FIVE-YEAR REVIEW REPORT

SECOND FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE
EAST BATON ROUGE PARISH, LOUISIANA

LAD057482713
LDEQ AI# 2469

Prepared by:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
DALLAS, TEXAS

643263

SECOND FIVE-YEAR REVIEW REPORT

Petro-Processors of Louisiana, Inc. (PPI) Site
East Baton Rouge Parish, Louisiana

LAD057482713

Summary of Findings

The selected remedies include Monitored Natural Attenuation (MNA), Enhanced Attenuation (EA), long-term monitoring for a period of 30 years, source control, source reduction, natural recovery, and protective fill placement with inspections for a period of 20 years. The Remedial Action (RA) began in 1984 upon approval of a remedial action work plan. Construction complete status was achieved in July 2003. The remedy is in the operation and maintenance phase and is currently protective of human health and the environment.

Actions Needed

NPC Services, Inc. (NPC) is currently operating under an approved Remedial Planning and Activities (RPA) Report for the Scenic OU. This remedial work is necessary to implement the approved Enhanced Attenuation remedy for ground water at the PPI site, Scenic OU. An EA field test was successful completed and demonstrated a significant reduction of contaminant mass in the near-source area of the former waste disposal pit. The findings of these investigations, conducted in accordance with site work plans, have resulted in the expansion of EA in the source area to disrupt the downgradient transport of contaminants. Additional investigations are being conducted to implement the approved EA remedy within the downgradient contaminant plume. The findings of these investigations and any required modification of the remedy, including the Long Term Monitoring Plan (LTMP), will be reported as an addendum to the Remedial Planning Activity (RPA) Report.

Determinations

The remedial actions selected and implemented at the Petro-Processors of Louisiana, Inc., site are currently protective of human health and the environment in the short term. These remedies are anticipated to be protective in the long term with the future implementation of enhance attenuation at the source area and within the contaminant plume at the Scenic OU.

Samuel Coleman, P.E.
Director, Superfund Division
U.S. Environmental Protection Agency
Region 6

12/28/10
Date

CONCURRENCES
SECOND FIVE-YEAR REVIEW REPORT

Petro-Processors of Louisiana, Inc. Site
East Baton Rouge Parish, Louisiana

LAD057482713

PRP Agent: NPC Services, Inc. President:	William C. Dawson	12-7-2010 Date
Concur By: LDEQ Remedial Project Manager:	Thomas L. Stafford	12-8-2010 Date
Concur By: LDEQ Administrator Remediation Services Division:	Thomas F. Harris	12/6/2010 Date
Concur By: EPA Region 6 Remedial Project Manager:	Bartolome J. Cañellas (6SF-RL)	Date
Concur By: EPA Region 6 Site Attorney:	John Emerson (6RC-S)	Date
Concur By: EPA Region 6 Superfund Branch Chief, Office of Regional Counsel:	Mark Peycke (6RC-S)	Date
Concur By: EPA Region 6 LA/OK/NM Section Leader:	Cathy Gilmore (6SF-RL)	Date
Concur By: EPA Region 6 Remedial Branch Chief:	Charles Faultry (6SF-R)	Date

CONCURRENCES
SECOND FIVE-YEAR REVIEW REPORT

Petro-Processors of Louisiana, Inc. Site
East Baton Rouge Parish, Louisiana

LAD057482713

PRP Agent: NPC Services, Inc. President:	SIGNED William C. Dawson	Date
Concur By: LDEQ Remedial Project Manager:	SIGNED Thomas L. Stafford	Date
Concur By: LDEQ Administrator Remediation Services Division:	SIGNED Thomas F. Harris	12/10/10 Date
Concur By: EPA Region 6 Remedial Project Manager:	Bartolome J. Cañellas Bartolome J. Cañellas (6SF-RL)	12/10/10 Date
Concur By: EPA Region 6 Site Attorney:	John Emerson John Emerson (6RC-S)	12/13/10 Date
Concur By: EPA Region 6 Superfund Branch Chief, Office of Regional Counsel:	 Mark Peycke (6RC-S)	12/17/10 Date
Concur By: EPA Region 6 LA/OK/NM Section Leader:	Cathy Gilmore Cathy Gilmore (6SF-RL)	12/17/10 Date
Concur By: EPA Region 6 Remedial Branch Chief:	Cathy Gilmore Charles Faultry (6SF-R)	Date

SECOND FIVE-YEAR REVIEW REPORT

Petro-Processors of Louisiana, Inc. Site
East Baton Rouge Parish, Louisiana

Table of Contents

Table Index

Appendices

List of Acronyms

ARARs	Applicable or Relevant and Appropriate Requirements
BBR	Bayou Baton Rouge
BQL	Below Quantification Levels
CD	Consent Decree
cis-DCE	cis-1,2-Dichloroethene
COC	Contaminants of Concern
DCA	1,2-Dichloroethane
DNAPL	Dense Non-Aqueous Phase Liquids
DOT	Department of Transportation
EA	Enhanced Attenuation
ESQs	Ecological Screening Quotients
EPA	United States Environmental Protection Agency, Region 6
Federal Court	U.S. Federal District Court, Middle District of Louisiana
HAZMAT	Hazardous Material
HCB	Hexachlorobenzene
HCBD	Hexachlorobutadiene
HHRA	Human Health Risk Assessment
HI	Hazard Index
HQ	Hazard Quotient
K	Thousand
LDEQ	Louisiana Department of Environmental Quality
LDHH	Louisiana Department of Health and Hospitals
LICR	Lifetime Incremental Cancer Risk
LPDES	Louisiana Pollutant Discharge Elimination System
LTMP	Long Term Monitoring Plan
LTADS	Liquid Treatment and Disposal System
MCL	Maximum Contaminant Level
MM	Million
MNA	Monitored Natural Attenuation
MSL	Mean sea level
MT3D	Modular Three-Dimensional Transport Model
NPC	NPC Services, Inc.
NPL	National Priorities List
OU	Operable Unit
OSWER	Office of Solid Waste and Emergency Response
PCE	Tetrachloroethene
PCOR	Preliminary Close Out Report
Plaintiff	U.S. Justice Department
POC	Points of Compliance
POE	Points of Exposure
PPI	Petro-Processors of Louisiana, Inc.
PRPs	Potentially Responsible Parties
RA	Remedial Action

RAOs	Remedial Action Objectives
RME	Reasonable Maximum Exposure
RPA	Remedial Planning Activity
RDCP	Remedial Design and Construction Plans
RT3D	Reactive Transport in 3-Dimensions
SARA	Superfund Amendments and Reauthorization Act
Scenic Highway	U.S. Highway 61
SRAP	Supplemental Remedial Action Plan
TCA	1,1,2-Trichloroethane
TCE	Trichloroethene
TeCA	1,1,2,2-Tetrachloroethane
trans-DCE	trans-1,2-Dichloroethene
VC	Vinyl Chloride
VOC	Volatile Organic Compound

Executive Summary

The U.S. Environmental Protection Agency Region 6 (EPA) has conducted this second Five-Year Review for the remedial actions implemented at the Petro-Processors of Louisiana, Inc. (PPI) site located in East Baton Rouge Parish, Louisiana. This second Five-Year Review is being conducted as a policy review at the discretion of EPA Region 6. The PPI site operates under a pre-Superfund Amendments and Reauthorization Act (SARA) Remedial Action (RA) that will leave contaminants on-site above levels that allow for unlimited use and unrestricted exposure. This policy review was triggered upon completion of the first Five-Year Review, and is intended to evaluate if the selected remedies are protective of human health and the environment.

At sites where EPA is the lead agency, the Region may acquire the services of a contractor or establish agreements with other agencies to perform studies, conduct investigations and/or develop draft Five-Year Review reports. Responsible parties may perform certain support activities; however, the EPA retains the final approval authority. This report is the combined effort of the Industry Defendants, represented by NPC Services, Inc., the Louisiana Department of Environmental Quality (LDEQ) and the EPA.

The PPI site, located north of the city of Baton Rouge, which includes the Brooklawn Operable Unit (OU) and the Scenic OU, was operated as a depository for various petrochemical waste products during the 1960s and the 1970s. In July 1980, the U.S. Justice Department (Plaintiff) filed suit against PPI and the Industry Defendants, alleging that they disposed of wastes at the Brooklawn OU and Scenic OU. On February 16, 1984, the U.S. District Court, Middle District of Louisiana (Federal Court) issued an order approving a Consent Decree (CD) for a remedial action at the PPI site. The PPI site is currently being monitored and maintained according to approved remediation plans that are part of the CD. This second Five-Year Review reports on the remedial status and the protectiveness of the remedies at both the Brooklawn and Scenic OUs.

The area surrounding the PPI site is primarily zoned as M-2, heavy industrial. The nearest concentration of residences is the Alsen Community on U.S. Highway 61 (Scenic Highway) about two miles east southeast of the Brooklawn OU and approximately one mile south of the Scenic OU. There are about one-half dozen residential homes on Springfield Road one and one-half miles east of the Brooklawn OU and one-half mile south of the Scenic OU. Land use in the vicinity of the PPI site is largely undeveloped in the bottomlands near the Mississippi River, with some industrial development in the upland areas.

In 1970 a discharge to the Bayou Baton Rouge (BBR) area of Devil's Swamp precipitated a series of legal actions against PPI and its customers resulting in the signing of the CD. The initial response action specified the design of a vault and the

complete closure of the site by excavating, solidifying and land-filling all visible waste along with recovery of deeper waste and treatment by incineration. Air quality monitoring demonstrated releases of Volatile Organic Compounds (VOC) above the previously agreed fence line concentrations. A supplemental investigation was conducted and the Federal Court approved a Supplemental Remedial Action Plan (SRAP). Based on this investigation, a hydraulic containment and recovery option, coupled with incineration was selected as the RA.

Through additional investigations conducted at the site, EPA determined that hazardous substances, including certain Contaminants Of Concern (COC), were found in various site media. COC for the PPI site are: Hexachlorobenzene (HCB), Hexachlorobutadiene (HCBD), 1,1,2,2-Tetrachloroethane (TeCA), 1,1,2-Trichloroethane (TCA), 1,2-Dichloroethane (DCA), Tetrachloroethene (PCE), Trichloroethene (TCE), trans-1,2-Dichloroethene (trans-DCE), cis-1,2-Dichloroethene (cis-DCE), and Vinyl Chloride (VC). The PPI site posed potential threats to human health and the environment through dermal contact with or ingestion of surface soil, ground water or surface water contaminated with hazardous substances, including certain COC. The site also posed potential threats to human health through inhalation of air and airborne particulate matter contaminated with hazardous substances, including certain COC. Ensuing Work Plans, Remedial Planning Activities (RPA), RPA Reports and Remedial Design and Construction Plans (RDCP) expanded or modified the selected RA as site characterization progressed and new remedial technologies became available.

Remedial actions selected and constructed to be protective of human health and the environment are:

1. Source control and protective coverings at the PPI site have reduced the potential risks associated with ingestion, inhalation, and dermal contact with site contaminants through surface water and sediment pathways for both human and biota receptors.
2. Source reduction at the Brooklawn and Scenic OU by pumping recoverable Dense Non-Aqueous Phase Liquids (DNAPL). Source reduction was discontinued in 2006.
3. Placement of a protective fill in the BBR distributaries has reduced risks that were discovered during EPA commissioned risk assessments. Annual inspections have documented that the protective fill continues to remain intact, that the area has been re-vegetated, and has been effective in reducing surface sediment concentrations to protective levels. Biota sampling, completed in 2008, has demonstrated that the protective fill remedy has reduced human health risks from the exposure domain to protective levels.
4. Monitored Natural Attenuation (MNA) remedy for ground water at the Brooklawn OU through implementation of a Long Term Monitoring Plan (LTMP) has been shown to be protective of downgradient receptors.
5. Enhanced Attenuation (EA) remedy for ground water at the Scenic OU as a source control remedy to disrupt the downgradient transport of COC is currently being implemented.

6. Sampling of sediments in BBR south of the Scenic OU has demonstrated that the RA of natural recovery is effective and protective. Sediment sampling was completed in 2009 and demonstrated that the natural recovery remedy has resulted in contaminant concentrations that are significantly below levels that are protective of potential receptors.
7. Finally, administrative controls to limit access to the PPI site are in place and continue to be effective in limiting entry to approved site personnel.

The remedy at the Brooklawn OU is protective of human health and the environment, and in the interim, exposure pathways that could result in unacceptable risks are being controlled.

The remedy at the Scenic OU currently protects human health and the environment and is protective in the short-term. However, in order for the remedy to be protective in the long-term, implementation of the near-source and distal end enhanced attenuation actions are necessary to ensure long-term protectiveness.

Source reduction, control and protective coverings over former disposal areas at the site have reduced the known risks associated with ingestion, inhalation, and dermal contact with site contaminants through surface water and sediment pathways for both human and ecological receptors. Placement of a protective fill in the BBR distributaries has reduced risks discovered during risk assessments to acceptable levels. The Brooklawn OU MNA remedy, through implementation of the LTMP, has been shown to be protective of downgradient receptors. Sampling of sediments in BBR south of the Scenic OU has demonstrated that the natural recovery remedy is effective. Finally, administrative controls to limit access to the PPI site are in place and continue to be effective in allowing entry only to approved site personnel.

The remedy at the PPI site currently protects human health and the environment and is protective in the short-term. However, in order for the remedy to be protective in the long-term, implementation of the near-source and distal end enhanced attenuation actions at the Scenic OU are necessary to ensure long-term protectiveness.

Five-Year Review Summary Form

Site name *(from WasteLAN)*: Petro-Processors of Louisiana Inc. (PPI)		
EPA ID *(from WasteLAN)*: LAD057482713		
Region: 6	**State: LA**	**City/County: Baton Rouge / East Baton Rouge Parish**
NPL status: ☒ Final ☐ Deleted ☐ Other (specify)		
Remediation status (choose all that apply): ☐ Under Construction ☒ Operating ☐ Complete		
Multiple OUs?* ☒ YES ☐ NO	**Construction completion date: 07 / 31 / 2003**	
Has site been put into reuse? ☐ YES ☒ NO		
Lead agency: ☒ EPA ☐ State ☐ Tribe ☐ Other Federal Agency _____		
Author name: Bartolome J. Cañellas		
Author title: Remedial Project Manager	**Author affiliation: USEPA Region 6**	
Review period:** 01 / 21 / 2010 to on or before 12 / 22 / 2010		
Date(s) of site inspection: LDEQ and EPA inspection conducted on 04 / 06 / 2010.		
Type of review: ☐ Post-SARA ☒ Pre-SARA ☐ NPL-Removal only ☐ Non-NPL Remedial Action Site ☐ NPL State/Tribe-lead ☐ Regional Discretion (Policy Review)		
Review number: ☐ 1 (first) ☒ 2 (second) ☐ 3 (third) ☐ Other (specify) _____		
Triggering action: ☐ Actual RA Onsite Construction at OU #____ ☐ Actual RA Start at OU#____ ☐ Construction Completion ☒ Previous Five-Year Review Report ☐ Other (specify)		
Triggering action date *(from WasteLAN)*: 12 / 22 / 2005		
Due date *(five years after triggering action date)*: 12 / 22 / 2010		

* ["OU" refers to operable unit.]
** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Five-Year Review Summary Form, cont'd.

Issues:
Enhancement of the natural attenuation remedy is necessary as a source control remedy for ground water contamination at the Scenic OU. Additional investigations are necessary to implement the approved EA remedy within the downgradient contaminant plume. A revised LTMP is being developed to evaluate the effectiveness of the EA remedy.

Recommendations and Follow-up Actions:
NPC is currently operating under an approved Remedial Planning Activities (RPA) Report for the Scenic OU. This remedial work is necessary to implement the approved Enhanced Attenuation remedy for ground water at the PPI site, Scenic OU. An EA field test was successful completed and demonstrated a significant reduction of contaminant mass in the near-source area of the former waste disposal pit. The findings of these investigations, conducted in accordance with site work plans, have resulted in the expansion of EA in the source area to disrupt the downgradient transport of contaminants. Additional investigations are being conducted to implement the approved EA remedy within the downgradient contaminant plume. The findings of these investigations and any required modification of the remedy, including the LTMP, will be reported as an addendum to the RPA Report.

Protectiveness Statement(s):
Brooklawn OU
The remedy at the Brooklawn OU is protective of human health and the environment, and in the interim, exposure pathways that could result in unacceptable risks are being controlled.

Scenic OU
The remedy at the Scenic OU currently protects human health and the environment and is protective in the short-term. However, in order for the remedy to be protective in the long-term, implementation of the near-source enhanced attenuation actions are necessary to ensure long-term protectiveness.

PPI Site
Source reduction, control and protective coverings over former disposal areas at the site have reduced the known risks associated with ingestion, inhalation, and dermal contact with site contaminants through surface water and sediment pathways for both human and ecological receptors. Placement of a protective fill in the BBR distributaries has reduced risks discovered during risk assessments to acceptable levels. The Brooklawn OU MNA remedy, through implementation of the LTMP, has been shown to be protective of downgradient receptors. Sampling of sediments in BBR south of the Scenic OU has demonstrated that the natural recovery remedy is effective. Finally, administrative controls to limit access to the PPI site are in place and continue to be effective in allowing entry only to approved site personnel.

The remedy at the PPI site currently protects human health and the environment and is protective in the short-term. However, in order for the remedy to be protective in the long-term, implementation of the near-source and distal end enhanced attenuation actions at the Scenic OU are necessary to ensure long-term protectiveness.

Other Comments:
None.

Petro-Processors of Louisiana, Inc. Site
Second Five-Year Review Report

I. INTRODUCTION

EPA has conducted this second Five-Year Review for the remedial actions implemented at the PPI site located in East Baton Rouge Parish, Louisiana. The first five-year review was conducted from September 2004 through December 2004, and concluded that the selected remedies were protective. This second five-year review was conducted from January 21, 2010 to the approval date and is intended to evaluate whether the selected remedies at the site remain protective of human health and the environment. The findings and conclusions of the review are documented in this report.

This second Five-Year Review is being conducted as a policy review at the discretion of EPA Region 6. The PPI site operates under a pre-Superfund Amendment and Re-authorization Act (SARA) Remedial Action (RA) that will leave contaminants onsite above levels that allow for unlimited use and unrestricted exposure. This policy review was triggered from the completion date of the first Five-Year Review, December 22, 2005.

The PPI site, located North of the city of Baton Rouge, includes the Brooklawn Operable Unit (OU), located off Brooklawn Drive, and the Scenic OU, located off U.S. Highway 61 (Scenic Highway); see Figure 1, Regional Map and Figure 2, Vicinity Map in Appendix F. In the WasteLAN database there are three OUs listed as part of the PPI site, OU #1 is the Brooklawn Disposal Area, OU #2 is the Bayou Baton Rouge Area and OU #3 is the Scenic site. In accordance with the Consent Decree (CD), OU #1 and OU #2 are combined to form the Brooklawn site and are referred to within this report as the Brooklawn OU. The Brooklawn OU and the Scenic OU, which include portions of Bayou Baton Rouge (BBR) and Devil's Swamp, have been investigated, remediated as necessary, and are currently being monitored and maintained according to approved remedial plans. This second Five-Year Review reports on the remedial

status and the protectiveness of the remedies at both the Brooklawn OU and Scenic OU.

II. SITE CHRONOLOGY

PPI operated the Brooklawn and Scenic sites as depositories for various petrochemical waste products during the 1960s and the 1970s. In July 1980, the U.S. Justice Department (Plaintiff) filed suit against PPI and Industry Defendants, alleging that they disposed of wastes including hazardous substances at the Brooklawn OU and Scenic OU. On February 16, 1984, before the PPI site was added to the National Priorities List (NPL), the U.S. District Court, Middle District of Louisiana (Federal Court) issued an order approving the CD (NPC 1984) for a remedial action at the PPI site. As provided for in the CD, the Industry Defendants designated a remedial plan coordinator, NPC Services, Inc. (NPC), to carry out these activities.

EPA proposed the site to the NPL on September 8, 1983 and added it to the final list on September 21, 1984 (37070 - 37082 Federal Register / Vol. 49, No. 185) NPL Update: No. 1.

EPA approved an Interim RA for the Scenic OU in November 2001 (NPC 2001c), and for the Brooklawn OU in July 2003 (NPC 2003a). A Preliminary Close Out Report (PCOR) was approved also in July 2003 (NPC 2003b).

Table 1 presents a chronology of significant events for the PPI site.

III. BACKGROUND

Physical Characteristics

The Brooklawn OU is located in East Baton Rouge Parish on Brooklawn Drive approximately one and one half miles west of Scenic Highway. The Brooklawn OU covers approximately 80 acres and includes the Disposal area and the adjacent BBR area (see Drawing BK-99-151). The Brooklawn OU has ground surface elevations ranging from approximately 35 feet Mean Sea Level (MSL) along the floodplain of the Bayou Baton Rouge area to an elevation of approximately 75 feet on top of the bluff which borders the northern portion of the site. Former disposal areas include lagoons in the batture area and pits in the bluff area. The Brooklawn disposal area has a minimum elevation of approximately 55 feet MSL. The stratigraphical investigation shows that the site is divided into either Pleistocene terrace or Recent alluvial deposits. Stratigraphically significant permeable zones within the Pleistocene deposits include the Pleistocene water table, the -40 MSL zone, the Intermediate Sand, and the 400-foot Aquifer. Permeable zones within the Recent alluvial deposits include the shallow and deep water tables and the semi-confined alluvial zone (Figure 3, Brooklawn OU Conceptual Model).

The Scenic OU is located in East Baton Rouge Parish on the west side of Scenic Highway approximately one-quarter mile north of the intersection of US Highway 61 and State Highway 964. The Scenic OU was a borrow pit for the construction of the overpass at the intersection of US Highway 61 and LA State Highway 964. The disposal area of Scenic OU covers approximately 17 acres and includes a portion of BBR, which was located immediately adjacent to the western end of the waste pit (see Drawing SC-02-100). The stratigraphy beneath the Scenic OU includes a +40 MSL zone, +20 Channel Deposit, -40 MSL zone, Intermediate Sand and the 400-foot Aquifer.

Land and Resource Use

The land surrounding the PPI site is primarily zoned as M-2, heavy industrial. Industrial facilities include Oxbow Calcining, Exide, and a WATCO Co. managed railroad yard. The nearest concentration of residences is the Alsen Community on Scenic Highway about two miles east southeast of the Brooklawn OU and approximately one mile south of the Scenic OU. There are about one-half dozen residential homes on Springfield Road one and one-half miles east of the Brooklawn OU and one-half mile south of the Scenic OU. The East Baton Rouge city/parish landfill is about one mile north northeast of the Brooklawn OU and one mile northeast of the Scenic OU. Jetson Correctional Facility for adolescents is two miles east of the Brooklawn OU and one-half mile southeast of the Scenic OU. The Joint Emergency Services Training Center operated by the Louisiana State Police is located one-half miles northwest of the Brooklawn OU.

Land use in the vicinity of the PPI site is largely undeveloped in the bottomlands near the Mississippi River, with some industrial development in the upland areas; see Figure 1, Regional Map. Most residents in the area are connected to the Baton Rouge Water Supply system. There is one domestic water well in the 400-foot aquifer within one-half mile of the Scenic OU. There are no domestic wells within one-half mile of the Brooklawn OU. The CD identified the 400-foot Aquifer as an aquifer of concern to be protected from infiltration of contaminants originating from the pits and lagoons located on these OUs. None of the 400-foot Aquifer monitor wells have indicated the presence of hazardous substances. In addition to monitoring, the Potentially Responsible Parties (PRPs) have conducted an evaluation of site geology and ground water modeling to assess the potential contamination to this aquifer. Current geochemical conditions favorable to natural and enhanced attenuation and clay layers are protecting this aquifer from hazardous substances.

