Five-Year Review Report

Second Five-Year Review Report
for
Peak Oil Company/Bay Drum Company
EPA ID FLD004091807

Tampa
Hillsborough County, Florida

September 2010

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For:
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Approved by:

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S.R. 574
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List of Acronyms

ARAR	Applicable or Relevant and Appropriate Requirement
AMD	Record of Decision Amendment
Bay Drum	Bay Drum Company
BLRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
COC	Contaminant of Concern
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FFS	Focused Feasibility Study
FYR	Five-Year Review
MCL	Maximum Contaminant Level
mg/kg	milligram per kilogram
µg/L	microgram per liter
NCP	National Contingency Plan
NPL	National Priorities List
OSWER	Office of Solid Waste and Emergency Response
OU	Operable Unit
O&M	Operation and Maintenance
Peak Oil	Peak Oil Company
PCB	Polychlorinated Biphenyl
POTW	Publicly Owned Treatment Works
PRG	Preliminary Remediation Goal
PRP	Potentially Responsible Party
RAO	Remedial Action Objectives
Reeves	Reeves Southeastern Galvanizing Superfund Site
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
RRA	Resource Recovery Association, Inc.
SVOC	Semi-Volatile Organic Compound
SWFWMD	Southwest Florida Water Management District
TBC	To-Be-Considered criteria
VOC	Volatile Organic Compound

Executive Summary

Introduction

The Peak Oil Company (Peak Oil) and the Bay Drum Company (Bay Drum) were originally listed as two separate National Priorities List (NPL) sites, which now make up the single Peak Oil Co./Bay Drum Co. Superfund site (Site) located in Tampa, Florida. Peak Oil and Bay Drum are adjacent to each other and consist of 4 acres and 14.8 acres, respectively. Additionally, the ground water remedy at the Site includes remedial components that affect portions of another Superfund site, the Reeves Southeastern Galvanizing Superfund site (Reeves), which is located to the north of the Site. Ground water contamination is present at Reeves, and is separate from the existing ground water contamination at the Site. Separate remedial actions are being implemented at the Site and at Reeves to treat the respective ground water contaminations.

Peak Oil operated a waste oil re-refinery at the Site beginning in 1954. The Peak Oil facility accepted used auto and truck crankshaft oils, with some hydraulic oil, transformer oil and other oils. By 1979, Peak Oil operations were limited to the resale of used oils as fuel and floatation oil, and the repackaging of virgin material. During facility operations, spills and leaks occurred from on-site storage tanks, tanker trucks, oil/water separators and other equipment. Waste was also reportedly stored in on-site lagoons. In 1986, the U.S. Environmental Protection Agency (EPA) implemented a removal action to treat sludge that was found in the remaining lagoons. The lagoons have since been closed.

Bay Drum began drum reconditioning operations at the Site beginning in 1962. During facility operations, drums were stored across the entire site property, although a two-acre portion of the facility served as the primary drum storage area. Beginning in 1984, while being operated by the Resource Recovery Association Inc. (RRA), the facility accepted waste roofing shingles for approximately two-and-a-half years. In 1989, EPA removed approximately 70,000 cubic yards of waste roofing shingles from Bay Drum. In 1990, EPA conducted a removal action to remove contaminated soil, hazardous waste drums and bags of pesticides stored at the Site.

In 1984, EPA jointly evaluated the Peak Oil and Bay Drum sites according to the Hazard Ranking System and proposed the sites for listing on EPA's NPL. The Peak Oil and Bay Drum sites were combined into one site and finalized on the NPL in June 1986. The primary contamination risk at the Site is the presence of volatile organic compounds (VOCs), semi-VOCs (SVOCs), metals and polychlorinated biphenyls (PCBs) in soil; and VOCs and metals in ground water. The triggering action for this Five-Year Review (FYR) was the signing of the previous FYR on September 23, 2005.

Remedial Action Objectives (RAOs)

The RAOs established in the statement of work for the remedial design and remedial action at operable unit 1 (OU1), OU2 and OU3 of the Site include:

- Prevent or mitigate the continued release of hazardous substances, pollutants and contaminants to the overburden and bedrock, surficial or Floridan aquifers; surface water bodies and sediments.
- Eliminate or reduce the risks to human health associated with direct contact or inhalation of hazardous substances, pollutants or contaminants within the Site.
- Eliminate or minimize the threat posed to human health and the environment from current and potential migration of hazardous substances in the surface water, ground water, subsurface soil, surface soil and rock at the Site.
- Reduce concentrations of hazardous substances, pollutants and contaminants in the surface water, ground water, surface soil and subsurface soil within the Site to levels specified by the performance standards.
- Reduce the volume, toxicity and mobility of hazardous substances, pollutants or contaminants at the Site.
- Continued prevention of on-site and off-site exposure to humans through ingestion, direct contact and inhalation of impacted ground water in the surficial and Floridan aquifers.

Remedial Components

The Site has four OUs to address the contamination at the Site. The Record of Decision (ROD) for OU1 was signed in June 1993 to address soil contamination at the Peak Oil site. The ROD was modified once through an Explanation of Significant Differences (ESD) in June 2000. The current remedy called for:

- Demolition of buildings, fence and railroad tracks.
- Construction of a slurry wall around impacted soils.
- Construction of a chain-link fence with warning signs around the Site.
- Solidification/stabilization of lead-impacted soils and of the ash pile.
- On-site disposal of solidified/stabilized soil and ash beneath a geosynthetic clay liner cap.
- Institution of deed restrictions.

All of the soil and ash contaminated above cleanup goals established in the 2000 ESD has been solidified/stabilized and is contained beneath the geosynthetic clay liner cap and is surrounded by a slurry wall.

The ROD for OU2 was signed in August 1993 to address the ground water contamination at the Site. The ROD was modified once through an amended ROD (AMD) issued by EPA in January 2005. The AMD eliminated the ground water removal and treatment component of the cleanup approach in the 1993 ROD and replaced it with in-situ bioremediation of chlorinated VOCs via the injection of an organic substrate (i.e., vegetable oil) and monitored natural attenuation. The selected remedy also calls for the implementation of institutional controls to restrict ground water well installation at the Site, and annual notifications to the Florida Department of Environmental Protection (FDEP) and interested parties about the institutional controls in place. Three locations have been established as vegetable oil injection sites: along the Peak Oil/Bay Drum northern property line, along the Reeves southern property line bordering Broadway Avenue, and at the northwestern end of the Reeves property. Two vegetable oil injections have been completed to address the ground water contamination along the Peak Oil/Bay Drum

northern property line. Vegetable oil injections still need to be planned at the remaining locations on the Reeves property. The goal of the selected remedy is to restore ground water to federal and state drinking water standards.

The ROD for OU3 was signed in March 1993 to address soil contamination and the Bay Drum site. The ROD was modified once through an ESD in June 2000. The current remedy called for solidification/stabilization of contaminated soils; excavation and disposal of contaminated soil and sediment; off-site disposal of non-hazardous debris and shingle debris; construction of a low-permeability clay cap over stabilized material; construction of a fence with warning signs; and recording deed notices with Hillsborough County advising that hazardous constituents are disposed of on site. The 2000 ESD for OU3 established new cleanup goals for chlordane and lead and excavation and disposal criteria for chlordane impacted soils at the Site. The soil contaminated above cleanup goals established in the 2000 ESD has been solidified/stabilized and is contained beneath a low-permeability clay cap. Non-hazardous debris and shingle debris has been disposed of off site and a fence with warning signs has been constructed around the Site.

The selected remedy described in the ROD for OU4, which was signed in June 1994, addresses the fourth and final OU that consists of two wetlands, the Central Wetland and the South Wetland. The selected remedy is a "no-action" remedy that will include ecological monitoring of the wetlands. The purpose of the selected remedy is to monitor the ecologic status of the Central and South wetlands as the OU1, OU2 and OU3 remedies are being implemented and to ensure that conditions in the wetlands are protective of human health and the environment.

Technical Assessment

The assessment of the Site for this FYR is based on a review of documents, which include RODs, ESDs, AMDs, reports, sampling and monitoring plans, community interviews and the previous FYR report, as well as ARARs, risk assumptions and a site inspection. The selected remedies for OU1, OU2, OU3 and OU4 are functioning as intended by the decision documents for the Site. There have been no changes to the physical conditions at the Site that would affect the selected remedies.

Contaminated soils at OU1 and OU3 remain contained at the Site by solidification and stabilization and are covered by low permeability caps that prevent contaminant migration. A locked fence limits access to the Site and warning signs identify the Site as a Superfund site. Vegetative covers have been established and maintained on the capped portions of the Site to prevent erosion and maintain the integrity of the caps. Restrictive covenants were placed on Peak Oil and Bay Drum in March 2004 and May 2004, respectively, to restrict any land use activities that would interfere with the remedial components required at OU1 and OU3. The Site is located within a ground water delineated area, which restricts the construction of potable water wells and ground water use at or surrounding the Site. O&M and site inspections are conducted regularly to maintain the remedial components and ensure that they are functioning properly.

The air sparging system continues to treat the ground water contamination located near monitoring well B-7 at OU2. The initial vegetable oil injections used to treat ground water contamination at OU2 were not as effective as anticipated. Subsequently, an additional round of

injections was completed and this additional round of injections is projected to adequately address remaining ground water contamination. Because the remaining vegetable oil injections are planned at the Reeves property as part of the selected remedy, EPA, FDEP, Peak Oil/Bay Drum and Reeves need to determine when vegetable oil injections at the locations on the Reeves property should be completed and whether concerns about migration of metal contamination at Reeves still exists. Institutional controls are in place to prevent the construction of wells and use of ground water at the Site and in areas surrounding the Site. The plume at the Site has VOC contamination, and a vapor intrusion assessment has not been conducted. If future development plans for areas surrounding the Sites where VOC contamination is present may include the construction of buildings, a vapor intrusion assessment would need to be performed.

The "no-action remedy" selected for OU4 remains in place. However, during an ecological monitoring event completed in 2002, zinc was detected in sediment at the wetlands. Zinc is not a contaminant of concern (COC) at the Site, but is a COC at Reeves. The potentially responsible parties (PRPs) are willing to complete further remediation in the wetlands area to ensure no exposure pathways are created in the future. To ensure that the remedy at OU4 remains protective, the remaining contamination in the OU4 wetlands need further evaluation.

Conclusion

The selected remedy for OU1 is protective because contaminated soils, sediments and ash at the Peak Oil site have been solidified and stabilized beneath a cap on site and are contained within a slurry wall. The cap and slurry wall are in good working condition and are preventing the spread of contamination. A vegetative cover has been established on the cap to help prevent erosion and O&M is completed regularly to maintain the cap. A locked fence limits access to the Site and warning signs are posted around the perimeter of the Site along the fence. Institutional controls in the form of restrictive covenants are in place at the Site limiting future land uses to prevent any interference with the remedial components required for OU1 to remain protective.

The remedy for OU2 is protective because ground water contamination continues to be treated by vegetable oil injections, monitored natural attenuation and air sparging, and ground water continues to be monitored regularly. For the OU2 remedy to remain protective in the future, more vegetable oil injections might be needed to adequately treat the remaining contamination and ensure that contaminant concentrations are decreasing. In addition, it might be necessary to determine if metals at Reeves will be mobilized by the vegetable oil injections.

The selected remedy for OU3 is protective because contaminated soil has been excavated and solidified/stabilized beneath a cap on site. The cap is in good working condition and is preventing the spread of contamination. A vegetative cover has been established on the cap to help prevent erosion, a drainage ditch prevents ponding and ground water is monitored regularly to ensure that there is no contaminant migration. The cap for OU3 is located within the fenced area of the Site. Institutional controls in the form of restrictive covenants are in place at the Site limiting future land uses to prevent any interference with the remedial components required for OU3 to remain protective.

The remedy for OU4 is protective because the contaminant concentrations at OU4 have not changed and monitoring at OU1, OU2 and OU3 continues to ensure that contaminants from the Site are not migrating to the wetlands area. Although the selected remedy is a "no-action" remedy with ecological monitoring, zinc sediment contamination has been detected during ecological monitoring completed at the wetlands. To ensure that the remedy at OU4 remains protective, further evaluation might be necessary to determine what is needed to address the remaining contamination in the OU4 wetlands.

Because the remedial actions at all OUs are protective in the short term, the Site's remedy is protective of human health and the environment in the short term.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name *(from CERCLIS)*: Peak Oil Co./Bay Drum Co.		
EPA ID *(from CERCLIS)*: FLD004091807		
Region: 4	**State:** FL	**City/County:** Tampa, Hillsborough County

SITE STATUS	
NPL status: ☒ Final ☐ Deleted ☐ Other (specify)	
Remediation status (choose all that apply): ☐ Under Construction ☒ Operating (OU2) ☒ Complete (OU1, OU3 and OU4)	
Multiple OUs?* ☒ YES ☐ NO	**Construction completion date:** 09/26/2006
Has site been put into reuse? ☐ YES ☒ NO	

REVIEW STATUS	
Lead agency: ☒ EPA ☐ State ☐ Tribe ☐ Other Federal Agency	
Author name: Christy Fielden and Treat Suomi (reviewed by EPA)	
Author title: Associate and Senior Associate	**Author affiliation: E^2 Inc.**
Review period**: 02/02/2010 to 09/23/2010	
Date(s) of site inspection: 03/11/2010	

Type of review:

☒ Post-SARA ☐ Pre-SARA ☐ NPL-Removal only
☐ Non-NPL Remedial Action Site ☐ NPL State/Tribe-lead
☐ Regional Discretion

Review number: ☐ 1 (first) ☒ 2 (second) ☐ 3 (third) ☐ Other (specify)

Triggering action:

☐ Actual RA Onsite Construction at OU# ☐ Actual RA Start at OU#
☐ Construction Completion ☒ Previous Five-Year Review Report
☐ Other (specify)

Triggering action date *(from CERCLIS)*: 09/23/2005

Due date *(five years after triggering action date)*: 09/23/2010

* ["OU" refers to operable unit.]

** [Review period should correspond to the actual start and end dates of the Five-Year Review in CERCLIS.]

Five-Year Review Summary Form (continued)

Issues:

1) Zinc sediment contamination remains in the OU4 wetlands, and natural processes may not be adequate to reduce contaminant concentrations to levels that are protective.
2) Off-site bioremediation injections, as proposed in the OU2 remedial design, were not performed at the Reeves property because of concerns about mobilizing metals at Reeves.
3) Ground water contaminant concentrations have not decreased at expected rates at OU2 following vegetable oil injections.
4) Increase of vinyl chloride concentration in floridan.

Recommendations:

1) Conduct further evaluations at OU4 to determine if further remedial actions are needed to address zinc sediment contamination.
2) Evaluate whether completing bioremediation injections will cause the metals at Reeves to become mobilized.
3) Determine if additional vegetable oil injections as required by the AMD are needed to effectively address the remaining ground water contamination at OU2.
4) Evaluate cause of increased vinyl chloride concentration in floridan.

Protectiveness Statement(s):

The selected remedy for OU1 is protective because contaminated soils, sediments and ash at the Peak Oil site have been solidified and stabilized beneath a cap on site and are contained within a slurry wall. The cap and slurry wall are in good working condition and are preventing the spread of contamination. A vegetative cover has been established on the cap to help prevent erosion and O&M is completed regularly to maintain the cap. A locked fence limits access to the Site and warning signs are posted around the perimeter of the Site along the fence. Institutional controls in the form of restrictive covenants are in place at the Site limiting future land uses to prevent any interference with the remedial components required for OU1 to remain protective.

The remedy for OU2 is protective because ground water contamination continues to be treated by vegetable oil injections, monitored natural attenuation and air sparging, and ground water continues to be monitored regularly. For the OU2 remedy to remain protective in the future, more vegetable oil injections might be needed to adequately treat the remaining contamination and ensure that contaminant concentrations are decreasing. In addition, it might be necessary to determine if metals at Reeves will be mobilized by the vegetable oil injections.

The selected remedy for OU3 is protective because contaminated soil has been excavated and solidified/stabilized beneath a cap on site. The cap is in good working condition and is preventing the spread of contamination. A vegetative cover has been established on the cap to help prevent erosion, a drainage ditch prevents ponding and ground water is monitored regularly to ensure that there is no contaminant migration. The cap for OU3 is located within the fenced area of the Site. Institutional controls in the form of restrictive covenants are in place at the Site limiting future land uses to prevent any interference with the remedial components required for OU3 to remain protective.

The remedy for OU4 is protective because the contaminant concentrations at OU4 have not changed and monitoring at OU1, OU2 and OU3 continues to ensure that contaminants from the Site are not migrating to the wetlands area. Although the selected remedy is a "no-action" remedy with ecological monitoring, zinc sediment contamination has been detected during ecological monitoring completed at the wetlands. To ensure that the remedy at OU4 remains protective, further evaluation might be necessary to determine what is needed to address the remaining contamination in the OU4 wetlands.

Because the remedial actions at all OUs are protective in the short term, the Site's remedy is protective of human health and the environment in the short term.

Other Comments:

None.

Second Five-Year Review Report
for
Peak Oil Company/Bay Drum Company Superfund Site

1.0 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 will continue to be protective of human health and the environment. The methods, findings and conclusions of FYRs are documented in FYR reports. 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) prepares FYRs pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) section 121 and the National Contingency Plan (NCP). CERCLA section 121 states:

> "If the President selects a remedial action that results in any hazardous substances, pollutants or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews."

EPA interpreted this requirement further in the NCP; 40 Code of Federal Regulations (CFR) section 300.430(f)(4)(ii), which states:

> "If a remedial action is selected that results in hazardous substances, pollutants or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such actions no less often than every five years after the initiation of the selected remedial action."

E^2 Inc., an EPA Region 4 contractor, conducted the FYR and prepared this report regarding the remedy implemented at the Peak Oil Co./Bay Drum Co. Superfund Site (Site) in Tampa, Hillsborough County, Florida. This FYR was conducted from February to September of 2010. EPA is the lead agency for the FYR. The Bay Drums Site Group and Peak Oil Site Group are the potentially responsible parties (PRPs) responsible for developing and implementing the remedy for the PRP-financed cleanup at the Site. The Florida Department of Environmental Protection (FDEP), as the support agency representing the State of Florida, has reviewed all supporting documentation and provided input to EPA during the FYR process.

This is the second FYR for the Site. The triggering action for this statutory review is the previous FYR. The FYR is required due to the fact that hazardous substances, pollutants or contaminants

remain at the site above levels that allow for unlimited use and unrestricted exposure. The Site consists of four Operable Units (OUs), all of which are addressed in this FYR. The selected remedies for site OUs include:

- OU1 – Excavation and solidification/stabilization of contaminated soil at Peak Oil.
- OU2 – Groundwater in-situ bioremediation and an air sparging system.
- OU3 – Excavation and solidification/stabilization of contaminated soil at Bay Drum.
- OU4 – "No action" with ecological monitoring of wetlands.

2.0 Site Chronology

The following table lists the dates of important events for the Site.

Table 1: Chronology of Site Events

Event	Date
Discovery	January 1, 1981
Preliminary assessment	August 1, 1982
Site inspection	June 1, 1984
Proposal to National Priorities List (NPL)	October 15, 1984
Final listing on NPL	June 10, 1986
Site-wide removal begins	1986
Combined remedial investigation/feasibility study (RI/FS) for OU1 begins	April 24, 1987
Combined RI/FS for OU3 and OU4 begins	February 5, 1988
Combined RI/FS for OU1 completed PRP RI/FS for OU2 begins	March 1, 1988
Administrative order on consent to conduct the RI/FS for OU1 PRP RI/FS for OU1 begins	February 10, 1989
Site-wide removal assessment	September 30, 1991
Health risk assessment for OU1	March 6, 1992
Health risk assessment for OU1	April 15, 1992
Site-wide removal completed	September 30, 1992
Combined RI/FS for OU3 completed and Record of Decision (ROD) for OU3 signed	March 31, 1993
PRP RI/FS for OU1 completed ROD for OU1 signed	June 21, 1993
PRP RI/FS for OU2 completed ROD for OU2 signed	August 9, 1993
Combined RI/FS for OU4 completed ROD for OU4 signed	June 28, 1994
Administrative order on consent	July 18, 1995
PRP remedial design for OU1, OU2 and OU3 begins	December 7, 1995
Consent Decree for OU1, OU2 and OU3	June 20, 1997
PRP remedial design for OU4	February 19, 1998
Administrative order on consent	July 23, 1998
Site-wide removal begins	December 16, 1999
Site-wide removal completed	December 18, 1999
Explanation of Significant Differences (ESD) for OU1 and OU3 signed	June 26, 2000
PRP remedial design for OU1 and OU3 completed and remedial action for OU1 and OU3 begins	September 22, 2000
PRP remedial action for OU1 and OU3 completed	September 26, 2001
Administrative order on consent	July 10, 2002
OU1 restrictive covenant	March 17, 2004
OU3 restrictive covenant	May 20, 2004
Record of Decision Amendment (AMD) for OU2 signed	January 1, 2005
PRP remedial design for OU2 completed PRP remedial action for OU2 begins	January 11, 2005
First FYR signed	September 23, 2005
Preliminary close-out report for OU2 Construction Completion	September 26, 2006

3.0 Background

3.1 Physical Characteristics

The Peak Oil Co. (Peak Oil) and Bay Drum Co. (Bay Drum) sites were two separate National Priorities List (NPL) sites that now make up the Peak Oil Co./Bay Drum Co. Superfund site (Site) located in Tampa, Florida (Figure 1). The Peak Oil and Bay Drum sites were later combined under the EPA ID for Peak Oil, which is FLD004091807. The unique EPA ID for Bay Drum is FLD088783865. Peak Oil and Bay Drum consist of 4 acres and 14.8 acres, respectively. The Site is located on Reeves Road and is bordered on the north by CSX railroad tracks. The Reeves Southeastern Galvanizing Superfund Site (Reeves) is located directly north of Bay Drum. The Site is located in an industrial area and is zoned for light manufacturing and commercial use. The nearest residential area is approximately one-third of a mile east and is hydraulically upgradient of the Site. The Hillsborough County property parcel numbers for the Site include U-07-29-20-ZZZ-000002-40090.0, U-07-29-20-ZZZ-000002-40170.0, U-07-29-20-ZZZ-000002-40120.0, U-07-29-20-ZZZ-000002-40130.0, and U-07-29-20-ZZZ-000002-40110.0.

Soil, sediment, ash and ground water at the Site were contaminated as a result of industrial processes, which included oil re-refining, oil filtering and blending and storage. OU1 and OU3 are designated as the source contamination areas and are located at Peak Oil and Bay Drum, respectively. OU2 is designated at the Site's ground water contamination in the Floridan and surficial aquifers beneath the Site. OU4 is designated as the Site's wetland contamination areas, which includes the Central and South Wetlands. The North Wetland is located north-northwest of the Site beyond the CSX railroad tracks. The North Wetland collects water from the area just south of State Road 574 via culverts installed below the road and the CSX railroad. Discharges from the North Wetland overflow into the north-running ditch along the western border of the Reeves facility. The Central Wetland is located directly south of Bay Drum and has no surface outlet. The South Wetland is located southeast of the Site. The OU4 wetlands are not being affected by site-impacted ground water as determined by an evaluation of the surficial ground water flow at the Site, which showed that site-impacted ground water does not typically discharge into the Central and South Wetlands.

Figure 1: Site Location Map

Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site, and is not intended for any other purpose.

Figure 2: Detailed Site Map

Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site, and is not intended for any other purpose.

3.2 Land and Resource Use

Previous use of Peak Oil included operating an oil waste re-refinery beginning in 1954. In 1979, oil re-refinery operations ceased and Peak Oil shifted to filtering and blending of waste oil for resale. Bay Drum was previously used for drum reconditioning and storage beginning in 1962, and operated until sometime between 1982 and 1984. The Site is located in an area that is primarily industrial or undeveloped and this is not expected to change in the near future. The Site is zoned for light manufacturing and commercial use, and is currently not in reuse. No reuse is currently planned for the Site due to the ongoing site remediation. Any future land use at the Site is likely to continue to be industrial.

The ground water remedy at the Site includes remedial components that affect portions of another Superfund site, the Reeves Southeastern Galvanizing Superfund site (Reeves), which is located to the north of the Site. Although ground water contamination is present at Reeves, it is separate from the ground water contamination being addressed at the Site. Separate remedial components are being implemented at the respective sites to address existing ground water contamination. A private well survey was completed in 1992 in the area surrounding the Site as part of the remedial design for OU2. In September 2002, a targeted well survey was completed to re-verify well locations and uses near the Site. The 2002 survey focused on the area within a 1,500-foot radius of the Site. Because ground water beneath the Site is known to flow towards the north-northwest, a larger area to the north-northwest of the Site was also surveyed to ensure inclusion of the entire ground water plume area. The survey identified 22 water supply wells. None of the wells are used for drinking water purposes and have not been found to impact the flow of the ground water plume. The nearest water supply well is located approximately 800 feet northeast of the Site's plume. The closest supply well to the north-northwest of the Site is approximately 2.5 miles beyond the plume's leading edge. The Site is located within a ground water delineated area, which restricts the construction of potable water wells and ground water use at or surrounding the Site. Additionally, the Hillsborough County Ordinance 90-35 requires that any new construction of buildings or modifications to existing buildings within 500 feet of a County main water line must use the public water supply system. Public water lines are currently in place within the site area. Restrictive covenants have also been placed on the Site to prevent the installation of any on-site drinking water wells in the Floridan and surficial aquifers.

3.3 History of Contamination

Peak Oil

In August 1954, the Peak Oil facility was constructed and operations as a waste oil re-refinery began under the ownership of John Schroter. Ownership of Peak Oil was later transferred to Robert Morris in 1975, and waste oil re-refinery operations continued. After 1979, operations were reportedly limited to the resale of used oils as fuel and flotation oil and the repacking of virgin material. Facility operations involved the use of a waste re-refining process to purify waste oils and lubrication fluids. Waste oils accepted at Peak Oil for re-refining consisted primarily of used auto and truck crankcase oil, with

some hydraulic oil, transformer oil and other waste oils. An acid/clay purification and filtration process was used to re-refine the oil. This process generated a low pH sludge and oil-saturated clay, which were stored over the life of the Peak Oil facility in three separate impoundment areas (Lagoons No. 1, 2 and 3). These impoundment areas were located on the southern portion of the Peak Oil property. An oil/water separator connected two of the impoundments.

In approximately 1979 or 1980, Peak Oil discontinued their refining process and shifted to filtering and blending the waste oil for resale as burner fuel or floatation oil. Several company employees reported that spills and leaks continued to occur from on-site storage tanks, tanker trucks, oil/water separators and other on-site equipment after the company shifted its operations from re-refining to filtering and blending. Former employees also reported that some wastes continued to be stored in the on-site lagoons. Lagoon No. 1 and Lagoon No. 3 were backfilled. However, the exact dates of backfilling are unknown. Lagoon No. 2 is the only impoundment at the Site that was not backfilled at the same time as Lagoon No. 1 and Lagoon No. 3. During site operations, Lagoon No. 2 contained up to 12 feet of sludge.

Contamination at the Site was discovered during EPA and FDEP site inspections completed in the early 1980s. Chemical constituents at the Site were identified during inspections conducted by EPA and FDEP in the mid-1980s. In 1986, EPA initiated a removal action utilizing a mobile incinerator to treat approximately 4,000 cubic yards of contaminated sludge from Lagoon No. 2.

Bay Drum

Operations at Bay Drum, which included drum reconditioning and storage, began in 1962. While drums were stored on all portions of Bay Drum, drum reconditioning activities primarily occurred within on-site buildings located on two acres in the northeastern portion of Bay Drum. An aerial photograph of Bay Drum dated October 27, 1965 showed that a berm was constructed on the southern portion of Bay Drum that crossed through the southern one-third of on-site wetlands. When site operations transferred to Tampa Steel Drums between 1974 and 1978, the volume of drums reconditioned at the Site increased. Drums were stored along the western edge of the wetlands in 1975. An aerial photograph from 1977 indicated that a wetland that had presumably been receiving site waste had been backfilled, possibly with materials from the southeast corner of Bay Drum where a new pond had been formed. In 1978, the western portion of the filled wetland area was developed into a wash water holding pond that was known to have received waste from drum reconditioning activities.

Drum reconditioning activities ceased at Bay Drum sometime between 1982 and 1984. Beginning in 1984, Bay Drum operated as Resource Recovery Association, Inc. (RRA) for approximately two-and-a-half years. During RRA operations, waste roofing shingles were deposited on most of Bay Drum at depths ranging from three feet to more than nineteen feet. The intent of RRA was to recycle the shingles as asphalt, but no significant recycling occurred, and Bay Drum essentially operated as an unpermitted dump.

3.4 Initial Response

Peak Oil

The Peak Oil and Bay Drum sites were jointly evaluated and proposed for the National Priorities List (NPL) on October 15, 1984. The Peak Oil and Bay Drum sites were combined into one site and finalized on the NPL on June 10, 1986. In 1986, EPA initiated a removal action utilizing a mobile incinerator to treat approximately 4,000 cubic yards of sludge from Lagoon No. 2 that was contaminated with polychlorinated biphenyls (PCBs). Approximately 6,000 cubic yards of ash were generated during the incineration treatment process. The processed material was left on site where it was covered with protective plastic.

The PRPs for Peak Oil formed the Peak Oil Generators Group. In 1989, the Peak Oil Generators Group entered into a Consent Order with EPA to conduct a remedial investigation/feasibility study (RI/FS) at Peak Oil.

In 1994, two on-site production wells were decommissioned after the RI concluded that wells F-2 and F-3 were causing contaminant migration in the Floridan aquifer. Two Floridan monitoring wells (F-2R and F-3R) were installed near the former location of the production wells. The new wells were properly sealed into the Hawthorn Formation to eliminate the potential for leaking of contamination into the Floridan aquifer from the overlying surficial aquifer. Ground water monitoring in the Floridan aquifer has been conducted since the installation of the monitoring wells.

Bay Drum

In November 1986, EPA issued a CERCLA Section 106 Order to the Bay Drum operator requiring no further dumping on site and the removal of materials currently in place at Bay Drum. Although dumping ceased at Bay Drum, the operator failed to remove the majority of the shingles at the Site. In 1989, EPA removed approximately 70,000 cubic yards of shingles so that they could effectively evaluate the extent of soil contamination at Bay Drum. The shingles were placed on Hillsborough County property adjacent to the Site. The shingles were covered and a fence with warning signs was installed. Approximately 27,000 cubic yards of shingles were left on site because a temporarily high water table made it difficult to remove the remaining shingles without also removing contaminated soils.

Sampling conducted in 1989 revealed the presence of buried drums and sludges, which were later found to be located throughout the entire northeast corner of Bay Drum. Three additional drum burial areas were discovered south of the site buildings on the Hillsborough County property. EPA removed drums, soils and sludges contaminated with volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), pesticides, PCBs and metals from Bay Drum. The drums were decontaminated and disposed of off site, while approximately 4,000 cubic yards of soil and other materials

were temporarily stored in a lined, covered cell built on site. In early 1990, EPA completed a second removal action and shipped the stored soil and materials to a regulated hazardous waste disposal facility in Utah.

