

**THIRD FIVE-YEAR REVIEW REPORT
FOR
PETRO-PROCESSORS OF LOUISIANA, INC. SUPERFUND SITE
EAST BATON ROUGE PARISH, LOUISIANA**

**LAD057482713
LDEQ AI# 2469 & 83225**



January 2016



Prepared by:

**U.S. Environmental Protection Agency
Region 6
Dallas, Texas**



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DETERMINATIONS
THIRD FIVE-YEAR REVIEW REPORT
for
Petro-Processors of Louisiana, Inc. (PPI) Superfund Site
EPA ID#: LAD057482713, LDEQ AI# 2469 & 83225
East Baton Rouge Parish, Louisiana

This memorandum documents the U.S. Environmental Protection Agency's performance, determinations, and approval of the Petro-Processors of Louisiana, Inc. Superfund Site (Site) third five year review under Section 121 (e) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S. Code Section 962I(c), as provided in the attached third Five-Year review Report.

Summary of third Five-Year Review Report

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.

Government Performance and Results Act (GPRA) Measures Review

As part of this FYR, the GPR Measures have also been reviewed. The GPRA Measures and their status are as follow:

Environmental Indicators

Human Health: Human Exposure Controlled and Protective Remedy in Place (HEPR).

Groundwater Migration: Groundwater Migration under Control (GMUC).

Sitewide Ready for Anticipated Use

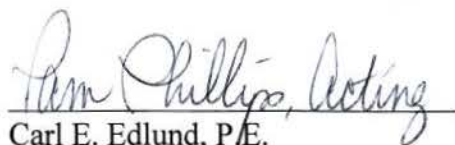
The Site has not achieved Sitewide Ready for Anticipated Use status.
Site received Construction Completion (CC) status on July 31, 2003.

Actions Needed

To reinforce Institutional Controls (ICs) and meet requirements of the Louisiana Department of Environmental Quality (LDEQ), this Five-Year Review recommends to file and record the Consent Decree (CD) filed in the U.S. Middle District Court of Louisiana as a CONVEYANCE NOTICE with the Parish Clerk of Court, to inform and notify interested persons of information and restrictions regarding this Site. These additional ICs will “layer” with ICs already in place.

Determinations

I have determined that the remedy at the PPI site currently protects human health and the environment and is protective in the short-term. With the implementation of the near-source and distal end enhanced attenuation actions at the Scenic Operable Unit (OU), the remedy is expected to be protective in the long-term. This Five-Year Review report specifies the actions that need to be taken for the remedy to be protective in the long term.



Carl E. Edlund, P/E.

Director, Superfund Division

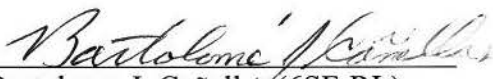
U.S. Environmental Protection Agency, Region 6



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CONCURRENCES
THIRD FIVE-YEAR REVIEW REPORT
for the
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EPA ID#: LAD057482713, LDEQ AI# 2469 & 83225
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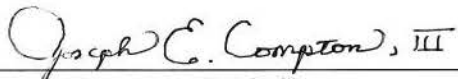
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Date


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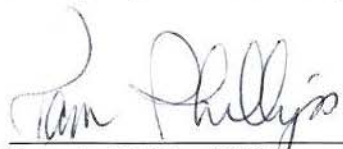
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ISSUES/RECOMMENDATIONS
THIRD FIVE-YEAR REVIEW REPORT
for
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EPA ID#: LAD057482713, LDEQ AI# 2469 & 83225
East Baton Rouge Parish, Louisiana

Issues and Recommendations Identified in the Five-Year Review:

OU(s): Sitewide	Issue Category: Institutional Controls			
	Issue: Ensure long-term protectiveness through institutional controls			
	Recommendation: Select additional ICs (filing CD as conveyance notice) to “layer” with ICs already in place.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	No	PRP	EPA/State	9/30/2016

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East Baton Rouge Parish, Louisiana

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List of Acronyms

ARARs	Applicable or Relevant and Appropriate Requirements
BBR	Bayou Baton Rouge
BQL	Below Quantification Levels
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CC	Construction Completion
CD	Consent Decree
cis-DCE	cis-1,2-Dichloroethene
COC	Contaminants of Concern
DCA	1,2-Dichloroethane
DNAPL	Dense Non-Aqueous Phase Liquids
DTZ	Distal Treatment Zone
EA	Enhanced Attenuation
EDMS	Electronic Data Management System
EPA	United States Environmental Protection Agency, Region 6
Federal Court	U.S. Federal District Court, Middle District of Louisiana
FYR	Five-Year Review
GMUC	Groundwater Migration under Control
GPRA	Government Performance and Results Act
HCB	Hexachlorobenzene
HCBD	Hexachlorobutadiene
HEPR	Human Exposure Controlled and Protective Remedy in Place
ICs	Institutional Controls
JESTC	Joint Emergency Services Training Center
K	Thousand
LAC	Louisiana Administrative Code
LDEQ	Louisiana Department of Environmental Quality
LDHH	Louisiana Department of Health and Hospitals
LSP	Louisiana State Police
LSU	Louisiana State University
LTMP	Long Term Monitoring Plan
MM	Million
MNA	Monitored Natural Attenuation
MSL	Mean sea level
NCP	National Contingency Plan
NPC	NPC Services, Inc.
NA	Natural Attenuation
NPL	National Priorities List
O&M	Operation and Maintenance
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
RECAP	Risk Evaluation/ Corrective Action Program
RPA	Remedial Planning Activities
Scenic Highway	U.S. Highway 61
STZ	Source Treatment Zone
TCA	1,1,2-Trichloroethane
TCE	Trichloroethene
TeCA	1,1,2,2-Tetrachloroethane
trans-DCE	trans-1,2-Dichloroethene
UU/UE	Unlimited Use and Unrestricted Exposure
VC	Vinyl Chloride

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I. Introduction

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this five-year review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the third FYR for the Petro-Processors of Louisiana, Inc. (PPI) Superfund Site. The triggering action for this policy review signature date of the previous FYR. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of all Operable Units (OUs) at the Site, and all of OUs reviewed in this FYR will be addressed in this FYR.

There are three main areas listed as part of the PPI Site, the Brooklawn Disposal Area, the Bayou Baton Rouge/Devil's Swamp Area, and the Scenic Area. In accordance with the Consent Decree (CD), the Brooklawn Area and Bayou Baton Rouge Areas were combined as a single OU. The Brooklawn OU and the Scenic OU have been investigated, remediated as necessary, and are currently being monitored and maintained according to approved remedial plans. This third Five-Year Review reports on the remedial status and the protectiveness of the remedies at both the Brooklawn OU and Scenic OU.

The PPI Superfund Site Five-Year Review was led by Mr. Bartolome Canellas, EPA Remedial Project Manager. Participants included Mr. Keith Horn, state agency representative and Mr. Jason McKinney, EPA community involvement coordinator. The relevant entities such as the PRP were/was notified of the initiation of the five-year review. The public and other interested parties were notified through a public notice posted in a local newspaper and a fact sheet mailed to members of the community in the site mailing list. The review began on 4/1/2015.

The PPI Site, located north of the city of Baton Rouge, includes the Brooklawn 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.

Site Background

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. Middle District Court of Louisiana issued an order approving the CD for a remedial action at the PPI Site. As provided for in the CD, the Industry Defendants designated a remedial plan coordinator, 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, and for the Brooklawn OU in July 2003. A Preliminary Close Out Report (PCOR) was also approved in July 2003. The Site received the classification of Construction Completion in July 2003.

Brooklawn OU

The Brooklawn Operable OU is located in the northwestern portion of East Baton Rouge Parish, on Brooklawn Drive, approximately one and one half miles west of Scenic Highway. The OU covers approximately 80 acres, including the disposal area and the adjacent Bayou Baton Rouge (BBR) area. Ground surface elevations range from approximately 35 feet Mean Sea Level (MSL), along the floodplain of the BBR area, to an elevation of approximately 75 feet MSL, on top of the bluff which borders the northern portion of the Site.

PPI operated the site as a depository for various petrochemical waste products containing hazardous substances during the 1960s and the 1970s. The Brooklawn OU operated from approximately 1969 to 1978. Former disposal areas in the OU include lagoons and pits that were covered to a minimum elevation of approximately 55 feet MSL during the remedial action. Land use in the vicinity of the PPI site consists of largely undeveloped areas in the bottomlands, near the Mississippi River, with some industrial development in the upland areas and along U.S. Highway 61. An industrial district of Baton Rouge is located southeast of the site, in and around Scotlandville.

Bayou Baton Rouge and Devil's Swamp

BBR originates in the broad uplands, about six (6) miles north of the Scenic OU. The bayou crosses U.S. Highway 61, about one-fourth mile north of the Scenic OU, and flows southwest

adjacent to the Scenic OU. The bayou turns near its confluence with Baker Canal, and flows west for about two (2) miles. The bayou then turns south and enters the Mississippi River floodplain, adjacent to the Brooklawn OU. The bayou and distributaries eventually discharge into Devil's Swamp (the swampy lowlands of the Mississippi River floodplain). A significant channel in the BBR distributaries, the Middle Channel, was filled to mitigate the surface material exposure pathway.

On January 10, 2003, all construction activities, which affect the remedy at the Brooklawn OU, were completed. An Interim Remedial Action Report for the Brooklawn OU was approved on July 9, 2003.

Scenic OU

The Scenic OU is located in an unincorporated area of East Baton Rouge Parish, north of the Baton Rouge city limit. The Site is situated along the BBR floodplain and is located immediately west of Scenic Highway (U.S. Hwy 61) and the Kansas City Southern rail line, and east-northeast of BBR. The Site has been covered with a protective cap and has an elevation ranging from approximately 75 feet, MSL along the top of the cap to about 45 feet, MSL along BBR near the Site.

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. The Scenic OU received petrochemical waste containing hazardous substances from 1961 to 1974. Land use in the area surrounding the Site is largely undeveloped in the bottomlands near the Mississippi River, with some industrial development in the upland areas. An industrial district of Baton Rouge is located southeast of the Site, in and around Scotlandville, LA.

On January 11, 2000, all construction activities, which affect the remedy at the Scenic OU, were completed. An Interim Remedial Action Report for the Scenic OU was approved on November 29, 2001.

Interim Remedial Action Reports have been approved at both the Brooklawn and Scenic OU, and the Agency issued a PCOR for the PPI Site on July 31, 2003.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Petro-Processors of Louisiana, Inc. (PPI)		
EPA ID: LAD057482713		
Region: 6	State: LA	City/County: Baton Rouge, East Baton Rouge Parish
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA <i>[If "Other Federal Agency", enter Agency name]:</i>		
Author name (Federal or State Project Manager): Bartolome J. Canellas		
Author affiliation: EPA Region 6		
Review period: 4/1/2015 - 12/1/2015		
Date of site inspection: 9/21/2015		
Type of review: Policy		
Review number: 3		
Triggering action date: 12/28/2010		
Due date (five years after triggering action date): 12/28/2015		

II. Response Action Summary

Basis for Taking Action

The CD, signed in Federal Court on February 16, 1984, outlined various remedial activities. As stated in the CD, the primary goal of the PPI Site remediation project is “to protect public health and the environment from releases of hazardous wastes, solid wastes, hazardous substances and pollutants and contaminants from the Brooklawn and Scenic Highway sites, by the investigation, development, design and implementation of remedial and long-term monitoring programs.”

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, that were developed specifically for the Brooklawn and Scenic OU. Each approved document is incorporated by reference and has become part of the CD.

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, groundwater, 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.

Preventing endangerment to public health and the environment, and to prevent the release of hazardous waste or contaminants from the Brooklawn and Scenic OUs, is the primary goal of the PPI remediation project. The Long Term Monitoring Plan (LTMP) reports provide verification that the approved and implemented remedial actions continue to be protective.

Status of Implementation

Brooklawn OU

The remedial objective identified for the groundwater exposure pathway at the Brooklawn OU is the prevention of unacceptable contamination reaching the downgradient Point of Exposure (POE), the Mississippi River. Evidence was presented in 2006 that predicted Natural Attenuation (NA) processes would stabilize the dissolved contaminant plume, such that it does not migrate to the defined downgradient POE.

Previous inspection reports were reviewed. Data presented, confirms that groundwater contamination from the PPI Site former waste disposal areas is not present in sentry wells within the 400-foot aquifer or in the alluvial base.

Supplemental investigation that include an update of the groundwater flow and solute transport model at the Brooklawn OU were approved in 2014 and are currently underway.

Bayou Baton Rouge and Devil's Swamp

Natural Recovery was selected for remediation of Bayou Baton Rouge sediments, south of the Brooklawn and Scenic OU. The remedial plan also specified filling the Middle Channel of Devil's Swamp in the Bayou Source Area of the Brooklawn OU. This action was completed in February 2003.

The condition of this filled Middle Channel, today, compares favorably to previous years; vegetation is well established, no critical concerns related to the integrity of the protective fill exists. Vegetative cover over the clay fill has returned to its natural state and appears to be thriving; no corrective action or additional maintenance is required at this time.

Scenic OU

The principal remedial objectives for the Scenic OU are to protect public health and the environment, include the development of a solute transport model to assess potential impacts on the 400-foot aquifer, evaluation of NA of dissolved organic constituents, and development of a monitoring program.

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, the selected Remedial Action (RA) for the disposal area was source reduction with MNA. Source reduction included the removal of mobile Dense Non-Aqueous Phase Liquids (DNAPL), by pumping recovery wells placed in the waste pit. In 2003, Monitored Natural Attenuation (MNA) was selected as the approved RA for groundwater contamination.

NPC conducted modeling to define Natural Attenuation (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 NA processes can provide effective reduction of the soluble contaminants.

An update for the fate and transport model presented in 2003 identified that three of the Contaminants of Concern (COC) found in the +20 MSL Zone, beneath the Scenic Site, did not reach equilibrium during the simulated 50-year period. This prompted additional investigations on +20 MSL Zone. In 2007 Enhanced Attenuation (EA) was selected as the approved RA for groundwater contamination, proceeding with field testing and additional investigation of this zone.

In 2010, Primary and a Secondary Source Treatment Zones (STZ) were installed north-west of the Scenic OU. EA activities were initiated with the injection of Molasses, in 2011. A third treatment zone designated as the Distal Treatment Zone (DTZ), was installed in property of the Louisiana State Police (LSP), and initial injections were completed in 2013 (see Figures 3 and 4).

Previous inspection and monitoring reports were reviewed. Data presented, confirms that the EA near-source remedy in the area of the field test has significantly reduced COC concentrations within the +20 MSL Zone. The STZ, installed in 2010, has also resulted in reduced contaminant concentrations and is anticipated to be effective as a source control measure. Data collected during the 2014 sampling event continue to demonstrate that enhancing the naturally occurring attenuation processes are sufficient to achieve significant COC mass reduction, in an area of high total COC concentrations (greater than 25 mg/L).

STZ contaminant contours displayed in the report shows significant progress in detaching the source area from the down gradient contaminant plume, which originated from the Scenic OU former waste disposal area. The LTMP reports conclude that the approved near-source RA is expected to be protective of human health and the environment and recommends continued operation and monitoring of the EA groundwater remedy.

Groundwater COC data for transect monitoring locations within the +20 MSL Zone, for the 2008 to 2014 reporting years, demonstrate the decrease of COC. These results represent significant reductions in the concentrations that were previously “feeding” the growing plume, west of the source area, at the Scenic OU. Appendix J contains copy of graphs showing the Contaminant Trends that were included as part of the 2014 Long Term Monitoring Plan Report for the Scenic OU.

Operation and monitoring of the EA groundwater remedy continues, and the Scenic OU groundwater model approved by the Agencies was updated on October 22, 2013.

IC Summary Table

Table 1: Summary of Planned and/or Implemented Institutional Controls (ICs)

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Fish and Crawfish Devil's Swamp and Bayou Baton Rouge	Yes	No	Brooklawn Site	Governmental Control Issued as a precaution	Fish Consumption Advisor issued in 2015 Implemented
Soils	Yes	Yes	Brooklawn and Scenic Sites	Informational Devices Address and Control	Fencing and Signage, Educational Material and Additional Sources of Site Information Implemented
Soils, Sediment and Groundwater	Yes	Yes	Brooklawn and Scenic Site	Enforcement Tool	Consent Decree (CD) February 1984 Implemented
Soil, Sediment and Groundwater	Yes	Yes	Brooklawn and Scenic Site	Enforcement Tool	Supplemental Remedial Action Plan consistent with CD December 1988 Implemented
Soil, Sediment and Groundwater	Yes	Yes	Brooklawn and Scenic Site	Enforcement Tool	Conveyance Notice Recommended to be Implemented

Soil, Sediment and Groundwater	Yes	No	Scenic Site	Proprietary Controls	Negative Servitudes Implemented
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Section IV of this FYR provides additional detail of implemented and recommended Institutional Controls.

System Operation/Operation and Maintenance (O&M)

As the Petro-Processors of Louisiana, Inc. site was a Potentially Responsible Parties (PRPs) funded cleanup, the funding information is not publicly available. O&M activities continue to be implemented by the PRPs.

There are no modifications to existing O&M plans.

III. Progress Since the Last Review

Table 2: Protectiveness Determinations/Statements from the 2010 FYR

OU #	Protectiveness Determination	Protectiveness Statement
1 Brooklawn	Protective	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.
2 Scenic	Short-term Protective	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.
Sitewide	Protective	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.

Table 3: Status of Recommendations from the 2010 FYR

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
Scenic	Damaged bridge crossing	Repair bridge crossing	Completed	Recommended bridge repairs completed	6/30/2010
Scenic	Enhancement of the natural attenuation remedy is necessary as a source control remedy	Investigate potential for Enhanced Attenuation and implement	Ongoing	Investigation completed, implementation of Enhanced Attenuation remedy currently ongoing	Not applicable

Source Treatment Zone

The second Five-Year Review recommended that, in order for the remedy to be protective in the long-term, implementation of enhanced attenuation actions at the near-source and distal end of the groundwater plume at the +20 MSL Zone were necessary, to ensure long-term protectiveness at the Scenic OU.

Pilot testing of enhanced natural attenuation started at the Scenic OU in December 2008, with the installation of injection and extraction wells. Favorable results supported the implementation of a near-source remedy, using enhanced attenuation treatment zones, to augment previous actions to remediate the site. Drilling for additional injection and extraction wells for construction of a near-source remedy were completed in 2010. Injection activities of substrate at the primary and secondary treatment zones started in April 2011 and were completed in July 2011. Additional reinjection events occurred in 2013, with targeted reinjection events occurring approximately every two years.

Distal Treatment Zone

A supplemental investigation was conducted at the distal end of the plume on Louisiana State Police property, in 2012. This resulted in construction of a distal treatment zone (DTZ) for enhanced attenuation. Pilot testing with initial substrate injections started in June 2012, and injection at all the distal treatment zone wells started in April 2013.

Reinjection of molasses in 2014 and 2015 was completed in all eighteen (18) wells. During the 2013 and 2014 events, a yearly average of 20 tons of molasses was injected with 1.3 MM gallons of groundwater. Since completion of the field test in 2012, full scale substrate reinjections have been conducted for three (3) years at the DTZ. The table of events shown below details the investigation phases, initial field test, and substrate reinjections at the DTZ.

Currently, enhanced natural attenuation is taking place at these three (3) treatment zones (see Figure 4). Further evaluation of the groundwater flow models, evaluation of the extent of the western plume, and microbial characterization investigations by the Louisiana State University will continue (LSU).

IV. Five-Year Review Process

Mr. Bartolome J. Canellas, EPA Project Manager, Region 6, led this third 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.

Community Notification, Involvement & Site Interviews

A public notice was made available by a newspaper posting, (The Advocate), on 4/3/2015, stating that there was a five-year review and inviting the public to submit any comments to the U.S. EPA. The results of the review and the report will be made available at the Site information repository located at located at 2401 Brooklawn Drive, in Baton Rouge, Louisiana, and through EPA Region 6 and LDEQ.

A Five-Year Review fact sheet was distributed to the mailing list maintained for the site. The public notice and fact sheet are presented in Appendix B. A copy of this completed report will be available at the PPI Site, at the site information repository.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. The results of these interviews are summarized below.

There were no negative comments or concerns associated with the remedial activities of the site.

Appendix D contains the completed site survey forms (site interviews) and a listing of those who were interviewed. These interviews were conducted by phone, mail, and email. Responses were received from the Louisiana Department of Environmental Quality (LDEQ) personnel, Louisiana Department of Health and Hospitals (LDHH) personnel, LSU professors who served in the past as court appointed experts, technical personnel associated with the groundwater and DNAPL modeling efforts, the PPI Site Facility Manager, representatives of EPA Region 6, and residents of the Alsen community.

Data 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.

Appendix C contains a concurrence letter from LDEQ, stating their findings from the request for ARARs review. Since the last Five-Year Review performed at the site, responsibility for the regulation of water wells and related reporting requirement in the State of Louisiana has been fully transferred from the Louisiana Department of Transportation and Development, to the Louisiana Department of Natural Resources, Office of Conservation. This was effective January 1, 2010, and relevant regulations are now found in the Louisiana Administrative Code (LAC) Title 56, Part I “Water Wells” (LAC 56 Part I).

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

Inspections of protective coverings in the former disposal areas and in BBR distributaries at the Brooklawn OU reveal no integrity concerns.

Groundwater monitoring results at the Scenic OU indicates that the remedy is protective. EA at the Scenic OU showed significant reduction in contaminant mass within the source and distal treatment zones.

Site Inspection

The inspection of the site was conducted on September 21, 2015. In attendance were Mr. Bartolome Canellas, representative of the EPA, Mr. Keith Horn, representative of LDEQ and Mr. Bryan McReynolds, representative of the PRPs. The purpose of the inspection was to assess the protectiveness of the remedy.

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. This confirms the effectiveness of the access control and informational ICs. Photographs that were taken during the site inspection are included in Appendix E. Figures, tables and maps are included in Appendix F. The site inspection checklist is presented in Appendix G.

Institutional Controls

The PRPs, the EPA, and the State of Louisiana have implemented the following four types of institutional controls to minimize and, where possible, prevent exposure to contamination that could result in unacceptable risk. ICs planned for the future are also discussed and recommended as part of this Five-Year Review.

Governmental Controls:

☐ *Fish consumption advisories.* In 2015, the Secretary of the Louisiana Department of Health and Hospitals, Environmental Quality, and Wildlife and Fisheries issued a health advisory for Devil's Swamp/Bayou Baton Rouge to advise "do not eat fish or crawfish from this area", included in Appendix H. This advisory was issued as a precaution. Any further sampling data from this area will be evaluated to determine the need for modifications to the current recommendations.

Informational Devices:

☐ *Fencing.* Fencing has been erected along the Brooklawn and Scenic sites. The PRPs continues to use, monitor and maintain fencing to address and control access to these areas. Fencing and signage were verified during the site inspection and are shown in the photographs included in Appendix E.

☐ *Signage.* Signage is used extensively at the Site, both to communicate the fishing advisory as well as to warn the public about these sites. The PRPs conduct annual inspections of signage to ensure this institutional control remains in place and is protective.

☐ *Additional Educational Materials.* In addition to outreach materials on the health advisory for fish consumption and recommendations issued by the state, the EPA issues Fact Sheets, distributed to the public through the site mailing list. An example is included in Appendix B.

☐ *Additional Sources of Information:* The LDEQ Electronic Data Management System (EDMS) as well as EPA's website might also be listed.

Enforcement tools:

☐ *Other legal tools – Consent Decree.* Article 28 of the February 1984 CD states:

"Any Industry Defendant possessed of any interest in real property upon which a site which is the subject of this Decree is located shall give sixty (60) days prior notice in writing, together with a copy of the conveyance documents, to each Plaintiff of its intent to convey any interest in such property. Any Plaintiff may object to the conveyance or terms thereof. Conveyance shall not proceed until all such objections are finally resolved. This notice shall set forth the conditions of the conveyance, adequate and complete provision for access, continued maintenance of any monitoring systems, and completion of all remedial activities at the sites. Notwithstanding any conveyance, the Industry Defendants shall record a copy of this Consent Decree with the appropriate Parish official."

☐ *Other legal tools – Supplemental Remedial Action Plan of December 1988*

The SRAP is consistent with the provisions of the basic CD and was approved on August 28, 1989 through an order issued by U.S. Middle District Court of Louisiana. This document

outlines the operation and maintenance activities to be conducted by the PRPs as part of the post-closure operations.

□ *Other legal tools – Conveyance Notices.*

There have been no such conveyances of impacted property and no such potential is foreseen. Nevertheless, to reinforce institutional controls, this Five-Year Review will recommend to file and record a CONVEYANCE NOTICE with the Parish Clerk of Court to inform and notify interested persons of information and restrictions regarding this Site.

Proprietary Controls:

□ *Other legal tools – Negative Servitudes.* Negative servitudes have been established for the sale of non-impacted property such as the Baxter property east of US61 and north of the Scenic OU. The act of sale established a negative servitude prohibiting water wells for irrigation or drinking purposes, as follows:

“VENDOR'S/SELLER'S transfer to VENDEE/PURCHASER of the property is subject to the restriction and negative servitude in favor of VENDOR'S/SELLER'S adjacent and/or nearby property (including NPC Tract Y-1-A-1-A as shown on attached plat and property NPC owns in the U.S. Highway Right-of-Way) that the property shall not be used any time for any water wells for irrigation or drinking purposes.”

The PRPs Act of Exchange of property with Louisiana State Police at the Joint Emergency Services Training Center (JESTC), transferred portions of the Baxter property in exchange for access to comply with the CD, also included a negative servitude. The executed Act of Exchange, included in Appendix I, Section 2, Transfer by NPC to STATE, lists the negative servitude in part D. It includes land use restrictions ranging from no hotels to child care or nursing homes. It also restricts wells for irrigation or public use. On JESTC property not part of the exchange, in Section 4, Part D, Notice, LSP has agreed to give notice to NPC (representative for the PRPs) for any subsurface installations.

V. 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 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.

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 distributary channels, to ensure its integrity. Inspections have documented that vegetation is well established, and there is no noted erosion of any fill areas.

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.

ICs are in place and effective for all areas of the site that do not achieve UU/UE, but additional ICs are recommended to meet the LDEQ regulations under the Risk Evaluation/ Corrective Action Program (RECAP).

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. Site conditions have not changed from the previous Five-Year Remedy Review. There are no new buildings, land use changes, new identified contaminants or sources that may present a potential vapor intrusion risk.

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 Remedial Planning Activities (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.

Issues/Recommendations	
OU(s) without Issues/Recommendations Identified in the Five-Year Review:	
None of the OU(s) have issues that could affect current or future protectiveness.	

Issues and Recommendations Identified in the Five-Year Review:

OU(s): Sitewide	Issue Category: Institutional Controls			
	Issue: Ensure long-term protectiveness through institutional controls			
	Recommendation: Select additional ICs (filing CD as conveyance notice) to “layer” with ICs already in place.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	No	PRP	EPA/State	9/30/2016

NPC is currently in the process of conducting an update of the groundwater flow and transport model to reflect the most recent geological and contaminant data. This will provide a better understanding of the predicted fate of contamination in the groundwater, downgradient from the DTZ. These planned activities are anticipated to be completed in the first quarter of 2016, and will be documented in forthcoming RPA reports.

VI. Protectiveness Statement(s)

Brooklawn OU

Construction activities are complete, the MNA remedy is operating, operation and maintenance activities are occurring, and the LTMP monitoring program is taking place.

Protectiveness Statement(s)	
<i>Operable Unit:</i> Brooklawn OU	<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> 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

Construction activities are complete, the MNA and EA remedy is operating, operation and maintenance activities are occurring, and the LTMP monitoring program is taking place.

The remedy at the Scenic OU currently protects human health and the environment and is protective in the short-term. With the implementation of the near-source and distal end enhanced attenuation actions the remedy would generally be considered protective in the long-term, as long as these actions continue, no exposures are occurring and effective ICs are maintained until cleanup standards have been achieved.

Protectiveness Statement(s)	
<i>Planned Addendum</i> <i>Completion Date: NA</i>	<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i> The remedy at the Scenic OU currently protects human health and the environment and is protective in the short-term. With the implementation of the near-source and distal end enhanced attenuation actions the remedy would generally be considered protective in the long-term, as long as these actions continue, no exposures are occurring and effective ICs are maintained until cleanup standards have been achieved.	

PPI Sitewide

All construction activities are complete.

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, and the Scenic OU MNA and EA remedies, through implementation of the LTMP, has been shown to be effective and protective of downgradient receptors.

Current site conditions, limited access limitations, and the implemented remedy components (that do not explicitly address the vapor intrusion pathway) effectively mitigate the vapor intrusion risk and support a protective determination.

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.

Sitewide Protectiveness Statement

Protectiveness Determination:

Protective

Protectiveness Statement:

The remedy at the PPI Site currently protects human health and the environment and is protective in the short-term. With the implementation of the near-source and distal end enhanced attenuation actions at the Scenic OU, the remedy is expected to be protective in the long-term.

VII. Next Review

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

APPENDIX A

Documents Reviewed

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

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DOCUMENTS REVIEWED DURING THIS FIVE-YEAR REVIEW

DOCUMENT DATE	DOCUMENT TITLE	SUBJECT
November 19, 2007	Scenic OU – Addendum H to the Work Plan for Remedial Planning Activities – Supplemental Investigation (+20 MSL Channel) and Enhanced Attenuation (EA) Field Testing (SDMS # 673210)	Scenic OU – Three COC are not fully attenuated, TCA, PCE, TCE Proposal to investigate +20 MSL Channel
March 12, 2008	Scenic OU – Addendum H to the Work Plan for Remedial Planning Activities - +20 MSL Channel Characterization Phase Extension (SDMS # 826496)	Scenic OU – +20 MSL Channel investigation
August 13, 2008	Scenic OU – Addendum H to the Work Plan for Remedial Planning Activities - +20 MSL Channel Characterization Phase Extension – (Additional investigation to identify the western extent of the plume) (SDMS # 830145)	Scenic OU – +20 MSL Channel investigation
December 23, 2008	Scenic OU - Field Oversight and Observation of the Installation of Monitoring, Extraction, and Injection Wells (for pilot testing EA at near source treatment zones) (SDMS # 861259)	Scenic OU – Installation test wells
March 9, 2010	Brooklawn OU - Long Term Monitoring Plan Report 2008 (SDMS #887235)	Brooklawn OU – Monitoring Report
March 29, 2010	Scenic OU – Long Term Monitoring Plan Report 2008 and 2009 (SDMS #887242)	Scenic OU – Monitoring Report

April 7, 2010	Scenic OU – Status Update (Results of the +20 MSL Channel Investigation, EA pilot testing that started January 2009, Characterization of Bacterial Populations by LSU, and Near source conceptual remedy) (SDMS # 886860)	Scenic OU – Results +20 MSL Channel Investigation Results Near Source Pilot Test Proposal for near source treatment zones
July 15, 2010	Scenic OU – Draft: Addendum H to the Remedial Design and Construction Plan (RDCP) - +20 MSL Near Source Remedial Action (SDMS # 627948)	Scenic OU – Draft: Remedial Design and Construction Plan
August 19, 2010	Scenic OU – Final: Addendum H to the Remedial Design and Construction Plan (RDCP) - +20 MSL Near Source Remedial Action (SDMS # 9122034)	Scenic OU – Final: Remedial Design and Construction Plan
October 6, 2010	Scenic OU - Field Oversight and Observation of the Installation of Monitoring, Extraction and Injection Wells (SDMS # 612919)	Scenic OU – Installation near source wells
November 29, 2010	Brooklawn OU - Long Term Monitoring Plan Report 2009 (SDMS # 628050)	Brooklawn OU – Monitoring Report
December 28, 2010	Second Five-Year Review for Petro-Processors of Louisiana, Inc., site (SDMS # 643263)	Second Five-Year Review
April – May 2011	Scenic OU – Initial Injection Molasses at the Primary and Secondary Near source Treatment Zones (NTZ) (SDMS # 636124)	Scenic OU – Near Source EA (Initial Injection Of Molasses)

June 1, 2011	Scenic OU - Addendum I to the Work Plan for Remedial Planning Activities - Supplemental Investigation Distal Treatment Zone Enhanced Attenuation Field Testing (SDMS # 9176207)	Scenic OU – Investigation Distal Treatment Zone
September 14, 2011	Scenic OU – Addendum I to the Work Plan for Remedial Planning Activities - Supplemental Investigation at the Distal Treatment Zone (SDMS # 693503)	Scenic OU – Results Distal Treatment Zone Investigation
December 27, 2011	Brooklawn OU - Long Term Monitoring Plan Report 2010 (SDMS # 651862)	Brooklawn OU – Monitoring Report
February 28, 2012	Scenic OU - Long Term Monitoring Plan Report 2010 (SDMS # 665139)	Scenic OU – Monitoring Report
May 25, 2012	Scenic OU – Addendum I to the Work Plan for Remedial Planning Activities - Field Test of Enhanced Attenuation (Distal Treatment Zone) (SDMS # 665149)	Scenic OU – Pilot test Distal Treatment Zone
June 29, 2012	Brooklawn OU – Addendum J to the Work Plan for Remedial Planning Activities - Primary Transect Investigation (Devil's Swamp) (SDMS # 665128)	Brooklawn OU – Primary Transect Investigation at Devil's Swamp (south of former waste disposal area)
October 24, 2012	Brooklawn OU – Addendum J to the Work Plan for Remedial Planning Activities - Initial Ground Water Contaminant Results – Request for Additional Data Collection (SDMS # 672466)	Brooklawn OU – Results Groundwater Investigation at Devil's Swamp

November 13, 2012	Brooklawn OU – Addendum J to the Work Plan for Remedial Planning Activities - Supplemental Ground Water Contaminant Results – Request for Additional Data Collection (SDMS # 672777)	Brooklawn OU – Results Groundwater Investigation at Devil’s Swamp
November 15, 2012	Brooklawn OU - Long Term Monitoring Plan Report 2011 (SDMS # 673287)	Brooklawn OU – Monitoring Report
January 30, 2013	Scenic OU - Long Term Monitoring Plan Report 2011 (SDMS # 681066)	Scenic OU – Monitoring Report
March 13, 2013	Scenic OU – Addendum I to the Work Plan for Remedial Planning Activities - Enhanced Attenuation Injections at the Distal Treatment Zone (SDMS # 680645)	Scenic OU – Start of EA remedial injections at 18 wells of the Distal Treatment Zone
May 22, 2013	Scenic OU - Addendum I to the Work Plan for Remedial Planning Activities - Distal Treatment Zone Enhanced Attenuation Field Testing (SDMS # 692943)	Scenic OU – Results Pilot Test for EA at Distal Treatment Zone
October 22, 2013	Scenic OU - Addendum K to the Work Plan for Remedial Planning Activities - Groundwater Flow and Solute Transport Model Update (SDMS # 692945)	Scenic OU – Update Groundwater Model
October 24, 2013	Brooklawn <u>OU</u> – Addendum J to the Work Plan for Remedial Planning Activities – Locations Anticipated to be sampled in 2013 (SDMS # 693478)	Brooklawn OU – Groundwater Investigation AT Devil’s Swamp

December 5, 2013	Scenic OU - Long Term Monitoring Plan Report 2012 (SDMS # 698209)	Scenic OU – Monitoring Report
December 23, 2013	Brooklawn OU - Long Term Monitoring Plan Report 2012 (SDMS # 701239)	Brooklawn OU – Monitoring Report
March 24, 2014	Scenic OU – Addendum L to the work plan for Remedial Planning Activities – Distal Treatment Zone Soil Investigation (SDMS # 703243)	Scenic OU – Distal Treatment Zone Soil Investigation for a potential toluene source
August 12, 2014	Brooklawn OU – Addendum J to the Remedial Planning Activities Report – Brooklawn Primary Transect Investigation (Prepared in response to actions specified in Addendum J to the Work Plan) (SDMS # 710375)	Brooklawn OU – Primary Transect Investigation at Devil’s Swamp (south of former waste disposal area)
September 15, 2014	Brooklawn OU – Addendum J to the Remedial Design and Construction Plan (RDCP) for the Brooklawn OU – Primary transect Monitor Well Installations (Prepared in response to actions specified in Addendum J to the Work Plan) (SDMS # 711263)	Brooklawn OU – Remedial Design and Construction Plan Monitoring locations at Devil’s Swamp (south of former waste disposal area)
October 8, 2014	Brooklawn OU – Addendum M To The Work Plan for Remedial Planning Activities - Groundwater Flow and Solute Model Update (SDMS # 713706)	Brooklawn OU – Update Groundwater Model
January 19, 2015	Scenic OU - Long Term Monitoring Plan Report 2013 (SDMS # 9490584)	Scenic OU – Monitoring Report

January 29, 2015	Brooklawn OU - Long Term Monitoring Plan Report 2013 (SDMS # 9490583)	Brooklawn OU – Monitoring Report
March 17, 2015	Brooklawn OU - Long Term Monitoring Plan Report 2014 (SDMS # 9490364)	Brooklawn OU – Monitoring Report
October 27, 2015	Scenic OU - Long Term Monitoring Plan Report 2014	Scenic OU – Monitoring Report
October, 2015	Superfund Fact Sheet	Petro-Processors of LA Brooklawn and Scenic sites

APPENDIX B

Public Notices And Fact Sheet

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

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

EPA Region 6 and LDEQ Begin Third 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 third 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 second Five-Year Review was approved on December 28, 2010, 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 third 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.epq.gov/region6/superfund or <http://edms.deq.louisiana.gov/app/doc/querydef.aspx> (AI#83225). 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 Keith Horn (225) 219-3687 or by e-mail at Keith.Horn@LA.GOV

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

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:

04/03/15



Shelley Calloni, Public Notice Clerk

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

April 3, 2015



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



**PETRO-PROCESSORS OF
LOUISIANA, INC. SUPER-
FUND SITE**

PUBLIC NOTICE
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www.epa.gov/region6/superfund

or
<http://edms.deq.louisiana.gov/app/doc/querydef.a>

SPX (A# 2469 and 83225). For more information about the Site, contact: Bartolome Canelas (214) 665-6662 or 1-800-533-3508 (toll-free), or by e-mail at canelas.bartol@epa.gov or Keith Horn (225) 219-3687 or by e-mail at

Keith.Horn@LA.GOV

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

5113214-apr 3-1t

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

5113214

EPA Begins Third Five-Year Review of Site Remedy

PETRO-PROCESSORS OF LOUISIANA, INC. SUPERFUND SITE
East Baton Rouge, Louisiana

October 2015

This Fact Sheet will tell you about...

- **Five-Year Review for Superfund Sites:**
- **Site History**
- **Initial Remedy**
- **Final Remedy**
- **Enhanced Attenuation**
- **Future Plans**
- **Community Involvement**
- **The Five Year Review: Protecting Public Health and the Environment**
- **What Happens After the Review?**
- **For More Information**

Five-Year Review for Superfund Site:

After completion of a Superfund National Priorities List (NPL) site cleanup action, the U.S. Environmental Protection Agency (EPA) conducts regular inspections, called Five-Year Reviews, at selected Superfund sites. The EPA and the Louisiana Department of Environmental Quality (LDEQ) have begun the third Five-Year Review for the Petro-Processors of Louisiana, Inc. site (Site), located in Baton Rouge, East Baton Rouge Parish, Louisiana.

During the review, the EPA will: study information on the Site, including the effectiveness of the cleanup and the laws that apply; inspect the Site; interview people familiar with the remediation; and complete a Five-Year Review report.

Site History:

The Site was originally used as a depository for various petrochemical waste products during the 1960s and the 1970s.

In July 1980, the U.S. Department of Justice filed suit against Petro-Processors of Louisiana, Inc. (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 the U.S. Federal District Court approved a Supplemental Remedial Action Plan. This plan provided for hydraulic containment and recovery, coupled with incineration.

Through additional investigations, the remedial plans were expanded or modified to protect against potential threats to human health and the environment. These plans were implemented as approved by the court.

In July 2003, the site received Construction Complete status. The first Five-Year Review was conducted in 2005, followed by a second Five-Year Review in 2010.

Currently the Site is in the operations and maintenance phase, while further modeling, monitoring, and inspection activities continue to be implemented to ensure human health and the environment are protected.

Enhanced Attenuation (EA):

An investigation was initiated in 2003 to assess the fate and transport of dissolved contaminants from the Scenic site and update the transport model. The investigation included further evaluation of the shallow groundwater (the +20 MSL zone) where monitoring found some contaminants not degrading as fast as predicted.

Enhanced plume attenuation is a viable remedial alternative to accelerate compliance with the groundwater remedial objectives. Therefore, the shallow groundwater was further investigated in 2004, 2005 and 2006 to define the edges of this zone (the +20 MSL zone). Once identified, pilot testing for EA was initiated at the Scenic site in 2009.

After successful testing, construction of two near source treatment zones was proposed in 2010 to augment the natural attenuation process. These treatment zones were built and EA activities were initiated with the injection of molasses to enhance biological activity in 2011. In 2013, EA operations were expanded with the testing and construction of a third treatment zone at the end of the plume.

Future Plans:

Annual long-term monitoring of the implemented actions at the Brooklawn, Scenic and Bayou/wetland area continues.

With the implementation of EA at the treatment zones, monitoring continues. Future injections of substrate molasses, will be injected as needed to support the enhanced biological activity.

Since PPI is continuing to treat wastes onsite or wastes remain onsite at the Site, the EPA will continue to perform site reviews at a minimum of every five years to determine if the cleanup at the Site is still protective of public health and the environment.

Community Involvement:

We want to hear from you. During its review, the 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 Five-Year Review: Protecting Public Health and the Environment:

The EPA's Remedial Project Manager (RPM) is working with the Responsible Parties at the Site, represented by NPC Services, Inc., as well as State and Federal scientists and engineers to evaluate the Site. The RPM will collect information about the Site from a variety of sources including historical information. The Site will be inspected to see if the cleanup continues to function properly and if it is well maintained. The RPM will talk with local officials to see if they have any concerns or if there have been any changes in local policy or zoning that might affect the original cleanup.

People who live near the Site, own businesses nearby, or work at the Site may also be contacted to see if they have any information or concerns about the Site. These people may be contacted with a mailed survey, a phone call, or an interview.

The RPM and Community Involvement Coordinator (CIC) plan to conduct interviews with local officials and personnel familiar with the implementation of the remedy during 2015.

The public may contact the RPM or State officials regarding any questions or concerns.

The RPM will use the information collected to decide whether or not the cleanup continues to be protective of human health and the environment.

A Five-Year Review report will be made available to the public once the Five-Year Review is complete. The report will include historical information on the Site and 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, Baton Rouge, Louisiana. You will be notified when the report is finished.

What happens after the review?

The EPA will ensure that if any problems are identified by the review, they will be addressed. Since wastes or contaminants that prevent unlimited use and unrestricted exposure remain onsite, EPA will return every five years for another review. The EPA and the State will also keep an eye on the Site between reviews. If at any time you have concerns or questions about the Site, let EPA know. You can contact EPA through the CIC or the RPM at 1.800.533.3508 (toll free).

For More Information, Please Contact...

Bartolome Cañellas

Remedial Program Manager

U.S. EPA Region 6 (6SF-RP)

Tel: 214.665.6662 or 800.533.3508 (toll free)

Email: canellas.bart@epa.gov

Jason T. McKinney

Community Involvement Coordinator

U.S. EPA Region 6 (6SF-VO)

Tel: 214.665.8132 or 800.533.3508 (toll free)

Email: mckinney.jason@epa.gov

Keith Horn

Staff Environmental Scientist

LDEQ

P. O. Box 4312

Baton Rouge, Louisiana 70821-4312

Tel: 225.219.3793 or 866.896.5337 (toll free)

Email: keith.horn@la.gov

Information Repositories:

Petro-Processors of Louisiana, Inc.