History of Contamination

PPI operated the Brooklawn OU and Scenic OU as depositories for various petrochemical waste products containing hazardous substances during the 1960s and the 1970s. The Scenic OU received petrochemical waste containing hazardous substances from 1961 to 1974. The Brooklawn OU operated from approximately 1969 to 1978. An estimated 300 K (Thousand) tons of waste were deposited during operations conducted by PPI. This approximate amount includes 125 K tons of solids, 64K tons of sludge and 125 K tons of liquid waste, of which, 52 K tons were non-chlorinated organic liquids, 63 K tons were chlorinated organic liquids and 10 K tons were aqueous liquids. In 1970, a discharge to the BBR area of Devil's Swamp precipitated a series of legal actions against PPI and its clients resulting in the signing of the CD in Federal Court on February 16, 1984.

Site characterization activities performed during the Brooklawn OU investigation included the completion of 537 soil borings, 119 push tubes, 236 core barrels, and 41 vibracores. In addition, 45 sediment, 31 soil, 27 surface water, and 368 ground water samples were collected and analyzed for potential hazardous substances and COC. These activities were completed to define site stratigraphy and assess the nature and extent of free phase and dissolved contamination at the Brooklawn OU presented in Drawing BK-99-121. Site conditions were further characterized during installation of 192 recovery wells.

Additional waste characterization data specific to the Brooklawn OU became available in risk assessments commissioned by EPA (EPA contract number 68-W4-0016; Ecological Risk Assessment, December 6, 1999, and Human Health Risk Assessment December 8, 1999, Devil's Swamp, Baton Rouge, Louisiana). The study area for these risk assessments included the BBR distributaries.

A waste characterization investigation program was completed at the Scenic OU and presented to EPA in Addendum D, Volume 4, to the Remedial Planning Activities (RPA)

Report (NPC 1998). This RPA provided characterization of geotechnical and hydrogeological properties, further definition of site stratigraphy and identified the extent of contamination in BBR. The program included completion of 93 soil borings, 136 ground water samples, 18 push tubes, 16 vibracores, 51 piezometers, and three test wells. Samples of BBR water, sediments and biota were obtained from 18 stations adjacent to the Scenic OU. Investigations at the Scenic OU revealed the migration of dissolved contamination containing hazardous substances laterally away from the waste pit and vertically through a channel in the base of the +40 MSL zone into the underlying more transmissive +20 MSL channel deposit.

Supplemental investigations of the Scenic OU, presented in Addendum H to the Work Plan for Remedial Planning Activities (NPC 2007a), were conducted to assess the potential for enhanced plume attenuation by field testing and to delineate contaminant plume boundaries within the +20 MSL channel. Investigations of the +20 MSL Channel started in January 2008, and concluded in March 2010. During the investigation period, 347 ground water samples were collected and analyzed from 131 locations; a total of 159 locations were interrogated for lithology.

These investigations revealed that the dissolved organic contaminants had migrated via ground water flow gradients to the west approximately 9,300 feet and, to a lesser extent, east (500 feet) from the pit area. Neither free phase organics nor dissolved contamination was detected in any of the site borings completed within the -40 MSL zone, Intermediate Sand, or 400-foot aquifer. Analysis of BBR surface water, biota and sediment revealed the presence of the semi-volatiles Hexachlorobenzene (HCB) and Hexachlorobutadiene (HCBD) and Volatile Organic Compounds (VOC) including 1,1,2,2-Tetrachloroethane (TeCA), 1,1,2-Trichloroethane (TCA), 1,2-Dichloroethane (DCA), Tetrachloroethene (PCE), Trichloroethene (TCE), trans-1,2-Dichloroethene (trans-DCE), and Vinyl Chloride (VC).

Initial Response

The CD specified that plans include the siting and design of a vault in accordance with 1984 RCRA regulations and the complete closure of the PPI site by excavating, solidifying and land-filling all visible waste along with pumping deeper waste and treatment by incineration. The vault was built and waste solidification activities began at the Brooklawn OU in late 1987. During these activities, air quality monitoring demonstrated releases of VOC above the previously agreed fence line concentrations. At that time it was determined that closure could not proceed under the approved plan. A supplemental investigation was conducted in 1988, and the Federal Court approved the Supplemental Remedial Action Plan (SRAP) (NPC 1989b) on August 31, 1989. Based on this investigation, a hydraulic containment and recovery option, coupled with incineration was selected as the RA.

Basis for Taking Action

Through investigations at the PPI site, EPA determined that hazardous substances, including certain COC were found in various site media as presented in Table 2. The PPI site posed potential threats to human health and the environment through dermal contact with or ingestion of surface soil, ground water or surface water contaminated with the hazardous substances and COC. The site also posed potential threats to human health through inhalation of air and airborne particulate matter contaminated with hazardous substances, including certain COC. The selection of remedies and the RA that have been implemented to reduce, eliminate and monitor all known risks are reported in Section IV of this report.

IV. REMEDIAL ACTIONS

Remedy Selection

The CD included a Conceptual Closure Plan designed to guard against contamination of the regionally significant 400-foot aquifer. The CD outlined various activities for the Industry Defendants to investigate, develop, design, and implement remedial actions to effect closure of the PPI site. The 1984 CD became the framework for subsequent Work Plans, the RPA, RPA Reports, Supplemental Remedial Action Plan (SRAP) and Remedial Design and Construction Plans (RDCP) that were developed specifically for the Brooklawn and Scenic OU. Each approved document is incorporated by reference and has become part of the CD.

A remedial action work plan was submitted and approved in 1984. Closure of the PPI site according to the original RA was prohibited due to problems encountered during implementation (see Initial Response). A supplemental investigation was conducted in 1988 resulting in the selection of a hydraulic containment and recovery option, coupled with incineration as the RA. Ensuing Work Plans, RPA, RPA Reports and RDCP expanded or modified the selected RA as site characterization progressed and new remedial technologies became available.

Brooklawn OU

In 2001, Addendum A to the Brooklawn RPA Report, Volume 4, defined all known exposure pathways, documented the remedial actions that were implemented to eliminate exposure pathways (see Remedy Implementation) and proposed RA for the remaining exposure pathways. The principal objectives presented in Volume 4, Waste Processing and Risk Based Remedial Action, were to:

1. Identify potential contaminant pathways to human and ecological receptors.
2. Evaluate pathways and, if complete, quantify the risk.
3. Develop a remedial plan to reduce any unacceptable risks to levels that are protective of human health and the environment.
4. Develop a comprehensive long-range monitoring plan to measure the efficacy of the remedial action.

The RPA Report (NPC 2001b) concluded that two exposure pathways existed requiring further remedial action. These exposure pathways were (1) surface materials in Bayou Baton Rouge sediments contaminated with HCB and HCBD immediately south of the Brooklawn OU and (2) ground water below the Brooklawn OU containing the following hazardous substances: TeCA, TCA, DCA, PCE, TCE, cis-DCE, trans-DCE, and VC.

EPA conducted a comprehensive Human Health Risk Assessment (HHRA) (EPA 1999b) in Devil's Swamp that concluded only HCB and HCBD in crawfish produced a significant risk to human health. Receptor modeling for the Brooklawn OU was conducted using Reactive Transport in 3-Dimensions (RT3D), a transport model for simulation of advection, dispersion and chemical reactions of contaminants in ground water systems. A predictive simulation of 30 years was performed to model any impacts that may occur to the 400-foot aquifer based on the "present day" (year 2000) distribution of dissolved COC. Results of the RT3D receptor modeling at the Brooklawn OU demonstrated that the contaminant plume would reach equilibrium through natural attenuation within the model period without affecting sensitive receptors. The results of this modeling were reported in Addendum A to the RPA Report (NPC 2001b). In 2001 the EPA and the Louisiana Department of Environmental Quality (LDEQ) approved Addendum A to the RPA. This resulted in the selection of Monitored Natural Attenuation (MNA) and source reduction for ground water contamination and the placement of a protective fill in the Middle Channel of the BBR area distributaries (Drawing 020-C-339 rev 2) as the RA. Included, as part of the RA, is a Long Term Monitoring Plan (LTMP). The LTMP for the Brooklawn OU includes the following objectives:

1. For at least 30 years, monitoring the contaminant plume and geochemical parameters in the subsurface to evaluate the effectiveness of the natural attenuation process;
2. For 20 years, inspection of the Bayou Baton Rouge fill material to assure continued conformance with performance requirements;
3. For at least 3 years, collection and analysis of crawfish from the Bayou Baton Rouge Channels and North Swamp sub-areas to assure the success of the remedial action; and

4. For at least 30 years, protect the identified down gradient Points of Exposure (POE) (the Mississippi River) through monitoring sentry POE wells for the appearance of site COC.

As a result of the Brooklawn OU LTMP report for 2008, the collection and analysis of biota (crawfish) from the BBR channel distributaries was discontinued. The LTMP report concluded that the Middle Channel fill RA had reduced human health risk for both HCBD and HCB associated with the consumption of crawfish. The human health risk results from the exposure domain are within acceptable ranges demonstrating that the RA was effective in reducing surface sediment contamination to protective levels. The results also indicate that adverse impacts on crawfish would not be anticipated. Data showing the potential carcinogenic risks and the potential non-carcinogenic hazards associated with the 2008 crawfish concentrations are presented in Section V, Data Review.

Addendum F to the RPA report for the Brooklawn OU (NPC 2006) updated the DNAPL and ground water solute fate and transport models. The updated DNAPL model showed that regardless of future DNAPL pumping, predictive simulations conservatively showed that DNAPL reached its maximum extent by the year 2500, moving laterally less than 500 ft south of its current location and posed no direct threat to sensitive receptors. The report concluded that the continued pumping of DNAPL at the Brooklawn OU produced no significant reduction in DNAPL extent. Therefore, EPA and LDEQ approved the suspension of active DNAPL recovery at the Brooklawn OU. On July 18, 2006, source recovery operations were suspended.

The current selected remedial actions at the Brooklawn OU are:

1. Protective Fill monitoring in the Middle Channel of the Bayou Baton Rouge area distributaries.
2. Monitored Natural Attenuation of contaminated ground water.
3. Administrative Controls.

Scenic OU

Addendum D to the RPA Report (NPC 1998) at the Scenic OU, presented the following

principal objectives:

1. Develop a conceptual remedial design for the Scenic OU.
2. Develop a conceptual model of the Scenic area hydrogeologic conditions.
3. Develop a solute transport model to assess potential impacts on the 400-foot aquifer.
4. Evaluate the potential for natural attenuation of dissolved organic constituents in the +40 MSL zone and the +20 MSL channel deposit.
5. Develop a risk-based remedial program for Bayou Baton Rouge sediment contamination downstream of the Scenic OU, and for natural attenuation of the dissolved organic constituents in the +40 MSL zone and the +20 MSL channel deposit.
6. Document these objectives in a report presenting the conceptual design and remedial action.

To complete the stated objectives, receptor modeling was conducted using a modular three-dimensional transport model (MT3D) for simulation of advection, dispersion and chemical reactions of contaminants in ground water systems (NPC 1998). A predictive simulation of 500 years was performed to model any impacts that may occur to the 400-foot aquifer based on the "present day" (year 1997) distribution of dissolved COC. Results of the MT3D receptor modeling at the Scenic Site demonstrated that contamination would not reach the 400-foot aquifer.

Additional remedial investigations based on the objectives outlined in Addendum B to the Work Plan (NPC 2001a) were conducted. The findings and proposed modifications to the selected RA were reported in Addendum E to the RPA Report (NPC 2003d). The proposed modifications to the remedy were reviewed by EPA and approved for implementation. These modifications included termination of active recovery (source reduction) and modifications to the LTMP for the MNA component.

Addendum G to the Work Plan (NPC 2003e), was submitted and approved to collect additional characterization data which was used to construct an entirely new ground water transport model. This reactive transport model predicted that three (3) COC would continue downgradient migration within the +20 MSL Channel. Addendum G to the RPA Report (NPC 2007b) was approved on August 27, 2007, and proposed

enhancing the naturally occurring biological attenuation through the addition of a substrate that stimulates anaerobic degradation to address the COC that are not fully attenuating under existing site conditions. These actions were initiated through a work plan (NPC 2007a) designed to field test the viability of EA in the near-source area downgradient of the former disposal pits and to further delineate hazardous substances within the +20 MSL Channel.

Based on the favorable results of the EA field test, which showed significant reduction in contaminant mass, NPC is currently implementing EA in the near-source area. These activities are being conducted by an approved RPA report (NPC 2010a) and a RDCP (NPC 2010b). Additional investigations are ongoing to evaluate EA in the downgradient plume and are anticipated to be completed in the first quarter of 2011.

Sampling of sediments in BBR south of the Scenic OU has demonstrated that the RA of natural recovery is effective and protective. As defined in the LTMP, the last sediment sampling event was completed in 2009, and demonstrated that the natural recovery remedy has resulted in contaminant concentrations that are significantly below levels that are protective of potential receptors.

The current selected remedial actions at the Scenic OU are:

1. Source Control near the disposal area.
2. Natural Recovery of Bayou Baton Rouge sediment.
3. Enhanced Attenuation of contaminated ground water.
4. Administrative Controls.

Remedy Implementation

In order to implement the hydraulic containment and recovery RA selected in SRAP (NPC 1989a), both the Scenic OU and the Brooklawn OU were filled and graded. This RA also provided a clean surface for storm water drainage and discharge through permitted Louisiana Pollutant Discharge Elimination System (LPDES) outfalls (Permit No. LA0066214) at both OU. Backfill was applied to provide protection from flooding and portions of BBR were rerouted as needed. Comprehensive ground water modeling

was performed. Based on the results of the modeling, an extensive system of recovery wells and support facilities was designed and built for the Brooklawn OU. This included facilities for the collection, separation and treatment of DNAPL and associated contaminated ground water. In 1996, the Louisiana Department of Health and Hospitals (LDHH) conducted a public health assessment (LDHH 1996) of the PPI site, which indicated the site neighbors were not experiencing a higher cancer rate than the rest of East Baton Rouge Parish. At the Scenic OU a system of recovery wells, collection and support facilities were built in 2000. Administrative control of the PPI site was achieved by providing perimeter fencing and security.

Brooklawn OU

In accordance with the Remedial Planning Activities Report (NPC 1985), and to reduce surface material contamination exposure, 700 feet of the easternmost BBR distributary channel was remediated in 1990 by excavation. The remediated portion is the southernmost 700 feet along the South Access Road and is depicted on Drawing BK-99-152. In 1991 the Brooklawn OU disposal area was covered with two feet of clay, protective cover and six inches of topsoil (seeded and mulched for erosion control) to provide a suitable working surface, eliminate vapor emissions and exposure to contaminated soils. Additionally, a segment of BBR was diverted away from the disposal area to allow for natural drainage to continue through uncontaminated areas.

In 1994, the upper lagoon was filled and a protective cover was installed. During the filling of the upper lagoon, 800 tons (140 K gallons) of DNAPL were recovered and shipped offsite for incineration.

After the Brooklawn OU protective cover was completed, a system of recovery wells (192) and collection sumps (98) were installed in the disposal area. This recovery system provided hydraulic containment of the contaminated ground water. During the operation of this recovery system 136 MM gallons of contaminated water and 817 K gallons of DNAPL were recovered. Recovery system production data is presented in

Table 3. Active recovery (source reduction) was terminated at the Brooklawn OU on July 18, 2006.

A Liquid Treatment and Disposal System (LTADS) was placed in service during 1994 to treat liquids produced from the recovery wells and collection sumps. This system included separation, storage, air stripping, incineration, and water treatment facilities. The LTAD incineration and air stripping system operated until September 2000, when declining free phase organic production made onsite incineration impractical. During operation of the LTAD incinerator, 2.25 K tons (412 K gallons) of free phase organics were treated. Additionally, 114 MM gallons of recovered contaminated ground water were processed through the air stripper and the organic vapors were incinerated. This water was then treated with activated carbon and discharged to the Mississippi River through an LPDES permitted outfall.

Addendum A to Volume One of the RDCP (NPC 2002), specified the installation of two additional sentry monitor wells in the 400-foot aquifer downgradient of the contaminant plume to assist in measuring the performance of the MNA remedy. The LTMP, approved in Addendum A to the RPA Report (NPC 2001b), was designed consistent with the requirements of the CD and the current Office of Solid Waste and Emergency Response (OSWER) guidance on MNA at Superfund sites. Ground water monitoring samples are collected at twenty-six locations (Figure 4) to determine COC concentrations along transects parallel with the dominant migration pathway. Sentry Points of Compliance (POC) wells at the expected plume boundaries are monitored to assess the extent of plume migration. Additionally, geochemical data is collected to verify that conditions favorable for natural attenuation continue to occur in the aquifer and hydraulic head data is collected to aid in interpreting chemical data.

In 2006, as approved in Addendum F to the RPA report (NPC 2006), additional primary source transect wells were installed to assess the effectiveness of the MNA remedy at the Brooklawn OU. These primary source transect monitoring location are shown on Figure 5. Annual monitoring and long term reporting of data collected at these

locations are used to assess the effectiveness of the MNA remedial action.

The selected remedy for the BBR area sediments and biota, south of the Brooklawn disposal area, was the placement of a protective fill in a distributary channel (Drawing 020-C-339 rev 2). This construction activity was completed in January 2003; a total of 3,045 feet of the channel was filled with 9,888 cubic yards of material. The LTMP required the collection and analysis of Biota (crawfish) samples from 15 locations and annual monitoring of the integrity of the protective fill. Crawfish serve as a sentinel organism for ecological inputs and were analyzed for HCB and HCBD. As reported in the Remedy Selection, Brooklawn OU section of this report biota sampling and reporting was discontinued in 2008, due to significant reductions in risks to both humans and ecological receptors; protective fill inspections will continue to be conducted annually for the prescribed 20-year period.

Scenic OU

The Scenic OU has been covered with two feet of clay protective fill and six inches of topsoil (seeded and mulched for erosion control) to provide a suitable working surface, eliminate exposure to impacted soils and to provide for clean surface water drainage. Fill was placed to reinforce the existing dikes at the closed waste pit. Two segments of BBR were diverted away from the waste pit as a part of the overall site development. The site is fenced and security is provided.

In 1999, upon approval of Addendum D (NPC 1998), the selected RA for the disposal area was source reduction with MNA. Source reduction included the removal of mobile DNAPL by pumping recovery wells placed in the waste pit. The removal of DNAPL required preparation and development of the site and construction of a recovery system (wells, collection network, electrification, instrumentation, a control room, a covered, diked loading area and service roadways). Eleven recovery wells were pushed through the cover into the disposal pit. Based on an evaluation of core samples, it was determined that seven of these wells were capable of producing

DNAPL. Above ground structures and pumps associated with each of the seven wells were installed. Recovered liquids were pumped to a DOT trailer mounted tank. The tank was kept in a covered, bermed area during filling. Alarms interfaced with pump controllers were programmed to shut down the recovery well field if a high level occurred in the storage tank. The DNAPL was transported approximately two miles to the Brooklawn OU for treatment. Transport was on public thoroughfares utilizing a Department of Transportation (DOT) Hazardous Material (HAZMAT) driver and vehicle operated and maintained by NPC. The well field was mechanically complete on January 11, 2000. The first shipment of waste material was completed on February 10, 2000. DNAPL production from the recovery system totaled 3,900 gallons. Contaminated ground water recovered totaled 6,400 gallons. Active recovery (source reduction) was terminated at the Scenic OU (see Remedy Selection, Scenic OU) on August 21, 2003.

NPC conducted modeling to define NA processes at the Scenic OU and to evaluate its effectiveness as a part of the overall remedial strategy. Field and laboratory studies have shown that microorganisms present at the site completely degrade site contaminants under aerobic and anaerobic conditions and that natural attenuation processes can provide effective reduction of the soluble contaminants. The modeling efforts reported in Addendum E to the RPA report (NPC 2003d) indicated that three COC (PCE, TCE, and TCA) are only dechlorinated significantly under anaerobic conditions and simulation results suggest that these species are not completely dechlorinated within the +20 MSL channel. Modeling predicted that these contaminants, though they are partially attenuated, would continue to migrate down gradient in the +20 MSL channel. A monitoring plan was approved which utilized fifteen existing monitor wells and recommended the construction of twenty new piezometers installed in the +40 MSL zone, the +20 Channel Deposit, and the -40 MSL zone. Seven additional piezometers, also used in the monitoring plan, were installed in the Intermediate Sand and the 400-foot Aquifer. Based on the Addendum E report, additional investigations, presented in Addendum G to the Work Plan (NPC 2003e), were proposed, approved and conducted to define the lithology and contaminant

distribution in the +20 MSL Channel.

Upon completion of the work plan activities (NPC 2003e), Addendum G to the RPA report (NPC 2007a) was submitted presenting an approach to conduct additional investigations of the +20 MSL channel and prepare a work plan (NPC 2007b) to evaluate enhancements to the natural attenuation remedial action at the Scenic OU.

Addendum G to the Work Plan (NPC 2007b) outlined the following two primary +20 MSL channel characterization objectives:

1. Verify the location of the southern boundary of the +20 MSL Channel in the vicinity of the treatment zone near the distal end of the plume
2. Verify the plume extent and concentration gradient, in particular at the distal and northern edges of the plume.

The +20 MSL channel investigations started in January 2008, and concluded in March 2010. During the investigation period, 347 ground water samples were collected and analyzed from 131 locations; a total of 159 locations were interrogated for lithology. The results were reported in Addendum H to the RPA Report (NPC 2010a). These investigations of the +20 MSL Channel revealed that COC had migrated further than previously known; the results showed downgradient contaminant concentrations significantly higher than previously anticipated. Therefore, near-source EA treatment zones within the +20 MSL Channel were proposed and approved by the Agencies to cut off the downgradient plume from the source of additional contamination. This +20 MSL Channel near-source remedy augments previous site actions for the source area. The previous actions have included 1) source reduction through removal of waste material from the disposal pit in the early 70s while the pit was still uncovered, 2) source control by filling the disposal pit with clay material to mix with the unrecoverable residual waste material, 3) source control by installing a surface barrier over the disposal pit and re-routing of the Bayou Baton Rouge to minimize interaction of waste materials with surface water, and 4) source reduction by pumping recoverable waste material.

The approved +20 MSL Channel near-source remedy is based on information gained during the recently completed (2009-2010) EA field test, where it was successfully demonstrated that enhanced dechlorination can be induced through addition of a bioremediation substrate. The results, presented in Addundum H to the RPA Report (NPC 2010a), showed that EA in areas of high COC concentrations was demonstrably effective in significantly reducing COC mass within treated portions of the plume. Addendum H to the RDCP (NPC 2010b), was submitted and approved which provided a description of the work necessary to implement the +20 MSL Channel near-source RA. In September and October 2010, NPC completed the installation of twenty-three (23) injection wells and three (3) monitoring wells. The layout of the injection wells are presented in Figure 6.

Natural Recovery was selected for remediation of Bayou Baton Rouge sediments south of the Scenic OU. Investigations of surface water, biota and sediments in the bayou have revealed the presence of HCB and HCBD in surface sediments. The general lack of unacceptable risks along with other factors allowed the selection of Natural Recovery. These other factors included poor accessibility, the low volume of water normally present and no commercial or sport fishing in the affected portion of the bayou. As reported in the Remedy Selection, Scenic OU section of this report, the final sediment sampling event was conducted in 2009.