Between 1990 and 1992, EPA conducted the RI/FS to further define site contamination, determine exposure risks and evaluate cleanup alternatives. The final RI report was published in July 1992, and the FS report was completed in September 1992.

EPA identified approximately 400 companies who arranged to have drums reconditioned by or sold to Bay Drum Co. and/or Tampa Steel Drums Co. Between 1986 and 1991. EPA issued notice letters to these PRPs advising them of their potential liability. Although the PRPs did not agree to conduct the RI/FS, a group of approximately 60 companies formed a steering committee, known as the Bay Drum Group, for the purpose of negotiating a settlement with EPA for the final cleanup of Bay Drum. In 1997, the Bay Drum Group removed the remaining shingles from the Site.

3.5 Basis for Taking Action

OU1

In 1992, a Baseline Risk Assessment (BLRA) for OU1 and OU3 used soil, sediment and surface water samples at Peak Oil for chemical characterization. The BLRA examined the potential soil exposure pathways to contaminants of concern (COCs) following the removal of soil contamination, which were identified as inhalation, dermal contact or ingestion of contaminated soil, sediment, pond water, vapors or particulates. The 1992 Site Source: Focused Feasibility Study (FFS) established soil cleanup goals at OU1 using data from the 1992 BLRA. Cleanup goals were calculated for on-site trespasser, future on-site workers and future on-site residential scenarios. Table 2 includes the risk-based and ground water protection-based cleanup goals established for the soil and sediment COCs at OU1 to ensure contaminant concentrations remained within EPA's acceptable risk range.

Table 2: Soil and Sediment COCs and Remediation Goals for OU1

Contaminants of Concern	June 1993 ROD Soil and Sediment Cleanup Goals (milligrams/kilogram (mg/kg))
Aroclor-1260	25[a]
Bis(2-ethylhexyl)-phthalate	0.58[b]
Lead	284[c]

a. Risk-based value determined from EPA Guidance on Remedial Actions for Superfund Sites with PCB contamination.
b. Ground water protection-based cleanup goal calculated using the federal maximum contaminant level (MCL).
c. Risk-based value for carcinogens 1.0×10^{-4}. The final cleanup goal of 284 mg/kg is used for lead based on an EPA review of the Peak Oil, Bay Drums and Reeves sites.

OU2

An area-wide RI/FS was conducted between October 1989 and January 1990. Analytical results of ground water indicated the presence of VOCs, SVOCs, inorganic compounds, and some pesticides. In April 1992, a separate BLRA for OU2 and Wetland Impact Study determined that future-use risk scenarios at the Site included on-site residential use and future on-site worker use. Ground water cleanup goals were established for site-specific COCs by comparing risk-based cleanup goals to chemical-specific applicable or relevant and appropriate requirements (ARARs) developed in the RI/FS process. Table 3 includes the ground water cleanup goals based on federal or state primary and secondary drinking water standards, health-based non-cancer reference doses and health-based cancer slope factors to ensure ground water remains within EPA's acceptable risk range.

Table 3: Ground Water COCs and Remediation Goals for OU2

Contaminant	1993 Remediation Goals (microgram/Liter (µg/L))
Surficial Aquifer and Upper Floridan Aquifer	
Acetone	3,000[a]
Benzene	1[b]
1,1-Dichloroethane	2,400[a]
1,2-Dichloroethane	3[b]
1,1-Dichloroethylene	7[c]
1,2-Dichloroethylene (total)	70[c]
Ethylbenzene	700[d]
Methylene chloride[e]	5
Tetrachloroethylene	3[b]
Toluene	1,000[d]
Vinyl chloride	1[b]
Xylenes (total)	10,000[d]
Bis (2-chloroethyl) ether	7[f]
Bis (2-ethylhexyl) phthalate	6[c]
2-Methyphenol	2,000[a]
Naphthalene	100[g]
Antimony	6[c]
Arsenic	50[c]
Beryllium	4[c]
Chromium	100[b]
Lead	15[h]
Sodium	160,000[b]
Vanadium	240[a]
Upper Floridan Aquifer	
Ethylbenzene	30[i]
Xylenes (total)	20[i]
Aluminum	200[i]
Iron	300[i]
Manganese	50[i]
Zinc	5,000[i]

Contaminant	1993 Remediation Goals (microgram/Liter (µg/L))
a. Cleanup goal is based on protection of health from the non-cancer reference dose and future residential exposure assumptions from the BLRA.	
b. Cleanup goal is based on the Florida primary drinking water MCL.	
c. Cleanup goal is based on the federal primary drinking water MCL.	
d. Cleanup goal is based on the MCL goal.	
e. Methylene chloride is also known as dichloromethane.	
f. Cleanup goal is a health-based number derived from the cancer slope factor and the future residential assumptions from the BLRA.	
g. Cleanup goal is a petroleum-contaminated site cleanup criterion as listed in Florida Administrative Code (F.A.C.)17-770 (now F.A.C. 62-770).	
h. Cleanup goal is the federal action level for lead.	
i. Cleanup goal is a Florida secondary drinking water MCL.	

OU3

In July 1992, the BLRA determined that potential exposure to soil contamination at OU3 through future uses at the Site included inhalation, dermal contact or ingestion of contaminated soil, shingles pile, surface water, sediment and air. The September 1992 Final Feasibility Study established the remediation goals for OU3 by taking into consideration findings from the July 1992 BLRA. Cleanup goals were established for current on-site workers and future child residential use scenarios. Cleanup goals for the treatment of soils were developed to protect human health, to prevent contamination of the ground water and to comply with ARARs. Table 4 includes the risk-based, non-carcinogenic and ground water protection-based cleanup goals for soil and sediment COCs at OU3.

Table 4: Soil and Sediment COCs and Remediation Goals for OU3

Contaminants of Concern	March 1993 ROD Soil and Sediment Cleanup Goals[a] (mg/kg)
Chlordane	180[b]
Lead	284[c]
a. The cleanup goals represent the most conservative of the non-carcinogenic, risk-based or ground water protection standard.	
b. Value represents cleanup goal for total chlordane, which represents the summation of seven constituents of chlordane.	
c. Based on the average ground water protection standards generated for the Peak Oil, Bay Drums and Reeves sites.	

4.0 Remedial Actions

4.1 Remedy Selection

Remedial Action Objectives (RAOs)

The RAOs at the Site include:

- Prevent or mitigate the continued release of hazardous substances, pollutants and contaminants to the overburden and bedrock, surficial or Floridan aquifers, surface water bodies and sediments.
- Eliminate or reduce the risks to human health associated with direct contact or inhalation of hazardous substances, pollutants or contaminants within the Site.
- Eliminate or minimize the threat posed to human health and the environment from current and potential migration of hazardous substances in the surface water, ground water and subsurface soil, surface soil and rock at the Site.
- Reduce concentrations of hazardous substances, pollutants and contaminants in the surface water, ground water, surface soil and subsurface soil within the Site to levels specified by the performance standards.
- Reduce the volume, toxicity and mobility of hazardous substances, pollutants or contaminants at the Site.
- Continue the prevention of on-site and off-site exposure of humans through ingestion, direct contact and inhalation of impacted ground water in the surficial and Floridan aquifers.

Remedial Components

The Site has four OUs. OU1 and OU3 address source contamination at Peak Oil and Bay Drum, respectively. OU2 addresses site-wide ground water contamination, and OU4 addresses contamination at site wetlands.

OU1

The Record of Decision (ROD) for OU1 was signed in June 1993 to address the soil contamination at the Peak Oil site. OU1 remedial components included:

- Demolition of buildings, fence and railroad tracks, where necessary, to construct the slurry wall.
- Construction of a slurry wall around the impacted soils.
- Construction of a chain-link fence and placement of warning signs around the perimeter of the Site.
- Installation of a ground water recovery system, which includes extraction wells and collection header piping.
- Installation of a mixing system to add necessary nutrients and dissolved oxygen (or hydrogen peroxide) to the ground water for infiltration.

- Installation of a delivery system (leach field piping or spray irrigation) to provide infiltration of treated ground water.
- Implement weekly maintenance and operation of in-situ treatment system.
- Implement periodic monitoring to optimize the hydrodynamics of the extraction wells and infiltration field, track the effectiveness of the biodegradation and soil flushing processes, and maintain the levels of nutrients and oxygen in the media at proper levels to ensure biodegradation.
- Solidification/stabilization of lead-impacted soil with concentrations above the remediation goal of 284 mg/kg.
- Solidification/stabilization of the ash pile.
- On-site disposal of solidified/stabilized soil and ash.
- Installation of a multimedia cap after in-situ treatment is completed.
- Institution of deed restrictions.
- Conduct FYRs after treatment is completed to evaluate the necessity of additional remedial actions.

EPA subsequently issued an Explanation of Significant Differences (ESD) in June 2000, which made several modifications to the 1993 ROD, including:

- Revised cleanup goals for lead, based on new information developed during the pre-design investigation and the revised site model.
- Cap design changed from a multimedia cap to a geosynthetic clay liner cap.
- The soil flushing/bioremediation remedial component was eliminated as it was no longer deemed necessary, based on information developed during the pre-design investigation and the revised solidification performance standards.

OU2

The ROD for OU2 was signed in August 1993 to address the groundwater contamination at the Peak Oil site. OU2 remedial components include:

- Ground water extraction of both the surficial and Upper Floridan aquifers via extraction wells.
- Implementation of the Peak Oil source control remedy outlined in the Peak Oil ROD for OU1.
- Air stripping for removal of VOCs.
- Carbon polishing for removal of SVOCs and other organic materials.
- Discharge to local publicly owned treatment works (POTW). Ground water will be treated to meet federal and state drinking water standards and/or pollutant limits set by the local POTW prior to discharge. The treated water will be conveyed via discharge piping to connect to a manhole for ultimate discharge to the POTW. A permit from the POTW will have to be obtained in order to discharge the treated ground water into its system.
- Ground water monitoring.

EPA issued an amended ROD (AMD) for OU2 in January 2005. The 2005 AMD eliminated the ground water removal and treatment component of the cleanup approach. The amended remedial components for OU2 include:

Surficial Aquifer

- Implementation of in-situ bioremediation of chlorinated VOCs via injection of an organic substrate.
- Installation of an acceptable number of new monitoring wells to monitor downgradient of the oil emulsion, or organic substrate, injection areas.
- Performance of baseline ground water sampling for parameters needed to track the success or failure of natural attenuation.
- Injection of organic substrate through the depth of the surficial aquifer using a slotted injection tool and direct push technology.
- Monitoring of chemical and natural attenuation parameters to document organic substrate distribution, reduction of contaminant concentration and reduction of contaminant mass. In addition, annual monitoring of certain chemicals and parameters to evaluate progress toward achieving the cleanup levels. Monitoring will occur quarterly for the first six months after injection and every six months after that during the first two-year period. After two years, the frequency of monitoring will be evaluated and modified as needed.
- Additional injection of organic substrate, if needed.
- Installation of air sparging system in the area of MW B-7.
- Monitoring of the effectiveness of the air sparging system through time.
- Monitoring of metal concentrations to evaluate/document reductions over time.
- Ongoing evaluation of monitoring wells to determine the effect of turbidity on observed metals.
- Maintenance of institutional controls (i.e., prohibition on installation of drinking water wells on the Peak Oil/Bay Drum site; continuation of the Delineation Area designation pursuant to Chapter 62-524 F.A.C., which prohibits/restricts new potable water wells; continuation of Hillsborough County 90-35, which, with certain limited exceptions, requires anyone constructing new or modifying existing buildings within 500 feet of a county main water line to use the public water supply system; and annual notification of the current institutional controls in place to local government entities and interested parties).

Floridan Aquifer

- Long term monitoring of select Floridan aquifer monitoring wells for chemical parameters to routinely evaluate if attenuation processes are lowering contaminants to levels below the OU2 ground water cleanup levels.
- Maintenance of institutional controls (see surficial aquifer section above).
- An option for a contingent remedy (e.g., injection of an organic substrate like vegetable oil), if needed. The need for the contingent remedy will be evaluated on an annual basis.

OU3

The ROD for OU3 was signed in March 1993 to address the source contamination at Bay Drum. OU3 remedial components include:

- Dredge contaminated sediments that exceed performance standards from the pond areas and north drainage ditch and treat in an on-site stabilization/solidification treatment process.
- Excavate contaminated soils that exceed performance standards and treat in an on-site stabilization/solidification treatment process.
- Backfill excavated areas and surface ponds with clean fill.
- Dispose of treated soils and sediments on site above the water table.
- Construct a low permeability clay cap over stabilized material.
- Demolish and dismantle all on-site structures and dispose of in an appropriately permitted off-site landfill.
- Dispose of non-hazardous debris present at the Site in an appropriately permitted off-site landfill.
- Dispose of shingles in accordance with all applicable federal, state and local requirements.
- Construct drainage ditches as needed to prevent ponding of water on the Site.
- Place a one-foot cover of topsoil over remaining portions of the Site and re-vegetate the Site with native grasses to prevent erosion of the cap and backfilled areas.
- Conduct ground water monitoring on a periodic basis in conjunction with ground water treatment to assess contaminant migration.
- Erect an eight-foot security fence with appropriately spaced warning signs to prevent entry.
- Record deed notices with Hillsborough County advising that hazardous constituents are disposed of on site.

ROD performance standards for the treatment of soils were developed to protect human health, to prevent contamination of the ground water and to be in compliance with ARARs. Soils and sediments with lead concentrations greater than 284 mg/kg and/or with chlordane levels greater than 180 mg/kg would be excavated and treated.

EPA issued an ESD in June 2000, which made modifications to the 1993 OU3 ROD. New lead and chlordane cleanup goals were established for the Site based on new information from the Pre-Design Investigation (October 1998 - February 1999) and revised site modeling conducted by EPA (March 2000). The ESD established a new cleanup level for lead of 521 mg/kg. For chlordane-impacted soils, soils with levels greater than 9.6 mg/kg, but less than 180 mg/kg, would be excavated and disposed of beneath the OU3 cap. Soils chlordane levels above 180 mg/kg would be solidified prior to placement within the monolith, the hallow foundation covered by the OU3 cap.

OU4

The 1994 OU4 ROD addresses site wetlands, which consist of the Central Wetland and the South Wetland. The selected remedy for OU4 is a "no-action" remedy that includes ecological monitoring of the wetlands. The purpose of the selected remedy is to monitor the ecological status of the Central and South Wetlands as the remedies for OU1, OU2 and OU3 are being implemented to eliminate or significantly reduce the potential for contaminant migration from the Peak Oil and Bay Drum sites to the wetlands. The assessments performed require:

- General vegetation surveys to assess the composition and health of the plant communities and collections of samples to asses relative abundance and diversity of aquatic vertebrates and invertebrates.
- Sampling and analysis of wetland surface water, sediment and biota.
- Field measurement of hardness, pH, temperature, dissolved oxygen and conductivity at each sampling station.
- Monitoring of surficial aquifer monitoring wells to assess potential contamination close to the point of discharge into the wetlands from the Site. Florida surface water standards are applicable at the point of discharge. The wells will be placed to intercept surficial aquifer flow from the direction of the Site.

If monitoring at OU4 indicates a potential threat to human health or the environment, EPA, in consultation with the State of Florida, will reconsider the protectiveness of the selected remedy and the need for additional remedial actions.

The OU4 ROD further stated that the remedial action at the wetlands will be considered complete when the following criteria are met:

- Monitoring wells upgradient of the South and Central Wetlands demonstrate that ground water discharging into the wetlands does not exceed F.A.C. 17-302 surface water standards for site-related contaminants.
- OU2 ground water cleanup goals have been met.
- An evaluation of post-OU4 ROD monitoring data confirms the effectiveness of the remedy in providing adequate protection of human health and the environment.

4.2 Remedy Implementation

In 1997, EPA completed the statements of work for the remedial designs and remedial actions for OU1, OU2 and OU3. The remedial designs were approved by EPA in September 1998. Below are details about the remedial activities that have been completed at the Site.

OU1

Remedial activities at OU1 began on September 22, 2000 and included the following remedial components:

- Excavation and stabilization/solidification of impacted soils and the ash pile.
- Construction of a slurry wall around the impacted area and keyed into the underlying Hawthorn Formation.
- On-site disposal of solidified/stabilized soil and ash in a single monolith.
- Installation of a low permeability cap over the treated material.
- Construction of a drainage structure around the cap to channel surface runoff from the capped area to the pre-existing county drainage area located north of the Site.

The remedial action at OU1 was completed on September 26, 2001. The OU1 remedy components continue to perform adequately to contain the solidified/stabilized material at Peak Oil. A restrictive covenant was also placed on OU1 on March 17, 2004 limiting future land use at the Site to ensure that the remedy in place remains protective.

OU2

Following the 1993 ROD for OU2, additional ground water sampling and pre-design studies were conducted. These studies indicated that the ground water remedy selected in the ROD should be reevaluated.

The post-ROD data showed that VOC concentrations were decreasing due to the natural attenuation/reductive dechlorination processes that were active in the surficial aquifer. Additionally, pump tests conducted during the post-ROD period indicated that anticipated flow rates in the surficial aquifer were less than one gallon per minute. Therefore, an excessive number of extraction wells were required to achieve the ground water yield anticipated for the remedial alternative selected in the 1993 ROD. Based on sampling in the Floridan aquifer, it was determined that decommissioning production wells F-2 and F-3 virtually eliminated the source contaminant migration. Following the decommissioning of the production wells, monitoring of the Floridan aquifer has been conducted at the Site. VOC concentrations in the Floridan aquifer demonstrated a downward trend over time and supported the premise for natural attenuation.

In 2004, an FFS was prepared to evaluate remedial alternatives for the surficial and Floridan aquifers. The FFS recommended enhanced in-situ bioremediation with source area treatment and monitored natural attenuation for the surficial aquifer and monitored natural attenuation for the Floridan aquifer. EPA issued the AMD on January 7, 2005, selecting the remedial alternatives recommended in the FFS. Additionally, the 2005 AMD updated the cleanup goals for arsenic and vanadium to 10 µg/L and 49 µg/L, respectively.

In February 2005, air sparging treatability testing was performed to determine the specifications for the air sparging system. The final design determined that a network of 75 wells would be required to address the contamination in the area of MW-7. Construction of the air sparging system began in March 2005 and was completed in August 2005. Start up and operation of the air sparging system began in December 2005. During start up, the air was also monitored to ensure that the system demonstrated compliance with Florida air regulations. Baseline ground water sampling was completed

in June 2005 and the first ground water monitoring events were performed in December 2005 and March 2006. Ground water monitoring is ongoing.

Three locations were established as in-situ bioremediation (vegetable oil) injection sites: along the Peak Oil/Bay Drum northern property line, along the Reeves southern property line bordering Broadway Avenue, and at the northwestern end of the Reeves property. The first vegetable oil injections were performed along the Peak Oil/Bay Drum northern property line in June 2005. A total of 5,667 gallons of emulsified oil was injected into eight injection points and was completed between June 13 and June 16. A total of 54 injection points were completed along the northern boundary of the Site between June 14 and August 10, 2005.

In June 2006, the PRPs submitted three rounds of ground water monitoring data in order for EPA to evaluate the status of the remedial ground water activity at the Site. EPA determined that the ground water data indicate that the vegetable oil injections and air sparging remedies are performing as designed. Therefore, no further construction at the Site is anticipated.

In April 2009, quarterly ground water monitoring data from 2008 indicated that elevated levels of chlorinated solvents remained immediately downgradient from the vegetable oil injection treatment areas. The PRP recommended additional injections to enhance the bioremediation process, which is consistent with the ROD. EPA approved an oil injection work plan in January 2010, and additional vegetable oil injections were completed the week of March 8, 2010. No vegetable oil injections have been completed at the remaining two sites located on the Reeves property. Further coordination with EPA, FDEP, Peak Oil/Bay Drum PRPs and Reeves PRPs is needed to determine when the remaining vegetable oil injections will be completed. Ground water monitoring is ongoing to confirm and track the progress of the ground water cleanup activities.

OU3

The remedial activities for OU3 began on September 22, 2000 in conjunction with OU1 remedial activities. OU3 remedial activities included:

- Excavation and stabilization/solidification of impacted soils and sediments.
- On-site disposal of solidified/stabilized soils in a single monolith.
- Installation of a low permeability cap over the treated material.
- Disposal of the on-site shingle pile (i.e., the shingles left on the Bay Drum property after the EPA shingle removal that was completed in 1997).
- Placement of a one-foot cover of topsoil over the remainder of the uncapped portion of the Site.

The source control remedy at OU3 was completed on September 26, 2001. The OU3 remedy components continue to perform adequately to contain the solidified/stabilized material at Bay Drum. To ensure the remedy in place remains protective, a restrictive covenant was also placed on OU3 on May 20, 2004 limiting future land uses that would

interfere with the remedial components at the Site, such as the construction of wells and activities that would damage the on-site cap, slurry walls, fencing and ground water monitoring wells.

OU4

Two ecological assessments have been performed for the wetlands since the 1994 ROD was signed. Initial environmental sampling activity was conducted in September and October 2000, prior to implementation of the OU1, OU2 and OU3 remedies. Prior to 2005, two wetland sampling events occurred at OU4. Based on the results from the sampling data, while also taking into account records of a severe drought (from 1998 to 2001) and the fact that the remedial actions at OU1 and OU3 were completed successfully without impacting the wetlands, EPA temporarily discontinued wetland monitoring events to focus on completing the ground water remedy.

Site-related contaminants remaining in the wetland sediments have not mobilized, which is consistent with the selected remedy for OU4, "no action" with ecological monitoring. To address the remaining contamination, the PRPs recommended a removal of the remaining sediment contamination in the wetlands. During the 1998-2001 drought, the wetlands dried out, providing an opportunity to examine the possibility of removing the remaining sediment contamination. In August 2007, the PRPs developed a work plan for wetland remediation and wetland restoration in the event that the wetlands again dry up. Sampling was completed in December 2007 and February 2008 to define the contamination "hot spots" in the wetlands. The results from the sampling were included in addendums to the EPA-approved wetlands work plan in February 2008 and January 2009, respectively. The final decision regarding the removal action at the wetlands will be made based on analysis of the sampling results.

4.3 Operation and Maintenance (O&M)

Since 2002, the firm de maximis, inc. has conducted O&M activities at the Site in accordance with an interim Operation, Maintenance and Monitoring Plan developed for OU1, OU2 and OU3. O&M includes routine monthly inspections and maintenance of the Site's security system, cover integrity, stormwater management system and ground water monitoring wells. Reports concerning O&M activities are regularly submitted to EPA. No O&M activities are associated with OU4.

OU1 and OU3

Ground water monitoring is completed at OU1 and OU3 in accordance with phase I of the ground water monitoring plans developed for the Site. The primary objective of phase I of the monitoring plans is performance monitoring of the source control remedy at the Site. The monitoring under the plans primarily focuses on the water quality of the surficial aquifer in close proximity to the soil remedies completed under the OU1 and OU3 RODs. Ground water sampling at Peak Oil includes annual sampling of the six-well network with analysis of bis(2-ethylhexyl)phthalate; PCB, Aroclor 1260; and lead.

Ground water monitoring at Bay Drum includes annual sampling of the four-well network with a focus on analysis of chlordane and lead because both contaminants exceeded soil and/or sediment cleanup goals.

OU2

Ground water monitoring at the Site was conducted as part of the remedy selected for OU2. The O&M contractor has completed annual ground water sampling at the Site since December 2005 and was conducted in accordance with EPA-approved work plans. Since construction of the OU2 remedial components were completed in 2006, the ground water monitoring for OU1 and OU3 were combined into the area-wide ground water monitoring program.

The RODs estimated the total costs for each OU as follows:

- OU1: $3,947,165
- OU2: $5,632,000
- OU3: $2,680,000
- OU4: $278,000

Although O&M costs were requested from the PRPs, they declined the opportunity to share them; therefore O&M costs are not available.

5.0 Progress Since the Last Five-Year Review

The protectiveness statement from the 2005 FYR for the Site stated the following:

Remedy Under Construction - OU-2
The remedy for the OU-2 (Area-Wide Groundwater) is expected to be protective of human health and the environment upon completion, and in the interim, exposure pathways that could result in unacceptable risks are being controlled.

Completed Remedies - OU-1 and OU-3
The remedies for the OU-1 (Peak Oil Source Control) and OU-3 (Bay Drums Source Control) are protective of human health and the environment, and the institutional control component of the remedy is functioning to prevent exposure pathways that could result in unacceptable risks.

Completed Remedy/Remedy Under Construction - OU-4
The OU-4 (Wetlands) ROD was "no action" with monitoring. The monitoring is to evaluate the ecological impact of the remedies for OU-1, OU-2 and OU-3 and to evaluate whether or not the selected remedy is providing adequate protection of human health and the environment. The remedy for OU-1 and OU-3 was completed in 2001. The remedy for OU-2 was installed during the spring and summer of 2005 and is currently operating. The remedy at OU-4 currently protects human health and the environment in the short-term because the site overall contaminant concentrations have not changed since the signing of the OU-4 ROD in 1994. However, in order to be protective in the long-term, the remedy for OU-2 remedy will have to be operating for a while and a final determination as to whether or not the remedial actions and monitoring to date are protective of human health and the environment will have to be made.

Site-Wide Statement
The OU-1 and OU-3 remedies have been satisfactorily completed, and the construction of the groundwater remedy for OU-2 and the wetland monitoring approach are occurring as directed by the U.S. EPA. Once the OU-2 remedy is operating and some performance data is available, U.S. EPA will turn its attention to whether or not the ROD requirement for further wetland monitoring is merited and, ultimately, whether or not the selected remedy provides adequate protection for human health and the environment. Because the actions taken at the three operable units are protective, the site is protective of human health and the environment.

The 2005 FYR included eight issues and recommendations. Each recommendation and the current status is discussed below.

Table 5: Progress on Recommendations from the 2005 FYR

Section	Recommendations	Party Responsible	Action Taken and Outcome	Date of Action
5.1	Ensure that the monthly and quarterly inspection reports for OU1 and OU3 are provided to EPA in the next annual ground water monitoring report.	PRP	de maximis, inc. included the Peak Oil and Bay Drum quarterly reports and monthly site inspection and maintenance reports in the 2005, 2006, 2007 and 2008 annual reports for OU1 and OU3.	April 2006, March 2007, February 2008 and March 2009
5.2	Re-seed portions of the vegetative covers where the vegetation is becoming sparse.	PRP	The vegetative covers at the Site were monitored during the monthly site inspections to ensure that no erosion occurred. During the November 2005 site inspection, areas with a sparse vegetative cover were re-seeded and covered with hay to promote growth.	November 3, 2005
5.3	Establish January as the month for performing the annual notification to the State and adjacent property owners. This annual notification provides an update of Site status and reminds the recipient of the presence of institutional controls.	PRP	Annual reports are submitted to EPA and the State providing information about the status of the Site.	Ongoing - annually
5.4	Evaluate performance of the OU1 remedy through reviews of the ground water sampling data associated with compliance monitoring.	PRP	Annual ground water sampling has been completed at monitoring wells for OU1. A detailed discussion of monitoring data is found in Section 6.4 of this report.	Ongoing
5.5	Evaluate performance of the OU2 remedy through reviews of the ground water sampling data associated with the organic substrate (vegetable oil) injections, air sparging system, as well as monitored natural attenuation data. This evaluation includes deciding on installation of enhanced bioremediation injection zones 2 and 3 on the Reeves site. This evaluation also includes keeping up-to-date on the Floridan production well under consideration by Tampa Bay Water.	PRP	Ground water sampling has been completed annually at OU2 since 2005. A detailed discussion of monitoring data is found in Section 6.4 of this report. Further evaluation is still necessary to determine whether bioremediation injection zones can be installed along the Reeves site. No production well was installed in the Floridan aquifer by Tampa Bay Water.	Ongoing
5.6	Evaluate performance of the OU3 remedy through reviews of the ground water sampling data associated with compliance monitoring.	PRP	Annual ground water sampling has been completed at monitoring wells in the surficial aquifer for OU3. A detailed discussion of monitoring data is found in Section 6.4 of this report.	Ongoing

Section	Recommendations	Party Responsible	Action Taken and Outcome	Date of Action
5.7	Monitor and track the success or failure of Administrative Controls in keeping exposure pathways incomplete.	PRP	Administrative controls, including institutional controls and regular O&M at the Site, are monitored to ensure exposure pathways remain incomplete.	Ongoing
5.8	Evaluate the merits and scope of further ecological assessments of the South and Central Wetlands and determine whether or not the OU4 ROD is protective in the long-term. This action includes coordinating with Reeves on the observed zinc contamination leading to the South Wetland. In addition, coordination with the Reeves Site will be needed to address the total recoverable polycyclic hydrocarbons/zinc soil contamination along the property line between Peak/Bay and the Reeves Site. The expectation is that this action will be addressed concurrent with resolution of the zinc in the South Wetland.	PRP	An evaluation of appropriate actions to address the remaining zinc contamination in wetland sediments is currently underway. Sampling in the wetlands has been completed and a work plan to remove remaining contamination has been developed. The work plan has been reviewed by EPA and follow-up actions are underway to update the review to address comments provided by EPA.	Ongoing

5.1 Monthly and Quarterly Reports for OU1 and OU3

de maximis, inc. included the Peak Oil and Bay Drum quarterly reports and monthly site inspection and maintenance reports in the 2005, 2006, 2007 and 2008 annual reports for OU1 and OU3.

5.2 Re-seed Portions of the Vegetative Cover

The vegetative covers at the Site were monitored during the monthly site inspections to ensure that no erosion occurred. During the November 2005 site inspection, areas with a sparse vegetative cover were re-seeded and covered with hay to promote growth. The vegetative cover has been monitored regularly during monthly site inspections to ensure that the vegetative cover remains well established.

5.3 Annual Notifications in January

Annual reports are submitted to EPA and the State providing information about the status of the Site.

5.4 Evaluate Remedial Performance at OU1

Annual ground water sampling has been completed at monitoring wells in the surficial aquifer for OU1. There is no indication that solidified/stabilized contamination at OU1 has impacted the ground water beneath OU1. A detailed discussion of monitoring data is found in Section 6.4 of this report.

5.5 Evaluate Remedial Performance at OU2

Ground water sampling has been completed annually at OU2 since 2005. A detailed discussion of monitoring data is found in Section 6.4 of this report. The monitoring data indicate that the vegetable oil injections have not decreased contamination as expected. However, during the site inspection an additional round of injections was being completed to address remaining ground water contamination. Further evaluation is still necessary to determine whether bioremediation injection zones can be installed along the Reeves site. No production well was installed in the Floridan aquifer by Tampa Bay Water.

5.6 Evaluate Remedial Performance at OU3

Annual ground water sampling has been completed at monitoring wells in the surficial aquifer for OU3. There is no indication that solidified/stabilized contamination at OU1 has impacted the ground water beneath OU3. A detailed discussion of monitoring data is found in Section 6.4 of this report.

