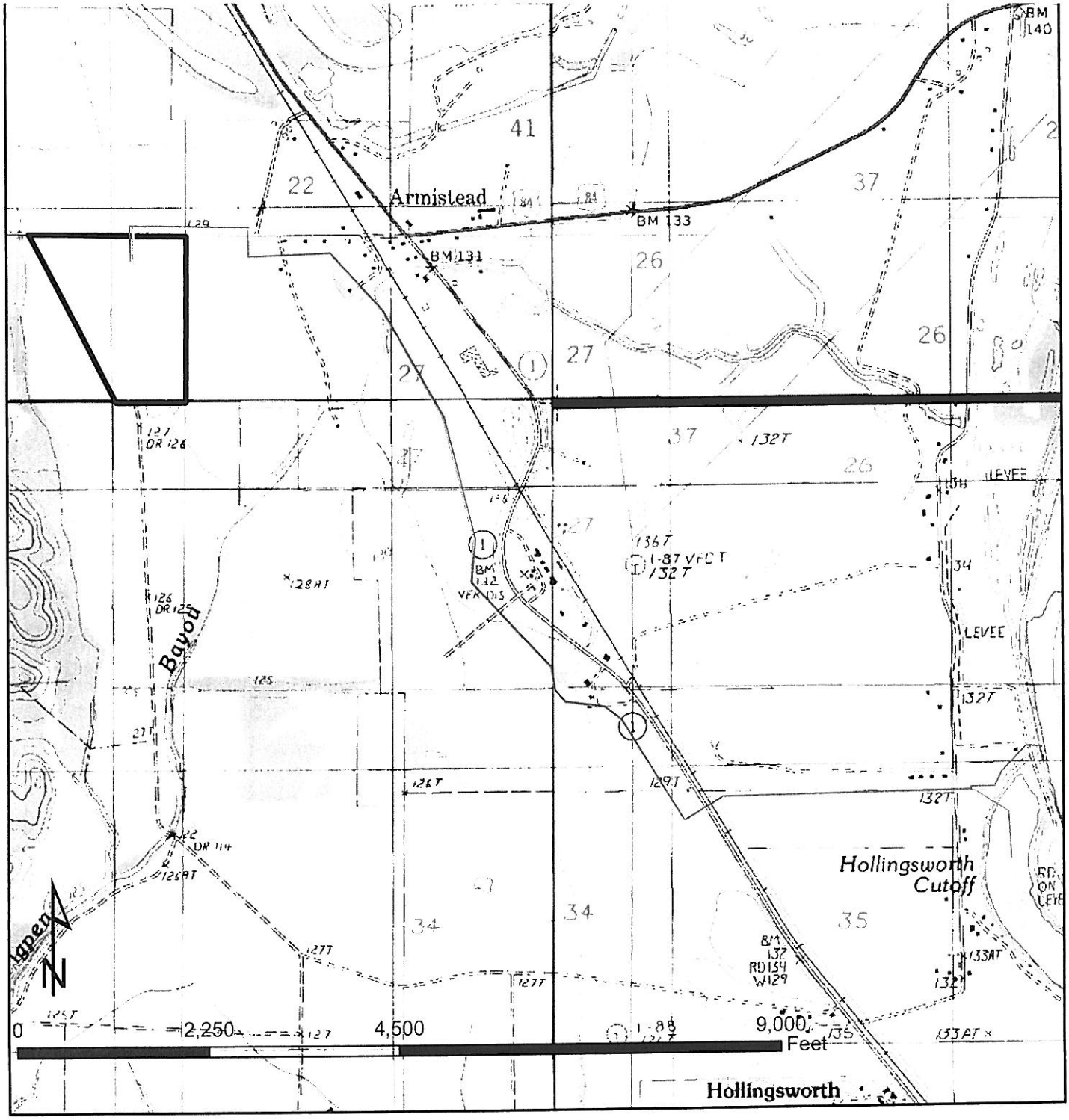


Figure 2
Site Location Map
Proposed Outfall ROW
Red River Environmental Products,
Armistead, Red River Parish, Louisiana

Sources: Coushatta, Evelyn, Hanna, and Harmon USGS Quadrangle; 1996.

Drawn by: C. Fischer
Checked by: B. Watson

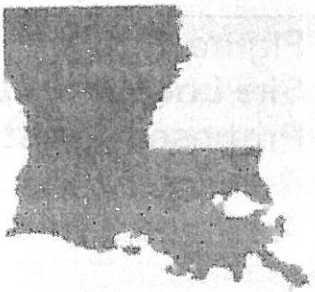
Date: 26 February 2009

Proposed Outfall ROW

Oxbow Intake ROW

Gas Line

Site Boundary



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DEPARTMENT OF THE ARMY
VICKSBURG DISTRICT, CORPS OF ENGINEERS
4155 CLAY STREET
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

April 28, 2008

Operations Division

SUBJECT: Red River Environmental Products, LLC, South Parish Road 604 Site, Coushatta, Red River Parish, Louisiana

Ms. Andrea Adams
Red River Environmental Products, LLC
C/O ADA-ES, Incorporated
8100 South Park Way, Unit B
Littleton, Colorado 80120

Dear Ms. Adams:

Based upon the information provided, it appears that Department of the Army permit requirements for the proposed work will be authorized by Nationwide Permit No. 39, as specified in the March 12, 2007, Federal Register, Issuance of Nationwide Permits; Notice (72 FR 11092-11198), provided the activity complies with the Nationwide Permit Special Conditions (enclosure 1), the Nationwide Permit General Conditions (enclosure 2), and the Regional Conditions (enclosure 3). It is your responsibility to read and become familiar with the enclosed conditions in order for you to ensure that the activity authorized herein complies with the Nationwide Permits.