2401 Brooklawn Drive

Baton Rouge, Louisiana 70807

Tel: 225.778.6200

LDEQ

602 North Fifth Street

Baton Rouge, Louisiana 70802

Tel: 225.219.5337

For press inquiries, please call the EPA Press Office at 214.665.2200.

On The Web...

You can find more information about the Region 6 Superfund program on the EPA Region 6 website at <http://www2.epa.gov/region6/>.

To be added to the mailing list call 800.533.3508 (toll free).



Region 6
1445 Ross Ave. (6SF-VO)
Dallas, TX 75202

APPENDIX C

State Concurrence and ARARs Review

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 ROSS AVENUE, SUITE 1200

DALLAS TEXAS 75202-2733

March 26, 2015

Mr. Keith Horn, MS, Staff Environmental Scientist
Underground Storage Tank and Remediation Division
Louisiana Department of Environmental Quality
P.O. Box 4312
Baton Rouge, LA 70821-4312

Re: Petro-Processors, Inc. Site – **AI# 83225, EPA Site Id # LAD000804245**
Request for Applicable or Relevant and Appropriate Requirements (ARARs)

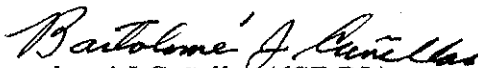
Dear Mr. Horn:

The U.S. Environmental Protection Agency (EPA) is currently involved in conducting a third 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 April 30, 2010 the Louisiana Department of Environmental Quality identified only one ARAR that pertains to Petro that is not found in Federal regulations. Now during the third 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,


Bartolomé J Cañellas (6SF-RL)

Cc:
Bryan McReynolds, P.E.
Environmental Engineer
NPC Services, Inc.
2401 Brooklawn Drive
Baton Rouge, LA 70807-6200



State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL COMPLIANCE

May 18, 2015

Mr. Bartolome Cañellas (6SF-LP)
US EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202

RE: Request for Applicable or Relevant and Appropriate Requirements (ARARs)
Petro Processors of Louisiana, Inc.
EPA ID LAD057482713
Brooklawn Operable Unit; **AI# 2469**
2401 Brooklawn Drive, Baton Rouge, East Baton Rouge Parish
Scenic Operable Unit; **AI # 83225**
15310 Samuel's Road, Baker, East Baton Rouge Parish

RECEIVED
15 MAY 29 AM 11:36
SUPERFUND DIV.
REMEDIAL BRANCH
(6SF-R)

Dear Mr. Cañellas:

The Louisiana Department of Environmental Quality – Underground Storage Tank and Remediation Division (LDEQ-USTRD) has reviewed your *Request for Applicable or Relevant and Appropriate Requirements* dated March 26, 2015. We have identified one updated ARAR. Since the last Five Year Review performed at the site, responsibility for the regulation of water wells and related reporting requirements in the State of Louisiana has been fully transferred from the Louisiana Department of Transportation and Development (LDOTD) to the Louisiana Department of Natural Resources (LDNR). The relevant regulations are now found in the Louisiana Administrative Code (LAC) Title 56 Part I "Water Wells" (LAC 56 Part 1).

Please contact me at (225) 219-3793 or by e-mail at Keith.Horn@la.gov with any questions. All correspondence must include the **AI number** and be submitted in triplicate to: Mr. Gary A. Fulton, Jr., Administrator; Underground Storage Tank and Remediation Division; P.O. Box 4312; Baton Rouge, LA 70821-4312.

Your continued cooperation is appreciated.

Sincerely,

A handwritten signature in dark ink, appearing to read "Keith Horn", with a long, sweeping horizontal stroke extending to the right.

Keith Horn, MS, Staff Environmental Scientist
Underground Storage Tank and Remediation Division

c: LDEQ Imaging Operations – Inactive and Abandoned Sites

Mr. Bryan McReynolds, PE
NPC Services, Inc.
2401 Brooklawn Drive
Baton Rouge, LA 70807-6200

Title 56

PUBLIC WORKS

Part I. Water Wells

Chapter 1. Registering Water Wells

§101. Authorization

A. The Louisiana Department of Transportation and Development, Office of Public Works revised the rules, regulations and standards for water well registration, construction, plugging and abandonment, installation of control devices on free flowing wells and licensing of water well contractors and other drillers under the authority given in R.S. 38:2091-38:3098.8.

B. Effective January 1, 2010, in accordance with Act 437 of 2009, The Department of Natural Resources, Office of Conservation, hereafter referred to as “department,” is responsible for registering water wells and holes in Louisiana.

C. The rules, regulations and procedures, stated herein, will become effective on November 1, 1985 and supersede the rules, regulations and procedures in effect since July 1, 1975.

AUTHORITY NOTE: Promulgated in accordance with R.S. 38:3091-38:3098.8.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Office of Public Works, LR 1:249 (May 1975), amended LR 11:950 (October 1985), repromulgated by the Department of Transportation and Development, Office of Public Works, LR 31:942 (April 2005), amended by the Department of Natural Resources, Office of Conservation, LR 37:906 (March 2011).

§103. Purpose

A. The purpose of the rules, regulations and procedures for registering water wells and holes, stated herein, is to ensure that water wells and holes are properly constructed; to collect, catalog and store water well construction and drilling data; and to gather data on water resources of the state. The data obtained from the registration forms are stored on computer files and are readily available for use by hydrologists, engineers, geologists, drillers and others who are involved in the administration, development, protection, and the wise use of the ground water resources of the state.

AUTHORITY NOTE: Promulgated in accordance with R.S. 38:2091-38:3098.8.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Office of Public Works, LR 1:249 (May 1975), amended LR 11:950 (October 1985), repromulgated by the Department of Transportation and Development, Office of Public Works, LR 31:942 (April 2005).

§105. Registration of Water Wells and Holes Completed on or after November 1, 1985

A. The contractor who drills or constructs a well or hole on or after November 1, 1985 shall be responsible for

registering that well or hole by submitting to the department a completed water well registration Form within 30 calendar days after completing such well or hole. Registration requirements shall apply to all water wells, regardless of yield or use, including but not limited to, public supply, domestic, irrigation/agriculture, power generation, rig-supply, observation, dewatering, monitoring, and heat pump supply wells, as well as test holes, abandoned pilot holes, and heat pump holes. For glossary of terms, refer to §113 of this Chapter.

B. Exemption from Registration. The following wells and holes shall be exempt from registration requirements:

1. wells producing saline water in connection with oil or gas production;
2. driven wells or wells dug by use of hand auger;
3. geotechnical boreholes.

C. Water Well Registration Long Form (DNR-GW-1). The Water Well Registration Long Form (DNR-GW-1) shall be used to register the following types of wells and holes:

1. community public supply wells;
2. noncommunity public supply wells;
3. industrial wells;
4. irrigation/agricultural wells;
5. power generation wells;
6. observation wells;
7. dewatering wells;
8. test holes.

For long form instructions see §117.

D. Water Well Registration Short Form (DNR-GW-1S). The Water Well Registration Short Form (DNR-GW-1S) shall be used to register the following types of wells and holes:

1. domestic wells;
2. rig-supply wells;
3. monitoring wells;
4. heat pump supply wells;
5. heat pump holes (closed loop system);
6. abandoned pilot holes.

For short form instructions see §119.

E. Submission of Water Well Registration Forms

1. The contractor who drills a well or hole shall complete and submit to the department the original copy of the Water Well Registration Form within 30 calendar days after each well or hole has been completed. The owner's copy shall be sent to the owner immediately after completion of the work and the contractor shall retain the contractor's copy for his files.

2. For registration purposes only, the department considers a well or hole completed when it is accepted by the owner or when the contractor has moved his equipment from the site, whichever comes first. Acceptance by the owner or removal of equipment from the site by the contractor does not imply, in any way, acceptance or approval by the state of Louisiana. The department, after reviewing applicable records and/or inspection of the well site, can cause the owner and/or the contractor to do whatever additional work is necessary to bring the well or hole up to standards. The expense for the additional work shall be borne by the owner or the contractor, as the case may be.

3. For the purpose of registering heat pump holes only, one form (DNR-GW-1S) Short Form per project (site) will suffice. Under item marked "remarks," materials and method used to seal the holes shall be indicated. Driller's log description of cuttings should be the typical formations encountered at the site.

4. Registration forms may be submitted to the department on a monthly basis as long as the 30-day limitation is not exceeded. Forms that are illegible, have incomplete items, lack a sketch or directions to the well, do not include latitudinal and longitudinal coordinates or have not been signed and dated will be rejected by the department and will be returned to the contractor for correction and resubmittal. It is the responsibility of the contractor to see to it that the submitted registration forms are actually received by the department.

5. Each registration form shall be personally signed and dated by the contractor who is responsible for drilling the well or hole. For convenience of the contractor, affidavits filed by the contractor to authorize office personnel to sign forms on his behalf will be accepted by the department.

6. Upon receipt of the registration forms, the department will review and process each form, including field inspection, if necessary, and will assign an identification number to each well after which the well is considered registered. The well data will then be entered into the computerized data file and, upon request, the owner and/or the contractor will be informed of the fact of registration and of the assigned identification number.

F. Copies of Available Data Which Shall Be Attached to Registration Forms. The water well contractor who is responsible for drilling a public supply, industrial or power generation water well or test hole, shall attach to the registration form copies of the following items (if available for transmittal) to the department:

1. electrical log or other borehole geophysical log;
2. mechanical analysis of the drill cuttings;
3. chemical analysis of the water;
4. aquifer test results.

G. Registration of Reworked Water Wells

1. Registered wells that are reworked (e.g., removing and replacing the screen; redeveloping the well) need not be registered a second time unless the screen setting is altered or a liner is installed inside the original casing. If the registered well, after reworking, obtains water from an aquifer different from that reported on the original registration form, another registration form shall be submitted by the contractor within 30 calendar days after completion of the work.

2. If an unregistered well is reworked, deepened or changed in any manner or if screen setting is altered, the proper registration form (DNR-GW-1 or DNR-GW-1S) shall be submitted to the department by the contractor no later than 30 calendar days after the work has been completed.

H. Registration of Subcontracted Water Wells. When a water well contractor agrees to construct a water well for a customer but subcontracts the work to another water well contractor, the following registration procedure shall govern:

1. the subcontractor who drills the well shall keep an accurate record of the pertinent data to be used in completing the registration form; however, the name and license number of the original contractor must be shown on the upper right-hand corner of the registration form, and it is the original contractor who is responsible for signing and transmitting the form to the department in accordance with the procedures outlined in §105.E. The subcontractor may write his or his company's name and license number at the space designated for "remarks."

I. Registration of Rig-Supply Water Wells

1. In order to register a rig-supply water well, each registration form must be accompanied by a copy of the "registered" permit plat reflecting the section, township, range and the distances from the section lines to the location of the well (oil, gas, injection, etc.). The plat will be used by the department to verify the latitude and longitude of the well. The water well contractor who drilled the water well shall obtain a copy of the plat from the company in charge of the drilling of the oil or gas well (lessee) or from the operator of the oil or gas drilling rig and shall attach it to the registration form for transmittal to the department. Alternatively, the water well contractor may send the registration form to the lessee with appropriate instructions for them to attach the plat to the registration form and transmit it to the department.

2. The lessee or the operator shall furnish the water well contractor with the required plat in a timely manner so that the 30-day limitation for water well registration is not exceeded.

J. Registration of Monitoring Wells. Although construction of monitoring wells for facilities regulated by the Department of Environmental Quality (DEQ) requires approval from DEQ prior to construction, they shall be registered with the Office of Conservation, like all other water wells, as part of the state's effort to catalog well sites and to collect and provide data on the geohydrological system. In order to register a monitoring well, the drilling contractor, in addition to completing all items on the Water Well Registration Short Form (DNR-GW-1S), must also complete the spaces provided for the latitude and longitude of the well location, as well as the section, township and range.

AUTHORITY NOTE: Promulgated in accordance with R.S. 38:3091-38:3098.8.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Office of Public Works, LR 1:249 (May 1975), amended LR 11:950 (October 1985), repromulgated by the Department of Transportation and Development, Office of Public Works, LR 31:942 (April 2005), amended by the Department of Natural Resources, Office of Conservation, LR 37:906 (March 2011).

§107. Registration of Water Wells Completed Prior to November 1, 1985

A. Because many water wells have already been inventoried by the department, the procedures for registering wells completed prior to November 1, 1985 are dependent on whether or not the wells have been inventoried and their records are available to the department.

B. Registration of Inventoried Water Wells Completed Prior to November 1, 1985 Whose Records Are Available to the Department

1. The department will obtain from available data a listing, by owner, of wells and pertinent data. A copy of the list will either be sent to the owner for checking and updating, or will be checked and updated by a representative of the department with assistance from the owner.

2. If the list is sent to the owner for checking and updating, the owner shall be responsible for updating the list by indicating the current status of each registered well, by adding wells not on the list and by indicating wells that have been abandoned. The owner shall then certify the list as current and correct and shall return the list to the department within 30 calendar days after receiving the list. When the corrected and certified list is received by the department, the wells added to the list by the owner shall be inventoried and registered by a representative of the department.

3. If, in the opinion of the department, a visit or telephone contact by a representative of the department is preferable and more convenient to the owner than sending a list of wells, a field visit or telephone contact will be made by a representative of the department. After the data are verified and the well locations are checked, any well not on the list will be inventoried and registered by the representative of the department.

4. Upon request, the owner will be sent an updated listing of registered wells for which he is responsible.

C. Registration of Water Wells Completed Prior to November 1, 1985 Which Have Not Been Inventoried and Whose Records Are Not Available to the Department

1. All wells used to supply a public water system regardless of yield, and all other water wells capable of producing more than 50,000 gallons per day, which were constructed on or after July 1, 1975, shall be registered by the owner by completing a water well registration long form (DNR-GW-1) for each well and sending them to the department for verification and registration within 90 calendar days after the effective date of these regulations.

2. The owner may register any uninventoried water well, not covered under Item A of the form, by completing an appropriate registration form and sending it to the department for verification and registration.

3. The department's representative may contact the owner to obtain well data and check and verify the location of wells that have not been inventoried and whose records are not on file with the department. After receiving the pertinent data and locating the wells, the department will register the wells accordingly.

4. The owner shall make available any needed data for registering uninventoried wells and shall permit access to the well sites. Upon request, the owner will be informed of the fact of registration and of the assigned identification number.

AUTHORITY NOTE: Promulgated in accordance with R.S. 38:3091-38:3098.8.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Office of Public Works, LR 1:249 (May 1975), amended LR 11:951 (October 1985), repromulgated by the Department of Transportation and Development, Office of Public Works, LR 31:942 (April 2005), amended by the Department of Natural Resources, Office of Conservation, LR 37:907 (March 2011).

§109. Use of Information Obtained from Registration Forms

A. Information obtained from registration forms will be available to all persons upon request. The well data will be coded and entered into the department's computerized data file and will be integrated with water well data systems operated by other governmental agencies and research groups, as needed. Copies of the registration forms or computerized listings of the registered wells should fulfill the need of water districts, commissions or other state agencies; thus eliminating the need for a second set of registration forms.

AUTHORITY NOTE: Promulgated in accordance with R.S. 38:2091-38:3098.8.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Office of Public Works, LR 1:249 (May 1975), amended LR 11:952 (October 1985), repromulgated by the Department of Transportation and Development, Office of Public Works, LR 31:942 (April 2005).

§111. Enforcement Actions

A. Provisions addressing enforcement of this Chapter appear in R.S. 38:3096, as follows.

1. Whoever knowingly and willingly violates a provision of this Chapter, or a rule, regulation or order of the director or a board hereunder, shall be subject to a civil penalty of not more than \$1,000 a day for each day of violation and for each act of violation if a penalty for the violation is not otherwise provided in this Chapter.

a. The place of suit to recover this penalty shall be selected by the director or board, as may be appropriate, in the district court of the parish in which any one of the defendants resides, or in the district court of the parish where the violation took place.

b. Suit shall be at the direction of the director or board, as may be appropriate, and shall be instituted and conducted in his or its name by the attorney general or by the district attorney of the district under the direction of the attorney general.

2. Whoever knowingly and willfully aids or abets a person in the violation of a provision of this Chapter, or in any rule, regulation or order made hereunder shall be subject to the same penalties provided herein for the principal violator.

B. Falsification of Documents. Falsification of documents to evade regulations, as well as penalties for said falsifications, appears in R.S. 38:3095 as follows.

1. No person shall, for the purpose of evading this Chapter or any rule, regulation or order made thereunder:

a. make, or cause to be made, any false entry or statement of fact in any report required to be made by this Chapter, or by any rule, regulation or order made hereunder; or

b. make, or cause to be made, any false entry in an account, record or memorandum kept by any person in connection with the provisions of this Chapter or of any rule, regulation or order made thereunder; or

c. remove out of the jurisdiction of the state or destroy or mutilate, alter, or by any other means, falsify any book, record or the paper pertaining to the matters regulated by this Chapter, or by any rule, regulation or order made thereunder.

2. Whoever violates this Section shall be fined not more than \$5,000 or imprisoned not more than six months or both.

3. The penalty provision for falsification of documents required under the provisions of this Chapter are therefore criminal in nature and will be enforced through the district attorney having jurisdiction where said violation occurs. It should also be noted that utilization of the United States Mail in the falsification of documents constitutes a violation of Title 18 of the United States Code (Mail Fraud), and such violations will be referred to the, appropriate United States Attorney.

C. Appeals. An alleged violator may appeal any order of the department by requesting a hearing. The hearing request must be made to the department, in writing, within

30 calendar days of the original order and must be sent by "Certified Mail-Return Receipt Requested." After receiving the request, the department will arrange a hearing to determine what other remedial action will serve to effect compliance with the rules and regulations.

AUTHORITY NOTE: Promulgated in accordance with R.S. 38:2091-38:3098.8.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Office of Public Works, LR 1:249 (May 1975), amended LR 11:952 (October 1985), repromulgated by the Department of Transportation and Development, Office of Public Works, LR 31:942 (April 2005).

§113. Definitions

A. Glossary of Terms. Letter in parentheses is the number of the reference found in §115 which is the source of the definition.

Abandoned Well—a well is considered to be abandoned if:

a. its use has been permanently discontinued;

b. its pumping equipment has been permanently removed;

c. the well is in such a state of disrepair that it cannot be used to supply water, and/or has the potential for transmitting surface contaminants into the aquifer;

d. the well poses potential health or safety hazards; or

e. the well is in such a condition that cannot be placed in the active, standby or inactive status.

Active Well—a well is considered to be active if it is an operating well used to supply water.

Annular Space—the space between the drill hole and the well casing.

Aquifer—a formation, group of formations, or a part of a formation that contains sufficient saturated material to yield significant quantities of water to wells. (E)

Aquifer Test—aquifer or pumping tests are made in water wells to obtain information about the performance and efficiency of the well being pumped, and/or to obtain data from which the hydraulic characteristics of the aquifer can be calculated. The test made to determine hydraulic characteristics of an aquifer is usually referred to as *aquifer test*.

Artesian (Confined Ground Water)—when the water level rises above the top of the aquifer which the well taps, the aquifer is assumed to be *artesian*. An artesian well flows only when the water level is above land surface. (E)

Assistant Secretary—the Assistant Secretary of the Office of Conservation, Department of Natural Resources, or his designee.

Bacteriological Analysis—this analysis, usually for drinking water, consists of a laboratory report indicating the

presence or absence of coliform bacteria in a given water sample, as determined by laboratory procedure.

Bentonite Slurry—a mixture of bentonite and water, weighing not less than 9 pounds per gallon.

Casing—a tubular retaining structure, generally metal or PVC which is installed in a drilled, bored, driven, or augured hole to maintain the well opening.

Cement-Bentonite Slurry—a mixture of cement, bentonite and water, consisting of not more than 8 percent bentonite by dry weight of cement and a maximum of 10 gallons of water per sack (94 pounds) of cement. Additives, in the approved and proper ratio, may be added to the slurry if required.

Chemical Analysis—a chemical analysis is usually a report of dissolved minerals in the water and the water's physical properties, such as temperature and color. The minimum chemical properties that are usually determined are hardness, specific conductance, hydrogen-ion concentration (pH), dissolved solids, chloride, bicarbonate, iron, fluoride and nitrate.

Coarse Ground Bentonite—a processed bentonite used to seal well casings and to plug holes. Coarse ground bentonite is placed by pouring from surface or pumping from the bottom to surface. An approved inorganic polymer may be used to retard swelling of the bentonite.

Community Public Supply Water Well—a public supply well which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. A community public supply well may be owned by a municipality or community, a water district, a corporation, a private individual or by a local, state or federal governmental agency.

Contaminant—any undesirable physical, chemical, biological, or radiological substance or matter in water. (F)

Contamination—any introduction into water of microorganisms, chemicals, wastes, or waste-water in a concentration that makes the water unfit for its intended use. (D)

Contractor—the word *contractor* in these regulations is used to refer to any person, firm or corporation who is licensed to engage in the business of drilling, reworking or installing water wells, monitoring wells, heat pump wells or holes, geotechnical boreholes, and/or plugging and abandoning wells or holes, excluding oil and gas wells.

Department—the Louisiana Department of Natural Resources, Office of Conservation.

Dewatering Well—a water well installed to dewater an aquifer or lower a water table in order to allow construction or mining activities.

Disinfection—the killing of a large proportion of microorganisms in or on a substance with the probability that all pathogenic microorganisms will be killed.

Ditch—a man-made excavation dug to convey surface water for drainage purposes or irrigation.

Director or a Board—see *Assistant Secretary*.

Domestic Well—a water well used exclusively to supply the household needs of the owner/lessee and his family. Uses may include drinking, cooking, washing, sanitary purposes, lawn and garden watering and caring for pets.

Drawdown—the difference, usually in feet, between the static (nonpumping) water level and the pumping level in a well after the well has been pumped for a specified period of time.

Drill Cuttings—samples of the material obtained during drillings and are the source of lithologic information needed for proper selection of screen openings. A principal objective of drilling test holes is to obtain samples. (A)

Driller—see *Contractor*.

Drilling—the word *drilling* in these regulations is used to refer to the drilling, boring, coring, driving or augering of a well or hole.

Drilling Contractor—see *Contractor*.

Driller's Log—a driller's log is the driller's description of the geologic strata encountered, their thickness and depth. (A)

Drilling Mud—a fluid composed of water and clay (either native clay or a combination of native and commercial clays) used in drilling operations to remove cuttings from the hole, to clean and cool the bit, to reduce friction between the drill stem and the sides of the hole, to seal the sides of the hole, to prevent caving, bridging or loss of circulation, and to prevent the interchange of water between aquifers. When permitted, drilling mud may be used as filler or plugging material, provided it weighs not less than 9 pounds per gallon.

Electrical Log—a record of the resistivity of the subsurface formations and the contained fluid and spontaneous potentials generated in the borehole, both plotted in terms of depth below some datum, such as land surface. Similar logs commonly made in boreholes are the induction logs. Other borehole geophysical logs that also may be available are the gamma ray, caliper and neutron logs.

Flood Prone Area—an area subject to a 100-year flood level as established by the administering agency for the Federal Flood Insurance Program.

Free Flowing Water Well—an artesian well which is allowed to flow, under natural conditions, at or above the ground surface.

Geopressured Aquifer—a term used for an aquifer, especially in the Gulf Coast Area, in which the fluid pressure exceeds the normal hydrostatic pressure of 0.465 pounds per square inch per foot of depth. (B)

Geotechnical Borehole—an exploratory borehole drilled, augured, bored or cored to obtain soil samples to be analyzed for chemical and/or physical properties.

Geothermal—pertaining to the internal heat of the earth.

Gravel-Packed Well—a well in which properly graded gravel or coarse sand is hydraulically placed in the area immediately surrounding the screen or slotted pipe used as a screen to increase the effective diameter of the well, to stabilize the aquifer and to prevent sand from entering the well.

Ground Water—water percolating below the earth's surface.

Health Hazard—any condition that may create a danger to public health and well being.

Heat Pump Hole—a hole drilled to install piping for an earth-coupled water source heat pump system, also known as a vertical closed-loop system.

Heat Pump Supply Well—a water well which supplies ground water to a heat pump heat exchanger.

Industrial Well—a well used to supply water for plants that manufacture, process or fabricate a product. The water may or may not be incorporated into the product being manufactured. The water is usually used to cool machinery, to provide sanitary facilities for employees, to air condition the plant, and water grounds at the plant. Water used for mining or processing ore, such as gravel, is included in the industrial category.

Inactive Well—a well is considered to be inactive if it is not presently operating but is maintained in such a way that it can be put back in operation with a minimum of effort to supply water.

Irrigation/Agricultural Well—a well used for irrigating cultivated plants, for watering stock, for crawfish and catfish farming, and for similar agricultural activities. Most irrigation wells supply water for farm crops, but this category also includes wells that are used for watering parks, golf courses, cemeteries and wells which are used exclusively for watering lawns in urban areas.

Lessee—see *Owner*.

Monitoring Well—a well used to obtain hydrologic and water quality data, usually installed at or near a known or potential source of ground water contamination.

Neat Cement—a mixture of cement and water, consisting of not more than 5 gallons of water per sack (94 pounds) of cement.

Noncommunity Public Supply Well—a public supply water well which serves either fewer than 15 service connections or fewer than 25 year-round residents or no year-round residents. Examples of the former case are small public water supplies for mobile home parks, subdivisions, etc. which fall below the 15 connections/25 persons criteria for community water supplies. The latter case includes public water supplies which serve no year-round residents,

such as bars and lounges, motels, camps, office buildings, restaurants, rest stops, service stations, recreational facilities, schools, commercial establishments, etc.

Observation Well—a well used by the owner, by governmental agencies, or by an appropriate engineering or research organization to obtain information on the water resources of an area.

Owner—individual, corporation, association, partnership, institution or governmental agency who is either the legal owner of the property on which the well or hole is located or is holding a long-term lease on the property.

Permeability—a measure of the relative ease with which porous media can transmit a liquid under a potential gradient. Sands have a higher permeability than clays.

Pilot Hole—a hole drilled with the intent to install casing and to produce water. It is usually of a smaller diameter than the proposed well and has to be reamed to a larger diameter for the installation of casing and screen.

Plumbness—the variation with depth of the center line of the well from a vertical line drawn through the center of the well at the top of the casing. (C)

Pollution—a condition created by harmful or objectionable material in water. (D)

Potable Water—water whose bacteriological, physical and chemical properties make it suitable for human consumption.

Power Generation Well—a well used to supply water for generation of any type of power.

Private Well—see *Domestic Well*.

Public Supply Water Well—a well which provides water for drinking, cooking or washing use by the public, or transients, or by persons other than the immediate family of the owner of the supply. A public supply water well may be either a community water well or a noncommunity water well.

Pump-Down Method—a positive displacement method for placing grout or slurry material by pumping or forced injection by air pressure.

Pumping Test—see *Aquifer Test*.

Pumping Water Level—the water level in a well which is being pumped, usually expressed in feet above or below a specific datum, such as land surface.

PVC Well Casing—a polyvinyl chloride plastic pipe conforming to current AWWA Standard A-100 and/or ASTM F-480 Standard for water well casing.

Registered Permit Plat—a land surveyor's plat showing section, township, range, and the distances from the section lines to the location of the well (oil, gas, injection, etc). The permit plat is submitted to the Office of Conservation with the oil or gas well permit application.

Registered Well—an inventoried well that has been assigned an identification number by the department and whose records are available.

Reworking Water Well—rehabilitation or modification of a water well to increase its efficiency, restore its capacity, and/or improve its water quality. Methods of reworking water wells include removing and replacing the screen, regravelling packing the screen, placing a new screen within the old screen, placing a liner pipe within the old casing or redeveloping a well by surging, acidizing, jetting, etc.

Rig-Supply Well—a water well drilled at an oil or gas drilling site to supply water for drilling and/or other oil field related activities.

Saline Water—water with a dissolved solids content of 1,000 milligrams per liter (parts per million) or more.

Sanitary Seal—a suitable threaded, flanged, or welded water-tight cap or compression seal installed at the top of the well casing so as to prevent the entrance of contaminated water or other objectionable material into the well.

Sanitary Sewer—an underground conduit that conveys domestic, commercial or industrial sewage.

Screen—a structural tubular retainer, usually metal or PVC, used to support the hole in unconsolidated material with openings which are selected on the basis of adopted standards, and which allows sand free water to flow freely into the well in ample quantities and with a minimum loss of head. In agricultural wells, slotted pipe is sometimes used as a screen.

Seepage—the slow movement of water and/or other fluids through the soil into the subsurface.

Septic Tank—an underground water-tight tank which receives sewage.

Specific Capacity—the rate of discharge of water from a well divided by the drawdown of water level within the well for a specified period of continuous pumping of the well. It is usually expressed as "gallons per minute per foot of drawdown after (specified) hours of continuous pumping."

Standby Well—a well is considered to be a standby if it is used in emergencies or occasionally used to supply water.

Static Water Level—static water level is the nonpumping water level in a well that has not been in operation for a period of time and is usually expressed in feet above or below a specified datum, such as land surface.

Stream—a natural channel or water course which conveys surface and subsurface runoff.

Storm Sewer—an underground conduit used for covering surface water.

Subsidence—a local mass movement that involves principally the downward settling or sinking of the earth's surface with little or no horizontal motion. (B)

Subsurface Absorption Fields—an underground area containing a bedding of aggregate with distribution lines to permit disposal of septic tank effluent.

Test Hole—an exploratory borehole drilled to obtain geologic, hydrologic and water quality data.

Test Well—see *Test Hole*.

Underground Injection—the subsurface emplacement of fluids by well injection. (F)

Underground Water—see *Ground Water*.

Uniformity Coefficient—the uniformity coefficient is the number expressing the ratio of the 40 percent size of the material to its 90 percent size. Size refers to the percentage by weight retained on a given sieve.

Vent (Breather Pipe)—a screened outlet at the upper end of the well casing to allow equalization of air pressure in the well and the escape of gases.

Water Well Contractor—see *Contractor*.

Well Cap—a removable, usually water-tight device used to cover an opening into the well casing and is threaded, bolted or otherwise attached to the casing to prevent easy entry by other than the owner and to prevent the entrance of any contaminant or other objectionable material into the well.

AUTHORITY NOTE: Promulgated in accordance with R.S. 38:3098 -38:3098.8.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Office of Highways, LR 1:969 (May 1975), amended LR 11:969 (October 1985), repromulgated by the Department of Transportation and Development, Office of Public Works, LR 31:942 (April 2005), amended by the Department of Natural Resources, Office of Conservation, LR 37:907 (March 2011).

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AUTHORITY NOTE: Promulgated in accordance with R.S. 38:3098 -38:3098.8.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Office of Highways, LR 1:969 (May 1975), amended LR 11:971 (October 1985), repromulgated by the Department of Transportation and Development, Office of Public Works, LR 31:942 (April 2005).

§117. Water Well Registration (Long Form)

A. The Water Well Registration Long Form (DNR-GW-1) and detailed instructions for properly completing the form are available by contacting department staff at (225) 342-8244 or by accessing the department's website at www.dnr.louisiana.gov/gwater. The long form consists of a set of three copies. The first copy (marked DNR copy) is to be mailed by the water well contractor within 30 calendar days after the well has been completed to:

Department of Natural Resources
Office of Conservation
P.O. Box 94275
Baton Rouge, La 70804-9275

B. The second copy of the form is to be retained by the water-well contractor for his files, and the third copy is to be given to the well owner immediately upon completion of the work. The commissioner will consider and encourages the electronic submission of registration, data or reports required under this Section.

C. Although most of the information needed to complete the form is available to the water well contractor, the following explanation will provide clarification of intent for selected items and uniformity of reporting.

D. Owner Information. List the name of the legal owner of the property on which the well is located or the person or company holding a long-term lease on the property. If the owner or lessee is an individual, list first and last names and middle initial of individual. List area code and telephone number of owner in the spaces provided.

1. Address. The address should be that of the owner. If the well is owned by an industry, the local address of the firm is preferred in order that additional data on the well may be easily obtained by the state or a regional water district or commission.

2. Owner's Well Number. Many cities, institutions, industrial plants, and large farms have their own system of designating or identifying wells by number and/or name. This information is useful when locating the well and should be entered on the form.

E. Well Location. List the parish where the well is located, including the nearest town, city, etc., and give directions to the well site. The location of the well should be described in detail and as accurately as possible so that the well can be easily located by the department's staff or field inspector. Please include a detailed map or sketch on the back of the original form, showing location of well with reference to roads, railroads, buildings, etc. Use an (X) to indicate location of the well. Show location of nearest existing well(s), if any nearby, by marking (Os), and approximate distance between wells. Determine the well's Global Positioning System (GPS) location and record the GPS longitude and latitude coordinates onto the form.

F. Well Information. Required data are available from water well contractor's and/or engineer's report.

G. Casing and Screen Information. Required data are available from water well contractor's and/or engineer's report. By type of screen indicate whether it is "bar lug" rib type, slotted pipe, etc. State whether casing is plastic or metal. Indicate the depth to which the annular space was cemented and state method of cementing.

H. Water Level and Yield Information. Most of the information entered on the form can usually be obtained from the water well contractor's or engineer's report. Except for "static water level," the terms need no explanation. Static water level is "the nonpumping water level in a well that has not been in operation for a period of time and is usually expressed in feet above or below a specified datum, such as land surface." The owner should be able to provide information on proposed use and pumping rate.

I. Use of Well. The principal purpose for which water from the well is used should be indicated where appropriate on the form. If water is used for more than one purpose, only the principal or primary use should be shown. If the planned use of water is unknown or does not fit one of the specified uses, this should be noted in the space marked "other." Following are explanations of the terms used on the well registration form to indicate the principal use of water from a well.

1. Irrigation/Agricultural. Refers to the use of water to irrigate cultivated plants, to water stock, for crawfish and catfish farming, and for similar agricultural activities. Most irrigation wells supply water for farm crops, but this category also includes wells that are used for watering parks, golf courses, and cemeteries. Occasionally a home owner in an urban area has a well used solely for watering a lawn. This well also should be in the agricultural and irrigation category.

2. Industrial. Includes plants that manufacture, process or fabricate a product. The water may or may not be incorporated into the product being manufactured. Industrial water may be used to cool machinery, to provide sanitary facilities for employees, to air-condition the plant, and water grounds at the plant. Water used for mining or to process ore such as gravel pits is included in the industrial category. Planning and water-use needs can be implemented by dividing this category into the following standard industrial categories that predominate in Louisiana. Indicate the principal category of industrial use on the form where appropriate. The categories are defined as follows:

a. Food and Kindred Products. This group includes establishments manufacturing foods and beverages for human consumption and certain related products, such as manufactured ice, vegetable oils, animal fats and oils, and prepared feeds for animals and fowl.

b. Textile Mill Products. This major group includes establishments engaged in performing any of the following operations:

- i. preparation of fiber and subsequent manufacturing of yarn, thread, braids, twine and cordage;
 - ii. manufacturing broad woven fabric, narrow woven fabric, knit fabric, and carpets and rugs from yarn;
 - iii. dyeing and finishing fiber, yarn, fabric, and knit apparel;
 - iv. coating, waterproofing, or otherwise treating fabric;
 - v. the integrated manufacture of knit apparel or other finished articles from yarn; and
 - vi. the manufacture of felt goods, lace goods, bonded-fiber fabrics, and miscellaneous textiles.
- c. **Lumber and Wood Products (except furniture).** This major group includes sawmills, lath mills, shingle mills, cooperage stock mills, planning mills, and plywood and veneer mills engaged in producing lumber and wood basic materials; and establishments engaged in manufacturing finished articles made entirely or mainly of wood or wood substitutes.
- d. **Paper and Allied Products.** This major group includes the manufacture of pulp from wood and other cellulose fibers and rags; the manufacture of paper and paperboard; and the manufacture of paper and paperboard into converted products such as paper coated paper bags, paper boxes and envelopes.
- e. **Chemicals and Allied Products.** This major group includes establishments manufacturing products by predominantly chemical processes. Establishments classified in this major group manufacture three general classes of products:
- i. basic chemicals such as acids, alkalies, salt, and organic chemicals;
 - ii. chemical products to be used in further manufacture such as synthetic fibers, plastic materials, dry colors, and pigments;
 - iii. finished chemical products to be used for ultimate consumption such as drugs, cosmetics and soaps; or to be used as materials or supplies in other industries such as paints, fertilizers, explosives. The mining of natural rock salt is classified in mining industries. Establishments primarily engaged in manufacturing nonferrous metals and high percentage ferroalloys are classified in the primary metals category and baking powder; other leavening compounds and starches in the food and kindred products category. Establishments primarily engaged in packaging, repackaging, and bottling of purchased chemical products are classified in traded industries of the standard industrial categories. Plastic materials and synthetic rubber are included in this category.
- f. **Petroleum Refining and Related Industries.** This major group includes establishments engaged in petroleum refining, manufacturing paving and roofing materials, and compounding lubricating oils and greases from purchased materials. Establishments manufacturing and distributing gas

to consumers are classified in public utilities industries, and those primarily engaged in producing coke and by-products in primary metals category.

g. **Primary Metal Industries.** This major group includes establishments engaged in the smelting and refining of ferrous and non ferrous metals; in the manufacture of castings, forgings, and other basic products of ferrous and nonferrous metals, and in the manufacture of nails, spikes, and insulated wire and cable. This major group also includes the production of coke.

h. **Other.** Please name the principal industrial output from the industry if not listed in the industrial categories on the form.

3. **Public Supply.** Refers to a well which provides water for drinking, cooking, or washing use by the public or transients, or by persons other than immediate family of the owner of the supply. A public supply water well may either be a community water well or a noncommunity water well, as follows.

a. **Community Public Supply Water Well.** A public supply well which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. A community public supply well may be owned by a municipality or community, a water district, a corporation, a private individual or by a local, state or federal governmental agency.

b. **Noncommunity Public Supply Well.** A public supply water well which serves either fewer than 15 service connections or fewer than 25 year-round residents or no year-round residents. Examples of the former case are small public water supplies for mobile home parks, subdivisions, etc., which fall below the 15 connections/25 persons criteria for community water supplies. The latter case includes public water supplies which serve no year-round residents, such as bars and lounges, motels, camps, office buildings, restaurants, rest stops, service stations, recreational facilities, schools, commercial establishments, etc.

c. Because public supply use includes many categories of use, requirements for planning and water-use surveys require a further break-down of this use; thus, public supply use is divided into the following categories: (A list is provided on the registration form (refer to §117) so that the user may select the appropriate category of public supply use.)

d. **Municipal.** This category includes all wells used to supply the drinking, sanitation, and other needs of an urban area, e.g., Lake Charles, Ruston, etc. The well is generally owned by a utility company, a municipality or private individual.

e. **Rural.** The wells are used for the drinking, sanitation, and other needs of a rural area. Such systems generally are operated by a local water district or by private individuals.

f. **Commercial**

PUBLIC WORKS

i. Wells that are used principally to supply a motel, hotel, restaurant, office complex, swimming pool, ice rink or other recreational facility; drive-in, trailer park or public summer camp.

ii. Where water is used commercially in the making of bottled drinks, the wells are in this category.

g. Therapeutic. Water that is used primarily for bathing and/or drinking and is purported to have therapeutic value is in this category. Water that is bottled and sold falls into this category, mainly because of its claimed therapeutic value.

h. Institutional/Government. Refers to wells used specifically in the maintenance and operation of an institution such as large schools, churches, universities, hospitals, rest homes, penal institutions, and other governmental installations.

i. Other. A well that is used for a purpose that does not fit into the above categories. Give details.

4. Power Generation. Refers to a well used to supply water for generation of any type or power.

5. Dewatering Well. This is a water well installed to de-water an aquifer or lower a water table in order to allow construction or mining activities.

6. Observation. Refers to a well used by the owner, by governmental agencies, or by an appropriate engineering or research organization to obtain information on the water resources of an area.

7. Test Hole. An exploratory borehole drilled to obtain geologic, hydrologic and water quality data.

8. Other. A well that is used for the purpose that does not fit into either the above categories or those listed on the short form (DNR-GW-1S).

J. Available Information. Please indicate where appropriate on the form whether the specified logs or data were collected; if so, attach copies to the registration form for transmittal to the department.

K. Abandonment Information. If the well is new, specify whether or not it replaces an existing well. The water well contractor is responsible for informing the owner of the well of state regulations requiring plugging of abandoned wells. This item is intended to serve as a reminder.

L. Remarks. This space can be used for presenting any other pertinent information, such as name of consulting engineer, screen openings, pump information, name of subcontractor, etc.

M. Driller's Log. Give a description of the materials encountered and depth. If space on front of the form is insufficient, continue driller's log on reverse side of original form or attach a copy of the driller's log to the original form to be transmitted to the department.

1. After completing the form, list the name of the water well contracting company and the license number on the space provided. Sign and date the form and mail the

original to the department at the address listed on the form within 30 calendar days after the well has been completed. The owner's copy shall be given to the owner immediately upon completion of the work. The contractor's copy shall be retained by the contractor for his files.

2. If there are any questions, please call or write:

Louisiana Department of Natural Resources
Office of Conservation
P.O. Box 94275
Baton Rouge, LA 70804-9275
Phone: (225) 342-8244

AUTHORITY NOTE: Promulgated in accordance with R.S. 38:3098-38:3098.8.

HISTORICAL NOTE: Promulgated by the Department of Transportation and Development, Office of Highways, LR 1:249 (May 1975), amended LR 11:971 (October 1985), repromulgated by the Department of Transportation and Development, Office of Public Works, LR 31:942 (April 2005), amended by the Department of Natural Resources, Office of Conservation, LR 37:907 (March 2011).

§119. Water Well Registration (Short Form)

A. The Water Well Registration Short Form (DNR-GW-1S) and detailed instructions for properly completing the form are available by contacting department staff at 225-342-8244 or by accessing the department's website at www.dnr.louisiana.gov/gwater. The short form consists of a set of three copies. The first copy (marked DNR copy) is to be mailed by the water well contractor within 30 calendar days after the well has been completed to: Louisiana Department of Natural Resources, Office of Conservation, P.O. Box 94275, Baton Rouge, LA 70804-9275.

B. The second copy of the form shall be retained by the water well contractor for his files and the third copy shall be given to the well owner immediately upon completion of the work. The commissioner will consider and encourages the electronic submission of registration, data or reports required under this section.

C. Although most of the information needed to complete the form is available to the water well contractor, the following explanation will provide clarification of intent for selected items and uniformity of reporting:

1. Use of Well. The principal purpose for which the well is used should be indicated by checking the appropriate box on the form. If the well is used for more than one purpose, only the principal or primary use should be shown.

a. Domestic Well. A water well used exclusively to supply the household needs of the owner/lessee and his family. Uses may include drinking, cooking, washing, sanitary purposes, lawn and garden, watering and caring for pets.

b. Rig Supply Well. A water well drilled at an oil or gas drilling site to supply water for drilling and/or other field related activities.

c. Monitoring Well. A well used to obtain hydrologic and water quality data, usually installed at or

near a known or potential source of ground water contamination.

d. Heat Pump Supply. A water well which supplies ground water to a heat pump heat exchanger.

e. Heat Pump Hole. A hole drilled to install piping (tubing) material for an earth-coupled water source heat pump system, also known as a vertical closed-loop system.

f. Abandoned Pilot Hole. A hole drilled with the intent to install casing and to produce water but had to be abandoned because of problems related to drilling operations or encountering unsatisfactory formations.

g. Other. A well used for a purpose that does not fit into either the above categories or those requiring a long form (DNR-GW-1).

2. Owner Information. List the name of the legal owner of the property on which the well is located or the person or company holding a long-term lease on the property. If the owner or lessee is an individual, list first and last names and middle initial of individual. List area code and telephone number of owner in the spaces provided.

3. Owner's Address. List full and correct address of the owner.

4. Owner's Well Number. List name or number the well owner has assigned to the well.

5. Well Information. List in appropriate spaces, completion date of well, depth of hole, depth of well, static water level, casing type, size and length, screen size, type and length, the depth to which the casing was cemented, and cementing method used.