5.7 Monitor Administrative Controls

Administrative controls, including institutional controls and regular O&M at the Site, are monitored to ensure exposure pathways remain incomplete.

5.8 Remaining Ecological Assessment Needs at OU4

An evaluation of appropriate actions to address the remaining zinc contamination in wetland sediments is currently underway. Sampling in the wetlands has been completed and a work plan to remove remaining contamination has been developed. The work plan has been reviewed by EPA and follow-up actions are underway to update the review to address comments provided by EPA.

6.0 Five-Year Review Process

6.1 Administrative Components

EPA Region 4 initiated the FYR in February 2010 and scheduled its completion for September 2010. The EPA site review team was led by EPA Remedial Project Manager (RPM) Scott Martin and also included EPA site attorney Elisa Roberts, EPA Community Involvement Coordinator (CIC) Tonya James and contractor support provided to EPA by E^2 Inc. In February 2010, EPA held a scoping call with the review team to discuss the Site and items of interest as they related to the protectiveness of the remedy currently in place. A review schedule was established that consisted of the following activities:

- Community notification.
- Document review.
- Data collection and review.
- Site inspection.
- Local interviews.
- FYR Report development and review.

6.2 Community Involvement

In March 2010, a public notice was published in the *Tampa Tribune* newspaper announcing the commencement of the FYR process for the Site, providing contact information for Scott Martin and Tonya James, and inviting community participation. The press notice is available in Appendix B. No one contacted EPA as a result of this advertisement.

The FYR report will be made available to the public once it has been finalized. Copies of this document will be placed in the designated site repository: Brandon Regional Library, 619 Vonderburg Drive, Brandon, Florida, 33511. Upon completion of the FYR, a public notice will be placed in the *Tampa Tribune* newspaper to announce the availability of the final FYR report in the Site's document repository.

6.3 Document Review

This FYR included a review of relevant, site-related documents including the RODs, ESD(s), AMD, remedial action reports and recent monitoring data. A complete list of the documents reviewed can be found in Appendix A.

ARARs Review

Section 121 (d)(2)(A) of CERCLA specifies that Superfund remedial actions must meet any federal standards, requirements, criteria or limitations that are determined to be ARARs. ARARs are those standards, criteria or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstance at a CERCLA site. To-Be-Considered

criteria (TBCs) are nonpromulgated advisories and guidance that are not legally binding, but should be considered in determining the necessary level of cleanup for protection of human health or the environment. While TBCs do not have the status of ARARs, EPA's approach to determining if a remedial action is protective of human health and the environment involves consideration of TBCs along with ARARs.

Chemical-specific ARARs are numerical quantity restrictions on individually listed contaminants in specific media. Examples of chemical-specific ARARs include the MCLs specified under the Safe Drinking Water Act as well as the ambient water quality criteria that are enumerated under the Clean Water Act. Because there are usually numerous contaminants of potential concern for any site, various numerical quantity requirements can be ARARs.

The final remedy selected for the Site was designed to meet or exceed all chemical-specific ARARs and meet location- and action-specific ARARs. Chemical-specific ARARs identified in the selected remedy within the Site's OU1 ROD for source contamination at the Peak Oil site, the Site's OU3 ROD for source contamination at the Bay Drum site and the Site's OU2 ROD for ground water are listed in Tables 6, 7 and 8, respectively. The source contamination remedies are complete and the ground water treatment remedy continues at the Site.

Source Contamination ARARs

The Site's OU1 ROD selected the final remedy and established the soil and sediment cleanup goals for three COCs at the Site: PCB, Aroclor-1260; bis(2-ethylhexyl)-phthalate; and lead. The cleanup goals for lead and bis (2-ethylhexyl)-phthalate are based on the protection of ground water, and the cleanup goal for PCBs (Aroclor-1260) is based on the EPA-recommended cleanup goals for PCBs in soils in industrial areas from the 1990 EPA Guidance on Remedial Actions for Superfund Sites with PCB Contamination. In 2000, the cleanup goal for lead was re-evaluated based on the subsurface and ground water data obtained and analyzed during the Pre-Design Investigation conducted between October 1998 and February 1999, which indicated that the mass of lead was significantly less than originally anticipated. As a result, a 2000 ESD was issued changing the cleanup goal for lead from 284 mg/kg to 521 mg/kg. EPA performed additional modeling at the Site verifying that the new cleanup goal remained protective of human health and the environment. This FYR did not find evidence suggesting any other changes since the OU1 ROD. The assumptions that were used in the development of the ground water protection cleanup goals or the EPA recommended cleanup goals for PCBs remain unchanged. Therefore, the current ARARs for soil and sediment remain the same as the cleanup goals presented in the 2005 FYR.

Table 6: Cleanup Goals for Soil and Sediment COCs at OU1

Contaminants of Concern	1993 OU1 ROD Soil and Sediment Cleanup Goals (mg/kg)	2000 OU1 ESD Soil and Sediment Cleanup Goals (mg/kg)	Current[a] Cleanup Goals (mg/kg)	Cleanup Goals Change
PCBs (Aroclor-1260)	25[a]	25	25	No
Bis(2-ethylhexyl)-phthalate	0.58[b]	0.58	0.58	No
Lead	284[c]	521	521	No

a. Risk-based value determined from EPA Guidance on Remedial Actions for Superfund Sites with PCB Contamination.

b. Ground water protection-based cleanup goal calculated using the federal MCL.

c. Ground water protection-based cleanup goal calculated using the federal MCL is the basis for the soil cleanup goal and the risk-based value for carcinogens (1.0×10^{-4}) is the basis for the sediment cleanup goal. The final cleanup goal of 284 mg/kg used for lead was based on an EPA review of the Peak Oil, Bay Drums and Reeves sites.

The OU3 remedy was selected in the March 1993 ROD and established the soil and sediment cleanup goals for two COCs at Bay Drum: lead and chlordane (Table 7). The cleanup goals for the COCs are based on non-carcinogenic risks at the Site because EPA determined that none of the carcinogenic risk levels were exceeded in soils or sediments. In 2000, the cleanup goal for lead was re-evaluated based on the subsurface and ground water data obtained and analyzed during the Pre-Design Investigation conducted between October 1998 and February 1999, which indicated that the mass of lead was significantly less than originally anticipated. As a result, a 2000 ESD was issued changing the cleanup goal for lead from 284 mg/kg to 521 mg/kg. EPA performed additional modeling at the Site verifying that the new cleanup goal remained protective of human health and the environment. Additionally, according to the 2000 ESD, all soil with chlordane concentrations greater than or equal to 9.6 mg/kg, but less than 180 mg/kg, would be disposed of beneath the OU3 cap. This FYR did not find evidence of any other changes in the assumptions used in the OU3 ROD that might increase the estimated risk. Therefore, the current ARARs for soil and sediment remain the same as the cleanup goals presented in the 2005 FYR.

Table 7: Cleanup Goals for Soil and Sediment COCs at OU3

Contaminants of Concern	1993 OU3 ROD Soil and Sediment Cleanup Goals[a] (mg/kg)	2000 OU3 ESD Soil and Sediment Cleanup Goals (mg/kg)	Current Cleanup Goals (mg/kg)	Cleanup Goals Change
Chlordane	180[b]	180[c]	180	No
Lead	284[d]	521	521	No

a. The cleanup goals represent the most conservative of the non-carcinogenic, risk-based or ground water protection standards. The cleanup goal is based on the non-carcinogenic risk value.

b. Value represents cleanup goal for total chlordane, which represents the summation of seven constituents of chlordane, which includes gamma-chlordane, alpha-chlordane, chlordane, gamma-chlordene, alpha-chlordene, trans-nonachlor ,and cis-nonachlor.

c. The 2000 ESD required chlordane impacted soils and sediments with levels greater than or equal to 9.6 mg/kg, but less than 180 mg/kg, to be disposed of beneath the OU3 cap.

d. Based on the average ground water protection standards generated for the Peak Oil, Bay Drums and Reeves sites.

Ground Water ARARs

The Site's final remedy for OU2 was selected in the August 1993 ROD, which established cleanup goals for the 27 ground water COCs listed in Table 8. Ground water cleanup goals in the 1993 ROD were based on federal and Florida primary and secondary drinking water standards. The cleanup goals for acetone, 1,1-dichloroethane, 2-methylphenol and vanadium are based on the protection of health from non-cancer reference dose and future residential exposure assumptions from the BLRA. The cleanup goal for bis (2-chloroethyl)ether is based on the health-based number derived from the cancer slope factor and future residential assumptions from the BLRA representing a risk level of 1.0×10^{-4}. The cleanup goal for naphthalene is a petroleum-contaminated site cleanup criterion, as listed in the Florida Administrative Code (F.A.C. 17-770, now F.A.C. 62-770), which has become more stringent (from 100 µg/L to 14 µg/L). No wells exceed the new standard for naphthalene. In the 2005 AMD, the cleanup goals for arsenic and vanadium were updated to the 2005 standards. Cleanup goals for arsenic (50 µg/L to 10 µg/L) and vanadium (240 µg/L to 49 µg/L) are more stringent than the original cleanup goals established in the 1993 OU2 ROD Standards for the remaining COCs have not changed.

Table 8: Ground Water Cleanup Goals

Contaminant of Concern	1993 ARARs (µg/L)	2005 AMD ARARs (µg/L)	Current ARARs (µg/L)	ARAR changed?
Surficial Aquifer				
VOCs				
Acetone	3,000[a]	3,000	3,000	No
Benzene	1[b]	1	1	No
1,1-Dichloroethane	2,400[a]	2,400	2,400	No
1,2-Dichloroethane	3[b]	3	3	No
1,1-Dichloroethylene	7[c]	7	7	No
1,2-Dichloroethylene (total)	70[c]	70	70[d]	No
Ethylbenzene	700[e]	700	700	No
Methylene chloride[f]	5[c]	5	5	No
Tetrachloroethylene	3[b]	3	3	No
Toluene	1,000[e]	1,000	1,000	No
Vinyl chloride	1[b]	1	1	No
Xylenes (total)	10,000[e]	10,000	10,000[g]	No
SVOCs				
Bis (2-chloroethyl) ether	7[h]	7	7	No
Bis (2-ethylhexyl) phthalate[i]	6[c]	6	6	No
2-Methyphenol	2,000[a]	2,000	2,000	No
Naphthalene	100[j]	100	14[k]	Yes – More stringent
Inorganics				
Antimony	6[c]	6	6	No
Arsenic	50[c]	10	10	No
Beryllium	4[c]	4	4	No
Chromium	100[b]	100	100	No

Contaminant of Concern	1993 ARARs (µg/L)	2005 AMD ARARs (µg/L)	Current ARARs (µg/L)	ARAR changed?
Lead	15[l]	15	15[m]	No
Sodium	160,000[b]	160,000	160,000	No
Vanadium	240[a]	49	49	No
Upper Floridan Aquifer				
VOCs				
Acetone	3,000[a]	3,000	3,000	No
Benzene	1[b]	1	1	No
1,1-Dichloroethane	2,400[a]	2,400	2,400	No
1,2-Dichloroethane	3[b]	3	3	No
1,1-Dichloroethylene	7[c]	7	7	No
1,2-Dichloroethylene (total)	70[c]	70	70[d]	No
Ethylbenzene	30[n]	30	30	No
Methylene chloride[f]	5[c]	5	5	No
Tetrachloroethylene	3[b]	3	3	No
Toluene	1,000[c]	1,000	1,000	No
Vinyl chloride	1[b]	1	1	No
Xylenes (total)	20[n]	20	20	No
SVOCs				
Bis (2-chloroethyl) ether	7[g]	7	7	No
Bis (2-ethylhexyl) phthalate[h]	6[c]	6	6	No
2-Methyphenol	2,000[a]	2,000	2,000	No
Naphthalene	100[j]	100	14[k]	Yes – More stringent
Inorganics				
Aluminum	200[o]	200	200[m]	No
Antimony	6[c]	6	6	No
Arsenic	50[c]	10	10	No
Beryllium	4[c]	4	4	No
Chromium	100[b]	100	100	No
Iron	300[n]	300	300	No
Lead	15[l]	15	15[k]	No
Manganese	50[n]	50	50	No
Sodium	160,000[b]	160,000	160,000	No
Vanadium	240[a]	49	49	No
Zinc	5,000[n]	5,000	5,000	No

Contaminant of Concern	1993 ARARs (µg/L)	2005 AMD ARARs (µg/L)	Current ARARs (µg/L)	ARAR changed?

a. Cleanup goal is based on protection of health from the non-cancer reference dose and future residential exposure assumptions from the BLRA.
b. Cleanup goal is based on the Florida primary drinking water MCL.
c. Cleanup goal is based on the Federal primary drinking water MCL.
d. The current ARAR listed is federal and Florida primary drinking water MCL for cis-1,2-dichloroethylene. Both the federal and Florida primary drinking water MCL for trans-1,2-dichloroethylene is 100 µg/L.
e. Cleanup goal is based on the maximum contaminant level goal.
f. Methylene chloride is also known as dichloromethane.
g. The Current ARAR is based on the federal and Florida primary drinking water standard, which is also equal to the maximum contaminant level goal.
h. Cleanup goal is a health-based number derived from the cancer slope factor and the future residential assumptions from the BLRA.
i. Bis (2-ethylhexyl) phthalate is also known as di (2-ethylhexyl) phthalate.
j. Cleanup goal is a petroleum-contaminated site cleanup criterion as listed in F.A.C. 17-770 (now F.A.C. 62-770).
k. The current cleanup goal is based on F.A.C. 62-770, which has replaced F.A.C. 17-770. Appropriate cleanup target levels for a petroleum contamination site were set using F.A.C. 62-770 in conjunction with F.A.C. 62-777. Established cleanup target levels can be found in Table I of F.A.C. 62-777.
l. Cleanup goal is the federal action level for lead.
m. Cleanup goal is the federal treatment technique action level for lead. If more than 10% percent of tap water samples exceed the action level, water systems must take additional steps.
n. Cleanup goal is a Florida secondary drinking water MCL.
o. The Federal secondary drinking water standard for aluminum is a range of 50-200 µg/L.

6.4 Data Review

Ground water monitoring at the Site continues to be conducted in the surficial and Floridan aquifers at OU2. Ground water monitoring wells are sampled annually, and sampling also verifies that the cap-remedies at OU1 and OU3 continue to function as designed. The monitoring data collected for ground water beneath the OU1 and OU3 properties showed that there were no exceedances in COCs. Appendix C provides the ground water monitoring sampling data from May 2005 through November 2008. The monitoring data show that ground water contaminant concentrations are not decreasing at OU2 as expected. However, it is anticipated that ground water contaminant concentrations will begin to decrease as a result of the most recent vegetable oil injections completed in March 2010. Further details are provided below for COCs that have been detected in ten or more wells at the Site, all of which are located within the surficial and Floridan ground water plumes as shown in Figure 3.

Benzene has been detected in monitoring wells located on Bay Drum along the vegetable oil injection zone. Benzene has also been detected above the cleanup goal of 1 µg/L in INJ MW1 and INJ MW4, which are located in the area designated as the oil injection zone on the Reeves site (see Figure 2). In INJ MW1, the concentration of benzene was 15 µg/L in December 2005, and had decreased to 11 µg/L in December 2008. However, benzene in INJ MW4 was 3.4 µg/L in December 2005, and had increased to 12 µg/L in December 2008. The highest concentration of benzene was detected in geoprobe well GW-4 at a concentration of 80 µg/L during August 2008 sampling.

1,1-dichloroethylene has primarily been detected above the cleanup goal of 7 µg/L in the geoprobe wells. In B-7, 1,1-dichloroethylene was detected at a concentration of 2,951 µg/L in June 2005, and had decreased to 9.2 µg/L in October 2008. The concentration of 1,1-dichloroethylene in B-10R increased from 92.6 µg/L in June 2005 to 190 µg/L in October 2008. The highest concentration was 18,000 µg/L in GW-2 during August 2008 sampling.

Vinyl chloride has been detected above the cleanup goal of 1 µg/L at wells located on Bay Drum and in wells located along the vegetable injection zones. The highest concentration of vinyl chloride (310 µg/L) was detected in B-7 in October 2006, and had decreased to 10 µg/L in October 2008. Vinyl chloride was also detected in INJ MW1 at a concentration of 49 µg/L in December 2005, and had decreased to 26 µg/L in October 2007.

Table 9 below provides a summary of the COCs that have been detected above cleanup goals in ground water at the Site between 2005 and 2008.

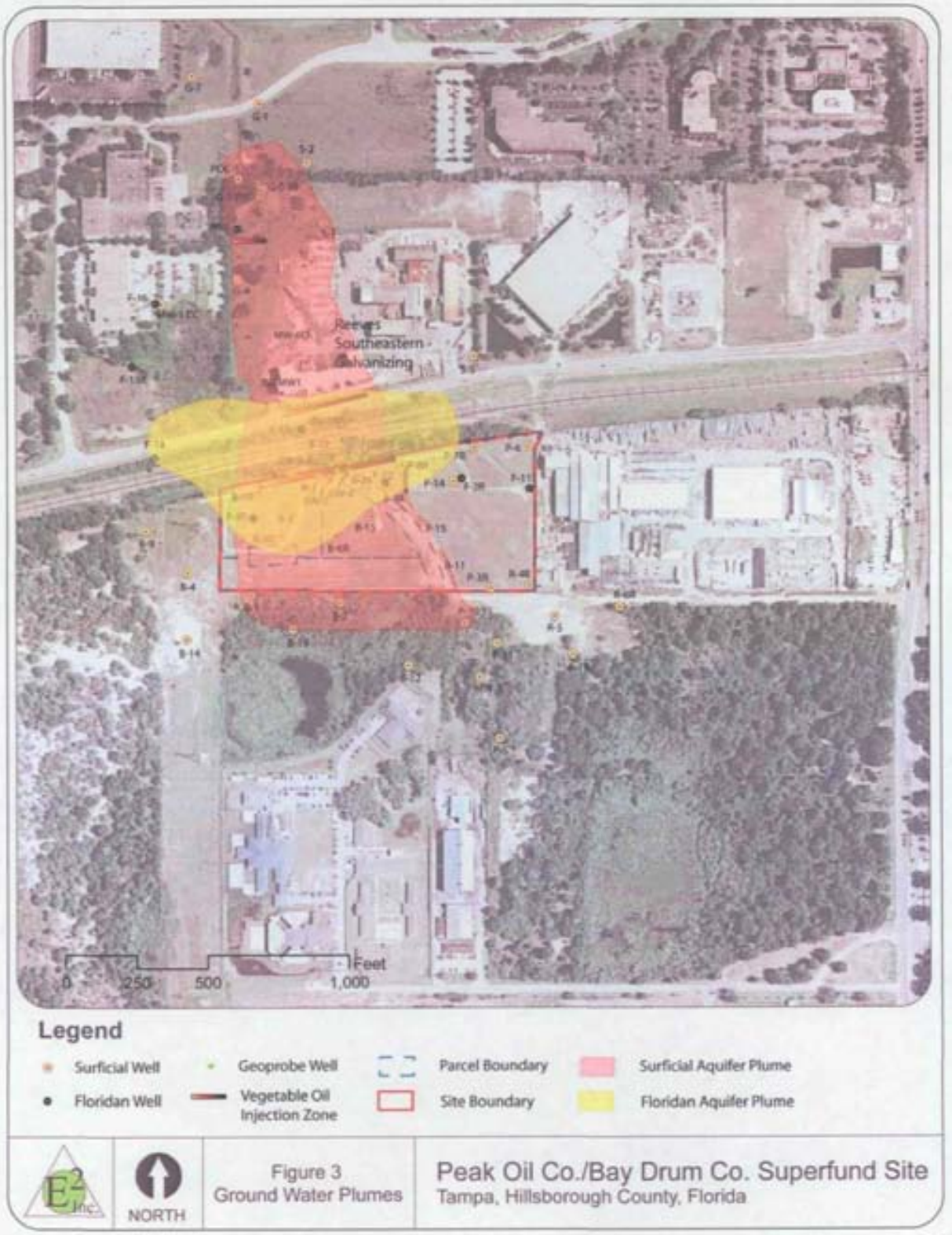
Table 9: Contaminant Concentrations Above Cleanup Goals

COC	Cleanup Goal (µg/L)	Monitoring Well	Exceedances (µg/L)	Date
		INJ MW-1	15	Dec. 2005
		INJ MW-3	31	Mar. 2005
		INJ MW-4	3.4	Dec. 2005
		B-1R	2.8	Oct. 2008
		B-3	3.1	Mar. 2006
		B-6R	3.6	May 2007
		B-7	7.9	Mar. 2006
		B-10R	40	Oct. 2008
		B-21	57	Oct. 2008
		B-22	70	Oct. 2008
		G-4	8.6	Oct. 2008
		GW-1	26	Aug 2008
		GW-4	80	Aug 2008
		GW-5	3.5	Aug 2008
Benzene	1	P-15	4.3	Oct. 2008
1,1-dichloroethane	2,400	B-7	2800	Oct. 2006
1,1-dichloroethlyene	7	INJ MW-1	48	Oct. 2006 and Oct. 2007
		INJ MW-4	26	Oct. 2008
		B-7	2951	Jun. 2005
		B-10R	950	Oct. 2008
		B-21	15000	Oct. 2008
		B-22	140	Aug 2008
		G-4	110	Oct. 2008
		GW-1	15	Aug 2008

COC	Cleanup Goal (µg/L)	Monitoring Well	Exceedances (µg/L)	Date
		GW-2	18000	Aug 2008
		GW-3	9100	Aug 2008
		GW-4	170	Aug 2008
		GW-5	45	Aug 2008
		P-15	130	Dec. 2005
		B-7	76	Oct. 2006
		B-10R	950	Oct. 2008
1,2-dichloroethane	3	B-21	16	Oct. 2008
		INJ MW-1	130	Mar. 2006
		B-21	880	Oct. 2008
		B-22	780	Nov. 2008
		G-4	87	Oct. 2008
		GW-1	380	Aug 2008
1,2-dichloroethlyene	70	GW-3	670	Aug 2008
Ethylbenzene	700	B-1R	1800	Oct. 2007
		INJ MW-1	20	Dec. 2005
		B-7	320	Oct. 2006
		B-21	26000	Oct. 2008
		GW-2	20000	Aug 2008
		GW-3	12000	Aug 2008
		GW-4	230	Aug 2008
Methylene chloride	5	P-15	60	Oct. 2007
		B-7	3000	Dec. 2005
		B-21	75000	Oct. 2008
		GW-2	70000	Aug 2008
Toluene	1,000	GW-3	41000	Aug 2008
Vinyl chloride	1	INJ MW1	49	Dec. 2005
		INJ MW3	2.04	Jun. 2005
		INJ MW4	22	Oct. 2008
		B-1R	4.6	Oct. 2008
		B-5	3.4	Oct. 2008
		B-6R	1.2	Oct. 2008
		B-7	310	Oct. 2006
		B-10R	150	Oct. 2006
		B-21	190	Oct. 2008
		B-22	100	Nov. 2008
		G-4	52	Oct. 2008
		GW-4	52	Aug 2008
		GW-5	2.6	Aug 2008
		GW-6	9.1	Aug 2008

COC	Cleanup Goal (µg/L)	Monitoring Well	Exceedances (µg/L)	Date
		POC-1	2.5	Oct. 2008
		P-15	3.4	Oct. 2007
Antimony (dissolved)	6	P-8R	138	Oct. 2007
		INJ MW3	171	Oct. 2006
		INJ MW4	14	May 2007
		B-2	21.3	Dec. 2005
		B-3	30.5	Mar. 2006
		B-7	29.9	Oct. 2008
		B-10R	17.5	Oct. 2007
		B-22	31.5	Nov. 2008
Arsenic (dissolved)	10	P-8R	32.4	Oct. 2008
		B-1R	7.3	Dec. 2005
		B-22	112	Nov. 2008
Chromium (dissolved)	100	P-15	23.2	Oct. 2007
Lead (dissolved)	15	B-10R	20	Oct. 2008
		B-2	169000	Dec. 2005
Sodium (dissolved)	160,000	P-15	283000	Oct. 2007
		B-22	94.3	Nov. 2008
Vanadium (dissolved)	240	P-15	124	Oct. 2008
Antimony	6	P-8R	141	Oct. 2007
		B-7	33.1	Oct. 2008
		B-10R	52.3	Oct. 2008
Arsenic	10	B-22	49.7	Nov. 2008
		B-10R	159	Jul. 2008
		B-22	143	Nov. 2008
Chromium	100	P-15	107	Dec. 2005
		B-10R	51	Oct. 2008
		P-15	115	Dec. 2005
Lead	15	P-8R	212	Oct. 2007
Sodium	160,000	P-15	281000	Oct. 2008
		B-10R	166	Oct. 2008
		B-22	106	Nov. 2008
Vanadium	240	P-15	155	Dec. 2005

Figure 3: Surfical and Floridan Ground Water Plumes Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site, and is not intended for any other purpose.

6.5 Site Inspection

The site inspection was held on March 11, 2010. In attendance were representatives from EPA, Scott Martin, Remedial Project Manager; de maximis, inc., Michael Miller, Clay McClarnon and Anton Plaines; E² Inc., Treat Suomi and Christy Fielden. Site participants met at the Site to discuss the current site conditions. The completed site inspection checklist in available in Appendix D and photographs are available in Appendix E.

The Site was surrounded by a fence to prevent trespassing and a sign was posted at the entrance that identified the Site as a Superfund site. There was no evidence of trespassing and the fence was in good condition. The capped areas had well-established vegetative covers and the monitoring wells that were located were found to be locked and secured. At the time of the site inspection, de maximis, inc. was completing organic substrate injections into the surficial aquifer to continue treatment of remaining ground water contamination. A single metal warehouse is located on the Site and is used for storage by the O&M contractor. The air sparging system also continues to operate to treat the ground water located near the wetlands at OU4. The building that houses the air sparging system is located within the fenced area of the Site and is in good condition. The wetlands located in OU4 were in good condition and contained water at the time of the site inspection.

On March 11, 2010, E² Inc. staff visited the designated site repository, Brandon Regional Library, as part of the site inspection. All relevant public site documents were available at the repository.

E² Inc. staff conducted research on the Hillsborough County Clerk of the Circuit Court Web Public Search, and found restrictive covenants pertaining to the Site, which are listed in Table 10. Appendix F includes copies of the restrictive covenants.

Table 10: Restrictive Covenants from the Hillsborough County Clerk of the Circuit Court

Date	Type of Document	Description	Book	Page
May 2004	Restrictive Covenant	The restrictive covenant at the Bay Drum site is designed to prevent any damage or modifications that would jeopardize the protectiveness of the remedy. The document also restricts the construction of wells; activities that would damage the on-site cap, slurry walls, ground water monitoring wells and fencing; and activities that would impede the operation of the ground water extraction and treatment system.	13919	1682
March 2004	Restrictive Covenant	The restrictive covenant at the Peak Oil site is designed to prevent any damage or modifications that would jeopardize the protectiveness of the remedy. The document also restricts the construction of wells; activities that would damage the on-site cap, slurry walls, ground water monitoring wells and fencing; and activities that would impede the operation of the ground water extraction and treatment system.	13795	78

Table 11 lists the institutional controls associated with areas of interest at the Site.