Site Wide Remedy Implementation

The current approved remedies for the PPI site are described in Addendum F (NPC 2006) to the RPA Report (Brooklawn OU) and Addendum H (NPC 2010a) to the RPA Report (Scenic OU). These remedies include source control, MNA for ground water contamination and protective Bayou Baton Rouge channel fill at the Brooklawn OU; source control, natural recovery of sediments, and enhanced attenuation of ground water at the Scenic OU.

Plans have been implemented at both OU to monitor the ground water, including the

400-foot aquifer, to ensure protectiveness of the remedies. The monitoring plan also evaluates natural attenuation and the recovery of the BBR channel area at the Brooklawn OU. Monitoring plans at the Scenic OU will be updated in the 1Q2011 that are specific to the recently implemented EA remedy. The CD recognizes the potential for contingencies to occur and the need to address them through the development of remedial alternatives. The post-construction monitoring plans will provide ample warning of the threat of releases of hazardous substances that may present a concern.

The former waste disposal areas on the PPI site have been covered with two feet of clay protective fill and six inches of topsoil (seeded and mulched for erosion control) to provide a suitable working surface, eliminate exposure to impacted soils and ground water and to provide for clean surface water drainage. These source control measures are effective in mitigating exposure hazards resulting from inhalation of vapors migrating from contamination beneath the PPI sites into buildings. Additionally, NPC has no permanent buildings located at the Scenic OU and buildings constructed at the Brooklawn OU are located on the west side of the property away from major sources of hazardous substances. There are no buildings or structures with basements and or buildings or structures used for residential properties at the site. In addition the site is located in an industrial area and is not adjacent to any residential properties.

System Operation/Operation and Maintenance

As the Petro-Processors of Louisiana, Inc. Site was a PRP funded cleanup, the funding information is not publicly available.

In consideration of the entry for the Consent Decree, defendants agreed not to make any claims pursuant to Section 112 of CERCLA, 42 U.S.C. Section 9612, directly or indirectly against the Hazardous Substance Response Trust Fund established by the Act for expenses related to this case and the CD.

The Environmental Protection Agency, Hazardous Substance Response Trust fund

received $600,000 as consideration for compromise by the United States of its claims for all costs previously incurred by it in investigating and responding to conditions at the sites. The State of Louisiana, Bond Security and Redemption Fund received $30,500 as consideration for compromise by the State of Louisiana of its claims for all costs previously incurred by it in investigating and responding to conditions at the sites.

V. FIVE-YEAR REVIEW PROCESS

Mr. Bartolome J. Canellas, EPA Project Manager Region 6, led this second Five-Year Review. The process consisted of a review of relevant site documents, site data, an Applicable or Relevant and Appropriate Requirements (ARARs) review, interviews, public notice and a site inspection. Each of these review processes were conducted for both the Brooklawn OU and Scenic OU.

Document Review

A list of the relevant documents that were reviewed is presented in Appendix A. Documents reviewed consisted of approved site work plans, remedial planning documents, monitoring reports and EPA commissioned risk assessments.

Public notice of this second Five-Year Review was published in the local newspaper, and a Five-Year Review fact sheet was distributed to the mailing list maintained for the site. These public notices are presented in Appendix B. A copy of this completed report will be available in the public library at the PPI site located at 2401 Brooklawn Drive in Baton Rouge, Louisiana and through EPA Region 6 and LDEQ.

Appendix C contains a concurrence letter from LDEQ stating their findings from the request for Applicable or Relevant and Appropriate Requirements (ARARs) review. Appendix C also contains Louisiana laboratory accreditations for the analytical laboratory used to report data to LDEQ in compliance with the ARARs review.

Interviews

Appendix D contains the completed site survey forms (site interviews) and a listing of those who were interviewed. These interviews were conducted by mail. Responses were received from LDEQ personnel, LDHH personnel, LSU professors who served in the past as court appointed experts, technical personnel associated with the ground water and DNAPL modeling efforts, the PPI site Facility Manager and representatives of EPA Region 6. There were no negative comments or concerns associated with the remedial activities of the site.

Site Inspection

On April 7, 2010 representatives of EPA and LDEQ conducted an inspection of the PPI site. The inspection assessed the conditions of the physical facilities, site administrative controls and visible implementations of the remedies. Protective coverings at both OUs were in good condition and appropriate signs were posted on security fencing. The site inspection checklist is presented in Appendix G. Photographs that were taken during the site inspection are included in Appendix E.

Data Review

Ground water monitoring results at the Brooklawn OU indicates that the MNA remedy is protective at the Brooklawn OU. All COC concentrations at sentry POC wells located down gradient of the primary migration pathway are Below Quantitative Levels (BQL). The data demonstrates that no short-term risk exists that the contaminant plume will migrate unacceptably.

Inspections of protective coverings in the former disposal areas and in BBR distributaries at the Brooklawn OU reveal no integrity concerns. The recently completed biota monitoring (2008) also confirms the effectiveness of the protective fill remedy. Tables 4 and 5 display the results of biota analysis and Hazard Indices (HI) that were calculated from crawfish collected during the 2008 LTMP at the Brooklawn OU. The combined (HCB and HCBD) Lifetime Incremental Cancer Risk (LICR) from

Table 4 is 3E-06, which is within the risk management range where additional RA is not normally required. The combined HI displayed in Table 5 is 0.06, which also is protective. Table 6, reproduced from Table 4-3 in the Ecological Risk Assessment (EPA 1999a), provides Hazard Quotients (HQs) for crawfish in western channels, eastern channels, and the transition swamp. For HCB, the highest HQs are 7.4, 6.2, and 6.4, respectively. For HCBD, the highest HQs are 23.6, 12.8, and 21.3, respectively. None of the data shown in Table 7, Potential Ecological Screening Quotients (ESQs) Associated with 2008 Crawfish Concentrations, exceed 1. These results demonstrate the effectiveness of the RA regarding contaminated sediments in BBR distributaries at the Brooklawn OU and support the recently approved discontinuation of biota monitoring. Furthermore, the Brooklawn OU BBR protective fill is stable, functioning as intended, and is protective of human health and the environment.

Sediment sampling in BBR south of the Scenic OU shows that no risks are unacceptable. BBR sediment samples were collected during the 2009 monitoring period as described in Addendum D to RPA Report (NPC 1998) for the Scenic OU. This sampling was conducted on March 23, 2009, and March 24, 2009. The 2009 sediment sampling event was the final event of the eight (8) originally proposed events. Results for 2009 are consistent with the results from the previous sampling event in 2007, and show that for all four (4) receptor scenarios (adolescent human trespassers, aquatic biota, mink, and heron), the Exposure Domain Hazard Index (EDHI) is less than the Reasonable Maximum Exposure (RME) HI. Furthermore, the 2009 EDHI are all less than one. Table 8 presents the 2009 compliance evaluation from BBR sediments. Historical data presented in Table 9, shows that the EDHI for each potential receptor scenario has been less than one for the past three (3) sampling events, 2005 – 2009. This data supports discontinuation of sediment sampling in BBR and demonstrates that the natural recovery remedy has resulted in contaminant concentrations below levels that support the protection of potential receptors in the Exposure Domain (ED).

Enhanced attenuation at the Scenic OU field test area showed significant reduction in contaminant mass within the test area as presented in Addendum H to the RPA Report

(NPC 2010a). Table 10 shows the composite dechlorination results for the test cell. In summary, data indicate that COC parent compound concentrations (e.g., all compounds except DCE and VC) declined by 63% over the 216-day test. An increase in DCE concentration was observed while VC remained relatively constant at wells where the pH was below pH 6. Note that at wells IP-1 and IP-W, where the pH was near 7, complete dechlorination was observed with over 95% reduction in COC over the 7-month duration of the field test. To further evaluate the impact of pH on dechlorination extent, a sodium carbonate (soda ash) buffer solution was introduced into the test cell after about 1 year of treatment. After introduction of the buffer to raise pH values above about 6.5, rapid complete dechlorination proceeded. The response was very rapid because a significant quantity of biomass had been built up and remained from the initial substrate addition. Table 11 shows the dechlorination results comparing pre-buffer addition COC concentrations to concentrations one week after buffer addition. The results in Table 11 demonstrate that very effective dechlorination occurs when sufficient buffering is provided for the treatment zone. Finally, all data indicates that administrative controls are adequate at both of the OU.

VI. TECHNICAL ASSESSMENT

Question A: Is the remedy functioning as intended by the decision documents?

Yes. A review of site-specific data and the results of the inspection documented in this report demonstrate that the remedy is functioning as intended by the approved RPA Reports. Stabilization of the disposal pits, diversion of BBR and placement of protective covers at the PPI site have achieved the remedial objectives to control vapor emissions from and dermal contact with contaminants in soil and sediments. Ecological and human health risks have been reduced to acceptable levels in the BBR distributaries portion of the Brooklawn OU through the placement of a protective fill and at the Scenic OU through natural recovery.

Based on a review of recent ground water sampling and analytical data, MNA at the Brooklawn OU appears to be containing the dissolved contaminant plume. The contaminant plume at the Brooklawn OU has not and is not expected to migrate to the defined down gradient POE for the ground water source, the Mississippi River. Ground water modeling indicates that the contaminant plume will stabilize before migrating beyond the property wholly owned by NPC. To ensure containment of the plume, point of compliance (POC) monitoring locations have been installed. Figure 4, Ground water Sample Locations, show the locations of these sentry wells (P-2522-1 and P-2528-1). The data indicates that all COC concentrations at the sentry POC wells do not exceed the Maximum Contaminant Level (MCL).

Ground water at the Scenic OU is also monitored. NPC is currently operating under an approved RDCP for the Scenic OU (NPC 2010b) to install injection well and inject substrate into the ground water in the near source area along the dominant migration pathway, the +20 MSL Channel. While this additional work is progressing, no short-term risk exists that the plume will pose a threat. During this investigation at the Scenic OU additional monitoring locations have been installed to detect plume migration and contaminant degradation. NPC is currently working on a remedial plan

to implement an EA treatment zone in the downgradient portion of the contaminant plume at the Scenic OU. This RPA report and subsequent RDCP is planned to be submitted to the agencies in the first quarter of 2011.

Operation and maintenance of the PPI facility, as indicated in the site inspection (Appendix G), has been effective in maintaining the integrity of the protective coverings at both the Brooklawn OU and Scenic OU, see the photographs in Appendix E. The PPI site is inspected daily by site personnel and maintenance items are noted and corrective actions are taken as needed. The filled and graded former waste disposal areas have sufficient grass coverings and are frequently mowed to prevent unwanted shrub growth. Requirements of the Brooklawn OU long term monitoring plan specify the inspection of the protective fill in the BBR distributaries channels to ensure its integrity. Inspection have documented that vegetation is well established, and there is no noted erosion of any fill areas. However, sampling personnel access several ground water monitoring locations along the protective fill resulting in several ruts in the protective covering. A new access route to these monitoring locations will be established to avoid unwanted traffic on the protective fill.

Administrative controls are in place and are functioning as intended. Access to the site is controlled by the PPI security system, and a card key system is employed allowing entrance only to approved site personnel. Fencing around the PPI site is intact and in good repair. Signs are posted around the perimeter of the site on the fencing and on access gates, see photograph log, Appendix E.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and Remedial Action Objectives (RAOs) used at the time of the remedy still valid?

Yes. The ARARs review and the findings of this Five-Year Review reveal that no significant changes in standards or assumptions have occurred to affect the implemented remedy. Exposure pathways that were defined and used to select the remedy remain valid and are comprehensive. Current and anticipated future use of

the land and resources surrounding the PPI site has not changed. Physical conditions at the site have not changed in a manner that would affect the protectiveness of the remedy.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No. Based on the information in this review, no new information has been discovered that could call into question the protectiveness of the remedy.

Technical Assessment Summary

Based on the data reviewed, the site inspections, and the interviews, the selected remedies and the implementation of the remedies at the PPI site are functioning as intended by the CD and subsequent RPA Reports. There have been no changes in standards or assumptions used to construct the remedy. Conditions at the site have not changed in such a way as to affect the remedy and there is no other information that calls into question the protectiveness of the remedy.

VII. ISSUES

The Agencies recently approved EA as the RA for ground water contamination at the Scenic OU. As stated in this report, NPC has recently installed 26 new wells in the near source area of the Scenic OU to inject substrate and monitor the effectiveness of this RA. NPC is planning to inject substrate into the contaminated aquifer (+20 MSL Channel) in the first quarter of 2011. Based on a completed field test conducted at the Scenic OU, this RA is anticipated to be successful and effective. In addition to the near source remedy, a distal end RA is needed at the Scenic OU. NPC is currently working on investigative activities to implement an EA zone in the downgradient portion of the plume. When complete (projected in January 2011) a RPA report will be submitted to address the downgradient contaminants and to provide a revised long term monitoring plan to evaluate the effectiveness of the EA remedy at the Scenic OU.

VIII. RECOMMENDATIONS AND FOLLOW-UP ACTIONS

During the site inspection of the Scenic OU on April 7, 2010, site personnel informed and showed the Agencies that a bridge crossing Bayou Baton Rouge had failed and was restricting the natural flow of this waterway. Site personnel informed the inspectors that NPC was planning on repairing the bridge to restore natural flow in the bayou. On June 3, 2010, these repairs were completed; photographs of the failed and repaired bridge are presented in Appendix E, photographs 27 - 30.

NPC is currently planning to allow alternative access to monitoring locations in the BBR distributaries south of the Brooklawn OU to avoid unnecessary traffic on the protective covering. NPC is planning to complete this work by December 2010, and will report these completed activities in a subsequent LTMP report for the Brooklawn OU.

As presented in the issues section of this report, Section VII, NPC is currently in the process of investigating a downgradient EA remedy and implementing EA substrate injection at the Scenic OU in the near source area of the site. These planned activities are anticipated to be completed in the first quarter of 2011, and will be documented in forthcoming RPA and RDCP reports.

IX. PROTECTIVENESS STATEMENT

Brooklawn OU

The remedy at the Brooklawn OU is protective of human health and the environment, and in the interim, exposure pathways that could result in unacceptable risks are being controlled.

Scenic OU

The remedy at the Scenic OU currently protects human health and the environment and is protective in the short-term. However, in order for the remedy to be protective in the long-term, implementation of the near-source and distal end enhanced attenuation actions are necessary to ensure long-term protectiveness.

PPI Sitewide

Source reduction, control and protective coverings over former disposal areas at the site have reduced the known risks associated with ingestion, inhalation, and dermal contact with site contaminants through surface water and sediment pathways for both human and ecological receptors. Placement of a protective fill in the BBR distributaries has reduced risks discovered during risk assessments to acceptable levels. The Brooklawn OU MNA remedy, through implementation of the LTMP, has been shown to be protective of downgradient receptors. Sampling of sediments in BBR south of the Scenic OU has demonstrated that the natural recovery remedy is effective. Finally, administrative controls to limit access to the PPI site are in place and continue to be effective in allowing entry only to approved site personnel.

The remedy at the PPI site currently protects human health and the environment and is protective in the short-term. However, in order for the remedy to be protective in the long-term, implementation of the near-source and distal end enhanced attenuation actions at the Scenic OU are necessary to ensure long-term protectiveness.

X. NEXT REVIEW

The third Five-Year Review for the Petro-Processors of Louisiana, Inc. Superfund Site will be performed within five years of the signature date of this second Five-Year Review report.

References

NPC Services, Inc., 1984. Consent Decree, Civil Action No. 80-358-B, Petro-Processors, Inc.

NPC Services, Inc., 1985. Remedial Planning Activities Report, Petro-Processors, Inc.

NPC Services, Inc., 1989a. Remedial Design and Construction Plan, Brooklawn Site Preparation and Earthwork.

NPC Services, Inc. 1989b. Supplemental Remedial Action Plan, Petro-Processors, Inc.

Louisiana Department of Health and Hospitals, 1996. Public Health Assessment for Petro-Processors of Louisiana, Incorporated, Baton Rouge, East Baton Rouge Parish, Louisiana, January 16, 1996.

NPC Services, Inc. 1998. Remedial Planning Activities , Addendum D, Volume 4, Waste Processing, Scenic Highway Site.

EPA, 1999a. Ecological Risk Assessment, Devil's Swamp, Baton Rouge, Louisiana. EPA Contract No. 68-W4-0016.

EPA, 1999b. Human Health Risk Assessment, Devil's Swamp, Baton Rouge, Louisiana. EPA Contract No. 68-W4-0016.

NPC Services, Inc., 2001a. Addendum B to the Work Plan for Remedial Planning Activities, Petro-Processors, Inc.

NPC Services, Inc., 2001b. Addendum A to the Remedial Planning Activities Report, Brooklawn OU, Petro-Processors, Inc.

NPC Services, Inc., 2001c. Interim RA Report, Scenic OU, Petro-Processors, Inc.

NPC Services, Inc., 2002, Addendum A to Vol. One and Addendum B to Vol. Three of the Remedial Design and Construction Plan. Brooklawn OU

NPC Services, Inc., 2003a. Interim RA, Brooklawn OU.

NPC Services, Inc., 2003b. Preliminary Close Out Report, PPI Site.

NPC Services, Inc., 2003c. Addendum F to the Work Plan for Remedial Planning Activities, Petro-Processors, Inc., Brooklawn OU.

NPC Services, Inc., 2003d. Addendum E to the Remedial Planning Activities Report, Petro-Processors, Inc., Scenic OU, Ground water and DNAPL Fate and Transport Models.

NPC Services, Inc., 2003e. Addendum G to the Work Plan for Remedial Planning Activities, Petro-Processors, Inc., Scenic OU.

NPC Services, Inc., 2006. Addendum F to the Remedial Planning Activities Report, Petro-Processors, Inc., Brooklawn OU.

NPC Services, Inc., 2007a. Addendum G to the Remedial Planning Activities Report, Petro-Processors, Inc., Scenic OU.

NPC Services, Inc., 2007b. Addendum H to the Work Plan for Remedial Planning Activities, Petro-Processors, Inc., Scenic OU.

NPC Services, Inc., 2010a. Addendum H to the Remedial Planning Activities Report, Petro-Processors, Inc., Scenic OU.

NPC Services, Inc., 2010b. Addendum H to the Remedial Design and Construction Plan, Scenic OU, Implementation of near-source EA.

SECOND FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE
EAST BATON ROUGE PARISH, LOUISIANA
LAD057482713

Table Index

Table 1: Chronology of Significant Events for the Petro-Processors of Louisiana, Inc. Site

Date	Event Description
1961 - 1974	Scenic OU received petrochemical wastes
1969 - 1978	Brooklawn OU received petrochemical wastes
1970	Legal actions taken against PPI and its clients
1974	Scenic OU disposal pit was filled and closed
1980	Brooklawn OU disposal ceased
July 1980	U.S. Justice Department filed suit against PPI and PRPs
September 1983	PPI site proposed to NPL.
February 1984	Consent Decree Signed in Federal Court by PRPs (ROD)
September 1984	Final NPL listing
1987	Vault constructed and solidification began
1987	Excavation and Solidification terminated
1988	A supplemental investigation of alternative RA conducted.
August 1989	SRAP approved a hydraulic containment and recovery option, coupled with incineration was selected as the remedial action
1991	Brooklawn OU disposal area protective cover completed
1991-2000	A system of recovery wells and collection were installed in the disposal areas of the Brooklawn and Scenic OUs
1994	LTADS was placed in service to treat recovered liquid
1994	Brooklawn Upper lagoon protective cover was installed.
1997-1999	Ecological Risk Assessment and Human Health Risk Assessment Approved December 1999, Devil's Swamp, Baton Rouge, LA
July 1999	Scenic OU RPA approved
August 1999	Scenic OU RDCP approved
January 2000	Scenic OU construction activity completed
November 2001	Brooklawn OU RPA approved, selected remedy, MNA, source reduction, source control and protective fill
November 2001	Scenic OU Interim Remedial Action report approved
March 2002	Brooklawn OU RDCP approved, recovery well production termination and decommissioning, Sentry well installations, and Middle Channel Fill of Bayou Baton Rouge.
January 2003	Final remedial construction activity completed at the PPI site
July 2003	Brooklawn OU Interim Remedial Action report approve
July 2003	Preliminary Close Out Report approved for the PPI site
Added for Second Five-Year Review	
July 2003	Scenic OU, Addendum E, RPA Report, Termination of active source recovery, revised monitoring plan for MNA, continue Natural Recovery for Bayou Baton Rouge sediments, further investigations needed for ultimate fate of dissolved

Table 1: Chronology of Significant Events for the Petro-Processors of Louisiana, Inc. Site

Date	Event Description
	contamination.
December 2005	First Five-Year Review approved.
May 2006	Brooklawn OU, Addendum F, RPA Report approved, suspension of active source recovery operations, revised monitoring plan for MNA, installed new primary source transect.
2006 - 2007	Dismantled Brooklawn OU facilities associated with LTADS, incineration and storage facilities.
August 2007	Scenic OU, Addendum H to the Work Plan, additional characterization of the +20 MSL channel was approved and a phased approach to implementing enhanced attenuation.
March 2009	Scenic OU, Conducted field test of EA.
March 2010	Brooklawn OU, LTMP Report concluded that protective covering in the BBR distributaries was effective. Biota sampling was discontinued.
March 2010	Scenic OU, LTMP Report concluded that the natural recovery remedy for sediments in BBR was protective, discontinuation of sediment sampling was approved.
August 2010	Scenic OU, Addendum H to the RPA Report, EA approved as near-source remedy for the +20 MSL Channel
August 2010	Scenic OU, Addendum H to the RDCP, construction plans approved to install 23 injection wells and 3 monitoring wells to implement the EA remedy.

Notes

LTADS	Liquid Treatment and Disposal System
NPC	NPC Services, Inc. – PRPs Remedial Plan Coordinator
PPI	Petro-Processors of Louisiana, Inc.
PRP	Potentially Responsible Party
RPA	Remedial Planning Activities
RDCP	Remedial Design and Construction Plan
SRAP	Supplemental Remedial Action Plan
OU	Operable Unit

Table 2: Contaminants of Concern in PPI Site Media

COC	Groundwater	Surface Water	Lagoons	Sediment	Surface Soil	Air
1,2-Dichloroethane	X	X	X			
cis-1,2-Dichloroethene	X	X	X			
trans-1.2-Dichloroethene	X	X	X			
Hexachlorobenzene			X	X	X	X
Hexachlorobutadiene			X	X	X	X
Tetrachloroethylene	X	X	X			
1,1,2,2-Tetrachloroethane	X	X	X			
1,1,2-Trichloroethane	X	X	X			
Trichloroethene	X	X	X			
Vinyl chloride	X	X	X			

Table 3: Brooklawn OU, Recovery Well Production History

Year	Wells in Production [4]	Annual Total Fluid Production (gal)	Annual Organics Production (gal)	% Organics	Total Flow Rate (gpd)	Average Total Flow/Well (gpd)	Average Organics/ Well (gpd)
1985-1988 [1]	15	NA	42,700	NA	NA	NA	NA
1991 [2]	14	1,783,000	16,500	0.93%	4,900	349	3.2
1992	40	5,702,000	58,100	1.02%	15,600	391	4.0
1993	92	19,201,000	121,400	0.63%	52,600	572	3.6
1994	93	23,553,000	92,400	0.39%	64,500	694	2.7
1995	136	22,878,000	70,300	0.31%	62,700	461	1.4
1996 [3]	165	16,780,000	95,600	0.57%	46,000	279	1.6
1997	165	13,541,000	77,300	0.57%	37,100	225	1.3
1998	191	15,157,000	68,800	0.45%	41,500	217	1.0
1999	191	11,667,000	64,400	0.55%	32,000	167	0.9
2000	105	4,419,000	45,800	1.04%	12,100	115	1.2
2001	67	335,700	16,300	4.86%	964	14	0.7
2002	76	266,800	12,600	4.72%	765	10	0.5
2003 [5]	74	201,700	8,900	4.41%	577	7	0.3
2004	68	276,800	9,900	3.58%	783	11	0.4
2005	66	236,900	9,500	4.01%	675	10	0.4
2006 [6]	63	113,200	6,400	5.65%	328	5	0.3
Total		**136,112,100**	**816,900**	**0.60%**	**23,318**	**235**	**1.5**

[1] Production from 1985 through 1988 from pilot recovery system

[2] Production data from 1991 through 1995 based on estimated individual well discharge

[3] Production data from 1996 through 2006 based on tank volumes

[4] Number of wells varied some years; the maximum number is used for each year except for 2000/2001 where an average was used

[5] Upon approval of Addendum E, to the Scenic RPA Report, Scenic OU well field shutdown on August 21, 2003.