6. Well Location. List the parish where the well is located, including the nearest town, city, etc., and give directions to the well site. The location of the well should be described in detail and as accurately as possible so that the well can be easily located by the department's staff or field inspector. Please include a detailed map or sketch on the back of the original form showing the location of the well with reference to roads, railroads, buildings, etc. Use an (X) to indicate location of the well. Show location of nearest existing well(s), if any nearby, by making (Os) and approximate distance between wells. Determine the well's Global Positioning System (GPS) location and record the GPS longitude and latitude coordinates onto the form. For rig-supply wells, attach a "registered" permit plat (see §105.I) and for monitoring wells, complete spaces provided for the section, township and range (see §105.J).

7. Remarks. This space can be used for presenting any other information, such as screen openings, pump information, problems encountered during drilling, name and license number of water-well subcontractors, method and materials used to seal heat pump hole, etc.

8. Driller's Log. List in the space provided a description of the materials encountered and depth. If space on front of the form is insufficient, continue driller's log on

reverse side of original form or attach a copy of the driller's log to the original form to be transmitted to the department.

9. Heat Pump Holes. List average depth of holes and number of holes drilled at the site. Indicate type of tubing material used by checking appropriate box. Method and materials used to seal holes shall be stated under item marked "remarks."

10. Abandonment Information. If the well is new, specify whether or not it replaces an existing well. The water well contractor is responsible for informing the owner of the well of state regulations requiring plugging of abandoned wells.

D. After completing the form, list the name of the water well contracting company and the license number on the spaces provided. Sign and date the form and mail the original to the department at the address listed on the form within 30 calendar days after the well has been completed. The owner's copy shall be given to the owner immediately upon completion of the work. The contractor's copy shall be retained by the contractor for his files.

E. If there are any questions or you need assistance, please call or write to:

Louisiana Department of Natural Resources
Office of Conservation
P.O. Box 94275
Baton Rouge, LA 70804-9275
Phone: (225) 342-8244

AUTHORITY NOTE: Promulgated in accordance with R.S. 38:3098-38:3098.8.

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APPENDIX D Site

Survey Forms

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

December 2015

APPENDIX D THIRD 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
Keith Horn	Environmental Scientist	LA Department of Environmental Quality	4/23/2015
Bryan McReynolds	Process & Env Engineer	NPC Services, Inc.	5/26/2015
Jack Collins	Facility Manager	Dayspring Group	4/27/2015
W. David Constant	Humphreys Turner Professor and Interim Dean, College of Engineering	Louisiana State University	4/22/2015
Jason McKinney	Community Involvement Coordinator	EPA Region 6	11/04/2015
Darcie Olexia	Environmental Health Scientist Coordinator	LA Dept. of Health and Hospitals	6/29/2015
William M. Moe, Ph.D., P.E.	Professor	Louisiana State University	8/17/2015
Peter B. Lee	Senior Geologist	EcoScience Resource Group, LLC	4/21/2015
Rose Mary Jones	Resident Alsen Community	Alsen Community	10/27/2015

INTERVIEW RECORD		
Site Name: Petro-Processors of Louisiana Inc. (PPI)		EPA ID No.: LAD057482713
Subject: Third 5-Year Review		Time: Date: 04/23/2015
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> By Mail <input checked="" type="checkbox"/> Other Location of Visit: N/A		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
Contact Made By:		
Name: Bartolome J Canellas	Title: Remedial Project manager	Organization: EPA Region 6
Individual Contacted:		
Name: Keith Horn	Title: Environmental Scientist	Organization: La. Dept of Environmental Quality
Telephone No: (b) (6) Fax No: (b) (6) E-Mail Address: (b) (6)	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

The US EPA is conducting the third Five-Year Review for the Petro-Processors of Louisiana, Inc. Superfund Site. Please help us in this review by filling out the following questionnaire and returning it by mail, e-mail, or fax. We appreciate your help in this matter. If you have further any questions, please contact me at your convenience.

Bartolome J Canellas (6SF-RL)
 EPA Region 6
 1445 Ross Avenue, Suite 1200
 Dallas, TX 75202
Canellas.Bart@epa.gov
 (214) 665-6662 office
 (214) 665-6660 fax

Interview Questionnaire

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

☐ No ☒ Yes

2. What is your overall impression of the project (general sentiment)?

It is one of the best managed CERCLA Remediation sites I have ever worked on.

3. Are you aware of what effects have site operations had on the surrounding community?

☒ No ☐ Yes - Please give details.

4. Are you aware of what effects have site operations had on the nearby swamp (Devil's Swamp) and the Baton Rouge Bayou?

☐ No ☒ Yes - Please give details.

Historically, crawfish from the "middle channel" were impacted by site constituents, but remediation efforts have been effective in eliminating this risk.

5. Are you aware of any community concerns regarding the site or its operation and administration?

☒ No ☐ Yes - Please give details.

6. Are you aware of the existence of a fish consumption and/or swimming advisory issued to Devil's Swamp by the Louisiana Department of Environmental Quality and the Louisiana Department of Health and Hospitals?

☐ No ☒ Yes

7. 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?

☒ No ☐ Yes - Please give details.

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

☐ No ☒ Yes

9. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?

☐ No ☒ Yes - Please give details.

Investigation and remediation of the +20 MSL Channel from the Scenic OU has resulted in a number of changes. There have been limited changes to monitoring of the Brooklawn OU based on recent investigation data

10. Are you aware of any problems related to site access control, road maintenance, site security?

☒ No ☐ Yes - Please give details.

11. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?

☒ No ☐ Yes - Please give details.

12. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.

☒ No ☐ Yes - Please give details.

13. Are you aware of the investigation and implementation of Enhance Attenuation activities implemented to speed-up natural physical-chemical and biological processes at the Scenic site?

☐ No ☒ Yes

14. Are you aware of on-going characterization of bacterial populations by investigators from the Louisiana State University?

☐ No ☒ Yes

15. Do you have any comments, suggestions, or recommendations regarding the site's investigations, management or operation?

- *Examples of this include:*
- *repairing areas where erosion has been noted, performing O&M activities, site monitoring.*
- *conducting pilot testing (field testing) and implementation of Enhance Attenuation to speed-up natural physical-chemical and biological processes,*
- *updating current groundwater computer models*
- *preparing additional plans for monitoring natural attenuation and near-source and*
- *supporting on-going characterization of bacterial populations with investigators from the Louisiana State University.*

☒ No ☐ Yes - Please give details.

16. Are you aware of any changes in actual or projected land uses?

☒ No ☐ Yes

INTERVIEW RECORD		
Site Name: Petro-Processors of Louisiana Inc. (PPI)		EPA ID No.: LAD057482713
Subject: Third 5-Year Review		Time: Date: 2015
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> By Mail <input type="checkbox"/> Other Location of Visit: N/A		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
Contact Made By:		
Name: Bartolome Canellas	Title: Remedial Project Manager	Organization: EPA Region 6
Individual Contacted:		
Name: Bryan McReynolds	Title: Process & Env. Engineer	Organization: NPC Services, Inc.
Telephone No: (b) (6) Fax No: (b) (6) E-Mail Address: (b) (6)		Street Address: 2401 Brooklawn Drive City, State, Zip: Baton Rouge, LA 70807-6200

The US EPA is conducting the third Five-Year Review for the Petro-Processors of Louisiana, Inc. Superfund Site. Please help us in this review by filling out the following questionnaire and returning it by mail, e-mail, or fax. We appreciate your help in this matter. If you have further any questions, please contact me at your convenience.

Bartolome J Canellas (GSF-RL)
 EPA Region 6
 1445 Ross Avenue, Suite 1200
 Dallas, TX 75202
Canellas.Bart@epa.gov
 (214) 665-6662 office
 (214) 665-6660 fax

Interview Questionnaire

1. Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
☐ No ☒ Yes
2. What is your overall impression of the project (general sentiment)? Remedial activities at the site have resulted in actions which are currently protective of human health and the environment.
3. Are you aware of what effects have site operations had on the surrounding community?
☒ No ☐ Yes - Please give details.
4. Are you aware of what effects have site operations had on the nearby swamp (Devil's Swamp) and the Baton Rouge Bayou?
☐ No ☒ Yes – A protective fill was placed in portions of the distributaries of Bayou Baton Rouge referred to as the Middle Channel to interrupt a potential exposure pathway. Annual inspections are conducted along the Middle Channel to ensure it remains intact and continues to be protective.
5. Are you aware of any community concerns regarding the site or its operation and administration?
☒ No ☐ Yes - Please give details.
6. Are you aware of the existence of a fish consumption and/or swimming advisory issued to Devil's Swamp by the Louisiana Department of Environmental Quality and the Louisiana Department of Health and Hospitals?
☐ No ☒ Yes
7. 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?
☐ No ☒ Yes – This past January several hunters were discovered accessing the LSP property via the Scenic OU. Site personnel discovered that someone was potentially scaling the fence and entering the site near US Hwy 61. Cameras were setup and verified that unauthorized persons were entering the site. Site personnel, while performing site activities, discovered unauthorized persons on LSP property bordering the Scenic site. Police were notified and detained the trespassers.
8. Do you feel well informed about the site's activities and progress?
☐ No ☒ Yes
9. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
☐ No ☒ Yes - Please give details.
Since the approval of Enhanced Attenuation at the Scenic OU, there has been increased operation activities associated with the injection of a carbon source. Performance monitoring has also increased as a result of the EA activities. Investigations at the Brooklawn OU have resulted in newly installed monitor wells.

10. Are you aware of any problems related to site access control, road maintenance, site security?

☒ No ☐ Yes - Please give details.

11. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?

☒ No ☐ Yes - Please give details.

12. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.

☒ No ☐ Yes - Please give details.

13. Are you aware of the investigation and implementation of Enhance Attenuation activities implemented to speed-up natural physical-chemical and biological processes at the Scenic site?

☐ No ☒ Yes

14. Are you aware of on-going characterization of bacterial populations by investigators from the Louisiana State University?

☐ No ☒ Yes

15. Do you have any comments, suggestions, or recommendations regarding the site's investigations, management or operation?

- *Examples of this include:*
- *repairing areas where erosion has been noted, performing O&M activities, site monitoring.*
- *conducting pilot testing (field testing) and implementation of Enhance Attenuation to speed-up natural physical-chemical and biological processes,*
- *updating current groundwater computer models*
- *preparing additional plans for monitoring natural attenuation and near-source and*
- *supporting on-going characterization of bacterial populations with investigators from the Louisiana State University.*

☒ No ☐ Yes - Please give details.

16. Are you aware of any changes in actual or projected land uses?

☒ No ☐ Yes

INTERVIEW RECORD		
Site Name: Petro-Processors of Louisiana Inc. (PPI)		EPA ID No.: LAD057482713
Subject: Third 5-Year Review		Time: Date: 2015
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> By Mail <input type="checkbox"/> Other Location of Visit: N/A		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
Contact Made By:		
Name: Bartolome Canellas	Title: Remedial Project Manager	Organization: EPA Region 6
Individual Contacted:		
Name: W. David Constant	Title: Professor and Chair, BAE	Organization: La State University
Telephone No: (b) (6) Fax No: (b) (6) E-Mail Address: (b) (6)		Street Address: 149 E.B. Doran Building, LSU City, State, Zip: Baton Rouge, LA 70803

The US EPA is conducting the third Five-Year Review for the Petro-Processors of Louisiana, Inc. Superfund Site. Please help us in this review by filling out the following questionnaire and returning it by mail, e-mail, or fax. We appreciate your help in this matter. If you have further any questions, please contact me at your convenience.

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 EPA Region 6
 1445 Ross Avenue, Suite 1200
 Dallas, TX 75202
Canellas.Bart@epa.gov
 (214) 665-6662 office
 (214) 665-6660 fax

Interview Questionnaire

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

☐ No ☐ Yes

2. What is your overall impression of the project (general sentiment)?

The work is progressing as planned. Issues that arise are being carefully studied by NPC and LSU and we are engaged in the process.

3. Are you aware of what effects have site operations had on the surrounding community?

☐ No ☐ Yes - Please give details.

I'm not aware of any negative effects site operations have on the surrounding community.

4. Are you aware of what effects have site operations had on the nearby swamp (Devil's Swamp) and the Baton Rouge Bayou?

☐ No ☐ Yes - Please give details.

I'm aware of the contamination issues and remedies in use for both areas. While we are looking at subsurface contaminant plume control issues, I'm not aware of any problems with these areas on the surface.

5. Are you aware of any community concerns regarding the site or its operation and administration?

☐ No ☐ Yes - Please give details.

I'm not aware of any new concerns from the community. There are usually issues surrounding the reuse of the old vault for industrial waste, and I don't think any reuse has been approved.

6. Are you aware of the existence of a fish consumption and/or swimming advisory issued to Devil's Swamp by the Louisiana Department of Environmental Quality and the Louisiana Department of Health and Hospitals?

☐ No ☐ Yes

7. 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?

☐ No ☐ Yes - Please give details.

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

☐ No ☐ Yes

9. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?

☐ No ☐ Yes - Please give details.

We continue to work with NPC on addressing contaminant plumes and augmenting the natural attenuation remedy to address these plumes. These activities do change sampling and monitoring activities.

10. Are you aware of any problems related to site access control, road maintenance, site security?

☐ No ☐ Yes - Please give details.

11. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?

☐ No ☐ Yes - Please give details.

12. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.

☐ No ☐ Yes - Please give details.

13. Are you aware of the investigation and implementation of Enhance Attenuation activities implemented to speed-up natural physical-chemical and biological processes at the Scenic site?

☐ No ☐ Yes

14. Are you aware of on-going characterization of bacterial populations by investigators from the Louisiana State University?

☐ No ☐ Yes

15. Do you have any comments, suggestions, or recommendations regarding the site's investigations, management or operation?

- *Examples of this include:*
- *repairing areas where erosion has been noted, performing O&M activities, site monitoring.*
- *conducting pilot testing (field testing) and implementation of Enhance Attenuation to speed-up natural physical-chemical and biological processes,*
- *updating current groundwater computer models*
- *preparing additional plans for monitoring natural attenuation and near-source and*
- *supporting on-going characterization of bacterial populations with investigators from the Louisiana State University.*

☐ No ☐ Yes - Please give details.

16. Are you aware of any changes in actual or projected land uses?

☐ No ☐ Yes

INTERVIEW RECORD		
Site Name: Petro-Processors of Louisiana Inc. (PPI)		EPA ID No.: LAD057482713
Subject: Third 5-Year Review		Time: Date: 2015
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> By Mail <input type="checkbox"/> Other Location of Visit: N/A		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
Contact Made By:		
Name: Bartolome Canellas	Title: Remedial Project Manager	Organization: EPA Region 6
Individual Contacted:		
Name: Peter B. Lee	Title: Senior Geologist	Organization: EcoScience Resource Group, LLC
Telephone No: (b) (6) Fax No: (b) (6) E-Mail Address: (b) (6)		Street Address: 11827 Sunray Ave. City, State, Zip: Baton Rouge, LA 70816

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 EPA Region 6
 1445 Ross Avenue, Suite 1200
 Dallas, TX 75202
Canellas.Bart@epa.gov
 (214) 665-6662 office
 (214) 665-6660 fax

Interview Questionnaire

1. Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
☐ No **X Yes**
2. What is your overall impression of the project (general sentiment)?
Activities are being performed professionally and protective of the environment.
3. Are you aware of what effects have site operations had on the surrounding community?
X No ☐ Yes - Please give details.
4. Are you aware of what effects have site operations had on the nearby swamp (Devil's Swamp) and the Baton Rouge Bayou?
☐ No **X Yes - Please give details.**
A portion of Baton Rouge Bayou was filled and capped and rerouted to eliminate offsite migration.
5. Are you aware of any community concerns regarding the site or its operation and administration?
X No ☐ Yes - Please give details.
6. Are you aware of the existence of a fish consumption and/or swimming advisory issued to Devil's Swamp by the Louisiana Department of Environmental Quality and the Louisiana Department of Health and Hospitals?
☐ No **X Yes**
7. 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?
X No ☐ Yes - Please give details.
8. Do you feel well informed about the site's activities and progress?
☐ No **X Yes**
9. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
☐ No **X Yes - Please give details.**
Bioremediation injection/monitoring at Scenic has been used to further remediate.

10. Are you aware of any problems related to site access control, road maintenance, site security?

X No ☐ Yes - Please give details.

11. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?

X No ☐ Yes - Please give details.

12. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.

X No ☐ Yes - Please give details.

13. Are you aware of the investigation and implementation of Enhance Attenuation activities implemented to speed-up natural physical-chemical and biological processes at the Scenic site?

☐ No **X Yes**

14. Are you aware of on-going characterization of bacterial populations by investigators from the Louisiana State University?

☐ No **X Yes**

15. Do you have any comments, suggestions, or recommendations regarding the site's investigations, management or operation?

- *Examples of this include:*
- *repairing areas where erosion has been noted, performing O&M activities, site monitoring.*
- *conducting pilot testing (field testing) and implementation of Enhance Attenuation to speed-up natural physical-chemical and biological processes,*
- *updating current groundwater computer models*
- *preparing additional plans for monitoring natural attenuation and near-source and*
- *supporting on-going characterization of bacterial populations with investigators from the Louisiana State University.*

X No ☐ Yes - Please give details.

16. Are you aware of any changes in actual or projected land uses?

X No ☐ Yes

INTERVIEW RECORD		
Site Name: Petro-Processors of Louisiana Inc. (PPI)		EPA ID No.: LAD057482713
Subject: Third 5-Year Review		Time: Date: 2015
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> By Mail <input type="checkbox"/> Other Location of Visit: N/A		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
Contact Made By:		
Name: Bartolome Canellas	Title: Remedial Project Manager	Organization: EPA Region 6
Individual Contacted:		
Name: Jack Collins	Title: Facility Manager	Organization: Dayspring Group
Telephone No: (b) (6) Fax No: (b) (6) E-Mail Address: (b) (6)	Street Address: P.O. Box 1008 City, State, Zip: Zachary, LA 70791	

The US EPA is conducting the third Five-Year Review for the Petro-Processors of Louisiana, Inc. Superfund Site. Please help us in this review by filling out the following questionnaire and returning it by mail, e-mail, or fax. We appreciate your help in this matter. If you have further any questions, please contact me at your convenience.

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Canellas.Bart@epa.gov
 (214) 665-6662 office
 (214) 665-6660 fax

Interview Questionnaire

1. Are you familiar with the Petro Processors of Louisiana Superfund Site located in the East Baton Rouge Parish?
☐ No ☒ **Yes**
2. What is your overall impression of the project (general sentiment)? **Excellent. EA at Scenic OU is demonstrating effectiveness. Workers at the PPI Site have completed 14 with no OSHA recordable injuries.**
3. Are you aware of what effects have site operations had on the surrounding community?
☒ **No** ☐ Yes - Please give details.
4. Are you aware of what effects have site operations had on the nearby swamp (Devil's Swamp) and the Baton Rouge Bayou?
☐ No ☒ **Yes - Please give details. Middle Channel of Bayou Baton Rouge was filled several years ago and the former channel fill area has returned to a natural state.**
5. Are you aware of any community concerns regarding the site or its operation and administration?
☒ **No** ☐ Yes - Please give details.
6. Are you aware of the existence of a fish consumption and/or swimming advisory issued to Devil's Swamp by the Louisiana Department of Environmental Quality and the Louisiana Department of Health and Hospitals?
☐ No ☒ **Yes**
7. 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?
☐ No ☒ **Yes – In January, 2015, deer hunters trespassed across the Scenic OU to illegally hunt on the Louisiana State Police property. The violators were arrested by the state police. There was no negative impact to the Scenic OU.**
8. Do you feel well informed about the site's activities and progress?
☐ No ☒ **Yes**
9. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?
☐ No ☒ **Yes - Enhanced Attenuation has been implemented at the Scenic OU.**

10. Are you aware of any problems related to site access control, road maintenance, site security?

☒ No ☐ Yes - Please give details.

11. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?

☒ No ☐ Yes - Please give details.

12. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.

☒ No ☐ Yes - Please give details.

13. Are you aware of the investigation and implementation of Enhance Attenuation activities implemented to speed-up natural physical-chemical and biological processes at the Scenic site?

☐ No ☒ Yes

14. Are you aware of on-going characterization of bacterial populations by investigators from the Louisiana State University?

☐ No ☒ Yes

15. Do you have any comments, suggestions, or recommendations regarding the site's investigations, management or operation?

- *Examples of this include:*
- *repairing areas where erosion has been noted, performing O&M activities, site monitoring.*
- *conducting pilot testing (field testing) and implementation of Enhance Attenuation to speed-up natural physical-chemical and biological processes,*
- *updating current groundwater computer models*
- *preparing additional plans for monitoring natural attenuation and near-source and*
- *supporting on-going characterization of bacterial populations with investigators from the Louisiana State University.*

☒ No ☐ Yes - Please give details.

16. Are you aware of any changes in actual or projected land uses?

☒ No ☐ Yes

INTERVIEW RECORD		
Site Name: Petro-Processors of Louisiana Inc. (PPI)		EPA ID No.: LAD057482713
Subject: Third 5-Year Review		Time: Date: 2015
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> By Mail <input checked="" type="checkbox"/> Other Location of Visit: N/A		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
Contact Made By:		
Name: Bartolome Canellas	Title: Remedial Project Manager	Organization: EPA Region 6
Individual Contacted:		
Name: Darcie Olexia	Title: Environmental Health Scientist Coordinator	Organization: La. Department of Health & Hospitals
Telephone No: (b) (6) Fax No: E-Mail Address: (b) (6)		Street Address: 1450 Poydras St. City, State, Zip: New Orleans, LA 70112

The US EPA is conducting the third Five-Year Review for the Petro-Processors of Louisiana, Inc. Superfund Site. Please help us in this review by filling out the following questionnaire and returning it by mail, e-mail, or fax. We appreciate your help in this matter. If you have further any questions, please contact me at your convenience.

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 EPA Region 6
 1445 Ross Avenue, Suite 1200
 Dallas, TX 75202
Canellas.Bart@epa.gov
 (214) 665-6662 office
 (214) 665-6660 fax

Interview Questionnaire

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

☐ No ☒ Yes

2. What is your overall impression of the project (general sentiment)?

LDHH completed a ground water health consultation in January 2014; at that time, remedial actions were protective of public health.

3. Are you aware of what effects have site operations had on the surrounding community?

☐ No ☒ Yes - Please give details.

The PPI site is located over the 400-foot aquifer, a major drinking water aquifer. The 400-foot aquifer is an aquifer of concern to be protected from infiltration of contaminants from the Brooklawn and Scenic OUs. MNA and EA remedial actions at the PPI site aim to reduce the potential for future exposure to site-related contaminants.

4. Are you aware of what effects have site operations had on the nearby swamp (Devil's Swamp) and the Baton Rouge Bayou?

☐ No ☒ Yes - Please give details.

Placements of protective fill, rerouting of BBR and monitoring of BBR distributaries has been conducted to reduce surface sediment and biota contaminant concentrations.

5. Are you aware of any community concerns regarding the site or its operation and administration?

☒ No ☐ Yes - Please give details.

6. Are you aware of the existence of a fish consumption and/or swimming advisory issued to Devil's Swamp by the Louisiana Department of Environmental Quality and the Louisiana Department of Health and Hospitals?

☐ No ☒ Yes

7. 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?

☒ No ☐ Yes - Please give details.

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

☐ No ☒ Yes

9. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?

☒ No ☐ Yes - Please give details.

INTERVIEW RECORD		
Site Name: Petro-Processors of Louisiana Inc. (PPI)		EPA ID No.: LAD057482713
Subject: Third 5-Year Review		Time: Date: 2015
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> By Mail <input type="checkbox"/> Other Location of Visit: N/A		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
Contact Made By:		
Name: Bartolome Canellas	Title: Remedial Project Manager	Organization: EPA Region 6
Individual Contacted:		
Name: William M. Moe, Ph.D., P.E.	Title: Professor	Organization: Department of Civil and Environmental Engineering
Telephone No: (b) (6) Fax No: E-Mail Address: (b) (6)		Street Address: 3513B Patrick Taylor Hall Department Civil and Environmental Engineering Louisiana State University City, State, Zip: Baton Rouge, LA 708036

The US EPA is conducting the third Five-Year Review for the Petro-Processors of Louisiana, Inc. Superfund Site. Please help us in this review by filling out the following questionnaire and returning it by mail, e-mail, or fax. We appreciate your help in this matter. If you have further any questions, please contact me at your convenience.

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 (214) 665-6662 office
 (214) 665-6660 fax

Interview Questionnaire

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

☐ No ☒ Yes

2. What is your overall impression of the project (general sentiment)?

My overall impression is that cleanup activities at both the Brooklawn and Scenic operable units is proceeding in a methodical and technically defensible manner. If future remediation activities and monitoring continues along the path that has been pursued over the last several years, then I think that acceptable remediation endpoints can be achieved in a manner that is protective of public health.

3. Are you aware of what effects have site operations had on the surrounding community?

☒ No ☐ Yes - Please give details.

4. Are you aware of what effects have site operations had on the nearby swamp (Devil's Swamp) and the Baton Rouge Bayou?

☒ No ☐ Yes - Please give details.

5. Are you aware of any community concerns regarding the site or its operation and administration?

☒ No ☐ Yes - Please give details.

6. Are you aware of the existence of a fish consumption and/or swimming advisory issued to Devil's Swamp by the Louisiana Department of Environmental Quality and the Louisiana Department of Health and Hospitals?

☐ No ☒ Yes

7. 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?

☒ No ☐ Yes - Please give details.

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

☐ No ☒ Yes

9. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?

☐ No ☒ Yes

The most obvious changes to me have been the installation and operation of a series of injection wells that have facilitated the subsurface injection of electron donors (molasses) and pH control to enhance anaerobic reductive dechlorination in the near source zone and distal plume areas at the Scenic site. The repeated injections of electron donors and monitoring of groundwater contaminant concentrations in the vicinity of these areas are, I think, positive steps.

10. Are you aware of any problems related to site access control, road maintenance, site security?

☒ No ☐ Yes - Please give details.

11. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?

☒ No ☐ Yes - Please give details.

12. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.

☒ No ☐ Yes - Please give details.

13. Are you aware of the investigation and implementation of Enhance Attenuation activities implemented to speed-up natural physical-chemical and biological processes at the Scenic site?

☐ No ☒ Yes

14. Are you aware of on-going characterization of bacterial populations by investigators from the Louisiana State University?

☐ No ☒ Yes

15. Do you have any comments, suggestions, or recommendations regarding the site's investigations, management or operation?

- *Examples of this include:*
- *repairing areas where erosion has been noted, performing O&M activities, site monitoring.*
- *conducting pilot testing (field testing) and implementation of Enhance Attenuation to speed-up natural physical-chemical and biological processes,*
- *updating current groundwater computer models*
- *preparing additional plans for monitoring natural attenuation and near-source and*
- *supporting on-going characterization of bacterial populations with investigators from the Louisiana State University.*

☐ No ☒ Yes - Please give details.

The work by LSU to characterize the microbial populations present in the subsurface at the site over the past several years has resulted in the discovery of several new bacterial genera that were previously unknown. The discovery of the chlorinated alkane dehalogenating genus *Dehalogenimonas* seems to be

particularly important in providing a mechanistic understanding of biodegradation and biotransformation processes at the site. Further characterization of microbial populations and microbial activity would, I think, provide additional confidence in the remedies at both Brooklawn and Scenic portions of the site moving forward. Thus, I recommend that the microbial characterization efforts continue.

16. Are you aware of any changes in actual or projected land uses?

☒ No

☐ Yes

INTERVIEW RECORD			
Site Name: Petro-Processors of Louisiana Inc. (PPI)		EPA ID No.: LAD057482713	
Subject: Thirds 5-Year Review		Time: 3:15 pm	Date: 10/27/2015
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> By Mail <input type="checkbox"/> Other Location of Visit: N/A		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	
Contact Made By:			
Name: Jason McKinney		Title: Community Involvement	Organization: EPA Region 6
Individual Contacted:			
Name: (b) (6)		Title: Community Contact	Organization: Alsen Resident
Telephone No: (b) (6) Fax No: E-Mail Address:		Street Address: (b) (6) City, State, Zip: Baton Rouge, LA 70807	

The US EPA is conducting the third Five-Year Review for the Petro-Processors of Louisiana, Inc. Superfund Site. Please help us in this review by responding by phone or filling out the following questionnaire and returning it by mail, e-mail, or fax. We appreciate your help in this matter. If you have further any questions, please contact me at your convenience or the Remedial Project Manager Mr. Bartolome J Canellas.

Jason McKinney (6SF-VO)
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 (214) 665-6662 office
 (214) 665-6660 fax

Interview Questionnaire

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

☐ No ☒ Yes

2. What is your overall impression of the project (general sentiment)?

Have not receive much information recently. The EPA Remedial Project Manager offered to provide copy of the latest fact sheet recently sent in October 2015 to all members of the site mailing list.

3. Are you aware of what effects have site operations had on the surrounding community?

☒ No ☐ Yes - Please give details.

The community asked her about three Superfund sites and other disposal sites in the community. Devil's Swamp Lake, the Ronaldson Field Landfill (not a Superfund site), Petro-Processors of Louisiana and other sites. She will check with her neighbors.

4. Are you aware of what effects have site operations had on the nearby swamp (Devil's Swamp) and the Baton Rouge Bayou?

☒ No ☐ Yes - Please give details.

Aware of Petro located on Devil's Swamp.

5. Are you aware of any community concerns regarding the site or its operation and administration?

☒ No ☐ Yes - Please give details.

In reference to Petro no.

6. Are you aware of the existence of a fish consumption and/or swimming advisory issued to Devil's Swamp by the Louisiana Department of Environmental Quality and the Louisiana Department of Health and Hospitals?

☐ No ☒ Yes

The EPA Remedial Project Manager alerted her of an updated fishing advisory and agreed to provide her a copy of the latest fact sheet about this issue.

7. 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?

☒ No ☐ Yes - Please give details.

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

☒ No ☐ Yes

Not really. She feels in lot of danger due to the large number of disposal and industrial sites near the community. She knows who to contact several persons at EPA (Bart, Bill Little, Jason) and LDEQ (John Halk). She will appreciate to receive fact sheets.

9. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?

☒ No ☒ Yes - Please give details.

Not familiar with Petro-Processors. Familiar only with Devil's Swamp Lake activities.

10. Are you aware of any problems related to site access control, road maintenance, site security?

☒ No ☐ Yes - Please give details.

At Petro not aware.

11. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?

☒ No ☐ Yes - Please give details.

Not at Petro-Processors of Louisiana.

There are problems in the community with raising water and homes sinking in the Alsen area (settlement). Her concern according to her is attributable to the increased train traffic along Scenic Highway.

12. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.

☒ No ☐ Yes - Please give details.

13. Are you aware of the investigation and implementation of Enhance Attenuation activities implemented to speed-up natural physical-chemical and biological processes at the Scenic site?

☒ No ☐ Yes

14. Are you aware of on-going characterization of bacterial populations by investigators from the Louisiana State University?

☒ No ☐ Yes

15. Do you have any comments, suggestions, or recommendations regarding the site's investigations, management or operation?

- *Examples of this include:*
- *repairing areas where erosion has been noted, performing O&M activities, site monitoring.*
- *conducting pilot testing (field testing) and implementation of Enhance Attenuation to speed-up natural physical-chemical and biological processes,*
- *updating current groundwater computer models*
- *preparing additional plans for monitoring natural attenuation and near-source and*
- *supporting on-going characterization of bacterial populations with investigators from the Louisiana State University.*

☒ No ☐ Yes - Please give details.

Not recently. Received some notices from LDEQ about a water discharge from oil and gas exploration.

16. Are you aware of any changes in actual or projected land uses?

☒ No ☐ Yes

INTERVIEW RECORD		
Site Name: Petro-Processors of Louisiana Inc. (PPI)		EPA ID No.: LAD057482713
Subject: Thirds 5-Year Review		Time: Date: 2015
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> By Mail <input type="checkbox"/> Other		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
Location of Visit: N/A		
Contact Made By:		
Name: Jason McKinney	Title: Community Involvement	Organization: EPA Region 6
Individual Contacted:		
Name: (b) (6)	Title: Community Contact	Organization: Alsen Resident
Telephone No: (b) (6)	Street Address: (b) (6)	
Fax No:	City, State, Zip: Baton Rouge, LA 70807	
E-Mail Address:		

The US EPA is conducting the third Five-Year Review for the Petro-Processors of Louisiana, Inc. Superfund Site. Please help us in this review by responding by phone or filling out the following questionnaire and returning it by mail, e-mail, or fax. We appreciate your help in this matter. If you have further any questions, please contact me at your convenience or the Remedial Project Manager Mr. Bartolome J Canellas.

Jason McKinney (6SF-VO)
EPA Region 6
(214) 665-8132

Bartolome J Canellas (6SF-RL)
EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202
Canellas.Bart@epa.gov
(214) 665-6662 office
(214) 665-6660 fax

Interview Questionnaire

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

☐ No ☒ Yes

2. What is your overall impression of the project (general sentiment)?

Just know of it through work. I am the CFC on the site. Site is being cleaned up

3. Are you aware of what effects have site operations had on the surrounding community?

☐ No ☒ Yes - Please give details.

It should be having no effect on surrounding community

4. Are you aware of what effects have site operations had on the nearby swamp (Devil's Swamp) and the Baton Rouge Bayou?

☒ No ☐ Yes - Please give details.

5. Are you aware of any community concerns regarding the site or its operation and administration?

☐ No ☒ Yes - Please give details.

Community's main concern is contamination from the 3 site that surrounds their community

6. Are you aware of the existence of a fish consumption and/or swimming advisory issued to Devil's Swamp by the Louisiana Department of Environmental Quality and the Louisiana Department of Health and Hospitals?

☐ No ☒ Yes

7. 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?

☒ No ☐ Yes - Please give details.

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

☐ No ☒ Yes

9. Are you aware of any significant changes in Operation and Maintenance activities or sampling routines in the last five years?

☒ No ☐ Yes - Please give details.

10. Are you aware of any problems related to site access control, road maintenance, site security?

☒ No

☐ Yes - Please give details.

11. Are you aware of any settlement, cracks, erosion, stressed vegetation, damage to the vegetative cover or ponding of water over the backfilled areas?

☒ No

☐ Yes - Please give details.

12. Are you aware of any spills, seeps, or run-off of potentially contaminated liquids into the swamp? Please explain.

☒ No

☐ Yes - Please give details.

13. Are you aware of the investigation and implementation of Enhance Attenuation activities implemented to speed-up natural physical-chemical and biological processes at the Scenic site?

☒ No

☐ Yes

14. Are you aware of on-going characterization of bacterial populations by investigators from the Louisiana State University?

☒ No

☐ Yes

15. Do you have any comments, suggestions, or recommendations regarding the site's investigations, management or operation?

- *Examples of this include:*
- *repairing areas where erosion has been noted, performing O&M activities, site monitoring.*
- *conducting pilot testing (field testing) and implementation of Enhance Attenuation to speed-up natural physical-chemical and biological processes,*
- *updating current groundwater computer models*
- *preparing additional plans for monitoring natural attenuation and near-source and*
- *supporting on-going characterization of bacterial populations with investigators from the Louisiana State University.*

☒ No

☐ Yes - Please give details.

16. Are you aware of any changes in actual or projected land uses?

☒ No

☐ Yes

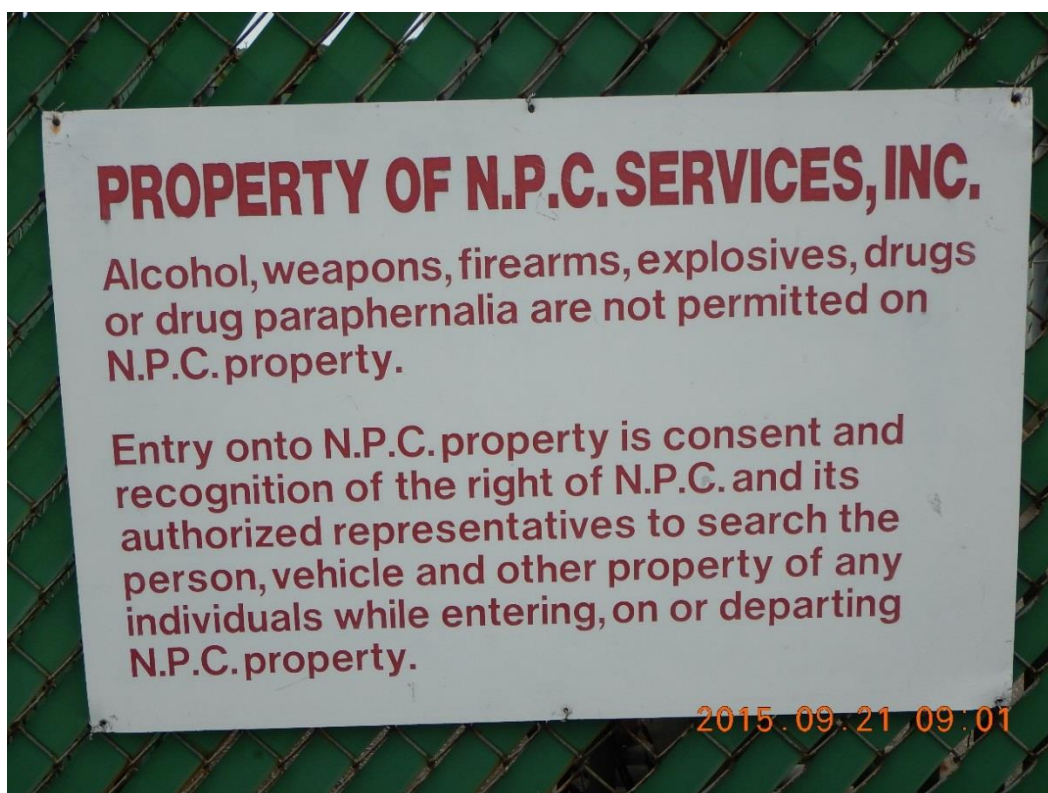
APPENDIX E

Site Photographs

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

Brooklawn Site:





Warning signs at entrance.



Location of former Brooklawn lagoons.



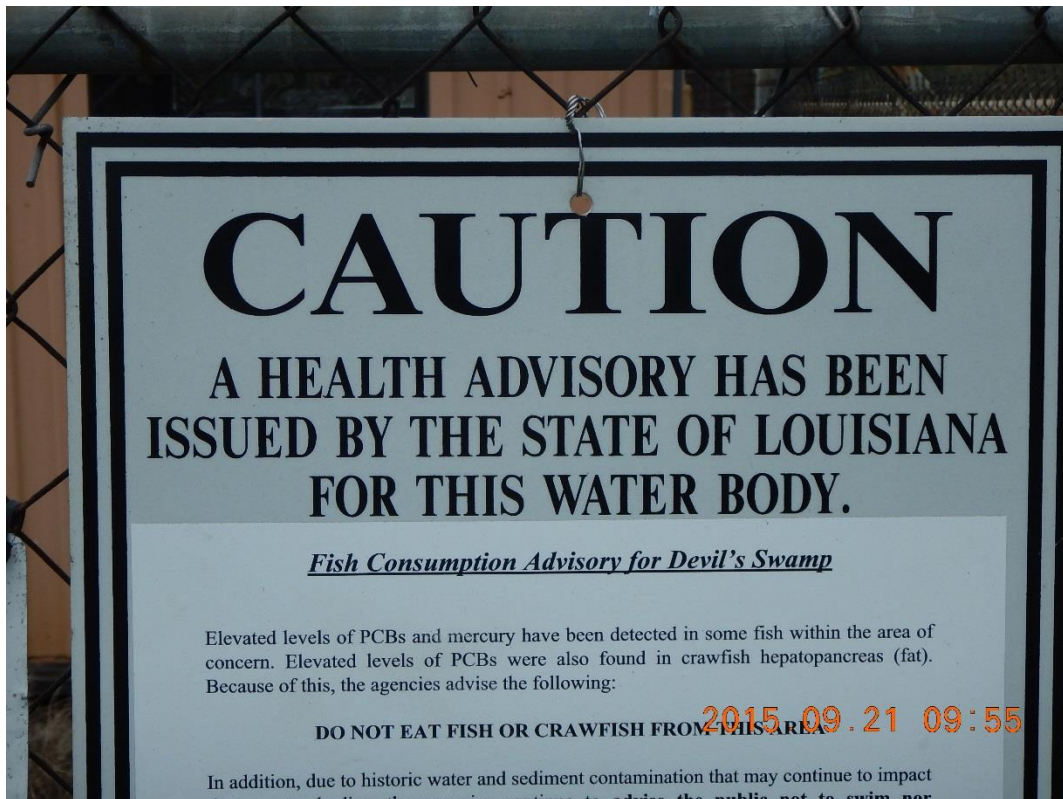
Groundwater monitoring wells protected, lock and properly identified.



Storm water discharge points monitored and identified.

Devil's Swamp area:





Fence, gate, warning sign and fish advisory warning sign posted.

Scenic Site:





Former Scenic Site disposal lagoons.



Storms water and groundwater monitoring.

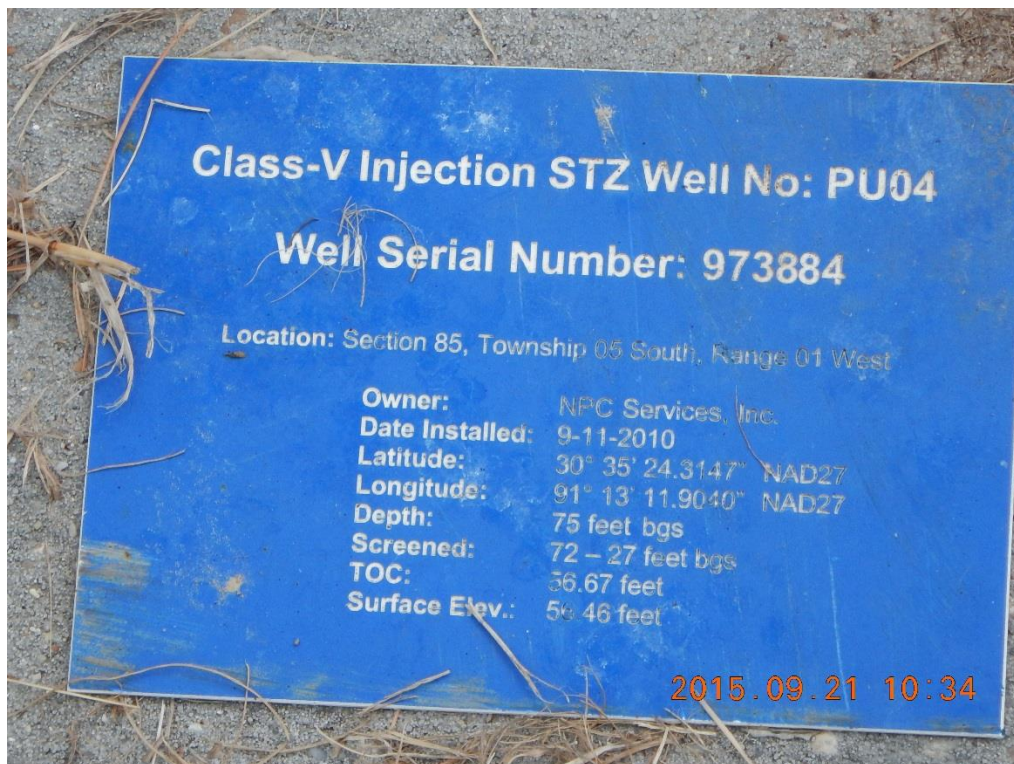
Near Source Enhanced Remediation Treatment Zones:



Enhanced Remediation at Distal Treatment Zone:







Injection and extraction wells protected and properly identified.