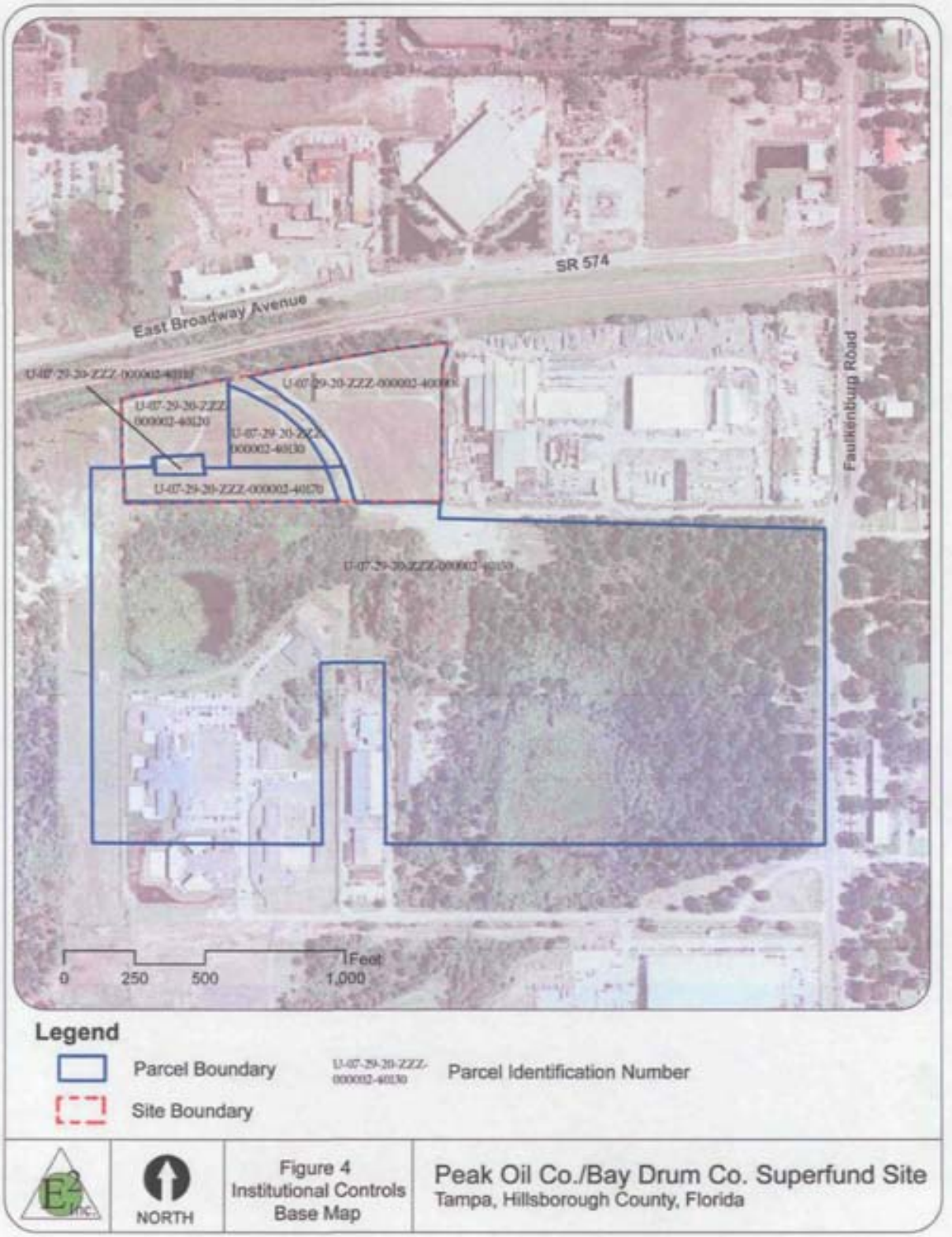
Table 11: Institutional Control Summary Table

Area of Interest – Peak Oil/Bay Drum Site Properties (Parcels: U-07-29-20-ZZZ-000002-40090.0, U-07-29-20-ZZZ-000002-40170.0, U-07-29-20-ZZZ-000002-40120.0, U-07-29-20-ZZZ-000002-40130.0 and U-07-29-20-ZZZ-000002-40110.0)					
Media	**Institutional Controls Needed**	**Institutional Controls Called for in the Decision Documents**	**Impacted Parcel(s)**	**Institutional Controls Objective**	**Instrument in Place**
Ground Water	Yes	Yes	U-07-29-20-ZZZ-000002-40090.0, U-07-29-20-ZZZ-000002-40170.0, U-07-29-20-ZZZ-000002-40120.0, U-07-29-20-ZZZ-000002-40130.0 and U-07-29-20-ZZZ-000002-40110.0	Restrict installation and use of ground water wells on site.	The May/March 2004 restrictive covenant in place restricts the installation of wells at the Site. The Site is also located within a ground water delineated area[1].
Soil	Yes	Yes	U-07-29-20-ZZZ-000002-40090.0, U-07-29-20-ZZZ-000002-40170.0, U-07-29-20-ZZZ-000002-40120.0, U-07-29-20-ZZZ-000002-40130.0 and U-07-29-20-ZZZ-000002-40110.0	Restrict any activities that might damage the cap or treatment system.	The May/March 2004 restrictive covenant in place restricts any activities at the Site that will damage or alter the cap or monitoring wells.
Sediment	Yes	No	U-07-29-20-ZZZ-000002-40150.0	Restrict activities that may result in the creation of an exposure pathway to remaining sediment contamination.	None
Wetlands	Yes	No	U-07-29-20-ZZZ-000002-40150.0	Based on determinations made at OU4, restrict activities that may result in the creation of an exposure pathway to remaining contamination in the wetlands.	None

Area of Interest – Peak Oil/Bay Drum Site Properties (Parcels: U-07-29-20-ZZZ-000002-40090.0, U-07-29-20-ZZZ-000002-40170.0, U-07-29-20-ZZZ-000002-40120.0, U-07-29-20-ZZZ-000002-40130.0 and U-07-29-20-ZZZ-000002-40110.0)					
Media	**Institutional Controls Needed**	**Institutional Controls Called for in the Decision Documents**	**Impacted Parcel(s)**	**Institutional Controls Objective**	**Instrument in Place**
1. Florida's ground water delineation information can be found online at: http://www.dep.state.fl.us/water/groundwater/delineate.htm					

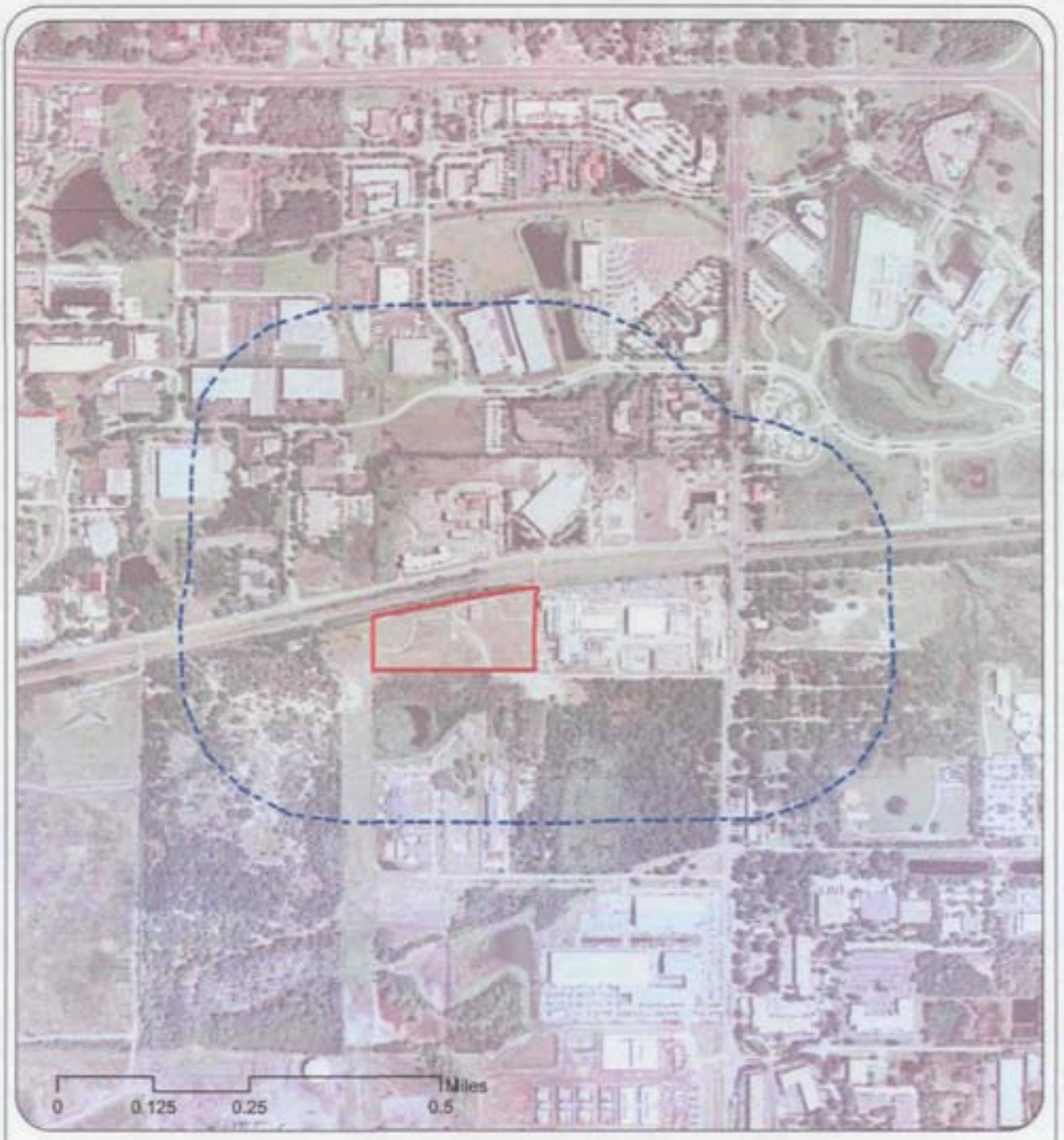
Figure 4 shows property boundaries at the Site and Figure 5 shows the Florida Delineated Ground Water Area within which the Site lies.

Figure 4: Institutional Control Base Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site, and is not intended for any other purpose.

Figure 5: Florida Ground Water Delineation Area Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site, and is not intended for any other purpose..

6.6 Interviews

During the FYR process, interviews were conducted with parties impacted by the Site, including the current site owner and regulatory agencies that are involved in site activities or who are aware of the Site. The purpose of the interviews was to document the perceived status of the Site and any perceived problems or successes with the phases of the remedy that have been implemented to date. Interviews were conducted during the site inspection on March 11, 2010 as well as on the phone following the site inspection. Because the Site is located in an industrial area, there were no residents near the Site available for interviews. Interviews are summarized below and complete interviews are included in Appendix G.

Mr. Michael Miller, Mr. Clay McClarnon and Mr. Anton Plaines: Mr. Miller, Mr. McClarnon and Mr. Plaines of de maximis, inc. are in charge of conducting O&M at the Site. Mr. Miller has worked at the Site for 15 years and considers the Site a success in regard to OU1 and OU3. The air sparging system at OU2 is working well, and monitoring data show that contaminant levels are decreasing. Regular O&M is completed at the Site, including monthly inspections, annual sampling and bioremediation injections as needed. No significant changes to O&M have been made and there have been no unexpected difficulties or costs at the Site. de maximis, inc. communicates regularly with the Site's RPM, Scott Martin.

Mr. Scott Martin: Mr. Martin is the Site RPM. He believes that the remediation project is going well because the contamination remaining in the aquifer has a decreasing trend. More bioremediation injections are being completed at OU2, and the PRP is willing to do additional work to address remaining contamination at OU4. The Site is 10 years into monitoring. The solidification/stabilization at OU1 and OU3 continues to contain the soil contaminants, and the remedy at OU2 continues to address remaining ground water contamination. The performance of the air sparging system is being reviewed to determine if the system can work better and faster. Mr. Martin has occasionally received inquiries as part of Phase I investigations from industries that are interested in reusing the area. Mr. Martin is not aware of any changes in projected land use at the Site or in the surrounding area. Future land use at the Site will be limited because the caps at OU1 and OU3 will remain in place following the site cleanup.

Mr. David Arnold: Mr. Arnold of the Southwest Florida Water Management District (SWFWMD), Well Construction Section, is aware of the Site and that the major physical activities of the remedy have been completed. Mr. Arnold is not aware of any problems or complaints at the Site. Mr. Arnold is aware that F.A.C. 62-524, which regulates the construction of wells for potable use in delineated areas, applies to the Site. Mr. Arnold feels well informed about the Site, and the SWFWMD Well Construction Section regularly checks the EPA website to stay updated.

Ms. Kelsey Helton: Ms. Helton of FDEP is aware of the cleanup activities that have taken place at the Site. The source remedies appear to be effective based on the ground water monitoring data. The initial bioremediation injections completed at the Site were not

completely effective; however, additional enhanced bioremediation injections have been proposed, and FDEP supports the additional injections. Ms. Helton is not aware of any impacts or complaints from the surrounding community. FDEP communicates with EPA on important site-related issues and participates in reviews of site documents. Ms. Helton feels well informed about Site activities and believes that the cleanup is going well. The PRPs are completing sediment sampling in addition to the remedy and plan to complete a sediment removal action, which FDEP supports in lieu of continued monitoring.

7.0 Technical Assessment

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

Yes, the review of documents, ARARs, risk assumptions and the site inspection indicates that the selected remedies are functioning as intended by the RODs, ESDs and AMD.

OU1 and OU3

The selected remedies for OU1 and OU3 are adequately containing contaminated soil and materials through solidification/stabilization. The low permeability caps covering the contaminated soil and materials at OU1 and OU3 are both in good condition with a well-established vegetative cover. No major erosion or damage to the capped areas was observed during the site inspection. The O&M contractor completes monthly site inspections to maintain the caps and ensure that the effectiveness of the cap is not compromised. Access to OU1 and OU3 is limited by a locked fence with signs indentifying the Site. Restrictive covenants were placed on both Peak Oil and Bay Drum properties in March 2004 and May 2004, respectively, which restrict any land use that would interfere with the remedial components required at OU1 and OU3.

OU2

The selected remedy to address ground water contamination at OU2 using air sparging and vegetable oil injections continues to operate at the Site. The air sparging system has been effective in reducing contaminant concentrations in ground water near monitoring well B-7. The vegetable oil injections on the north border of the Site have been completed and ground water monitoring has been conducted regularly. Contaminant concentrations did not decrease as anticipated following the first round of injections; however, another round of injections was completed during March 2010 and it is expected to more effectively treat the remaining contamination. As part of a phased approach to vegetable oil injections, no vegetable oil injections have been completed at the two injection sites on the Reeves property. EPA, FDEP, Peak Oil/Bay Drum and Reeves will need to review the ground water data for OU2 to determine the next steps to complete vegetable oil injections at the remaining injection zones. Although ground water contamination remains at the Site, the remedy for OU2 continues to be protective because institutional controls are in place, which restrict use of the ground water within the impacted aquifers, and no exposure pathways have been created.

OU4

The "no action with monitoring" remedy selected for the wetlands at OU4 remains in place. However, because zinc was detected in sediment at the wetlands during an ecological monitoring event in 2002, further investigation of the contamination is needed to determine how to address the contamination in the wetland sediments. Zinc is not a COC at the Site, but is a COC at Reeves. The PRP is willing to complete further remediation to ensure the wetlands remain protective. Sampling in the wetlands has been

completed and a work plan to remove the remaining contamination has been developed. The work plan has been reviewed by EPA and follow-up actions are underway to address comments provided by EPA. The remedy for OU4 continues to be protective because the remedial actions at OU1, OU2 and OU3 are operating as required by the ROD for OU4. However, follow-up actions are needed to address remaining sediment contamination to ensure that OU4 remains protective in the future.

7.2 Question B: Are the exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of remedy selection still valid?

Yes, the exposure assumptions, toxicity data and RAOs used at the time of the remedy selection are still valid. Remedial actions for OU2 continue to be implemented as designed to achieve RAOs. Future ground water monitoring data will be evaluated in the next FYR to determine how effectively the remedy is progressing towards decreasing remaining ground water contamination at the Site. The ARAR associated with naphthalene has changed for ground water COCs since the Site's 1993 ROD for OU2. The cleanup goal for naphthalene was 100 µg/L based on F.A.C. 17-770, which provided petroleum-contaminated site cleanup criterion. F.A.C. 62-770 has replaced F.A.C.17-770, and the current cleanup goal for naphthalene is now 14 µg/L, which is more stringent than the original cleanup goal. Because institutional controls are in place restricting well installation and ground water use at the Site and the areas surrounding the Site, no exposure pathways have been created. Therefore, the protectiveness at the Site has not been affected by the change in the ARAR. However, to ensure the cleanup goal for naphthalene remains protective in the future, an evaluation of the cleanup goal is necessary to ensure that it still falls within EPA's acceptable risk range.

Aroclor-1260, a soil COC at OU1, has dioxin-like qualities, and EPA is currently in the process of evaluating dioxin preliminary remediation goals (PRGs) for dioxin and dioxin-like compounds. EPA's dioxin reassessment has been developed and undergone review over many years with the participation of scientific experts in EPA and other federal agencies, as well as scientific experts in the private sector and academia. The Agency followed current cancer guidelines and incorporated the latest data and physiological/biochemical research into the assessment. The results of the assessment have currently not been finalized and have not been adopted into state or federal standards. EPA anticipates that a final revision to the dioxin toxicity numbers may be released by the end of 2010. In addition, EPA/Office of Solid Waste and Emergency Response (OSWER) has proposed to revise the interim PRGs for dioxin and dioxin-like compounds, based on technical assessment of scientific and environmental data. However, EPA has not made any final decisions on interim PRGs at this time. Therefore, the dioxin toxicity reassessment for this Site will be updated during the next FYR.

When the original RAOs were developed in the 1994 statements of work for OU1, OU2, and OU3, the issue of vapor intrusion (the migration of vapors from contaminated ground water to the ground surface) was not taken into consideration. As more information on vapor intrusion has become available, EPA has begun evaluating sites with VOC-contaminated ground water in order to determine if the vapor intrusion pathway may pose

an unacceptable risk to human health. The vapor intrusion pathway does not pose a significant risk at the site since there are no occupied buildings on the site. Additionally, the Johnson and Ettinger Vapor Intrusion Model was used as a screening tool to evaluate the potential for vapor intrusion from site related contaminants on the Reeves Southeastern Galvanizing site which is adjacent to Peak Oil/Bay Drum. The screening was conducted on benzene and vinyl chloride concentrations in well INJMW-1 which is located on the Reeves property. The results indicated that the vapor intrusion pathway does not pose a risk.

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

No new information has come to light that could call into question the protectiveness of the remedy.

7.4 Technical Assessment Summary

The assessment of the Site for this FYR is based on a review of documents, which include RODs, ESDs, AMDs, reports, sampling and monitoring plans, community interviews and the previous FYR report, as well as ARARs, risk assumptions and a site inspection. The selected remedies for OU1, OU2, OU3 and OU4 are functioning as intended by the decision documents for the Site. There have been no changes to the physical conditions at the Site that would affect the selected remedies.

Contaminated soils at OU1 and OU3 remain contained at the Site by solidification and stabilization and are covered by low permeability caps that prevent contaminant migration. A locked fence limits access to the Site and warning signs identify the Site as a Superfund site. Vegetative covers have been established and maintained on the capped portions of the Site to prevent erosion and maintain the integrity of the caps. Restrictive covenants were placed on Peak Oil and Bay Drum in March 2004 and May 2004, respectively, to restrict any land use activities that would interfere with the remedial components required at OU1 and OU3. The Site is located within a ground water delineated area, which restricts the construction of potable water wells and ground water use at or surrounding the Site. O&M and site inspections are conducted regularly to maintain the remedial components and ensure that they are functioning properly.

The air sparging system continues to treat the ground water contamination located near monitoring well B-7 at OU2. The initial vegetable oil injections used to treat ground water contamination at OU2 were not as effective as anticipated. Subsequently, an additional round of injections was completed and this additional round of injections is projected to adequately address remaining ground water contamination. Because the remaining vegetable oil injections are planned at the Reeves property as part of the selected remedy, EPA, FDEP, Peak Oil/Bay Drum and Reeves need to determine when vegetable oil injections at the locations on the Reeves property should be completed and whether concerns about migration of metal contamination at Reeves still exists. Institutional controls are in place to prevent the construction of wells and use of ground

water at the Site and in areas surrounding the Site. The plume at the Site has VOC contamination, and a vapor intrusion assessment has not been conducted. If future development plans for areas surrounding the Sites where VOC contamination is present may include the construction of buildings, a vapor intrusion assessment would need to be performed.

The "no-action remedy" selected for OU4 remains in place. However, during an ecological monitoring event completed in 2002, zinc was detected in sediment at the wetlands. Zinc is not a COC at the Site, but is a COC at Reeves. The PRPs are willing to complete further remediation in the wetlands area to ensure no exposure pathways are created in the future. To ensure that the remedy at OU4 remains protective, the remaining contamination in the OU4 wetlands needs further evaluation.

8.0 Issues

Table 12 summarizes the current site issues.

Table 12: Current Site Issues

Issue	Affects Current Protectiveness (Yes or No)	Affects Future Protectiveness (Yes or No)
Zinc sediment contamination remains in the OU4 wetlands, and natural processes may not be adequate to reduce contaminant concentrations to levels that are protective.	No	Yes
Bioremediation injections were not performed at the Reeves property because of concerns about mobilizing metals at Reeves.	No	Yes
Ground water contaminant concentrations have not decreased at expected rates at OU2 following vegetable oil injections.	No	Yes

9.0 Recommendations and Follow-up Actions

Table 13 provides recommendations to address the current site issues.

Table 13: Recommendations to Address Current Site Issues

Issue	Recommendations/ Follow-Up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness? (Yes or No)	
					Current	Future
Zinc sediment contamination remains in the OU4 wetlands, and natural processes may not be adequate to reduce contaminant concentrations to levels that are protective.	Conduct further evaluations at OU4 to determine if further remedial actions are needed to address zinc sediment contamination.	PRP	EPA	3/31/2011	No	Yes
Bioremediation injections were not performed at the Reeves property because of concerns about mobilizing metals at Reeves.	Evaluate whether completing bioremediation injections will cause the metals at Reeves to become mobilized.	PRP	EPA	9/30/2011	No	Yes
Ground water contaminant concentrations have not decreased at expected rates at OU2 following vegetable oil injections.	Determine if additional vegetable oil injections as required by the AMD are needed to effectively address the remaining ground water contamination at OU2.	PRP	EPA	9/30/2011	No	Yes
Increase of vinyl chloride concentration in floridan.	Evaluate cause of increased vinyl chloride concentrations in floridan.					

10.0 Protectiveness Statements

The selected remedy for OU1 is protective because contaminated soils, sediments and ash at the Peak Oil site have been solidified and stabilized beneath a cap on site and are contained within a slurry wall. The cap and slurry wall are in good working condition and are preventing the spread of contamination. A vegetative cover has been established on the cap to help prevent erosion and O&M is completed regularly to maintain the cap. A locked fence limits access to the Site and warning signs are posted around the perimeter of the Site along the fence. Institutional controls in the form of restrictive covenants are in place at the Site limiting future land uses to prevent any interference with the remedial components required for OU1 to remain protective.

The remedy for OU2 is protective because ground water contamination continues to be treated by vegetable oil injections, monitored natural attenuation and air sparging, and ground water continues to be monitored regularly. For the OU2 remedy to remain protective in the future, more vegetable oil injections might be needed to adequately treat the remaining contamination and ensure that contaminant concentrations are decreasing. In addition, it might be necessary to determine if metals at Reeves will be mobilized by the vegetable oil injections.

The selected remedy for OU3 is protective because contaminated soil has been excavated and solidified/stabilized beneath a cap on site. The cap is in good working condition and is preventing the spread of contamination. A vegetative cover has been established on the cap to help prevent erosion, a drainage ditch prevents ponding and ground water is monitored regularly to ensure that there is no contaminant migration. The cap for OU3 is located within the fenced area of the Site. Institutional controls in the form of restrictive covenants are in place at the Site limiting future land uses to prevent any interference with the remedial components required for OU3 to remain protective.

The remedy for OU4 is protective because the contaminant concentrations at OU4 have not changed and monitoring at OU1, OU2 and OU3 continues to ensure that contaminants from the Site are not migrating to the wetlands area. Although the selected remedy is a "no-action" remedy with ecological monitoring, zinc sediment contamination has been detected during ecological monitoring completed at the wetlands. To ensure that the remedy at OU4 remains protective, further evaluation might be necessary to determine what is needed to address the remaining contamination in the OU4 wetlands.

Because the remedial actions at all OUs are protective in the short term, the Site's remedy is protective of human health and the environment in the short term.

11.0 Next Review

This Site is a statutory FYR that requires these reports as long as waste is left on site that does not allow for unrestricted use and unlimited exposure. The next FYR will be due within five years of the signature/approval date of this FYR in September 2015.

Appendix A: List of Documents Reviewed

EPA Record of Decision: Peak Oil Co./Bay Drum Co. Site. EPA ID: FLD004091807. OU3 Tampa, FL. March 31, 1993.

EPA Record of Decision: Peak Oil Co./Bay Drum Co. Site. EPA ID: FLD004091807. OU1 Tampa, FL. June 21, 1993.

EPA Record of Decision: Peak Oil Co./Bay Drum Co. Site. EPA ID: FLD004091807. OU2 Tampa, FL. August 9, 1993.

EPA Record of Decision: Peak Oil Co./Bay Drum Co. Site. EPA ID: FLD004091807. OU4 Tampa, FL. June 28, 1994.

Initial Five-Year Review Report for the Peak Oil Superfund Site and the Bay Drums Superfund Site. Tampa, Hillsborough County, Florida. September 2005. Prepared by de maximis, inc. Reviewed, Edited, and Finalized by U.S. Environmental Protection Agency, Region 4.

Superfund Proposed Plan Fact Sheet: Peak Oil/Bay Drums Site. United States Environmental Protection Agency. February 1993.

Superfund Fact Sheet: Proposed Plan, Peak Oil/Bay Drums Superfund Site, Area-Wide Groundwater Contamination (Operable Unit 2). U.S. Environmental Protection Agency, Region 4, Atlanta, Georgia. September 2004.

Final Amendment to the 1993 Record of Decision (ROD) for Operable Unit 2, Peak Oil Site/Bay Drum Site. Prepared by U.S. Environmental Protection Agency, Region 4, Atlanta, Georgia. January 2005.

Peak Oil/Bay Drum Superfund Sites (OU-1 and OU-3), Annual Report. For Submittal to Environmental Protection Agency, Region 4, Atlanta, Georgia. Prepared by de maximis, inc. April 2006.

Explanation of Significant Differences Superfund Fact Sheet. Bay Drums Site. U.S. Environmental Protection Agency, Region 4. June26, 2000.

Explanation of Significant Differences Superfund Fact Sheet. Peak Oil Site. U.S. Environmental Protection Agency, Region 4. June26, 2000.

Annual Groundwater Monitoring Report Bay Drums Superfund Site (OU-3). For Submittal to Environmental Protection Agency, Region 4, Atlanta, Georgia. Prepared by O&M, Inc. September 2004.

Final Remedial Investigation Report and Baseline Risk Assessment. Bay Drums Superfund Site. Brandon, Hillsborough County, Florida. July 1992.

Final Feasibility Study Report, Bay Drums Source Control, Peak Oil/Bay Drums NPL Site, Brandon, Florida. Prepared by U.S. Environmental Protection Agency, Region 4, Atlanta, Georgia. September 1992.

Focused Feasibility Study: Peak Oil/Bay Drums Superfund Site. Submitted to U.S. Environmental Protection Agency, Region 4. Prepared for Peak Oil and Bay Drums Groups. Submitted by de maximis, inc. Revised June 2004.

Peak Oil – Bay Drum Company, State Summary.

Peak Oil & Bay Drums Superfund Sites, OU-1 and OU-3, 2006 Annual Report. For Submittal to Environmental Protection Agency, Region 4. Prepared by de maximis, inc. March 2007.

Peak Oil & Bay Drums Superfund Sites, OU-1 and OU-3, 2007 Annual Report. For Submittal to Environmental Protection Agency, Region IV. Prepared by de maximis, inc. February 2008.

Peak Oil & Bay Drums Superfund Sites, OU-1, OU2, and OU-3, 2008 Annual Report. For Submittal to Environmental Protection Agency, Region IV. Prepared by de maximis, inc. March 2009.

Final Work plan for Enhanced Treatment of On-site Groundwater on the Peak Oil/Bay Drums Site, Florida. Prepared by de maximis, inc. January 7, 2010.

Work Plan for Wetland Remedation and Restoration. Peak Oil/Bay Drum Sites. Hillsborough County, Florida. Prepared by de maximis, inc. August 2, 2007.

Addendum to Work Plan for Wetland Remediation and Restoration. Peak Oil/Bay Drum Sites. Prepared by de maximis, inc. January 9, 2009.

Preliminary Close Out Report. Peak Oil Co./Bay Drum Co. Tampa, Hillsborough County, Florida. FLD004091807. Prepared by U.S. Environmental Protection Agency, Region 4. September 2006.

Remedial Action Construction Completion Report. Peak Oil/Bay Drums Superfund Sites, OU2, Ground Water. Hillsborough County, Florida. Submitted to U.S. Environmental Protection Agency, Region 4. Prepared by de maximis, inc. July 2006.

EPA Region 4 Reuse Fact Sheets, Peak Oil Co./Bay Drum Co. Superfund Site. Prepared by U.S. Environmental Protection Agency, Region 4. October 2009.

Operations, Maintenance, and Monitoring Plan, Peak Oil/Bay Drums Superfund Sites. Submitted to U.S. Environmental Protection Agency, Region 4. Prepared by de maximis, inc. November 2005.

Appendix B: Press Notices

U. S. Environmental Protection Agency, Region 4
Announces the Second Five-Year Review
for the Peak Oil Co./Bay Drum Co. Superfund Site,
Tampa, Hillsborough County, Florida

Purpose/Objective: The U.S. Environmental Protection Agency (EPA) is conducting a Five-Year Review of the remedy for the Peak Oil Co./Bay Drum Co. Superfund Site (the Site) in Tampa, Florida. The purpose of the Five-Year Review is to ensure that the selected cleanup actions effectively protect human health and the environment.

Site Background: The Site is located in Tampa, Florida and is comprised of two separate NPL sites, Peak Oil Co. (Peak) and Bay Drum Co. (Bay Drum), which consists of 4 acres and 14.8 acres, respectively. Peak operated as a waste oil re-refinery beginning in 1954. Waste oils from auto and truck crankshaft oil, with some hydraulic oil, transformer oil, and other oils were accepted at the Peak facility. By 1979, Peak operations were limited to the resale of used oils as fuel and flotation oil and repackaging of virgin material. Spills and leaks from on-site storage tanks, tanker trucks, oil/water separators, and other equipment occurred during Peak facility operations. Waste was also stored in onsite lagoons. In 1986, EPA implemented a removal action to treat sludge found in the remaining lagoons, and lagoons have since been closed. Bay Drum began operating as a drum reconditioning facility in 1962. A two-acre portion of Bay Drum was officially used for drum storage; however, drums were stored throughout the entire property. Beginning in 1984, Resource Recovery Association operated at Bay Drum's site accepting waste roofing shingles for approximately two and a half years. In 1989, EPA removed approximately 70,000 cubic yards of shingles and conducted another removal action in 1990 removing contaminated soil, hazardous waste drums and bags of pesticides. The Site was finalized on EPA's National Priorities List in June 1986. The primary contamination risk at the Site is the presence of volatile organic compounds (VOCs), semi-VOCs (SVOCs), metals and polychlorinated hydrocarbons (PCBs) in soil; and VOCs and metals in ground water.

Cleanup Actions: The contamination at the Site is being addressed in four operable units (OUs). The Record of Decision (ROD) for OU1 and OU3 was signed in June 1993 and March 1993, respectively. The remedies selected for OU1 and OU3 consisted of excavation and onsite solidification/stabilization of contaminated soils and institutional controls. The selected remedy for OU1 also included the construction of a slurry wall and installation of a low permeability cap over treated soil, while the selected remedy for OU3 included the placement of one foot of top soil over the remainder of the uncapped area of the Site. In June 2000, an explanation of significant differences (ESD) was issued for OU1 that revised the remediation goal for lead, and selected the use of a geosynthetic clay liner cap. The ROD for OU2 was signed in August 1993,

and consisted of ground water extraction and treatment to remove ground water contamination with discharge of treated water into the local water treatment plant. In 2005, an ESD was issued removing the use of the extraction and treatment to address ground water contamination, and instead selected the use of in-situ bioremediation and natural attenuation. The ROD for OU4 was signed in June 1994. The selected remedy for OU4 consisted of a no action remedy, relying on the remediation activities at OU1, OU2 and OU3 to address the contamination at OU4. Periodic ecological assessments of the nearby wetlands and monitoring of the adjacent surficial aquifer are completed at OU4.

Five-Year Review Schedule: The National Contingency Plan requires that remedial actions resulting in any hazardous substances, pollutants or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure be reviewed every five years to ensure the protection of human health and the environment. The second of the Five-Year Reviews for this Site will be completed by September 2010.