This verification is valid for a period of 2 years, or until the Nationwide Permit is modified, suspended, or revoked. Activities which are under construction or that are under contract to commence in reliance upon a Nationwide Permit will remain authorized, provided the activity is completed within 12 months of the date of any subsequent modification, expiration, or revocation of the Nationwide Permit. Upon completion of the activity authorized by this Nationwide Permit, please fill out the enclosed certification of compliance (enclosure 4) and return it to our office.

This authorization was based upon a preliminary determination that there appear to be jurisdictional areas on the property subject to regulation pursuant to Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act. For your information, I have enclosed a copy of the appeals form for your review (enclosure 5).

Tab 2

Thank you for advising us of your plans. If you change your plans for the proposed work, or if the proposed work does not comply with the conditions of the Nationwide Permit, please contact Mr. Kevin Philley of this office, telephone (601) 631-5607, fax (601) 631-5459, or e-mail address: regulatory@usace.army.mil. In any future correspondence concerning this project, please refer to Identification No. MVK-2008-234.

I am forwarding a copy of this letter to Mr. Clay V. Fischer, Zephyr Environmental Corporation, 2600 Via Fortuna, Suite 450, Austin, Texas 78746.

The Vicksburg District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete the Customer Service Survey found on our web site at http://per2.nwp.usace.army.mil/survey.html, or if more convenient, complete the enclosed survey form (enclosure 6) and return it in the envelope provided.

Sincerely,

Anthony R. Lobred
Acting Chief, Permit Section
Regulatory Branch

Enclosures

CF:
CEMVK-EC-WR

APPENDIX E

LDEQ DOCUMENTATION

Due to the large number of pages, hardcopies of the following permits are not provided in order to conserve paper; however, all of the documents are available from the LDEQ's Electronic Document Management System (EDMS). Follow the website link, set-up a username and password, and on the "search page" enter the Agency Interest Number and Document ID, then click "Run":

http://www.deq.louisiana.gov/portal/tabid/2604/Default.aspx

AI: 152139

Air Permit Package – 36940287

LPDES Permit – 42579507 (Final), 42076278 (Draft Permit Package)

Groundwater Certification – 36214120

Water Quality Certification – 36786232, 39411210, 40730111

AI: 156874

Construction Stormwater – 36996379

APPENDIX F

CONSTRUCTION EMISSIONS DOCUMENTATION

Table 1
Non-Road Equipment
Hours of Operation

Equipment	2008 (hours/month)				2009 (hours/month)												2010 (hours/month)						
	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July
Air Compressors	0	190	30	70	0	0	0	130	330	950	480	480	480	480	480	480	480	480	480	480	480	480	360
Back-Hoes	0	160	0	10	120	120	190	480	200	290	160	160	160	80	0	0	0	0	0	0	0	0	0
Bob Cats	10	190	80	0	0	0	40	220	260	260	160	160	160	160	160	160	0	0	0	0	0	0	0
Concrete Pump	0	0	0	0	0	0	90	160	190	40	0	0	0	0	0	0	0	0	0	0	0	0	0
Cranes	10	210	190	100	250	150	90	600	870	800	480	480	480	480	480	280	160	160	160	40	0	0	0
Dozers	470	820	470	160	480	620	410	290	450	420	160	160	160	120	0	0	0	0	0	0	0	0	0
Dump Trucks	940	900	700	40	380	150	190	580	950	900	320	320	320	320	320	320	320	320	320	320	320	320	320
Fork Lifts	10	210	240	120	290	280	840	970	1240	1130	560	480	480	480	480	480	480	480	480	480	480	320	240
Grout Pump	10	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JLGs	0	0	0	0	90	490	500	630	1220	1280	800	800	800	720	480	320	160	160	160	160	160	40	0
Light Plants	0	0	0	0	0	0	0	300	220	180	120	120	120	0	0	0	0	0	0	0	0	0	0
Mini Excavators	0	80	290	0	0	40	480	130	390	400	160	160	160	160	160	160	0	0	0	0	0	0	0
Motor Graders	20	110	90	70	220	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Road Grader	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scissor Lift	0	0	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40	40	40	40	40	40	40
Sheep's Foot Roller	0	270	440	140	400	370	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Foot Roller	0	100	130	70	200	430	210	30	0	0	160	160	160	120	0	0	0	0	0	0	0	0	0
Track-Hoes	420	0	330	80	390	260	510	760	1550	1530	520	600	320	160	120	0	0	0	0	0	0	0	0
Tractors	80	480	140	70	200	390	80	260	280	130	160	160	160	160	160	160	160	160	80	0	0	0	0
UTV Mules	10	240	210	420	360	520	790	530	1050	1020	1040	960	960	960	960	960	960	960	800	600	480	320	240
Wacky Packers	0	0	0	0	0	0	130	230	320	650	160	160	160	160	160	160	160	160	440	320	160	0	0
Water Pumps	0	0	0	0	0	0	0	380	290	20	0	0	0	0	0	0	0	0	0	0	0	0	0
Water Trucks	0	230	130	0	120	200	0	0	0	0	160	160	160	120	0	0	0	0	0	0	0	0	0