[6] Upon approval of Addendum F, to the Brooklawn RPA Report, Brooklawn OU well field shutdown on July 18, 2006.

Table 4: Potential Carcinogenic Risks Associated with 2008 Crawfish Concentrations at Brooklawn OU

Chemical	Target LICR	Crawfish Concentration		Corresponding LICR ( ) [c]
		Risk-Based [a] (mg/kg)	Measured [b] (mg/kg)	
Hexachlorobenzene	1E-04	6.4E-01	1.72E-02	3E-06
	1E-05	6.4E-02		
	1E-06	6.4E-03		
Hexachlorobutadiene	1E-04	1.3E+01	4.61E-02	4E-07
	1E-05	1.3E+00		
	1E-06	1.3E-01		
Combined LICR				3E-06

[a] Chemical concentration in crawfish corresponding to target RME LICR.

[b] 95% UCL chemical concentration measured in edible crawfish tissue during 2008.

[c] LICR from measured chemical concentration under RME conditions.

Table 5: Potential Non-Carcinogenic Hazards Associated with 2008 Crawfish Concentrations at Brooklawn OU

Chemical	Target HI	Crawfish Concentration		Corresponding HQ ( ) [c]
		Risk-Based [a] (mg/kg)	Measured [b] (mg/kg)	
Hexachlorobenzene	10	3.5E+01	1.72E-02	0.005
	1	3.5E+00		
	0.1	3.5E-01		
Hexachlorobutadiene	10	8.8E+00	4.61E-02	0.05
	1	8.8E-01		
	0.1	8.8E-02		
Combined HI = $HQ_{HCB} + HQ_{HCBD}$				0.06

[a] Chemical concentration in crawfish corresponding to target RME HI.

[b] 95% UCL chemical concentration measured in edible crawfish tissue during 2008.

[c] HQ from measured chemical concentration under RME conditions.

Table 6: Summary of Tissue Effect Hazard Quotients for Crawfish *

COC & Exposure Scenario	Exposure Domain HQs			TRV Description
	Western Channels	Eastern Channels	Transition Swamp	
HCB				
AVG	0.0 -1.0	0.0 -2.5	0.1 -6.4	Based on abnormal histology without affecting survival; from exposure to HCB in water.
UBME	0.1 -7.4	0.1 -6.2	0.1 -6.4	
HCBD				
AVG	0.4 -1.4	0.6 -2.5	5.5 -21.3	Based on abnormal histology without affecting survival; from exposure to HCBD in water.
UBME	6.1 -23.6	3.3 -12.8	5.5 -21.3	
Lead				
AVG	0.6 -1.0	1.0 -1.6	0.3 -0.4	Reduced survival.
UBME	4.3 -6.7	3.0 -4.7	0.3 -0.4	

AVG = Average; UBME = Upper-bound mean estimate. Cadmium and PCBs are not shown because all of their HQs were less than 1.0.

* Reproduced from Table 4-3, Summary of Tissue Effect Hazard Quotients for Crawfish, Ecological Risk Assessment (EPA 1999)

Table 7: Potential Ecological Screening Quotients (ESQs) Associated with 2008 Crawfish Concentrations

Chemical	Crawfish Concentration (mg/kg) [a]	NOAEL [b]		LOAEL [c]	
		TRV [d] (mg/kg)	ESQ [e] ( )	TRV [d] (mg/kg)	ESQ [e] ( )
Hexachlorobenzene	3.24E-02	1.00E-01	3E-01	5.75E+00	6E-03
Hexachlorobutadiene	1.08E-01	2.64E-01	4E-01	1.02E+00	1E-01
Combined ESQ			7E-01		1E-01

[a] 95% UCL whole body crawfish concentrations from 2008 sampling effort.

[b] No observed adverse effect level.

[c] Lowest observed adverse effect level.

[d] Toxicity Reference Values from Table 3-7 in Ecological Risk Assessment (USEPA, 1999).

[e] Whole body crawfish concentration divided by the TRV.

Table 8: 2009 Compliance Evaluation of Bayou Baton Rouge Sediments

Potential Receptor Scenario	HCB and HCBD Combined Risk		Is EDHI < RME HI ?	Is EDHI < 1 ? *
	EDHI	RME HI		
Human	3.9E-04	1.0E-01	YES	YES
Aquatic Biota	6.1E-02	5.0E+00	YES	YES
Heron	4.8E-01	1.2E+01	YES	YES
Mink	2.8E-01	8.0E+00	YES	YES

* Each potential receptor's EDHI has been less than 1 for the last three (3) sampling events (2005, 2007 and 2009)

Table 9: Historical Combined Risk EDHI

Potential Receptor Scenario	Year								
	1996[1]	1999	2000	2001	2002	2003	2005	2007	2009
Human, EDHI ()	9.1E-04	1.7E-03	5.5E-04	1.1E-03	6.2E-03	4.8E-03	1.3E-03	3.9E-04	3.9E-04
Aquatic Biota, EDHI ()	1.2E-01	1.8E-01	1.2E-01	3.4E-01	7.4E-01	4.9E-01	4.9E-01	8.1E-02	6.1E-02
Heron, EDHI ()	***1.1E+00***[2]	***2.3E+00***	5.7E-01	8.3E-01	***8.0E+00***	***6.5E+00***	7.8E-01	4.1E-01	4.8E-01
Mink, EDHI ()	6.5E-01	***1.2E+00***	3.8E-01	7.2E-01	***4.4E+00***	***3.5E+00***	8.3E-01	2.7E-01	2.8E-01
HCB ED Average (mg/kg)	2.80	5.68	1.36	1.91	19.80	16.04	1.69	0.99	1.17
HCBD ED Average (mg/kg)	0.18	0.23	0.19	0.56	1.01	0.62	0.81	0.13	0.09

Notes:

1: Data presented in Addendum D to the Scenic RPA Report, 1999

2: ***n*** - indicates EDHI > 1

Table 10: Composite Analysis of Test Cell Dechlorination over 216 days of Treatment

COC	Start of Test Average Concentration in Test Cell (µM)	End (7 months) Average Concentration in Test Cell (µM)	Percent Reduction
TeCA	0.98	0.36	64
TCA	11.7	4.32	63
DCA	29.9	10.7	64
PCE	4.73	1.27	73
TCE	22.6	8.95	60
c-DCE	19.7	23.3	– 18
VC	47.5	46.6	2
Total - all	137	95.4	30
Total - parents	69.8	25.6	63
Total - TCA/PCE/TCE	38.9	14.5	63
	all test cell wells 3/10 and 3/11/2009 data	no EN or EU 10/5 and 10/6/2009 data	
Mass Dechlorinated			
	moles dechlorinated	**kg-TCA equivalent**	
Total - all	114	15.3	
Total - parents	122	16.2	
Total - TCA/PCE/TCE	67.2	8.96	
	assumes thickness = 22 ft, radius = 75 ft, porosity = 0.25		

Table 11: Composite Analysis of Test Cell Dechlorination after Buffer Addition on February 10-11, 2010.

COC	Prior to Buffer Addition: Average Concentration in Test Cell (µM)	1 Week After Buffer Addition: Average Concentration in Test Cell (µM)	Percent Reduction
TeCA	0.47	0.12	75
TCA	4.69	0.53	89
DCA	12.9	1.36	89
PCE	1.39	0.16	88
TCE	10.2	0.58	94
c-DCE	22.3	16.8	24
VC	68.9	24.5	64
Total - all	121	44.1	63
Total - parents	29.7	2.76	91
	1/11-13/2010 data, excluding EN & EU	2/18-22/2010 data, excluding EN & EU	

APPENDIX A

Documents Reviewed

SECOND FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE
EAST BATON ROUGE PARISH, LOUISIANA
LAD057482713

(2 pages)

December 2010

Appendix A

Documents Reviewed

Document Date	Document ID	Document Title
12/1/1983	CDD.19831201.001	Original Consent Decree Document
9/1/1985	CDD.19850901.001	RPA 1985 Vol. II - VI.
8/1/1989	CDD.19890801.001	RDCP: Brooklawn Site Prep and Earthwork
9/11/1995	CDD.19950911.001	RDCP Vol. II & III: Upper & Lower Lagoon Fill
9/23/1996	CDD.19960923.001	Work Plan, Addendum B: Supplemental Waste Investigation of Scenic Site
8/31/1998	CDD.19980831.001	RPA Addendum D,Vol. I-IV (Scenic)
9/1/1998	CDD.19980901.001	RDCP. Addendum D, Vol. I-III (Scenic)
5/31/2001	CDD.20010531.001	RPA Addendum A, Vol. I-IV (Brooklawn)
11/1/2001	CDD.20011101.001	Addendum B to the Work Plan for RPA, WP-5 (Scenic)
11/1/2001	CDD.20011101.002	Interim RA Report - Scenic OU
1/1/2002	CDD.20020101.004	RDCP Vol I, Add. A & Vol. III, Add. B
1/31/2003	CDD.20030131.001	Addendum E, RPA Report, PPI Scenic Site
7/21/2003	CDD.20030721.001	Interim RA Report - Brooklawn OU
7/31/2003	CDD.20030731.001	Preliminary Close Out Report, PPI Site
10/20/2003	CDD.20031020.001	Addendum F to the Work Plan (Brooklawn)
11/4/2003	CDD.20031104.001	Addendum G to the Work Plan (Scenic)
12/4/2003	CDD.20031204.001	RPA Long Range Monitoring Report 2002 (Scenic)
12/12/2004	CDD.20041212.001	Long Range Monitoring Report, Brooklawn Site 2003
12/27/2004	CDD.20041227.001	RPA Long Range Monitoring Report 2003 (Scenic)
12/22/2005	CDD.20051222.001	First Five Year Review Report
4/24/2006	CDD.20060424.001	Long Range Monitoring Report, Brooklawn Site 2004
6/22/2006	CDD.20060622.001	Addendum F, RPA, Brooklawn Unit
7/24/2006	CDD.20060724.001	RPA Long Range Monitoring Report 2004 (Scenic)
12/14/2006	CDD.20061214.001	Long Range Monitoring Plan Report, Brooklawn Site 2005
4/12/2007	CDD.20070412.001	RPA Long Range Monitoring Report 2005 & 2006 (Scenic)
7/18/2007	CDD.20070718.001	Addendum G, RPA, Scenic Unit
11/19/2007	CDD.20071119.001	Addendum H to Work Plan for RPA - Scenic Site
6/2/2008	CDD.20080602.001	RPA Long Range Monitoring Report 2007 (Scenic)
9/25/2008	CDD.20080925.001	Long Range Monitoring Plan Report, Brooklawn Site 2006 & 2007
6/19/2009	CDD.20090619.001	Addendum to the Long Range Monitoring Plan Report, Brooklawn, 2006 & 2007
3/9/2010	CDD.20100309.001	Long Range Monitoring Plan Report, Brooklawn Site 2008
3/29/2010	CDD.20100329.001	RPA Long Range Monitoring Plan Report 2008 & 2009 (Scenic)
8/17/2010	CDD.20100817.001	Addendum H to the RPA - Scenic Site
8/19/2010	CDD.20100819.001	Addendum H to the RDCP - Scenic Site

APPENDIX B

Public Notices

SECOND FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE
EAST BATON ROUGE PARISH, LOUISIANA
LAD057482713

(7 pages)

December 2010

PETRO-PROCESSORS of LOUISIANA, INC

East Baton Rouge, Louisiana

February 2010

United States Environmental Protection Agency

This Fact Sheet will tell you about…

- **Current Actions**
- **Future Five-Year Reviews**
- **Site History**
- **Community Involvement**
- **For More Information**

Current Actions

On February 1, 2010, the U.S. Environmental Protection Agency (EPA) and the Louisiana Department of Environmental Quality (LDEQ) began the second Five-Year Review, at the Petro-Processors of Louisiana, Inc. (PPI) site, located in Baton Rouge, Louisiana. The EPA is working with the responsible parties at PPI, as well as state and federal scientists and engineers to evaluate the site. During the five-year review, EPA will:

- Examine the effectiveness of the cleanup;
- Review current environmental laws;
- Talk with local officials to see if they have any concerns or if there have been any changes in local policies or zoning that might affect the original cleanup;
- Inspect the site to see if the cleanup process continues to function properly;
- Ensure the site is being maintained correctly; and
- Talk to people who live close to the site, own businesses nearby, or work at the site to determine if they have any concerns.

This second Five-Year Review will indicate if the selected remedy for the PPI site, as specified in the Consent Decree and the supplemental plans, remains protective of human health and the environment. The EPA and LDEQ will insure that any problems identified by the review will be addressed.

The Five-Year Review report will be made available to the public once the Five-Year Review is completed. The report will include information about the site history, cleanup activities, site inspection results, data review and analysis, conclusions and recommendations. A copy of the report will be made available at the PPI operation area located at 2401 Brooklawn Drive in Baton Rouge, Louisiana. You will be notified when the report is finished and available to the public.

Future Five-Year Reviews

Since PPI wastes remain onsite at the Petro-Processors of Louisiana, Inc. Site, EPA will perform site reviews at a minimum of every five years to determine if the cleanup at the site is still protecting public heath and the environment. EPA and the State will continue to monitor the site between reviews. If at any time you have concerns or questions about the site, let EPA know. You can contact EPA by calling 800.533.3508 (toll-free).

Site History

The PPI site was originally used as a depository for various petrochemical waste products during the 1960s and the 1970s. In July 1980, the U.S. Justice Department filed suit against PPI and Industry Defendants, alleging that they disposed wastes at this facility. On February 16, 1984, the U.S. Federal District Court, Middle District of Louisiana issued an order approving a Consent Decree for a remedial action.

- **Initial Remedy**

The initial response action specified the design of a vault and the complete closure of the site by excavating, solidifying and land-filling all visible waste along with recovery of deeper waste and treatment by incineration. After initiating this response, air monitoring demonstrated releases of volatile organics to the air above the previously agreed fence line concentrations.

- **Final Remedy**

A supplemental investigation was conducted and a Supplemental Remedial Action Plan was approved. This plan provided for hydraulic containment and recovery, coupled with incineration. Through additional investigations, the remedial plans were expanded or modified to protect potential threats to human health and the environment. These plans were implemented and included

- Placement of a protective covering over the original open pits
- Source reduction by pumping treatment and removal of contaminated groundwater
- Protective fill over Bayou Baton Rouge distributaries near the Brooklawn PPI location
- Monitoring that natural attenuation takes place

- Sampling the groundwater sediments, biota and the air to monitor the effectiveness of the actions
- Conducting future modeling and inspection activities
- Continue updating of groundwater modeling investigations
- Placing administrative controls to limit access to the site.

In July 2003, the site received Construction Complete status. Currently the site is in the operation and maintenance phase, while further modeling, monitoring, and inspection activities continue to be implemented to ensure protection of human health and the environment.

The first Five-Year Review completed on December 22, 2005, found that the remedy remained protective of public health and the environment.

Community Involvement

We want to hear from you. During its review, EPA will consider any information or concerns that you may have about the site. If you are familiar with the site, you may know things that can help the review team. Here are some examples:

- Broken fences, unusual odors, illegal dumping, or other problems;
- Buildings or land being used in new ways around the site;
- Any unusual activities at the site such as vandalism or trespassing; and
- How the cleanup at the site has helped the area.

The public may contact the EPA or local state officials with any questions or concerns they may have.

For More Information, Please contact…

Bartolome Cañellas
Remedial Program Manager
U.S. EPA Region 6 (6SF-RP)
Tel: 214.665.6662 or Toll Free: 800.533.3508
Email: canellas.bart@epa.gov

Jason T. McKinney
Community Involvement Coordinator
U.S. EPA Region 6 (6SF-VO)
Tel: 214.665.8132 or Toll-free: 800.533.3508
Email: Mckinney.jason@epa.gov

Thomas Stafford
Louisiana Department of Environmental Quality
#602 North Fifth Street
Baton Rouge, Louisiana 70802
Tel: 225.219.2333 or Toll Free: 888.763.5424
Email: Thomas.Stafford@LA.GOV

For press inquiries, please call, EPA Press Office, at 214.665.2208 or 214.665.2261.

On The Web…

You can find more information about the Region 6 Superfund program on EPA's Region 6 website:
http://www.epa.gov/region6/superfund
or to be added to the mailing list call 800.533.3508

Information Repositories

Petro-Processors of Louisiana, Inc
2401 Brooklawn Drive
Baton Rouge, Louisiana 70807
Tel: 225.778.6200

Louisiana Department of
Environmental Quality
Thomas F. Harris
Remediation Services.
P.O. Box 4314
Baton Rouge, Louisiana 70821-4314
Tel: 225.219.3192


EPA
United States
Environmental Protection
Agency

PETRO-PROCESSORS OF LOUISIANA, INC. SUPERFUND SITE
PUBLIC NOTICE

EPA Region 6 and LDEQ Begin Second Five-Year Review of Site Remedy

The U. S. Environmental Protection Agency Region 6 (EPA) and the Louisiana Department of Environmental Quality (LDEQ) have begun the second Five-Year Review of the remedy for the Petro-Processors Superfund Site. The review will let us know if the remedy performed is still protecting public health and the environment. The first five year review was approved on December 22, 2005, and found the remedy to be protective of public health and the environment. The site is located in Baton Rouge, East Baton Rouge Parish, Louisiana. Once completed, the results of the second Five-Year Review will be made available to the public at www.epa.gov and at the following information repositories:

EPA, Region 6
1445 Ross Avenue
Dallas, Texas 75202

LDEQ
602 N. Fifth Street
Baton Rouge, Louisiana 70802

Information about the Site also is available on the Internet at www.epg.gov/region6/superfund or http://edms.deq.louisiana.gov/app/doc/querydef.aspx (AI#2469). For more information about the Site, contact: Bartolome Canellas (214) 665-6662 or 1-800-533-3508 (toll-free), or by e-mail at canellas.bart@epa.gov or Thomas Stafford (225) 219-3222 or by e-mail at thomas.stafford@la.gov.

All media inquiries should be directed to the EPA Press Office at (214) 665-2200.

ENV.20100205.002

RECEIVED
FEB 2 2 2010
NPC SERVICES INC.

CAPITAL CITY PRESS

Publisher of
THE ADVOCATE

PROOF OF PUBLICATION

The hereto attached notice was published in THE ADVOCATE, a daily newspaper of general circulation published in Baton Rouge, Louisiana, and the Official Journal of the State of Louisiana, City of Baton Rouge, and Parish of East Baton Rouge, in the following issues:

02/05/10

Susan A. Bush, Public Notice Clerk

Sworn and subscribed before me by the person whose signature appears above

February 5, 2010

M. Monic McChristian,
Notary Public ID# 88293
State of Louisiana
My Commission Expires: Indefinite

PETRO-PROCESSORS OF LOUISIANA, INC.
SUPERFUND SITE
PUBLIC NOTICE

EPA Region 6 and LDEQ Begin Second Five-Year Review of Site Remedy

The U. S. Environmental Protection Agency Region 6 (EPA) and the Louisiana Department of Environmental Quality (LDEQ) have begun the second Five-Year Review of the remedy for the Petro-Processors Superfund Site. The review will let us know if the remedy performed is still protecting public health and the environment. The first five year review was approved on December 22, 2005, and found the remedy to be protective of public health and the environment. The site is located in Baton Rouge, East Baton Rouge Parish, Louisiana. Once completed, the results of the second Five-Year Review will be made available to the public at www.epa.gov and at the following information repositories:

EPA, Region 6
1445 Ross Avenue
Dallas, Texas 75202

LDEQ
602 N. Fifth Street
Baton Rouge, Louisiana 70802

Information about the Site also is available on the Internet at www.epa.gov/region6/superfund or http://edms.deq.louisiana.gov/app/doc/querydef.aspx (AI#2469). For more information about the Site, contact: Bartolome Canellas (214) 665-6662 or 1-800-533-3508 (toll-free), or by e-mail at canellas.bart@epa.gov or Thomas Stafford (225) 219-3222 or by e-mail at thomas.stafford@la.gov.

All media inquiries should be directed to the EPA Press Office at (214) 665-2200.

4221321-feb 5-1t

M. MONIC McCHRISTIAN NOTARY PUBLIC NOTARY NO. 88293 STATE OF LOUISIANA

NPC SERVICES **4221321**
PETRO PROCESSORS SITE
2401 BROOKLAWN DR
BATON ROUGE LA 70807

ENV:20100205.001

Advocate

CAPITAL CITY PRESS
PO BOX 613
BATON ROUGE, LA 70821-0613

(225) 383-1111 FED ID NO 72-0146160

DATE: 2-05-10

ACCOUNT NUMBER: 701130

LEGAL ADVERTISING INVOICE

* * * ORIGINAL INVOICE * * *

NPC SERVICES
PETRO PROCESSORS SITE
2401 BROOKLAWN DR
BATON ROUGE LA 70807

POSTED

PAID 45535 2/10/10 VERIFIED

PMT/CREDITS

INVOICE NUMBER	TAG / DESCRIPTION	START DATE	STOP DATE	TIMES	SIZE	AMOUNT DUE
T0422132102	2ND FIVE YR REVIEW	02/05/10	02/05/10	1	168.0	✓ 325.80

LEGAL ADVERTISING INVOICE AFFIDAVITS WILL BE SENT SEPARATELY

PETRO-PROCESSORS OF LOUISIANA, INC.
SUPERFUND SITE
PUBLIC NOTICE

EPA Region 6 and LDEQ Begin Second Five-Year Review of Site Remedy

The U. S. Environmental Protection Agency Region 6 (EPA) and the Louisiana Department of Environmental Quality (LDEQ) have begun the second Five-Year Review of the remedy for the Petro-Processors Superfund Site. The review will let us know if the remedy performed is still protecting public health and the environment. The first five year review was approved on December 22, 2005, and found the remedy to be protective of public health and the environment. The site is located in Baton Rouge, East Baton Rouge Parish, Louisiana. Once completed, the results of the second Five-Year Review will be made available to the public at www.epa.gov and at the following information repositories:

EPA, Region 6
1445 Ross Avenue
Dallas, Texas 75202

LDEQ
602 N. Fifth Street
Baton Rouge, Louisiana 70802

Information about the Site also is available on the Internet at www.epa.gov/region6/superfund or http://edms.deq.louisiana.gov/app/doc/querydef.aspx (AI#2469). For more information about the Site, contact: Bartolome Canellas (214) 665-6662 or 1-800-533-3508 (toll-free), or by e-mail at canellas.bart@epa.gov or Thomas Stafford (225) 219-3222 or by e-mail at thomas.stafford@la.gov.

All media inquiries should be directed to the EPA Press Office at (214) 665-2200.