EPA invites community participation in the Five-Year Review process: EPA is conducting this Five-Year Review to evaluate the effectiveness of the Site's remedy and to ensure that the remedy remains protective of human health and the environment. As part of the process, EPA staff members are available to answer any questions about the Site. Community members who have questions about the Site or the Five-Year Review process, or who would like to participate in a community interview, are asked to contact:

Scott Martin, Remedial Project Manager
Phone: 404-562-8916
E-mail: martin.scott@epa.gov

Tonya James, Community Involvement Coordinator
Phone: 404-562-8633
E-mail: james.tonya@epa.gov

Mailing Address: EPA Region 4, 61 Forsyth St. S.W., Atlanta, GA 30303-8960

Additional site information is also available at the Site's document repository, located at Brandon Regional Library, 619 Vonderburg Drive, Brandon, Florida, 33511, or online: *http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0400536*

Appendix C: Ground Water Monitoring Data

Table 4-1

Peak Oil / Bay Drums Groundwater Sampling Results
October 2009

OU-2 Surficial

Analyte Name	ROD Cleanup Level (ppb)	INJ MW-1 Dec-05	INJ MW-1 Mar-06	INJ MW-1 Oct-06	INJ MW-1 May-07	INJ MW-1 Oct-07	INJ MW-1 Oct-08	INJ MW-1 Nov-09	INJ MW-3 Jun-05	DUP of INJ MW3 Jun-05
Volatile Organic Compounds (ug/L)										
Acetone	3,000	22 J	13 U R	130 UJ	63 UJ	13 UJ	13 UJ	14 U	10.0 U	10.0 U
Benzene	1	15	11	13	8 J	11	11	6.1	8.41	8.27
1,1-Dichloroethane	2400	380	390	420	280	380 J	280	170	2.99	3.04
1,2-Dichloroethane	3	10 U	1.4 J	13 U	13 U	0.97 J	2.5 U	2.5 U	1.00 U	1.00 U
1,1-Dichloroethene	7	38 J	33	48	31	48	47	29	1.00 U	1.00 U
1,2-Dichloroethene (total)	70	120	130	87	43	61	54	44	NA	NA
Cis-1,2-dichloroethene	70 (total)	120	120	95	44	54	58	45	1.00 U	1.13
Trans-1,2-dichloroethene	70 (total)	10 U	1.7 J	13 U	13 U	0.53 J	2.5 U	2.5 U	1.00 U	1.00 U
Ethylbenzene	700	25	29	29	15	19	24	11	11.6	10.8
Methylene Chloride	5	29	18	14 UJ	13 U	2.5 U	2.5 UJ	2.5 U	5.00 U	5.00 U
Tetrachloroethene	3	10 U	2.5 U	J	13 U	2.5 U	2.5 U	2.5 U	1.00 U	1.00 U
Toluene	1,000	50	31	24	13 U	5.5	8.1	2.4 J	3.36	3.70
Vinyl Chloride	1	49	38	45	23 J	38	32	12	2.84	2.84
o-Xylene	10,000 (total)	7.0 J	8.3	10 J	6.3 J	8	9.4	5.7	27.7	23.8
m+p-Xylene	10,000 (total)	9.2 J	8.5	9.8 J	5.5 J	6.3	5.2	3.6 J	98.4	82.6
Xylene (total)	10,000	17	17	21	12 J	15	15	9.6	NA	NA
SVOCs										
Bis(2-chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	6	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRPH (Petroleum Range) mg/l	NR	5.7 J	6.2	NA	4.1	NA	0.17 U	0.30	NA	NA
Inorganics:										
Dissolved Metals (ug/l)										
Antimony	6	NA	NA	NA	NA	2.1 U	10 U	10 UJ	NA	NA
Arsenic	10	NA	NA	NA	NA	8.5 J	10 UJ	5.4	NA	NA
Beryllium	4	NA	NA	NA	NA	0.5 U	5 U	5 UJ	NA	NA
Chromium	100	NA	NA	NA	NA	5.3 J	7.2	3 V	NA	NA
Lead	15	NA	NA	NA	NA	3 UJ	3 U	3 U	NA	NA
Nickel	Note 2	NA	NA	NA	NA	3 J	2.6 J	2 J	5.00	4.40
Sodium	160,000	NA	NA	NA	NA	51800 J	47700	31300	NA	NA
Vanadium	49	NA	NA	NA	NA	11.7	12.8	7.3	NA	NA
Zinc	Note 2	NA	NA	NA	NA	3	20 U	0.88 J	13.2	13.0
Total Metals (ug/l)										
Antimony	6	NA	NA	NA	NA	2.1 U	10 U	10 U	NA	NA
Arsenic	10	NA	NA	NA	NA	3.3 J	7.3 J	10 U	NA	NA
Beryllium	4	NA	NA	NA	NA	0.5 U	5 U	5 U	NA	NA
Chromium	100	NA	NA	NA	NA	10 UJ	8.3	5.6 J	NA	NA
Lead	15	NA	NA	NA	NA	3 UJ	3 U	1.3 J	0.021	0.023
Nickel	Note 2	NA	NA	NA	NA	2.7 J	4.2	40 U	6.50	5.70
Sodium	160,000	NA	NA	NA	NA	45900 J	48500	27900 J	NA	NA
Vanadium	49	NA	NA	NA	NA	12	12.2	7.5	NA	NA
Zinc	Note 2	NA	NA	NA	NA	20 UJ	20 U	20 U	21.1	28.2
MNA										
Total Iron		NA	NA	NA	NA	887	658	560	NA	NA
Total Manganese		NA	NA	NA	NA	48	33.3	21.9	NA	NA
Dissolved Iron		NA	NA	NA	NA	892	661	537	NA	NA
Dissolved Manganese		NA	NA	NA	NA	46.8	37.6	18.1 J	NA	NA
Ethane (ug/l)		20.0	13.0	12	8	3	9	2	58.0	73.0
Ethene (ug/l)		4	2	3	2	0.8 J	2	0.3 J	0.520	0.620
Methane (ug/l)		970	600	570	510 J	140 J	490	130	7000	8400
Chloride (mg/l)		68.2	64.5	45.60	39.9	41.2	24 J	18 D	37	37.1
Nitrate (mg/l)		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.25 UJ	0.34 D	0.05 U	0.05 U
Nitrite (mg/l)		0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.25 UJ	0.25 U	0.05 U	0.05 U
Sulfate (mg/l)		19.8	8.8	17.30	15.7	5 U	8.1 J	12 D	40	40.8
Total Organic Carbon (mg/l)		83.2	130.0	64.6	39.6	77.2	17	45	1.81	NA
Dissolved Organic Carbon (mg/l)		77.9	126.0	67.0	39.8	51.3	R	41	74.7	68.4
Color (pcu)		230	430 J	NA	23	NA	20	250 D	7,800	NA
Carbon Dioxide (mg/l)		150	200	170	220	NA	NA	120	NA	NA
Sulfide (mg/l)		0.11	0.80	0.43	0.76	NA	NA	2.35	NA	NA
Alkalinity (mg/l)		94	88	78	58	NA	NA	30	NA	NA
Hexane Oil and Grease							5 U	NA		

Analyte Name	INJ MW-3 Dec-05	INJ MW-3 Mar-06	INJ MW-3 Oct-06	INJ MW-3 May-07	INJ MW-3 Oct-07	INJ MW-3 Oct-08	INJ MW-3 Nov-09	INJ MW-4 Dec-05	INJ MW-4 Mar-06	INJ MW-4 Oct-06	INJ MW-4 May-07	INJ MW-4 Oct-07	INJ MW-4 Oct-08	INJ MW-4 Nov-09
Volatile Organic Compounds (ug/L)														
Acetone	2.5 U R	5 U R	14 J	R	63 UJ	13 UJ	13 U	3.2 J	2.5 U R	2.1 J	R	2.5 UJ	13 UJ	R
Benzene	3.2	31	7.1	18	8.4 J	7.5	8.8	3.4	3.8	1.7	3.8	1.8	12	11
1,1-Dichloroethane	1.9	1.0 U	3.1	2.7	2.6 J	2.3 J	4.1	6.6	5.3	2.8	9.9	5.3	25	18
1,2-Dichloroethane	0.50 U	1.0 U	1.6 U	1.3 U	13 U	2.5 U	2.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U
1,1-Dichloroethene	0.50 U	1.0 U	1.6 U	1.3 U	13 U	2.5 U	2.5 U	19	13	5	15	7.7	38	13
1,2-Dichloroethene (total)	0.70	1.0 U	1.9	1.5	13 U	0.72 J	1.5 J	5.3	3.8	1.9	13	6.8	38	25
Cis-1,2-dichloroethene	0.53	1.0 U	1.6	1.3	13 U	0.77 J	1.5 J	5.2	3.7	1.9	13	5.9	37	26
Trans-1,2-dichloroethene	0.16 J	1.0 U	0.33 J	0.27 J	13 U	2.5 U	2.5 U	0.50 U	0.50 U	0.5 U	0.1 J	0.5 U	0.53 J	0.51 J
Ethylbenzene	1.3	1.0 U	45	38	18	8.5	24	0.40 J	0.37 J	0.14 J	0.32 J	0.24 J	2.5 U	2.5 U
Methylene Chloride	0.13 J	1.0 U	1.6 U	1.3 U	13 U	2.5 UJ	2.5 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	2.5 UJ	2.5 U
Tetrachloroethene	0.50 UJ	1.0 U	1.6 U	1.3 U	13 U	2.5 U	2.5 U	0.50 UJ	0.50 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U
Toluene	0.81	1.0 U	5.3	1.3 U	13 U	0.96 J	4.6	0.15 J	0.16 J	0.12 J	0.5 U	0.5 U	2.5 U	1.3 J
Vinyl Chloride	0.53	1.0 U	1.8	1.2 J	13 U	1.1 J	4.2	6.1	3.8	1.7	7.1	2.6	22	12
o-Xylene	1.4	1.0 U	18	14	9.1 J	3.8	15	0.31 J	0.31 J	0.18 J	0.29 J	0.19 J	0.57 J	0.61 J
m+p-Xylene	6.2	2.0 U	82	62	65	35	100	0.30 J	0.30 J	1.0 U	0.27 J	0.23 J	5 U	5 U
Xylene (total)	7.9	1.0 U	100	98	75	42	130	0.62	0.62	0.16 J	0.58	0.43 J	0.57 J	0.61 J
SVOCs														
Bis(2-chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRPH (Petroleum Range) mg/l	16 J	22 J	NA	16	NA	6.70	2.50	20 J	1.7 J	NA	3.6	NA	0.70	0.79
Inorganics:														
Dissolved Metals (ug/l)														
Antimony	1.2 UJ	1.2 U	2.0 UJ	10 U	7.1 U	2 J	10 U	2.1 J	4.2 U	1.2 UJ	R	2.1 U	10 U	10 U
Arsenic	143	167	171	168	143	189	60.1	1.7 J	3.2 J	7.6 U	14.5	5 J	10 UJ	10 U
Beryllium	0.09 UJ	0.10 U	1.1 U	5 U	8 U	0.58 J	5 U	0.09 UJ	0.10 U	0.9 U	5 U	0.6 U	5 U	1.4 U
Chromium	30.4	25.3	29.8	28	47.9	34.7	22.6	3.8	3.0	1.4 U	2.9 J	1.3 J	3.7	10 U
Lead	1.0 UJ	1.3	1.8 J	2.1 B	5.4 J	7.2	1.7 J	1.6 UJ	1.0 U	1.6 U	3 U	3 UJ	2.7 J	3 U
Nickel	7.1	5.5	6.4	7 B	5.2	6.2	5.8	3.7 J	2.5 J	3.0 J	4	2.3	3.5	4.4 J
Sodium	200,000	181,000	189000	204000	175000	168000	187000	22,000	18,500	25800	20000	26000	27900	38400
Vanadium	11.4	8.2	12.3	10.9 B	13.2	18.1	13	3.1	2.6	1.8 U	3 J	20 U	5.3	4.6
Zinc	13.1 J	0.55 J	2.3 J	20 U	8.2	20 U	2.5	1.0 U	0.30 UJ	0.80 U	20 U	0.5 U	20 U	20 U
Total Metals (ug/l)														
Antimony	3.9 J	2.3 U	3.8 UJ	10 U	2.4 J	6.9 J	10 U	10 UJ	3.8 U	1.4 UJ	10 U	2.1 U	10 U	6.8 J
Arsenic	286	245	321	277	190	119	141	5.4 U	1.4 UJ	2.6 UJ	R	10 UJ	10 U	10 U
Beryllium	0.52	0.10 U	1.3 U	5 U	5 U	0.35 J	0.79 J	0.20 U	0.10 U	1.2 U	5 U	0.5 U	5 U	1 U
Chromium	157	112	171	186	118	86	141	4.1	3.3	2.3 U	2.4 J	10 UJ	6.2	3.2 J
Lead	28.3	21.5	33.8	38.6	19.9	10.2	23.6	1.5 UJ	2.7 U	3.2 U	3 U	3 UJ	3 UJ	4.2 UJ
Nickel	8.6	7.2	9.4	NA	6.1	5.8	6.2	2.1 J	1.6 J	1.7 J	NA	2.2	4.5	4.2 J
Sodium	210,000	178,000 J	189000	183000 J	161000	178000	178000	21800	18,000 J	23700	19300	26700	27400	37600
Vanadium	21.1	16.0	22.9	21.2	17.2	16.2	20.2	3.1	2.8	2.0 U	20 UJ	20 U	5.1	5.2
Zinc	19.7 UJ	9.9	14.1 UJ	17.8	11	9.8	18	6 UJ	2.5	5.7 U	20 U	20 U	20 U	20 U
MNA														
Total Iron	703	487	512	490	384	391 J	453	560	472	3100	2280	2850	1080 J	3140
Total Manganese	121	113	117	131	137	167	164	6.1	8.0	118	49.1	121	37.3 J	74.2
Dissolved Iron	512	309	333	344	371	378	459	803	457	3180	1860	3110	1110	3030
Dissolved Manganese	107	106	96.2	124	143	164	158 J	8.7	7.9	117	47	126	40.7	73.4
Ethane (ug/l)	7	22	17 J	11	7	5	7	0.8 J	0.6 J	0.4 J	0.6 J	0.2 J	0.4 J	2
Ethene (ug/l)	2	0.4 J	0.6 J	2 U	2 U	2 U	2 U	0.8 J	0.4 J	0.2 J	2 U	2 U	0.4 J	0.6 J
Methane (ug/l)	630	690	480 J	580 J	340 J	760	1200	630	360 J	550	1100 J	170 J	770	980 BBD
Chloride (mg/l)	28.0	29.7	24.4	24.9	28.3	24 D	18 D	14.6	15.3	14.8	25.2	23.3	26 D	32 D
Nitrate (mg/l)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.25 U	R	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.25 U	0.25 U
Nitrite (mg/l)	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.25 U	R	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.25 U	0.25 U
Sulfate (mg/l)	1.13	0.755	1.51	7.1	5 U	19 JD	15 D	11.7	12.5	5.0 U	81.7	300	34 D	16 D
Total Organic Carbon (mg/l)	193	138	145	850	156	100 D	120 D	46.8	39.1	20.0	32.5	87.7	10	49
Dissolved Organic Carbon (mg/l)	188	133	136	177	113	R	110 D	45.5	36.2	18.8	33.2	21.8	R	43
Color (pcu)	14,000	10,000	NA	1,450	NA	NA	17000 D	175	150	NA	70	NA	NA	100 D
Carbon Dioxide (mg/l)	708	NA	165	NA*	NA	NA	240	75	88	120	145	NA	NA	160
Sulfide (mg/l)	0.80	NA	0.38	0.87	NA	NA	2.6	0.01	0.64	0.59	0.42	NA	NA	1.86
Alkalinity (mg/l)	NA*	NA	188	580	NA	NA	480	67	88	52	52	NA	NA	68
Hexane Oil and Grease						3.2 B	NA						5 U	NA

NA* Samples too dark for field testing
NR - Not required as a Cleanup Objective
NA - Not Analyzed
R - Data results "rejected" by Data Validator

Note 1 - Monitoring of VOCs requested by Florida DEP for OU1. VOC analysis not required by ROD
Note 2 - Monitoring of Nickel and Zinc is required by OU2 ROD Amendment to evaluate impact to/from Reeves Site plume
Note 3 - Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations
Note 4 - 2009 dissolved metals included digestation to eliminate interference
Note 5 - Hexane Oil and Grease result from March 2008 sampling event

Table 4-1

Peak Oil / Bay Drums Groundwater Sampling Results
October 2009

OU-2 Surficial

Analyte Name	ROD Cleanup Level (ppb)	B-1R Jun-05	B-1R Dec-05	DUP of B-1R Dec-05	B-1R Mar-06	B-1R Oct-06	B-1R May-07	B-1R Oct-07	B-1R Oct-08	B-1R Nov-09
Volatile Organic Compounds (ug/L)										
Acetone	3,000	10.0 U	170 R	1.0 U R	130 UJ	270 UJ	R	310 UJ	13 UJ	130 UJ
Benzene	1	10.0 U	25 U	25 U	5.7 J	6.1 J	25 U	3.1 J	2.2	25 U
1,1-Dichloroethane	2400	10.0 U	25 U	25 U	25 U	25 U	25 U	25 U	1.2 J	25 U
1,2-Dichloroethane	3	10.0 U	25 U	25 U	25 U	25 U	25 U	25 U	2.5 U	25 U
1,1-Dichloroethene	7	10.0 U	25 U	25 UJ	25 U	25 U	25 U	25 U	2.5 U	25 U
1,2-Dichloroethene (total)	70	NA	7.8 J	8.4 J	8.7 J	7.8 J	8.2 J	25 U	3.3	9.3 J
Cis-1,2-dichloroethene	70 (total)	10.0 U	7.7 J	8.3 J	9.3 J	8.2 J	8.2 J	25 U	3.5	8.2 J
Trans-1,2-dichloroethene	70 (total)	10.0 U	25 U	25 U	25 U	25 U	25 U	25 U	2.5 U	25 U
Ethylbenzene	700	10.0 U	738	560	890	1200	600	1800	1500	1300
Methylene Chloride	5	50.0 U	25 U	25 U	25 U	25 U	25 U	25 U	2.5 UJ	25 U
Tetrachloroethene	3	10.0 U	25 UJ	25 U	25 U	25 U	25 U	25 U	2.5 U	25 U
Toluene	1,000	11.2	18 J	9.6 J	26	37	25 U	24 J	17	35 U
Vinyl Chloride	1	10.0 U	25 U	25 U	18 J	25 U	25 U	25 U	4.6	7.4 J
o-Xylene	10,000 (total)	10.9	67 J	38 J	140	140	84	160	120	86
m+p Xylene	10,000 (total)	725	380 J	240 J	720	940	350	1300	1000	600
Xylene (total)	10,000	NA	440 J	290 J	990	1200	420	1600	1300	720
SVOCs										
Bis(2-chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	6	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRPH (Petroleum Range) (mg/l)	NR	NA	26 J	2.5 J	27 J	NA	25	NA	1.7	4.2
Inorganics:										
Dissolved Metals (ug/l)										
Antimony	6	NA	1.2 UJ	1.2 UJ	1.2 U	1.2 UJ	10 U	2.1 U	10 U	10 U
Arsenic	10	NA	7.0 J	8.1 J	8.9 J	9.2 J	R	28.1 J	10 UJ	11
Beryllium	4	NA	0.09 UJ	0.09 UJ	0.1 U	0.94 U	5 U	0.5 U	5 U	5 U
Chromium	100	NA	6.8	7.3	6.5	5.7	4.7	5.1	5.1	6.6
Lead	15	NA	1.0 UJ	1 UJ	1.0 U	1.6 U	3 U	3 UJ	2.6 J	3 U
Nickel	Note 2	4.00	2.4	3.10 J	7.9	4.4	3.9	3.4 J	3.2 J	2.3
Sodium	160,000	NA	54,400	54,100	53,700 J	57700 J	54800	21400	17100	48000
Vanadium	49	NA	4.8	5.4	5.5	4.8	4.1	20 U	1.9	3.3
Zinc	Note 2	26.8	2.2 U	2.60 U	0.30 UJ	1.2 J	20 U	20 U	20 U	3.1 U
Total Metals (ug/l)										
Antimony	6	NA	3.3 U	10 U	1.2 U	2.3 UJ	10 U	2.1 U	5 J	10 U
Arsenic	10	NA	5.4 U	5.4 U	3.8 J	4.2 J	R	6.3 J	6.6 J	18.8
Beryllium	4	NA	0.20 U	0.20 U	0.10 U	1.2 U	5 U	0.5 U	5 U	5 U
Chromium	100	NA	14.9	18.7	17.9	17.7	13.7	10 U	5.7	11.6
Lead	15	0.002	2.1 J	4.6 J	4.9 U	8.3 U	3 U	3 UJ	3 UJ	2.5 J
Nickel	Note 2	3.00	2.4 J	2.50 J	3.7	4.7	NA	40 UJ	4.3	2.3 J
Sodium	160,000	NA	54,600	53600	48,500 J	49200 J	51000	19800	18600	50500
Vanadium	49	NA	5.1	6.5	6.9	6.5	5.9	20 U	2.2	4
Zinc	Note 2	7.70	7.3 UJ	6.70 UJ	4.5	4.4 UJ	20 U	3.4	20 U	4.5
MNA										
Total Iron		NA	339	329	442	329	461	1010	606	463
Total Manganese		NA	142	134	131	244	133	546	371	154
Dissolved Iron		NA	300	315	295	NA	295	590	716	400
Dissolved Manganese		NA	138	138	113	126	124	539	372	156
Ethane (ug/l)		0.830	1 J	0.8 J	2	0.4 J	2 U	0.2 J	0.2 J	0.1 J
Ethene (ug/l)		2.300	0.5 J	0.5 J	0.5 J	0.7 J	2 U	2 U	2 U	2 U
Methane (ug/l)		6800	830	720	510	700	540 J	260 J	480	650
Chloride (mg/l)		12.3	13.3	12.3	16.1	16	19.2	10.3	14 D	14 D
Nitrate (mg/l)		0.06 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.47	0.25 U	R
Nitrite (mg/l)		0.06 U	0.05 U	0.05 U	0.05 U	0.05 U	0.06 UJ	1.11	0.25 U	R
Sulfate (mg/l)		19.6	5.0 U	5.0 U	1.4	1.4	1.27	1.48	25 U	16 D
Total Organic Carbon (mg/l)		1.23	170	94.7	146	112	80.1	205	50	110 D
Dissolved Organic Carbon (mg/l)		30.3	127 J	85.0 J	142	116	81.9	156	R	110 D
Color (pnu)		1900	1,750 J	3,000 J	13,000	NA	1800	NA	NA	900
Carbon Dioxide (mg/l)		NA	470	NA	390	195	405	NA	NA	385
Sulfide (mg/l)		NA	0.43	NA	0.70	0.62	0.61	NA	NA	4.75
Alkalinity (mg/l)		NA	227.4	NA	260	424	270	NA	NA	220
Hexane Oil and Grease									10	NA

Analyte Name	B-2 Dec-05	B-2 Oct-06	B-2 Oct-07	B-2 Oct-08	B-2 Oct-09	B-3 Jun-05	B-3 Dec-05	B-3 Mar-06	DUP of B-3 Mar-06	B-3 Oct-06	B-3 May-07	Dup of B-3 May-07	B-3 Oct-07	B-3 Oct-08	B-3 Nov-09
Volatile Organic Compounds (ug/L)															
Acetone	NA	NA	NA	NA	NA	10.0 U	2.9 UJ	7.2 J	R	30 UJ	R	R	2.5 UJ	13 UJ	13 U
Benzene	NA	NA	NA	NA	NA	1.75	2.3	3.1	R	1.5 J	1.5	1.6	0.87	0.54 J	1.5 J
1,1-Dichloroethane	NA	NA	NA	NA	NA	1.00 U	2.6	3.0	R	1.5 J	1.2	1.2	0.43 J	0.59 J	1.9 J
1,2-Dichloroethane	NA	NA	NA	NA	NA	1.00 U	0.50 U	0.50 U	R	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U
1,1-Dichloroethene	NA	NA	NA	NA	NA	1.00 U	0.50 U	0.50 U	R	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	NA	0.44 J	0.70	R	2.5 U	0.26 J	0.28 J	0.19 J	2.5 U	2.5 U
Cis-1,2-dichloroethene	NA	NA	NA	NA	NA	1.00 U	0.43 J	0.53	R	2.5 U	0.26 J	0.28 J	0.17 J	2.5 U	2.5 U
Trans-1,2-dichloroethene	NA	NA	NA	NA	NA	1.00 U	0.50 U	0.15 J	R	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U
Ethylbenzene	NA	NA	NA	NA	NA	6.53	8.3	15	R	5.2	1.4	1.6	0.48 J	2.5 U	0.81 J
Methylene Chloride	NA	NA	NA	NA	NA	5.00 U	0.50 U	0.50 U	R	2.6 U	0.5 U	0.5 U	0.5 U	2.5 UJ	2.5 U
Tetrachloroethene	NA	NA	NA	NA	NA	1.00 U	0.50 U	0.50 UJ	R	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U
Toluene	NA	NA	NA	NA	NA	1.00 U	0.80 U	2.3	R	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U
Vinyl Chloride	NA	NA	NA	NA	NA	1.00 U	0.50 U	0.92	R	2.5 U	0.5 U	0.5 U	0.19 J	2.5 U	0.82 J
o-Xylene	NA	NA	NA	NA	NA	1.12	1.3	1.8	R	0.7 J	0.36 J	0.38 J	0.39 J	2.5 U	2.5 U
m+p Xylene	NA	NA	NA	NA	NA	11.7	11	15	R	3.2 J	0.84 J	0.62 J	0.54 J	5 U	5 U
Xylene (total)	NA	NA	NA	NA	NA	NA	13	17	R	4.4	1.2	1	0.93	2.5 U	2.5 U
SVOCs															
Bis(2-chloroethyl)ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	NA	NA	5 U	5.3 U	5 U
Bis(2-ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	NA	NA	5 U	5.3 U	5 U
2-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	NA	NA	5 U	5.3 U	5 U
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	50	NA	NA	4.1 J	5.3 U	5 U
TRPH (Petroleum Range) (mg/l)	NA	NA	NA	NA	NA	NA	17 J	13 J	14 J	NA	9.9	10	NA	0.23	0.75
Inorganics:															
Dissolved Metals (ug/l)															
Antimony	3.3 U	1.2 UJ	2.1 U	10 U	10 U	NA	3.3 U	1.2 U	1.2 U	1.2 UJ	10 U	10 U	2.1 U	10 U	10 U
Arsenic	21.3	13.3	R	8.1	12.8	NA	15.5 J	R	30.5	18.5	R	R	5.2 J	10 UJ	10 UJ
Beryllium	0.59 J	1.1 U	0.5 U	5 U	0.66 J	NA	0.20 U	0.10 U	0.10 U	0.79 U	5 U	5 U	0.5 U	5 U	5 U
Chromium	12.7	12.5	17.4	25.2	6.1	NA	9.7	14.3	17.6	7.1	7.2	7.1	2.7 J	2.9	6.6
Lead	3.4	4.8	1.5 J	6.2	3.6	NA	1.5 U	1.0 UJ	1.1 J	1.6 U	1.5 J	1.9 J	3 UJ	3 U	3 U
Nickel	14.9	11.1	5.9 J	8	5.1	2.00 U	3.5	3.5 J	3.0	2.1 J	1.6	3	0.75 J	40 UJ	40 U
Sodium	169000	105000 J	84400 J	108000	95300	NA	71,000	81,400 J	79,400	40400 J	45900	48100	19800	17500	48100 J
Vanadium	37.1	23.4	7.5	18.5	11.7	NA	2.1 U	4.3 J	3.5	1.5 U	20 U	20 U	20 U	0.73 J	1.1 J
Zinc	6.0 U	3.2 J	20 U	20 U	20.3 J	12.1	2.5 U	2.2	1.8	0.80 U	20 U	20 U	20 U	20 U	2.3 U
Total Metals (ug/l)															
Antimony	4.8	3.9 UJ	2.1 U	10 U	8.1 J	NA	1.8 U	1.2 U	1.2 U	2.5 UJ	10 U	10 U	2.1 U	10 U	10 U
Arsenic	185	46.7	R	17.1	22.8	NA	18.8	R	22.8 J	18.6	R	R	10 UJ	10 U	10 UJ
Beryllium	0.83 UJ	1.5 U	0.5 U	5 U	5 UJ	NA	0.42 U	0.10 U	0.10 U	1.0 U	5 U	5 U	0.5 U	5 U	5 U
Chromium	226	131	24.2	46.2	63.7	NA	25.9	17.3 J	31.5 J	21.9	8.3	8.7	10 UJ	2.7	9.4
Lead	56.3	27.9	7.1 J	13.9	16.2	0.004	3.9	3.2 U	4.9 UJ	8.2 U	3 UJ	3 UJ	1.7 J	3 U	3 UJ
Nickel	21.2	24	40 UJ	8.7	6.9	3.80	4.1	2.3 J	2.8	1.6 J	NA	NA	40 UJ	1.4	40 UJ
Sodium	180,000 J	92200 J	75000 J	113000	88500	NA	69,500 J	61,300 J	73,300 J	34200 J	42500	43300	18800	16400	41600 J
Vanadium	66.6	32.8	7.2	22	17.9	NA	3.6	2.5 J	4.3	3.2	20 U	20 U	20 U	20 UJ	1.7
Zinc	33.8	15.3 UJ	3.1	20 U	6.1 J	18.5	9	4.6	7.7	5.3 U	20 U	20 U	20 U	30 U	2.1
MNA															
Total Iron	NA	444	123	276	126	NA	123	54.2 UJ	75.9 J	75.7	100 U	100 U	2500	100 UJ	661
Total Manganese	NA	111	146	121	162	NA	168	146	162	401	468	465	333	157	216
Dissolved Iron	NA	345	177	227	88.6 J	NA	16.8 U	82.3 J	43.8	34	100 U	100 U	2620	100 U	818
Dissolved Manganese	NA	118	148	115	150	NA	164	161	153	418	477	469	350	157	219
Ethane (ug/l)	NA	NA	NA	NA	NA	8.300	2 U	2 J	1 J	0.8 J	2	2	0.5 J	0.08 J	1 J
Ethene (ug/l)	NA	NA	NA	NA	NA	0.180	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methane (ug/l)	NA	NA	NA	NA	NA	8600	440	560 J	360 J	410	750 J	750 J	480 J	60	470
Chloride (mg/l)	NA	NA	NA	NA	NA	25.8	15.7	20.6	19.8	17.3	19.4 J	28.9 J	19.2	15 D	15 D
Nitrate (mg/l)	NA	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	0.08 U	0.05 U	0.05 UJ	0.05 U	0.64 D	R
Nitrite (mg/l)	NA	NA	NA	NA	NA	0.05 U	0.05 UJ	0.05 U	0.05 U	0.08 U	0.05 UJ	0.05 U	0.05 U	0.25 U	R
Sulfate (mg/l)	NA	NA	NA	NA	NA	32.4	4.71	5.31	4.69	31.4	35.3	28.9	62.8	45 D	11 D
Total Organic Carbon (mg/l)	NA	NA	NA	NA	NA	0.78	90.7	71.4	63.9	55.6	50.4 J	44.8	44.5	34	48
Dissolved Organic Carbon (mg/l)	NA	NA	NA	NA	NA	34.7	65.0	66.5	60.8	51.4	44.1 J	44.1	26	R	42
Color (pnu)	NA	NA	NA	NA	NA	2,300	1,250	1,400 J	2,570 J	NA	420	240	NA	NA	500
Carbon Dioxide (mg/l)	NA	NA	NA	NA	NA	NA	130	NA	NA	230	175	NA	NA	NA	215
Sulfide (mg/l)	NA	NA	NA	NA	NA	NA	3.00	NA	NA	0.23	0.51	NA	NA	NA	0.27
Alkalinity (mg/l)	NA	NA	NA	NA	NA	NA	586	NA	NA	386	384	NA	NA	NA	376
Hexane Oil and Grease					NA									10y	NA

NA* Samples too dark for field testing
NR Not required as a Cleanup Objective
NA - Not Analyzed
R - Data results "rejected" by Data Validator

Note 1 - Monitoring of VOCs requested by Florida DEP for OU1. VOC analysis not required by ROD
Note 2 - Monitoring of Nickel and Zinc is required by OU2 ROD Amendment to evaluate impact to/from Reeves Site plume
Note 3 - Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations
Note 4 - 2009 dissolved metals unincluded digestation to eliminate interference
Note 5 - Hexane Oil and Grease result from March 2008 sampling event