Table 1
Non-Road Equipment
Hours of Operation

Equipment	2008 (hours/month)				2009 (hours/month)												2010 (hours/month)						
	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July
Generators	0	0	0	0	0	0	240	480	480	480	720	960	960	960	960	960	960	960	800	640	640	640	320
Pressure Washer	0	0	0	0	0	0	80	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Pump (mud hog)	0	0	0	0	0	0	400	640	640	640	640	640	640	640	640	640	520	480	120	0	0	0	0
1/2 ton truck (gas)	0	0	0	0	0	80	160	160	160	320	360	480	480	480	480	480	480	480	480	480	440	320	200
1 ton truck (diesel) (from March 2008)	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
1 ton truck (diesel) (from May 2009)	0	0	0	0	0	0	0	160	160	160	160	160	160	160	160	160	160	160	160	160	120	0	0
Compactors/Tampers	0	0	0	0	0	0	120	200	160	430	320	320	120	0	0	0	0	0	0	0	0	0	0
Concrete/Mortar Mixers	0	0	0	0	0	0	0	0	0	120	160	160	160	160	40	0	0	0	0	0	0	0	0
Trencher	0	0	0	0	0	0	0	0	0	0	160	0	0	0	0	0	0	0	0	0	0	0	0

Table 2
Non-Road Equipment
Emission Factors

Equipment	EF Data Year	SCC	SCC Description	HP	HC lb/hr/unit	VOC lb/hr/unit	CO lb/hr/unit	NOx lb/hr/unit	PM10 lb/hr/unit	PM2.5 lb/hr/unit	SO2 lb/hr/unit	CO2 lb/hr/unit
Air Compressors	2009	2270006015	Diesel Air Compressors	175	0.0445	0.0469	0.1485	0.6023	0.0336	0.0326	0.0140	64.9033
Back-Hoes	2009	2270002066	Diesel Tractors/Loaders/Backho	75	0.0428	0.0451	0.2126	0.1910	0.0328	0.0319	0.0043	19.9924
Bob Cats	2009	2270002072	Diesel Skid Steer Loaders	50	0.0373	0.0393	0.1496	0.1271	0.0230	0.0223	0.0031	14.3640
Concrete Pump	2009	2270006010	Diesel Pumps	75	0.0430	0.0453	0.1967	0.3534	0.0372	0.0360	0.0075	34.7780
Cranes	2009	2270002045	Diesel Cranes	300	0.0664	0.0699	0.2044	0.9862	0.0448	0.0435	0.0257	119.4570
Dozers	2009	2270002069	Diesel Crawler Tractor/Dozers	100	0.0505	0.0532	0.4475	0.5353	0.0615	0.0597	0.0146	67.9707
Dump Trucks	2009	2270003050	Diesel Other Material Handling Eqp	600	0.2011	0.2117	0.8955	1.5110	0.1339	0.1299	0.0266	123.6104
Fork Lifts	2009	2270003020	Diesel Forklifts	75	0.0280	0.0295	0.2732	0.3332	0.0298	0.0289	0.0103	47.7877
Grout Pump	2009	2270006010	Diesel Pumps	300	0.1177	0.1240	0.4529	1.3456	0.0892	0.0865	0.0263	122.0638
JLGs	2009	2270003010	Diesel Aerial Lifts	75	0.0453	0.0477	0.2002	0.2148	0.0320	0.0311	0.0042	19.3403
Light Plants	2009	2270002027	Diesel Signal Boards/Light Plants	40	0.0161	0.0169	0.0665	0.1480	0.0131	0.0127	0.0036	16.9186
Mini Excavators	2009	2270002036	Diesel Excavators	25	0.0136	0.0143	0.0860	0.1241	0.0109	0.0106	0.0036	16.6600
Motor Graders	2009	2270002048	Diesel Graders	300	0.0838	0.0883	0.3754	1.1662	0.0754	0.0731	0.0347	161.1787
Road Grader	2009	2270002048	Diesel Graders	300	0.0838	0.0883	0.3754	1.1662	0.0754	0.0731	0.0347	161.1787
Scissor Lift	2009	2265003010	4 Stroke Aerial Lifts	80	0.4825	0.4501	9.0815	0.7137	0.0043	0.0040	0.0105	50.8288
Sheep’s Foot Roller	2009	2270002015	Diesel Rollers	75	0.0380	0.0400	0.2974	0.3812	0.0417	0.0404	0.0101	46.9809