APPENDIX F

Figures and Drawings

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

List of Figures

Figure No.	Description
Figure 1	Regional Map
Figure 2	Vicinity Map
Figure 3	Enhanced Attenuation (EA) Treatment Zones
Figure 4	Areas subject to Enhanced Attenuation

List of Tables

Drawing No.	Description
Table 1-1	Contaminants of Concern

REGIONAL MAP

Figure 1

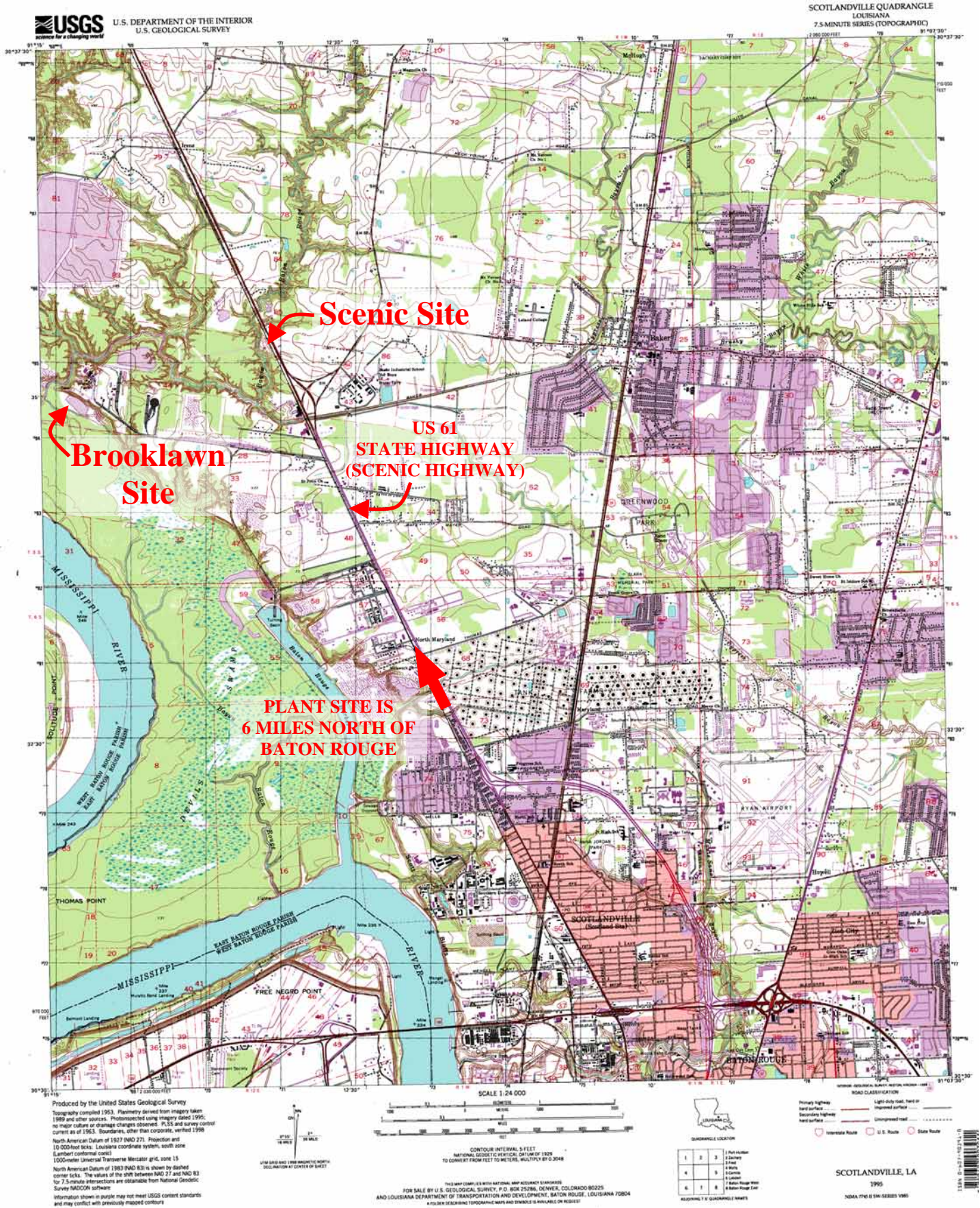
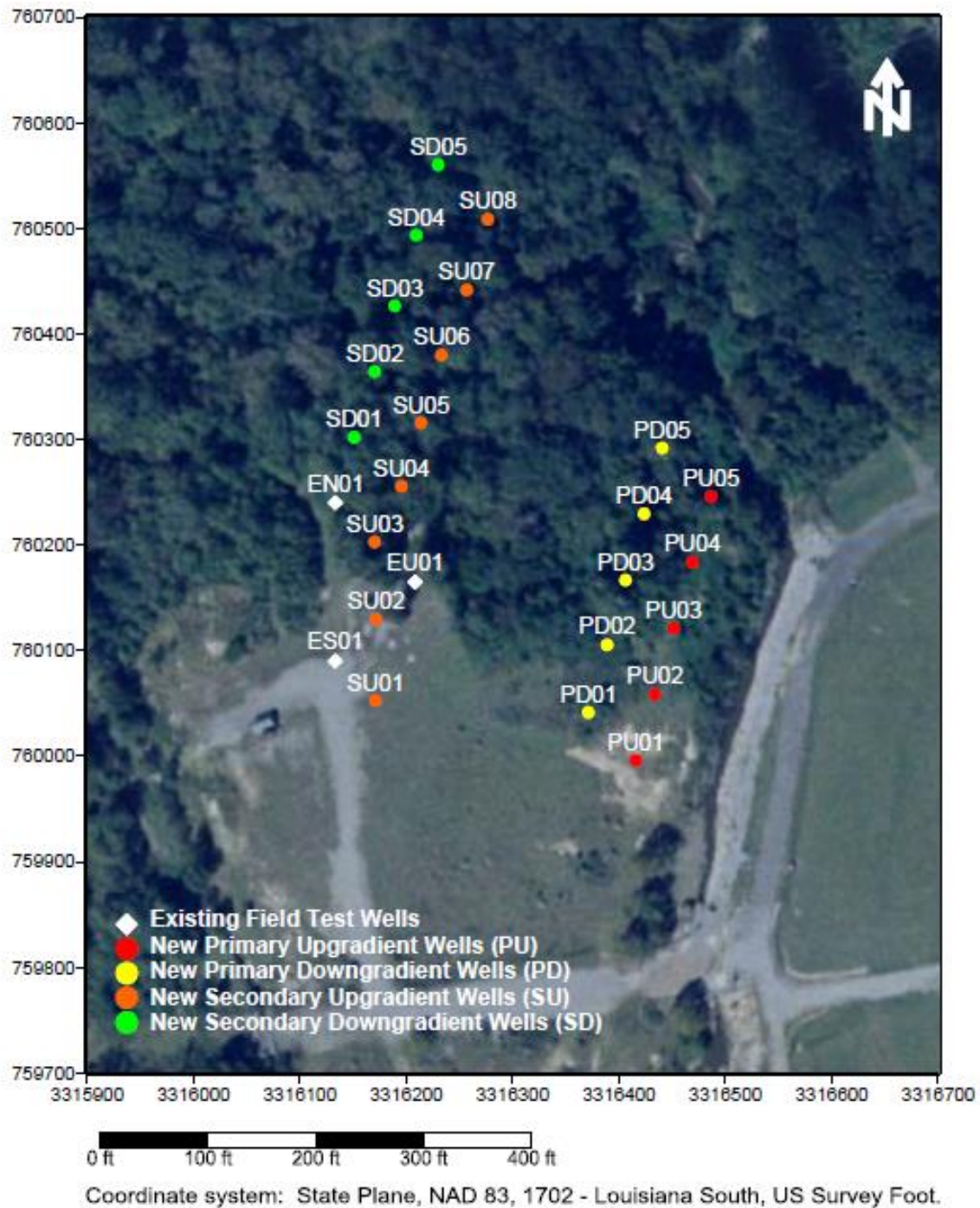


Figure 3 – Enhanced Attenuation (EA) Treatment Zones

Location of the injection wells for the primary and secondary near-source treatment zones, showing location of monitor wells and the location of twenty-three (23) wells installed for the source control remedial action.



Location of injection and extraction wells for the Distal Treatment Zone

Expansion of the DTZ field test into a full EA treatment zone; pilot test wells depicted by the yellow squares, additional well are depicted by the open yellow diamonds. Existing monitoring location SBP-089 is labeled and shown as a blue diamond. The red line depicts the nominal southern plume boundary in the +20 MSL channel.

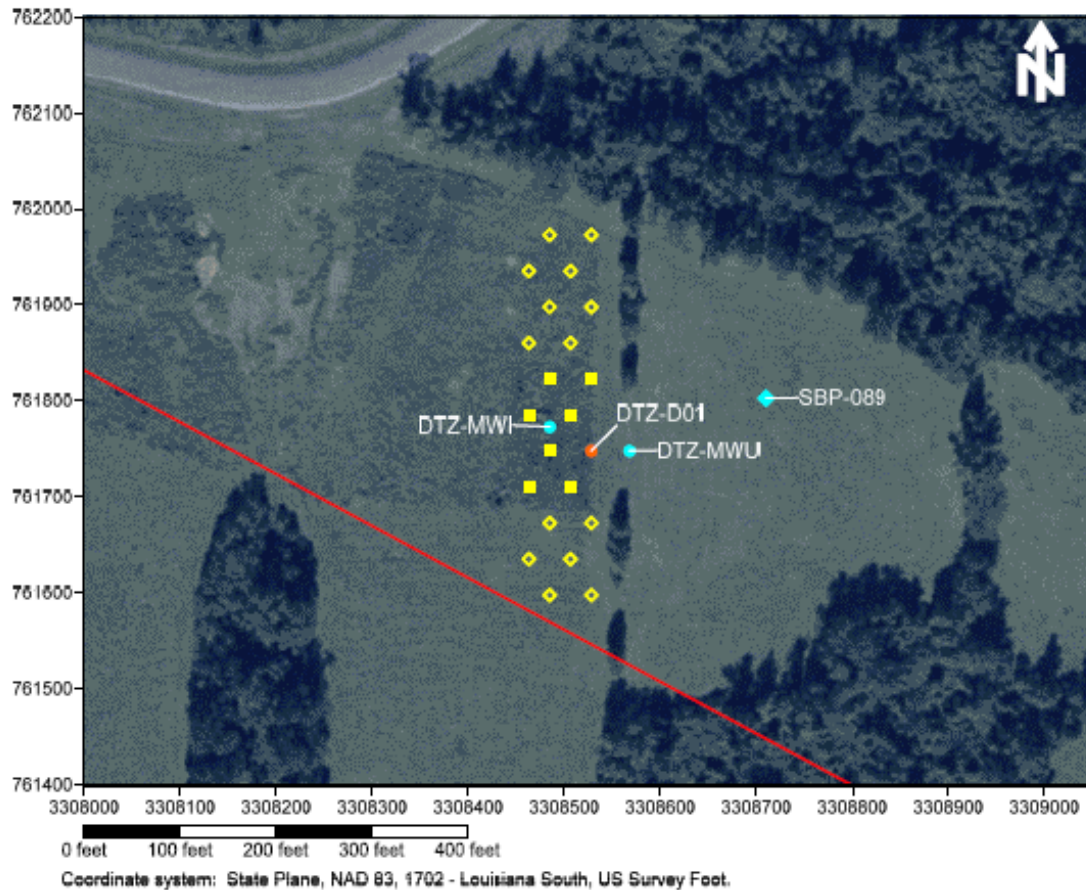


Figure 4 – Areas subject to Enhanced Attenuation (EA)

Source Control Conceptual Remedial Model. The source area is depicted in red, the +20 MSL contaminant plume is shown in orange, and the treatment zones are shown in green. The yellow line approximates the southern flow boundary of the +20 MSL Channel.



Table 1-1. Contaminants of Concern for the PPI site, Brooklawn OUI

Contaminants of Concern	Groundwater	Sediment
1,2-Dichloroethane (DCA)	X	
cis-1,2-Dichloroethene (cis-DCE)	X	
trans-1,2-Dichloroethene (trans-DCE)	X	
Hexachlorobenzene (HCB)		X
Hexachlorobutadiene (HCBd)		X
Tetrachloroethene (PCE)	X	
1,1,2,2-Tetrachloroethane (TeCA)	X	
1,1,2-Trichloroethane (TCA)	X	
Trichloroethene (TCE)	X	
Vinyl chloride (VC)	X	

APPENDIX G

Site Inspection Checklist

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

Five-Year Review Site Inspection Checklist

I. SITE INFORMATION	
Site name: Petro-Processors of Louisiana, Inc. (PPI)	Date of inspection: September 21, 2015
Location and Region: East Baton Rouge Parish, LA U.S. EPA Region 6	EPA ID: LAD057482713
Agency, office, or company leading the five-year review: U.S.EPA Region 6, Superfund Division	Weather/temperature: Cloudy/Low 90s
Remedy Includes: (Check all that apply) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input checked="" type="checkbox"/> Landfill cover/containment </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> Monitored natural attenuation </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> Access controls </div> <div style="width: 50%;"> <input type="checkbox"/> Groundwater containment </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> Institutional controls </div> <div style="width: 50%;"> <input type="checkbox"/> Vertical barrier walls </div> <div style="width: 50%;"> <input type="checkbox"/> Groundwater pump and treatment </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> Surface water collection and treatment </div> <div style="width: 50%;"> <input checked="" type="checkbox"/> Other <u>Enhanced Attenuation (EA) and Natural Recovery</u> </div> </div>	
Attachments: <input type="checkbox"/> Inspection team roster attached <input checked="" type="checkbox"/> Site map attached	
II. INTERVIEWS (Check all that apply)	
1. O&M site manager _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date </div> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ <div style="margin-top: 5px;"> Problems, suggestions; <input type="checkbox"/> Report attached _____ </div>	
2. O&M staff _____ <div style="display: flex; justify-content: space-between; margin-top: 5px;"> Name Title Date </div> Interviewed <input type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ <div style="margin-top: 5px;"> Problems, suggestions; <input type="checkbox"/> Report attached _____ </div>	

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 Department of Environmental Quality

Contact Keith Horn Environmental Scientist 2015 (225) 219-3793

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)

Jason McKinney, Community Involvement Coordinator, EPA Region 6

W. David Constant, Professor Louisiana State University (LSU) and Interim Dean, The Graduate School

Jack Collins, Facility Manager, Dayspring Group

Rose Mary Jones, resident of the nearby Alsen Community

Peter B. Lee, Senior Geologist, EcoScience Resource Group

Darcie Olexia, Environmental Health Scientist Coord., La. Dept. of Health & Hospitals

Bryan McReynolds, Process & Env. Engineer, NPC Services, Inc.

William M. Moe, Ph.D., P.E., Professor, LSU Department of Civil and Environmental Engineering

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)				
1.	O&M Documents <input checked="" type="checkbox"/> O&M manual <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A <input checked="" type="checkbox"/> As-built drawings <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Maintenance logs <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____ _____			
2.	Site-Specific Health and Safety Plan <input checked="" type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Contingency plan/emergency response plan <input checked="" type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____ _____			
3.	O&M and OSHA Training Records <input checked="" type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____ _____			
4.	Permits and Service Agreements <input type="checkbox"/> Air discharge permit <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Effluent discharge <input checked="" type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Waste disposal, POTW <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> Other permits _____ <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks <u>The PPI site has an LPDES permit LA0066214</u> _____			
5.	Gas Generation Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____ _____			
6.	Settlement Monument Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____ _____			
7.	Groundwater Monitoring Records <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks <u>Annual long term monitoring reports are submitted for the Brooklawn and Scenic OUs.</u> _____			
8.	Leachate Extraction Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks _____ _____			
9.	Discharge Compliance Records <input type="checkbox"/> Air <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Water (effluent) <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks <u>The PPI site discharges process and storm water via an LPDES Permit, LA0066214.</u> _____			
10.	Daily Access/Security Logs <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A Remarks <u>The PPI site used an Access Card Key system with computer access logs.</u> _____			

IV. O&M COSTS																																																															
1.	O&M Organization <input type="checkbox"/> State in-house <input type="checkbox"/> PRP in-house <input type="checkbox"/> Federal Facility in-house <input type="checkbox"/> Other _____	<input type="checkbox"/> Contractor for State <input checked="" type="checkbox"/> Contractor for PRP <input type="checkbox"/> Contractor for Federal Facility _____																																																													
2.	O&M Cost Records <input type="checkbox"/> Readily available <input type="checkbox"/> Up to date <u>This is a PRP funded clean up; the funding information is not publicly available.</u> <input type="checkbox"/> Funding mechanism/agreement in place Original O&M cost estimate _____ <input type="checkbox"/> Breakdown attached <div style="text-align: center;">Total annual cost by year for review period if available</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">From _____</td> <td style="width: 10%;">To _____</td> <td style="width: 20%;"></td> <td style="width: 10%;"></td> <td style="width: 40%;"></td> <td style="width: 10%; text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td></td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td></td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td></td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td></td> <td></td> <td></td> <td style="text-align: right;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> <td></td> <td></td> </tr> </table>			From _____	To _____				<input type="checkbox"/> Breakdown attached	Date	Date	Total cost				From _____	To _____				<input type="checkbox"/> Breakdown attached	Date	Date	Total cost				From _____	To _____				<input type="checkbox"/> Breakdown attached	Date	Date	Total cost				From _____	To _____				<input type="checkbox"/> Breakdown attached	Date	Date	Total cost				From _____	To _____				<input type="checkbox"/> Breakdown attached	Date	Date	Total cost			
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3.	Unanticipated or Unusually High O&M Costs During Review Period Describe costs and reasons: _____ _____ _____ _____																																																														
V. ACCESS AND INSTITUTIONAL CONTROLS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A																																																															
A. Fencing																																																															
1.	Fencing damaged <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Gates secured <input type="checkbox"/> N/A	Remarks <u>The PPI site has perimeter fencing, secured gates, all are in good condition.</u> _____																																																													
B. Other Access Restrictions																																																															
1.	Signs and other security measures <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A																																																														
Remarks <u>The PPI site has perimeter signs posted at both the Brooklawn and Scenic OU.</u> <u>The swamp portions of the PPR site are posted with signs for the fish consumption advisory.</u> _____																																																															

C. Institutional Controls (ICs)			
1.	Implementation and enforcement Site conditions imply ICs not properly implemented <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Site conditions imply ICs not being fully enforced <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Type of monitoring (<i>e.g.</i> , self-reporting, drive by) <u>Site inspection, self-monitoring and reporting.</u> Frequency <u>Operations personnel conduct daily site inspections.</u> Responsible party/agency <u>NPC Services, Inc.</u> Contact: <u>J. Bryan McReynolds, P.E. Environmental Engineer</u> <u>225-778-6229</u> <div style="display: flex; justify-content: space-between; width: 100%;"> Name Title Date Phone no. </div> Reporting is up-to-date <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Reports are verified by the lead agency <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Specific requirements in deed or decision documents have been met <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Violations have been reported <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Other problems or suggestions: <input type="checkbox"/> Report attached <u>Trespassers noted at the Scenic site promptly reported to state police.</u> <hr/> <hr/> <hr/>		
2.	Adequacy <input checked="" type="checkbox"/> ICs are adequate <input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A Remarks _____ <hr/> <hr/>		
D. General			
1.	Vandalism/trespassing <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No vandalism evident Remarks <u>The PPI site has perimeter fencing and access control to prevent vandalism.</u> <hr/>		
2.	Land use changes on site <input type="checkbox"/> N/A Remarks <u>There have been no changes to land use on site.</u> <hr/>		
3.	Land use changes off site <input type="checkbox"/> N/A Remarks <u>There have been no changes to land use on site.</u> <hr/>		
VI. GENERAL SITE CONDITIONS			
A. Roads <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Roads damaged <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Roads adequate <input type="checkbox"/> N/A Remarks <u>The PPI site has asphalt perimeter roads at the Brooklawn OU that are in good condition.</u> <hr/>		

B. Other Site Conditions			
Remarks <u>Inspections of the distributary channels at Devil's Swamp conducted as per approved plans.</u> <u>Monitoring and maintenance of Enhance Attenuation wells conducted as per approved plans.</u> <u>Mowing and O&M activities at the Brooklawn and Scenic sites implemented as per plans.</u> <hr/> <hr/> <hr/>			
VII. LANDFILL COVERS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
A. Landfill Surface Remarks: <u>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.</u>			
1.	Settlement (Low spots) Areal extent _____ Depth _____ Remarks _____ <hr/>	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Settlement not evident	
2.	Cracks Lengths _____ Widths _____ Depths _____ Remarks _____ <hr/>	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Cracking not evident	
3.	Erosion Areal extent _____ Depth _____ Remarks _____ <hr/>	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Erosion not evident	
4.	Holes Areal extent _____ Depth _____ Remarks _____ <hr/>	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Holes not evident	
5.	Vegetative Cover <input checked="" type="checkbox"/> Grass <input checked="" type="checkbox"/> Cover properly established <input checked="" type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks <u>Vegetation covers are inspected and maintained.</u> <hr/>		
6.	Alternative Cover (armored rock, concrete, etc.) <input checked="" type="checkbox"/> N/A Remarks _____ <hr/>		
7.	Bulges Areal extent _____ Height _____ Remarks _____ <hr/>	<input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Bulges not evident	

8.	Wet Areas/Water Damage <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade Remarks _____	<input checked="" type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Location shown on site map Areal extent _____
9.	Slope Instability <input checked="" type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks <u>The PPI site is inspected and maintained to ensure the integrity of the protective covers.</u> <u>Slides on South Levee Road at Brooklawn were promptly repaired in the past.</u>	
B. Benches <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> 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 Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
2.	Bench Breached Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
3.	Bench Overtopped Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
C. Letdown Channels <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> 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 <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of settlement Areal extent _____ Depth _____ Remarks _____	
2.	Material Degradation <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of degradation Material type _____ Areal extent _____ Remarks _____	
3.	Erosion <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of erosion Areal extent _____ Depth _____ Remarks _____	

4.	Undercutting Areal extent _____ Depth _____ Remarks _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of undercutting	
5.	Obstructions Type _____ <input type="checkbox"/> Location shown on site map Areal extent _____ Size _____ Remarks _____	<input type="checkbox"/> No obstructions	
6.	Excessive Vegetative Growth Type _____ <input type="checkbox"/> No evidence of excessive growth <input type="checkbox"/> Vegetation in channels does not obstruct flow <input type="checkbox"/> Location shown on site map Areal extent _____ Remarks _____		
D. Cover Penetrations <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Gas Vents <input type="checkbox"/> Active <input type="checkbox"/> Passive <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled v Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input checked="" type="checkbox"/> N/A Remarks _____		
2.	Gas Monitoring Probes <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input checked="" type="checkbox"/> N/A Remarks _____		
3.	Monitoring Wells (within surface area of landfill) <input type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks <u>Monitoring Wells within the protective cover of the PPI Site are locked and secure and are in good condition. Sampling of monitoring wells reported annually as per approved plans.</u>		
4.	Leachate Extraction Wells <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> Needs Maintenance <input checked="" type="checkbox"/> N/A Remarks _____		
5.	Settlement Monuments <input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input checked="" type="checkbox"/> N/A Remarks _____		

E. Gas Collection and Treatment			<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Gas Treatment Facilities <input type="checkbox"/> Flaring <input type="checkbox"/> Thermal destruction <input type="checkbox"/> Collection for reuse <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____			
2.	Gas Collection Wells, Manifolds and Piping <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____			
3.	Gas Monitoring Facilities (<i>e.g.</i> , gas monitoring of adjacent homes or buildings) <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____			
F. Cover Drainage Layer			<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Outlet Pipes Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____			
2.	Outlet Rock Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____			
G. Detention/Sedimentation Ponds			<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Siltation Areal extent _____ Depth _____ <input type="checkbox"/> N/A G Siltation not evident Remarks _____ _____			
2.	Erosion Areal extent _____ Depth _____ G Erosion not evident Remarks _____ _____			
3.	Outlet Works <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____			
4.	Dam <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____			

H. Retaining Walls		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Deformations Horizontal displacement _____ Rotational displacement _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident Vertical displacement _____
2.	Degradation Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
I. Perimeter Ditches/Off-Site Discharge			
		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Siltation Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident Depth _____
2.	Vegetative Growth <input type="checkbox"/> Vegetation does not impede flow Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A Type _____
3.	Erosion Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Erosion not evident Depth _____
4.	Discharge Structure Remarks _____	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
VIII. VERTICAL BARRIER WALLS			
		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Settlement Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Settlement not evident Depth _____
2.	Performance Monitoring Type of monitoring _____ <input type="checkbox"/> Performance not monitored Frequency _____ Head differential _____ Remarks _____		

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

C. Treatment System		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Treatment Train (Check components that apply) <input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input type="checkbox"/> Air stripping <input checked="" type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters _____ <input type="checkbox"/> Additive (e.g., chelation agent, flocculent) _____ <input type="checkbox"/> Others _____ <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ Remarks <u>The site maintains facilities for the collection and treatment of contained storm water.</u> _____		
2.	Electrical Enclosures and Panels (properly rated and functional) <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____		
3.	Tanks, Vaults, Storage Vessels <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance Remarks _____ _____		
4.	Discharge Structure and Appurtenances <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ _____		
5.	Treatment Building(s) <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks _____ _____		
6.	Monitoring Wells (pump and treatment remedy) <input checked="" type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input checked="" type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____		
D. Monitoring Data			
1.	Monitoring Data <input checked="" type="checkbox"/> Is routinely submitted on time <input checked="" type="checkbox"/> Is of acceptable quality		
2.	Monitoring data suggests: <input checked="" type="checkbox"/> Groundwater plume is effectively contained <input checked="" type="checkbox"/> Contaminant concentrations are declining		

D. Monitored Natural Attenuation			
1.	Monitoring Wells (natural attenuation remedy) <input checked="" type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input checked="" type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ _____		
X. OTHER REMEDIES			
<p>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.</p> <p><u>Enhanced Attenuation (EA) is implemented in an area west of the Scenic Site. After pilot testing EA, three treatment zones are currently in operation. Monitoring of EA progress is routinely conducted and reported. Additional injections of substrate (molasses) for the EA process are routinely conducted. Additional investigations and groundwater modeling updates are conducted.</u></p>			
XI. OVERALL OBSERVATIONS			
A. Implementation of the Remedy			
<p>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.).</p> <p><u>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 continues to be 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.</u></p>			
B. Adequacy of O&M			
<p>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.</p> <p><u>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 are 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.</u></p>			

C. Early Indicators of Potential Remedy Problems
<p>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.</p> <hr/> <hr/> <p style="text-align: center;"><u>None apparent</u></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
D. Opportunities for Optimization
<p>Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.</p> <hr/> <hr/> <p style="text-align: center;"><u>None apparent</u></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

APPENDIX H

Health Advisory on Fish Consumption

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



Bobby Jindal
GOVERNOR

Kathy H. Kliebert
Secretary
Department of
Health & Hospitals
P. O. Box 629
Baton Rouge, LA
70821-0629

Peggy M. Hatch
Secretary
Department of
Environmental Quality
P. O. Box 4301
Baton Rouge, LA
70821-4301

Robert J. Barham
Secretary
Department of
Wildlife & Fisheries
P. O. Box 98000
Baton Rouge, LA
70898-9000

The following fish consumption advisory was issued on 8/12/15 by the Department of Health & Hospitals, the Department of Environmental Quality, and the Department of Wildlife & Fisheries. For more information, please contact:

DHH
Shannon Soileau
(888) 293-7020

DEQ
Keith Horn
(225) 219-3793

DWF
Bobby Reed
(337) 488-3039

ADVISORY FOR DEVIL'S SWAMP/BAYOU BATON ROUGE

In response to follow up sampling and analysis of finfish and crawfish, the Louisiana Department of Health & Hospitals (DHH), Department of Environmental Quality (DEQ), and Department of Wildlife & Fisheries (DWF) are updating the advisory for the Devil's Swamp/Bayou Baton Rouge Area (E. Baton Rouge Parish). The area of concern is bounded on the north by Hall Buck Marine Road, on the east by the bluffs and the Baton Rouge Barge Harbor and on the south and west by the Mississippi River.

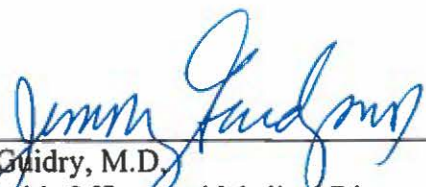
DHH, DEQ and DWF advise the following:

• DO NOT EAT FISH OR CRAWFISH FROM THIS AREA


This update is based on limited sampling data from 2012-2013. Largemouth bass, channel catfish, crappie and bluegill samples from Devil's Swamp Lake and crawfish from swampy areas outside of the Lake were tested for hexachlorobenzene (HCB), hexachlorobutadiene (HCBd), polychlorinated biphenyls (PCBs), arsenic, lead and mercury. Unacceptable levels of PCBs and mercury were found in some species of finfish. Unacceptable levels of PCBs were also found in crawfish hepatopancreas (fat). This advisory supersedes a previous advisory issued for this area on 7/9/1993.

Due to historic water and sediment contamination that may continue to impact these water bodies, the agencies continue to advise the public not to swim nor participate in other primary water contact sports in the area of concern.


This advisory is issued as a precaution. Any further sampling data from this area will be evaluated to determine the need for modifications to the current recommendations. For more information regarding this advisory, contact the Department of Health and Hospitals at 1-888-293-7020. If you have questions or concerns about your health, please consult a physician.



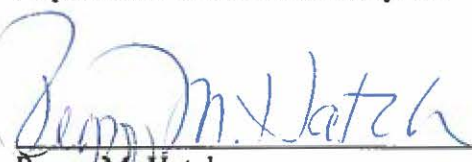
Jimmy Guidry, M.D.
State Health Officer and Medical Director
Department of Health & Hospitals




J.T. Lane
Assistant Secretary, Office of Public Health
Department of Health & Hospitals



Kathy H. Kliebert
Secretary
Department of Health & Hospitals



Peggy M. Hatch
Secretary
Department of Environmental Quality



Robert J. Barham
Secretary
Department of Wildlife & Fisheries

APPENDIX I

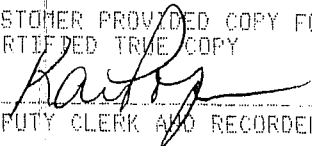
Act of Exchange

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

STATE OF LOUISIANA

ACT OF EXCHANGE

PARISH OF EAST BATON ROUGE

FILED AND RECORDED
EAST BATON ROUGE PARISH, LA
CLERK OF COURT AND RECORDERCUSTOMER PROVIDED COPY FOR
CERTIFIED TRUE COPYBY 
DEPUTY CLERK AND RECORDER

BE IT KNOWN, that effective on the 23rd day of September, 2013, before us, Notaries Public, duly commissioned in and for said state and parish, and in the presence of the respective subscribing witnesses, personally came and appeared:

THE STATE OF LOUISIANA, herein represented and appearing through Kristy H. Nichols, Commissioner of Administration, Division of Administration, Office of the Governor, State of Louisiana, under the authority granted pursuant to La. R.S. 39:11 and other applicable law, whose mailing address is Post Office Box 94095, Baton Rouge, Louisiana 70804-9095, herein called "STATE";

-AND-

NPC SERVICES, INC., (TIN 72-1009593), a Louisiana corporation domiciled in the Parish of East Baton Rouge, State of Louisiana, herein represented by William C. Dawson, its President, duly authorized, pursuant to a resolution of its Shareholders, a certified copy is attached hereto, whose permanent mailing address is 2401 Brooklawn Dr., Baton Rouge, Louisiana 70807; herein called "NPC";

who declared that the parties do enter into this Agreement for the consideration and upon the express terms and conditions set forth as follows, to-wit:

1. Definitions

As used in this Agreement, the terms below shall have the following meaning:

"US 61 Property" shall mean Tract "LSP-1" as more fully described on Exhibit A, and the "Resubdivision Map" as defined therein.

"Consent Decree" shall mean the federal Consent Decree dated and entered by the U.S. District Court, Middle District of Louisiana, on February 16, 1984, in *United States of America, Plaintiff, v. Petro Processors of Louisiana, Inc., et al., Defendants, and State of Louisiana, et al., Intervenor*s, Civil Action No. 80-358 "B," and any and all documents incorporated in the said Consent Decree, which include, but are not limited to, Remedial Planning Activities work plans and/or reports for waste originating from the former Petro Processors of Louisiana, Inc. sites, including the Scenic Operating Unit and the plume of waste from the Scenic Operating Unit as it may be described in the Remedial Planning Activities work plans and/or reports.

"LSP" shall mean the Office of State Police, Louisiana Department of Public Safety and Corrections.

"LSP Tract" shall mean the following described property:

- A. One certain tract or parcel of ground together with all buildings and improvements thereon and all rights, privileges, and servitudes running in favor thereof designated as **Tract 2-A-2** on a map entitled "Map Showing Resubdivision of the Kaiser Aluminum and Chemical Corp. Tract 2-A, Being part of Tracts A, B & C of the Millwood Plantation, Thomas McVea Tract, Samuel Land Corp. Tract and Tracts A, B, C, D, E, & F of the Samuels Prop. into Tracts 2-A-1 and 2-A-2, Located in Sections 44, 79, 81 & 82, T5S R1W, and in Sections 50, 51 & 52, T5S-R2W, Greensburg Land District, East Baton Rouge Parish, Louisiana, for Kaiser Aluminum & Chemical Co." prepared by M.J. Defield and Associates, Inc., dated December 15, 1999, revised December 17, 1999, and recorded as Original

277, Bundle 11079, official records of the Clerk and Recorder for the Parish of East Baton Rouge, Louisiana (the "Resubdivision Map"); according to the Resubdivision Map, Tract 2-A-2 contains 1451.2± acres and is located in Sections 44, 79, 81, 82, and 83, T5S, R1W, and Sections 50, 51, 52 and 53, T5S, R2W, East Baton Rouge Parish, Louisiana.

AND

- B. A 1.829 acre tract in Section 44, T5S-R1W, East Baton Rouge Parish, Louisiana, as shown on map by Forte and Tablada, Inc., dated December 12, 1996, a copy of which is attached to an Act of Exchange and Predial Servitude between Kaiser Aluminum and Exide Corporation, recorded as Original 587, Bundle 10766.

Being the same property acquired by the State of Louisiana from Kaiser Aluminum & Chemical Corporation, recorded on January 24, 2000, as Original 412, Bundle 11088 of the official records of East Baton Rouge Parish, Louisiana.

"NPC Property" shall mean Tract "Y-1-A-1-A" as more fully described on Exhibit B, and the "Resubdivision Map" as defined therein.

"RPA work plans and/or reports" shall mean Remedial Planning Activities work plans and/or reports and any future addenda, revisions or updates thereto, approved by the United States Environmental Protection Agency and the Louisiana Department of Environmental Quality, which are incorporated in the Consent Decree.

"STATE REPRESENTATIVES" shall mean STATE, its employees, agents, contractors and/or lessees, including any of its oil, gas and mineral lessees.

2. Transfer by NPC to STATE

For and in consideration of the transfer of servitudes and the other terms and conditions set forth herein below to NPC, NPC does hereby convey by exchange and grant, bargain, assign, set over, transfer and deliver unto STATE, the US 61 Property.

This transfer and exchange of the US 61 Property to STATE is made subject to the following:

A. Mineral Reservation. NPC reserves all oil, gas and other minerals in, under or related to the US 61 Property, but waives and renounces any right to use the surface of the US 61 Property for conducting any mineral activities, and any such mineral activities will be by directional drilling and/or by pooling and/or unitization.

B. No Warranty. STATE agrees and acknowledges that the transfer and exchange of the US 61 Property is made without any warranty of title whatsoever, but with full substitution and subrogation in and to all the rights and actions of warranty which NPC has or may have against all preceding owners. In addition, STATE waives any and all claims or causes of action which STATE may have or hereafter may be otherwise entitled based on vices or defects in the US 61 Property herein conveyed, or any improvements or component parts thereof, whether in the nature of redhibition, reduction of the consideration, concealment, or any other theory of law. However, this waiver shall not affect any obligations for remediation of contamination from the former Petro Processors of Louisiana, Inc. sites which are set forth in the Consent Decree ("Petro Contamination"), except that NPC, its officers, directors, shareholders, and agents, and the successors and assigns of any of the preceding, shall not be liable for any remediation costs or damages relating to or arising from the migration, movement or release of such contamination due to the acts of the STATE REPRESENTATIVES. The STATE assumes the risk of all vices and defects in the US 61 Property, and all improvements and component parts thereof, whether those vices or defects are latent or not discoverable upon simple inspection, and including those vices or defects, knowledge of which would deter STATE from acquiring the property. STATE further acknowledges that STATE (a) had ample opportunity to fully inspect the US 61 Property, (b) has inspected the US 61 Property to the extent STATE deemed necessary, (c) does hereby acquire the US 61 Property AS IS, WHERE IS, AND SUBJECT TO ALL FAULTS, in its present condition, and (d) does hereby accept the US 61 Property subject to any physical

encroachments onto the US 61 Property and any physical encroachments onto adjacent property by improvements located on the US 61 Property. STATE expressly waives all warranties of fitness and condition, and the warranty against redhibitory vices and defects, whether apparent or latent, imposed by Louisiana Civil Code articles 2476 and articles 2500 through 2517, and any other applicable state or federal law and the jurisprudence thereunder. STATE also waives any rights it may have or to obtain a reduction or return of all or any part of acquisition/consideration given by STATE pursuant to Louisiana Civil Code articles 2520 through 2548, inclusive, in connection with the US 61 Property hereby conveyed to it by NPC.

C. Right of First Refusal. The STATE expressly grants to NPC the right to re-acquire the US 61 Property, in the event the STATE desires to transfer the US 61 Property to a third party, to the fullest extent provided by law, including but not limited to, pursuant to R.S. 41:1338. In the event the STATE ever desires to transfer the said Property to a third party, the STATE shall first offer to sell the US 61 Property at the fair market value to NPC, or NPC's successor in title as to the NPC Property. NPC expressly reserves its rights to reacquire the US 61 Property under the provisions of R.S. 41:1338 in the event the STATE ever desires to transfer the US 61 Property to a third party. In the event NPC fails to exercise its Right of First Refusal within Sixty (60) days of notice, or elects not to exercise such right, STATE may transfer said property, or any portion thereof, to a third party.

D. Restrictions and Negative Servitude on US 61 Property. NPC's transfer to STATE of the US 61 Property is subject to the restriction and negative servitude in favor of the NPC Property that the US 61 Property shall not be used at any time for (a) any hotel use; (b) for any purpose that would constitute a "Permitted Use" under any of the residential zones, districts, or classifications set forth in any applicable municipal, parish or state zoning laws in effect; (c) any other residential use; (d) any health care, clinic, hospital or other medical facility; (e) any playground, recreational park, day nursery, day-care center, child care center, nursing home, house of worship, or school; (f) construction or installation of any basements; or (g) any water wells for irrigation or drinking purposes. Upon written request made by STATE after all of the requirements of the Consent Decree, including cleanup and monitoring, have been fulfilled and completed, as evidenced by a final non-appealable judgment of the Federal Court which rendered the Consent Decree, NPC shall consider in good faith granting a release or modification of the aforesaid restrictions and negative servitude on the US 61 Property to STATE.

E. Personal and Predial Servitude on US 61 Property. The US 61 Property shall be subject to a personal and predial servitude in favor of NPC and the NPC Property to access the US 61 Property for the installation, inspection, monitoring, operating, repairing, replacing and/or maintaining of monitoring and/or treatment wells, existing or future, pursuant to the Consent Decree, and to conduct any other activities as required to carry out the Consent Decree on the US 61 Property, and to obtain access to the monitoring and/or treatment wells located on the NPC Property pursuant to the Consent Decree. The personal and predial servitudes shall be for a term coextensive with the term of the Consent Decree and any requirements set forth by, in, under or pursuant to said Consent Decree. If all of the requirements of the Consent Decree, including cleanup and monitoring, have been fulfilled and completed, as evidenced by a final non-appealable judgment of the Federal Court which rendered the Consent Decree, the servitudes in favor of NPC and the NPC property will expire and terminate. In addition, said US 61 Property shall be subject to the Access Servitude set forth in Section 4.E. below.

F. Taxes. Any and all 2013 property taxes attributable to the US 61 Property transferred to the State, shall be prorated as of the date of the exchange based on 2013 tax bill. NPC warrants that all 2012 taxes have been paid.

G. Other Terms and Conditions. In connection with transfer of the US 61 Property, the terms and conditions set forth in Section 4 below shall also apply.

TO HAVE AND TO HOLD the said US 61 Property unto the STATE, its heirs, successors and assigns, forever.

3. Transfer by STATE to NPC

For and in consideration of NPC's transfer to STATE of the US 61 Property, STATE does hereby convey by exchange and grant, bargain, assign, set over, transfer and deliver unto NPC, a personal servitude and a predial servitude of access and for installing, inspecting, monitoring, operating, repairing, replacing and/or maintaining of monitoring and/or treatment wells, existing or future, pursuant to the Consent Decree, and to conduct any other activities as required to carry out the Consent Decree, by NPC and/or its contractors and agents, in favor of NPC and the NPC Property over the LSP Tract (the "Monitoring Servitude").

A. Notice. NPC shall give reasonable notice of access to STATE. STATE shall initially designate the LSP as the agency to receive said Notice. Notice to LSP shall be given to: (1) the Undersecretary, Department of Public Safety and Corrections, Public Safety Services, P.O. Box 66614, Baton Rouge, Louisiana 70896-6614 (currently Jill Boudreaux); and (2) Mr. Richard Perry, JESTC Director, Richard.perry@dps.la.gov, and Captain Derrell Williams, Training Commander, Derrell.Williams@dps.la.gov, or the successors to their respective positions, 1400 West Irene Road, Zachary, Louisiana 70791, via email or mail. All parties shall immediately inform all other parties of any changes in personnel or address for the purpose of sending required notices.

B. Term and Expiration. This Monitoring Servitude shall be for a term coextensive with the term of the Consent Decree, and any requirements set forth by, in, under or pursuant to said Consent Decree. If all of the requirements of the Consent Decree, including cleanup and monitoring, have been fulfilled and completed, as evidenced by a final non-appealable judgment of the Federal Court which rendered the Consent Decree, the Monitoring Servitude in favor of NPC and the NPC property will expire and terminate.

C. Other Terms and Conditions. In connection with transfer of the Monitoring Servitude, the terms and conditions set forth in Section 4 below shall also apply.

TO HAVE AND TO HOLD the said Monitoring Servitude unto NPC, its heirs, successors and assigns, until termination as provided herein.

4. Other Terms and Conditions

A. Release. STATE, on behalf of itself and its heirs, successors and assigns, acknowledges that the LSP Tract has, and the US 61 Property may have, certain contaminants in and under the soil and in the groundwater. STATE does hereby release, waive, renounce, acquit and forever discharge NPC, its officers, directors, shareholders, and agents, and the successors and assigns of any of the preceding, of and from any claims, actions, causes of action, demands, rights, damages, costs, expenses or compensation whatsoever, direct or indirect, known or unknown, foreseen or unforeseen, or for damages to its properties, which STATE or any of its heirs, successors or assigns now has or which may arise in the future on account of or in any way related to or in connection with any past, present or future physical characteristic or condition of the US 61 Property or the LSP Tract, or originating or migrating from said properties, or under any applicable federal, state or local laws, rules, ordinances, permits, approvals, orders or regulations, including those pertaining to the environment or environmental matters, as they now exist or may subsequently be modified, supplemented or amended; provided, however, that this release shall not affect any obligations for remediation of contamination from the former Petro Processors of Louisiana, Inc. sites which are set forth in the Consent Decree ("Petro Contamination"), except that NPC, its officers, directors, shareholders, and agents, and the successors and assigns of any of the preceding, shall not be liable for any remediation costs or damages relating to or arising from the migration, movement or release of such contamination due to the acts of the STATE REPRESENTATIVES.