Table 4-1

Peak Oil / Bay Drums Groundwater Sampling Results
October 2009

OU-2 Surficial

Analyte Name	ROD Cleanup Level (ppb)	B-6 Mar-06	B-6 Oct-06	B-3 May-07	Dup of B-3 May-07	B-6 Oct-07	B-5 Oct-08	B-5 Nov-09	B-6R Dec-05	B-6R Mar-06	B-6R Oct-06	B-6R May-07	B-6R Oct-07	B-6R Oct-08	B-6R Oct-09	B-7 Jun-05	B-7 Dec-05	B-7 Mar-06	B-7 Oct-06	B-7 May-07	B-7 Oct-07	DUP of B-7 Oct-07	B-7 Oct-08	DUP of B-7 Oct-08	B-7 Dec-09	DUP of B-7 Dec-09
Volatile Organic Compounds (ug/L)																										
Acetone	3,650	13 U R	2.5 U R	R	R	13 UJ	11 UJ	13 U	2.5 U R	2.5 U R	33 UJ	R	13 UJ	13 UJ	81 UJ	3.000 U	630 U R	12 UJ	140 UJ	R	78 UJ	63 UJ	13 UJ	13 UJ	36 U	31 U
Benzene	1	2.5 U	0.55 U	0.12 J	0.13 J	2.5 U	2.5 U	2.5 U	1.5	2.7	1.8 J	3.8	3.3	1 J	2	300 U	130 U	7.9	13 U	2.5 U	1.6 U	1.3 U	2.5 U	2.5 U	7.1 U	6.3 U
1,1-Dichloroethane	3400	2.5 U	0.55 U	1.7	1.7	1.1 J	0.65 J	0.78 J	0.60	0.63	2.8	10	8.6	1.3 J	8.4	2.257	650	11	2800	200	32	31	360	370	310	320
1,2-Dichloroethane	3	2.5 U	0.50 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	0.50 U	0.50 U	2.5 U	0.5 U	2.5 U	2.5 U	0.5 U	300 U	130 U	10 U	76	18	1.6 UJ	2 J	12 J	12 J	3.6 J	4 J
1,1-Dichloroethene	7	2.5 U	0.51 J	0.78	0.9	1.2 J	2.5 U	2.5 U	0.50 U	0.13 J	2.5 U	0.5	2.5 U	2.5 U	0.56	2,951	210	10 U	660	93	48	46	47	9.2	16	15
1,2-Dichloroethene (total)	70	2.5 U	0.50 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	0.64	0.34 J	0.85 J	0.45 J	1.2 J	0.74 J	1.2	NA	130 U	2.1	4.5 J	0.85 J	1.6 U	0.36 J	2.5 U	2.5 U	7.1 U	6.3 U
cis-1,2-dichloroethene	70 (total)	2.5 U	0.50 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	0.62	0.31 J	0.91 J	0.45 J	1.1 J	0.79 J	1.1	300 U	130 U	1.8	4.8 U	0.85 J	1.6 U	0.32 J	2.5 U	2.5 U	7.1 U	6.3 U
Trans-1,2-dichloroethene	70 (total)	2.5 U	0.50 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	0.50 U	0.50 U	2.5 U	0.5 U	2.5 U	2.5 U	0.11 J	300 U	130 U	0.44 J	13 U	2.5 U	1.6 U	1.3 U	2.5 U	2.5 U	7.1 U	6.3 U
Ethylbenzene	700	2.5 U	0.50 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	0.13 J	0.18 J	2.5 U	0.5 U	2.5 U	2.5 U	0.5 U	300 U	130 U	1.8	13 U	2.5 U	1.6 U	1.3 U	2.5 U	2.5 U	7.1 U	6.3 U
Methylene Chloride	5	2.5 U	0.50 U	0.5 U	0.5 U	2.5 U	2.5 UJ	2.5 U	0.50 U	0.50 UJ	2.8 U	0.3 J	2.5 U	2.5 UJ	0.5 U	1,800 U	2300 J	10 U	320	2.5 U	1.6 U	1.3 U	12 J	12 J	7.1 U	6.3 U
Tetrachloroethene	3	2.5 U	0.50 U	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	0.50 U	0.50 U	2.5 U	0.5 U	2.5 U	2.5 U	0.5 U	300 U	130 U	10 U	13 U	2.5 U	1.6 U	1.3 U	2.5 U	2.5 U	7.1 U	6.3 U
Toluene	1,000	0.84 J	0.11 J	0.5 U	0.5 U	2.5 U	2.5 U	2.5 U	0.50 U	0.21 J	2.5 U	0.5 U	0.54 J	2.5 U	0.13 J	81418 J	3600	3.9	1800	2.5 U	1.6 U	1.3 U	5.6	5.5 J	1.2	1.1
Vinyl Chloride	1	2.5 U	0.65	3.4	3.1	2.5 U	2.5 U	2.5 U	0.50 U	0.49 J	1.1 J	1.2	0.81 J	0.67 J	1	300 U	130 U	1.2	310	2.5 U	1.6 U	1.3 U	1.8	1.7 J	7.1 U	6.3 U
o-,p-Xylene	10,000 (total)	2.5 U	0.50 U	0.41 J	0.43 J	2.5 U	2.5 U	0.53 J	0.19 J	0.15 J	2.5 U	0.5 U	2.5 U	2.8 U	0.5 U	300 U	48 J	10	24	2.5 U	1.6 U	1.3 U	1.2 J	1.2 J	7.1 U	6.3 U
m-,p-Xylene	10,000 (total)	3 U	0.7 J	0.29 J	0.31 J	5 U	5 U	1 J	0.26 J	0.35 J	5 U	0.28 J	5 U	5 U	1 U	600 U	61 J	5.3	72 J	5 U	3.1 U	2.5 U	5 U	5 U	14 U	13 U
Xylene (total)	10,000	2.5 U	0.52	0.7	0.73	2.5 U	2.5 U	1.7 J	0.37 J	0.73	2.8 U	0.28 J	2.5 U	2.5 U	0.5 U	NA	110 J	6.5	50	2.5 U	1.6 U	1.3 U	1.7 J	1.7 J	7.1 U	6.3 U
SVOCs																										
Bis(2-Chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA	10 U	NA	10 U	NA	5 U	5.3 U	5.8 U	NA	NA	NA	10 U	NA	5 U	5 U	5.4 U	5.8 U	5 U	5 U
Bis(2-ethylhexyl)phthalate	6	NA	NA	NA	NA	NA	NA	NA	10 U	NA	10 U	NA	5 U	5.3 U	5.8 U	NA	NA	NA	10 U	NA	5 U	5 U	5.4 U	5.8 U	5 U	5 U
2-Methylphenol	2,000	NA	NA	NA	NA	NA	NA	NA	10 U	NA	10 U	NA	5 U	5.3 U	5.8 U	NA	NA	NA	61	NA	5 U	5 U	9.1	8.4	5 U	5 U
Naphthalene	100	NA	NA	NA	NA	NA	NA	NA	10 U	NA	10 U	NA	5 U	5.3 U	5.8 U	NA	NA	NA	25 J	NA	9 J	9 UJ	5.4 U	5.8 U	5 U	5 U
TRPH (Petroleum Range) (mg/l)	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12 J	1.9 J	NA	2.9	NA	NA	NA	NA	0.76	1.20
Inorganics																										
Dissolved Metals (ug/l)																										
Antimony	6	NA	NA	NA	NA	NA	NA	NA	3.3 U	NA	1.2 UJ	NA	2.1 U	10 U	10 U	NA	3.3 U	NA	1.2 UJ	NA	2.1 U	2.1 U	5.9 J	5.8 J	10 U	2.7 J
Arsenic	10	NA	NA	NA	NA	NA	NA	NA	33.6 J	NA	41.9 J	NA	36	66.3 J	NA	NA	13.5 J	NA	11.9 J	NA	12.8 J	11.4 J	28.2	29.8	15.9 J	13 J
Beryllium	4	NA	NA	NA	NA	NA	NA	NA	0.20 U	NA	0.78 U	NA	0.5 U	5 U	0.68 J	NA	0.20 U	NA	0.87 U	NA	0.5 U	0.5 U	5 U	5 U	5 U	5 U
Chromium	100	NA	NA	NA	NA	NA	NA	NA	5.7	NA	3.4	NA	3 J	4	4.7 J	NA	4.8	NA	3.3	NA	2.3 J	2.3 J	10 U	10 U	19	6.3
Lead	15	NA	NA	NA	NA	NA	NA	NA	1.5 U	NA	3 UJ	NA	2.7 J	3 U	3 UJ	NA	1.5 U	NA	1.8 U	NA	3 UJ	3 UJ	3 U	3 U	3 UJ	3 UJ
Nickel	Note 2	NA	NA	NA	NA	NA	NA	NA	8.1	NA	3.9 J	NA	3.7 J	3.3 J	7.5	2.00 U	19.7	NA	11 J	NA	4.9 J	4.7 J	7.4	1.8 J	3.1	3.8
Sodium	160,000	NA	NA	NA	NA	NA	NA	NA	41800	NA	18700 J	NA	20000	14600	31000	NA	36300	NA	41700	NA	39000	34500	17000	17000	21700	20900
Vanadium	49	NA	NA	NA	NA	NA	NA	NA	14 U	NA	11 U	NA	20 U	11 J	20 U	NA	30.5	NA	12	NA	8	8	5.5	5.5	4.3	4.8
Zinc	Note 2	NA	NA	NA	NA	NA	NA	NA	25 U	NA	0.80 U	NA	20 U	20 U	5.6 J	18.8	4.1 U	NA	19.1	NA	19.6	19.7	9.7 J	10.8 J	20 UJ	10.4 J
Total Metals (ug/l)																										
Antimony	6	NA	NA	NA	NA	NA	NA	NA	1.6 U	NA	2.4 UJ	NA	2.1 U	10 U	9.1 J	NA	1.8 J	NA	3.0 UJ	NA	2.4 J	10 UJ	10 UJ	10 UJ	10 UJ	10 U
Arsenic	10	NA	NA	NA	NA	NA	NA	R	29.8 J	NA	36.2 J	32.8	51.3 J	NA	NA	NA	8.7 J	NA	7.8 J	NA	8.1 J	8.3 J	33.1	31.9	13.8 J	18.7 J
Beryllium	4	NA	NA	NA	NA	NA	NA	NA	0.40 U	NA	1.1 U	NA	0.5 U	5 U	3 UJ	NA	0.41 U	NA	1.7 U	NA	0.5 U	0.5 U	5 U	5 U	5 U	5 U
Chromium	100	NA	NA	NA	NA	NA	NA	NA	6.9	NA	4.4	NA	10 UJ	4.1	6.3	NA	7.1	NA	6.8	NA	10 UJ	10 UJ	10 U	10 U	3.1	2.5
Lead	15	NA	NA	NA	NA	NA	NA	NA	3.1	NA	3.7 U	NA	3 UJ	4.1	0.004	NA	3.8	NA	5.4 U	NA	1.5 J	3 UJ	3.1 J	3.7 J	3 UJ	3 U
Nickel	Note 2	NA	NA	NA	NA	NA	NA	NA	8.1	NA	3.1 J	NA	40 UJ	2 J	6.8	2.80	19	NA	6.3 J	NA	40 UJ	40 UJ	2.2 J	2.5	3.2	2.8
Sodium	160,000	NA	NA	NA	NA	NA	NA	NA	42,800 J	NA	19000 J	NA	18500	14800	29600	NA	36200 J	NA	38000	NA	35300	35200	17200	17300	20900	21400
Vanadium	49	NA	NA	NA	NA	NA	NA	NA	0.77 J	NA	1.4 U	NA	20 U	0.58 J	20 U	NA	0.7 U	NA	12.9	NA	8.3	8.3	5.8	5.8	4.6	4.2
Zinc	Note 2	NA	NA	NA	NA	NA	NA	NA	21 J	NA	2.2 U	NA	20 U	20 U	20 UJ	9.40	4.8	NA	17.6	NA	19.2	21	20 UJ	20 UJ	5.2	20 UJ
MNA																										
Total Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	11400	NA	7140	15400	12400	NA	5810	NA	1560	NA	3720	3240	10300	10800	7380	7840
Total Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	425	NA	346	588	543	NA	145	NA	69	NA	302	307	601	614	465	499
Dissolved Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	12000	NA	6470	15400	11900	NA	5580	NA	1060	NA	3170	3060	10400	10200	6880	7280
Dissolved Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	448	NA	341	704	530	NA	146	NA	60	NA	301	289	614	600	455	467
Ethene (ug/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Ethane (ug/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.0	2 U	0.05 J	0.7 J	2 U	2 U	1 J	1 J	2 U	2 U
Methane (ug/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7700	66	1	10 U	1 UJ	3 J	4	24	28	42
Chloride (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	358	86.3	116	137	253	153	154	66 D	73 D	64 D
Nitrate (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.05 U	0.05 U	0.05 U	0.05 U	2.64	0.355	0.355	0.25 U	0.25 U	1.2 D
Nitrite (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.25 U	0.25 U	0.25 U
Sulfate (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16.3	8.97	45.9	16.1	66.8	101	100	120 D	130 D	119 D
Total Organic Carbon (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	165.8	115	58.1	43.2	62	89.4	80	61	63
Dissolved Organic Carbon (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.8	88.4	115	58.7	43.6	57.9	54.7		63	64
Color (pcu)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000 J	3,600	NA	280	NA	NA	600 D	500 D	505 D
Carbon Dioxide (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40	370	70	20	NA	NA	NA	100	NA
Sulfide (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.30	0.80	0.18	0.17	NA	NA	NA	0.05	NA
Alkalinity (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	104	80	106	28	NA	NA	NA	112	NA
Hexane Oil and Grease							5 U	NA						2.8	NA								5 U		NA	NA

NA* - Samples too dark for field testing.
NR - Not required as a Cleanup Objective
NA - Not Analyzed
R - Data results "rejected" by Data Validator

Note 1 - Monitoring of VOCs requested by Florida DEP for OU1. VOC analysis not required by ROD
Note 2 - Monitoring of Nickel and Zinc is required by OU2 ROD Amendment to evaluate impact to/from Reeves Sea plume
Note 3 - Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations
Note 4 - 2008 dissolved metals unfiltered digestation to eliminate interference
Note 5 - Hexane Oil and Grease result from March 2008 sampling event

Table 4-1

Peak Oil / Bay Drums Groundwater Sampling Results
October 2009

OU-2 Surficial

Analyte Name	ROD Cleanup Level (ppb)	B-10R Jun-05	B-10R Dec-05	B-10R Mar-06	B-10R Oct-06	DUP of B-10R Oct-06	B-10R April-07	B-10R Oct-07	B-10R Jul-08	B-10R Oct-08	B-10R Nov-09
Volatile Organic Compounds (ug/L)											
Acetone	3,800	100 U	44 J	5 U R	450 UJ	470 UJ	R	63 UJ	43 U	13 UJ	130 UJ
Benzene	1	26.3	39	39	46	66	29	46	43	48	49
1,1-Dichloroethane	2400	117	100	100	290	270	130	210	230	210	250
1,2-Dichloroethane	3	10.0 U	10 U	1.2	50 U	50 U	25 U	13 U	13 U	2.7	25 U
1,1-Dichloroethene	7	12.6	74 J	38	210	220	71	180	150	190	190
1,2-Dichloroethene (total)	70	NA	790	580	1200	1100	870	1100	980	830	1200
Cis-1,2-dichloroethene	70 (total)	324	800	540	1300	1200	580	1000 J	940 D	1000	1200
Trans-1,2-dichloroethene	70 (total)	10.0 U	7.7 J	3.4	50 U	50 U	25 U	3.3 J	13 U	2 J	25 U
Ethylbenzene	700	49.0	99	16	210	170	65	150	160	120	130
Methylene Chloride	5	50.0 U	10 U	1.0 U	50 UJ	50 UJ	25 U	25 U	3 J	2.5 UJ	25 U
Tetrachloroethene	3	10.0 U	10 U	1.0 U	50 U	50 U	25 U	13 U	13 U	2.5 U	25 U
Toluene	1,000	10.0 U	27	27	62	66	25 U	87	45	48	77
Vinyl Chloride	1	45.1	81	37	150	130	38	78	64	68	89
o-Xylene	10,000 (total)	10.0 U	9.3 J	11	28 J	25 J	12 J	29	18	25	31
m+p-Xylene	10,000 (total)	20.0 U	18 J	17	66 J	41 J	17 J	38	24 J	29	43 J
Xylene (total)	10,000	NA	29	29	100 J	70 J	29	66	41	58	76
SVOCs											
Bis(2-chloroethyl)ether	7	NA	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	6	NA	NA	NA	NA	10 U	NA	NA	NA	NA	NA
2-Methylphenol	2,000	NA	NA	NA	NA	65	NA	NA	NA	NA	NA
Naphthalene	100	NA	NA	NA	NA	8.4 J	NA	NA	NA	NA	NA
TRPH (Petroleum Range) mg/l	NR	NA	10 J	7.1 J	NA	NA	8.8	NA	NA	0.17	0.27
Inorganics: Dissolved Metals (ug/l)											
Antimony	6	NA	1.2 UJ	1.2 U	1.2 UJ	1.2 UJ	10 U	2.1 U	NA	10 U	10 U
Arsenic	10	NA	8.2	10.9	10.2	8.6	14.6	17.9	NA	9.8	46.5
Beryllium	4	NA	0.09 UJ	0.14	1.4 U	1.2 U	5 U	6 U	NA	0.84	0.9
Chromium	100	NA	15.4	14.4	17.4	17.4	12.7	32	NA	31.8	145
Lead	15	NA	1.7 J	2.4	2.2 J	2.3 J	3 U	7.1	NA	28	46.5
Nickel	Note 2	11.3	8.4	8.0	10.0	9.0	10.4	9.2	NA	10.3	13.8
Sodium	160,000	NA	118,000	97000	98800 J	96500 J	97800	87300 J	NA	92800	106000
Vanadium	49	NA	63.9	56.8	94.2	72.7	77.2	114	NA	123	155
Zinc	Note 2	79.4	3.5 UJ	0.30 UJ	2.8 J	1.4 J	20 U	3.7	NA	20 U	20
Total Metals (ug/l)											
Antimony	6	NA	3.7 J	2.2 U	3.2 UJ	3.5 UJ	10 U	2.6 J	7.7 B	4.4 J	10 U
Arsenic	10	NA	31.3	32.4	35.9	34.9	27.9	36	47.9	82.3	62
Beryllium	4	NA	0.75	0.48	2.1 U	2.0 U	5 U	5 U	1.2 B	0.86	1.3
Chromium	100	NA	88.5	106	130	128	94.6	97	199	148	189
Lead	15	0.033	31.7	38.8	44.3	45.8	31	33.8	81.7	51	65.5
Nickel	Note 2	10.2	9.9	12.1	13.0	12.6	NA	11.2	14 B	12.1	16.1
Sodium	160,000	NA	117,000	92500 J	85800 J	84400 J	89000	88000 J	100000	99300	111000
Vanadium	49	NA	97.3	116	146	144	123	149	181	186	195
Zinc	Note 2	14.2	22.5 UJ	15.6	18.6	17.6	20 U	14.7	24.7	22.6	23.4
MNA											
Total Iron		NA	1420	1,900	1810	1830	1810	1840	1870	2180	3080
Total Manganese		NA	7.2	7.7	6.6	6.3	5.6	5.6	6.6 B	8.2	52
Dissolved Iron		NA	1010	1060	1300 J	945 J	881	1620	NA	1670	2170
Dissolved Manganese		NA	5.7	4.3	5.1 J	3.7 J	4.6	4.6	NA	5.8	4.1
Ethane (ug/l)		20.0	0.8 J	2	2	2	2 U	30 U	0.6 J	2	0.9 J
Ethene (ug/l)		13.0	1 U	3	2	2	2 U	30 U	0.2 J	3	2
Methane (ug/l)		9500	410	900	750	1100	220 J	880 J	NA	560	1000
Chloride (mg/l)		48.1	56.3	50.3	48.8	50.4	53.3	66	106	39 D	80 D
Nitrate (mg/l)		0.05 U	0.08 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	1 U	0.25 U	R
Nitrite (mg/l)		0.05 U	1.72	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	1 U	0.75 U	R
Sulfate (mg/l)		27.7	7.11	6.58	1.70	1.4	4.81	5 U	100 U	25 U	7.7 D
Total Organic Carbon (mg/l)		1.55	190	133	123	121	109	129	106	85 D	180 D
Dissolved Organic Carbon (mg/l)		85.3	209	138	121	118	137	106	10.8	R	130 D
Color (pcu)		20,000	7,000	10,000	NA	NA	13,430	NA	NA	NA	15000 D
Carbon Dioxide (mg/l)		NA	735	750	58	NA	NA*	NA	NA	NA	330
Sulfide (mg/l)		NA	0.80	0.80	0.74	NA	0.76	NA	NA	NA	4.63
Alkalinity (mg/l)		NA	NA*	180	1780	NA	378	NA	NA	NA	140
Hexane Oil and Grease										3.9 B	NA

Analyte Name	B-11 Dec-05	B-11 Oct-06	B-11 Oct-07	B-11 Oct-08	B-11 Oct-09	B-15 Jan-06	B-15 Mar-06	B-15 Oct-06	B-15 May-07	B-15 Oct-07	B-15 Oct-08	B-15 Nov-09
Volatile Organic Compounds (ug/L)												
Acetone	NA	NA	NA	NA	NA	1.4 J	13 U R	2.5 U R	R	2.5 UJ	2.5 UJ	2.5 U
Benzene	NA	NA	NA	NA	NA	0.13 J	2.5 U	0.23 J	0.44 J	0.47 J	0.36 J	0.5 U
1,1-Dichloroethane	NA	NA	NA	NA	NA	0.16 J	2.5 U	0.2 J	0.51	1.4	0.4 J	0.16 J
1,2-Dichloroethane	NA	NA	NA	NA	NA	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	NA	NA	NA	NA	NA	0.5 U	2.5 U	0.5 U	0.5 U	0.65	0.5 U	0.5 U
1,2-Dichloroethene (total)	NA	NA	NA	NA	NA	0.5 U	2.5 U	0.5 U	0.17 J	0.25 J	0.13 J	0.5 U
Cis-1,2-dichloroethene	NA	NA	NA	NA	NA	0.5 U	2.5 U	0.5 U	0.17 J	0.72 J	0.14 J	0.5 U
Trans-1,2-dichloroethene	NA	NA	NA	NA	NA	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	NA	NA	NA	NA	NA	0.13 J	2.5 U	0.5 U	0.12 J	0.22 J	0.5 U	0.5 U
Methylene Chloride	NA	NA	NA	NA	NA	0.6 U	2.5 U	0.6 U	0.6 U	0.19 J	0.5 UJ	0.5 U
Tetrachloroethene	NA	NA	NA	NA	NA	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	NA	NA	NA	NA	NA	0.5 U	0.62 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	NA	NA	NA	NA	NA	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	NA	NA	NA	NA	NA	0.2 J	2.5 U	0.5 U	0.18 J	0.24 J	0.12 J	0.5 U
m+p-Xylene	NA	NA	NA	NA	NA	0.24 J	5 U	1.0 U	0.27 J	0.35 J	1 U	1 U
Xylene (total)	NA	NA	NA	NA	NA	0.46 J	2.5 U	0.5 U	0.45 J	0.6	0.12 J	0.5 U
SVOCs												
Bis(2-chloroethyl)ether	10 U	10 U	5 U	NA	5 U	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	10 U	10 U	5 UJ	NA	5 U	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	10 U	10 U	5 UJ	NA	5 U	NA	NA	NA	NA	NA	NA	NA
Naphthalene	10 U	10 U	5 UJ	NA	5 U	NA	NA	NA	NA	NA	NA	NA
TRPH (Petroleum Range) mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics: Dissolved Metals (ug/l)												
Antimony	3.3 U	1.2 UJ	2.1 U	2.4 J	10 U	NA	NA	NA	NA	NA	NA	NA
Arsenic	5.4 U	2.6 U	6.2 J	10 UJ	10 UJ	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.20 U	0.80 U	0.5 U	5 U	5 U	NA	NA	NA	NA	NA	NA	NA
Chromium	1.8 J	1.9 U	1.2 J	2.4	10 U	NA	NA	NA	NA	NA	NA	NA
Lead	1.5 U	1.6 U	3 UJ	3.6 J	3.4	NA	NA	NA	NA	NA	NA	NA
Nickel	1.9 J	1.4 J	1 J	1.2 J	40 U	NA	NA	NA	NA	NA	NA	NA
Sodium	8740 J	9190	10200	16800 R	10300	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.63 J	0.64 U	20 U	0.66 J	20 U	NA	NA	NA	NA	NA	NA	NA
Zinc	11.4 U	1.1 J	20 U	20 U	4.1 J	NA	NA	NA	NA	NA	NA	NA
Total Metals (ug/l)												
Antimony	1.8 U	1.7 J	2.1 U	2.3 J	9.4 J	NA	NA	NA	NA	NA	NA	NA
Arsenic	2.0 UJ	2.6 UJ	10 UJ	10 UJ	10 U	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.35 U	0.10 U	0.5 U	5 UJ	5 U	NA	NA	NA	NA	NA	NA	NA
Chromium	2.8	2.4	10 UJ	2.4	10 U	NA	NA	NA	NA	NA	NA	NA
Lead	10.2	7.8	4.8 J	3 U	13.5 J	NA	NA	NA	NA	NA	NA	NA
Nickel	1.1 J	1.2 UJ	40 UJ	40 UJ	40 U	NA	NA	NA	NA	NA	NA	NA
Sodium	8000 J	8780	10300	11100 R	9580	NA	NA	NA	NA	NA	NA	NA
Vanadium	0.86 J	0.44 J	20 U	20 UJ	20 U	NA	NA	NA	NA	NA	NA	NA
Zinc	4.7	2.7 UJ	20 U	20 U	20 UJ	NA	NA	NA	NA	NA	NA	NA
MNA												
Total Iron	NA	2850	808	574	450	NA	NA	NA	NA	NA	NA	NA
Total Manganese	NA	437	420	347 J	365	NA	NA	NA	NA	NA	NA	NA
Dissolved Iron	NA	2450	498	531	607	NA	NA	NA	NA	NA	NA	NA
Dissolved Manganese	NA	418	417	350	370	NA	NA	NA	NA	NA	NA	NA
Ethane (ug/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene (ug/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane (ug/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Organic Carbon (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Color (pcu)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Dioxide (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane Oil and Grease					NA						5 U	NA

Analyte Name	B-20 Dec-05	B-20 Mar-06	B-20 Oct-06	B-20 Oct-07	B-20 Sep-08	B-20 Oct-09	B-21 Aug-08	B-21 Oct-08	B-21 Nov-09
Volatile Organic Compounds (ug/L)									
Acetone	2.5 U R	2.5 U R	33 UJ	13 UJ	13 UJ	4.4 UJ	410 B	63 UJ	1300 UJ
Benzene	0.88	0.78	0.53 J	0.85 J	2.5 U	0.5 U	49 J	87	66 J
1,1-Dichloroethane	1.5	0.48 J	3.8	29	15	5.7	1200	1700 J	2100
1,2-Dichloroethane	0.50 U	0.3 J	2.5 U	2.5 U	2.5 U	0.13 J	50 U	16	250 U
1,1-Dichloroethene	0.75	0.38 J	2.4 J	1.7 J	1.8 J	0.67	8400 D	15000	16000
1,2-Dichloroethene (total)	0.50 U	0.50 U	2.5 U	2.5 U	2.5 U	0.5 U	630	880	830
Cis-1,2-dichloroethene	0.50 U	0.50 U	2.5 U	2.5 U	2.5 U	0.5 U	600	900 J	840
Trans-1,2-dichloroethene	0.50 U	0.50 U	2.5 U	2.5 U	2.5 U	0.5 U	50 U	5.8 J	250 U
Ethylbenzene	0.44 J	0.38 J	2.5 U	16	2.5 U	0.5 U	200	350	410
Methylene Chloride	0.50 U	0.17 J	2.5 U	2.5 U	2.5 UJ	0.5 U		28000	33000
Tetrachloroethene	0.50 U	0.50 U	2.5 U	2.5 U	2.5 U	0.5 U	50 U	5.1 J	250 U
Toluene	0.24 J	0.29 J	2.5 U	2.5 U	2.5 U	0.12 J	43000 D	16000	62000
Vinyl Chloride	0.87	0.83	2.8 J	2.5	1.9 J	0.68	82	190	180 J
o-Xylene	0.24 J	0.42 J	2.5 U	0.56 J	2.5 U	0.5 U	200	380	430
m+p-Xylene	0.38 J	0.98 J	5.0 U	3.5 J	5 U	1 U	460	870	930
Xylene (total)	0.84	1.4	2.5 U	4.1	2.5 U	0.5 U	710	1200	1500
SVOCs									
Bis(2-chloroethyl)ether	10.00 UJ	NA	10 U	5 UJ	5.3 U	5.6 U	NA	NA	NA
Bis(2-ethylhexyl)phthalate	2.50 J	NA	10 U	5 UJ	5.3 U	5.6 U	NA	NA	NA
2-Methylphenol	10.00 UJ	NA	10 U	5 UJ	5.3 U	5.6 U	NA	NA	NA
Naphthalene	10.00 UJ	NA	10 U	5 UJ	5.3 U	5.6 U	NA	NA	NA
TRPH (Petroleum Range) mg/l	NA	NA	NA	NA	NA	NA	NA	NA	4.00 D
Inorganics: Dissolved Metals (ug/l)									
Antimony	3.3 J	NA	1.2 UJ	2.1 U	10 U	10 U	NA	10 U	10 U
Arsenic	7.1 J	NA	4.7 J	8.9 J	10 UJ	4.7 J	NA	10 U	R
Beryllium	0.29 J	NA	0.84 U	0.5 U	5 U	0.09 J	NA	5 U	0.65 U
Chromium	18.8	NA	15.1	4.8 J	11	13.4	NA	5.3	4.8 J
Lead	1.5 U	NA	1.8 U	3 UJ	2.7 J	3 U	NA	3 U	3 U
Nickel	2.7 J	NA	3.9 J	2 J	1 J	3.5 J	NA	6.5	6.8 J
Sodium	31800	NA	12000	4970	7080	3130	NA	58300	43400
Vanadium	4.5 U	NA	3.2	20 U	4.7	4.1	NA	32.7	30.1
Zinc	3.8 U	NA	0.80 U	20 U	20 U	20 U	NA	20 U	20 U
Total Metals (ug/l)									
Antimony	2.0 J	NA	1.2 U	2.1 U	10 U	8.6 J	NA	10 U	6.6 J
Arsenic	7.0 UJ	NA	2.8 UJ	3.5 J	10 UJ	10 UJ	NA	7.8 J	R
Beryllium	1.1 UJ	NA	0.86 U	0.5 U	5 U	5 UJ	NA	5 U	5 U
Chromium	23.4	NA	17.4	10 UJ	11.5	13.2	NA	9.7	7.5
Lead	1.8 J	NA	3.2 U	3 UJ	3 UJ	2.4	NA	3.3 J	5.4 UJ
Nickel	2.0 J	NA	3.1 J	40 UJ	1.8 J	2.8 J	NA	6.1	5.9 J
Sodium	32200 J	NA	10900	4830	6720	3090	NA	54700	42300
Vanadium	4.3	NA	3.2	20 U	4.7	4.1	NA	34.5	32.5
Zinc	5.3	NA	3.1 U	20 U	20 U	20 U	NA	20 U	4.2 J
MNA									
Total Iron	NA	NA	225	252	229	120	NA	18000	16700
Total Manganese	NA	NA	134	187	95.8	71.7	NA	70.8	17
Dissolved Iron	NA	NA	208	225	100 U	105	NA	15900	16700
Dissolved Manganese	NA	NA	138	186	95	72.3	NA	21.1	16.9
Ethane (ug/l)	NA	NA	NA	NA	NA	NA	NA	2	1 J
Ethene (ug/l)	NA	NA	NA	NA	NA	NA	NA	5	7
Methane (ug/l)	NA	NA	NA	NA	NA	NA	NA	660	1800
Chloride (mg/l)	NA	NA	NA	NA	NA	NA	NA	140 D	130 D
Nitrate (mg/l)	NA	NA	NA	NA	NA	NA	NA	0.75 U	0.36 D
Nitrite (mg/l)	NA	NA	NA	NA	NA	NA	NA	0.25 U	0.25 U
Sulfate (mg/l)	NA	NA	NA	NA	NA	NA	NA	11 JD	5 U
Total Organic Carbon (mg/l)	NA	NA	NA	NA	NA	NA	82.80	81	86
Dissolved Organic Carbon (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	82
Color (pcu)	NA	NA	NA	NA	NA	NA	NA	NA	400 D
Carbon Dioxide (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	250
Sulfide (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	5.75
Alkalinity (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	20
Hexane Oil and Grease					3.5 B	NA		5 U	NA