Table 2
Non-Road Equipment
Emission Factors

Equipment	EF Data Year	SCC	SCC Description	HP	HC lb/hr/unit	VOC lb/hr/unit	CO lb/hr/unit	NOx lb/hr/unit	PM10 lb/hr/unit	PM2.5 lb/hr/unit	SO2 lb/hr/unit	CO2 lb/hr/unit
Smooth Foot Roller	2009	2270002015	Diesel Rollers	75	0.0380	0.0400	0.2974	0.3812	0.0417	0.0404	0.0101	46.9809
Track-Hoes	2009	2270002066	Diesel Tractors/Loaders/Backho	100	0.0608	0.0640	0.3134	0.2699	0.0482	0.0467	0.0060	27.8992
Tractors	2009	2270005015	Diesel Agricultural Tractors	300	0.1296	0.1365	0.6341	1.5935	0.1179	0.1143	0.0354	164.7363
UTV Mules	2009	2265001030	4 Stroke ATVs	1	0.0111	0.0104	0.0952	0.0011	0.0001	0.0001	0.0001	0.5162
Wacky Packers	2009	2270002009	Diesel Plate Compactors	25	0.0162	0.0171	0.0633	0.1095	0.0104	0.0101	0.0024	11.3383
Water Pumps	2009	2270006010	Diesel Pumps	100	0.0595	0.0626	0.2722	0.4890	0.0522	0.0507	0.0104	48.1180
Water Trucks	2009	2270003050	Diesel Other Material Handling Eqp	300	0.1312	0.1381	0.4721	0.8653	0.0858	0.0833	0.0152	70.7164
Generators	2009	2265006005	4 Stroke Generator Sets	25	0.4368	0.4075	12.0684	0.1469	0.0037	0.0034	0.0070	33.7950
Pressure Washer	2009	2265006030	4 Stroke Pressure Washers	11	0.2110	0.1968	5.3888	0.0722	0.0020	0.0018	0.0037	17.8754
Pump (mud hog)	2009	2265006010	4 Stroke Pumps	25	0.3035	0.2832	9.0061	0.1194	0.0032	0.0029	0.0060	29.3293
1/2 ton truck (gas)												
1 ton truck (diesel) (from March 2008)	2009	2270003050	Diesel Other Material Handling Eqp	300	0.1312	0.1381	0.4721	0.8653	0.0858	0.0833	0.0152	70.7164
1 ton truck (diesel) (from May 2009)	2009	2270003050	Diesel Other Material Handling Eqp	300	0.1312	0.1381	0.4721	0.8653	0.0858	0.0833	0.0152	70.7164
Compactors/Tampers	2009	2265002009	4 Stroke Plate Compactors	16	0.1644	0.1534	4.9039	0.0645	0.0018	0.0016	0.0033	16.1158
Concrete/Mortar Mixers	2009	2265002042	4 Stroke Cement & Mortar Mixers	25	0.4679	0.4366	10.8687	0.1092	0.0031	0.0028	0.0055	26.6899
Trencher	2009	2270002030	Diesel Trenchers	25	0.0166	0.0175	0.1027	0.1320	0.0127	0.0123	0.0036	16.6972

Table 3

September - December

2008 Non-Road Emission Estimates

Equipment	HC ton/2008	VOC ton/2008	CO ton/2008	NOx ton/2008	PM10 ton/2008	PM2.5 ton/2008	SO2 ton/2008	CO2 ton/2008
Air Compressors	0.01	0.01	0.02	0.09	0.00	0.00	0.00	9.41
Back-Hoes	0.00	0.00	0.02	0.02	0.00	0.00	0.00	1.70
Bob Cats	0.01	0.01	0.02	0.02	0.00	0.00	0.00	2.01
Concrete Pump	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes	0.02	0.02	0.05	0.25	0.01	0.01	0.01	30.46
Dozers	0.05	0.05	0.43	0.51	0.06	0.06	0.01	65.25
Dump Trucks	0.26	0.27	1.16	1.95	0.17	0.17	0.03	159.46
Fork Lifts	0.01	0.01	0.08	0.10	0.01	0.01	0.00	13.86
Grout Pump	0.01	0.01	0.04	0.12	0.01	0.01	0.00	10.99
JLGs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Light Plants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mini Excavators	0.00	0.00	0.02	0.02	0.00	0.00	0.00	3.08
Motor Graders	0.01	0.01	0.05	0.17	0.01	0.01	0.01	23.37
Road Grader	0.00	0.00	0.00	0.01	0.00	0.00	0.00	1.61
Scissor Lift	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sheep's Foot Roller	0.02	0.02	0.13	0.16	0.02	0.02	0.00	19.97
Smooth Foot Roller	0.01	0.01	0.04	0.06	0.01	0.01	0.00	7.05
Track-Hoes	0.03	0.03	0.13	0.11	0.02	0.02	0.00	11.58
Tractors	0.05	0.05	0.24	0.61	0.05	0.04	0.01	63.42
UTV Mules	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.23
Wacky Packers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 3

September - December

2008 Non-Road Emission Estimates

Equipment	HC ton/2008	VOC ton/2008	CO ton/2008	NOx ton/2008	PM10 ton/2008	PM2.5 ton/2008	SO2 ton/2008	CO2 ton/2008
Water Trucks	0.02	0.02	0.08	0.16	0.02	0.01	0.00	12.73
Generators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pressure Washer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pump (mud hog)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/2 ton truck (gas)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 ton truck (diesel) (from March 2008)	0.04	0.04	0.15	0.28	0.03	0.03	0.00	22.63
1 ton truck (diesel) (from May 2009)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compactors/Tampers	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Concrete/Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trencher	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	**0.54**	**0.57**	**2.71**	**4.64**	**0.42**	**0.40**	**0.10**	**458.80**