B. Indemnity. NPC agrees to defend, indemnify and hold the STATE harmless from any third party claims asserted against the STATE for any claim of liability or loss from personal injury or property damage including attorney fees together with the duty to defend, resulting from or arising out of the use and occupancy of the LSP Tract or the US 61 Property by NPC, excepting however such claims or damages as may be due to or caused by any fault or negligent acts of the STATE REPRESENTATIVES.

In addition, NPC will defend, indemnify and hold the STATE harmless from any claim for remediation of Petro Contamination ordered or directed by United States Environmental Protection Agency and/or the Louisiana Department of Environmental Quality under the Consent Decree, unless the claim arises from the migration, movement or release of Petro Contamination due to acts of the STATE REPRESENTATIVES. The STATE shall defend, indemnify, and hold NPC harmless from any third party claims asserted against NPC for any claims or liability as resulting from or arising out of any fault or negligent acts of the STATE REPRESENTATIVES, but excluding from the definition of STATE REPRESENTATIVES in this sentence, any oil, gas and mineral lessee (or its assignee) as to a mineral lease which was granted prior to the State acquiring the LSP Tract (hereinafter a "Prior Mineral Lessee") relating to the US 61 Property, LSP Tract and NPC Property, excepting, however, any such claims or damages as may be due to or caused by the fault or negligent act of NPC or its servants or agents.

STATE agrees to defend, indemnify and hold NPC harmless against any third party claims asserted against NPC for any claim of liability or loss from personal injury or property damage including attorney fees together with the duty to defend, resulting from or arising out of the use and occupancy by STATE of the NPC Property, excepting however such claims or damages as may be due to or caused by any fault or negligent acts of NPC or its servants or agents.

C. Acknowledgements. STATE acknowledges its receipt of copies of the following documents which are incorporated in and made part of the Consent Decree from NPC: *RPA Report, Addendum H, PPI site, Scenic OU, revised August 17, 2010; Addendum I to the Work Plan, RPA; and Long Term Monitoring Plan Report, 2010 (Scenic OU) dated February 28, 2012.* STATE further acknowledges its understanding that the abovesaid documents are subject to future addenda, revisions or updates, and that the location, extent and boundaries of contamination governed by the Consent Decree are subject to change. NPC agrees that it will send copies of any future Consent Decree progress reports and any RPA work plans and/or reports for the Scenic Operating Unit to STATE, through the LSP and the State Land Office, P.O. Box 44124, Baton Rouge, LA 70804.

D. Notice. STATE, through the LSP, agrees to give advance written notice to NPC, or its successors, of any planned explosions or the installation or construction of any borings, wells, pipelines, pilings, footings, impoundments, excavations, or other installations in the subsurface of its property by the STATE REPRESENTATIVES, (including any Prior Mineral Lessee). The STATE, through the LSP, agrees that it will notify all STATE REPRESENTATIVES, (including any Prior Mineral Lessee), who are performing or will perform any installation or construction of any type on the US 61 Property or the LSP Tract, and/or the subsurface thereof, of the presence of contamination, subject to the Consent Decree, and will make copies of the Consent Decree documents, which have been provided by NPC to the LSP, available to the STATE REPRESENTATIVES, (including any Prior Mineral Lessee).

E. Access Servitude. STATE and NPC grant to each the other reciprocal 40' predial servitudes of ingress and egress to use the existing limestone road, noted as "40' Chevron Access Servitude" generally located as shown on the Resubdivision Map as "Approximate Location of 40' Chevron Access Servitude" south of the East Baton Rouge Landfill Road over the US 61 Property and the NPC Property to access each other's property. In addition, the STATE authorizes NPC to access and enter the LSP Tract via West Irene Road and the East Baton Rouge Landfill Road.

F. Servitude for Existing Fences. As reflected on the Resubdivision Map, there are existing fences located near the boundaries of the LSP Tract and (i) the US 61 Property and (ii) the NPC Property and the parties agree that said fencing is not a boundary fence; however, said existing fencing may remain in place and a reciprocal servitude is granted for said existing fencing to remain in place, but which servitude will terminate when, or if, the owner of the fencing removes or replaces its fencing.

G. Equalization of Values. For the purposes of this exchange, the parties agree that the value of the properties exchanged herein, is equal; that the receipt by each party from the other of the above described properties (subject to the servitudes and restrictions set forth above) constitutes full and adequate consideration for those properties. This exchange benefits the STATE by allowing the STATE to expand its training facilities and programs for emergency responders, law enforcement personnel, and hazardous material response and compensates the STATE for any inability or limitations to access those portions of the LSP Tract due to remedial activities

conducted pursuant to the Consent Decree, including the mandated injection wells and monitoring well sites. This exchange benefits NPC by allowing ready and long-term access to areas subject to remediation under the Consent Decree, including the mandated injection wells and monitoring well sites.

H. Waiver of Vendor's Lien or Privilege, and any Resolutive Condition. It is further agreed and acknowledged that the parties do not intend to create any vendor's lien or privilege, or any resolutive condition, or to make any stipulation for the benefit of any third parties, and if any such liens or privileges, resolutive conditions and/or stipulations are deemed to have been created, STATE and NPC do hereby expressly waive, renounce and release any and all such privileges, resolutive conditions and/or stipulations.

This exchange is made and mutually accepted, and delivery of the properties is hereby acknowledged by the parties hereto upon and subject to the above terms and conditions:

NO TITLE EXAMINATION HAS BEEN MADE BY, OR REQUESTED OF, THE UNDERSIGNED NOTARIES.

This Act of Exchange may be executed in multiple counterparts, all of which, when taken together, shall constitute but one and the same document.

THUS DONE AND SIGNED at my office in Baton Rouge, Louisiana, on the 23rd day of September, 2013, in the presence of me, notary, and the following competent witnesses, who have signed in the presence of the parties and me, notary.

WITNESSES:

THE STATE of LOUISIANA

T. Rapier
Print Name: Tim Rapier

By: Kristy H. Nichols
Kristy H. Nichols, Commissioner
Division of Administration,

Kara Allan
Print Name: Kara Allan

Rosita Warren
Rosita Warren, Notary Public
Louisiana Bar Roll Number 22803
My Commission Expires With Life

WITNESSES:

LOUISIANA DEPARTMENT of PUBLIC SAFETY and CORRECTIONS

Danielle Boudreaux
Print Name: Danielle Boudreaux

By: Jill P. Boudreaux
Jill Boudreaux, Undersecretary
Public Safety Services

Chris Jordan
Print Name: Chris Jordan

Faye D. Morris
Faye D. Morris, Notary Public
Louisiana Bar Roll Number 23049
My Commission Expires With Life

THUS DONE AND SIGNED at my office in Baton Rouge, Louisiana, on the 26
day of August, 2013, in the presence of me, notary, and the following competent
witnesses, who have signed in the presence of the parties and me, notary.

WITNESSES:

NPC SERVICES, INC.

Renee' R. Stolzenthaler
Print Name: Renee' R. Stolzenthaler

By: [Signature]
William C. Dawson, President, Duly Authorized

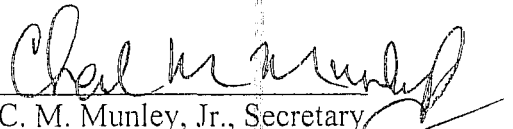
[Signature]
Print Name: Donna L. Montague

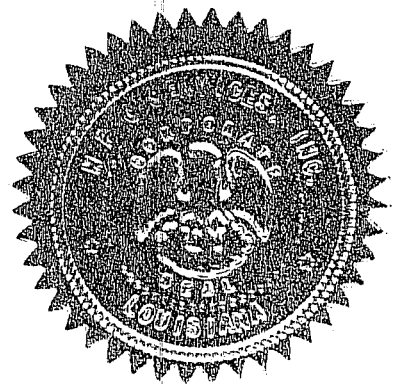
[Signature]
Anne J. Crockett, Notary Public
Louisiana Bar Roll Number 2010
My Commission Expires With Life

Certificate

I, C. M. Munley, Jr., Secretary of NPC Services, Inc., a Louisiana corporation, hereby certify that the attached "Resolution of the Shareholders of NPC Services, Inc.," previously certified by me on December 4, 2012, is a true and correct resolution unanimously adopted by the Shareholders of said corporation at a meeting duly called, noticed, and held on the 4th day of December 2012, and filed with the minutes of the meeting of said Shareholders; and I do further certify that said resolution has not been amended, rescinded or annulled and is now in full force and effect.

IN TESTIMONY WHEREOF, I have hereunder affixed my signature at Baton Rouge, Louisiana, on this 26th day of August, 2013.


C. M. Munley, Jr., Secretary



**RESOLUTION OF THE SHAREHOLDERS OF
NPC SERVICES, INC.**

WHEREAS, as a result of negotiations between the President of NPC Services, Inc. ("NPC") and representatives of the Louisiana State Police and the Louisiana State Land Office, the parties have arrived at a Memorandum of Understanding whereby NPC is to receive a long-term servitude for remediation purposes and other rights over certain property owned by the State of Louisiana, currently occupied and used by the Louisiana State Police, and certain releases and indemnifications by the State, in exchange for transferring the title of certain property owned by NPC, i.e., a portion of the former Baxter tract that is west of and fronts on U.S. Highway 61, to the State of Louisiana, for the Louisiana State Police to use in connection with its training facilities;

BE IT RESOLVED by the Shareholders of NPC Services, Inc., that William C. Dawson, President of NPC Services, Inc., a Louisiana corporation, domiciled in the Parish of East Baton Rouge, State of Louisiana, be and he is hereby authorized and empowered for and in the name of this company to enter into an Act of Exchange, and/or other appropriate documents, to transfer all of the company's rights, title and interest in the immovable property generally described and depicted as LSP-1 on Exhibit A, attached hereto, in exchange for a long-term servitude for remediation purposes and other rights over certain property owned by the State of Louisiana and currently used by the Louisiana State Police with such Act of Exchange to be in general conformity with the "NPC/LSP – Parameters of Servitude and Property Exchange" summary presented to the Shareholders, and to execute an Act of Exchange and/or any other contracts and agreements incidental to the transfer of NPC's immovable property, and acquisition of the above servitude, including agreements to defend, indemnify and hold the State of Louisiana harmless for certain actions, upon terms and conditions as he the said President, in his sole discretion shall deem to be in the best interest of NPC and to do all other things whatsoever necessary are requisite to be done to carry out the purpose and intent of this resolution.

BE IT FURTHER RESOLVED said President is fully authorized to make and/or agree to any terms and conditions of the final Act of Exchange, as he, in his absolute discretion, may deem appropriate and any documents executed by the President related to the above matters are and will be binding upon NPC.

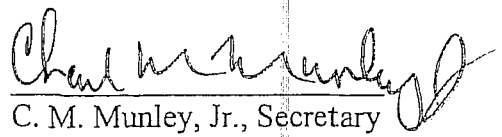
BE IT FURTHER RESOLVED that any and all lawful acts done and performed by said President, for and on behalf of this corporation in consideration of and/or in conformity with the authority hereby granted or previously granted, be and are hereby ratified and confirmed.

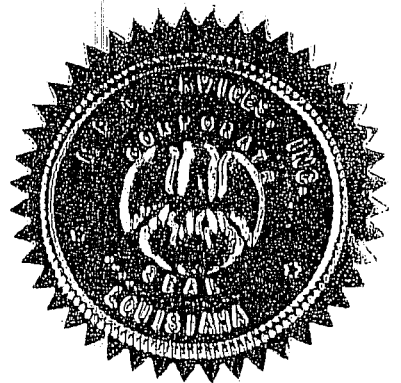
Certificate

I, C. M. Munley, Jr., Secretary of NPC Services, Inc., a Louisiana corporation, hereby certify that the above is a true and correct resolution unanimously adopted by the Shareholders of said corporation at a meeting duly called, noticed, and held on the

4th day of December 2012, and filed with the minutes of the meeting of said Shareholders; and I do further certify that said resolution has not been amended, rescinded or annulled and is now in full force and effect.

IN TESTIMONY WHEREOF, I have hereunder affixed my signature at Baton Rouge, Louisiana, on this 4th day of December, 2012.


C. M. Munley, Jr., Secretary



TRACT "LSP-1"

LEGAL DESCRIPTION

A CERTAIN TRACT OR PARCEL OF LAND, CONTAINING APPROXIMATELY 82.61 ACRES, BEING DESIGNATED AS THE TRACT "LSP-1", LOCATED IN SECTION 85, TOWNSHIP FIVE SOUTH, RANGE ONE WEST, GREENSBURG LAND DISTRICT, EAST OF THE MISSISSIPPI RIVER, EAST BATON ROUGE PARISH, LOUISIANA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE POINT WHICH MARKS THE INTERSECTION OF THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY) AND THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ROAD, SAID POINT HEREINAFTER REFERRED TO AS THE POINT-OF-BEGINNING;

THENCE, FROM THE POINT-OF-BEGINNING, PROCEED SOUTH 25°07'23" EAST, ALONG THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY) A DISTANCE OF 775.47 FEET TO A POINT AND CORNER, SAID POINT FALLING APPROXIMATELY 200 FEET NORTH OF THE CENTERLINE OF BATON ROUGE BAYOU;

THENCE, PROCEED SOUTH 64°52'37" WEST, A DISTANCE OF 200.00 FEET TO A POINT AND CORNER;

THENCE, PROCEED SOUTH 42°13'06" WEST, A DISTANCE OF 846.90 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 81°45'00" WEST, A DISTANCE OF 2,107.00 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 07°18'12" EAST, A DISTANCE OF 1,442.78 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 57°04'40" EAST, A DISTANCE OF 842.03 FEET TO A POINT AND CORNER;

THENCE, PROCEED SOUTH 82°32'07" EAST, A DISTANCE OF 19.52 FEET TO A POINT AND CORNER;

THENCE, PROCEED IN A SOUTHEASTERLY DIRECTION, ALONG THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 586.62 FEET, AN ARC LENGTH OF 189.78 FEET, A CHORD BEARING OF SOUTH 34°22'46" EAST, AND A CHORD LENGTH OF 188.96 FEET, TO A POINT AND CORNER;

THENCE, PROCEED SOUTH 25°06'41" EAST, ALONG THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, A DISTANCE OF 505.54 FEET TO A POINT AND CORNER;

THENCE, PROCEED IN A SOUTHEASTERLY DIRECTION, ALONG THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 686.62 FEET, AN ARC LENGTH OF 1,078.54 FEET, A CHORD BEARING OF SOUTH 70°06'41" EAST, AND A CHORD LENGTH OF 971.03 FEET, TO A POINT AND CORNER;

THENCE, PROCEED NORTH 64°53'19" EAST, ALONG THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, A DISTANCE OF 400.00 FEET TO A POINT AND CORNER, SAID POINT PREVIOUSLY REFERRED TO AS THE POINT-OF-BEGINNING.

TRACT "Y-1-A-1-A"

LEGAL DESCRIPTION

A CERTAIN TRACT OR PARCEL OF LAND, CONTAINING APPROXIMATELY 83.35 ACRES, BEING DESIGNATED AS THE TRACT "Y-1-A-1-A", LOCATED IN SECTIONS 44 AND 85, TOWNSHIP FIVE SOUTH, RANGE ONE WEST, GREENSBURG LAND DISTRICT, EAST OF THE MISSISSIPPI RIVER, EAST BATON ROUGE PARISH, LOUISIANA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE POINT WHICH MARKS THE INTERSECTION OF THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY) AND THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ROAD, SAID POINT HEREINAFTER REFERRED TO AS THE POINT-OF-COMMENCEMENT;

THENCE, FROM THE POINT-OF-COMMENCEMENT, PROCEED SOUTH 25°07'23" EAST, ALONG THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY) A DISTANCE OF 775.47 FEET TO A POINT AND CORNER, SAID POINT FALLING APPROXIMATELY 200 FEET NORTH OF THE CENTERLINE OF BATON ROUGE BAYOU, SAID POINT HEREINAFTER REFERRED TO AS THE POINT-OF-BEGINNING;

THENCE, FROM THE POINT-OF-BEGINNING, PROCEED SOUTH 25°07'23" EAST, ALONG THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY), A DISTANCE OF 3,029.23 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 81°49'31" WEST, A DISTANCE OF 1,232.63 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 24°39'25" WEST, A DISTANCE OF 1,489.20 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 08°15'00" EAST, A DISTANCE OF 8.69 FEET TO A POINT AND CORNER;

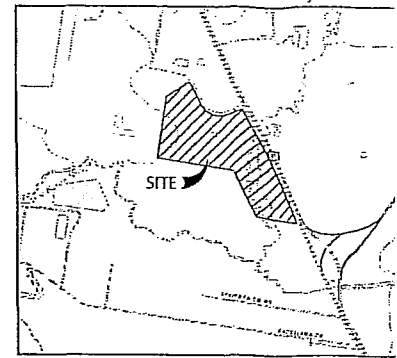
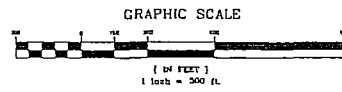
THENCE, PROCEED NORTH 81°45'00" WEST, A DISTANCE OF 2,364.28 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 07°18'12" EAST, A DISTANCE OF 460.06 FEET TO A POINT AND CORNER;

THENCE, PROCEED SOUTH 81°45'00" EAST, A DISTANCE OF 2,107.00 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 42°13'06" EAST, A DISTANCE OF 846.90 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 64°52'37" EAST, A DISTANCE OF 200.00 FEET TO A POINT AND CORNER, SAID POINT PREVIOUSLY REFERRED TO AS THE POINT-OF-BEGINNING.



LOCATION: SCENE HIGHWAY (US HWY 61) EAST BATON ROUGE PARISH, LA		
DATE: 11-21-12	TOTAL AREA: 165.95 ACRES	
SCALE: 1"=300'	DRAWN BY: RBF	CHECKED BY: RJT
COGO: 87-2: \94-301(2012) \NPC_LSP_RSUB.DWG	WO#	94-301

REFERENCE MAPS:

1. TOWNSHIP PLAT PROVIDED BY THE DEPARTMENT OF THE INTERIOR, GENERAL LAND OFFICE FOR TOWNSHIP 5 SOUTH, RANGE 1 WEST BY THE SURVEYOR GENERAL OF LOUISIANA AND DATED APRIL 15, 1854.
2. SURVEY OF THE EDGAR SAMUELS TRACT, LOCATED IN SECTIONS 77, 78, AND 81, T.5S, R.1E, S. 10, FOR THE FEDERAL LAND BANK OF NEW ORLEANS BY A.G. MURPHY, C.E. AND SURVEYOR, DATED AUGUST 10, 1936.
3. LOUISIANA DEPARTMENT OF HIGHWAYS RIGHT OF WAY PLANS FOR STATE PROJECT 232-01-03, ALSO IN PORT HADSON HIGHWAY - LA OR (U.S. 61) BY GEORGE COVERT, CIVIL ENGINEER AND DATED SEPTEMBER 12, 1952.
4. EXCHANGE MAP SHOWING THE REMOVAL OF A 4.43 ACRE PORTION, TRACT X, THE LAST OF A 7.85 ACRE PORTION LYING WEST OF U.S. HIGHWAY 61, HARELSON AND BOWDEN PROPERTY, BY FOWLER P. POON, P.E., R.L.S. AND DATED FEBRUARY 13, 1992.
5. RIGHT OF WAY MAP FOR NORTH LAZARUS ENTRANCE ROAD, CITY PARISH PROJECT NO. 91-PH-UT-001 FOR THE DEPARTMENT OF PUBLIC WORKS, PREPARED BY RAY CRITCHEL, P.L.S. AND DATED AUGUST 5, 1992.
6. MAP SHOWING THE RESUBDIVISION OF THE KAISER ALUMINUM AND CHEMICAL CORP., TRACT 2-A, BEING A PART OF TRACTS A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, OF THE WILLOW PLANTATION, THOMAS HENRY TRACT, SAMUEL LAND CORP., TRACT AND TRACTS A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, OF THE SAMUELS PROPERTY BEING TRACTS 2-A-1 AND 2-A-2 FOR KAISER ALUMINUM AND CHEMICAL CORP., PREPARED BY LARRY E. PORTERFIELD, P.L.S. AND DATED 12-15-98.

NOTES:

NO ATTEMPT HAS BEEN MADE BY R. JAMES TATUM, INC. TO VERIFY THE CURRENT ENVIRONMENTAL CONDITIONS, PROPERTY TITLE, ACTUAL LEGAL OWNERSHIP, EASEMENTS, RIGHTS-OF-WAY, JURISDICTIONAL WEALANDS, OR OTHER BURDENS ON THE PROPERTY OTHER THAN THAT FURNISHED BY THE CLIENT AND/OR HIS REPRESENTATIVE.

THE APPROVAL OF THIS PLAT OR MAP DOES NOT RELIEVE THE IMMEDIATE PROPERTY OWNER OR FUTURE PROPERTY OWNERS FROM COMPLYING WITH ALL APPLICABLE FEDERAL, STATE, AND CITY PARISH LAWS AND ORDINANCES GOVERNING THE SALE AND DEVELOPMENT OF THE PROPERTY. IN PARTICULAR, NO FILLING OF THE PROPERTY SHALL BE COMMENCED UNTIL ALL APPLICABLE PROVISIONS OF CHAPTER 15 OF THE UNIFIED DEVELOPMENT CODE ARE ADDRESSED.

THE CITY OF BATON ROUGE AND THE PARISH OF EAST BATON ROUGE DOES NOT OFFER PRIVATE DEED AND/OR SUBDIVISION RESTRICTIONS. HOWEVER, THE APPROVAL OF THIS PLAT DOES NOT RELEASE THE OWNER AND/OR CONTRACTOR/BUILDER FROM COMPLYING WITH ANY SUCH RESTRICTIONS THAT MAY BE ATTACHED TO THE PROPERTY ON THIS PLAT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS, DEPTH AND SIZE OF ALL UNDERGROUND UTILITIES AND STRUCTURES AND SHALL BE LIABLE FOR ANY DAMAGE CAUSED BY THE FAILURE TO DO SO. THE CONTRACTOR SHALL COMPLY WITH THE CALL AT 1-800-272-3028 PRIOR TO BEGINNING ANY EXCAVATION OPERATION. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND NOT FURNISHED BY THE RESPECTIVE UTILITIES COMPANIES. TATUM ENGINEERING DOES NOT WARRANT THE EXACT LOCATION OF ANY AND/OR ALL UNDERGROUND UTILITIES SHOWN HEREON.

THE FORCES SHOWN HEREON REPRESENT GENERAL LOCATIONS. THIS SURVEY DOES NOT WARRANT THE FORCES AS TRUE AND LEGAL. THE BOUNDARIES BETWEEN CONTIGUOUS PARCELS OF LAND, REFER TO THE PROPERTY LINE NOTES AND BOUNDARY DESCRIPTIONS FOR TRUE BOUNDARIES.

STORM WATER MANAGEMENT NOTE:

AS PART OF CONSTRUCTION, IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO COMPLY WITH STORM WATER MANAGEMENT AND DRAINAGE REQUIREMENTS SET FORTH IN SECTION 15.13 OF THE UNIFIED DEVELOPMENT CODE, LATEST VERSION.

APPROVED:

THIS IS AN EXCHANGE OF PROPERTY BETWEEN ADJACENT PROPERTY OWNERS AND NO NEW LOTS ARE BEING CREATED.

TRUDY L. BUNCH, PLANNING DIRECTOR
OR HIS DESIGNEE
EAST BATON ROUGE PARISH
PLANNING COMMISSION

DATE: _____ P - _____

CERTIFICATION:

I CERTIFY THAT THIS SURVEY WAS ACTUALLY MADE ON THE GROUND, AS PER RECORD DESCRIPTIONS, AND IS CORRECT, AND THAT THERE ARE NO VISIBLE ENCROACHMENTS EITHER WAY ACROSS PROPERTY LINES, UNLESS OTHERWISE NOTED. I ALSO CERTIFY THAT THIS SURVEY WAS PERFORMED IN ACCORDANCE WITH THE APPLICABLE PROFESSIONAL AND OCCUPATIONAL STANDARDS OF PRACTICE FOR A CLASS "D" SURVEY AS PER LOUISIANA ADMINISTRATIVE CODE, TITLE 48, PART 10, CHAPTER 25.

THIS IS TO CERTIFY THAT THIS MAP IS MADE IN ACCORDANCE WITH LA, REVISED STATUTES 33:5051 ET SEQ. AND ALSO CONFORMS TO ALL PARISH ORDINANCES GOVERNING THE SUBDIVISION OF LAND.



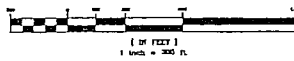
RESUME:
PE/PA/EA

PRELIMINARY

R. JAMES TATUM, P.E./P.L.S.
8520 NORTH MERCHANT COURT
BATON ROUGE, LA 70805
(225) 757-5555 (FAX) 757-5555

DATE 11-07-12

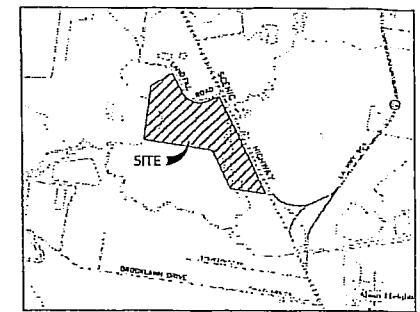
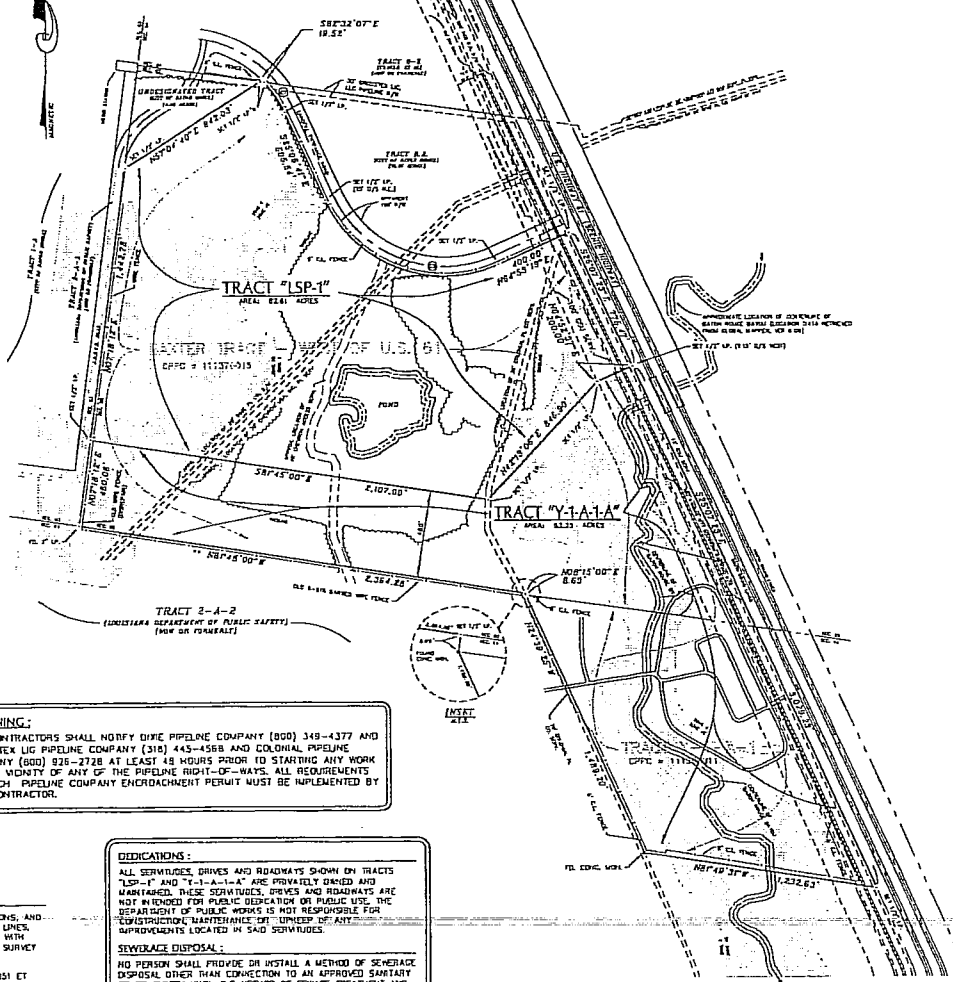
GRAPHIC SCALE



CURVE DATA				
CURVE	Δ	RADIUS	LENGTH	CHORD
①	10°32'10"	305.62'	125.78'	S 34°22'45" E 198.36'
②	60°00'00"	686.62'	1,078.54'	S 70°08'41" E 911.03'

BASE OF BEARING: **N81°45'00" W

BOND THE SECTION LINE BETWEEN SECTIONS 44 AND 85 AS SHOWN ON REFERENCE MAP NO. 1.



VICINITY MAP

1" = 2000'

GENERAL NOTES:

- ZONING: M-2 (HEAVY INDUSTRIAL)
- STREET: EXISTING ASPHALT W/ OPEN DITCH
- LAND USE: INDUSTRIAL
- SCHOOL DISTRICT: PARK ELEMENTARY
- CAPITAL MOBILE SCHOOL
- TARA HIGH SCHOOL
- ENTERITY
- NO GAS ON BROOKLAWN
- GAS: INDIVIDUAL TREATMENT PLANTS
- SEWER: BATON ROUGE WATER CO.
- FIRE DISTRICT: ALLEN FIRE DISTRICT, PROTECTION CLASS 3
- FLOOD ZONES: NE & W (PER FROM 22033C0135C & 22033C0135E, MAY 2, 2008)
- BASE FLOOD ELEVATION: - 30' - 31'
- THE BASE FLOOD ELEVATIONS IS SUBJECT TO CHANGE AND THE CURRENT BASE FLOOD ELEVATION SHOULD BE VERIFIED WITH THE ENGINEERING DIVISION OF THE DEPARTMENT OF PUBLIC WORKS.

APPROXIMATE LOCATION OF FLOOD ZONE AS SHOWN ON FEMA MAP

MAP SHOWING EXCHANGE OF PROPERTY
BETWEEN
BAXTER TRACT - WEST OF US 61
AND THE
TRACT "Y-1-A-1" - HARELSON/BOWDEN PROPERTY
INTO
TRACT "LSP-1"
BAXTER TRACT - WEST OF U.S. 61
AND
TRACT "Y-1-A-1-A"
HARELSON/BOWDEN PROPERTY
LOCATED IN SECTIONS 44 & 85, TOWNSHIP 5 SOUTH, RANGE 1 WEST,
GREENSBURG LAND DISTRICT, EAST BATON ROUGE PARISH, LOUISIANA
FOR
NPC SERVICES, INC.

LOCATION: SCENIC HIGHWAY (US HWY 61) EAST BATON ROUGE PARISH, LA	SHEET:
DATE: 11-07-12	TOTAL AREA: 165.86 ACRES
SCALE: 1"=300'	DRAWN BY: JAS
CODG: BP-2/V44-101(2012)/NPC_LSP_RSUBDING	CHECKED BY: RJT
	WSP 94-101

1

OF 1

TATUM ENGINEERING CONSULTANTS
R. JAMES TATUM, INC. BATON ROUGE, LOUISIANA

DEDICATIONS:

ALL SERVITUDES, DRIVES AND ROADWAYS SHOWN ON TRACTS "LSP-1" AND "Y-1-A-1-A" ARE PRIVATELY OWNED AND MAINTAINED. THESE SERVITUDES, DRIVES AND ROADWAYS ARE NOT INTENDED FOR PUBLIC DEDICATION OR PUBLIC USE. THE DEPARTMENT OF PUBLIC WORKS IS NOT RESPONSIBLE FOR CONSTRUCTION, MAINTENANCE OR REPAIR OF ANY SERVITUDES OR IMPROVEMENTS LOCATED IN SAID SERVITUDES.

SEWERAGE DISPOSAL:

NO PERSON SHALL PROVIDE OR INSTALL A METHOD OF SEWERAGE DISPOSAL OTHER THAN CONNECTION TO AN APPROVED SANITARY SEWER SYSTEM UNTIL THE METHOD OF SEWER TREATMENT AND DISPOSAL HAS BEEN APPROVED BY THE EAST BATON ROUGE PARISH HEALTH UNIT.

WILLIAM C. DAWSON, PRESIDENT DATE
NPC SERVICES, INC.

EXHIBIT A

TRACT "LSP-1"

LEGAL DESCRIPTION

A CERTAIN TRACT OR PARCEL OF LAND, CONTAINING APPROXIMATELY 82.61 ACRES, BEING DESIGNATED AS THE TRACT "LSP-1", LOCATED IN SECTION 85, TOWNSHIP FIVE SOUTH, RANGE ONE WEST, GREENSBURG LAND DISTRICT, EAST BATON ROUGE PARISH, LOUISIANA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE POINT WHICH MARKS THE INTERSECTION OF THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY) AND THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, SAID POINT HEREINAFTER REFERRED TO AS THE **POINT-OF-BEGINNING**;

THENCE, FROM THE **POINT-OF-BEGINNING**, PROCEED SOUTH 25°07'23" EAST, ALONG THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY) A DISTANCE OF 775.47 FEET TO A POINT AND CORNER, SAID POINT FALLING APPROXIMATELY 200 FEET NORTH OF THE CENTERLINE OF BATON ROUGE BAYOU;

THENCE, PROCEED SOUTH 64°52'37" WEST, A DISTANCE OF 200.00 FEET TO A POINT AND CORNER;

THENCE, PROCEED SOUTH 42°13'06" WEST, A DISTANCE OF 846.90 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 81°45'00" WEST, A DISTANCE OF 2,107.00 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 07°18'12" EAST, A DISTANCE OF 1,442.78 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 57°04'40" EAST, A DISTANCE OF 842.03 FEET TO A POINT AND CORNER;

THENCE, PROCEED SOUTH 82°32'07" EAST, A DISTANCE OF 19.52 FEET TO A POINT AND CORNER;

THENCE, PROCEED IN A SOUTHEASTERLY DIRECTION, ALONG THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 586.62 FEET, AN ARC LENGTH OF 189.78 FEET, A CHORD BEARING OF SOUTH 34°22'46" EAST, AND A CHORD LENGTH OF 188.96 FEET, TO A POINT AND CORNER;

THENCE, PROCEED SOUTH 25°06'41" EAST, ALONG THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, A DISTANCE OF 505.54 FEET TO A POINT AND CORNER;

THENCE, PROCEED IN A SOUTHEASTERLY DIRECTION, ALONG THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 686.62 FEET, AN ARC LENGTH OF 1,078.54 FEET, A CHORD BEARING OF SOUTH 70°06'41" EAST, AND A CHORD LENGTH OF 971.03 FEET, TO A POINT AND CORNER;

THENCE, PROCEED NORTH 64°53'19" EAST, ALONG THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, A DISTANCE OF 400.00 FEET TO A POINT AND CORNER, SAID POINT PREVIOUSLY REFERRED TO AS THE **POINT-OF-BEGINNING**, ALL AS MORE FULLY DESCRIBED ON MAP BY R. JAMES TATUM DATED 12/11/12, RECORDED AS ORIGINAL 827, BUNDLE 12461 OF THE OFFICE OF RECORDER OF EAST BATON ROUGE PARISH, LOUISIANA (THE "RESUBDIVISION MAP"), A COPY OF WHICH IS ATTACHED HERETO AS EXHIBIT A-1.

EXHIBIT B

TRACT "Y-1-A-1-A"

LEGAL DESCRIPTION

A CERTAIN TRACT OR PARCEL OF LAND, CONTAINING APPROXIMATELY 83.35 ACRES, BEING DESIGNATED AS THE TRACT "Y-1-A-1-A", LOCATED IN SECTIONS 44 AND 85, TOWNSHIP FIVE SOUTH, RANGE ONE WEST, GREENSBURG LAND DISTRICT, EAST BATON ROUGE PARISH, LOUISIANA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE POINT WHICH MARKS THE INTERSECTION OF THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY) AND THE SOUTHERN RIGHT-OF-WAY LINE OF LANDFILL ENTRANCE ROAD, SAID POINT HEREINAFTER REFERRED TO AS THE **POINT-OF-COMMENCEMENT**;

THENCE, FROM THE **POINT-OF-COMMENCEMENT**, PROCEED SOUTH 25°07'23" EAST, ALONG THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY) A DISTANCE OF 775.47 FEET TO A POINT AND CORNER, SAID POINT FALLING APPROXIMATELY 200 FEET NORTH OF THE CENTERLINE OF BATON ROUGE BAYOU, SAID POINT HEREINAFTER REFERRED TO AS THE **POINT-OF-BEGINNING**;

THENCE, FROM THE **POINT-OF-BEGINNING**, PROCEED SOUTH 25°07'23" EAST, ALONG THE WESTERN RIGHT-OF-WAY LINE OF U.S. HIGHWAY 61 (SCENIC HIGHWAY), A DISTANCE OF 3,029.23 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 81°49'31" WEST, A DISTANCE OF 1,232.63 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 24°39'25" WEST, A DISTANCE OF 1,489.20 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 08°15'00" EAST, A DISTANCE OF 8.69 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 81°45'00" WEST, A DISTANCE OF 2,364.28 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 07°18'12" EAST, A DISTANCE OF 460.06 FEET TO A POINT AND CORNER;

THENCE, PROCEED SOUTH 81°45'00" EAST, A DISTANCE OF 2,107.00 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 42°13'06" EAST, A DISTANCE OF 846.90 FEET TO A POINT AND CORNER;

THENCE, PROCEED NORTH 64°52'37" EAST, A DISTANCE OF 200.00 FEET TO A POINT AND CORNER, SAID POINT PREVIOUSLY REFERRED TO AS THE **POINT-OF-BEGINNING**, ALL AS MORE FULLY DESCRIBED ON MAP BY R. JAMES TATUM DATED 12/11/12, RECORDED AS ORIGINAL 827, BUNDLE 12461 OF THE OFFICE OF RECORDER OF EAST BATON ROUGE PARISH, LOUISIANA (THE "RESUBDIVISION MAP"), A COPY OF WHICH IS ATTACHED HERETO AS EXHIBIT B-1.

- REFERENCE MAPS:
1. TOWNSHIP PLAT PROVIDED BY THE DEPARTMENT OF THE INTERIOR, GENERAL LAND OFFICE FOR TOWNSHIP TYP. SOUTH - RANGE ONE WEST BY THE SURVEYOR GENERAL OF LOUISIANA AND DATED JUNE 15, 1954.
 2. SURVEY OF THE COGAT SAMUELS TRACT, LOCATED IN SECTIONS 77, 78, AND 81, T.15S. R.1W. OLD FOR THE FEDERAL LAND BANK OF NEW ORLEANS BY A.G. HENDERSON, C.E. AND SURVEYOR, D.C. AND DATED JUNE 10, 1955.
 3. LOUISIANA DEPARTMENT OF HIGHWAYS RIGHT OF WAY PLANS FOR STATE PROJECT 237-B1-01, ALSO - PORT HUGHES HIGHWAY - LA 05 (U.S. 91) BY GEORGE COVERT, CIVIL ENGINEER AND DATED SEPTEMBER 13, 1951.
 4. EXISTING MAP SHOWING THE REMOVAL OF A 1.43 ACRE PORTION, TRACT 4, THE LAST OF A 7.89 ACRE PORTION LYING WEST OF U.S. HIGHWAY 91, HARELSON AND BOWDEN PROPERTY, BY POWER P. POOL, F.E., R.L.S. AND DATED FEBRUARY 13, 1993.
 5. RIGHT OF WAY MAP FOR NORTH LAUDLUM ENTRANCE ROAD, CITY PARISH PROJECT NO. 31-PR-1F-001 FOR THE DEPARTMENT OF PUBLIC WORKS, PREPARED BY RAY GRIFFIN, P.L.S. AND DATED AUGUST 5, 1993.
 6. MAP SHOWING THE RESUBDIVISION OF THE KAUFER ALUMINUM AND CHEMICAL CORP. TRACT 3-A, BEING A PART OF TRACTS A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, OF THE MILLWOOD PLANTATION, RIGBAY MOORE TRACT, SAMUEL LAND CORP. TRACT AND TRACTS A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, OF THE SAMUELS PROPERTY AND TRACTS 1-A-1 AND 2-A-2 FOR HARELSON AND BOWDEN CHEMICAL CORP., PREPARED BY LARRY E. PORTERFIELD, P.L.S. AND DATED 12-15-93.

NOTES:

NO ATTEMPT HAS BEEN MADE BY R. JAMES TATUM, INC. TO VERIFY THE CURRENT ENVIRONMENTAL CONDITIONS, PROPERTY TITLE, ACTUAL LEGAL OWNERSHIP, SERVITUDES, EASEMENTS, RIGHTS-OF-WAY, JURISDICTIONAL METADATA, OR OTHER BURDENS ON THE PROPERTY OTHER THAN THAT FURNISHED BY THE CLIENT AND/OR ITS REPRESENTATIVE.

THE APPROVAL OF THIS PLAT OR MAP DOES NOT RELIEVE THE IMMEDIATE PROPERTY OWNER OR FUTURE PROPERTY OWNERS FROM COMPLYING WITH ALL APPLICABLE FEDERAL, STATE AND CITY PARISH LAWS AND ORDINANCES COVERING THE SALE AND DEVELOPMENT OF THE PROPERTY. IN PARTICULAR, NO PLATING OF THE PROPERTY SHALL BE CONSIDERED UNTIL ALL APPLICABLE PROVISIONS OF CHAPTER 15 OF THE UNITED DEVELOPMENT CODE ARE ADDRESSED.

THE CITY OF BATON ROUGE AND THE PARISH OF EAST BATON ROUGE DOES NOT ENFORCE PRIVATE DEED AND/OR SUBDIVISION RESTRICTIONS. HOWEVER, THE APPROVAL OF THIS PLAT DOES NOT RELEASE THE OWNER AND/OR CONTRACTOR/ENGINEER FROM COMPLYING WITH ANY SUCH RESTRICTIONS THAT MAY BE ATTACHED TO THE PROPERTY ON THIS PLAT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH AND SIZE OF ALL UNDERGROUND UTILITIES AND STRUCTURES AND SHALL BE LIABLE FOR ANY DAMAGE CAUSED BY THE FAILURE TO DO SO. THE CONTRACTOR SHALL CONTACT LOUISIANA ONE CALL AT 1-800-722-3000 PRIOR TO BEGINNING ANY EXCAVATION OPERATION. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON AND APPROXIMATE AND NOTED BY THE RESPECTIVE UTILITIES COMPANIES. TATUM ENGINEERING DOES NOT WARRANT THE EXACT LOCATION OF ANY AND/OR ALL UNDERGROUND UTILITIES SHOWN HEREON.

THE LINES SHOWN HEREON REPRESENT GENERAL LOCATIONS. THIS SURVEY DOES NOT WARRANT THE LINES AS TRUE AND LEGAL BOUNDARIES BETWEEN CONTIGUOUS PARCELS OF LAND, REFER TO THE PROPERTY LINE NOTES AND BOUNDS DESCRIPTIONS FOR TRUE BOUNDARIES.

IN REFERENCE TO THE CURRENT OR FORMER 30" CHEVRON PIPELINE RIGHT-OF-WAY, THERE ARE NO ABOVE GROUND PIPELINE MARKERS.

STORM WATER MANAGEMENT NOTE:

AS PART OF CONSTRUCTION, IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO COMPLY WITH STORM WATER MANAGEMENT AND DRAINAGE REQUIREMENTS SET FORTH IN SECTION 15.13 OF THE UNITED DEVELOPMENT CODE, LATEST VERSION.