4221321-feb 5-1t

APPENDIX C

State Concurrence and ARARs Review

(Including Louisiana Laboratory Accreditations for
Gulf Coast Analytical Laboratories)

SECOND FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE
EAST BATON ROUGE PARISH, LOUISIANA
LAD057482713

(9 pages)

December 2010

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

January 21, 2010

Mr. Thomas Stafford,
Environmental Scientist
Louisiana Department of Environmental Quality
Remediation Services Division
PO Box 4314.
Baton Rouge, LA 70821-4314

Re: **Petro Processors, Inc. Site; AI#2469**, EPA Site ID # LAD057482713
Request for Applicable or Relevant and Appropriate Requirements (ARARs)

Dear Mr. Stafford:

The U.S. Environmental Protection Agency (EPA) is currently involved in conducting a second five year review at the Petro Processors Site. Under Section 121(d)(2)(A) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), the remedial actions must meet any Federal standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate requirements (ARARs) as well as any State ARARs that are more stringent than Federal requirements.

On February 11, 2005, during the first five year review, Mr. Keith L Casanova, Administrator, informed us that they has identified only one ARAR that pertains to the Petro Processors Site. This was the requirement that all chemical analyses must be conducted by a laboratory that has complied with the Laboratory Accreditation Program promulgated on May 20, 1998. Now during the second five year review we would like to confirm there are no new ARARs.

We appreciate the Louisiana Department of Environmental Quality's cooperation with EPA in addressing the cleanup issues associated with this site. For additional information regarding current and future plans for this site, please contact me at (214) 665-6662.

Sincerely yours,

Bartolome J. Cañellas (6SF-RL)

Cc; Bryan McReynolds
NPC Services
2401 Brooklawn Drive
Baton Rouge, LA 70807-6200

BOBBY JINDAL
GOVERNOR

DEQ_20100430_001

PEGGY M. HATCH
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

April 30, 2010

Bartolome J. Canellas (6SF-LP)
Environmental Engineer
US Environmental Protection Agency
1445 Ross Avenue
Dallas, TX 75202-2733

RE: Applicable or Relevant and Appropriate Requirements (ARARS)
Petro Processors Brooklawn Rd, AI 2469
Petro Processors Scenic Highway, AI 83225
Baton Rouge, East Baton Rouge Parish

Dear Mr. Canellas:

The Louisiana Department of Environmental Quality/ Remediation Services Division (LDEQ/RSD) has identified only one ARAR that pertains to Petro that is not found in federal regulation; Chemical analyses must be conducted by a laboratory that has complied with the Laboratory Accreditation Program that was promulgated on May 20, 1998.

These regulations provide requirements for an accreditation program applicable to commercial laboratories, and federal, state and local government laboratories performing analyses reportable to the LDEQ. The program is designed to ensure the accuracy, precision, and reliability of the data generated, as well as the use of department-approved methodologies in the generation of that data. Laboratory data generated by commercial environmental laboratories that are not accredited under these regulations will not be accepted by LDEQ.

Please direct all future correspondence regarding remediation issues in triplicate to:

Thomas F. Harris, Administrator
Remediation Services Division
P. O. Box 4313
Baton Rouge, LA 70821-4313.

Please feel free to call Thomas L. Stafford at (225) 219-3222 if you have any questions or comments regarding this matter.

Sincerely,

Thomas L. Stafford
Environmental Scientist
Remediation Services Division

/tls

Cc: Imaging Operations - IAS
NPC Services; Bryan McReynolds; 2401 Brooklawn Drive
Baton Rouge, LA 70807-6200

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to:

Gulf Coast Analytical Labs
7979 GSRI Avenue
Baton Rouge, LA 70820

Agency Interest No. 30632

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory, and does not constitute an endorsement of the suitability of the listed methods for any specific application.

To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Melvin C. Mitchell Sr., Accreditation Officer
Louisiana Environmental Laboratory Accreditation Program

Certificate Number: 01955
Expiration Date: June 30, 2006
Issued On: July 1, 2005

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to:

Gulf Coast Analytical Labs
7979 GSRI Avenue
Baton Rouge, LA 70820

Agency Interest No. 30632

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory, and does not constitute an endorsement of the suitability of the listed methods for any specific application.

To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Melvin C. Mitchell Sr., Accreditation Officer
Louisiana Environmental Laboratory Accreditation Program

Certificate Number: 01955
Expiration Date: June 30, 2007
Issued On: July 1, 2006

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to

Gulf Coast Analytical Labs
7979 GSRI Avenue
Baton Rouge, LA 70820

THE NELAC INSTITUTE

Agency Interest No. 30632

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the NELAC standards and Part I, Subpart 3 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory.

To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Melvin C. Mitchell Sr., Accreditation Officer
Louisiana Environmental Laboratory Accreditation Program

Certificate Number: 01955
Expiration Date: June 30, 2009
Issued On: July 1, 2008

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to:

Gulf Coast Analytical Laboratories, Inc.
7979 GSRI Avenue
Baton Rouge, LA 70820

Agency Interest No. 3467

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status. Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory, and does not constitute an endorsement of the suitability of the listed methods for any specific application.

To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Nathan Levy

Nathan Levy, Administrator
Permit Support Services Division

Certificate Number: 01955
Expiration Date: June 30, 2010
Issued On: July 1, 2009

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to

Gulf Coast Analytical Laboratories Inc
7979 GSRI Ave
Baton Rouge, LA 70820

Agency Interest No. 3476

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status.

Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory. To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Christopher Mayeux, Environmental Scientist Manager
Notifications and Accreditations Section
Permit Support Services Division

Certificate Number: 01955
Expiration Date: June 30, 2011
Issued On: July 1, 2010

APPENDIX D

Site Survey Forms

SECOND FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE
EAST BATON ROUGE PARISH, LOUISIANA
LAD057482713

(20 pages)

December 2010

APPENDIX D
FIRST FIVE-YEAR REVIEW REPORT

Petro-Processors Of Louisiana, Inc. Site
East Baton Rouge Parish, Louisiana

Site Survey Forms

INTERVIEW DOCUMENTATION FORM			
The following is a list of individual interviewed for this five-year review. See the attached contact record(s) for a summary of the interviews.			
Name	**Title/Position**	**Organization**	**Date**
Thomas Stafford	Environmental Scientist	LA Department of Environmental Quality	4/13/2010
Bart Canellas	Remedial Project Manager	EPA Region 6	6/3/2010
Jack Collins	Facility Manager	Dayspring Group	3/1/2010
Michael J. Truex	Sr. Project Manager	Battelle Northwest	3/2/2010
W. David Constant	Humphreys Turner Professor and Interim Dean, College of Engineering	Louisiana State University	3/1/2010
Jason McKinney	Community Involvement Coordinator	EPA Region 6	6/2/2010
Darcie Olexia	Environmental Health Scientist Coordinator	LA Dept. of Health and Hospitals	3/2/2010
Beverly Negri	Community Involvement Coordinator	EPA Region 6	5/16/2010
Peter B. Lee	Senior Geologist	EcoScience Resource Group, LLC	3/2/2010

INTERVIEW RECORD

Site Name: Petro-Processors of Louisiana Inc. (PPI)		**EPA ID No.:** LAD057482713
Subject: 5-Year Review		**Time:** 8:35 **Date:** 4/13/2010
Type: ☐ Telephone ☐ Visit ☒By Mail ☐Other **Location of Visit: N/A**		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bryan McReynolds	**Title:** Process & Environmental Engineer	**Organization:** NPC Services, Inc.

Individual Contacted:

Name: Thomas Stafford	**Title:** Environmental Scientist	**Organization:** La. Dept of Environmental Quality

Telephone No: 225- 219-3222 **Fax No:** 225-219-3239 **E-Mail Address:** Thomas.Stafford@la.gov	**Street Address:** Remediation Services Division 602 N. Fifth Street Baton Rouge, LA 70802	**Mailing Address:** Remediation Services Division P.O. Box 4313 Baton Rouge, Louisiana 70821-4313

Summary Of Interview

1. What is your overall impression of the project (general sentiment)?
   It has been a very long process with many mid-course changes. The current solution is working well and is the best available. The addition of wells injecting a molasses solution into the plume at the Scenic Site is promising as a way to reduce the spread of the dissolved contaminants.

2. What effects have site operations had on the surrounding community?
   The project caused a lot of concern earlier in its operation. There were odor complaints from near by residents and industrial facilities. The site does not cause near the concern anymore. There is considerable concern about other facilities that are and have been operated in the area. These include the "New" North Landfill, Clean Harbors (formerly Rollins), and the "old" Devil's Swamp Landfill. There is additional concern about biota taken from areas of Devil's Swamp that have been contaminated by past activity at the site. Finally, there is another site (Devil's Swamp Lake) proposed to the NPL that is also causing concern about biota. This site is being investigated under a Unilateral Administrative Order issued by the U. S. EPA.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.
   There is still some concern that the investigation has underestimated the threat the site poses to human health and the environment. There is also concern that the remedy will eventually fail, causing additional releases and additional migration. There was considerable concern about the firm that had purchased the unused landfill cell from NPC using it for disposal of non-hazardous industrial solid waste. The permit application was denied.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities?
   If so, please give details. There have been none recently. There were some fires at Brooklawn during the 1980s before remedial efforts began.

5. Do you feel well informed about the site's activities and progress?
   Yes

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation? *No*

INTERVIEW RECORD

Site Name: Petro-Processors of Louisiana Inc. (PPI)		**EPA ID No.:** LAD057482713
Subject: 5-Year Review		**Time:** **Date:** 6/3/2010
Type: ☐ Telephone ☐ Visit ☒By Mail ☐Other **Location of Visit: N/A**		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bryan McReynolds	**Title:** Process & Env. Engineer	**Organization:** NPC Services, Inc.

Individual Contacted:

Name: Bart Canellas	**Title:** Remedial Project Manager	**Organization:** EPA Region 6
Telephone No: 214-665-6662 **Fax No:** 214-665-6660 **E-Mail Address:** canellas.bart@epa.gov		**Street Address:** 1445 Ross Ave. **City, State, Zip:** Dallas, TX 75202-2733

Summary Of Conversation

1. Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
   Yes.

2. What is your overall impression of the project (general sentiment)?
   Work has been completed in accordance to a Consent Decree signed in a Federal Court. Operation and maintenance activities are ongoing, monitoring of the site is ongoing as per approved plans, and additional investigations are carried out in areas where monitoring has shown the need of additional work.

3. Are you aware of what effects have site operations had on the surrounding community?
   Uncontrollable releases of the past are now under control. There are no more uncontrollable releases to the swamp or the air.

4. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.
   No particular concerns related to this site. Concerns related to other sites and facilities being addressed by EPA and LDEQ under the regulatory programs for those sites.

5. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, broken fences, damaged fences, or emergency responses from local authorities? If so, please give details.
   Not aware of any significant events that could affect the protectiveness of the site. Inspections have shown the site is fenced, secure, monitored and O&M activities are carried out as planned.

6. Do you feel well informed about the site's activities and progress?
   Yes, monitoring activities are carried out as required and properly reported to the EPA and the State.

7. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
   Not a significant change, but as planned, sediment sampling at the Scenic site will be discontinued after several years of monitoring showing no adverse effects.

8. Are you aware of any problems related to site access control, road maintenance, site security?
   None, access control is maintained.

9. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?
   No settlements, cracks, erosion or stressed vegetation observed as per the latest site inspection conducted by the EPA and State (LDEQ) project coordinators.

10. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.
    No. After implementation of the remedy, Swamp portions of the site are periodically monitored as per the approved plans and results reported to the regulatory agencies.

11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?
    Site management is very responsive in addressing areas where monitoring activities have shown the need of additional work. Examples of this include:
    - *repairing areas where erosion has been noted,*
    - *conducting pilot testing (field testing) of Enhance Attenuation to speed-up natural physical-chemical and biological processes,*
    - *conducting additional characterization of the area known as the +20 MSL Channel within the boundaries of the Scenic site and the Baxter Tract Property now fully owned by NPC Services,*
    - *preparing additional plans for near-source control to augment the approved natural attenuation remedy and*
    - *supporting on-going characterization of bacterial populations with investigators from the Louisiana State University.*

12. Are you aware of any changes in actual or projected land uses?
    No.

INTERVIEW RECORD

Site Name: Petro-Processors of Louisiana Inc. (PPI)		**EPA ID No.:** LAD057482713
Subject: 5-Year Review		**Time:** **Date:** 3/1/2010
Type: ☐ Telephone ☐ Visit ☒By Mail ☐Other **Location of Visit: N/A**		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bryan McReynolds	**Title:** Process & Env. Engineer	**Organization:** NPC Services, Inc.

Individual Contacted:

Name: Jack Collins	**Title:** Facility Manager	**Organization:** Dayspring Group
Telephone No: 225-778-6210 **Fax No:** 225-778-6299 **E-Mail Address:** mcollins@daysg.com	**Street Address:** P.O. Box 1008 **City, State, Zip:** Zachary, LA 70791	

Summary Of Conversation

1. Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
   Yes.

2. What is your overall impression of the project (general sentiment)?
   Good. The Site remedy is effective. Work continues to be performed in a safe environment.

3. Are you aware of what effects have site operations had on the surrounding community?
   I am not aware of any negative effects. NPC and its contractors actively participate in community programs such as United Way. NPC supports community organizations in the Alsen community.

4. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.
   None

5. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, broken fences, damaged fences, or emergency responses from local authorities? If so, please give details.
   None

6. Do you feel well informed about the site's activities and progress?
   Yes

7. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
   No significant changes in the last 5 years

8. Are you aware of any problems related to site access control, road maintenance, site security?
   No

9. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?
I am not aware of any of these issues in the backfilled areas.

10. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.
No

11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?
No comments, suggestions or recommendations

12. Are you aware of any changes in actual or projected land uses?
No

INTERVIEW RECORD

Site Name: Petro-Processors of Louisiana Inc. (PPI)		**EPA ID No.:** LAD057482713
Subject: 5-Year Review		**Time:** **Date:** 3/2/2010
Type: ☐ Telephone ☐ Visit ☒By Mail ☐Other **Location of Visit: N/A**		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bryan McReynolds	**Title:** Process & Env. Engineer	**Organization:** NPC Services, Inc.

Individual Contacted:

Name: Michael J. Truex	**Title:** Program Manager	**Organization:** Battelle Northwest
Telephone No: 509-376-5461 **Fax No:** 509-372-1704 **E-Mail Address:** mj.truex@pnl.gov		**Street Address:** P.O. Box 999 **City, State, Zip:** Richland, WA 99352

Summary Of Conversation

1. Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
   Yes.

2. What is your overall impression of the project (general sentiment)?
   Cleanup and containment are underway to mitigate the risk from contamination.

3. Are you aware of what effects have site operations had on the surrounding community?
   No

4. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.
   No

5. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, broken fences, damaged fences, or emergency responses from local authorities? If so, please give details.
   No

6. Do you feel well informed about the site's activities and progress?
   Yes, in terms of the technical details of the remedy.

7. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
   No, other than the recent activities being conducted under the current work plan for the site.

8. Are you aware of any problems related to site access control, road maintenance, site security?
   No

9. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?
   No

10. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.
No

11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?
No

12. Are you aware of any changes in actual or projected land uses?
No

INTERVIEW RECORD

Site Name: Petro-Processors of Louisiana Inc. (PPI)		**EPA ID No.:** LAD057482713
Subject: 5-Year Review		**Time:** **Date:** 3/1/2010
Type: ☐ Telephone ☐ Visit ☒By Mail ☐Other **Location of Visit: N/A**		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bryan McReynolds	**Title:** Process & Env. Engineer	**Organization:** NPC Services, Inc.

Individual Contacted:

Name: W. David Constant	**Title:** Interim Dean, Graduate Sch.	**Organization:** La State University
Telephone No: 225-578-3885 **Fax No:** 225-578-1370 **E-Mail Address:** hscons@lsu.edu		**Street Address:** 119 David Boyd Hall West **City, State, Zip:** Baton Rouge, LA 70803

Summary Of Conversation

1. Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
   Yes

2. What is your overall impression of the project (general sentiment)?
   Everything is proceeding as is the plan with appropriate safeguards in place.

3. Are you aware of what effects have site operations had on the surrounding community?
   I'm not aware of any issues or problems with the surrounding community. Model results reviewed do not indicate a risk issue present.

4. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.
   No.

5. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, broken fences, damaged fences, or emergency responses from local authorities? If so, please give details.
   No.

6. Do you feel well informed about the site's activities and progress?
   Yes, very well informed.

7. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
   Transition from active to passive remedy – monitored natural attenuation, with plans for active remedies if needed.

8. Are you aware of any problems related to site access control, road maintenance, site security?
   No

9. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?
   No

10. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.
    No, not in the swamp.

11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?
    All are doing a great job to protect human health and environment.

12. Are you aware of any changes in actual or projected land uses?
    No

INTERVIEW RECORD

Site Name: Petro-Processors of Louisiana Inc. (PPI)		**EPA ID No.:** LAD057482713
Subject: 5-Year Review		**Time:** **Date:** 6/2/2010
Type: ☐ Telephone ☐ Visit ☒By Mail ☐Other **Location of Visit: N/A**		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bryan McReynolds	**Title:** Process & Env. Engineer	**Organization:** NPC Services, Inc.

Individual Contacted:

Name: Jason McKinney	**Title:** Community Involvement Coordinator	**Organization:** EPA Region 6
Telephone No: 214-665-8132 **Fax No:** **E-Mail Address:** McKinney.Jason@epa.gov	**Street Address:** 1445 Ross Ave. **City, State, Zip:** Dallas, TX 75202-2733	

Summary Of Conversation

1. Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
   Yes.

2. What is your overall impression of the project (general sentiment)?
   My overall impression is that the EPA is doing a excellence job at cleaning up the contaminants

3. Are you aware of what effects have site operations had on the surrounding community?
   No I am not aware of either positive or negative effects the site operations had had on the surrounding community… I would assume positive one…

4. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.
   I am not aware of any community concerns regarding the site of its operations and administration.

5. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, broken fences, damaged fences, or emergency responses from local authorities? If so, please give details.
   There is 24 hours security for the site so at this point I have not heard of any vandalism, trespassing, broken fences, damaged fences, or emergency responses from local authorities.

6. Do you feel well informed about the site's activities and progress?
   Yes but not only by the information readily made available by the U.S. EPA but through online access...

7. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
   I am not aware of any significant changes regarding Operation and Maintenance activities or sampling routines in the last five years…

8. Are you aware of any problems related to site access control, road maintenance, site security?
   I am not aware of any problems related to the site as for access control, road maintenance, or site security. With 24 hours on-site security I would think that there would be no unauthorized site access from non-government individuals.

9. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover, or ponding of water over the backfilled areas?
   none at this time…

10. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.
    No, none at this time.

11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?
    No, none at this time.

12. Are you aware of any changes in actual or projected land uses?
    No, none at this time…

INTERVIEW RECORD

Site Name: Petro-Processors of Louisiana Inc. (PPI)	**EPA ID No.:** LAD057482713	
Subject: 5-Year Review	**Time:**	**Date:** 3/2/2010
Type: ☐ Telephone ☐ Visit ☒By Mail ☐Other **Location of Visit: N/A**	☐ Incoming ☐ Outgoing	

Contact Made By:

Name: Bryan McReynolds	**Title:** Process & Env. Engineer	**Organization:** NPC Services, Inc.

Individual Contacted:

Name: Darcie Olexia	**Title:** Environmental Health Scientist Coordinator	**Organization:** La. Department of Health & Hospitals

Telephone No: 225-219-4586 **Fax No:** **E-Mail Address:** dolexia@la.gov	**Street Address:** **City, State, Zip:** Baton Rouge, LA

Summary Of Conversation

1 . Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
Yes.

2. What is your overall impression of the project (general sentiment)?
Stakeholders are informed of EPA's current actions at the PPI site and are provided an opportunity to share information with state and federal site managers.

3. Are you aware of what effects have site operations had on the surrounding community?
I am not aware of any effects that site operations have had on the community.

4. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.
No.

5. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, broken fences, damaged fences, or emergency responses from local authorities? If so, please give details.
No.

6. Do you feel well informed about the site's activities and progress?
I receive updates from the EPA mailing list regarding any upcoming site events, including the most recent fact sheet for February 2010 to inform about the second five-year review at the PPI site.

7. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
No.

8. Are you aware of any problems related to site access control, road maintenance, site security?
No.

9. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?
   In September 2006, SEET evaluated post-Katrina groundwater samples and remarks from the EPA/CH2MHILL site evaluation. Groundwater samples were analyzed for VOCs and were below ATSDR health based comparison values. As stated in the February 2006 CH2MHILL Technical Memorandum, there were no observations of flooding or hurricane related damage at the entire site. No erosion or damage was observed to the site caps; the recovery system and equipment did not have any damage as a result of the hurricane; no flooding or damage was observed to the recovery wells at the site.

10. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.
    No.

11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?
    No.

12. Are you aware of any changes in actual or projected land uses?
    No.

INTERVIEW RECORD

Site Name: Petro-Processors of Louisiana Inc. (PPI)		**EPA ID No.:** LAD057482713
Subject: 5-Year Review		**Time:** **Date:** 5/16/2010
Type: ☐ Telephone ☐ Visit ☒By Mail ☐Other **Location of Visit: N/A**		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bryan McReynolds	**Title:** Process & Env. Engineer	**Organization:** NPC Services, Inc.

Individual Contacted:

Name: Beverly Negri	**Title:** Community Involvement Coordinator	**Organization:** EPA Region 6
Telephone No: 214-665-8157 **Fax No:** **E-Mail Address:** Negri.beverly@epa.gov	**Street Address:** 1445 Ross Ave. **City, State, Zip:** Dallas, TX 75202-2733	

Summary Of Conversation

1 . Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
Yes.

2. What is your overall impression of the project (general sentiment)?
Limited community interest. I would guess that 755 of the community don't care about the site. They are more concerned about the landfill in the community and the other NPL site in the community.

3. Are you aware of what effects have site operations had on the surrounding community?
In reviewing the 2nd 5-year review, it appears that the remedy is affective and has been so since construction completion.

4. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.
No knowledge.

5. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, broken fences, damaged fences, or emergency responses from local authorities? If so, please give details.
No.

6. Do you feel well informed about the site's activities and progress?
Limited, but I know where to go to secure information if needed.

7. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
No.

8. Are you aware of any problems related to site access control, road maintenance, site security?
No.

9. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?
No.

10. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.
No.

11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?
No.

12. Are you aware of any changes in actual or projected land uses?
Not at this time.

INTERVIEW RECORD

Site Name: Petro-Processors of Louisiana Inc. (PPI)		**EPA ID No.:** LAD057482713
Subject: 5-Year Review		**Time:** **Date:** 3/2/2010
Type: ☐ Telephone ☐ Visit ☒By Mail ☐Other **Location of Visit: N/A**		☐ Incoming ☐ Outgoing

Contact Made By:

Name: Bryan McReynolds	**Title:** Process & Env. Engineer	**Organization:** NPC Services, Inc.

Individual Contacted:

Name: Peter B. Lee	**Title:** Senior Geologist	**Organization:** EcoScience Resource Group, LLC
Telephone No: 225-755-8844 **Fax No:** 225-755-8845 **E-Mail Address:** plee@esrgroup.com		**Street Address:** 11827 Sunray Ave. **City, State, Zip:** Baton Rouge, LA 70816

Summary Of Conversation

1 . Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
Yes.

2. What is your overall impression of the project (general sentiment)?
Since my involvement in 1991, the project has been managed and performed in using the best available technology to reduce risk to the environment.