Table 4

January - December

2009 Non-Road Emission Estimates

Equipment	HC ton/2009	VOC ton/2009	CO ton/2009	NOx ton/2009	PM10 ton/2009	PM2.5 ton/2009	SO2 ton/2009	CO2 ton/2009
Air Compressors	0.10	0.10	0.32	1.29	0.07	0.07	0.03	139.22
Back-Hoes	0.04	0.04	0.21	0.19	0.03	0.03	0.00	19.59
Bob Cats	0.03	0.03	0.13	0.11	0.02	0.02	0.00	12.50
Concrete Pump	0.01	0.01	0.05	0.08	0.01	0.01	0.00	8.35
Cranes	0.18	0.19	0.56	2.68	0.12	0.12	0.07	324.92
Dozers	0.08	0.09	0.73	0.88	0.10	0.10	0.02	111.13
Dump Trucks	0.51	0.54	2.27	3.83	0.34	0.33	0.07	313.35
Fork Lifts	0.11	0.11	1.05	1.28	0.11	0.11	0.04	184.22
Grout Pump	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JLGs	0.18	0.19	0.81	0.87	0.13	0.13	0.02	78.62
Light Plants	0.01	0.01	0.04	0.08	0.01	0.01	0.00	8.97
Mini Excavators	0.02	0.02	0.10	0.15	0.01	0.01	0.00	19.99
Motor Graders	0.01	0.01	0.06	0.17	0.01	0.01	0.01	24.18
Road Grader	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift	0.06	0.05	1.09	0.09	0.00	0.00	0.00	6.10
Sheep's Foot Roller	0.01	0.02	0.11	0.15	0.02	0.02	0.00	18.09
Smooth Foot Roller	0.03	0.03	0.22	0.28	0.03	0.03	0.01	34.53
Track-Hoes	0.20	0.22	1.05	0.91	0.16	0.16	0.02	93.74
Tractors	0.15	0.16	0.73	1.83	0.14	0.13	0.04	189.45
UTV Mules	0.06	0.05	0.48	0.01	0.00	0.00	0.00	2.61
Wacky Packers	0.19	0.18	5.61	0.07	0.00	0.00	0.00	18.45
Water Pumps	0.02	0.02	0.09	0.17	0.02	0.02	0.00	16.60

Table 4

January - December

2009 Non-Road Emission Estimates

Equipment	HC ton/2009	VOC ton/2009	CO ton/2009	NOx ton/2009	PM10 ton/2009	PM2.5 ton/2009	SO2 ton/2009	CO2 ton/2009
Water Trucks	0.06	0.06	0.22	0.40	0.04	0.04	0.01	32.53
Generators	1.57	1.47	43.45	0.53	0.01	0.01	0.03	121.66
Pressure Washer	0.16	0.15	4.10	0.05	0.00	0.00	0.00	13.59
Pump (mud hog)	0.93	0.87	27.74	0.37	0.01	0.01	0.02	90.33
1/2 ton truck (gas)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 ton truck (diesel) (from March 2008)	0.13	0.13	0.45	0.83	0.08	0.08	0.01	67.89
1 ton truck (diesel) (from May 2009)	0.09	0.10	0.34	0.62	0.06	0.06	0.01	50.92
Compactors/Tampers	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Concrete/Mortar Mixers	0.19	0.17	4.35	0.04	0.00	0.00	0.00	10.68
Trencher	0.00	0.00	0.01	0.01	0.00	0.00	0.00	1.34
TOTAL	5.15	5.04	96.45	18.15	1.56	1.51	0.44	2,034.55

Table 5

January - July

2010 Non-Road Emission Estimates

Equipment	HC ton/2010	VOC ton/2010	CO ton/2010	NOx ton/2010	PM10 ton/2010	PM2.5 ton/2010	SO2 ton/2010	CO2 ton/2010
Air Compressors	0.07	0.08	0.24	0.98	0.05	0.05	0.02	105.14
Back-Hoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bob Cats	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Pump	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cranes	0.02	0.02	0.05	0.26	0.01	0.01	0.01	31.06
Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dump Trucks	0.23	0.24	1.00	1.69	0.15	0.15	0.03	138.44
Fork Lifts	0.04	0.04	0.40	0.49	0.04	0.04	0.02	70.73
Grout Pump	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JLGs	0.02	0.02	0.08	0.09	0.01	0.01	0.00	8.12
Light Plants	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mini Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motor Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Road Grader	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scissor Lift	0.07	0.06	1.27	0.10	0.00	0.00	0.00	7.12
Sheep’s Foot Roller	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Smooth Foot Roller	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Track-Hoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tractors	0.03	0.03	0.13	0.32	0.02	0.02	0.01	32.95
UTV Mules	0.02	0.02	0.21	0.00	0.00	0.00	0.00	1.13
Wacky Packers	0.10	0.10	3.04	0.04	0.00	0.00	0.00	9.99
Water Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 5

January - July

2010 Non-Road Emission Estimates

Equipment	HC ton/2010	VOC ton/2010	CO ton/2010	NOx ton/2010	PM10 ton/2010	PM2.5 ton/2010	SO2 ton/2010	CO2 ton/2010
Water Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generators	1.08	1.01	29.93	0.36	0.01	0.01	0.02	83.81
Pressure Washer	0.12	0.11	3.02	0.04	0.00	0.00	0.00	10.01
Pump (mud hog)	0.17	0.16	5.04	0.07	0.00	0.00	0.00	16.42
1/2 ton truck (gas)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 ton truck (diesel) (from March 2008)	0.07	0.08	0.26	0.48	0.05	0.05	0.01	39.60
1 ton truck (diesel) (from May 2009)	0.05	0.05	0.18	0.33	0.03	0.03	0.01	26.87
Compactors/Tampers	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Concrete/Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trencher	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	2.09	2.01	44.87	5.25	0.39	0.38	0.12	581.39