NA* Samples too dark for field testing
NR - Not required as a Cleanup Objective
NA - Not Analyzed
R - Data results "rejected" by Data Validator

Note 1 - Monitoring of VOCs requested by Florida DEP for OU1. VOC analysis not required by ROD
Note 2 - Monitoring of Nickel and Zinc is required by OU2 ROD Amendment to evaluate impact to/from Reeves Site plume
Note 3 - Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations
Note 4 - 2009 dissolved metals included digestion to eliminate interference
Note 5 - Hexane Oil and Grease result from March 2008 sampling event

NA* Samples too dark for field testing
NR - Not required as a Cleanup Objective
NA - Not Analyzed
R - Data results "rejected" by Data Validator

Table 4-1

Peak Oil / Bay Drums Groundwater Sampling Results
October 2009

OU-2 Surficial

Analyte Name	ROD Cleanup Level (ppb)	B-22 Aug-08	B-22 Nov-08	B-22 Nov-09	G-4 Jun-05	G-4 Dec-05	G-4 Mar-06	G-4 Oct-06	G-4 May-07
Volatile Organic Compounds (ug/L)									
Acetone	3,000	91 J	R	70 UJ	10.0 U	25 U R	31 U R	53 U R	34 UJ
Benzene	1	81	78	67	7.38	8.1	3.2 J	7.1 J	7.4
1,1 Dichloroethane	2400	190	120	160	318 J	210	97	290	320
1,2 Dichloroethane	3	21 U	25 U	14 U	1.06	5.0 U	6.3 U	3 U	5 U
1,1 Dichloroethene	7	148	128	98	74.2	72 J	17	80	118
1,2-Dichloroethene (total)	70	790	780	800	NA	89	37	84	88
Cis-1,2-dichloroethene	70 (total)	720	808	900	85.2	86	35	82	89
Trans-1,2-dichloroethene	70 (total)	21 U	25 U	14 U	1.00 U	5.0 U	6.3 U	13 U	5 U
Ethylbenzene	700	91	140	130	1.00 U	5.0 U	6.3 U	13 U	1.1 J
Methylene Chloride	5	11 JB	25 U	14 U	5.00 U	5.0 U	6.3 U	13 UJ	5 U
Tetrachloroethene	3	21 U	25 UJ	14 U	1.00 U	5.0 U	6.3 U	13 U	5 U
Toluene	1,000	280	29	41	1.00 U	5.0 U	2.8 J	13 U	5 U
Vinyl Chloride	1	71	108	85	37.2	41	7.2	31	37
o-Xylene	10,000 (total)	24	21 J	31	1.00 U	1.7 J	1.8 J	13 U	2.3 J
m,p-Xylene	10,000 (total)	44	38 J	47	2.00 U	2.8 J	4.0 J	7 J	4.8 J
Xylene (total)	10,000	71	59	62	NA	4.4 J	6.0 J	7.3 J	7.2
SVOCs									
Bis(2-chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	6	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	2,000	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	NA	NA	NA	NA	NA	NA	NA	NA
TRPH (Petroleum Range) mg/l	NR	NA	NA	2.40	NA	2.4 J	1.6 J	NA	2
Inorganics									
Dissolved Metals (ug/l)									
Antimony	6	10 U	10 U	10 U	NA	NA	NA	NA	NA
Arsenic	10	22.5	R	13.4	NA	NA	NA	NA	NA
Beryllium	4	1.2 B	5 U	1.6 U	NA	NA	NA	NA	NA
Chromium	100	25.9	R	25.6	NA	NA	NA	NA	NA
Lead	15	7.8 B	R	4.9 J	NA	NA	NA	NA	NA
Nickel	Note 2	8.4 B	11.6	11.1	2.00 U	NA	NA	NA	NA
Sodium	160,000	122000	125000	134000	NA	NA	NA	NA	NA
Vanadium	49	77.8	84.3	98.4	NA	NA	NA	NA	NA
Zinc	Note 2	2.9 B	R	20 U	3.30	NA	NA	NA	NA
Total Metals (ug/l)									
Antimony	6	NA	10 U	7.4 J	NA	NA	NA	NA	NA
Arsenic	10	NA	R	70	NA	NA	NA	NA	NA
Beryllium	4	NA	5 U	2 U	NA	NA	NA	NA	NA
Chromium	100	NA	R	213	NA	NA	NA	NA	NA
Lead	15	NA	R	88.2	0.001 U	NA	NA	NA	NA
Nickel	Note 2	NA	11.7	18	2.00 U	NA	NA	NA	NA
Sodium	160,000	NA	118000	132000	NA	NA	NA	NA	NA
Vanadium	49	NA	98.8	178	NA	NA	NA	NA	NA
Zinc	Note 2	NA	R	43.4	15.1	NA	NA	NA	NA
MNA									
Total Iron		NA	1890	2460	NA	NA	NA	NA	NA
Total Manganese		NA	6.5	7.3	NA	NA	NA	NA	NA
Dissolved Iron		NA	1500	1340	NA	NA	NA	NA	NA
Dissolved Manganese		NA	5.8	3.8 J	NA	NA	NA	NA	NA
Ethane (ug/l)		NA	1 J	0.1 J	8,400	1.0 J	1 J	1 J	1 J
Ethene (ug/l)		NA	2	2	5,800	1.0 J	1 J	1 J	1 J
Methane (ug/l)		NA	940	1400	3800	470	230	490	470 J
Chloride (mg/l)		NA	47 D	45 D	59.4	99.4	86.1	77.4	130
Nitrate (mg/l)		NA	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Nitrite (mg/l)		NA	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U	0.115 J
Sulfate (mg/l)		NA	13 JD	11 D	46.2	22.7	33.6	15.9	17.4
Total Organic Carbon (mg/l)		153.00	180 D	210 D	NA	21.6	16.4	16.7	13.4
Dissolved Organic Carbon (mg/l)		NA	NA	200 D	23.6	20.?	17	16	13
Color (pcu)		NA	NA	30000 D	NA	40	15 J	NA	11
Carbon Dioxide (mg/l)		NA	NA	400	NA	110	140	155	220
Sulfide (mg/l)		NA	NA	8.25	NA	0.36	0.60	R	0.75
Alkalinity (mg/l)		NA	NA	220	NA	[illegible]	14	22	8
Hexane Oil and Grease			5 U						

Analyte Name	ROD Cleanup Level (ppb)	G-4 Oct-07	G-4 Oct-08	G-4 Nov-09	GW-1 Aug-08	Dup of GW-1 Aug-08	GW-2 Aug-08	GW-3 Aug-08	GW-4 Aug-08	GW-5 Aug-08	GW-6 Aug-08	GW-7 Aug-08
Volatile Organic Compounds (ug/L)												
Acetone	3,000	2 UJ	2.5 UJ	3.1 U	130	120	3100 U	1600 J	160 J	6.9 U	19 J	120
Benzene	1	8.4	8.6	8.5	26	25	630 U	630 U	88	3.5	1.4 J	25
1,1 Dichloroethane	2400	220	360	360	41	40	1200	920	210	53	160	40
1,2 Dichloroethane	3	0.56	1.6	1.5	13 U	13 U	630 U	630 U	50 U	1.8 U	6.3 U	13 U
1,1 Dichloroethene	7	75	118	63	15	15	16000	8100	178	45	1.5 J	15
1,2-Dichloroethene (total)	70	73	87	85	340	380	540 J	670	1300	1.3 J	4.6 J	380
Cis-1,2-dichloroethene	70 (total)	65	88	87	390	380	550 J	680	1300	1.3 J	4.8 J	380
Trans-1,2-dichloroethene	70 (total)	0.75	0.53	8.6	13 U	13 U	630 U	630 U	50 U	1.8 U	6.3 U	13 U
Ethylbenzene	700	0.33 J	1.4	0.61	28	27	230 J	170 J	100	5.4	2.1 J	27
Methylene Chloride	5	0.3 J	0.5 UJ	0.5 U	3.1 J	2.6 J	20000	12000	230	1.7 J	6.3 U	2.6 J
Tetrachloroethene	3	0.5 U	0.5 U	0.5 U	13 U	13 U	630 U	630 U	50 U	1.8 U	6.3 U	13 U
Toluene	1,000	0.28 J	0.5 U	0.36	4.3 J	4.6 J	70000 D	41800 D	450	0.79 J	2.1 J	4.6 J
Vinyl Chloride	1	21	52	35	12 J	11 J	630 U	630 U	52	2.8	8.1	11 J
o-Xylene	10,000 (total)	2.1	3.8	2.7	13 U	13 U	270 J	180 J	15 J	1.8 U	6.3 U	13 U
m,p-Xylene	10,000 (total)	3.3	3.9	2.5	25 U	25 U	550 J	390 J	23 J	3.8 U	13 U	25 U
Xylene (total)	10,000	5.4	7.9	5.4	13 U	13 U	860	610 J	40 J	1.8 U	6.3 U	13 U
SVOCs												
Bis(2-chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRPH (Petroleum Range) mg/l	NR	NA	0.17 U	0.085 J	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics												
Dissolved Metals (ug/l)												
Antimony	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	Note 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	Note 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals (ug/l)												
Antimony	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	Note 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	Note 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MNA												
Total Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Iron		NA	NA	NA	NA	NA	NA*	NA*	NA	NA	NA*	NA*
Dissolved Manganese		NA	NA	NA	NA	NA	NA*	NA*	NA	NA	NA*	NA*
Ethane (ug/l)		0.8 J	3	1 J	NA	NA	NA	NA	NA	NA	NA	NA
Ethene (ug/l)		0.7 J	1 J	0.5 J	NA	NA	NA	NA	NA	NA	NA	NA
Methane (ug/l)		110 J	430	220	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (mg/l)		211	160 J	250 D	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (mg/l)		0.05 U	0.25 UJ	0.25 U	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite (mg/l)		0.05 U	0.25 UJ	0.25 U	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (mg/l)		24.9	13 J	14 D	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/l)		79.4	5 U	18	376.00	347.00	69.80	91.30	268.00	33.50	31.50	367.00
Dissolved Organic Carbon (mg/l)		10.7	R	17	NA	NA	NA	NA	NA	NA	NA	NA
Color (pcu)		NA	150	20	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Dioxide (mg/l)		NA	NA	230	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide (mg/l)		NA	NA	4.3	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (mg/l)		NA	NA	0	NA	NA	NA	NA	NA	NA	NA	NA
Hexane Oil and Grease				NA								

Analyte Name	ROD Cleanup Level (ppb)	POC-1 Dec-05	POC-1 Mar-06	POC-1 Oct-06	POC-1 May-07	POC-1 Oct-07	POC-1 Oct-08	POC-1 Nov-09	P-8R Dec-05 (Note 1)	P-8R Oct-06 (Note 1)	P-8R Oct-07 (Note 1)	P-8R Oct-08 (Note 1)	P-8R Oct-09 (Note 1)
Volatile Organic Compounds (ug/L)													
Acetone	3,000	2.5 U R	2.5 U R	2.5 U R	R	2.5 UJ	2.5 UJ	4.9 U	2.5 U R	2.5 U R	130 UJ	13 UJ	13 U
Benzene	1	0.78 J	0.21 J	0.28 J	0.23 J	0.38 J	0.45 J	0.4 J	0.50 U	0.5 U	25 U	2.5 U	2.5 U
1,1 Dichloroethane	2400	9.9	9.6	11	9.3	16	22	21	0.23 J	0.18 J	25 U	2.5 U	2.5 U
1,2 Dichloroethane	3	0.50 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	25 U	2.5 U	2.5 U
1,1 Dichloroethene	7	3.2	2.9	4.8	3.1	5.2	5.7	5.1	0.50 U	0.5 U	25 U	2.5 U	2.5 U
1,2-Dichloroethene (total)	70	4.2	4.0	5.5	4.7	6.8	6	5.4	0.42 J	0.78	25 U	2.5 J	0.5 J
Cis-1,2-dichloroethene	70 (total)	3.9	3.5	5	3.8	5.7	6	5.2	0.41 J	0.27 J	25 U	2.5 U	0.51 J
Trans-1,2-dichloroethene	70 (total)	0.26 J	0.28 J	0.35 J	0.26 J	0.47 J	0.35 J	0.28 J	0.50 U	0.5 U	25 U	2.5 U	2.5 U
Ethylbenzene	700	0.50 U	0.38 J	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	25 U	2.5 U	2.5 U
Methylene Chloride	5	0.50 U	0.50 U	0.50 U	0.5 U	0.37 J	0.5 UJ	0.5 U	0.80 U	0.8 U	25 U	2.5 UJ	2.5 U
Tetrachloroethene	3	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.5 U	25 U	2.5 U	2.5 U
Toluene	1,000	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.16 J	25 U	2.5 U	2.5 U
Vinyl Chloride	1	0.50 U	1.2	1.2	1.1	1.4	2.8	2.4	0.50 U	0.5 U	25 U	2.5 U	2.5 U
o-Xylene	10,000 (total)	0.38 J	0.43 J	0.23 J	0.19 J	0.18 J	0.2 J	0.22 J	0.50 U	0.13 J	25 U	2.5 U	2.5 U
m,p-Xylene	10,000 (total)	1.0 U	1.8	1.0 U	1 U	1 U	1 U	1 U	1.0 U	0.74 J	50 U	5 U	1.6 J
Xylene (total)	10,000	0.38 J	2.4	0.23 J	0.19 J	0.18 J	0.2 J	0.22 J	0.50 U	0.39 J	25 U	2.5 U	1.8 J
SVOCs													
Bis(2-chloroethyl)ether	7	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	5 U	5.3 UJ	5 U
Bis(2-ethylhexyl)phthalate	6	NA	NA	NA	NA	NA	NA	NA	10 UJ	10 U	5 U	5.3 UJ	5 U
2-Methylphenol	2,000	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	5 U	5.3 UJ	5 U
Naphthalene	100	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	5 U	5.3 UJ	5 U
TRPH (Petroleum Range) mg/l	NR	0.57 J	0.35 J	NA	0.63 J	NA	0.17 U	0.047 U	NA	NA	NA	NA	NA
Inorganics													
Dissolved Metals (ug/l)													
Antimony	6	NA	NA	NA	NA	NA	NA	NA	11.8	8.9 J	138	76.9	185
Arsenic	10	NA	NA	NA	NA	NA	NA	NA	17.4 UJ	28.2 J	25.8 J	8.3	20.9 J
Beryllium	4	NA	NA	NA	NA	NA	NA	NA	0.20 U	0.91 U	0.5 U	5 U	5 U
Chromium	100	NA	NA	NA	NA	NA	NA	NA	0.81 J	0.40 U	0.5 U	10 U	10 U
Lead	15	NA	NA	NA	NA	NA	NA	NA	1.5 UJ	1.6 U	6.3	9.7	159
Nickel	Note 2	NA	NA	NA	NA	NA	NA	NA	3.2 J	4.7 J	7.7 J	4 J	3.7 J
Sodium	160,000	NA	NA	NA	NA	NA	NA	NA	2460 J	3160	4740	5000 U	3430
Vanadium	49	NA	NA	NA	NA	NA	NA	NA	1.8 U	1.5 U	20 U	1.3 J	3.4
Zinc	Note 2	NA	NA	NA	NA	NA	NA	NA	9.5 U	7.4	350	275	796
Total Metals (ug/l)													
Antimony	6	NA	NA	NA	NA	NA	NA	NA	34.7	42.1	141	R	189
Arsenic	10	NA	NA	NA	NA	NA	NA	NA	7.2	15.7 J	21 J	R	14.8 J
Beryllium	4	NA	NA	NA	NA	NA	NA	NA	0.37 U	0.10 U	0.5 U	R	5 U
Chromium	100	NA	NA	NA	NA	NA	NA	NA	0.88 UJ	0.49 J	10 U	R	10 U
Lead	15	NA	NA	NA	NA	NA	NA	NA	30.6	38.1	212	R	218 J
Nickel	Note 2	NA	NA	NA	NA	NA	NA	NA	2.2 UJ	4.0 J	6 J	R	3.7 J
Sodium	160,000	NA	NA	NA	NA	NA	NA	NA	1930 J	3880	4630	R	3560
Vanadium	49	NA	NA	NA	NA	NA	NA	NA	1.3 U	1.2	2.5	R	3.8
Zinc	Note 2	NA	NA	NA	NA	NA	NA	NA	31.3	154	696	R	300
MNA													
Total Iron		NA	NA	NA	NA	NA	NA	NA	NA	8430	3660	R	2520
Total Manganese		NA	NA	NA	NA	NA	NA	NA	NA	341	368	R	150
Dissolved Iron		NA	NA	NA	NA	NA	NA	NA	NA	8150	3540	2220	2380
Dissolved Manganese		NA	NA	NA	NA	NA	NA	NA	NA	328	365	153	145
Ethane (ug/l)		2 U	0.08 J	0.08 J	2 U	2 U	2 U	2 U	NA	NA	NA	NA	NA
Ethene (ug/l)		2 U	0.1 J	0.06 J	2 U	2 U	2 U	2 U	NA	NA	NA	NA	NA
Methane (ug/l)		74	140	240	270 J	99 J	110	140	NA	NA	NA	NA	NA
Chloride (mg/l)		38.6	47.3	53.8	50.5	60.1	57 D	100 D	NA	NA	NA	NA	NA
Nitrate (mg/l)		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.25 U	0.25 U	NA	NA	NA	NA	NA
Nitrite (mg/l)		0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U	0.25 U	0.25 U	NA	NA	NA	NA	NA
Sulfate (mg/l)		64.1	66.8	58.7	49.4	53.4	46 D	38 D	NA	NA	NA	NA	NA
Total Organic Carbon (mg/l)		7.54 J	6.58	5.66	3.77 J	53.5	2.3 J	15	NA	NA	NA	NA	NA
Dissolved Organic Carbon (mg/l)		5.83	6.53	5.27	3.8 J	3.69 J	R	14	NA	NA	NA	NA	NA
Color (pcu)		33	5 J	NA	5 U	NA	NA	5	NA	NA	NA	NA	NA
Carbon Dioxide (mg/l)		100	164	130	175	NA	NA	155	NA	NA	NA	NA	NA
Sulfide (mg/l)		0.35	0.45	0.68	0.63	NA	NA	1	NA	NA	NA	NA	NA
Alkalinity (mg/l)		7	20	R	6	NA	NA	0	NA	NA	NA	NA	NA
Hexane Oil and Grease								NA					NA

Note 1 - Moni Note 1 - Monitoring of VOCs requested by Florida DEP for OU1. VOC analysis not required by ROD
Note 2 - Moni Note 2 - Monitoring of Nickel and Zinc is required by OU2 ROD Amendment to evaluate impact to/from Reeves Site plume
Note 3 - Moni Note 3 - Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations
Note 4 - 2009 Note 4 - 2009 dissolved metals included digestion to eliminate interference
Note 5 - Hexa Note 5 - Hexane Oil and Grease result from March 2008 sampling event

NA* Samples too dark for field testing
NR - Not required as a Cleanup Objective
NA - Not Analyzed
R - Data results "rejected" by Data Validator

Table 4-1

Peak Oil / Bay Drums Groundwater Sampling Results
October 2009

OU-2 Surficial

Analyte Name	ROD Cleanup Level (ppb)	P-8R Dec-05 (Note 1)	P-8R Oct-06 (Note 1)	P-8R Oct-07 (Note 1)	P-8R Oct-08 (Note 1)	P-8R Oct-09 (Note 1)	P-14 Dec-05 (Note 1)	P-14 Oct-06 (Note 1)	P-14 Oct-07 (Note 1)	P-14 Oct-08 (Note 1)	P-14 Oct-09 (Note 1)
Volatile Organic Compounds (ug/L)											
Acetone	3,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	2400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethene (total)	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cis-1,2-dichloroethene	70 (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trans-1,2-dichloroethene	70 (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	10,000 (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m+p-Xylene	10,000 (total)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene (total)	10,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOCs											
Bis(2-chloroethyl)ether	7	10 U	10 U	5 U	5.6 UJ	5.6 U	10 U	3.9 J	5 U	NA	5.6 U
Bis(2-ethylhexyl)phthalate	6	10 UJ	5.1 J	2.5 J	5.6 UJ	6 U	10 U	10 U	5 U	NA	5.6 U
2-Methylphenol	2,000	10 U	10 U	5 UJ	5.6 UJ	5.6 U	47	10 U	3.1	NA	11
Naphthalene	100	11	17	9.6 J	13 J	10 J	4.7 J	10 U	6.5	NA	7.4 J
TRPH (Petroleum Range) mg/l	NR	NA	NA	NA	NA	NA	29 J	NA	NA	NA	6.5
Inorganics											
Dissolved Metals (ug/l)											
Antimony	6	3.3 U	1.2 UJ	4.1 J	10 U	10 U	3.3 U	1.2 UJ	2.1 U	10 U	10 U
Arsenic	10	13.0 UJ	6.6 J	9.1 J	10 UJ	6.9 J	7.7 J	4.7 J	7.5 J	10 UJ	10 UJ
Beryllium	4	0.20 U	0.98 U	0.5 U	5 U	5 U	0.43 J	1.6 U	5 U	0.41 J	5 U
Chromium	100	6.1	7.7	8.2 J	7.2	6.5	6.2	5.9	6 J	6.6 B	4.7 J
Lead	15	9.1	15.8	21.2 J	27.2	21.1	1.5 U	1.6 U	3 UJ	3 U	3 U
Nickel	Note 2	8.4 J	6.5	7.1 J	7.1	6.3	5.7	4.9	4.4 J	5.1	3 J
Sodium	160,000	123000 J	119000	119000	106000	123000	106000	94700	90100	76700	81000
Vanadium	49	4.1 U	4.7	3.9	4.2	3.9	58.2	59.2	60.3	62.6	59.8
Zinc	Note 2	3.4 U	1.1 J	4	116	20 U	2.9 U	1.1 J	20 U	20 U	7.5 B
Total Metals (ug/l)											
Antimony	6	2.9 U	1.2 U	2.1 U	2 J	8.1 J	1.6 U	1.2 U	2.1 U	2.6 J	8.7 J
Arsenic	10	2.0 U	2.6 UJ	10 UJ	10 UJ	10 UJ	2.3 J	2.6 UJ	10 UJ	10 UJ	10 U
Beryllium	4	0.41 U	0.10 U	0.5 U	5 U	5 U	0.96 UJ	0.39	5 U	5 UJ	5 U
Chromium	100	9.5	13.4	10 UJ	12.6	11.5 J	6.9	6.5	10 UJ	6.7	5.4 J
Lead	15	95.7	183	16.1 J	119	187 J	1.1 U	2.2 J	2.3 J	3 U	2.6 J
Nickel	Note 2	7.2 J	9.8	5.8 J	7.6	6.3	5.8	5.4	40 UJ	6.7	6.9
Sodium	160,000	102000 J	123000	112000	113000 J	118000	102000 J	96100	83800	80800 J	76500
Vanadium	49	3.7	5.3	4	4.3	4.8	55.8	60.8	60.8	63.2	59.7
Zinc	Note 2	5.3 U	17.2	4.2	10.4 B	15.8	1.0 UJ	2.6 UJ	3.5	20 U	20 UJ
MNA											
Total Iron		NA	82.9 UJ	81.5	84.5	72 J	NA	1990	1540	1870	1530
Total Manganese		NA	0.69 U	1.7	10 UJ	10 U	NA	12.2	17	11.7 J	9.4
Dissolved Iron		NA	59.2 J	100 U	100 U	100 U	NA	1960	1540	1850	1550
Dissolved Manganese		NA	0.44 U	10 U	1.8 J	10 U	NA	11.8	9.6	12	9.1
Ethene (ug/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane (ug/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane (ug/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Organic Carbon (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Color (pcu)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Dioxide (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (mg/l)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane Oil and Grease				NA		NA			NA	NA	NA

Analyte Name	P-15 Dec-05 (Note 1)	DUP of P-15 Dec-05 (Note 1)	P-15 Oct-06 (Note 1)	DUP of P-15 Oct-06 (Note 1)	P-15 Oct-07 (Note 1)	DUP of P-15 Oct-07 (Note 1)	P-15 Oct-08 (Note 1)	DUP of P-15 Oct-08 (Note 1)	P-15 Oct-09 (Note 1)	Dup of P-15 Oct-09 (Note 1)	R-4R Dec-05 (Note 1)	R-4R Oct-06 (Note 1)	R-4R Oct-07 (Note 1)	R-4R Oct-08 (Note 1)	R-4R Oct-09 (Note 1)
Volatile Organic Compounds (ug/L)															
Acetone	42 U R	42 U R	46 J	46 J	50 UJ	13 UJ	13 UJ	13 UJ	R	R	2.5 U R	2.5 U R	4.2 UJ	2.5 UJ	18 U
Benzene	4.8 J	4.8 J	2.8	2.8	6 J	5.5	4.4	4.3	3.6	3.4	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
1,1-Dichloroethane	150	180	45	46	43	52	57	57	42	39	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
1,2-Dichloroethane	8.3 U	8.3 U	0.5 U	0.5 U	10 U	2.5 U	2.5 U	0.55 J	2.5 U	2.5 U	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
1,1-Dichloroethene	130	140	27	28	55	71	57	64	54	48	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
1,2-Dichloroethene (total)	64	67	32	33	47	52	34	33	28	28	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
Cis-1,2-dichloroethene	63	65	32	32	45	46	36	35	28	28	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
Trans-1,2-dichloroethene	8.3 U	8.3 U	0.5 U	0.5 U	10 U	0.58 J	2.5 U	2.5 U	2.5 U	2.5 U	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
Ethylbenzene	11	12	7.2	7	13	12	10	10	9.6	8.7	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
Methylene Chloride	190 J	220 J	55	54	49	60	60 J	82 J	68	61	0.50 U	0.50 U	0.84 U	0.5 UJ	1 J
Tetrachloroethene	8.3 U	8.3 U	0.91 J	0.86 J	10 U	1.7 J	1.5 J	1.5 J	1.8 J	1.6 J	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
Toluene	230	310	50	49	45	51	47	49	36	34	0.50 U	0.50 U	0.84 U	0.34 J	1 U
Vinyl Chloride	8.3 U	8.3 U	2.9	2.9	2.8 J	3.4	3.1	3	3.2	2.6	0.50 U	0.50 U	0.84 U	0.5 UJ	1 U
o-Xylene	10	11	5.9	6.1	10	11	6.9	8.7	8.2	7.2	0.50 U	0.50 U	0.84 U	0.18 J	1 U
m+p-Xylene	20	21	12	11	20	20	17	17	15	14	1.0 U	1.0 U	1.7 U	0.35 J	0.43 J
Xylene (total)	32	33	18	18	31	31	27	27	25	22	0.50 U	0.50 U	0.84 U	0.56 J	0.47 J
SVOCs															
Bis(2-chloroethyl)ether	2.2 J	3.0 J	10 U	10 U	5 U	5 U	5 UJ	5 UJ	5.4 U	5.4 U	10 U	10 U	5 UJ	5.6 UJ	5.6 U
Bis(2-ethylhexyl)phthalate	2.0 J	7.8 J	10 U	10 U	5 UJ	5 UJ	5 U	5 UJ	5.4 U	5.4 U	10 UJ	10 U	5 UJ	5.6 UJ	5.6 U
2-Methylphenol	68 J	77	69	65	55 J	56 J	78 J	60 J	57	57	10 U	10 U	5 UJ	5.6 UJ	5.6 U
Naphthalene	5.9 J	7.7 J	11	9.4 J	7.4 J	7.3 J	5.3	6.9 J	6.4 J	5.9 J	10 U	10 U	5 UJ	5.6 UJ	5.6 U
TRPH (Petroleum Range) mg/l	34 J	36 J	NA	NA	NA	NA	6.8	8.1	3.9	3.0	NA	NA	NA	NA	NA
Inorganics															
Dissolved Metals (ug/l)															
Antimony	3.3 U	3.3 U	1.2 UJ	1.2 UJ	2.1 U	2.1 U	10 U	10 U	10 U	10 U	3.3 U	1.2 UJ	2.1 U	4.2	7.5 J
Arsenic	11.3 J	11.5 J	6.4 J	7.4 J	8.9 J	11.3 J	10 UJ	10 UJ	10 U	10 U	32.0 U	28.8 J	33.1 J	32.4	16.7 J
Beryllium	0.68 J	0.95 J	1.7 U	1.5 U	5 U	5 U	1.4	1.2 J	0.91 U	0.75 U	0.20 U	0.71 U	0.5 U	5 U	5 U
Chromium	27.1	29.7	30.9	28.2	52.5	50.2	37.3	36.3	80.6	61.7	2.6	2.4 U	7.8 J	2.7	10 U
Lead	3.7 J	5.3 J	3.9 J	2.2 J	23.2	23	8.2	7.4	58.4	43.2	1.5 UJ	1.6 U	3 UJ	2.5 J	3 U
Nickel	10.6	12.8	17.2	10.6	14.3 J	14 J	14.5	14.7	16.3	13.5	36.4 J	37.1	32.5	29.3	24.7
Sodium	264000	252000	281000	263000	233000	281000	290000	268000	283000	290000	6950 J	8140	8180	8740	8320
Vanadium	92.6	101	110	98.8	119	123	122	124	111	99.3	0.50 U	0.67 U	20 U	0.82 J	0.89 J
Zinc	3.9 U	6.4 U	1.1 J	29.0 J	20 UJ	6.5 J	20 U	20 U	3.9 U	3.8 U	2410 J	2350	3080	2530	1770
Total Metals (ug/l)															
Antimony	1.6 U	1.6 U	1.9 J	1.8 J	2.1 U	2.1 U	1.9 J	10 UJ	10 U	10 U	1.6 U	2.8	2.1 U	4.6	17
Arsenic	3.8 J	4.0 J	2.7 J	3.6 J	10 UJ	5.2 J	3.7 J	10 UJ	10 U	10 U	17.8	22.5 J	28.7 J	41.4	14.9 J
Beryllium	2.1 UJ	1.8 UJ	1.3	1.4	5 U	5 U	1.6 J	5 UJ	1.1	1.1	0.41 U	0.10 U	0.5 U	5 U	5 U
Chromium	107	95.7	182	187	96.4	182	100 J	68.1 J	83.7	85.9	3.3	3.2	10 UJ	4	3.1 J
Lead	115	97.7	114	117	83.6	87.2	94.4 J	50.7 J	73.1	75.2	1.2 J	2.1 J	3 UJ	3 UJ	3.4 J
Nickel	24.8	21.6	22.3	23.1	20.1	20.9	21.3	18.6	18.7 J	18.7 J	31.8 J	32.2	30.1	28.9	24.4
Sodium	243000 J	234000 J	266000	272000	214000 J	270000	284000 J	281000 J	305000 J	312000 J	6100 J	8980	7780	8040 J	7800
Vanadium	155	139	195	181	149	157	148	134	124	125	0.50 U	0.46 J	20 U	0.38 J	1.8
Zinc	11.9	8.4	8.6	8.1 J	4.9	5.8 J	9.7 J	20 UJ	3 U	4.2 U	2050 J	2410	2960	2730	1880
MNA															
Total Iron	NA	NA	627	641	383	373	392	345	278	270	NA	1540	1070	995	907
Total Manganese	NA	NA	4.6	4.9	4.5	4.2	4 J	3.8 J	2.9	2.8	NA	94.9	64	29.1 J	35.5
Dissolved Iron	NA	NA	316	249	787	260	286	305	204	180	NA	1370	946	907	816
Dissolved Manganese	NA	NA	3	7.6	3.3	2.9	4.1	4	2.4	2	NA	90.5	64.4	31.3	33
Ethene (ug/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane (ug/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane (ug/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Organic Carbon (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Color (pcu)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Dioxide (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity (mg/l)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane Oil and Grease									NA	NA					NA