APPROVED:

THIS IS AN EXCHANGE OF PROPERTY BETWEEN ADJACENT PROPERTY OWNERS AND NO NEW LOTS ARE BEING CREATED.

[Signature]
TROY L. BUNDA, PLANNING DIRECTOR
OR HIS DESIGNEE
EAST BATON ROUGE PARISH
PLANNING COMMISSION

DATE: 12/12/12 P - 12/12/12

CERTIFICATION:

I CERTIFY THAT THIS SURVEY WAS ACTUALLY MADE ON THE GROUND, AS PER RECORD DESCRIPTIONS, AND IS CORRECT, AND THAT THERE ARE NO USABLE ENCUMBRANCES OTHER THAN PROPERTY LINES, UNLESS OTHERWISE NOTED. I ALSO CERTIFY THAT THIS SURVEY WAS PERFORMED IN ACCORDANCE WITH THE APPLICABLE PROFESSIONAL AND OCCUPATIONAL STANDARDS OF PRACTICE FOR A CLASS "D" SURVEY AS PER LOUISIANA ADMINISTRATIVE CODE, TITLE 46, PART 138, CHAPTER 25.

THIS IS TO CERTIFY THAT THIS MAP IS MADE IN ACCORDANCE WITH LA REVENUE STATUTES 33:3031 ET SEQ. AND ALSO CONFORMS TO ALL PARISH ORDINANCES COVERING THE SUBDIVISION OF LAND.



[Signature]
R. JAMES TATUM, P.E./P.L.S.
8920 NORTH MERCHANT COURT
BATON ROUGE, LA 70803
(225) 752-3550 (FAX) 752-5555

DATE: 12-11-12

WARNING:

ALL CONTRACTORS SHALL NOTIFY OXIE PIPELINE COMPANY (800) 349-4377 AND CROSSER LIO PIPELINE COMPANY (318) 445-1558 AND COLOMIAL PIPELINE COMPANY (800) 939-2728 AT LEAST 48 HOURS PRIOR TO STARTING ANY WORK IN THE WIGNITY OF ANY OF THE PIPELINE RIGHT-OF-WAYS. ALL REQUIREMENTS OF EACH PIPELINE COMPANY ENCROACHMENT PERMIT MUST BE IMPLEMENTED BY THE CONTRACTOR.

DEDICATIONS:

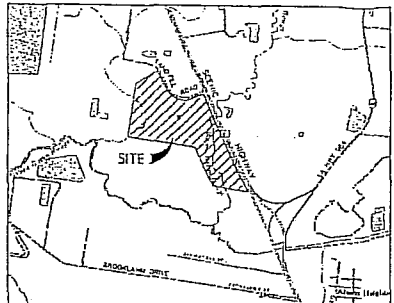
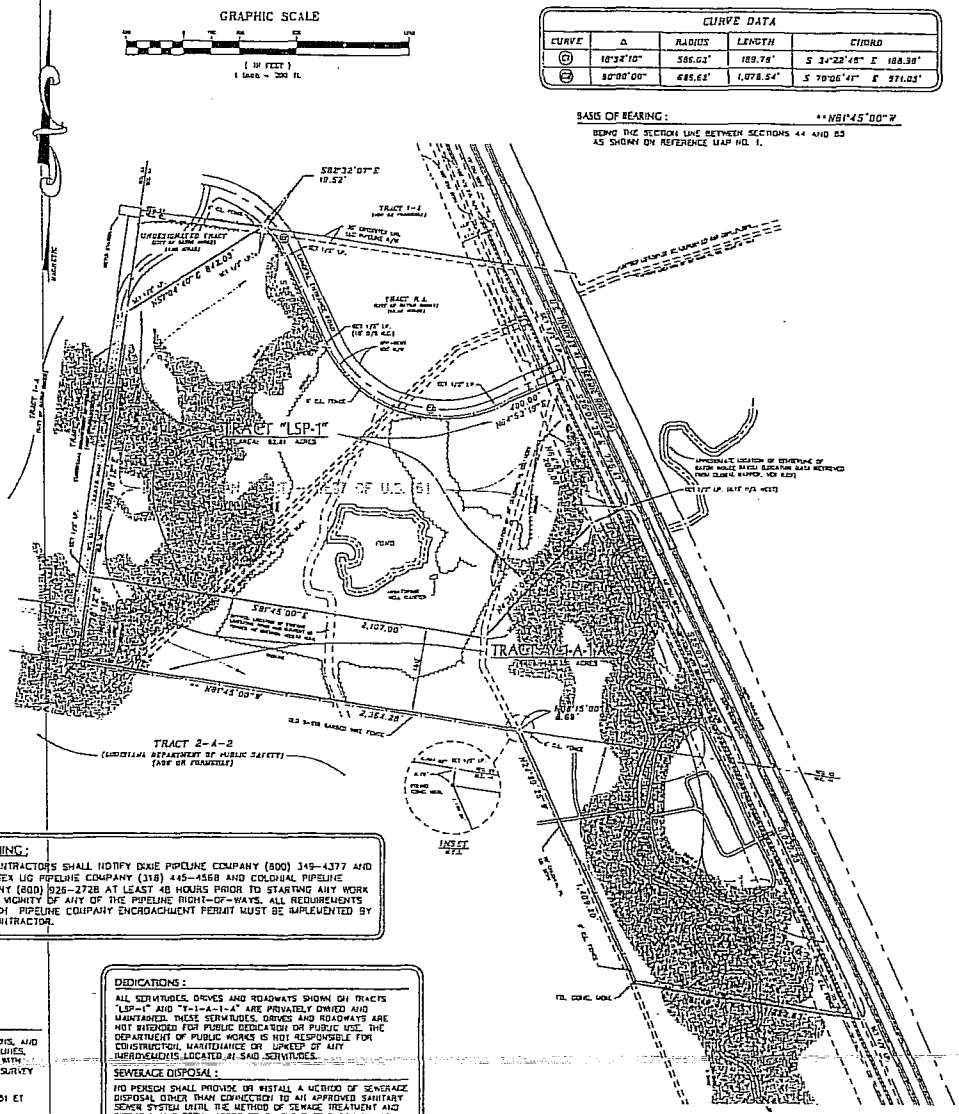
ALL SERVITUDES, DRIVES AND ROADWAYS SHOWN ON TRACTS "LSP-1" AND "Y-1-A-1-A" ARE PRIVATELY OWNED AND MAINTAINED. THESE SERVITUDES, DRIVES AND ROADWAYS ARE NOT INTENDED FOR PUBLIC DEDICATION OR PUBLIC USE. THE DEPARTMENT OF PUBLIC WORKS IS NOT RESPONSIBLE FOR CONSTRUCTION, MAINTENANCE OR REPAIR OF ANY INFRASTRUCTURE LOCATED AT SAID SERVITUDES.

SEWERAGE DISPOSAL:

NO PERSON SHALL PROVIDE OR INSTALL A METHOD OF SEWERAGE DISPOSAL OTHER THAN CONNECTED TO AN APPROVED SANITARY SEWER SYSTEM UNTIL THE METHOD OF SEWAGE TREATMENT AND DISPOSAL HAS BEEN APPROVED BY THE EAST BATON ROUGE PARISH HEALTH UNIT.

[Signature]
WILLIAM C. DAWSON, PRESIDENT
NPC SERVICES, INC.

DATE: 12-11-12



VICINITY MAP
1" = 2000'

GENERAL NOTES:

ZONING: M-2 (HEAVY INDUSTRIAL)
STREET: EXISTING ASPHALT W/ OPEN DITCH
LAND USE: INDUSTRIAL
SCHOOL DISTRICT: PARK ELEMENTARY
CAPITAL SCHOOL SCHOOL
TARA HIGH SCHOOL
ELECTRIC: NO GAS ON BROOKLAWN
GAS: INDIVIDUAL TREATMENT PLANTS
TELEPHONE: BATON ROUGE WATER CO.
WATER: ALBERT FIRE DISTRICT, PROTECTION CLASS 5
FLOOD ZONE: AE & X (PER FIRM 2201J0015E & 2201J0015E, MAY 2, 2003)
BASE FLOOD ELEVATION: 50 - 51'
THE BASE FLOOD ELEVATIONS IS SUBJECT TO CHANGE AND THE CURRENT BASE FLOOD ELEVATION SHOULD BE VERIFIED WITH THE ENGINEERING DIVISION OF THE DEPARTMENT OF PUBLIC WORKS.

APPROXIMATE LOCATION OF FLOOD ZONE AS SHOWN ON FEMA MAP

MAP SHOWING EXCHANGE OF PROPERTY
BETWEEN
H.W. BUSHMAN TRACT - WEST OF US 61
AND THE
TRACT "Y-1-A-1" - HARELSON/BOWDEN PROPERTY
INTO
TRACT "LSP-1"
H.W. BUSHMAN TRACT - WEST OF U.S. 61
AND
TRACT "Y-1-A-1-A"
HARELSON/BOWDEN PROPERTY
LOCATED IN SECTIONS 44 & 53, TOWNSHIP 5 SOUTH, RANGE 1 WEST, GREENBELT LAND DISTRICT, EAST BATON ROUGE PARISH, LOUISIANA
FOR
NPC SERVICES, INC.

LOCATION: SCENIC HIGHWAY (U.S. HWY 51) EAST BATON ROUGE PARISH, LA			SHEET: 1 OF 1
DATE: 12-11-12	TOTAL AREA: 163.00 ACRES		
SCALE: 1"=300'	DRAWN BY: JAS	CHECKED BY: RJT	
CODE: SP-2-134-301(2012)\\NPC_LSP_1.DWG		NO. 14-301	

TATUM ENGINEERING CONSULTANTS
R. JAMES TATUM, INC. BATON ROUGE, LOUISIANA

APPENDIX J

Contaminant Trends

**(This is a copy of Appendix D
included with the Scenic OU 2014
Long Term Monitoring Report)**

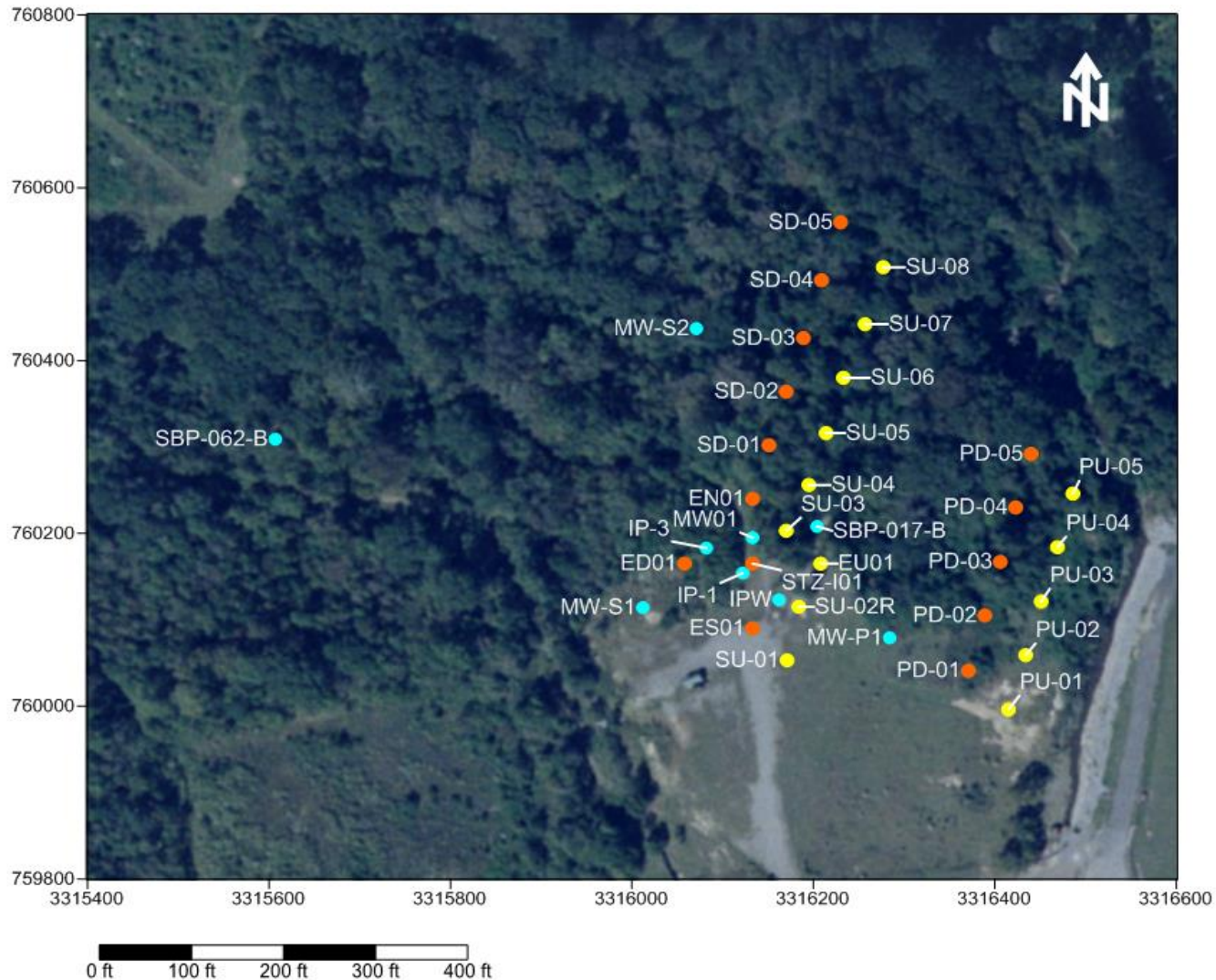
**THIRD FIVE-YEAR REVIEW REPORT
FOR THE
PETRO-PROCESSORS OF LOUISIANA, INC. SITE
EAST BATON ROUGE PARISH, LOUISIANA
LAD057482713**

This is a copy of the
Appendix D included in the
2014 Long Term Monitoring Plan Report

STZ Contaminant Trends

PPI Site, Scenic OU, dated October 27, 2015

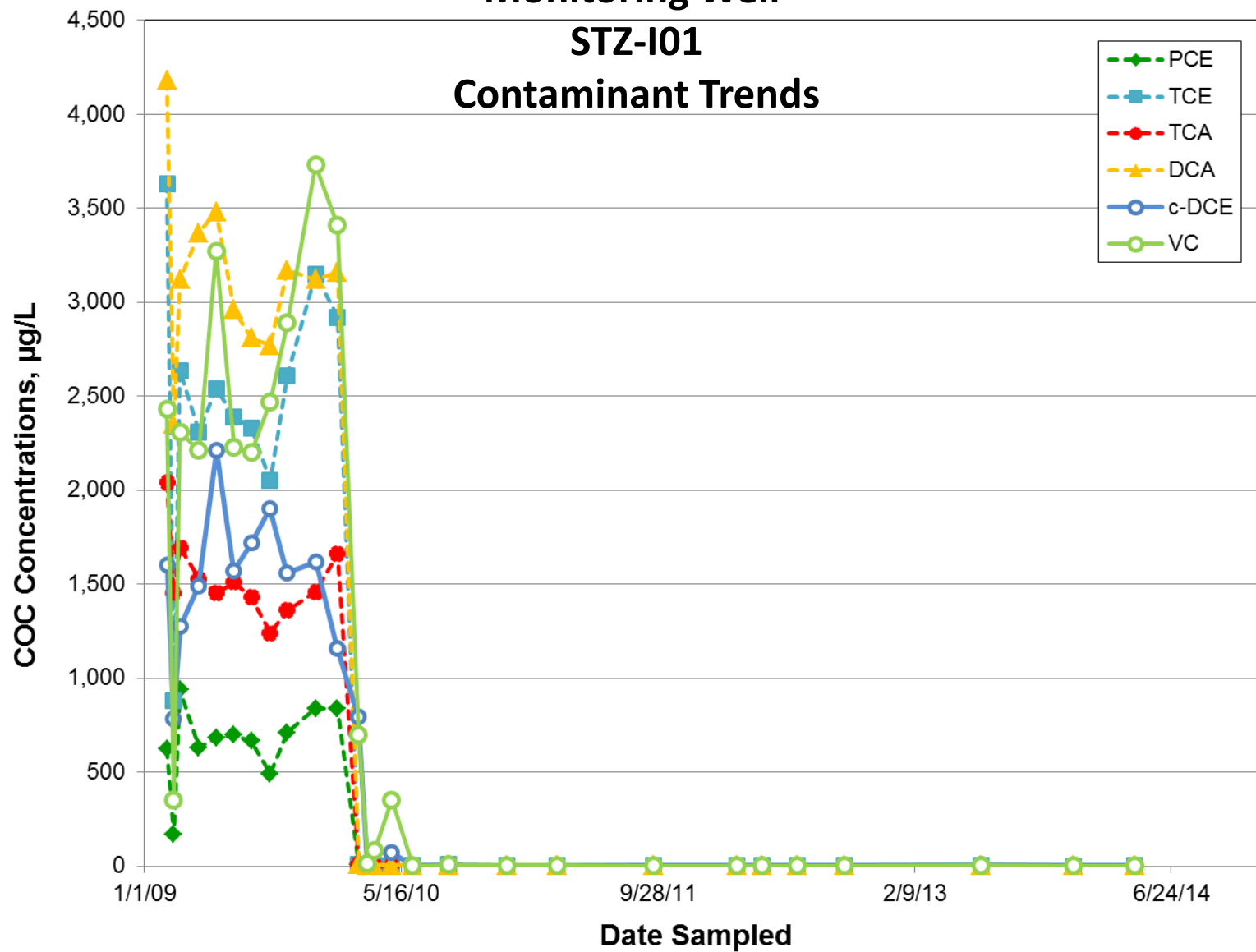
EA Injection & Monitoring wells



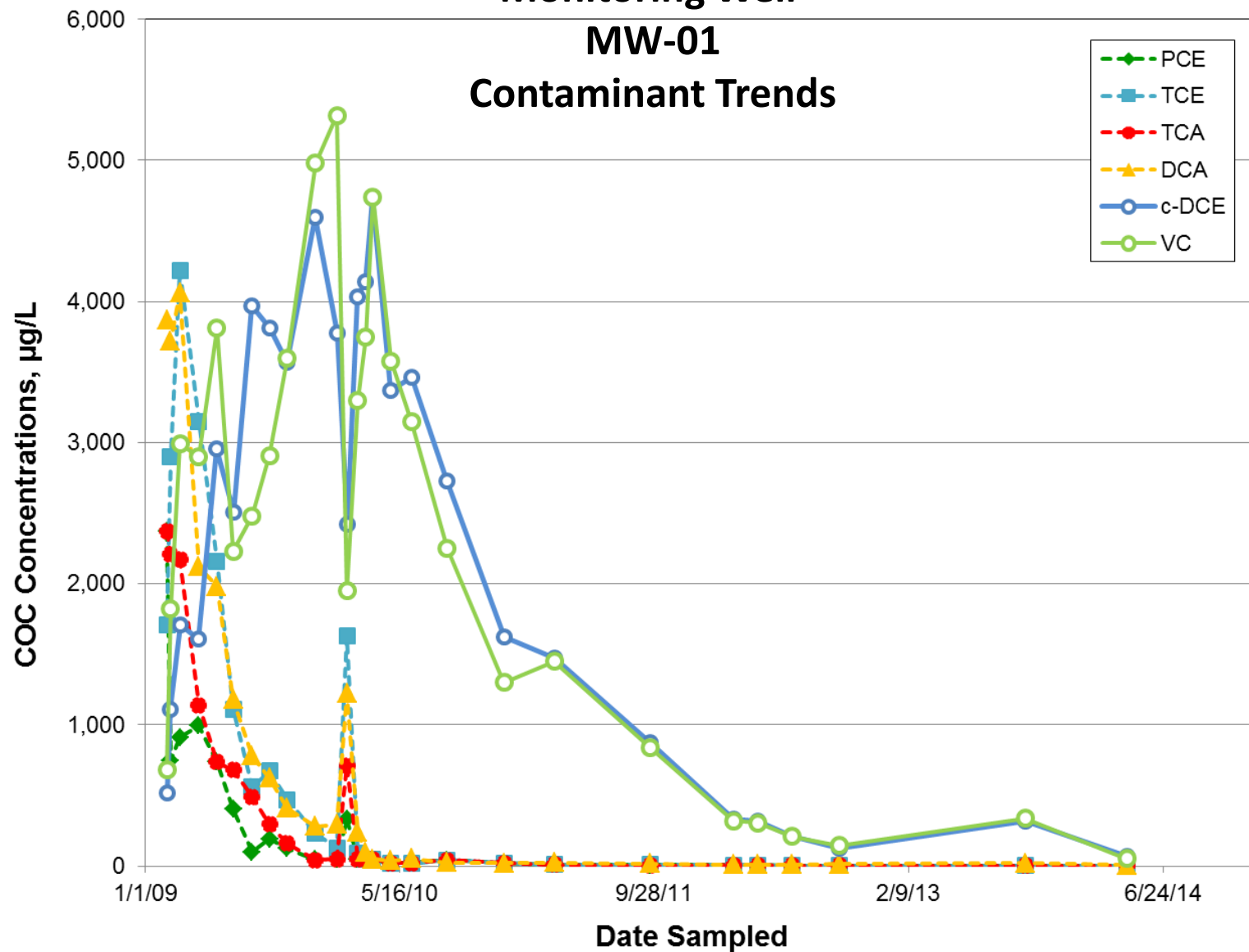
Source Treatment Zone

Contaminant Trends in
Field-Test Wells

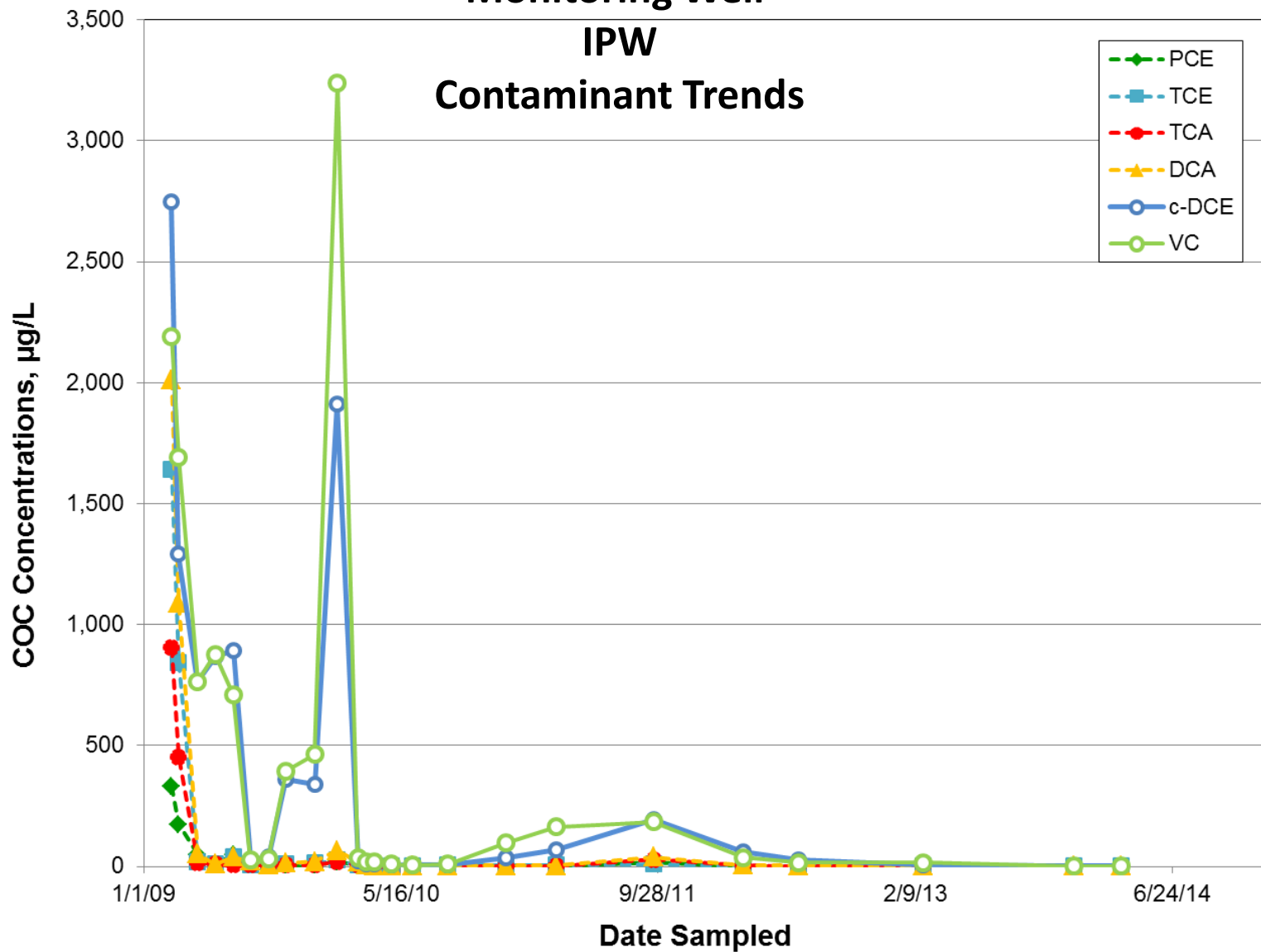
Monitoring Well STZ-I01 Contaminant Trends



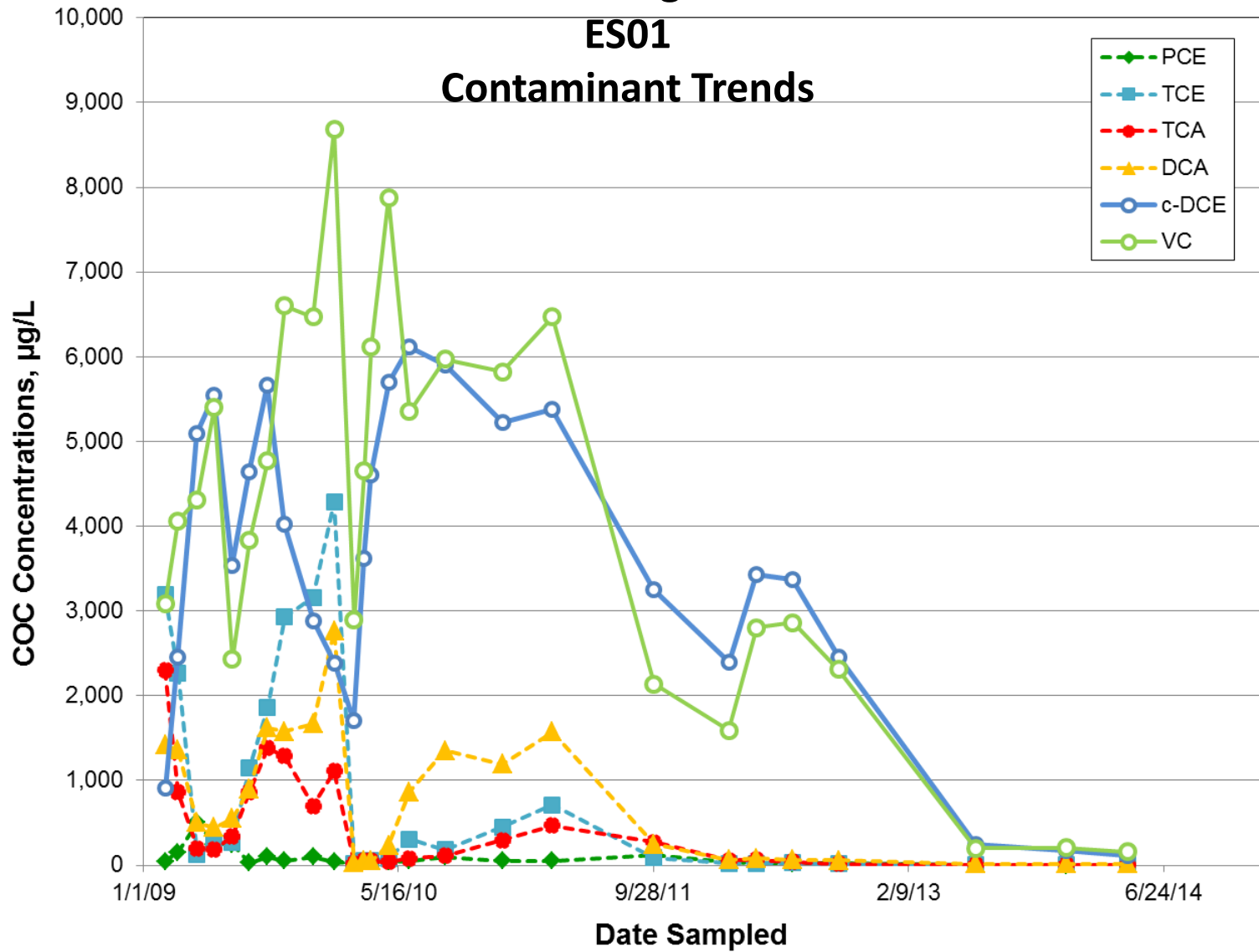
Monitoring Well MW-01 Contaminant Trends