3. Are you aware of what effects have site operations had on the surrounding community?
I am not aware of any negative effects. Employees and contractors have participated in many positive ways such as financial contributions and public road litter maintenance to benefit the community.

4. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.
No, I am not aware of any concerns.

5. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, broken fences, damaged fences, or emergency responses from local authorities? If so, please give details.
No, I am not aware of any of the above. Operations and maintenance have been managed to prevent these from occurring.

6. Do you feel well informed about the site's activities and progress?
Information and documents are easily available to the public through both LDEQ and EPA internet sites.

7. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
Monitored Natural Attenuation (MNA) has been used for remediation and pump and treat was discontinued. Operation and sampling activities have changed to support the MNA.

8. Are you aware of any problems related to site access control, road maintenance, site security?
No, I am not aware of any problems. These functions are properly implemented.

9. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?
Not over backfilled waste areas. Only erosion at the low water bridge over the bayou at Scenic which does not compromise the integrity of the waste-containing areas.

10. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.
No, I am not aware of any other than the original problems prior to 1991.

11. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?
The site is managed and operated very professionally and effectively by NPC Services, Inc. and their contractors. I recommend continued management and operation by these entities with continued regulatory support and assistance.

12. Are you aware of any changes in actual or projected land uses?
No, I am not aware of any actual or projected changes with former waste-containing or contaminated areas. use of the former vault area, which was originally intended for waste deposition but never used, has been proposed as a landfill in the past.

APPENDIX E

Site Photographs

SECOND FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE
EAST BATON ROUGE PARISH, LOUISIANA
LAD057482713

(17 pages)

December 2010

APPENDIX E
SECOND FIVE-YEAR REVIEW REPORT

Petro-Processors of Louisiana, Inc. Site
East Baton Rouge Parish, Louisiana

Photograph Index

Photograph 1 – Main Access Gate, Brooklawn OU. West, 9/22/10

Photograph 2 – Security Building and Card Key Access Reader, SW 9/22/10

Photograph 3 – Typical posted warning sign on perimeter fencing, South 4/6/10

Photograph 4 – North Perimeter Fence, Brooklawn OU, South 4/6/10

Photograph 5 – Outfall 006A, Brooklawn OU, South 4/6/10

Photograph 6 – Monitoring Well P-1223-3, Brooklawn OU, Northwest 4/6/10

Photograph 7 – Covered Disposal Area, Brooklawn OU, South 4/6/10

Photograph 8 – Covered Disposal Area, Brooklawn OU, East, 4/6/10

Photograph 9 – South Levee Road, Brooklawn OU, East 4/6/10

Photograph 10 – Repair on South Levee Road, Brooklawn OU, West 4/6/10

Photograph 11 – South Levee Road, Brooklawn OU, West 4/6/10

Photograph 12 – North Perimeter Fence, Brooklawn OU, Northwest 4/6/10

Photograph 13 – Bluff Area, Brooklawn OU, West 4/6/10

Photograph 14 – Bluff Area, Brooklawn OU, East 4/6/10

Photograph 15 – Middle Channel Fill, Brooklawn OU, East 4/6/10

Photograph 16 – Entrance Gate to Middle Channel Fill, South 4/6/10

Photograph 17 – Entrance to Middle Channel Fill, Brooklawn OU, South 4/6/10

Photograph 18 – Middle Channel Fill Rutts, Brooklawn OU, Southeast 4/6/10

Photograph 19 – Main Access Gate, Scenic OU, East 4/6/10

Photograph 20 – LPDES Outfall 013C, Scenic OU, East 4/6/10

Photograph 21 – Monitoring Well SBP-046, Scenic OU, South 4/6/10

Photograph 22 – Covered Disposal Area, Scenic OU, Northeast 4/6/10

Photograph 23 – Covered Disposal Area, Scenic OU, North 9/22/10

Photograph 24 – Covered Disposal Area, Scenic OU, South 9/22/10

Photograph 25 – Enhanced Attenuation Pilot Test Area, Scenic OU, North 4/6/10

Photograph 26 – Monitoring Wells, Scenic OU, Northeast 4/6/10

Photograph 27 – Bridge Failure, Scenic OU, Southwest 11/11/08

Photograph 28 – Bridge Construction, Scenic OU, Southwest 6/1/10

Photograph 29 – Bridge Repaired, Scenic OU, Southwest 6/3/10

Photograph 30 – Bridge Repaired, Scenic OU, West 6/3/10

APPENDIX F

Figures and Drawings

SECOND FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE
EAST BATON ROUGE PARISH, LOUISIANA
LAD057482713

December 2010

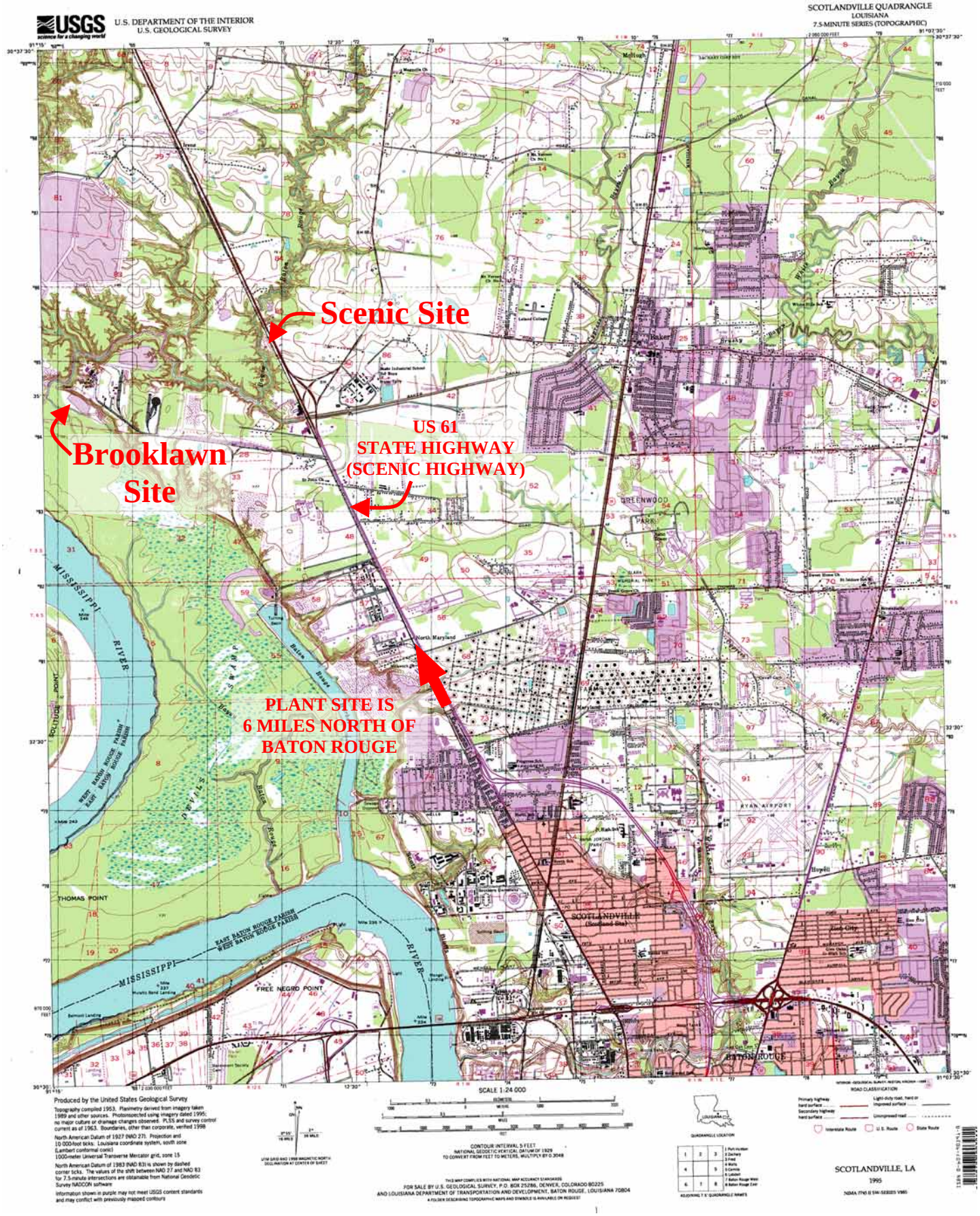
Appendix F

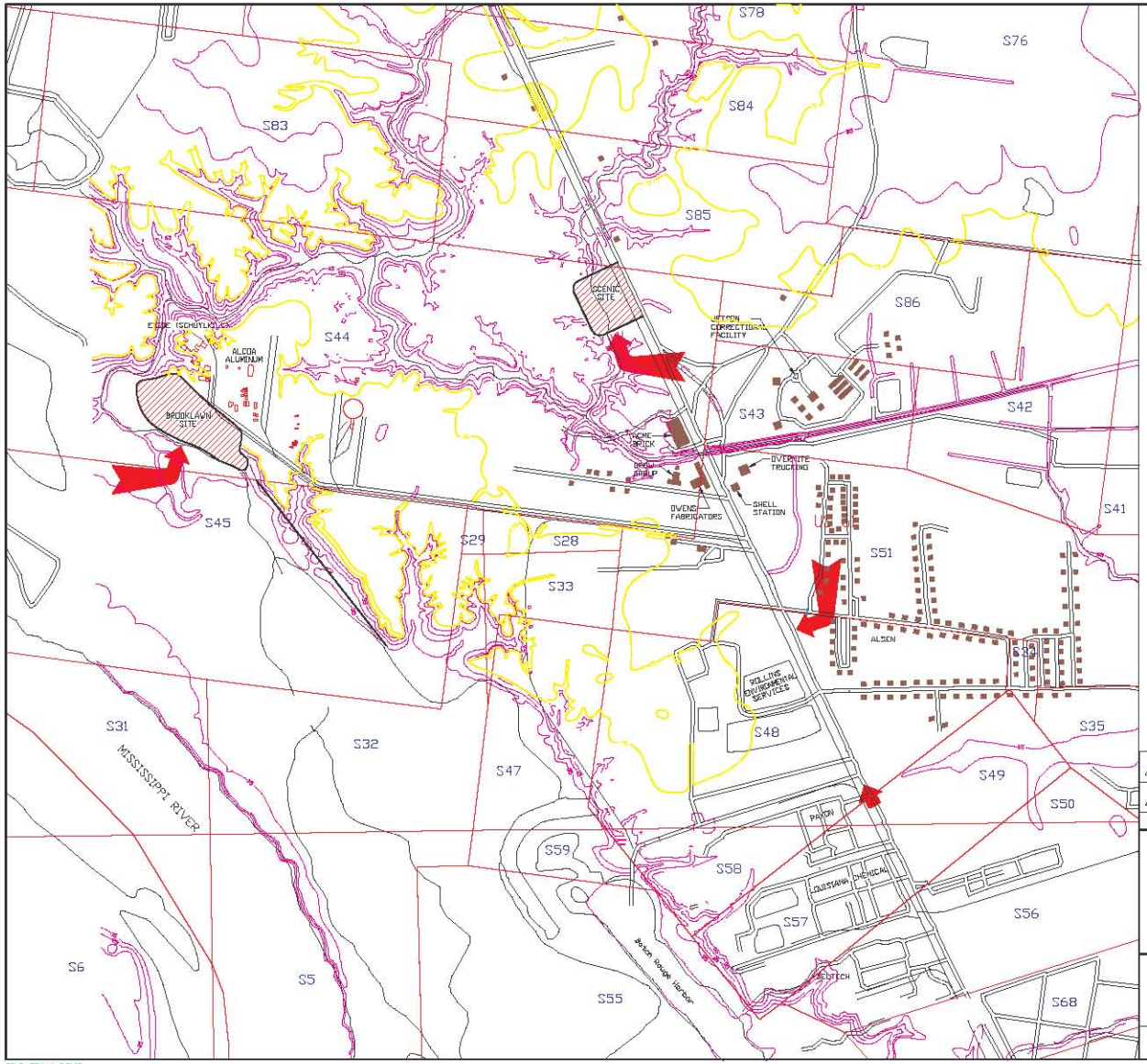
Figures and Drawings

List of Figures

List of Drawings

REGIONAL MAP
Figure 1





REV.	DRN	DATE	CKD	APD	APD	DESCRIPTION
0	C.L.	01/01	CLD	CMM	RHW	ISSUED FOR APPROVAL

BATON ROUGE, LOUISIANA

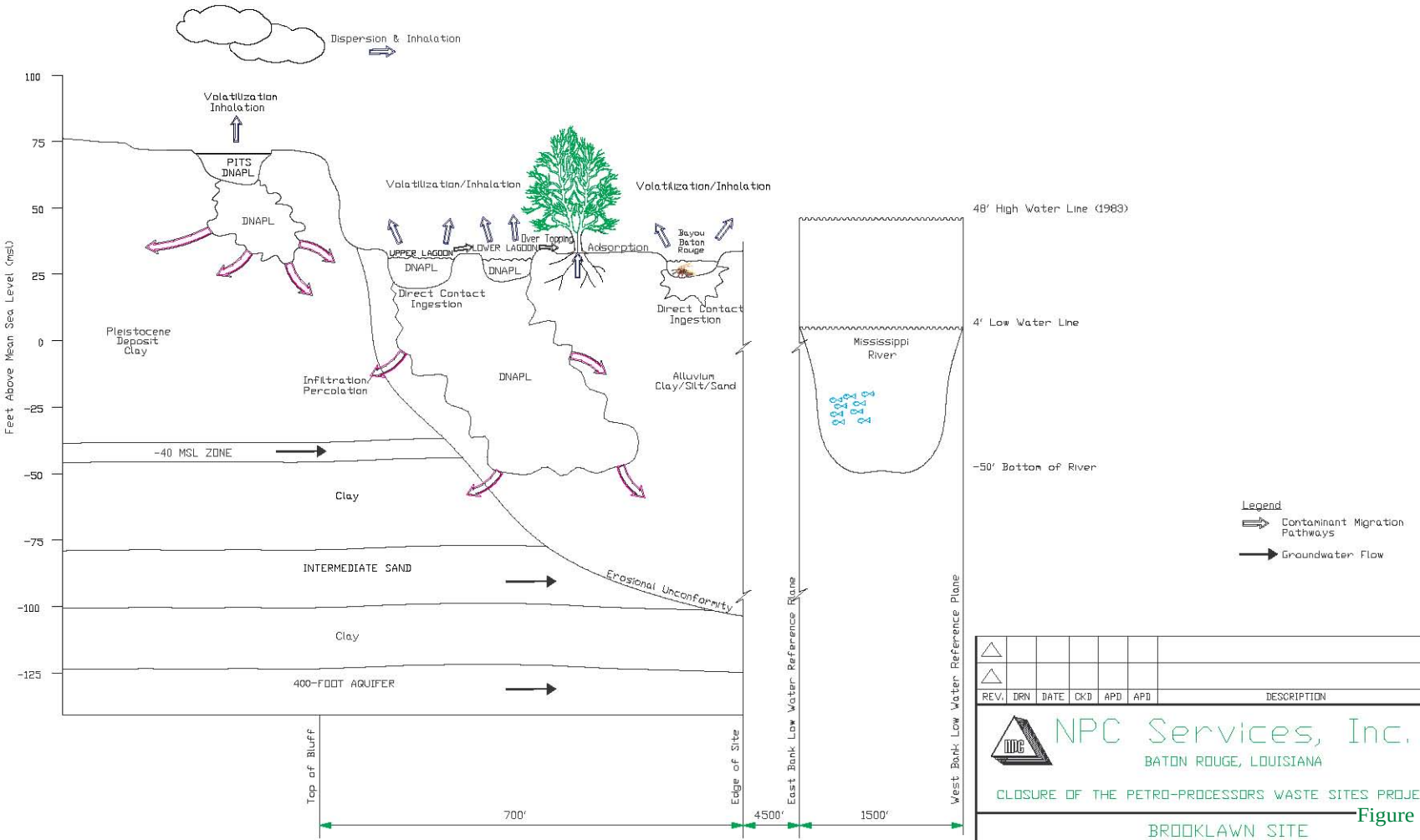
CLOSURE OF THE PETRO-PROCESSORS WASTE SITES PROJECT

NPC FACILITIES VICINITY MAP

SCALE	DATE OF ISSUE	DRAWING NO.	REV
NOTED	01/15/01	Figure 2	0

NPC11X17

FILE: RPA_4_8.DWG



REV.	DRN	DATE	CKD	APD	APD	DESCRIPTION
△						
△						

NPC Services, Inc.

BATON ROUGE, LOUISIANA

CLOSURE OF THE PETRO-PROCESSORS WASTE SITES PROJECT

Figure 3

BROOKLAWN SITE
CONCEPTUAL MODEL
CIRCA 1984

SCALE	DATE OF ISSUE	DRAWING NO.	REV
N.T.S.	3/14/01	FIGURE 4.1	0

NPC11X17

FILE: RPA_4_5.DWG

Figure 4. Brooklawn OU Monitoring Well Locations.

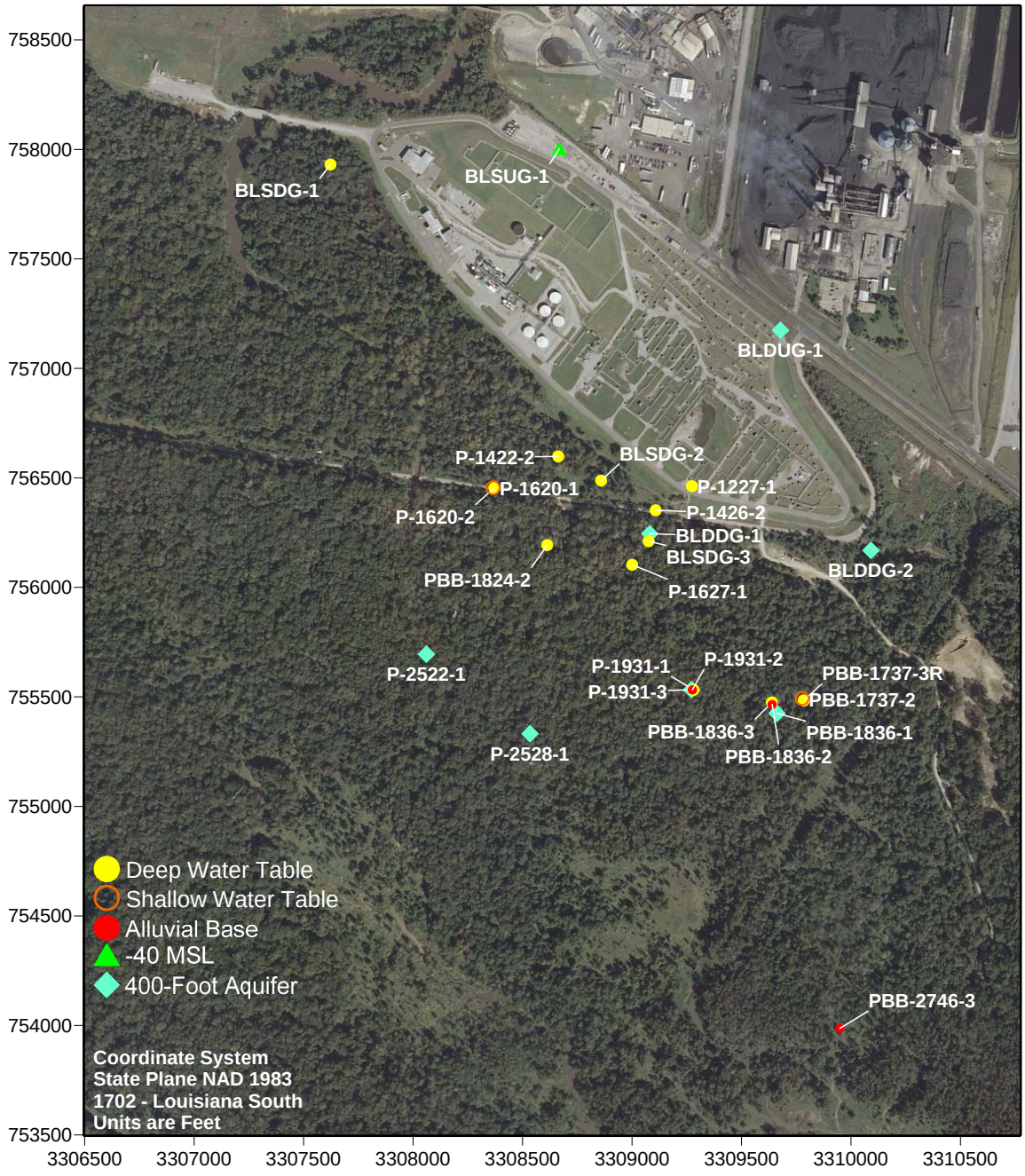


Figure 5. Location of Primary Source Transect Monitoring Wells.