Table 6

Summary Non-Road Emission Estimates

Year	HC ton/year	VOC ton/year	CO ton/year	NOx ton/year	PM10 ton/year	PM2.5 ton/year	SO2 ton/year	CO2 ton/year
2008	0.54	0.57	2.71	4.64	0.42	0.40	0.10	458.80
2009	5.15	5.04	96.45	18.15	1.56	1.51	0.44	2,034.55
2010	2.09	2.01	44.87	5.25	0.39	0.38	0.12	581.39
TOTAL	**7.78**	**7.63**	**144.03**	**28.04**	**2.37**	**2.30**	**0.66**	**3,074.75**

APPENDIX G

ON-ROAD MOBILE SOURCE CO2 EMISSIONS ANALYSIS

Table 1 - Lignite Truck Data

Vehicle, Road Type, SCC	NMIM Output		CO_2 Emission Factor (lb/VMT)	# Lignite Trucks (trucks/year)	Lignite Truck Round Trip (VMT)	CO_2 (lb/year)
	CO_2 (tons/year)	VMT ($x10^6$ miles/year)				
Heavy Duty Deisel Vehicles (heavy) Rural Major Collector 22 3007 4 170	378,788.50	213.51	3.55	13,873	37.64	1,852,833.93
Heavy Duty Deisel Vehicles (heavy) Rural Local 22 3007 4 210	207,209.50	116.79	3.55	13,873	21.44	1,055,385.52
					TOTAL (lb/yr):	2,908,219.45
					TOTAL (tpy):	1,454.11

Table 2 - AC Product Truck Data

Vehicle, Road Type, SCC	NMIM Output		CO_2 Emission Factor (lb/VMT)	# Product Trucks (trucks/year)	Product Truck Round Trip (VMT)	CO_2 (lb/year)
	CO_2 (tons/year)	VMT ($x10^6$ miles/year)				
Heavy Duty Deisel Vehicles (heavy) Rural Interstate 22 3007 4 110	2,095,195.00	1,180.97	3.55	3,330	506.40	5,983,472.36
Heavy Duty Deisel Vehicles (heavy) Rural Major Collector 22 3007 4 170	378,788.50	213.51	3.55	3,330	196.80	2,325,336.57
Heavy Duty Deisel Vehicles (heavy) Rural Local 22 3007 4 210	207,209.50	116.79	3.55	3,330	1.60	18,905.15
Heavy Duty Deisel Vehicles (heavy) Urban Interstate 22 3007 4 230	702,107.30	395.75	3.55	3,330	93.60	1,105,951.41
Heavy Duty Deisel Vehicles (heavy) Urban Local 22 3007 4 330	46,150.58	26.01	3.55	3,330	1.60	18,905.17
					TOTAL (lb/yr):	9,452,570.65
					TOTAL (tpy):	4,726.29

Table 3 - Ash Truck Data

Vehicle, Road Type, SCC	NMIM Output		CO_2 Emission Factor (lb/VMT)	# Ash Trucks (trucks/year)	Ash Truck Round Trip (VMT)	CO_2 (lb/year)
	CO_2 (tons/year)	VMT ($x10^6$ miles/year)				
Heavy Duty Deisel Vehicles (heavy) Rural Major Collector 22 3007 4 170	378,788.50	213.51	3.55	1,168	40.00	165,775.11
Heavy Duty Deisel Vehicles (heavy) Rural Local 22 3007 4 210	207,209.50	116.79	3.55	1,168	10.00	41,443.73
					TOTAL (lb/yr):	207,218.84
					TOTAL (tpy):	103.61

Table 4 - Lime Truck Data

Vehicle, Road Type, SCC	NMIM Output		CO_2 Emission Factor (lb/VMT)	# Lime Trucks (trucks/year)	Lime Truck Round Trip (VMT)	CO_2 (lb/year)
	CO_2 (tons/year)	VMT ($x10^6$ miles/year)				
Heavy Duty Deisel Vehicles (heavy) Rural Interstate 22 3007 4 110	2,095,195.00	1,180.97	3.55	435	356.00	549,483.45
Heavy Duty Deisel Vehicles (heavy) Rural Major Collector 22 3007 4 170	378,788.50	213.51	3.55	435	100.80	155,584.48
Heavy Duty Deisel Vehicles (heavy) Rural Local 22 3007 4 210	207,209.50	116.79	3.55	435	3.80	5,865.28
Heavy Duty Deisel Vehicles (heavy) Urban Interstate 22 3007 4 230	702,107.30	395.75	3.55	435	33.30	51,398.38
Heavy Duty Deisel Vehicles (heavy) Urban Local 22 3007 4 330	46,150.58	26.01	3.55	435	2.50	3,858.74
					TOTAL (lb/yr):	766,190.33
					TOTAL (tpy):	383.10