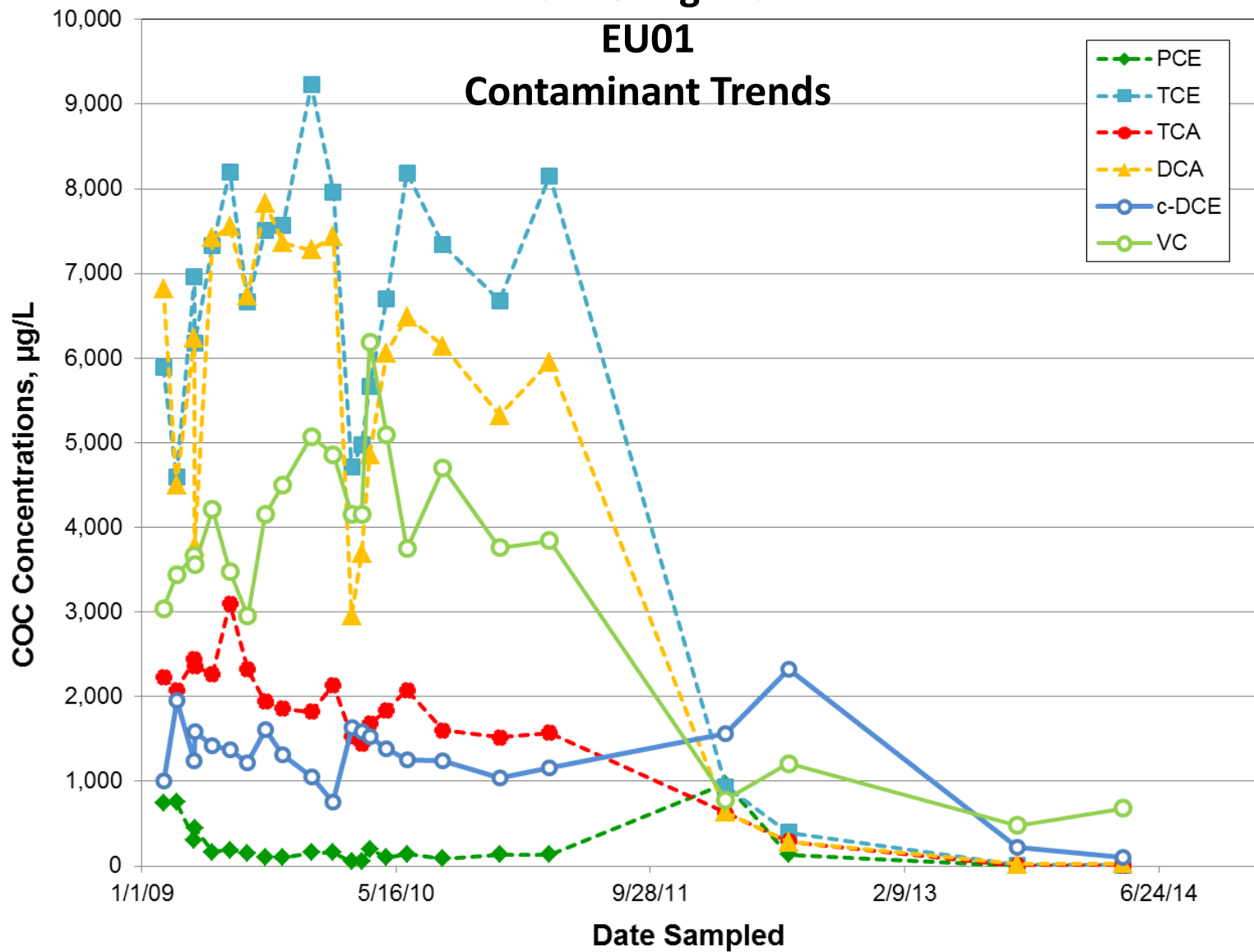
Monitoring Well IPW Contaminant Trends

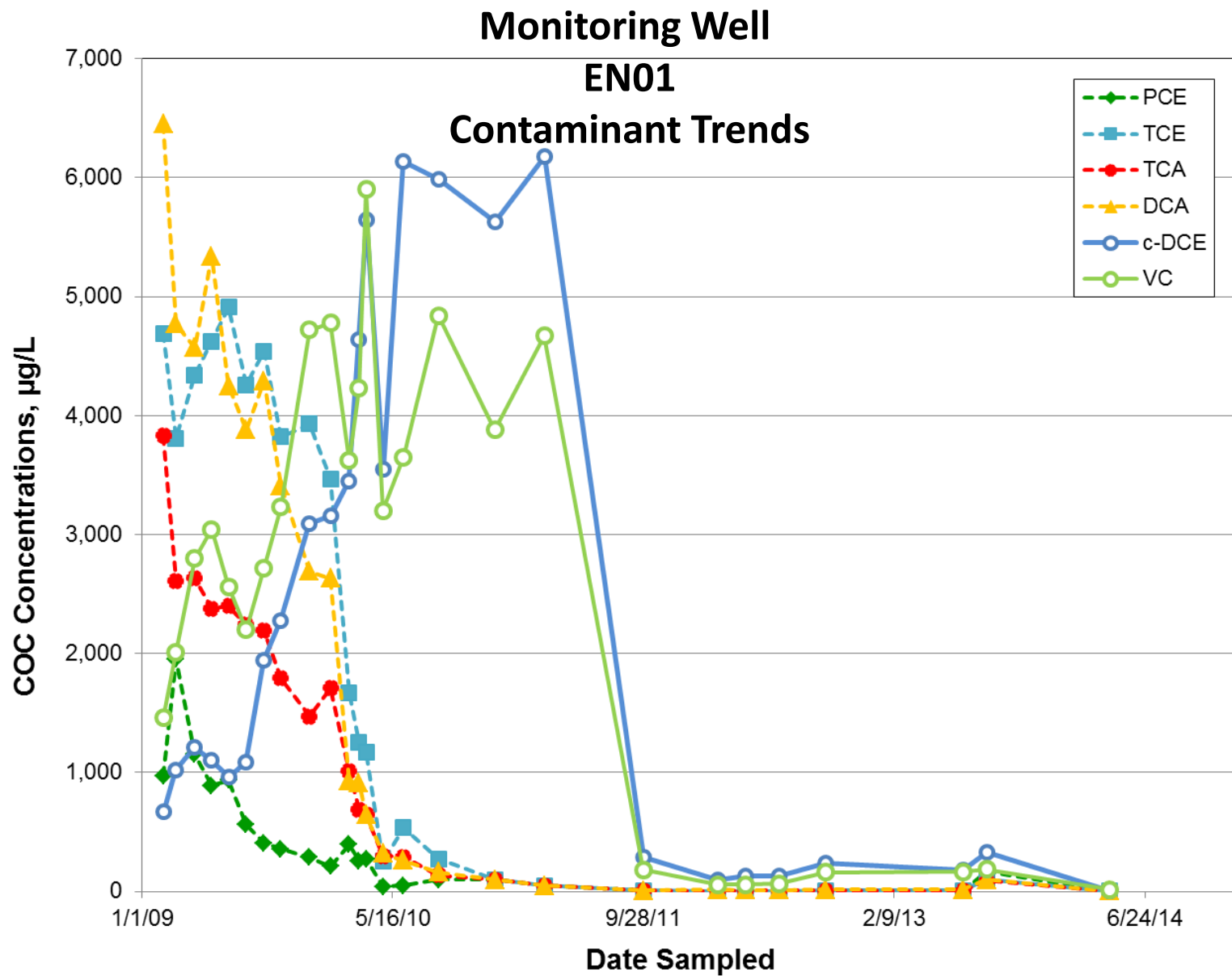


Monitoring Well ES01 Contaminant Trends

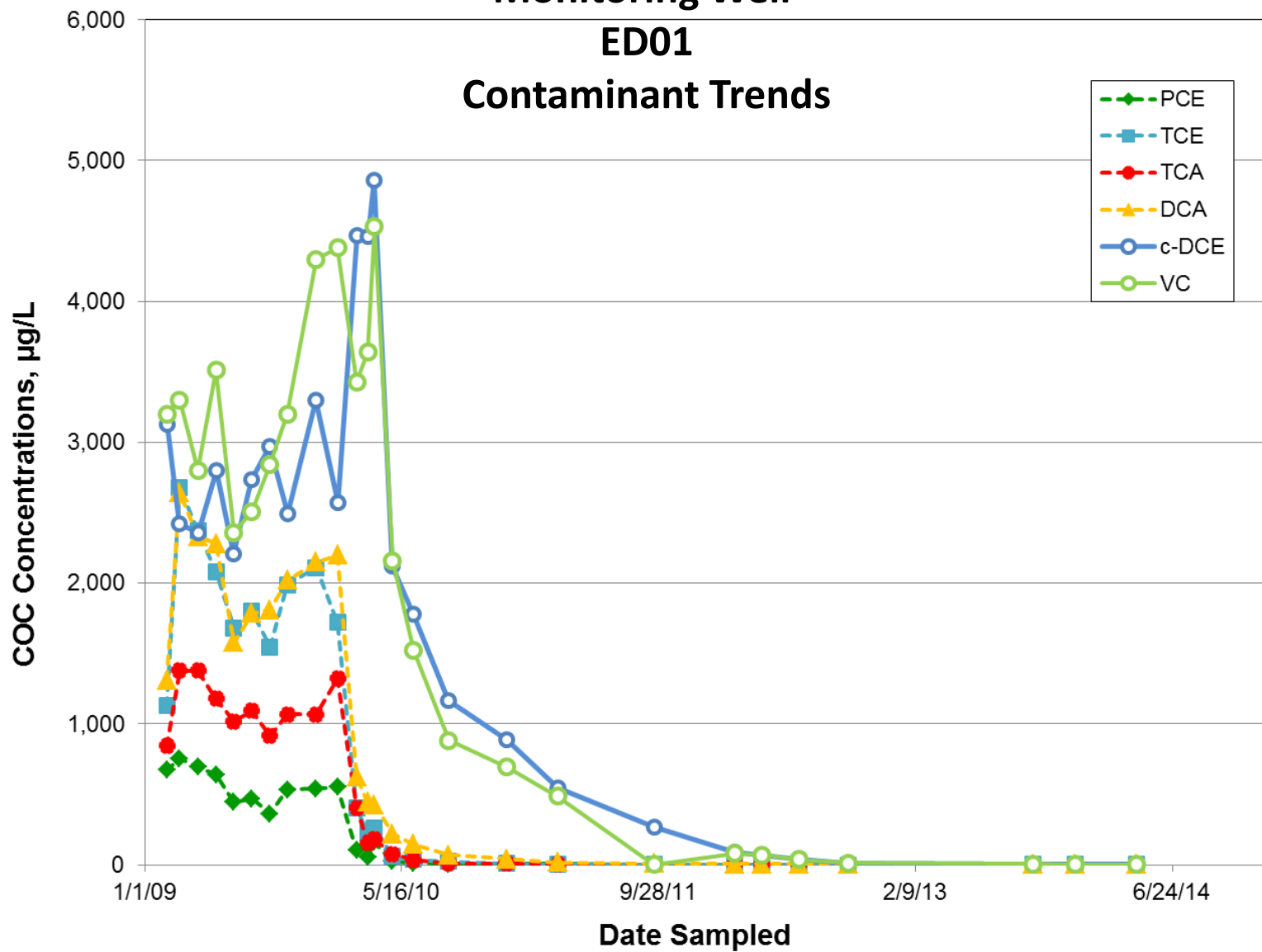


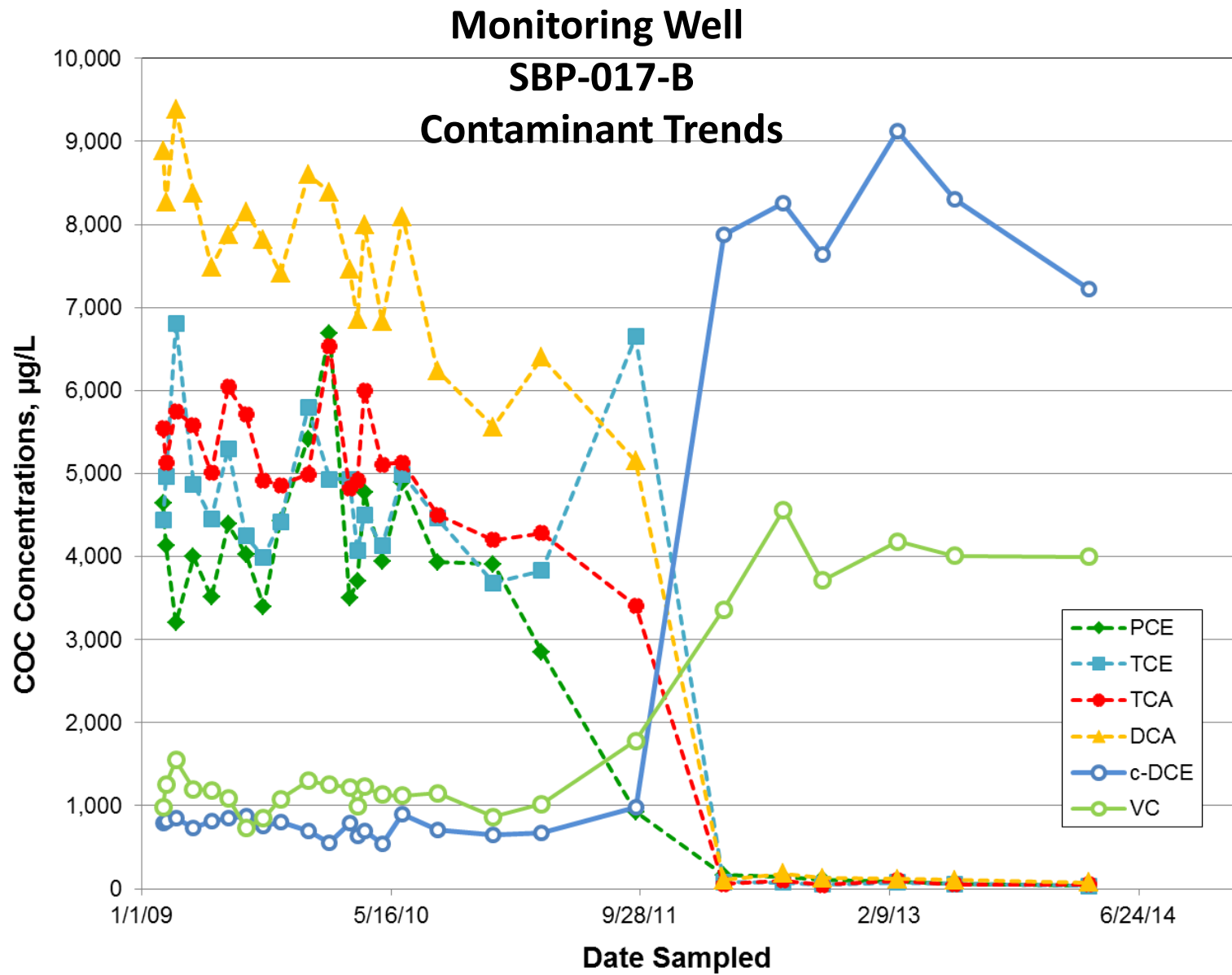
Monitoring Well EU01 Contaminant Trends





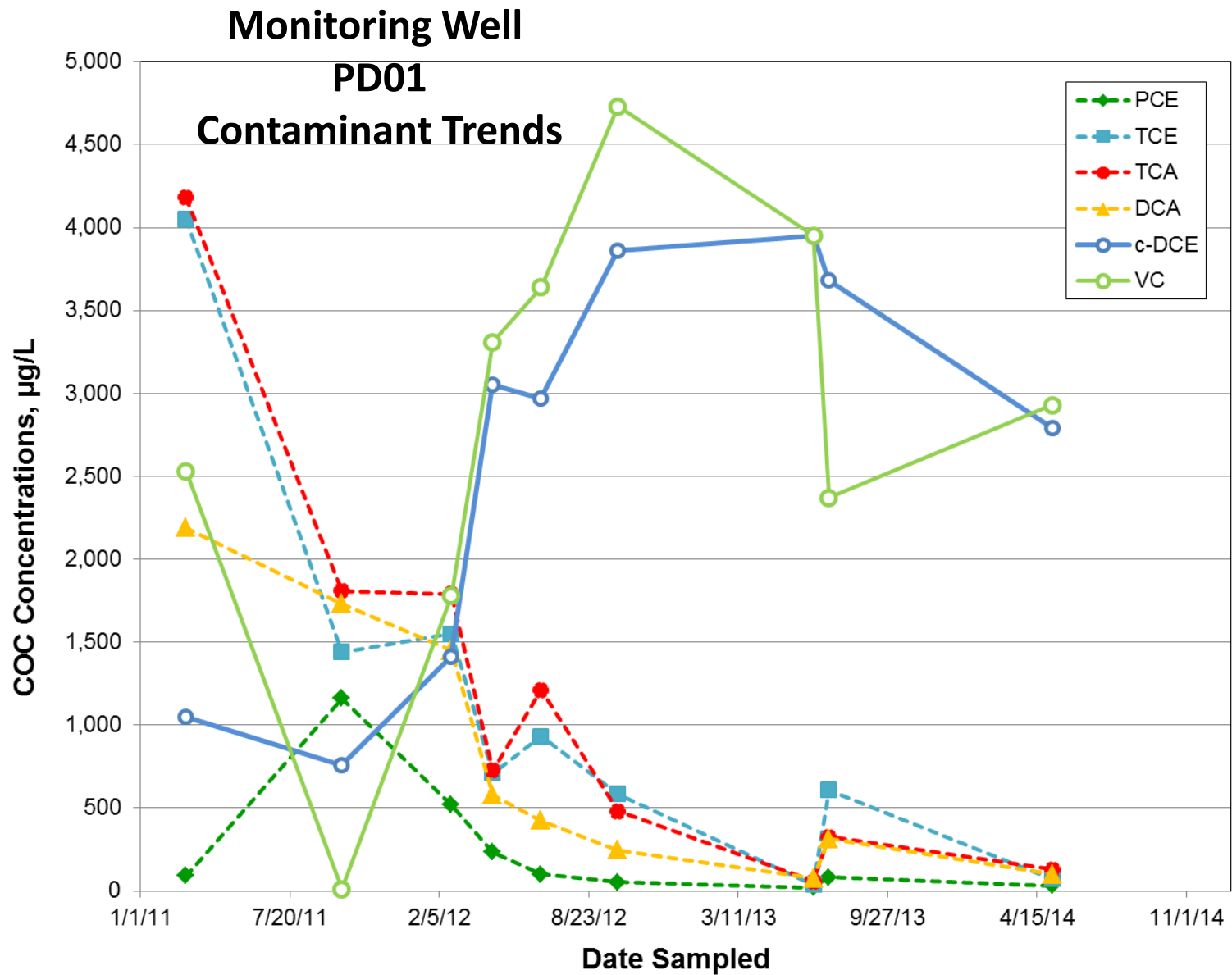
Monitoring Well ED01 Contaminant Trends



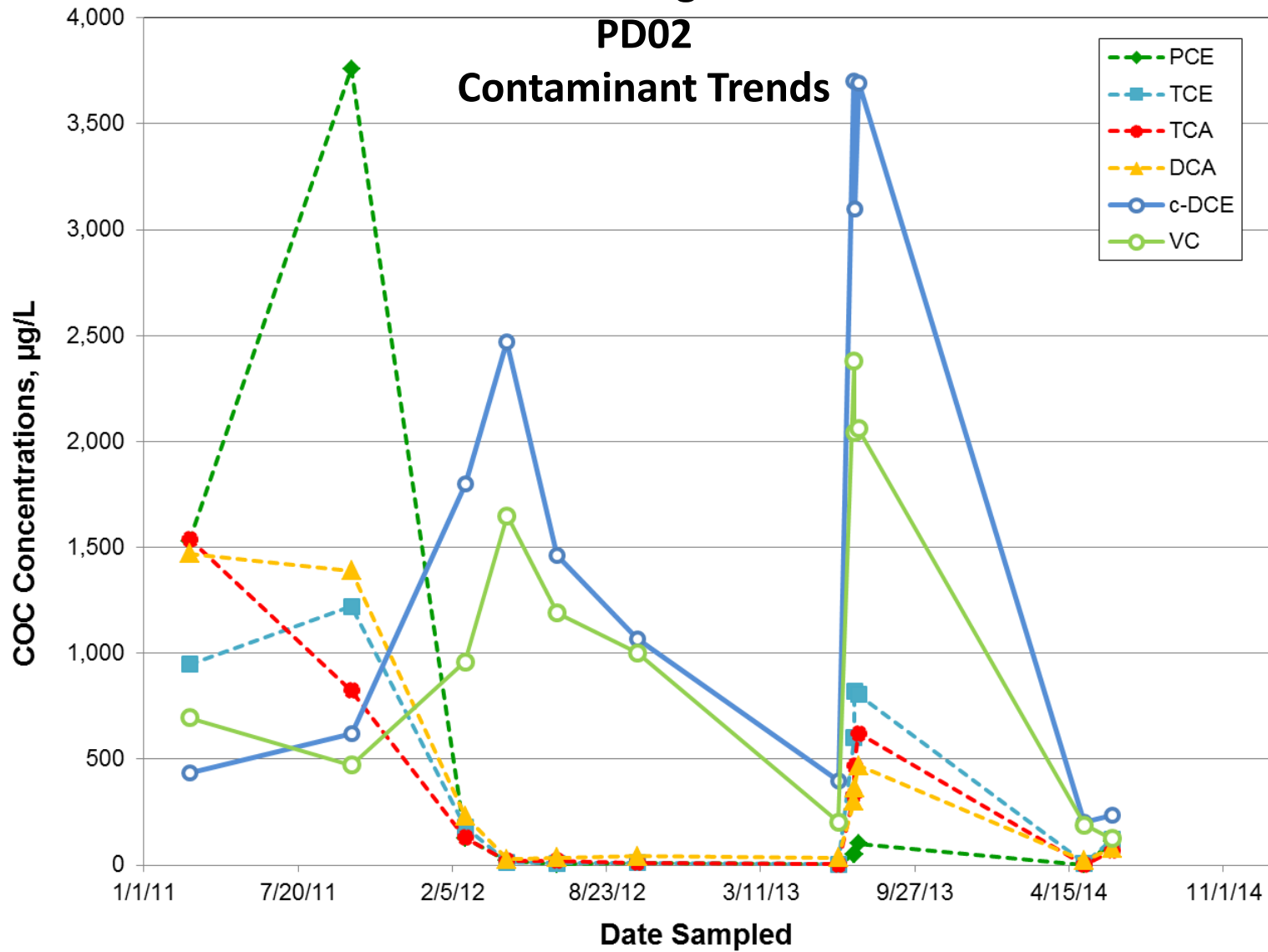


Source Treatment Zone

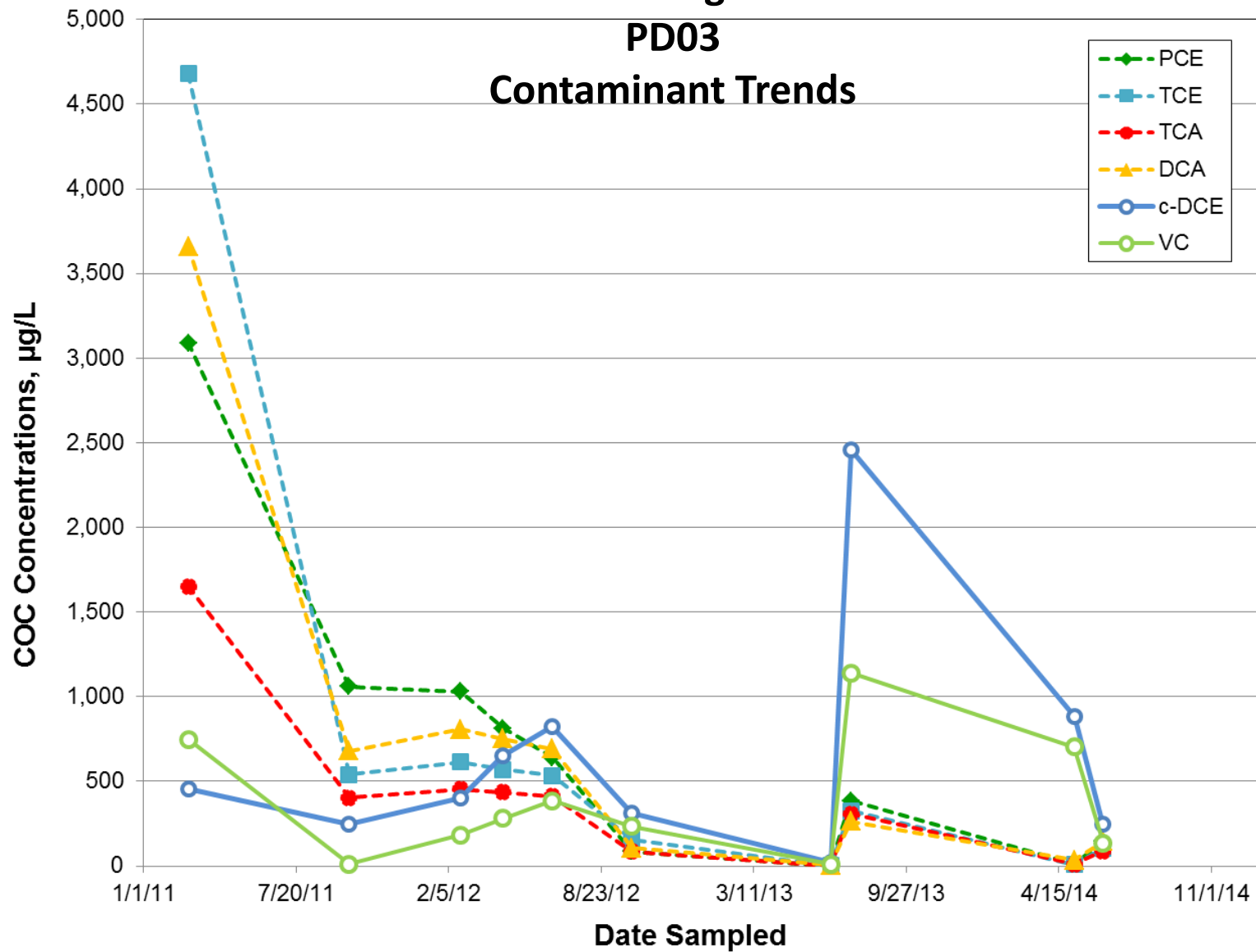
Contaminant Trends in
Primary Source Treatment Zone



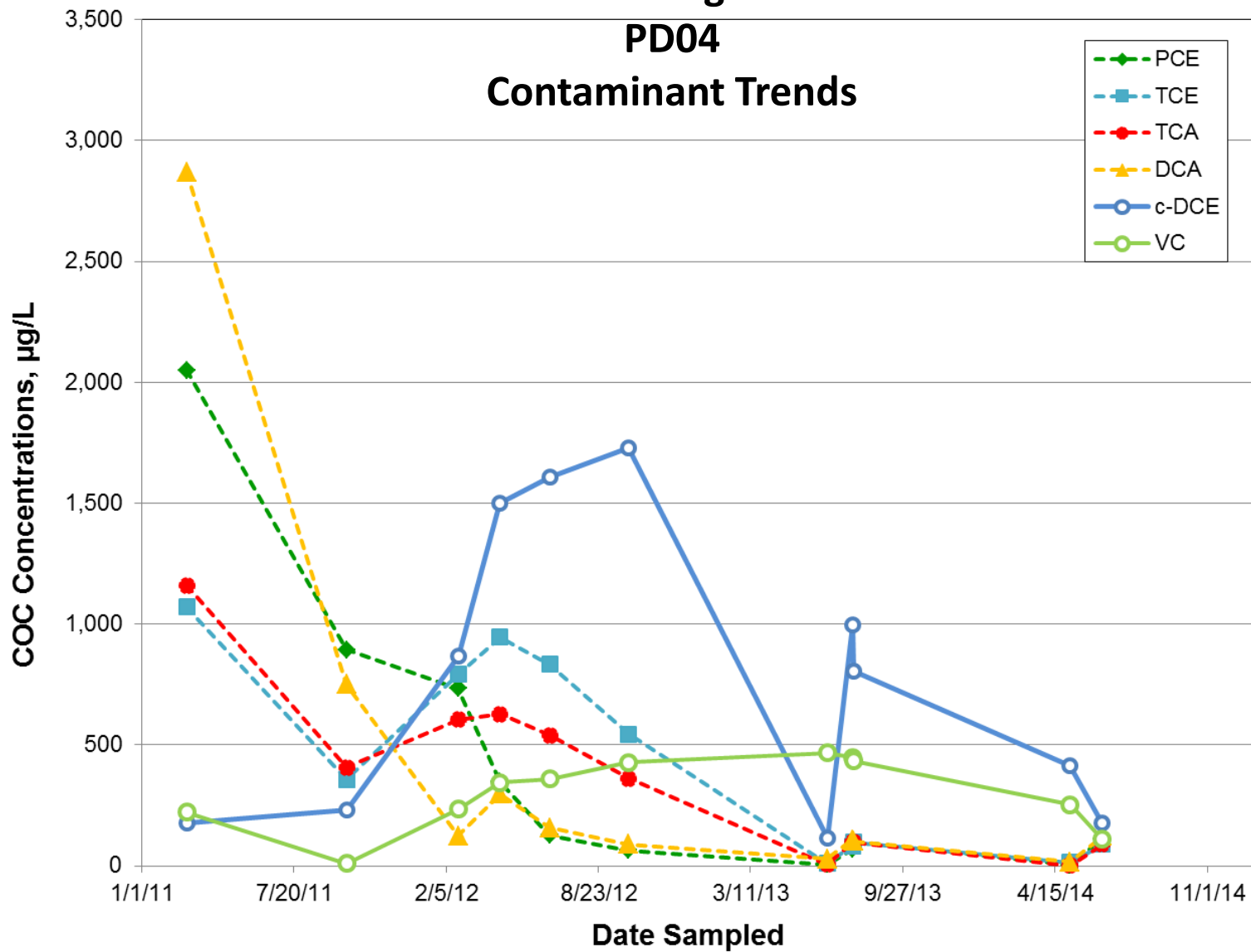
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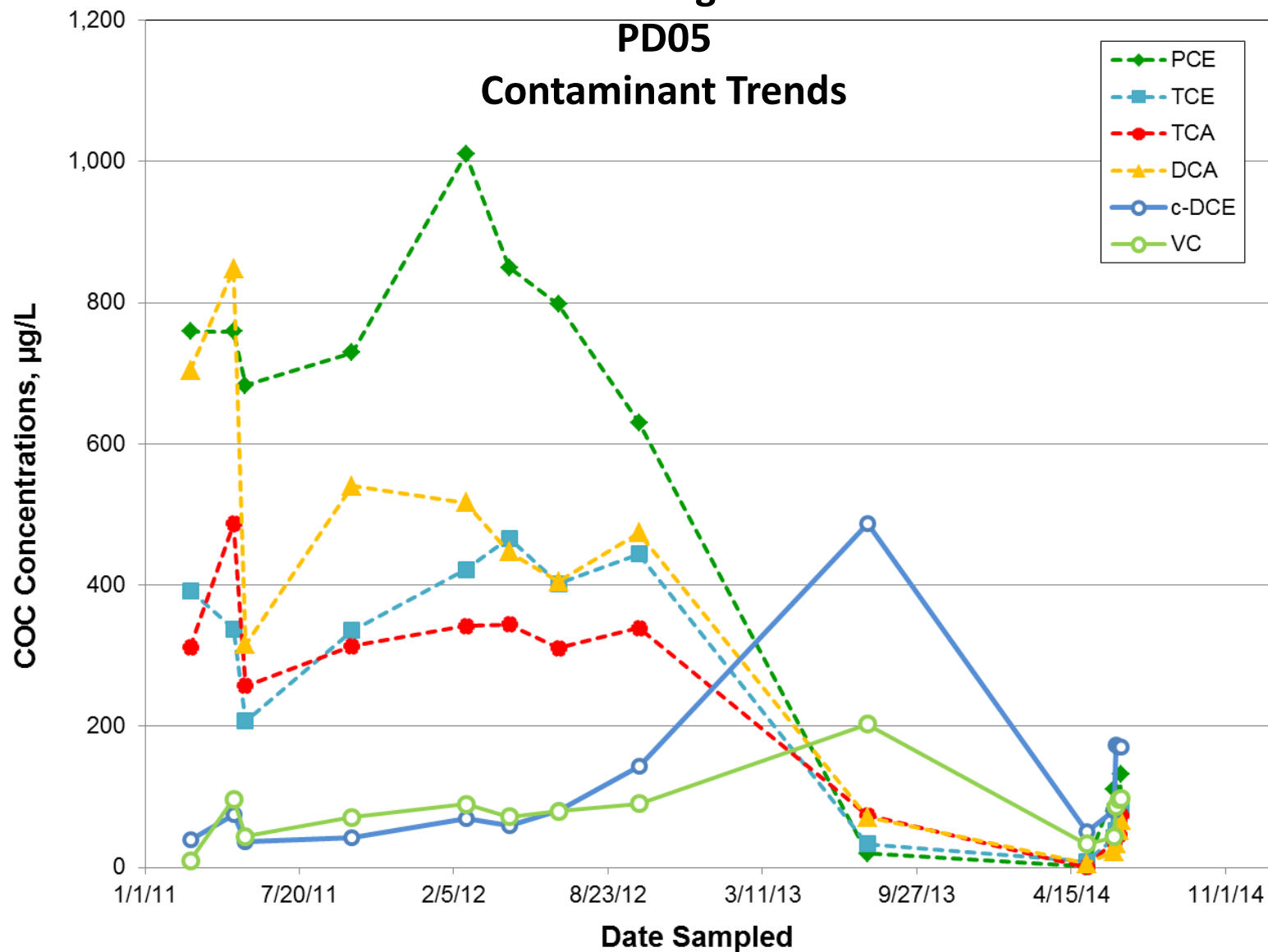
Monitoring Well PD03 Contaminant Trends



Monitoring Well PD04 Contaminant Trends



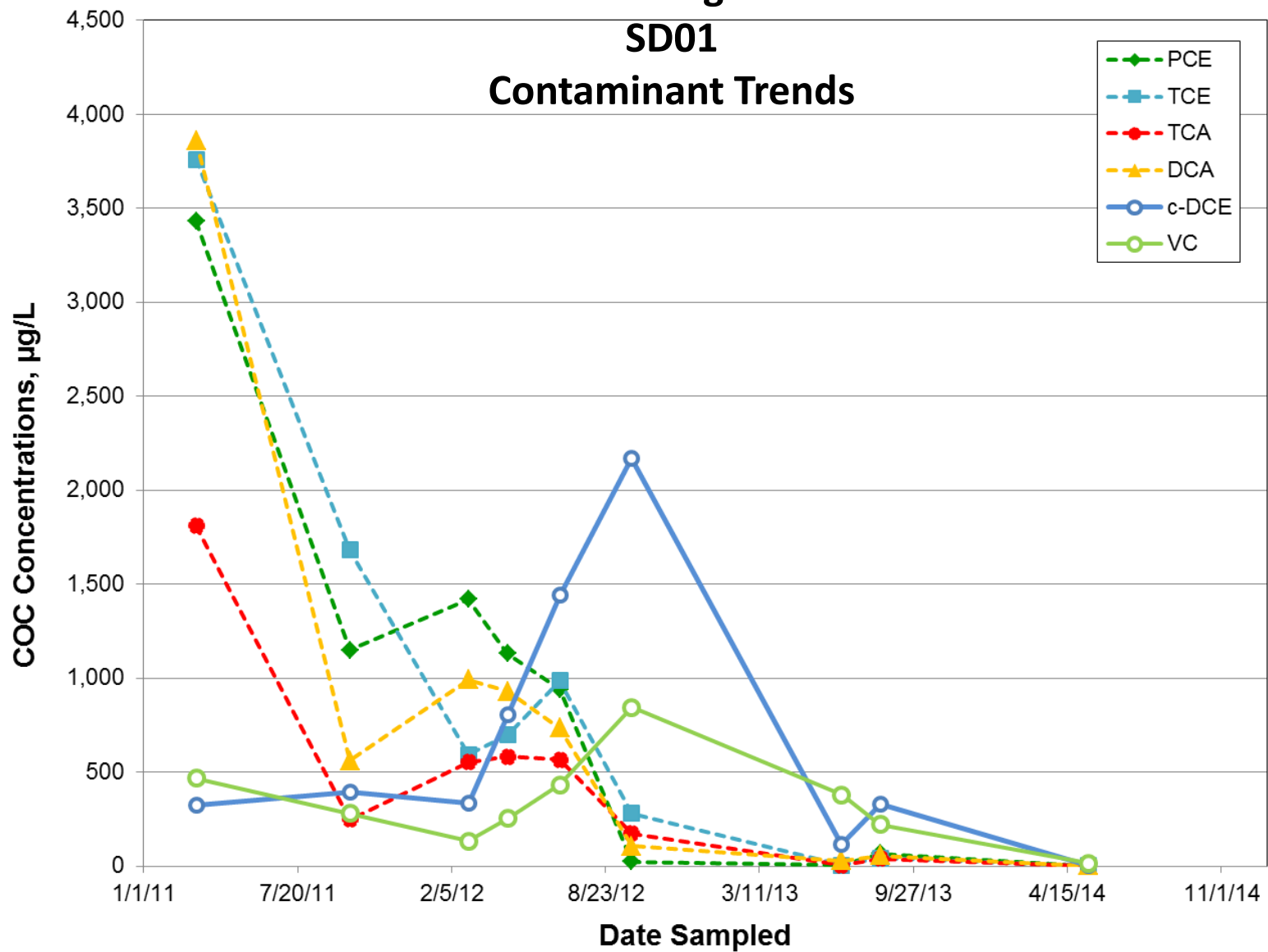
Monitoring Well PD05 Contaminant Trends

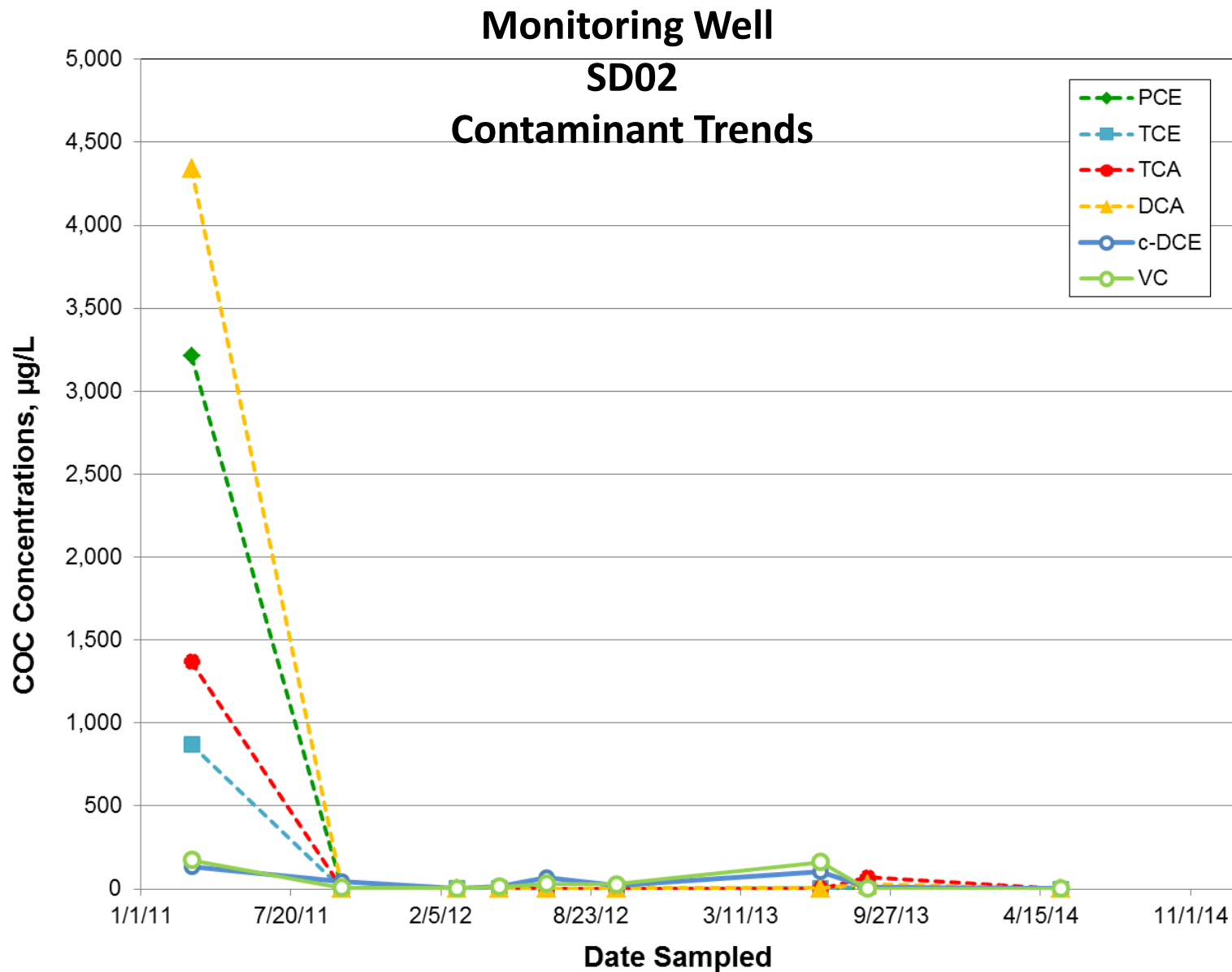


Source Treatment Zone

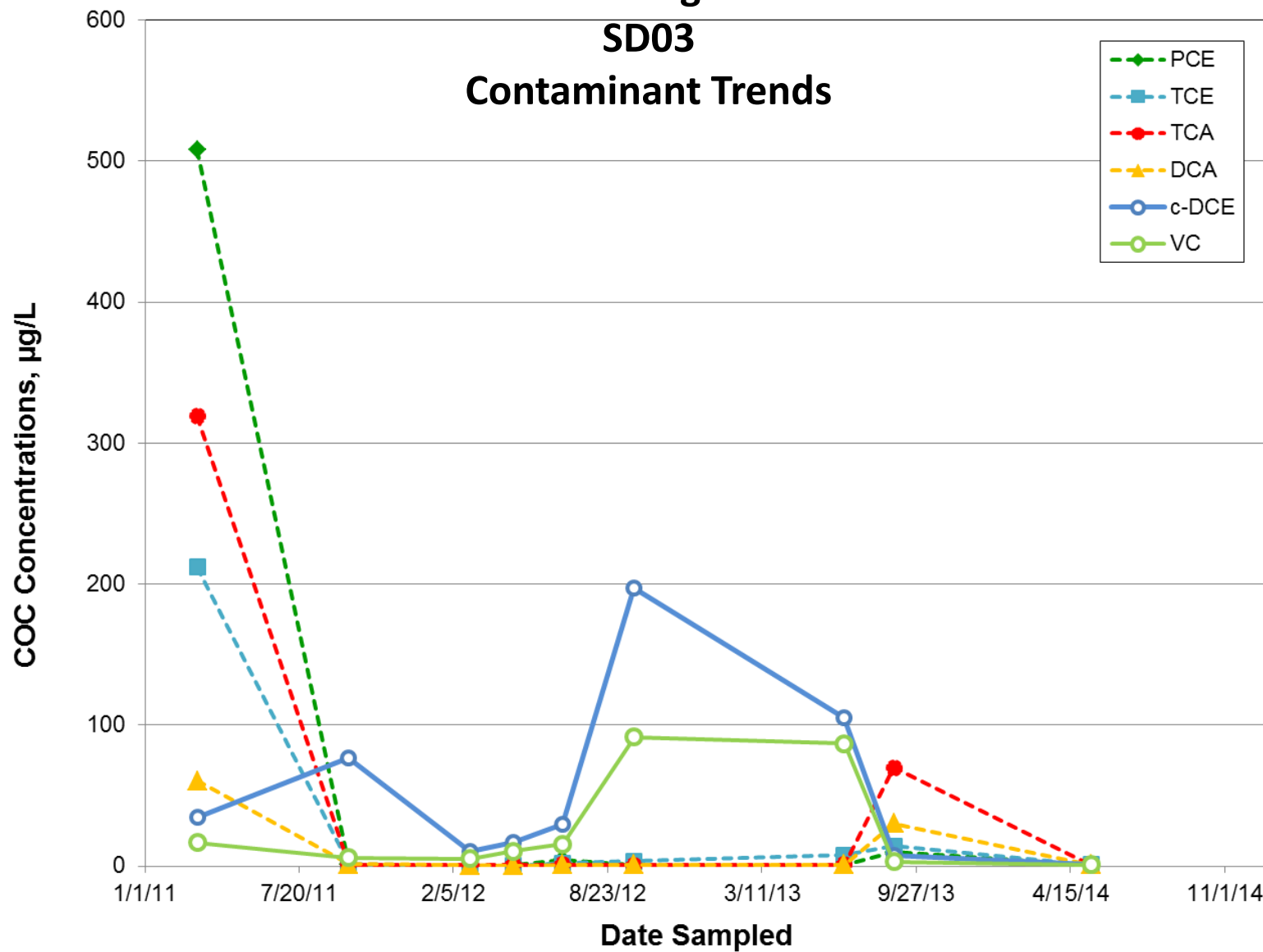
Contaminant Trends in
Secondary Source Treatment Zone