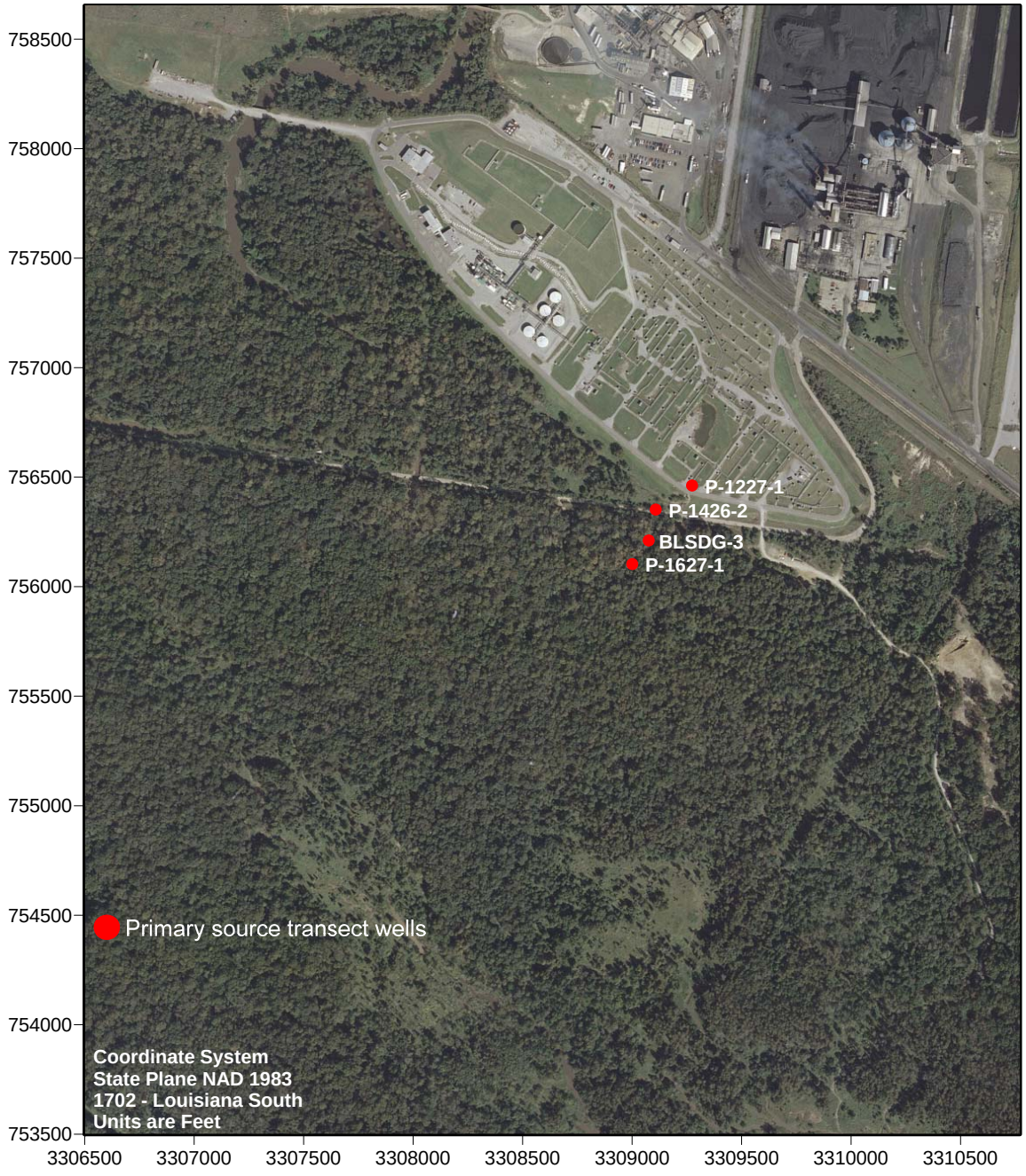
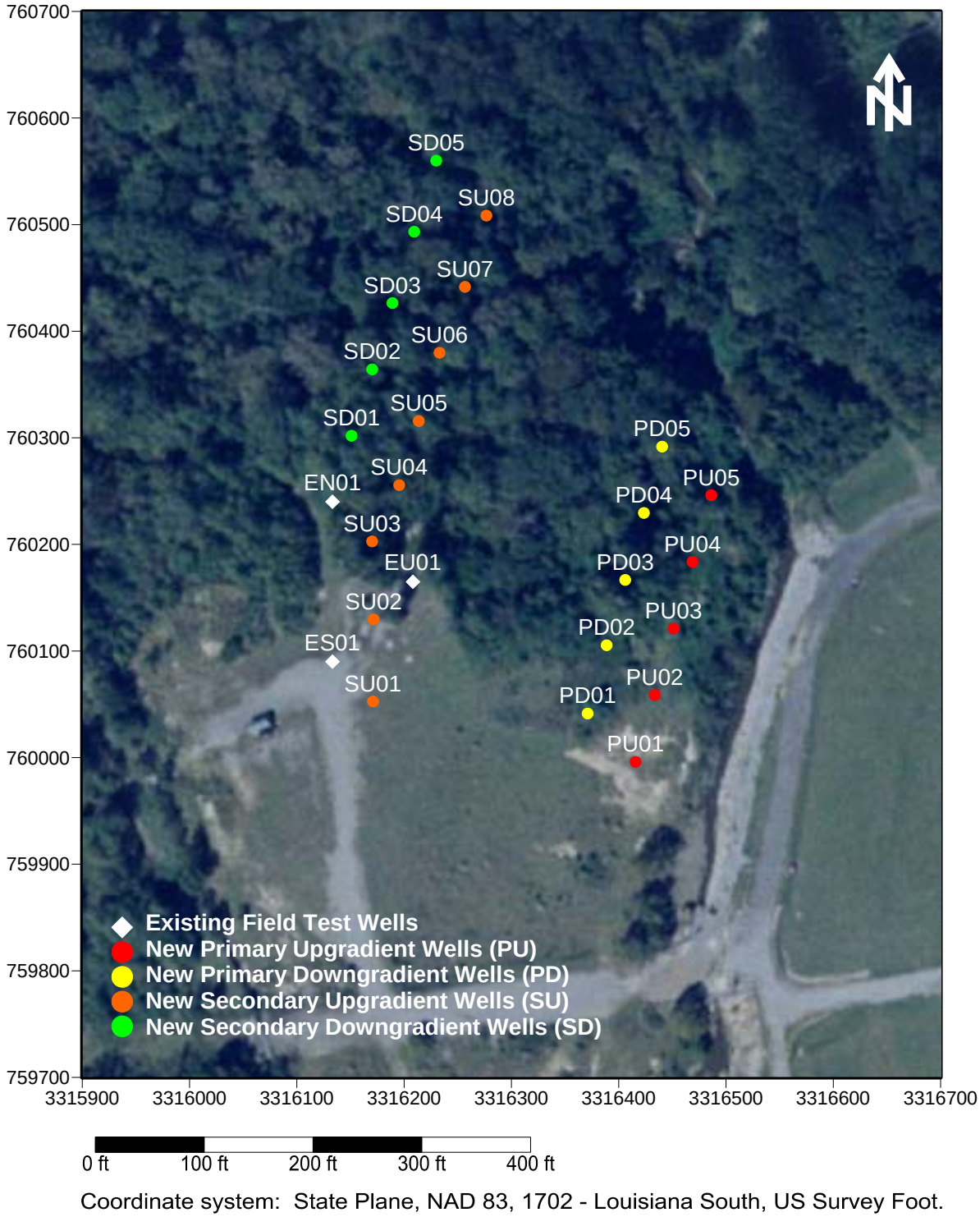
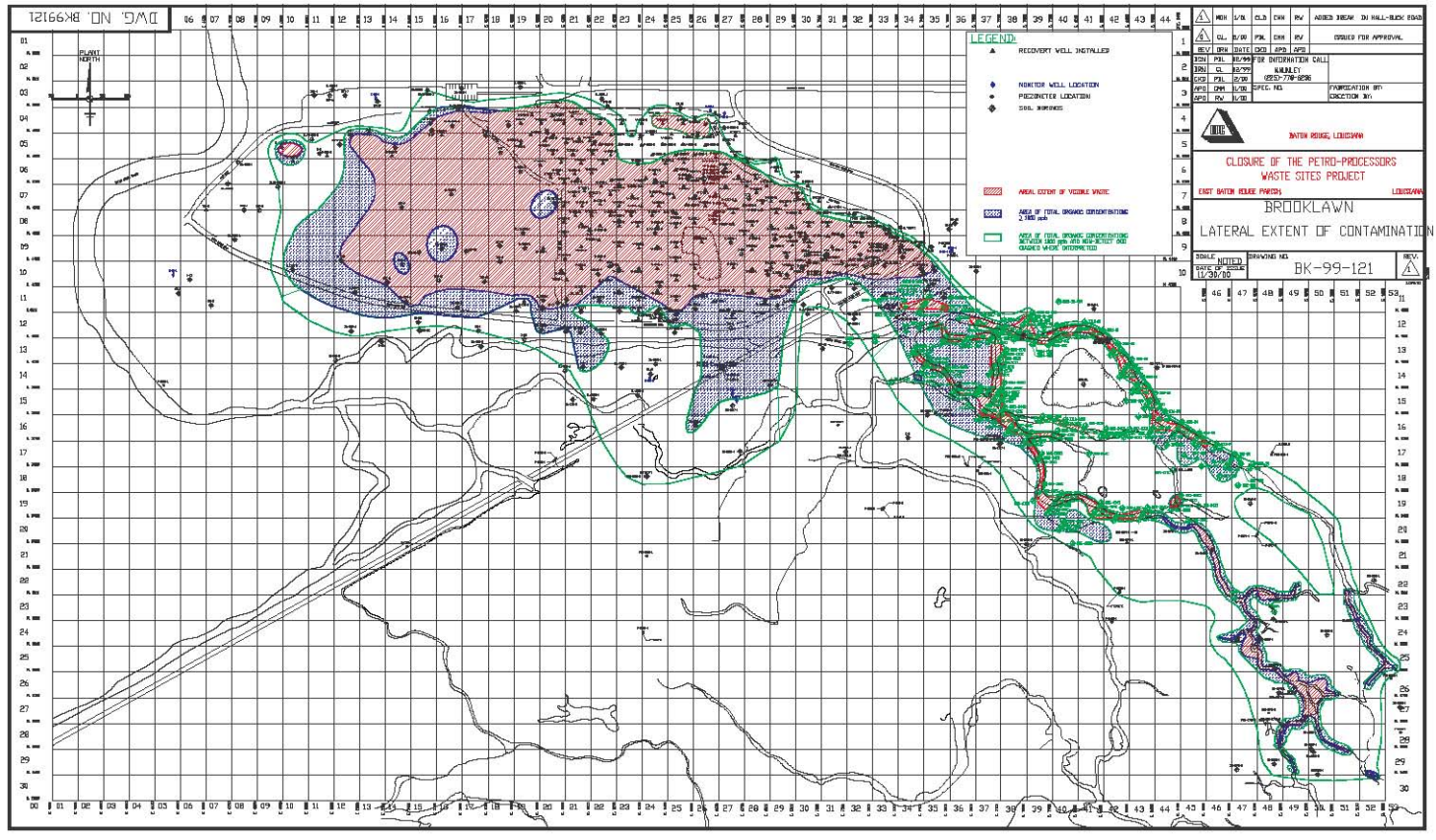
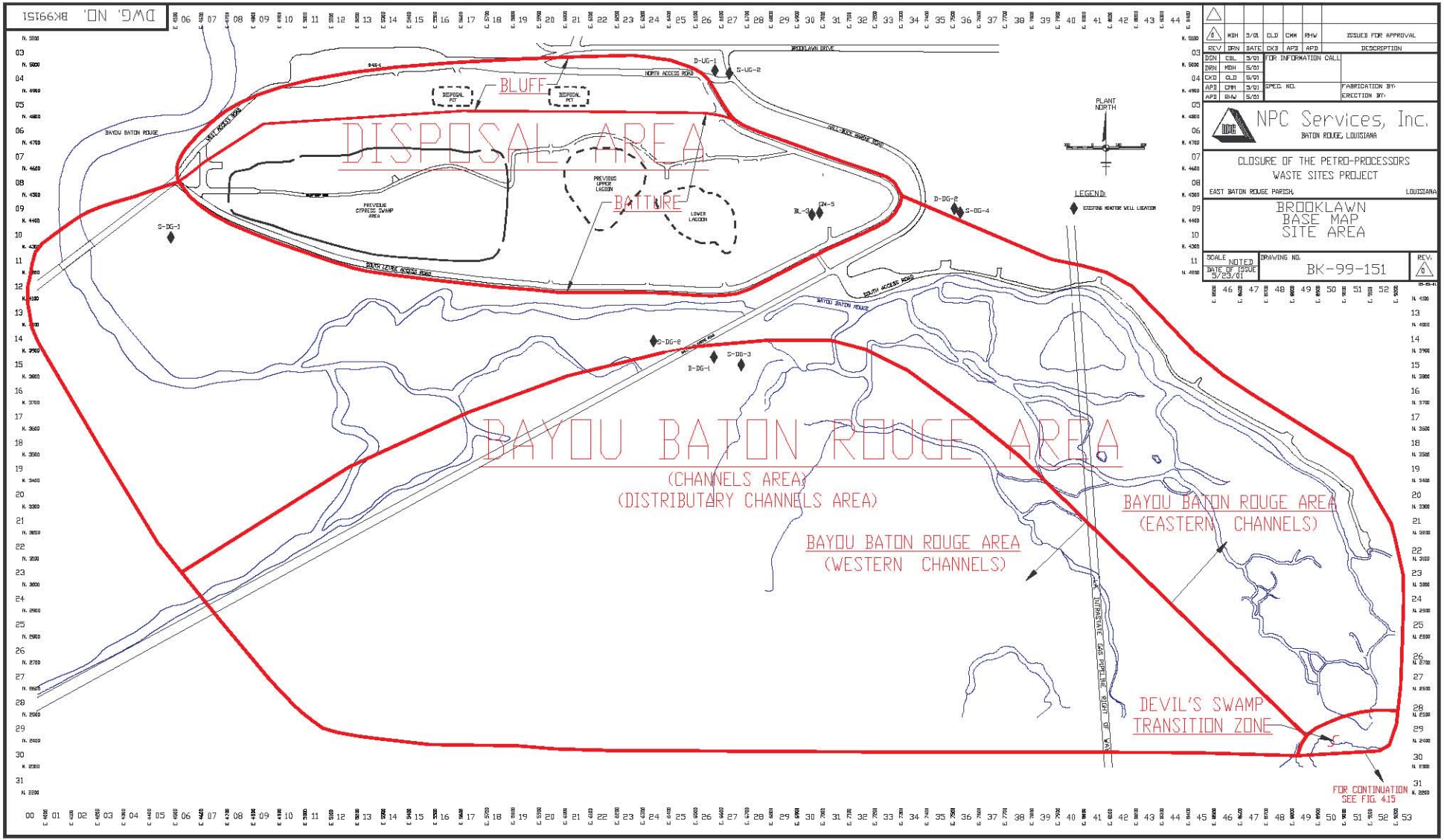


Figure 6. Location of the injection wells for the primary and secondary treatment zones, showing the three (3) existing field test wells and the locations of twenty-three (23) new wells installed for the source control remedial action.



Coordinate system: State Plane, NAD 83, 1702 - Louisiana South, US Survey Foot.


DWG. NO. BK99121
PLANT NORTH
LEGEND:
RECOVERY WELL INSTALLED
MONITOR WELL LOCATION
PIEZOMETER LOCATION
SOIL BORINGS
AREAL EXTENT OF VISIBLE WASTE
AREA OF TOTAL ORGANIC CONCENTRATIONS 3,100 ppb
AREA OF TOTAL ORGANIC CONCENTRATIONS BETWEEN 100 ppb AND NON-DETECT AND GRADED WHERE INTERPRETED
ADDED INSET IN HALL-RUCK ROAD
ISSUED FOR APPROVAL
FOR INFORMATION CALL
KINSLEY
(225)-778-9236
SPEC. NO.
FABRICATION BY:
ERECTION BY:
BATON ROUGE, LOUISIANA
CLOSURE OF THE PETRO-PROCESSORS WASTE SITES PROJECT
EAST BATON ROUGE PARISH, LOUISIANA
BROOKLAWN
LATERAL EXTENT OF CONTAMINATION
SCALE: NOTED
DATE OF ISSUE: 11/30/00
DRAWING NO.
BK-99-121
REV.


DWG. NO. BK99151
BLUFF
DISPOSAL AREA
BATTURE
BAYOU BATON ROUGE AREA
(CHANNELS AREA)
(DISTRIBUTARY CHANNELS AREA)
BAYOU BATON ROUGE AREA
(WESTERN CHANNELS)
BAYOU BATON ROUGE AREA
(EASTERN CHANNELS)
DEVIL'S SWAMP
TRANSITION ZONE
INTERSTATE GAS PIPELINE RIGHT OF WAY
BROOKLAWN DRIVE
NORTH ACCESS ROAD
SOUTH ACCESS ROAD
EAST ACCESS ROAD
BAYOU BATON ROUGE
PREVIOUS UPPER LAGOON
PREVIOUS CYPRESS SWAMP AREA
LOWER LAGOON
D-UG-1
D-UG-2
D-DG-2
D-DG-4
S-DG-1
S-DG-2
S-DG-3
D-DG-1
BL-3A
EM-5
PLANT NORTH
LEGEND:
EXISTING MONITOR WELL LOCATION
FOR CONTINUATION SEE FIG. 4.15
ISSUED FOR APPROVAL
FOR INFORMATION CALL
SPEC. NO.
FABRICATION BY:
ERECTION BY:
NPC Services, Inc.
BATON ROUGE, LOUISIANA
CLOSURE OF THE PETRO-PROCESSORS WASTE SITES PROJECT
EAST BATON ROUGE PARISH, LOUISIANA
BROOKLAWN BASE MAP SITE AREA
SCALE NOTED
DATE OF ISSUE 5/23/01
DRAWING NO. BK-99-151
REV. 0

DWG. NO. BK99152

REV	BRN	DATE	CKD	APD	APD	DESCRIPTION
A	RNR	5/01	CLB	CNN	RHW	FOR INFORMATION PURPOSES ONLY
DSN	CLB	2/01	FOR INFORMATION CALL			
DRN	RNR	5/01				
CKD	CLB	5/01				
APD	CNN	5/01	SPEC. NO.			FABRICATION BY:
APD	RHW	5/01				ERECTION BY:

NPC Services, Inc.
BATON ROUGE, LOUISIANA

CLOSURE OF THE PETRO-PROCESSORS WASTE SITES PROJECT

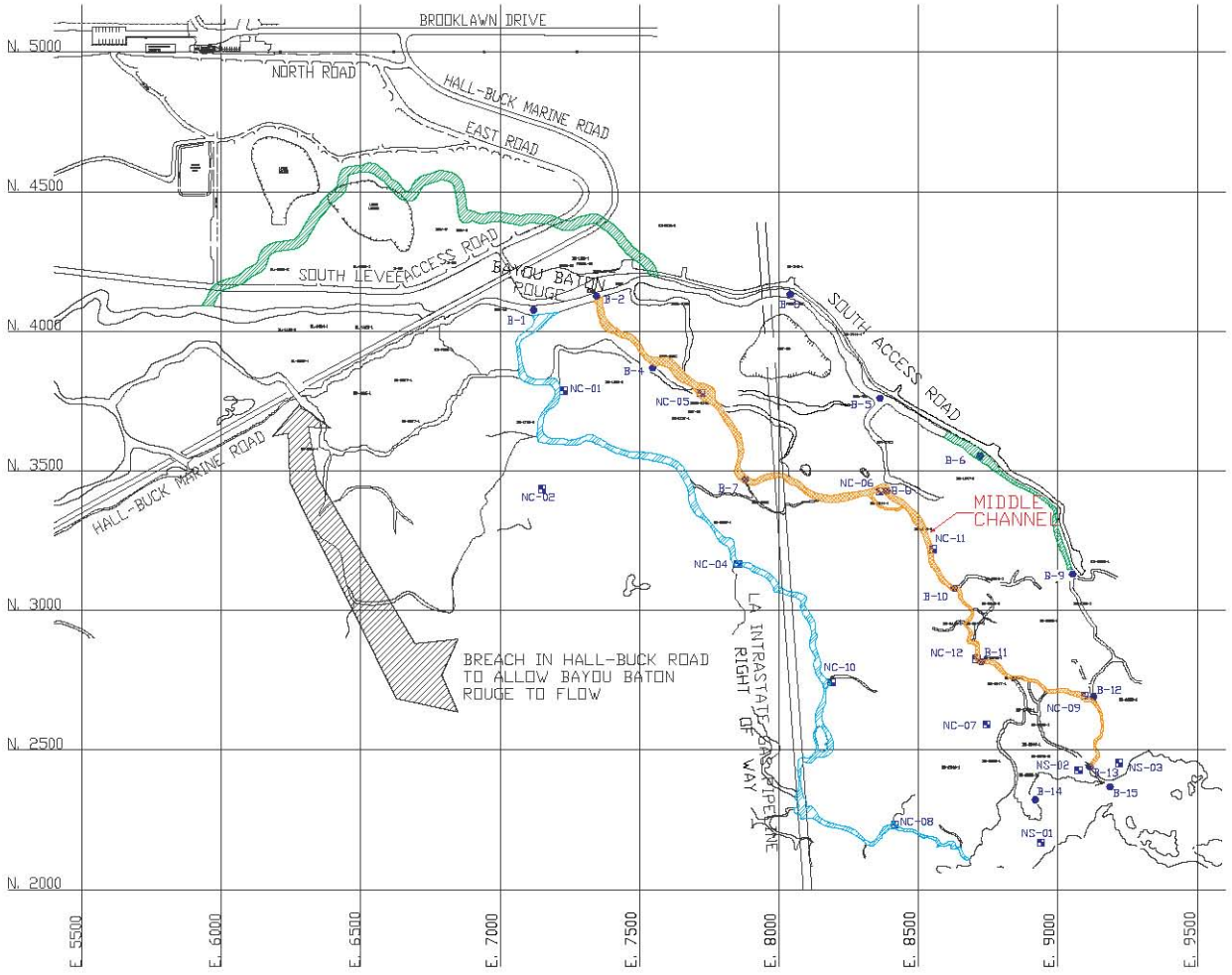
EAST BATON ROUGE PARISH, LOUISIANA

BROOKLAWN
BAYOU BATON ROUGE

STATUS OF CONTAMINATED CHANNELS

SCALE	DRAWING NO.	REV.
1"=150'	BK-99-152	A
DATE OF ISSUE 5/25/01		

PLANT



LEGEND

SECTIONS OF BAYOU REMEDIATED, CIRCA 1989

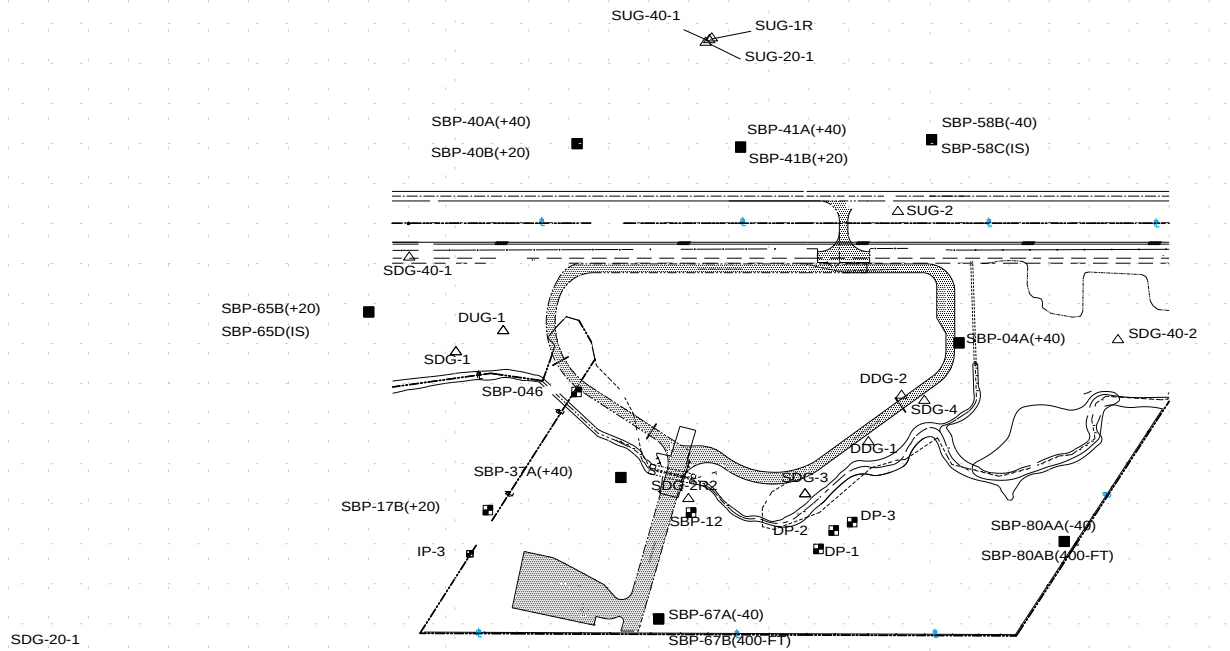
SECTION OF BAYOU SCHEDULED FOR FILLING, SEE DRAWING No: 020-C-339

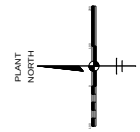
CONCENTRATIONS AT NC-01, NC-04, NC-10 & NC-8 DID NOT INDICATE FILLING OF THIS CHANNEL WAS REQUIRED TO MANAGE RISK

SAMPLING STATION - 1992

SAMPLING STATION - 1997

DWG. NO. SC02100





LEGEND

- PROPERTY LINE
- FENCE
- MONITOR WELL
- PIEZOMETER
- PVC PIEZOMETER LOCATIONS FOR NATURAL ATTENUATION SAMPLING.
- PUSH PIEZOMETERS

REV.	DRN	DATE	CKD	APD	APD	DESCRIPTION
1	MDH	2/03	PBL	CMM	JBM	ISSUED FOR APPROVAL

DSN		FOR INFORMATION CALL	
DRN	MDH 2/03		
CKD	PBL 2/03		
APD	CMM 2/03	SPEC. NO.	FABRICATION BY:
APD	JBM 2/03		ERECTION BY:

NPC Services, Inc.
BATON ROUGE, LOUISIANA

CLOSURE OF THE PETRO-PROCESSORS WASTE SITES PROJECT

EAST BATON ROUGE PARISH, LOUISIANA

SCENIC HIGHWAY SITE
MONITOR WELL AND
PIEZOMETER LOCATIONS

SCALE	DRAWING NO.	REV.
AS SHOWN	SC-02-100	0
DATE OF ISSUE		

DWG. NO. 020-C-339

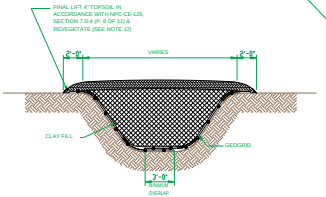
AGENCY STATUS			
REVISION	SUBMITTED	APPROVED DEQ	APPROVED EPA
0	12/4/02		CR
1	3/7/02	3/25/02	3/13/02

GENERAL NOTES:

1. ALL WORK TO BE DONE DURING HISTORICALLY DRYEST SEASON OF AUGUST THROUGH NOVEMBER.
2. CONSTRUCT DIKES ACROSS INLET/OUTLET CHANNELS FOR DEWATERING OF BAYOU.
3. FILLING SHALL BEGIN IMMEDIATELY SOUTH OF THE NORTHERNMOST DIKE AND PROCEED SOUTHWARD TO THE SOUTHERNMOST DIKE. LOCATION OF INTERMEDIATE DIKES IN MAIN CHANNEL SHALL BE LESS THAN 7200 SQ. FT. OF SURFACE AREA OR THE AMOUNT THAT CAN BE FILLED IN ONE WORK DAY.
4. ADJACENT ROLLS OF GEOGRID SHALL OVERLAP A MINIMUM OF THREE FEET AND BE TIED TOGETHER WITH HOG RINGS OR CABLE TIES EVERY THREE FEET.
5. EACH SECTION OF GEOGRID SHALL CONSIST OF TWO ROLLS OF TENSAR BX1300/60 OR EQUAL WHERE THE OUTER EDGES OF BOTH ROLLS SHALL BE LINED UP WITH THE TOP OF THE CHANNEL BANK, THE INNER EDGES OF THE TWO ROLLS SHALL OVERLAP IN THE MIDDLE OF THE CHANNEL. WHEN THE OVERLAP IN THE MIDDLE OF THE CHANNEL IS AT THE MINIMUM THREE FEET, THE CENTER OF THE OVERLAP SHALL BE LINED UP WITH THE MIDDLE OF CHANNEL. THE GRID CORNERS MAY BE HELD DOWN WITH ONE OR TWO SHOVELFULS OF FILL.
6. A SECTION OF GEOGRID SHALL BE PLACED UNDER EACH DIKE, WITH FIVE FEET ON THE UPSTREAM AND DOWNSTREAM SIDES OF THE CHANNEL AVAILABLE FOR OVERLAP WITH FUTURE CHANNEL GEOGRID SECTIONS.
7. TWELVE INCHES OF LOOSE FILL SHALL BE IN PLACE BEFORE TRACK EQUIPMENT IS ALLOWED ON THE GEOGRIDDED AREA.
8. SEE SPEC. NPC-CE-125 FOR EQUIPMENT, LABOR, MATERIALS AND PERFORMANCE OF WORK FOR FILLING THE CHANNEL.
9. REMOVE THE EXISTING CULVERTS CONTAINED IN THE CHANNEL BEING FILLED, PRIOR TO LAYING GEOGRID.
10. BAYOU CHANNEL SHALL BE USED AS THE INBOUND HAUL ROAD. OUTBOUND TRAFFIC SHALL USE THE EXISTING SOUTH ACCESS ROAD. LOW GROUND BEARING PRESSURE EQUIPMENT IS REQUIRED FOR CONSTRUCTION.
11. TOTAL LENGTH OF BAYOU FILL IS 2,850 FEET.
12. AFFECTED FILL AREA WILL BE REVEGETATED IN ACCORDANCE WITH NPC-CE-123, SECTION 7.0.5.
13. DUST CONTROL MEASURES WILL BE IMPLEMENTED AS WEATHER CONDITIONS DICTATE.
14. ALL ACTIVITIES WILL BE CONCLUDED WITH THE LEAST POSSIBLE IMPACT TO THE SURROUNDING ENVIRONMENT.

LEGEND

DETAIL



TYPICAL CROSS-SECTION

N.T.S

PLAN

SCALE: 1"=150'

REV	DRN	DATE	CKD	APD	APD	DESCRIPTION

DSN:	--	--	FOR INFORMATION CALL:
DRN:	--	--	M. MUNLEY
CKD:	--	--	(225)-778-6236
APD:	--	--	SPEC. NO.
APD:	--	--	

FABRICATION BY:

ERECTION BY:

NPC Services, Inc.

BATON ROUGE, LOUISIANA

CLOSURE OF THE PETRO-PROCESSORS

WASTE SITES PROJECT

EAST BATON ROUGE PARISH, LOUISIANA

BROOKLAWN SITE

BATON ROUGE BAYOU

CHANNEL CLAY FILL

PLAN & SECTION

SCALE	DRAWING NO.	REV.
NOTED	020-C-339	
DATE OF ISSUE: 2/4/02		

APPENDIX G

Site Inspection Checklist

SECOND FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE

EAST BATON ROUGE PARISH, LOUIANA
LAD057482713

(15 pages)

December 2010

Appendix G

Site Inspection Checklist

I. SITE INFORMATION	
Site name: Petro-Processors of Louisiana Inc. (PPI)	**Date of inspection: April 7, 2010**
Location and Region: East Baton Rouge Parish, LA Region 6	**EPA ID: LAD057482713**
Agency, office, or company leading the five-year review: EPA Region 6	**Weather/temperature: Partly Cloudy, 82°F**

Remedy Includes: (Check all that apply)

☒ Landfill cover/containment
☒ Access controls
☐ Institutional controls
☐ Groundwater pump and treatment
☐ Surface water collection and treatment
☒ Other: Enhanced Attenuation and Natural Recovery

☒ Monitored natural attenuation
☐Groundwater containment
☐Vertical barrier walls

Attachments: ☒ Inspection team roster see note below. ☒ Site maps attached in Appendix F

II. INTERVIEWS (Check all that apply)

1. **O&M site manager** _____ _____ _____
   Name Title Date
   Interviewed ☐ at site ☐ at office ☐ by phone Phone no. _____
   Problems, suggestions; ☐Report attached _____

2. **O&M staff** _____ _____ _____
   Name Title Date
   Interviewed ☐ at site ☐ at office ☐ by phone Phone no. _____
   Problems, suggestions; ☐ Report attached _____

Note
The inspection team consisted of:

1. Mr. Bartolome J. Canellas, EPA Project Manager Region 6
2. Mr. Thomas Stafford, Environmental Scientist, Louisiana Department of Environmental Quality

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency Louisiana Dept. of Environmental Quality
Contact Thomas Stafford Environmental Scientist 12/2010 (225) 219-3222
Name Title Date Phone no.
Problems; suggestions; ☒ Report attached Appendix D, Site Survey Forms

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____

4. **Other interviews** (optional) ☒ Report attached. Appendix D, Site Survey Forms

Bart Canellas	Remedial Project Manager	EPA Region 6	6/3/10
Jason McKinney	Community Involvement Coordinator	EPA Region 6	6/2/10
Beverly Negri	Community Involvement Coordinator	EPA Region 6	5/16/10
W. David Constant	Humphreys Turner Professor and Interim Dean, The Graduate School	Louisiana State University	3/1/10
Jack Collins	Facility Manager	Dayspring Group	3/1/10
Michael J. Truex	Program Manager	Battelle Northwest	3/2/10
Peter B. Lee	Senior Geologist	EcoScience Resource Group	3/2/10
Darcie Olexia	Environmental Health Scientist Coord.	La. Dept. of Health & Hospitals	3/2/10

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **O&M Documents**

☒ O&M manual	☒ Readily available	☒ Up to date	☐ N/A
☒ As-built drawings	☒ Readily available	☒ Up to date	☐ N/A
☒ Maintenance logs	☒ Readily available	☒ Up to date	☐ N/A

Remarks_____

2. **Site-Specific Health and Safety Plan** ☒ Readily available ☒ Up to date ☐ N/A
☒ Contingency plan/emergency response plan ☒ Readily available ☒ Up to date ☐ N/A
Remarks_____

3. **O&M and OSHA Training Records** ☒ Readily available ☒ Up to date ☐ N/A
Remarks_____

4. **Permits and Service Agreements**

☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A
☒ Effluent discharge	☒ Readily available	☒ Up to date	☐ N/A
☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☒ N/A
☐ Other permits_____	☐ Readily available	☐ Up to date	☒ N/A

Remarks: The PPI site has an LPDES permit LA0066214.

5. **Gas Generation Records** ☐ Readily available ☐ Up to date ☒ N/A
Remarks_____

6. **Settlement Monument Records** ☐ Readily available ☐ Up to date ☒ N/A
Remarks_____

7. **Groundwater Monitoring Records** ☒ Readily available ☒ Up to date ☐ N/A
Remarks: The Long Range Monitoring Plan requires annual monitoring and reporting which is current.

8. **Leachate Extraction Records** ☐ Readily available ☐ Up to date ☒ N/A
Remarks_____

9. **Discharge Compliance Records**

☐ Air	☐ Readily available	☐ Up to date	☒ N/A
☒ Water (effluent)	☒ Readily available	☒Up to date	☐ N/A

Remarks: The PPI site discharges process and storm water via an LPDES Permit, LA0066214. See Photographs 5 & 20, Appendix E, Site Photographs, show outfalls 006A (Brooklawn OU) and 013C (Scenic OU). The result of sampling to comply with the discharge permit indicates that the protective cover is functioning as intended and storm water is not being contaminated with site COC. All VOC and Semivolatile analytes sampled are historically BQL for both the Brooklawn and Scenic OU.

10. **Daily Access/Security Logs** ☒ Readily available ☒ Up to date ☐ N/A
Remarks: The PPI site used a Access Card Key system with computer access logs. See Photograph 2, Appendix E, Site Photographs.

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for State
☐ PRP in-house ☒ Contractor for PRP
☐ Federal Facility in-house ☐ Contractor for Federal Facility
☐ Other_____
_____

2. **O&M Cost Records**

☐ Readily available ☒ Up to date,
This is a PRP funded clean up; the funding information is not publicly available.
☐ Funding mechanism/agreement in place
Original O&M cost estimate_____ ☐ Breakdown attached

Total annual cost by year for review period if available

From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost
From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost
From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost
From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost
From_____ To_____ _____ ☐ Breakdown attached
Date Date Total cost

3. **Unanticipated or Unusually High O&M Costs During Review Period**

Describe costs and reasons: _____
_____
_____
_____
_____
_____

V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing damaged** ☐ Location shown on site map ☒ Gates secured ☐ N/A

Remarks: The PPI site has perimeter fencing, secured gates, all are in good condition. See Photographs 1-4, 12, and 19 Appendix E, Site Photographs.

B. Other Access Restrictions

1. **Signs and other security measures** ☐ Location shown on site map ☐ N/A

Remarks: The PPI site has perimeter signs posted at both the Brooklawn and Scenic OU. See Photographs 3, 16 and19, Appendix E, Site Photographs.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A
Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by): Site inspection, self-monitoring and reporting.
Frequency: Operations personnel conduct daily site inspections.
Responsible party/agency: NPC Services, Inc.
Contact: J. Bryan McReynolds, P.E. Environmental Engineer 12/02/10 225-778-6229
Name Title Date Phone no.

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A
Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☐ No ☒ N/A
Violations have been reported ☐ Yes ☐ No ☒ N/A
Other problems or suggestions: ☐ Report attached

2. **Adequacy** ☒ ICs are adequate ☐ ICs are inadequate ☐ N/A
Remarks

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☒ No vandalism evident
Remarks: The PPI site has perimeter fencing and access control to prevent vandalism. See Photographs 1, 3 12, 16 and 19, Appendix E, Site Photographs.

2. **Land use changes on site** ☐ N/A
Remarks: There have been no changes to land use on site.

3. **Land use changes off site** ☐ N/A
Remarks: There have been no changes to land use off site.

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A
Remarks: The PPI site has asphalt perimeter roads at the Brooklawn OU that are in good condition. See Photographs 1, 2, 4, 9, 11, and 12, Appendix E, Site Photographs. The limestone roads at the Scenic OU are also in good repair.

B. Other Site Conditions

Remarks _____

_____

_____

_____

_____

_____

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

Remarks: The PPI site has installed protective covers over the former disposal areas and has placed a protective fill in BBR distributaries. These coverings are inspected and maintained. See Photographs 7, 8, 13, 14 and 22-24, Appendix E, Site Photographs.

1. **Settlement** (Low spots) ☐ Location shown on site map ☒ Settlement not evident
   Areal extent_____ Depth_____
   Remarks_____
   _____

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident
   Lengths_____ Widths_____ Depths_____
   Remarks_____
   _____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
   Areal extent_____ Depth_____
   Remarks_____
   _____

4. **Holes** ☐ Location shown on site map ☒ Holes not evident
   Areal extent_____ Depth_____
   Remarks_____
   _____

5. **Vegetative Cover** ☒ Grass ☒ Cover properly established ☒ No signs of stress
   ☐ Trees/Shrubs (indicate size and locations on a diagram)
   Remarks: Vegetation covers are inspected and maintained. See Photographs 7, 8, 13, 14, and 22-24, Appendix E, Site Photographs.

6. **Alternative Cover (armored rock, concrete, etc.)** ☒ N/A
   Remarks_____
   _____

7. **Bulges** ☐ Location shown on site map ☒ Bulges not evident
   Areal extent_____ Height_____
   Remarks_____
   _____

8. **Wet Areas/Water Damage** ☒ Wet areas/water damage not evident

☐ Wet areas	☐ Location shown on site map	Areal extent_____
☐ Ponding	☐ Location shown on site map	Areal extent_____
☐ Seeps	☐ Location shown on site map	Areal extent_____
☐ Soft subgrade	☐ Location shown on site map	Areal extent_____

Remarks_____

_____

9. **Slope Instability** ☒ Slides ☐ Location shown on site map ☐ No evidence of slope instability

Areal extent_____

Remarks: Photograph 10, Appendix E, shows a repair on South Levee Road. The PPI site is inspected and maintained to ensure the integrity of the protective covers. See Photographs 7 - 10, Appendix E, Site Photographs.

B. Benches ☐ Applicable ☒ N/A

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

1. **Flows Bypass Bench** ☐ Location shown on site map ☐ N/A or okay

Remarks_____

_____

2. **Bench Breached** ☐ Location shown on site map ☐ N/A or okay

Remarks_____

_____

3. **Bench Overtopped** ☐ Location shown on site map ☐ N/A or okay

Remarks_____

_____

C. Letdown Channels ☐ Applicable ☒ N/A

(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

1. **Settlement** ☐ Location shown on site map ☐ No evidence of settlement

Areal extent_____ Depth_____

Remarks_____

_____

2. **Material Degradation** ☐ Location shown on site map ☐ No evidence of degradation

Material type_____ Areal extent_____

Remarks_____

_____

3. **Erosion** ☐ Location shown on site map ☐ No evidence of erosion

Areal extent_____ Depth_____

Remarks_____

_____

4. **Undercutting** ☐ Location shown on site map ☐ No evidence of undercutting
Areal extent_____ Depth_____
Remarks_____
_____

5. **Obstructions** Type_____ ☐ No obstructions
☐ Location shown on site map Areal extent_____
Size_____
Remarks_____
_____

6. **Excessive Vegetative Growth** Type_____
☐ No evidence of excessive growth
☐ Vegetation in channels does not obstruct flow
☐ Location shown on site map Areal extent_____
Remarks_____
_____

D. Cover Penetrations ☒ Applicable ☐ N/A

1. **Gas Vents** ☐ Active ☐ Passive
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance
☒ N/A
Remarks_____
_____

2. **Gas Monitoring Probes**
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☒ N/A
Remarks_____
_____

3. **Monitoring Wells** (within surface area of landfill)
☒ Properly secured/locked ☒ Functioning ☒Routinely sampled ☒ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A
Remarks: Monitoring Wells within the protective cover of the PPI Site are locked and secure and are in good condition. See Photographs 6, 21 and 25-26, Appendix E, Site Photographs.

4. **Leachate Extraction Wells**
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☒ N/A
Remarks_____
_____

5. **Settlement Monuments** ☐ Located ☐ Routinely surveyed ☒ N/A
Remarks_____
_____

E. Gas Collection and Treatment ☐ Applicable ☒ N/A

1. **Gas Treatment Facilities**
   ☐ Flaring ☐ Thermal destruction ☐ Collection for reuse
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____
   _____

2. **Gas Collection Wells, Manifolds and Piping**
   ☐ Good condition ☐ Needs Maintenance ☒N/A
   Remarks_____
   _____

3. **Gas Monitoring Facilities** (*e.g.*, gas monitoring of adjacent homes or buildings)
   ☐ Good condition ☐ Needs Maintenance ☒ N/A
   Remarks_____
   _____

F. Cover Drainage Layer ☐ Applicable ☒ N/A

1. **Outlet Pipes Inspected** ☐ Functioning ☐ N/A
   Remarks_____
   _____

2. **Outlet Rock Inspected** ☐ Functioning ☐ N/A
   Remarks_____
   _____

G. Detention/Sedimentation Ponds ☐ Applicable ☒ N/A

1. **Siltation** Areal extent_____ Depth_____ ☐ N/A
   ☐ Siltation not evident
   Remarks_____
   _____

2. **Erosion** Areal extent_____ Depth_____
   ☐ Erosion not evident
   Remarks_____
   _____

3. **Outlet Works** ☐ Functioning ☐ N/A
   Remarks_____
   _____

4. **Dam** ☐ Functioning ☐ N/A
   Remarks_____
   _____

H. Retaining Walls ☐ Applicable ☒ N/A

1. **Deformations** ☐ Location shown on site map ☐ Deformation not evident
   Horizontal displacement_____ Vertical displacement_____
   Rotational displacement_____
   Remarks_____
   _____

2. **Degradation** ☐ Location shown on site map ☐ Degradation not evident
   Remarks_____
   _____

I. Perimeter Ditches/Off-Site Discharge ☐ Applicable ☒ N/A

1. **Siltation** ☐ Location shown on site map ☐ Siltation not evident
   Areal extent_____ Depth_____
   Remarks_____
   _____

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A
   ☐ Vegetation does not impede flow
   Areal extent_____ Type_____
   Remarks_____
   _____

3. **Erosion** ☐ Location shown on site map ☐ Erosion not evident
   Areal extent_____ Depth_____
   Remarks_____
   _____

4. **Discharge Structure** ☐ Functioning ☐ N/A
   Remarks_____
   _____

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A

1. **Settlement** ☐ Location shown on site map ☐ Settlement not evident
   Areal extent_____ Depth_____
   Remarks_____
   _____

2. **Performance Monitoring** Type of monitoring_____
   ☐ Performance not monitored
   Frequency_____ ☐ Evidence of breaching
   Head differential_____
   Remarks_____
   _____

IX. GROUNDWATER/SURFACE WATER REMEDIES ☐ Applicable ☒ N/A	
A. Groundwater Extraction Wells, Pumps, and Pipelines ☐ Applicable ☐ N/A	
1.	**Pumps, Wellhead Plumbing, and Electrical** ☐ Good condition ☐ All required wells properly operating ☐ Needs Maintenance ☐ N/A Remarks: _____
2.	**Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances** ☐ Good condition ☐ Needs Maintenance Remarks_____
3.	**Spare Parts and Equipment** ☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided Remarks: _____
B. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A	
1.	**Collection Structures, Pumps, and Electrical** ☐ Good condition ☐ Needs Maintenance Remarks_____
2.	**Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances** ☐ Good condition ☐ Needs Maintenance Remarks_____
3.	**Spare Parts and Equipment** ☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided Remarks_____

C. Treatment System ☒ Applicable ☐ N/A

1. **Treatment Train** (Check components that apply)
   - ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation
   - ☐ Air stripping ☒ Carbon adsorbers
   - ☐ Filters_____
   - ☐ Additive (*e.g.*, chelation agent, flocculent)_____
   - ☐ Others_____
   - ☐ Good condition ☐ Needs Maintenance
   - ☐ Sampling ports properly marked and functional
   - ☐ Sampling/maintenance log displayed and up to date
   - ☐ Equipment properly identified
   - ☐ Quantity of groundwater treated annually _____
   - ☐ Quantity of surface water treated annually_____
   - Remarks: The site maintains facilities for the collection and treatment of contained storm water.

2. **Electrical Enclosures and Panels** (properly rated and functional)
   - ☐ N/A ☒ Good condition ☐ Needs Maintenance
   - Remarks_____

3. **Tanks, Vaults, Storage Vessels**
   - ☒ N/A ☐ Good condition ☐ Proper secondary containment ☐ Needs Maintenance
   - Remarks: _____

4. **Discharge Structure and Appurtenances**
   - ☐ N/A ☒ Good condition ☐ Needs Maintenance
   - Remarks_____

5. **Treatment Building(s)**
   - ☒ N/A ☐ Good condition (esp. roof and doorways) ☐ Needs repair
   - ☐ Chemicals and equipment properly stored
   - Remarks_____

6. **Monitoring Wells** (pump and treatment remedy)
   - ☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition
   - ☒All required wells located ☐ Needs Maintenance ☐ N/A
   - Remarks: See Photographs 6, 21 and 26, Appendix E, Site Photographs

D. Monitoring Data

1. Monitoring Data
   - ☒ Is routinely submitted on time ☒ Is of acceptable quality

2. Monitoring data suggests:
   - ☒ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

D. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)
☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition
☒ All required wells located ☐ Needs Maintenance ☐ N/A
Remarks: See Figure 4, Brooklawn OU Monitoring Well Locations and Drawing SC-02-100, Scenic Monitoring Well and Piezometer Locations, in Appendix F.

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

The following RA have been selected and constructed to be protective of human health and the environment. Source control and protective coverings at the site have reduced the risks associated with ingestion, inhalation, and dermal contact with site contaminants through surface water and sediment pathways for both human and biota receptors. Placement of a protective fill in the BBR distributaries has reduced risk, discovered during an EPA commissioned risk assessment, to acceptable levels. The MNA remedy through implementation of the monitoring plan at the Brooklawn OU has been shown to be protective of the down gradient receptors at the probable POE. Sampling of sediments in BBR south of the Scenic OU have demonstrated that the RA of natural recovery is effective. The recently approved RA of Enhanced Attenuation is being implemented at the Scenic OU. Finally, administrative controls to limit access to the PPI site are in place and continue to be effective in limiting entry to approved site personnel.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

Operation and maintenance of the facility has been effective in maintaining the integrity of the protective coverings at both the Brooklawn and Scenic OU. The PPI site is inspected daily by site personnel and maintenance items area noted and corrective actions are taken as needed. These maintenance records are maintained onsite. The filled and graded former waste disposal areas have sufficient grass coverings and are frequently mowed to prevent unwanted shrub growth. Requirements of the Brooklawn OU long term monitoring plan specify the inspection of the protective fill in the BBR distributaries channels to ensure its integrity. Recent repairs to the site is documented in Photographs 10 and 27 – 30, in Appendix E.

C.	**Early Indicators of Potential Remedy Problems: None apparent.**
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

D.	**Opportunities for Optimization: None apparent.**
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.