Table 5 - Inorganic Salt Truck Data

Vehicle, Road Type, SCC	NMIM Output		CO_2 Emission Factor (lb/VMT)	# Salt Trucks (trucks/year)	Salt Truck Round Trip (VMT)	CO_2 (lb/year)
	CO_2 (tons/year)	VMT ($x10^6$ miles/year)				
Heavy Duty Deisel Vehicles (heavy) Rural Interstate	2,095,195.00	1,180.97	3.55	480	335.60	571,582.01
Heavy Duty Deisel Vehicles (heavy) Rural Major Collector	378,788.50	213.51	3.55	480	95.00	161,801.05
Heavy Duty Deisel Vehicles (heavy) Rural Local	207,209.50	116.79	3.55	480	6.40	10,900.27
Heavy Duty Deisel Vehicles (heavy) Urban Interstate	702,107.30	395.75	3.55	480	45.20	76,983.14
Heavy Duty Deisel Vehicles (heavy) Urban Local	46,150.58	26.01	3.55	480	1.60	2,725.07
					TOTAL (lb/yr):	823,991.54
					TOTAL (tpy):	412.00

Table 6 - Commuter Vehicles Data

Vehicle, Road Type, SCC	NMIM Output		CO_2 Emission Factor (lb/VMT)	Distant Travel*			Local Travel*			Total All-Travel CO_2 Emissions (lb/yr)
	CO_2 (tons/year)	VMT ($x10^6$ miles/year)		# Commuter Vehicles* (trips/year)	Commuter Vehicle Round Trip (VMT)	CO_2 (lb/year)	# Commuter Vehicles* (trips/year)	Commuter Vehicle Round Trip (VMT)	CO_2 (lb/year)	
Light Duty Gas Vehicle Rural Interstate 22 0100 1 110	1,063,422.50	2,620.92	0.81	6,000	55.80	271,685.85	1,500	-	-	271,685.85
Light Duty Gas Vehicle Rural Major Collector 22 0100 1 170	1,049,617.50	2,586.90	0.81	6,000	32.80	159,700.71	1,500	10.00	12,172.31	171,873.02
Light Duty Gas Vehicle Rural Minor Collector 22 0100 1 190	429,462.30	1,058.46	0.81	6,000	0.00	-	1,500	6.00	7,303.38	7,303.38
Light Duty Gas Vehicle Rural Local 22 0100 1 210	574,189.60	1,415.15	0.81	6,000	6.80	33,108.71	1,500	4.00	4,868.93	37,977.64
Light Duty Gas Vehicle Urban Interstate 22 0100 1 230	1,206,479.60	2,973.50	0.81	6,000	14.00	68,165.00	1,500	0.00	-	68,165.00
Light Duty Gas Vehicle Urban Local 22 0100 1 330	230,501.20	568.10	0.81	6,000	0.60	2,921.36	1,500	0.00	-	2,921.36
Light Duty Gasoline Trucks (1) Rural Interstate 22 0102 0 110	946,728.00	1,797.73	1.05	8,800	55.80	517,188.18	2,200	0.00	-	517,188.18
Light Duty Gasoline Trucks (1) Rural Major Collector 22 0102 0 170	973,415.40	1,848.40	1.05	8,800	32.80	304,010.46	2,200	10.00	23,171.53	327,181.99

Table 6 - Commuter Vehicles Data

Vehicle, Road Type, SCC	NMIM Output		CO_2 Emission Factor (lb/VMT)	Distant Travel*			Local Travel*			Total All-Travel CO_2 Emissions (lb/yr)
	CO_2 (tons/year)	VMT ($x10^6$ miles/year)		# Commuter Vehicles* (trips/year)	Commuter Vehicle Round Trip (VMT)	CO_2 (lb/year)	# Commuter Vehicles* (trips/year)	Commuter Vehicle Round Trip (VMT)	CO_2 (lb/year)	
Light Duty Gasoline Trucks (1) Rural Minor Collector 22 0102 0 190	398,283.50	756.29	1.05	8,800	0.00	-	2,200	6.00	13,902.91	13,902.91
Light Duty Gasoline Trucks (1) Rural Local 22 0102 0 210	532,501.30	1,011.16	1.05	8,800	6.80	63,026.54	2,200	4.00	9,268.61	72,295.15
Light Duty Gasoline Trucks (1) Urban Interstate 22 0102 0 230	936,277.50	1,777.89	1.05	8,800	14.00	129,759.87	2,200	0.00	-	129,759.87
Light Duty Gasoline Trucks (1) Urban Local 22 0102 0 330	187,485.70	356.02	1.05	8,800	0.60	5,561.14	2,200	0.00	-	5,561.14
									TOTAL (lb/yr):	1,625,815.49
									TOTAL (tpy):	812.91

* It is assumed that 80% of the workers travel long distance (55 miles one way) and 20% of the workers travel locally (10 miles one way).