Monitoring Well SD01 Contaminant Trends

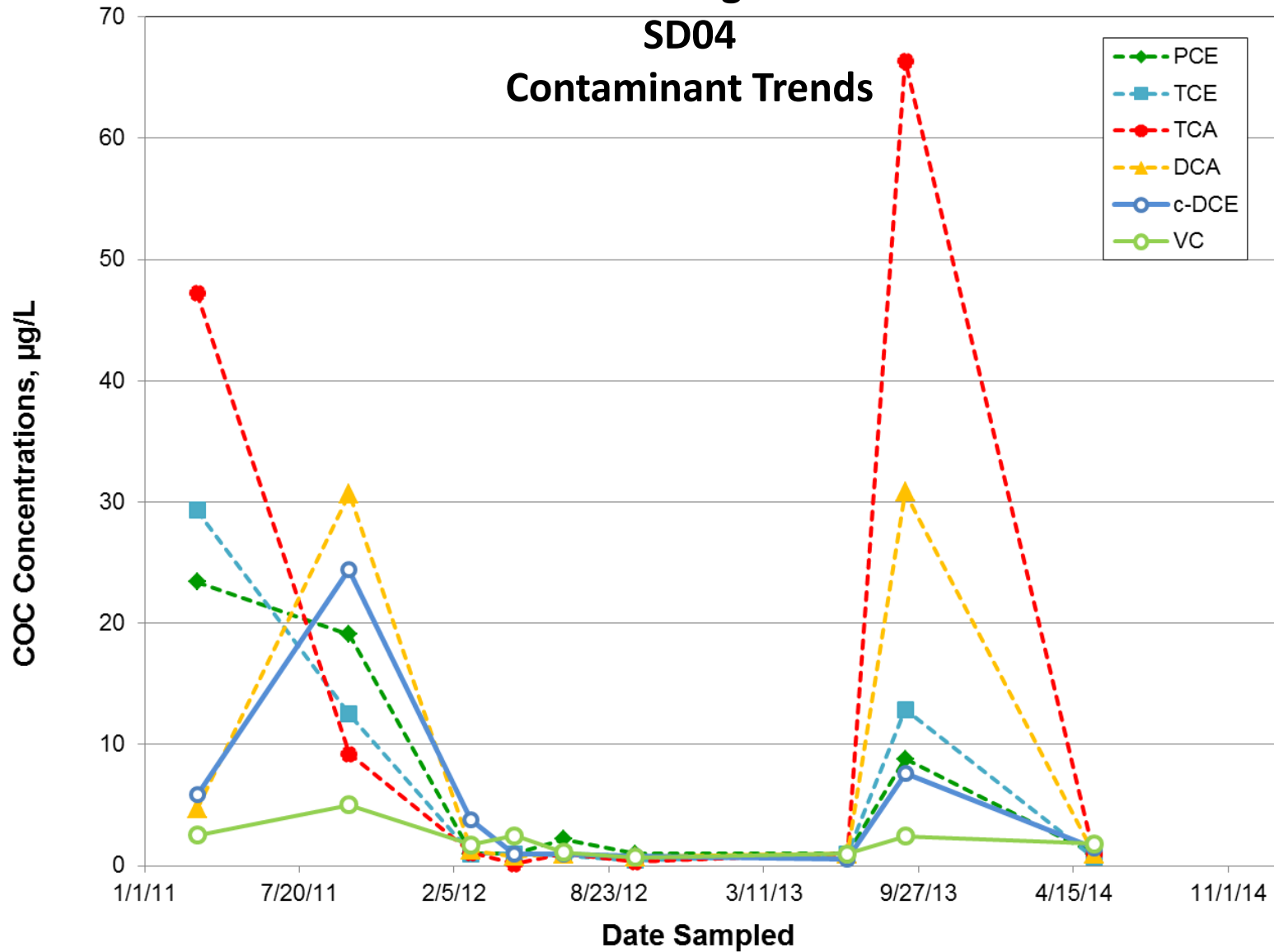




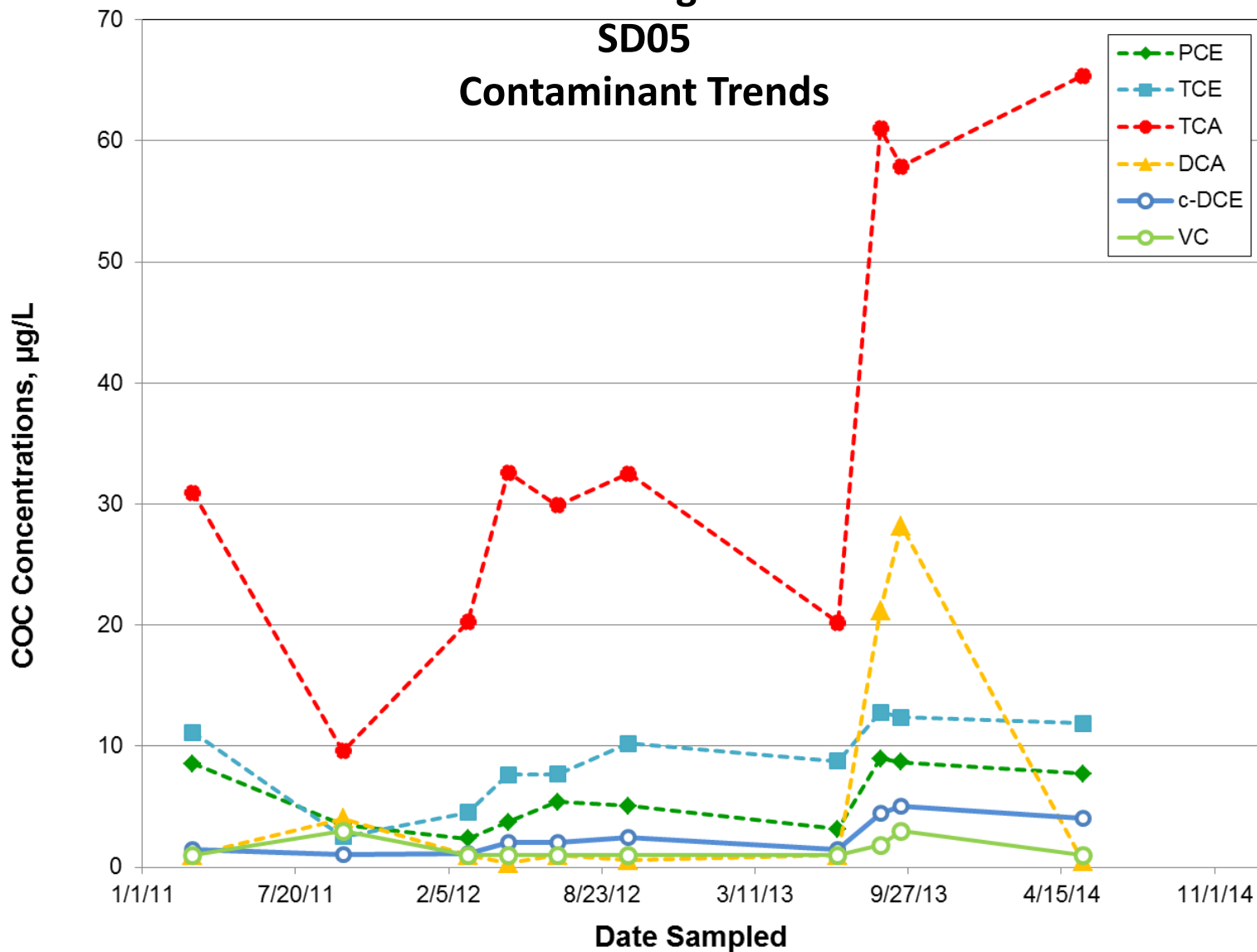
Monitoring Well SD03 Contaminant Trends



Monitoring Well SD04 Contaminant Trends

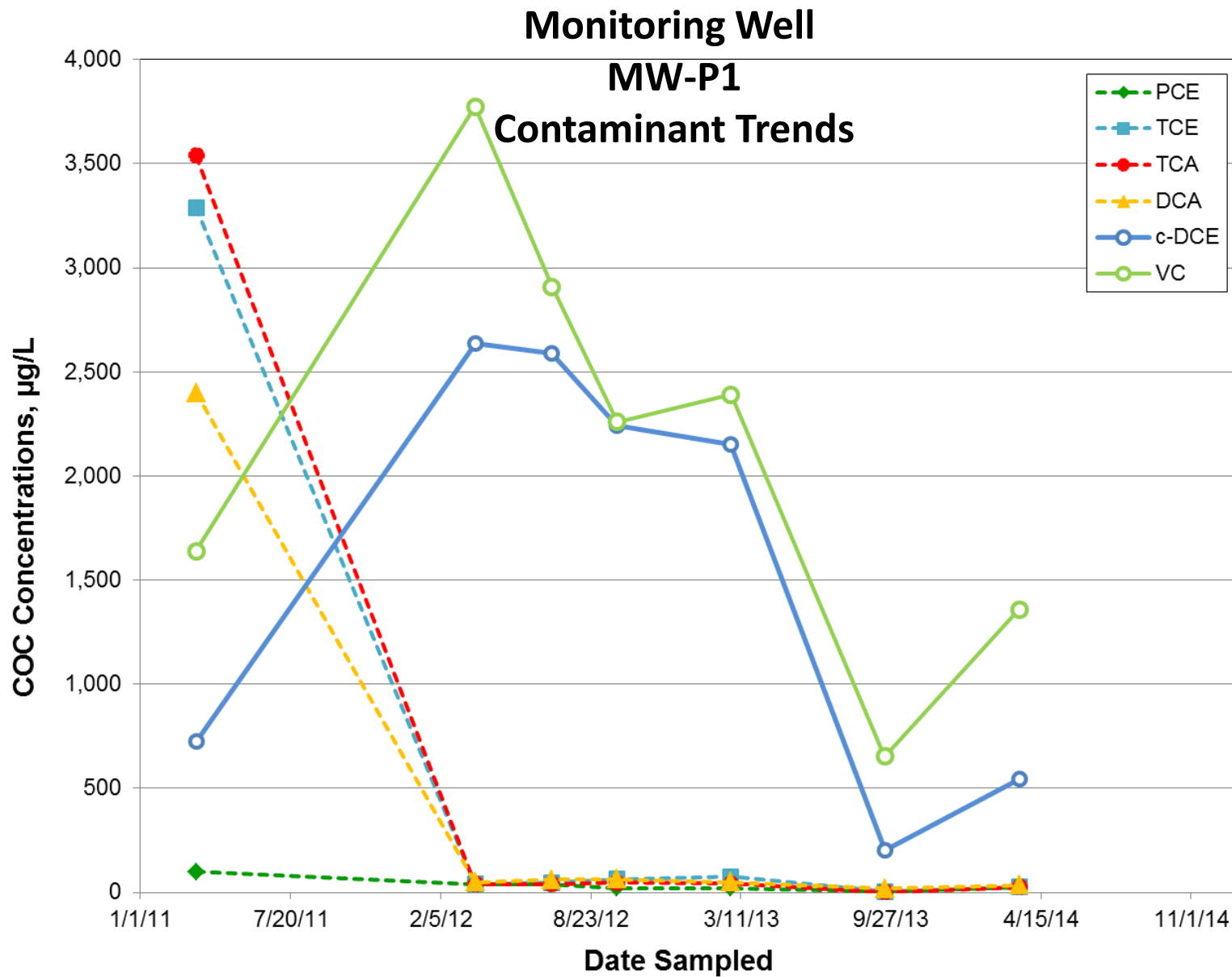


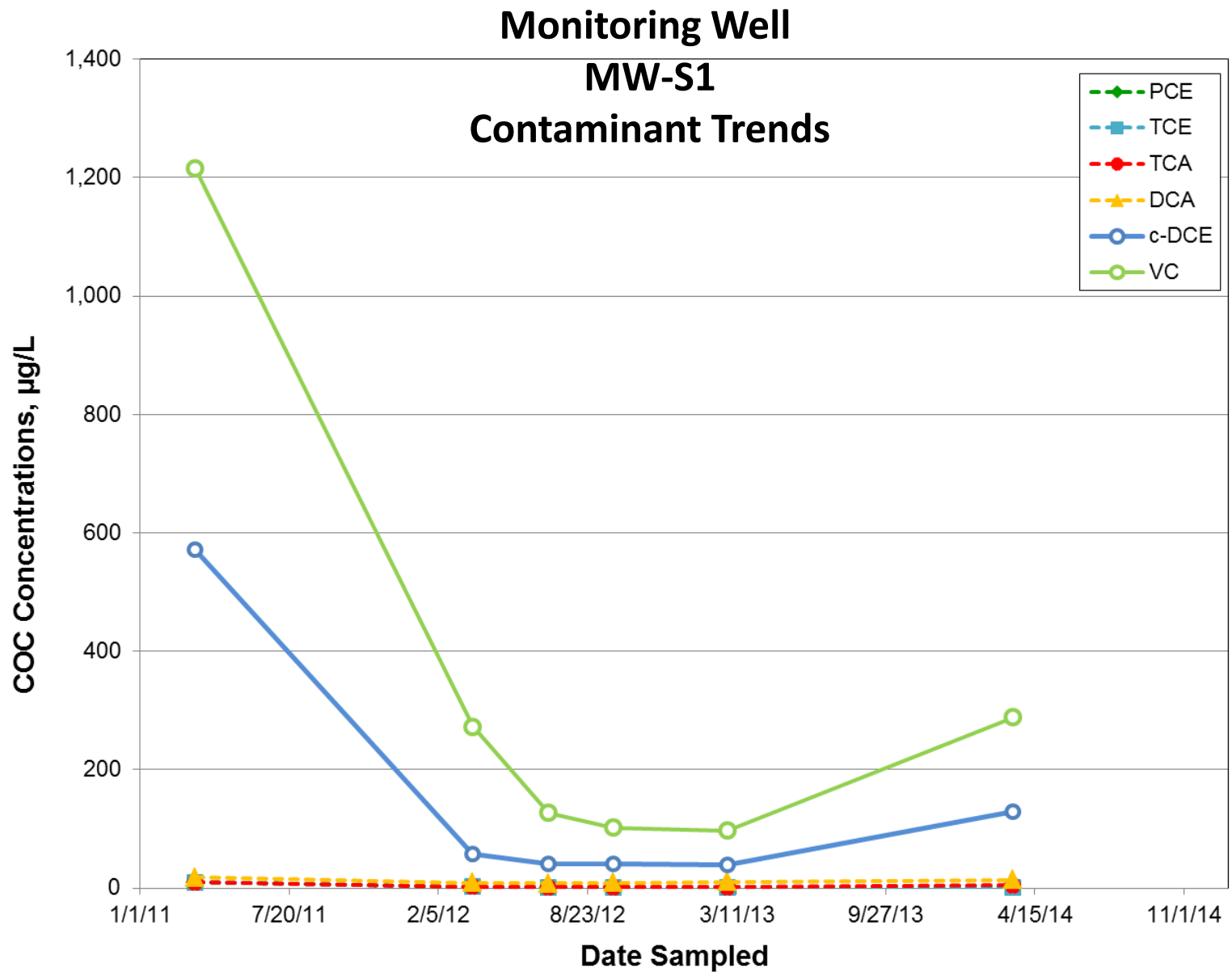
Monitoring Well SD05 Contaminant Trends



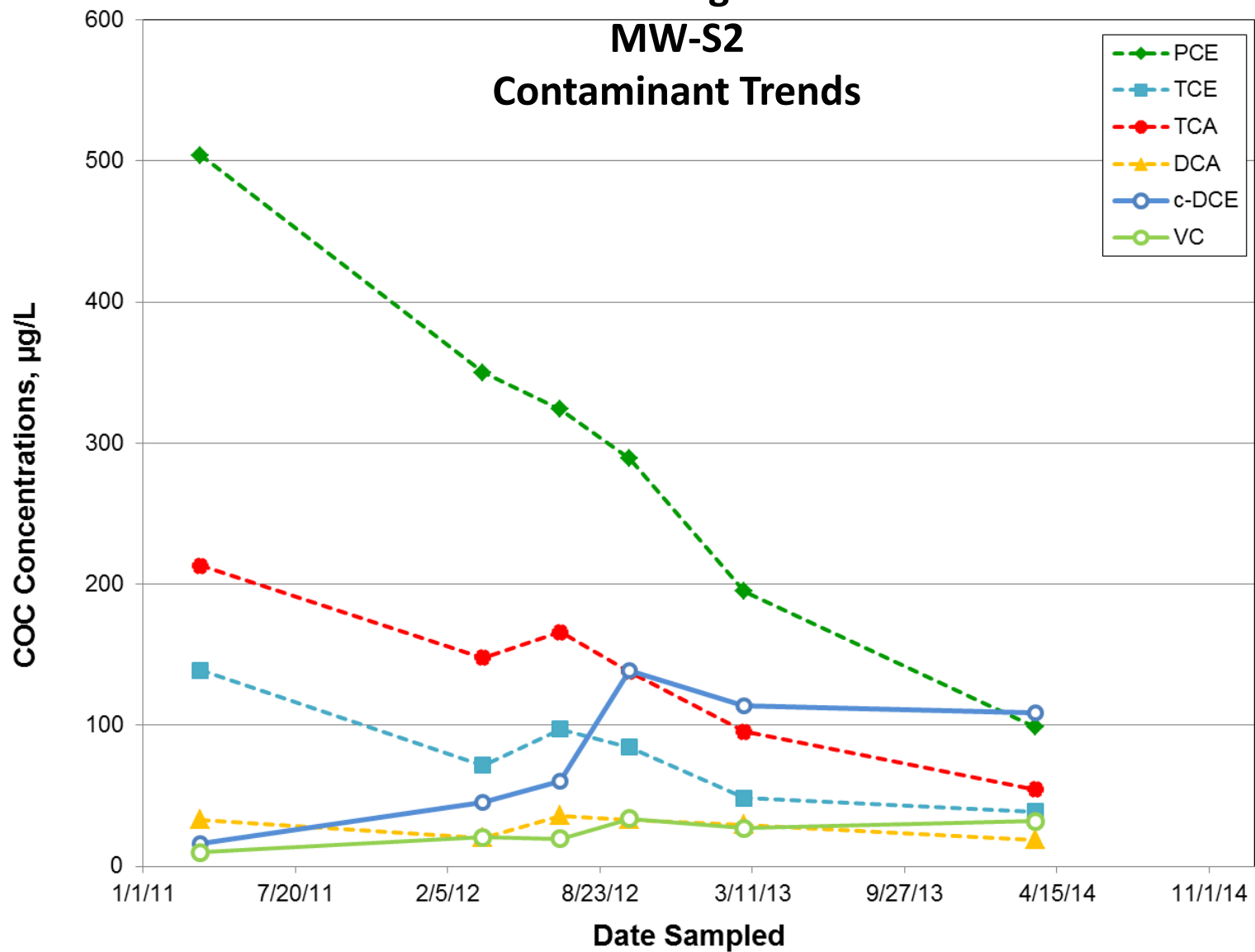
Source Treatment Zone

Contaminant Trends in
Secondary Source Treatment Zone
Down Gradient Wells

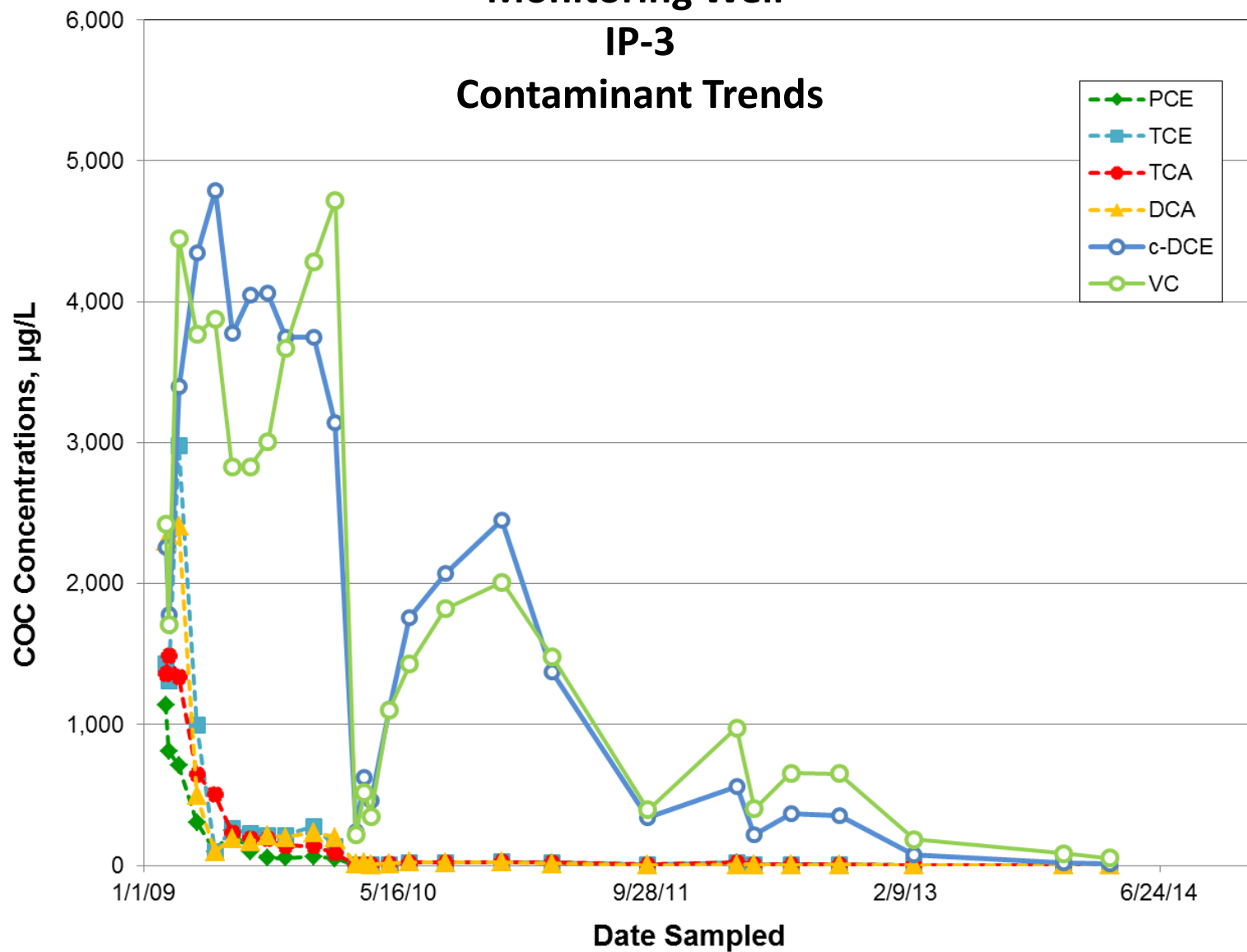




Monitoring Well MW-S2 Contaminant Trends

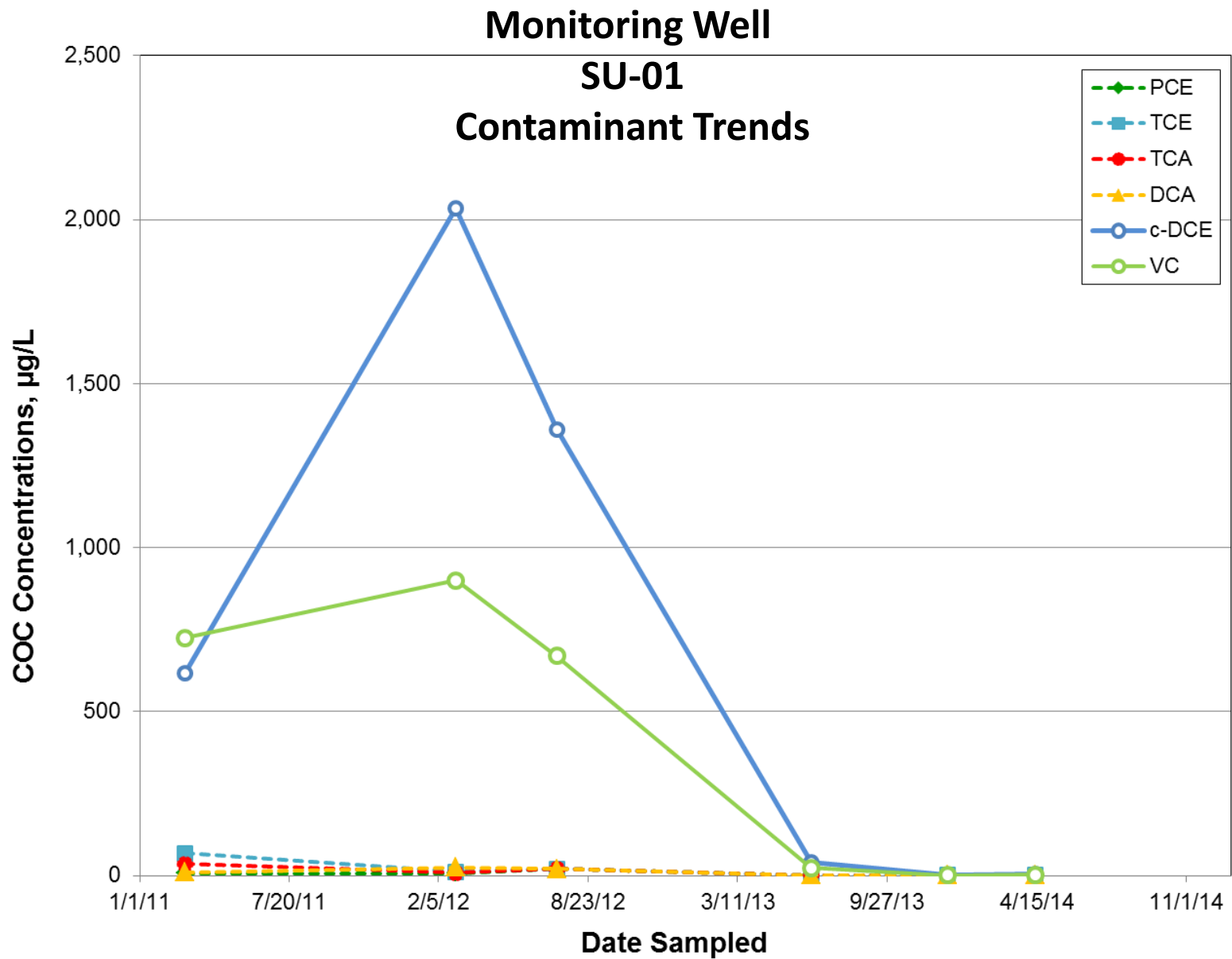


Monitoring Well IP-3 Contaminant Trends

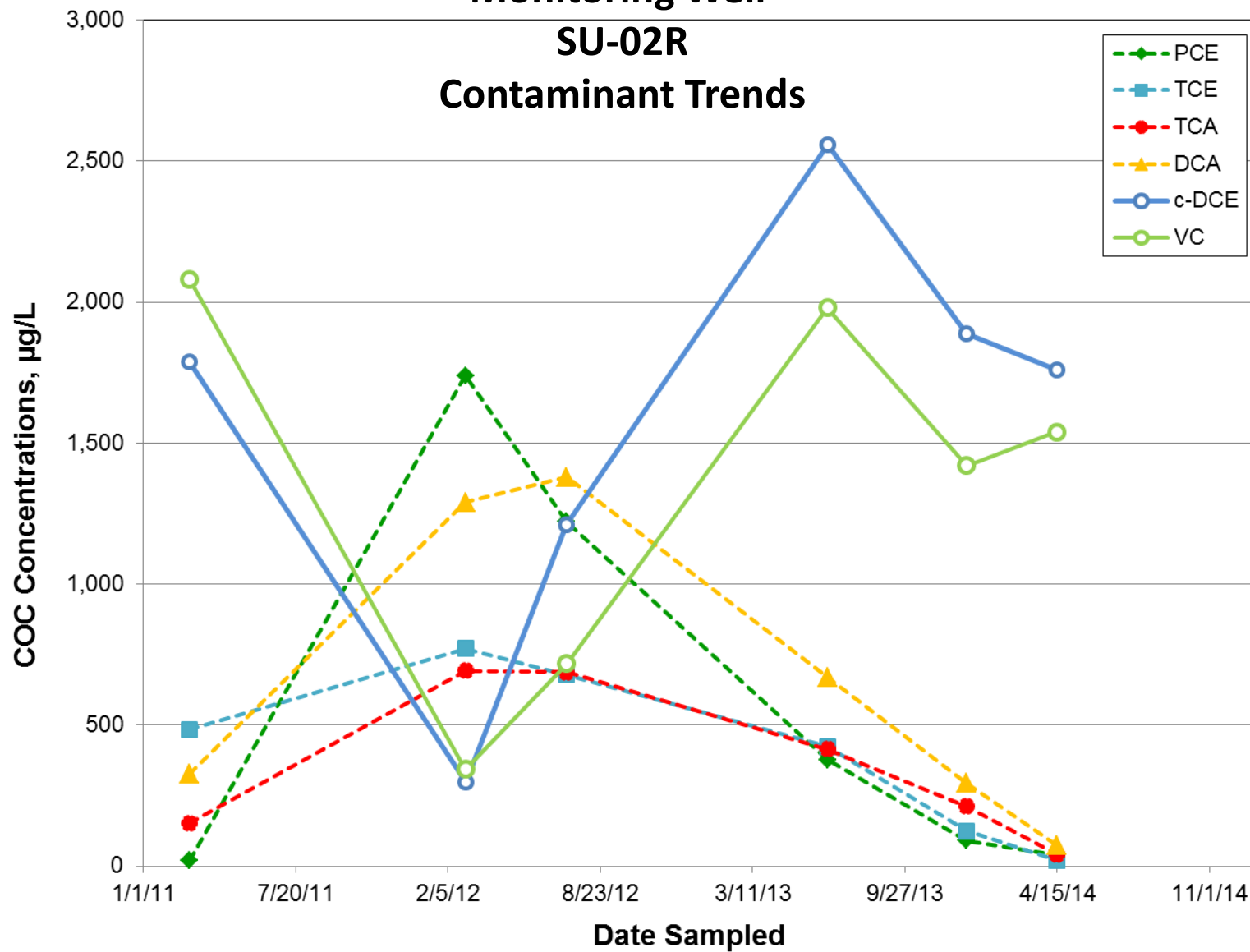


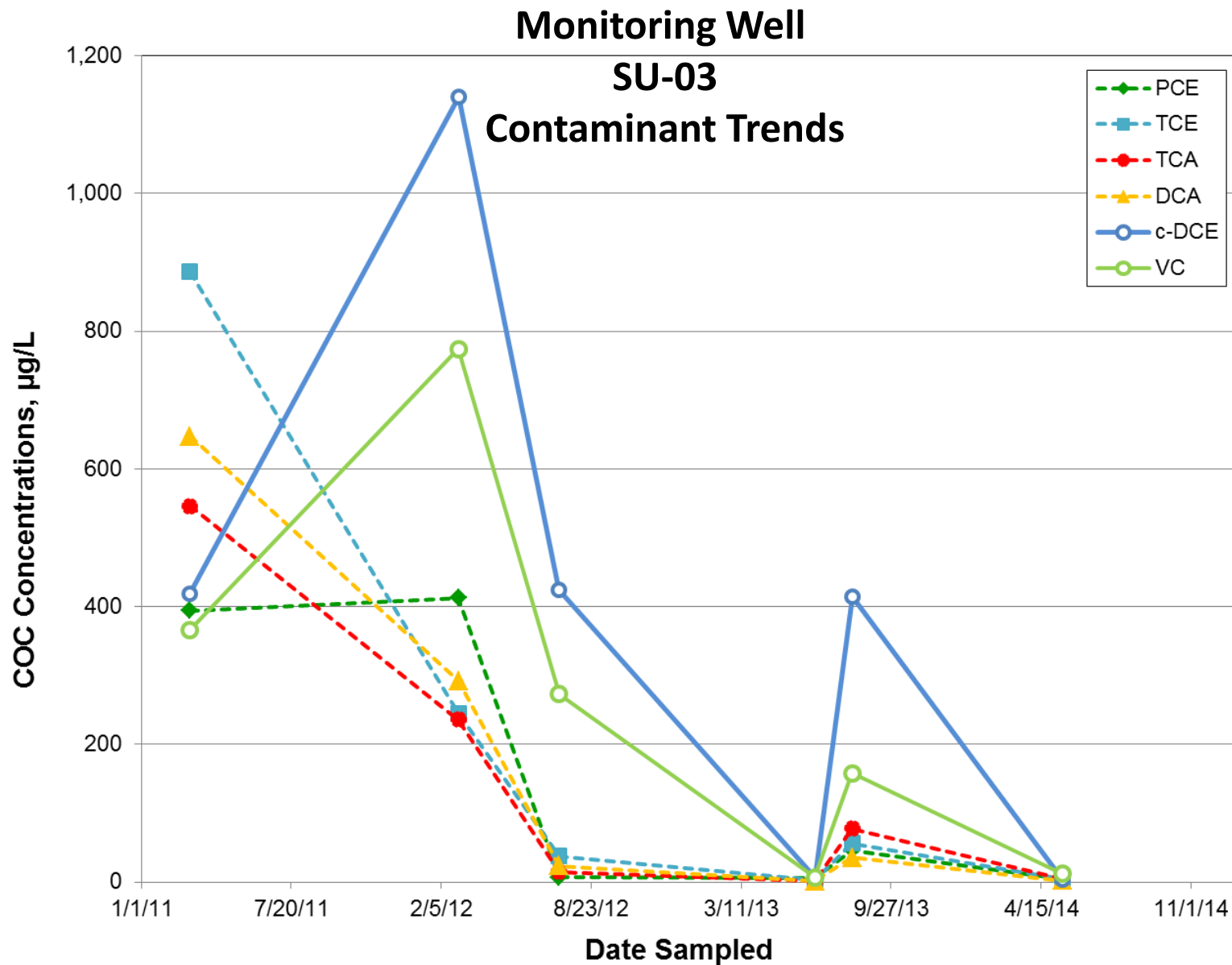
Source Treatment Zone

Contaminant Trends in
Secondary Source Treatment Zone
Up Gradient Wells

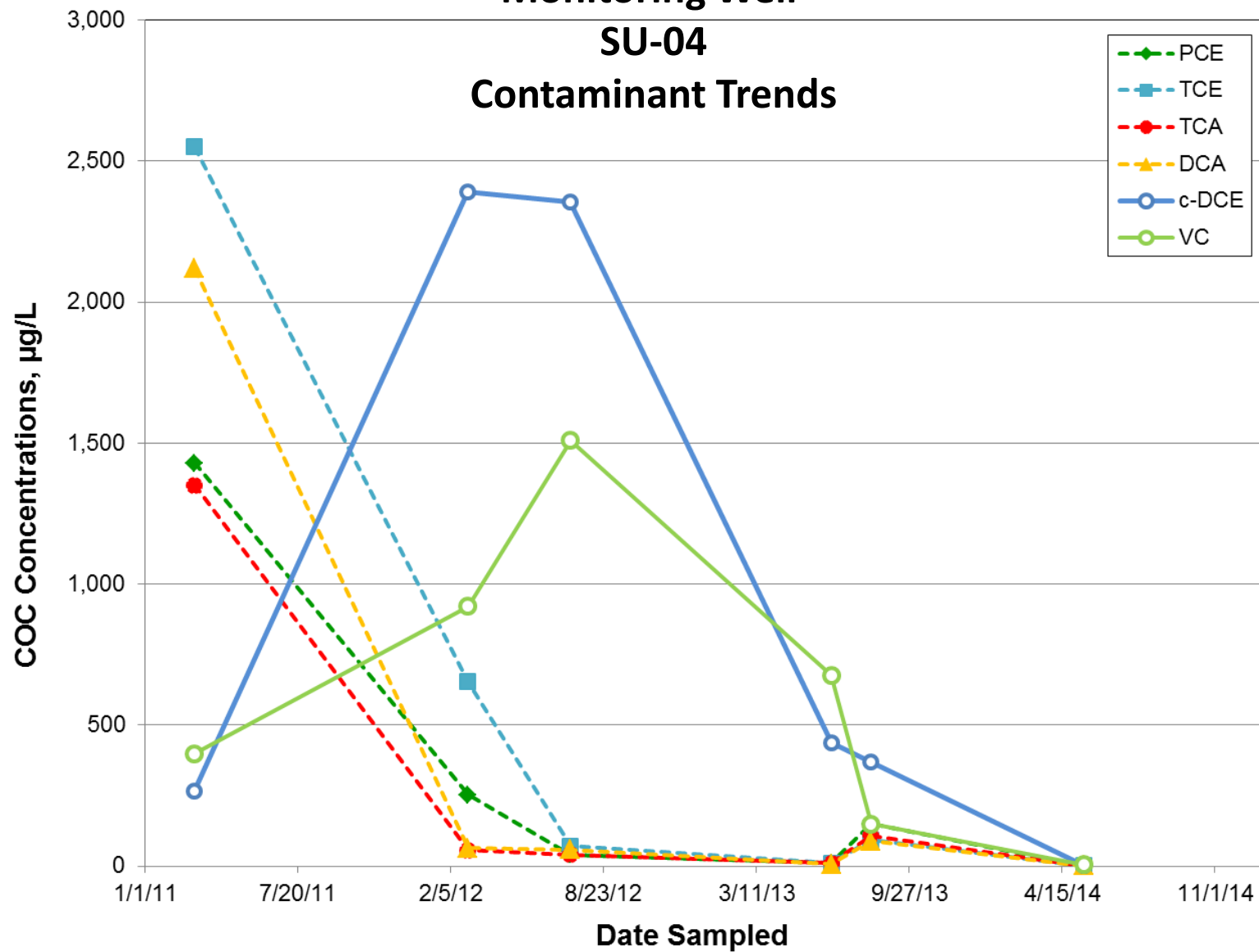


Monitoring Well SU-02R Contaminant Trends

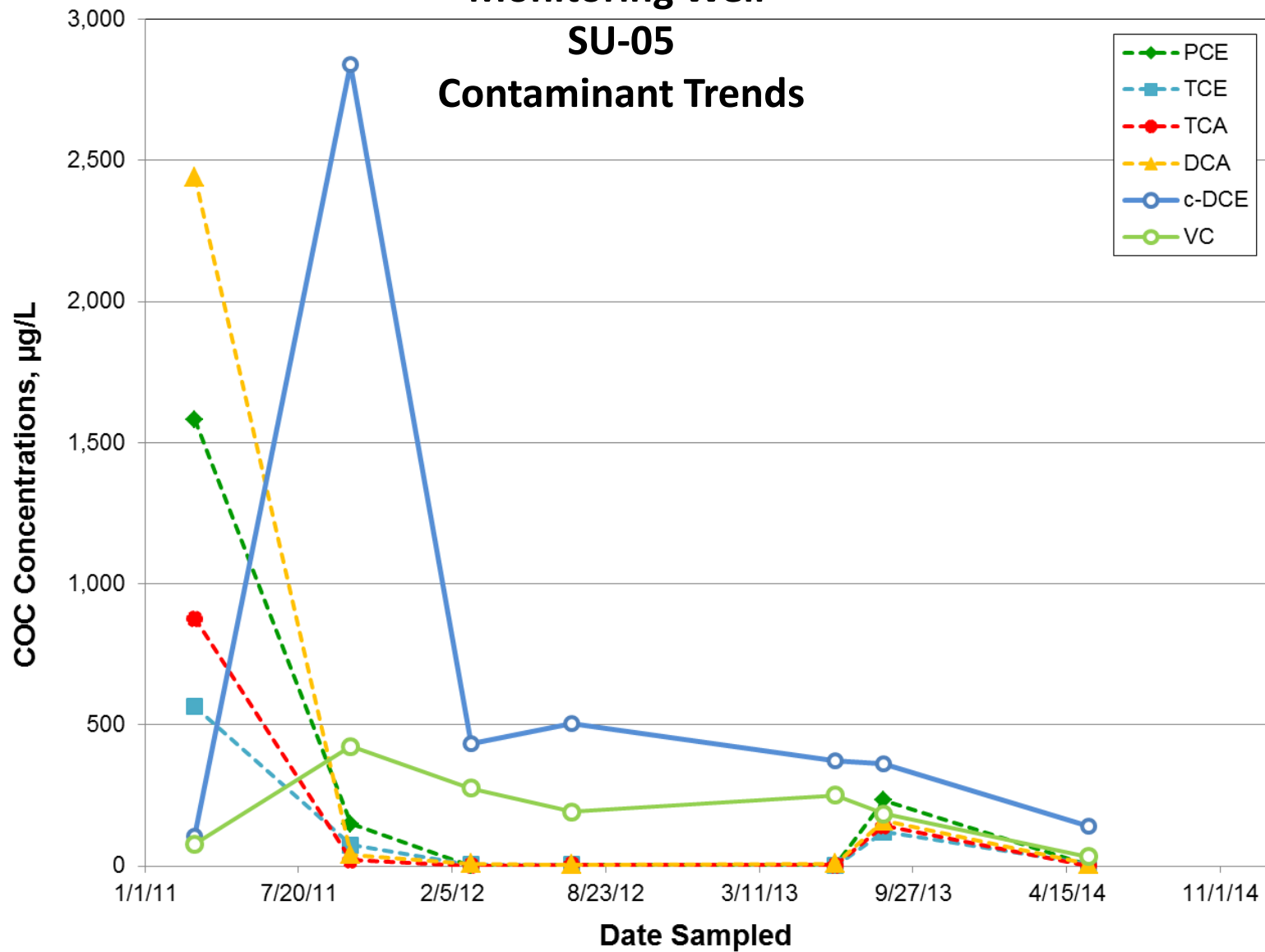




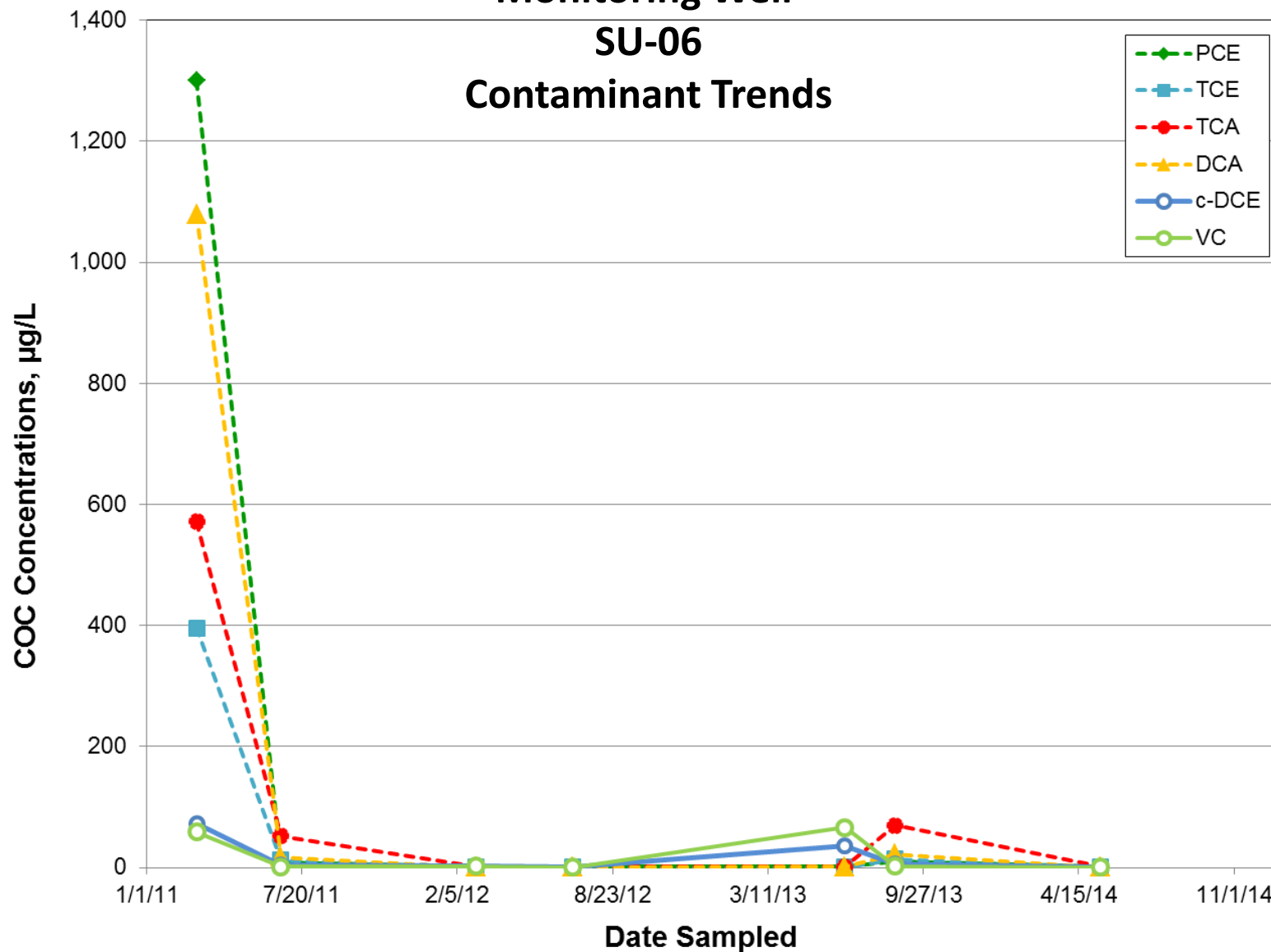
Monitoring Well SU-04 Contaminant Trends



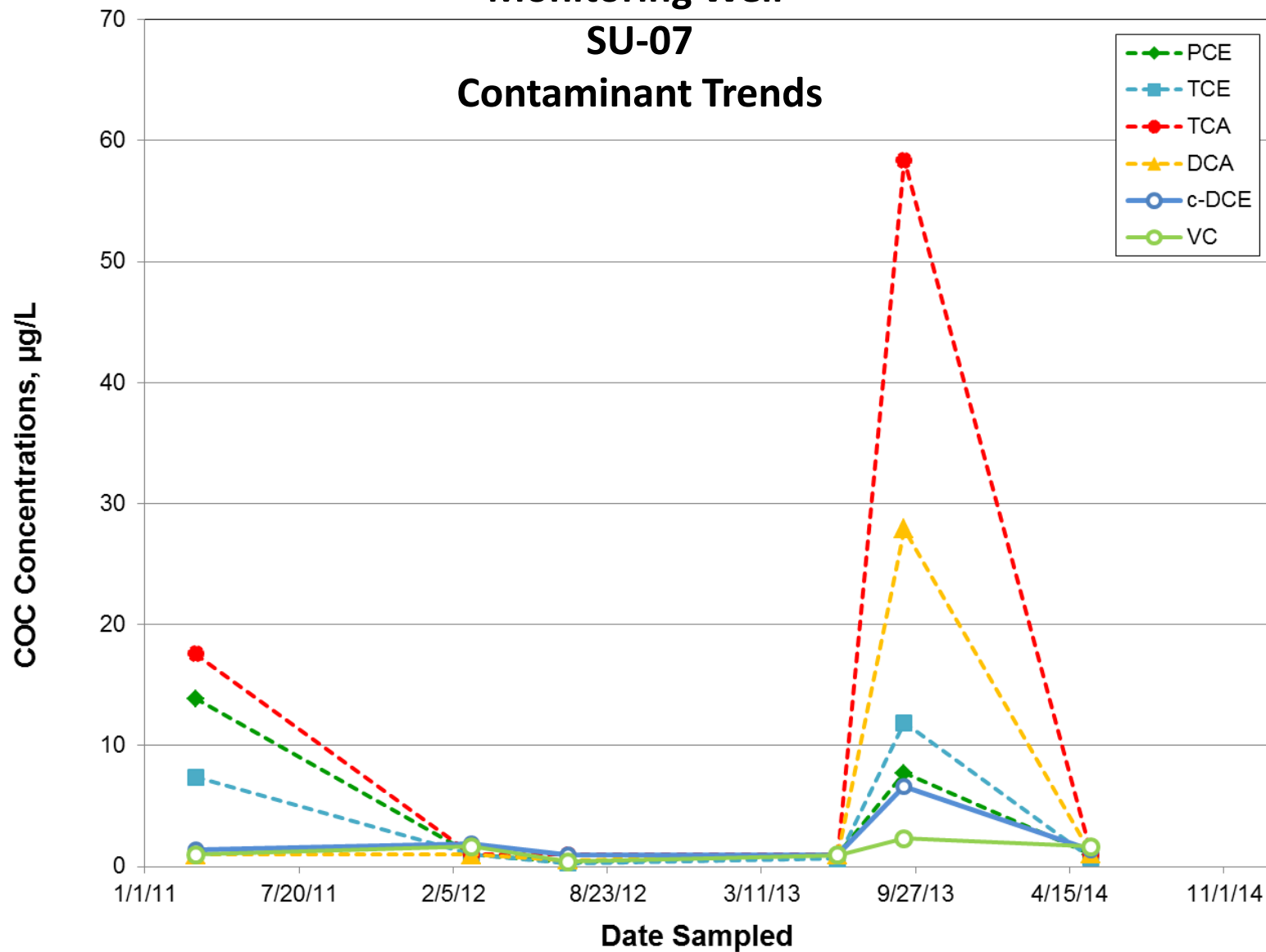
Monitoring Well SU-05 Contaminant Trends



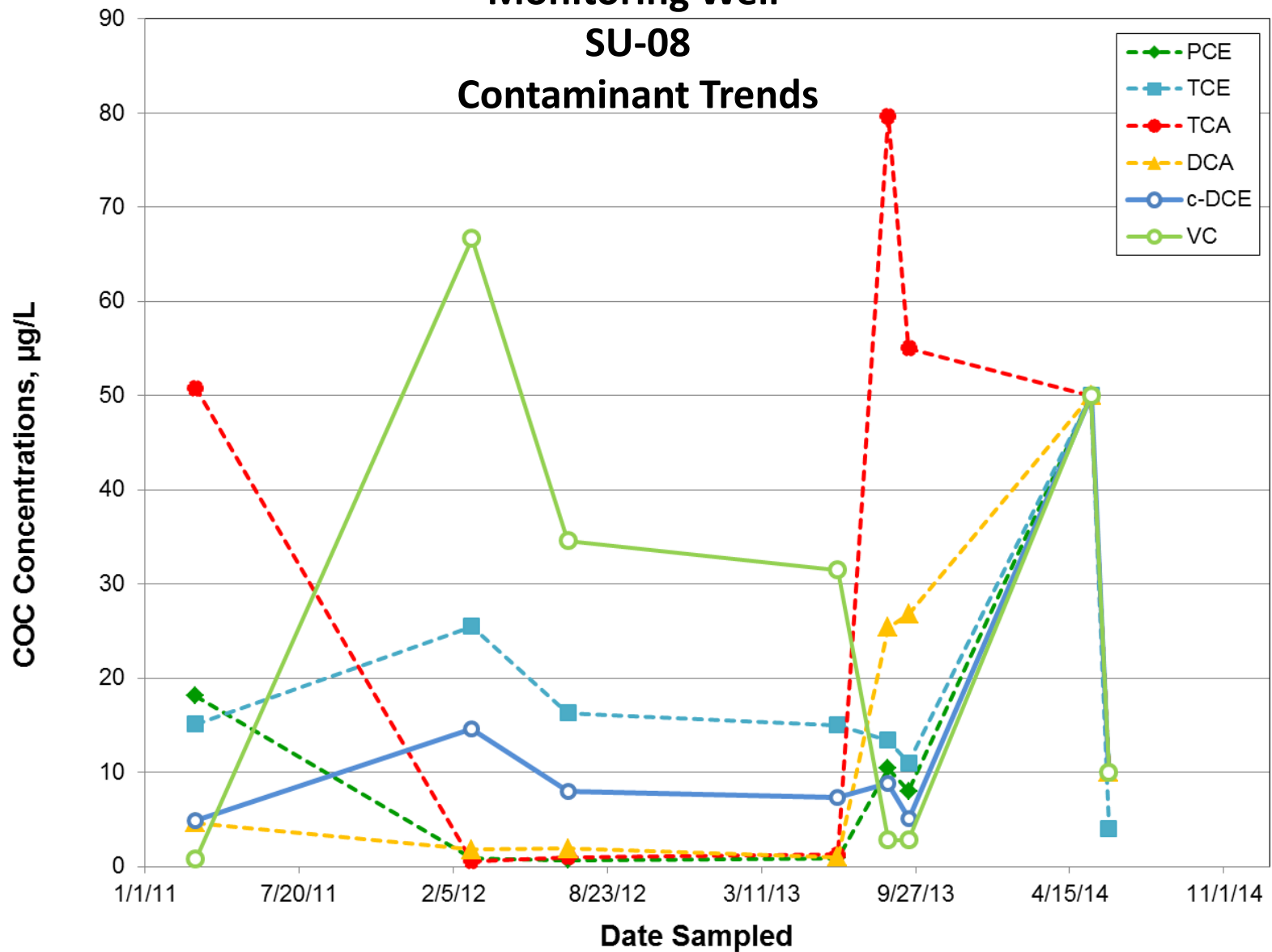
Monitoring Well SU-06 Contaminant Trends



Monitoring Well SU-07 Contaminant Trends



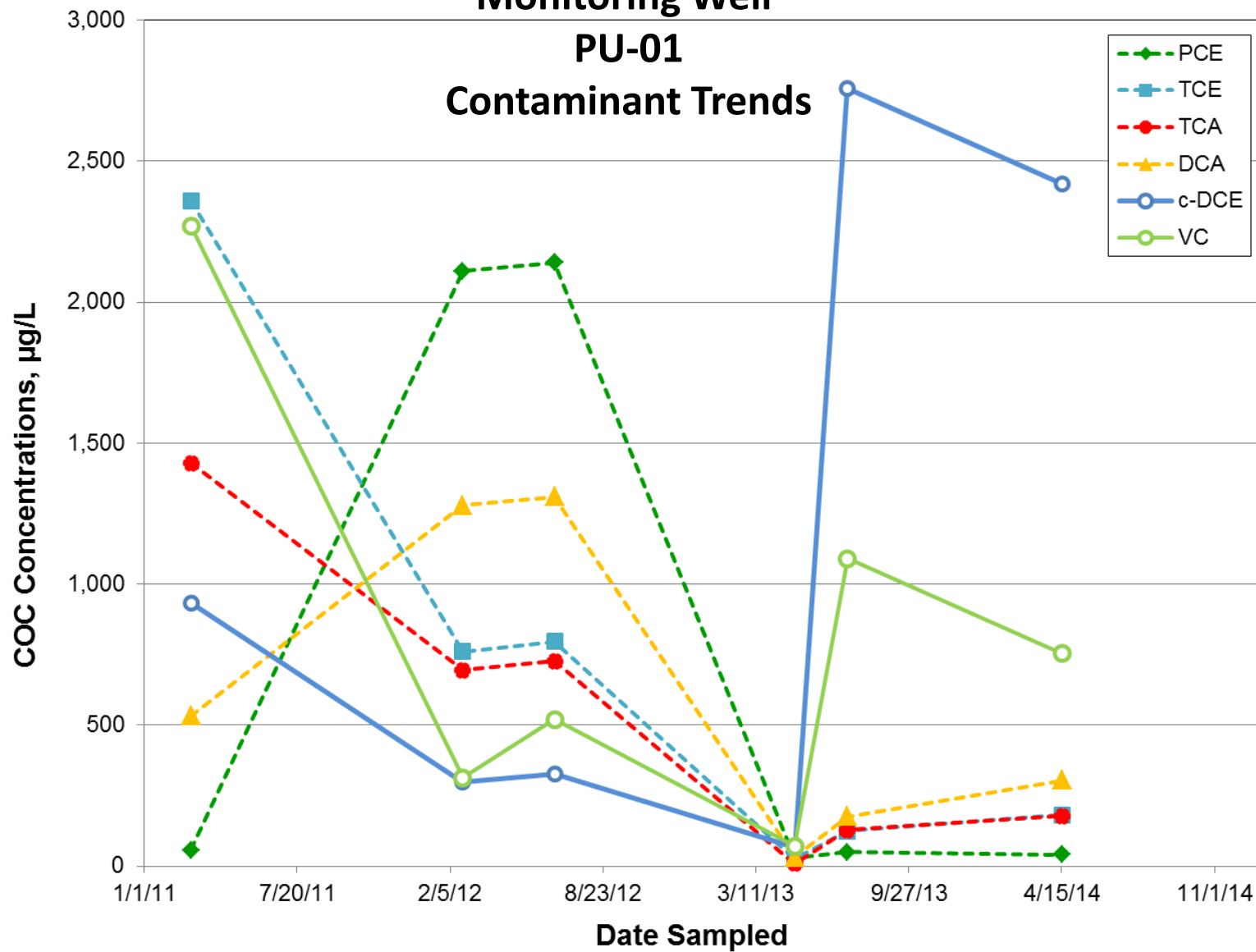
Monitoring Well SU-08 Contaminant Trends



Source Treatment Zone

Contaminant Trends in
Primary Source Treatment Zone
Up Gradient Wells

Monitoring Well PU-01 Contaminant Trends



Monitoring Well PU-02 Contaminant Trends