Table 7 - Miscellaneous Truck Data

Vehicle, Road Type, SCC	NMIM Output		CO_2 Emission Factor (lb/VMT)	# Misc. Trucks (trucks/year)	Misc. Truck Round Trip (VMT)	CO_2 (lb/year)
	CO_2 (tons/year)	VMT ($x10^6$ miles/year)				
Heavy Duty Deisel Vehicles (light) Rural Interstate	49,894.40	47.35	2.11	2,500	55.80	293,977.38
Heavy Duty Deisel Vehicles (light) Rural Major Collector	50,122.42	47.57	2.11	2,500	32.80	172,803.70
Heavy Duty Deisel Vehicles (light) Rural Local	27,419.11	26.02	2.11	2,500	6.80	35,825.18
Heavy Duty Deisel Vehicles (light) Urban Interstate	33,331.79	31.63	2.11	2,500	14.00	73,757.75
Heavy Duty Deisel Vehicles (light) Urban Local	6,014.52	5.71	2.11	2,500	0.60	3,161.05
					TOTAL (lb/yr):	579,525.06
					TOTAL (tpy):	289.76

APPENDIX H

SHPO DOCUMENTATION

Thomas, Sharon (CF)

From: Kellye French [kfrench@crt.state.la.us]
Sent: Thursday, December 17, 2009 2:28 PM
To: Thomas, Sharon (CF)
Subject: DOE in Red River Parish

Sharon,

Mike Varnado asked me to get back with you regarding some questions you had on the Section 106 review for this project. I have looked at the documentation that you sent and yes, you have met the Section 106 requirements for this project. Please let me or Mike know if you have any other questions.

Thanks,

Kellye French
Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804
Office: 225-342-6931
Fax: 225-342-4480

BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

MAIN FILE

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Original to JDW
copy to PAOK / Larsen

MAR 1 0 2009

PER 20090001

DEQ - OES
2009 APR 13 AM 10: 59

MEMORANDUM

TO: Mr. Scott Hutcheson, State Historic Preservation Officer
Department of Culture, Recreation, & Tourism
Office of Cultural Development/Division of Archaeology
Post Office Box 44247
Baton Rouge, LA 70804-4247

FROM: Niels Larsen, Environmental Project Specialist 3 NL
Permits Support Services Division

RE: LSHPO Notification of New Construction associated with LPDES Application

In accordance with the Memorandum of Understanding (MOU) between the Louisiana Department of Environmental Quality (LDEQ) and the Louisiana State Historic Preservation Office (LSHPO), the Office of Environmental Services (OES) is submitting the attached information for your review. Please send me a record of your decision (requiring a survey or no objection) within (30) thirty days to me at the address below:

Permits Application Administrative Review Group
Permit Support Services Division
Office of Environmental Services
Post Office Box 4313
Baton Rouge, LA 70821-4313

Please include a copy of this memo with your response so that the file reference below will be included. If you have any questions or require any additional information, please contact me at 225-219-3304.

No known historic properties will be affected by this undertaking. This effect determination could change should new information come to our attention.

Scott Hutcheson 4-6-09
Scott Hutcheson — Date
State Historic Preservation Officer

Attachment(s)

Applicant: Red River Environmental Products, LLC
Facility: Red River Environmental Products
Agency Interest No. 152139
Activity No. PER20090001
Section Industrial Section Group 1

RECEIVED
MAR 1 7 2009
DIV. OF ARCHAEOLOGY

AR Consultants, Inc.

Archaeological and Environmental Consulting
11020 Audelia Road, Suite C105, Dallas, TX 75243
Phone: (214) 368-0478
Fax: (214) 221-1519
E-mail: arcdigs@aol.com

February 6, 2009

No known historic properties will be affected by this undertaking. This effect determination could change should new information come to our attention.

Scott Hutcheson 3-6-09
Scott Hutcheson **Date**
State Historic Preservation Officer

Michael L. Varnado
Architectural Historian
Louisiana Division of Historic Preservation
Department of Culture, Recreation & Tourism
PO Box 44247
Baton Rouge, LA 70804

Dear Mike,

A client of ours in planning to discharge some water from an excavation project in Red River Parish and has designed the pipeline route to pass by a mid-1900s residence and associated outbuildings. I have included a section of a USGS map that shows the location of the residence as well as a more detailed map that shows the relative locations of the structures. Pictures of the structures are also included.

In your opinion do any of these structures meet the criteria for listing on the National Register of Historic Places?

Thank you for your help.

Sincerely,

S. Alan Skinner, PhD
President

Encl. USGS maps (2) and
structure pictures

FEB 13 2009

AR Consultants, Inc.

Archaeological and Environmental Consulting
11020 Audella Road, Suite C105, Dallas, TX 75243
Phone: (214) 368-0478
Fax: (214) 221-1519
E-mail: arcdigs@aol.com

February 20, 2008

TO: Brad Watson
Zephyr Environmental Corp.

RE: Red River Mine cultural resources

As indicated in our previous reviews of this project, I contacted Duke Rivet of the Louisiana SHPO's office in July of 2007. He sent us copies of previously published reports on the archaeology of the mine property along with information about the present condition of the mine.

I subsequently talked with him after reviewing these documents and as indicated in our previous review, "*…the remainder of the mine area was surveyed and tested for significant cultural resources in 1988 (LaVardera and Keller 1988) and in 1996 (Horizon 1996). These studies are summarized in a 20 volume work titled Oxbow Lignite Surface Mine, Red River Mine, Permit Revision Application to LSM-1 prepared by the North American Coal Corporation and submitted to and approved by the Louisiana State Historic Preservation Officer's office (Rivet personal communication 2007).*"

Thus, the SHPO concurred that no additional cultural resource investigations were warranted in the mine area, particularly since any resources situated in sediments overlying the lignite would have been destroyed in the mining process.

S. Alan Skinner, PhD
President