Note 1 - Monitoring of VOCs requested by Florida DEP for OU1. VOC analysis not required by ROD
Note 2 - Monitoring of Nickel and Zinc is required by OU2 ROD Amendment to evaluate impact to/from Reeves Site plume
Note 3 - Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations
Note 4 - 2009 dissolved metals unclouded digestation to eliminate interference
Note 5 - Hexane Oil and Grease result from March 2006 sampling event

Table 4-2

Peak Oil / Bay Drums Groundwater Sampling Results

OU-2 Flordan

Analyte Name	ROD Cleanup Level (ppb)	F-2R Jan-06	F-2R Oct-06	F-2R Oct-07	F-2R Oct-08	F-2R Oct-09	F-7 Jan-06	F-7 Oct-06	F-7 Oct-07	F-7 Oct-08	F-7 Nov-09	F-13R Jan-06	F-13R Oct-06	F-13R Oct-07	F-13R Oct-08	F-13R Nov-09
Volatile Organic Compounds (ug/L)																
Acetone	3,000	1.7 J	0.5 U	42 UJ	13 UJ	3.6 U	NA	0.5 U	R	R	2.5 U	16 J	11	13 UJ	13 UJ	8.7 UJ
Benzene	1	2	1.8	2.7 J	1.3 J	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.12 J	0.15 J	0.8 J	2.5 U	0.3 J
1,1-Dichloroethane	2400	7.4	4	4.6 J	3.7	3.2	0.4 J	0.64	1.7	2.3	3.3	0.63	0.7	1.1 J	2.5 U	2.1
1,2-Dichloroethane	3	0.5 U	0.5 U	8.4 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U
1,1-Dichloroethene	7	2.5	0.55	8.4 U	2.5 U	0.18 U	0.16 J	0.35 J	0.62 J	0.82	1	1.2	1.4	2.3 J	2.5 U	3
1,2-Dichloroethene (total)	70	20	20	23	11	11	0.19 J	0.24 J	0.25 J	0.48 J	0.62	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U
Cis-1,2-dichloroethene	70 (total)	19	18	20	12	11	0.19 J	0.22 J	0.27 J	0.47 J	0.63	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U
Trans-1,2-dichloroethene	70 (total)	0.44 J	0.24 J	8.4 U	2.5 U	0.14 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U
Ethylbenzene	700	5.3	4.6	6.1 J	3.6	2.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U
Methylene Chloride	5	0.34 J	0.41 J	1.8 J	2.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U
Tetrachloroethene	3	1.9	2.1	3.1 J	1.9 J	1.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U
Toluene	1,000	1.8	1.5	8.4 U	1.3 J	1	0.5 U	0.14 J	0.5 U	0.5 U	0.5 U	0.13 J	0.22 J	2.5 U	2.5 U	0.14 J
Vinyl Chloride	1	4	1.7	8.4 U	1.9 J	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.33 J	0.5 U	0.22 J	2.5 U	2.5 U	0.28 J
o-Xylene	10,000 (total)	3.8	3.2	3.9 J	2.3 J	1.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U
m+p-Xylene	10,000 (total)	1.9	1.5	17 U	1.2 J	1.2	1 U	U	1 U	1 U	1 U	1 U	U	5 U	5 U	1 U
Xylene (total)	10,000	5.6	4.9	3.9 J	3.7	3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U
SVOCs																
Bis(2-chloroethyl)ether	7	0 U	0 U	5 U	5.4 U	5.4 U	0 U	1 U	5 U	5.9 U	5 UJ	0 U	0 U	5 U	5.6 U	5.6 U
Bis(2-ethylhexyl)phthalate	6	2.5 J	0 U	5 UJ	5.4 U	5.4 U	1.5 J	1 U	5 UJ	5.9 U	5 UJ	1.8 J	0 U	5 UJ	5.6 U	5.6 U
2-Methylphenol	2,000	0 U	0 U	5 UJ	5.4 U	0.65 J	0 U	1 U	5 UJ	5.9 UJ	5 UJ	0 U	0 U	5 UJ	5.6 UJ	5.6 U
Naphthalene	100	5.5 J	7.7 J	5.4 J	3.5 J	3.7 J	0 U	1 U	5 UJ	5.9 U	5 UJ	0 U	0 U	5 UJ	5.6 U	5.6 U
TRPH (Petroleum Range) mg/l	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics:																
Dissolved Metals (ug/l)																
Antimony	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	Note 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	Note 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals (ug/l)																
Antimony	6	0.5 U	5.4 B	2.9 U	10 U	7.2 J	0.2 U	7.7 B	2.9 U	10 U	10 U	0.3 U	6 B	2.9 U	10 U	2.2 J
Arsenic	10	0.4 UJ	0.1 U	10 UJ	10 U	10 U	0.4 UJ	7.7 B	10 UJ	10 UJ	10 U	0.9 UJ	0.1 U	10 UJ	10 UJ	1.7 J
Beryllium	4	0.3 U	0.64 B	0.5	5 UJ	1.8 U	0.78 U	7.7 B	5 UJ	5 U	5 U	0.77 U	0.4 U	5 UJ	5 U	5 U
Chromium	100	3.4	11.9	25.7	37.3	40.9	0.84 U	7.7 B	0.7 J	10 U	10 U	5.9	5.1 B	0.5 U	10 U	1.6 U
Lead	15	UJ	0.4 U	2.1 U	3 U	3.2 U	1.1 J	7.7 B	2.1 U	3 UJ	2.1 J	1.1 J	0.4 U	2.1 U	3 UJ	1.8 J
Nickel	Note 2	NA	NA	NA	19.1	20.7	NA	7.7 B	NA	40 U	40 U	NA	NA	NA	5.1	2.3 J
Sodium	160,000	177000	198000	194000	167000	164000	11100	7.7 B	14300	11800	11700	23100	25000	19100	14800	13900 J
Vanadium	49	39.9	42.6	41.5	38.2	33.5	0.3 U	7.7 B	20 U	0.67 J	20 U	21.1	15.4 B	9.9	12.9	9.9
Zinc	Note 2	13.4	8.7 B	20 U	8.7 J	20 U	0.3 U	7.7 B	20 U	20 U	20 U	8.1	4.8 B	20 U	20 U	2.9 J
MNA																
Total Iron		23700	9740	5190	4390	6100	517	596	593	718	730	172	286	9.8 U	174	39.3 U
Total Manganese		159	142	90.2 J	123	143	14.3	12.7	15.3 J	16.1 J	18	4.4	2.9 B	10 UJ	2.9	10 U
Dissolved Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane (ug/l)		U	NA	NA	NA	NA	U	8 U	2 U	2 U	2 U	U	8 U	2 U	2 U	2 U
Ethene (ug/l)		U	NA	NA	NA	NA	U	8 U	2 U	2 U	2 U	U	8 U	2 U	2 U	2 U
Methane (ug/l)		330 J	NA	NA	NA	NA	68	53 BD	40 J	110 J	56	46	95 BD	78 J	54	54
Chloride (mg/l)		62.6	28.5	25.7	20 D	17 D	25.6	29.6	42.8	40	39 D	17.9	21.4	30.4	24 D	16 D
Nitrate (mg/l)		0.05 UJ	0.05 U	0.05 U	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.25 U	0.25 U
Nitrite (mg/l)		0.05 UJ	0.05 U	0.05 U	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.25 U	0.25 U
Sulfate (mg/l)		616 J	621	623	25 U	420 D	2.29 J	3.08 B	5 U	9 U	5.6 D	24.6	19.5	14.9	23 JD	22 D
Total Organic Carbon (mg/l)		NA	NA	NA	35	NA	NA	NA	NA	12	NA	NA	NA	NA	14	NA
Dissolved Organic Carbon (mg/l)		23.9	21.9	85.4	NA	27	9.38	3.27 B	44.7	NA	14	7.52	6.64	8.86	NA	10
Color (pcu)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Dioxide (mg/l)		NA	NA	NA	105	200	NA	NA	NA	45	50	NA	NA	NA	0	0
Sulfide (mg/l)		NA	NA	NA	5.25	8.12	NA	NA	NA	0	0.05	NA	NA	NA	0.95	0.75
Alkalinity (mg/l)		NA	NA	NA	50	100	NA	NA	NA	224	216	NA	NA	NA	434	278

NA" Samples too dark for field testing

NR - Not required as a Cleanup Objective

NA - Not Analyzed

R - Data results "rejected" by Data Validator

Note 1 - Monitoring of VOCs requested by Florida DEP VOC analysis not required by ROD.

Note 2 - Monitoring of Nickel and Zinc as required by OU2 ROD Amendment to evaluate impact to/from Reeves Site plume

Note 3 - Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations.

Table 4-2

Peak Oil / Bay Drums Groundwater Sampling Results

OU-2 Floridan

Analyte Name	ROD Cleanup Level (ppb)	F-14 Jan-06	F-14 Oct-06	F-14 Oct-07	DUP of F-14 Oct-07	F-14 Oct-08	DUP of F-14 Oct-08	F-14 Nov-09	Dup of F-14 Nov-09	F-15 Jan-06	F-15 Oct-06	DUP of F-15 Oct-06	F-15 Oct-07	F-15 Oct-08	F-15 Feb-09	F-15 Nov-09	F-16 Jan-06	F-16 Oct-06	F-16 Oct-07	F-16 Oct-08	F-16 Nov-09
Volatile Organic Compounds (ug/L)																					
Acetone	3,000	NA	0.5 U	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	R	NA	0.5 U	0.5 U	R	780 UJ	1000 J	R	NA	0.5 U	2.5 UJ	2.5 UJ	R
Benzene	1	1	0.55	0.53	0.58	0.21 J	0.21 J	0.17 J	0.18 J	6.6	4.6	4.4	4.2	160 U	250 U	24 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	2400	9.6	6.5	9.1	11	9.1	8.4	12	12	28 D	5.4	5.1	4.5	250	350	310	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	3	0.22 J	0.21 J	0.5 U	0.5 U	0.24 J	0.22 J	0.25 J	0.29 J	1.9	2.1	2.2	2.7	160 U	250 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	4.9	4.4	4.3 J	4.8 J	5.1	4.5	4.9	4.9	9.5	4.3	4.1	5.3 J	330	580	240	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (total)	70	12	10	9	11	11	10	12	13	5	1.5	1.4	1.3	160 U	52 J	22 J	0.5 U	0.5 U	0.5 U	0.16 J	0.23 J
Cis-1,2-dichloroethene	70 (total)	12	9	9.7	12	11 J	10	12	12	4.3	1	0.98	1	160 U	52 J	22 J	0.5 U	0.5 U	0.5 U	0.17 J	0.23 J
Trans-1,2-dichloroethene	70 (total)	0.39 J	0.38 J	0.15 J	0.23 J	0.43 J	0.42 J	0.53	0.5	0.64	0.39 J	0.38 J	0.29 J	160 U	250 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	700	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.84	0.13 J	0.14 J	0.33 J	95 J	140 J	99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	0.5 U	0.5 U	0.5 U	0.13 J	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	160 UJ	55 J	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	160 U	250 U	50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	6.8	5200	6900	3200	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	1	12	7.7	3.1	4	9.6	8.3	9.9	9.9	25 D	7.5	7.1	4.5	750	1500	840	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	10,000 (total)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.14 J	72 J	100 J	76	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m+p-Xylene	10,000 (total)	1 U	U	1 U	1 U	1 U	1 U	1 U	1 U	0.76 J	0.22 J	0.22 J	0.49 J	170 J	220 J	160	1 U	U	1 U	1 U	1 U
Xylene (total)	10,000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.3	0.24 J	0.23 J	0.67	250	340	250	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SVOCs																					
Bis(2-chloroethyl)ether	7	0 U	0 U	5 U	5 U	5.6 U	5.6 U	5.3 U	5.4 U	19	2.3 J	0 U	1.4 J	7.3	NA	6.2	0 U	1 U	5 U	5.1 U	5.6 U
Bis(2-ethylhexyl)phthalate	6	1.5 J	0 U	5 UJ	5 UJ	5.6 U	5.6 U	5.3 U	5.4 U	2.4 J	2.7 J	0 U	5 UJ	5.6 U	NA	5 U	0 U	1 U	5 UJ	5.1 U	5.6 U
2-Methylphenol	2,000	0 U	0 U	5 UJ	5 UJ	5.6 UJ	5.6 UJ	5.3 U	5.4 U	0 U	0 U	0 U	5 UJ	10	NA	9	0 U	1 U	5 UJ	5.1 U	5.6 U
Naphthalene	100	0 U	0 U	5 UJ	5 UJ	5.6 UJ	5.6 UJ	5.3 U	5.4 U	0 U	0 U	0 U	5 UJ	12	NA	13	0 U	1 U	5 UJ	5.1 U	5.6 U
TRPH (Petroleum Range) mg/l	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics:																					
Dissolved Metals (ug/l)																					
Antimony	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	Note 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	160,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	Note 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals (ug/l)																					
Antimony	6	0.2 U	5.5 B	4 J	10 UJ	4.6 J	10 UJ	10 U	10 U	0.2 U	4.8 B	5.4 B	2.9 U	10 U	NA	10 U	0.2 U	4.9 B	3.1 J	10 U	10 U
Arsenic	10	UJ	0.1 U	10 UJ	10 UJ	10 U	10 U	10 U	10 U	0.8 UJ	0.1 U	0.1 U	10 UJ	10 U	NA	10 U	0.4 UJ	0.1 U	10 UJ	10 U	10 U
Beryllium	4	0.86 U	0.4	5 UJ	5 UJ	5 UJ	5 UJ	5 U	5 U	0.81 U	0.4 U	0.4 U	5 UJ	5 UJ	NA	5 U	0.77 U	0.4 U	5 UJ	5 UJ	5 U
Chromium	100	3.4	2.9 B	0.5 U	0.5 U	10 U	10 U	1.2 U	1.1 U	0.5 U	2.7 B	2.4 B	1.7	10 U	NA	2 U	0.5 U	2.1 B	1.1	10 UJ	1.1 U
Lead	15	1.5 J	0.4 U	2.1 U	2.1 U	3 J	3 UJ	3 UJ	1.7 J	1 J	0.4 U	4.7	2.1 U	3 U	NA	1.8 J	1.2	0.4 U	2.1 U	3 U	2 J
Nickel	Note 2	NA	NA	NA	NA	40 U	4	3.1	3	NA	NA	NA	NA	40 U	NA	1.3 J	NA	NA	NA	35.3	5.3
Sodium	160,000	10100	10500	10400	10600	8650	8710	10400 J	10200 J	19000	24100	24900	22900	16100	NA	17200 J	10000	11000	10800	9920	10800 J
Vanadium	49	4.4	3 B	20 U	20 U	3	2.4	1.3 U	1.1 U	15.3	7.3 B	7.7 B	10.1	34.9	NA	38.5	0.6 U	0.4 U	0.82 J	0.94 J	0.54 U
Zinc	Note 2	46.1	18.2 B	20 U	20 U	10	11.6	10.7 J	4 J	0.54 U	0.6 U	0.6 U	20 U	20 U	NA	1 J	0.87 U	0.81 B	20 U	20 U	4.3 J
MNA																					
Total Iron		1340	1270	965	939	1200	1080	1420	1380	333	893	889	628	490	NA	407	792	698	228	808	756
Total Manganese		47.8	38.9	37.9 J	38.4 J	37.5	36.8	41.7	41	49.6	58.3	60.4	53.1 J	68.2	NA	48.9	37.4	25.9	13.4 J	25.9	21.9
Dissolved Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Manganese		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane (ug/l)		U	8 U	2 U	2 U	2 U	2 U	0.1 J	0.5 J	0 U	15 U	15 U	0.1 J	0.5 J	NA	0.5 J	U		2 U	2 U	2 U
Ethene (ug/l)		U	8 U	2 U	2 U	2 U	2 U	2 U	2 U	0.4 J	15 U	15 U	0.1 J	37	NA	23	U		2 U	2 U	2 U
Methane (ug/l)		100	84 BD	19 J	27 J	100 J	62 J	54 J	37	490	140 BD	200 BD	86 J	790	NA	590	19	34 B	1 U	15	15
Chloride (mg/l)		32.3	34.1	37.4	37.8	26 J	21 J	32 D	30 D	47.9	40.9	43.5	48.3	71 J	NA	63 D	33	37.4	42.8	39 D	36 D
Nitrate (mg/l)		0.05 U	0.05 U	0.05 U	0.05 U	0.25 UJ	0.25 UJ	R	R	0.05 U	0.47	0.05 U	0.05 U	0.25 UJ	NA	0.25 U	0.05 U	0.05 U	0.05 U	0.25 U	0.25 U
Nitrite (mg/l)		0.05 U	0.05 U	0.05 U	0.05 U	0.25 UJ	0.25 UJ	R	R	0.05 U	0.05 U	0.05 U	0.05 U	0.25 UJ	NA	0.25 U	0.05 U	0.05 U	0.05 U	0.25 U	0.25 U
Sulfate (mg/l)		19	24.3	20.1	19.9	15 J	12 J	23 D	21 D	13.2	8.77	9.23	6.3	25 UJ	NA	12 D	35.7 J	1.53 B	5 U	25 U	5 U
Total Organic Carbon (mg/l)		NA	NA	NA	NA	NA	18	NA	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	NA	12	NA
Dissolved Organic Carbon (mg/l)		23.3	6.28	81	58.5	NA	NA	12	12	15.7	8.72	8.67	5 U	NA	NA	19	8.57 J	2.27 B	30.8	NA	7.1
Color (pcu)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Dioxide (mg/l)		NA	NA	NA	NA	35	NA	60	NA	NA	NA	NA	NA	30	NA	135	NA	NA	NA	35	40
Sulfide (mg/l)		NA	NA	NA	NA	0.01	NA	0.01	NA	NA	NA	NA	NA	0	NA	2.2	NA	NA	NA	0	0
Alkalinity (mg/l)		NA	NA	NA	NA	244	NA	270	NA	NA	NA	NA	NA	360	NA	354	NA	NA	NA	238	224

NA* Samples too dark for field testing
NR - Not required as a Cleanup Objective
NA - Not Analyzed
R - Data results "rejected" by Data Validator

Note 1 - Monitoring of VOCs requested by Florida DEP. VOC analyses not required by ROD
Note 2 - Monitoring of Nickel and Zinc is required by OU2 ROD Amendment to evaluate impact to/from Reeves Site drums
Note 3 - Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations.

Table 4-3

Peak Oil Groundwater Sampling Results

OU-1 Surficial

Analyte Name	B-11 Dec-05	B-11 Oct-06	B-11 Oct-07	B-11 Oct-08	B-11 Oct-09	P-8R Dec-05	P-8R Oct-06	P-8R Oct-07	P-8R Oct-08	P-8R Oct-09	P-9R Dec-05	P-9R Oct-06	P-9R Oct-07	P-9R Oct-08	P-9R Oct-09	P-14 Dec-05	P-14 Oct-06	P-14 Oct-07	P-14 Oct-08	P-14 Oct-09
bis(2-ethyhexyl)phthalate	10 U	10 U	5 UJ		5 U	10 UJ	10 U	5 U	5.3 UJ	5 U	10 UJ	5.1 J	2.5 J	5.6 UJ	8 U	10 U	10 U	5 U	5 U	5.6 U
Aroclor 1260	0.93 U	0.98 U	0.93 U	0.98 UJ	1 U	0.93 U	0.93 U	0.93 UJ	1 UJ	1 U	0.93 UJ	0.93 U R	R	R	R	0.93 UJ	0.93 U	0.93 UJ	0.93 U	0.93 U
Dissolved Lead	1.5 U	1.60 U	3 UJ	3.6 J	3.4	1.5 UJ	1.6 U	6.3	9.7	159	9.1	15.80	21.2 J	27.2	21.1	1.5 U	1.6 U	3 UJ	3 U	3 U
Total Lead	10.2	7.9	4.6 J	3 U	13.5 J	20.6	36.1	212	R	210 J	95.7	183	16.1 J	119	107 J	1.1 U	2.2 J	2.3 J	3 U	2.6 J

Notes:
Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations.
R - Analytical data result rejected by data validator due to poor surrogate recovery.

Table 4-3

Peak Oil Groundwater Sampling Results

OU-1 Surficial

Analyte Name	P-15 Dec-05	Dup of P-15 Dec-05	P-15 Oct-06	Dup of P-15 Oct-06	P-15 Oct-07	Dup of P-15 Oct-07	P-15 Oct-08	Dup of P-15 Oct-08	P-15 Oct-09	Dup of P-15 Oct-09	R-4R Dec-05	R-4R Oct-06	R-4R Oct-07	R-4R Oct-08	R-4R Oct-09
bis(2-ethyhexyl)phthalate	2.0 J	7.9 J	10 U	10 U	5 UJ	5 UJ	5 U	5 UJ	5.4 U	5.4 U	10 UJ	10 U	5 UJ	5.6 UJ	5.6 U
Aroclor 1260	0.93 U R	0.93 U R	0.93 U R	0.93 U R	R	R	R	R	R	R	0.93 U	0.93 U	0.93 U	1 UJ	1 U
Dissolved Lead	3.7 J	5.3 J	3.9 J	2.2 J	23.2	23	8.2	7.4	58.4	43.2	1.5 UJ	1.6 U	3 UJ	2.5 J	3 U
Total Lead	115	97.7	114	117	83.6	87.2	94.4 J	50.7 J	73.1	75.2	1.2 J	2.1 J	3 UJ	3 UJ	3.4 J

Notes:
Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations.
R - Analytical data result rejected by data validator due to poor surrogate recovery.

Table 4-4

Bay Drums Groundwater Sampling Results

OU-3 Surficial

Analyte Name	B-2 Jun-05	B-2 Dec-05	B-2 Oct-06	B-2 Oct-07	B-2 Oct-08	B-2 Oct-09	B-6R Dec-05	B-6R Oct-06	B-6R Oct-07	B-6R Oct-08	B-6R Oct-09	B-7 Jun-05	B-7 Dec-05	B-7 Oct-06	B-7 Oct-07	DUP of B-7 Oct-07	B-7 Oct-08	DUP of B-7 Oct-08	B-7 Dec-09	Dup of B-7 Dec-09	B-20 Dec-05	B-20 Oct-06	B-20 Oct-07	B-20 Oct-08	B-20 Oct-09
alpha-Chlordane	NA	0.36 J	0.29 J	0.032 J	0.26 J	0.077 J	0.051 J	0.069	0.091	0.11 J	0.044 J	NA	0.013 J	0.050 U	0.05 U	0.05 U	0.17 JN	0.18 JN	0.054 UJ	0.051 UJ	0.027	0.042 J	0.05 U	0.012 J	0.05 U
gamma-Chlordane	NA	0.53 J	0.63 J	0.29 J	0.16 J	0.14 J	0.10	0.10	0.13	0.042 J	0.065 J	NA	0.0075 J	0.048 J	0.017 J	0.013 J	0.021 JN	0.015 JN	0.054 UJ	0.051 UJ	0.040 J R	0.040 J	0.0081 J	0.0083 J	0.05 U
Dissolved Lead	NA	3.4	4.8	1.5 J	9.2	3.6	1.5 U	1.5 U	3 UJ	2.7 J	3 U	NA	1.5 U	1.6 U	3 UJ	3 UJ	3 U	3.7 J	3 U	3 U	1.5 U	1.6 U	3 UJ	2.7 U	3 U
Total Lead	0.009	56.3	27.9	2.1 J	13.9	16.2	3.1	3.7 U	3 UJ	3 UJ	4.1	0.004	3.8	5.4 U	1.5 J	3 UJ	3.1 J	2.7 J	3 UJ	3 U	1.8 J	3.2 U	3 UJ	3 UJ	2.4

Notes

Monitoring of dissolved metals only to evaluate impact of turbidity on metals concentrations

R - Analytical data result rejected by data validator due to poor comparison to duplicate result.

Appendix D: Site Inspection Checklist

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST	
I. SITE INFORMATION	
Site name: Peak Oil Co./Bay Drum Co.	**Date of inspection: 3/11/2010**
Location and Region: Tampa, FL/Region 4	**EPA ID: FLD004091807**
Agency, office, or company leading the five-year review: EPA, Region 4	**Weather/temperature: Partly cloudy, rain/70°**
Remedy Includes: (Check all that apply) ☒ Landfill cover/containment ☒ Access controls ☒ Institutional controls ☐ Groundwater pump and treatment ☐ Surface water collection and treatment ☒ Other Soil - excavation and solidification/stabilization; ground water - in-situ bioremediation and air sparging	☒ Monitored natural attenuation ☐ Groundwater containment ☒ Vertical barrier walls
Attachments: ☐ Inspection team roster attached ☐ Site map attached	
II. INTERVIEWS (Check all that apply)	
1. **O&M site manager** Michael Miller (Name) ____ (Title) 3/11/2010 (Date) Interviewed ☒ at site ☐ at office ☐ by phone Phone no. ____ Problems, suggestions; ☒ Report attached ____	
2. **O&M staff** Clay McClarnon (Name) ____ (Title) 3/11/2010 (Date) Interviewed ☒ at site ☐ at office ☐ by phone Phone no. ____ Problems, suggestions; ☒ Report attached ____	

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 FDEP

Contact	Kelsey Helton	Project Manager	3/29/2010	(350) 245-8969
	Name	Title	Date	Phone No.

Problems; suggestions; ☐ Report attached _____

Agency _____

Contact	_____	_____	mm/dd/yyyy	_____
	Name	Title	Date	Phone No.

Problems; suggestions; ☐ Report attached _____

Agency _____

Contact	_____	_____	mm/dd/yyyy	_____
	Name	Title	Date	Phone No.

Problems; suggestions; ☒ Report attached _____

Agency _____

Contact	_____	_____	mm/dd/yyyy	_____
	Name	Title	Date	Phone No.

Problems; suggestions; ☐ Report attached _____

Agency _____

Contact	_____	_____	mm/dd/yyyy	_____
	Name	Title	Date	Phone No.

Problems; suggestions; ☐ Report attached _____

4. **Other interviews** (optional) ☒ Report attached

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

1.	**O&M Documents**				
	☒ O&M manual	☒ Readily available	☒ Up to date	☐ N/A	
	☒ As-built drawings	☒ Readily available	☒ Up to date	☐ N/A	
	☒ Maintenance logs	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks: _____				
2.	**Site-Specific Health and Safety Plan**	☒ Readily available	☒ Up to date	☐ N/A	
	☐ Contingency plan/emergency response plan	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks: _____				
3.	**O&M and OSHA Training Records**	☒ Readily available	☐ Up to date	☐ N/A	
	Remarks: _____				
4.	**Permits and Service Agreements**				
	☐ Air discharge permit	☐ Readily available	☐ Up to date	☐ N/A	
	☐ Effluent discharge	☐ Readily available	☐ Up to date	☐ N/A	
	☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☐ N/A	
	☒ Other permits well construction	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks: _____				
5.	**Gas Generation Records**	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks: _____				
6.	**Settlement Monument Records**	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks: _____				
7.	**Groundwater Monitoring Records**	☒ Readily available	☒ Up to date	☐ N/A	
	Remarks: _____				
8.	**Leachate Extraction Records**	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks: _____				
9.	**Discharge Compliance Records**				
	☐ Air	☐ Readily available	☐ Up to date	☒ N/A	
	☐ Water (effluent)	☐ Readily available	☒ Up to date	☐ N/A	
	Remarks: _____				
10.	**Daily Access/Security Logs**	☐ Readily available	☐ Up to date	☒ N/A	
	Remarks: _____				

IV. O&M COSTS

1.	**O&M Organization**		
	☐ State in-house	☐ Contractor for State	
	☐ PRP in-house	☒ Contractor for PRP	
	☐ Federal Facility in-house	☐ Contractor for Federal Facility	
	☐ Other _____		

2. **O&M Cost Records**

☐ Readily available ☒ Up to date

☐ Funding mechanism/agreement in place

Original O&M cost estimate _____ ☐ Breakdown attached

Total annual cost by year for review period if available

From mm/dd/yyyy	To mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	
From mm/dd/yyyy	To mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	
From mm/dd/yyyy	To mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	
From mm/dd/yyyy	To mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	
From mm/dd/yyyy	To mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	

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

Describe costs and reasons: _____

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

A. Fencing

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

Remarks: _____

B. Other Access Restrictions

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

Remarks: A fence surrounds the Site, and there is a lock at the entrance gate. A sign is posted identifying the Site as the Peak Oil Co./Bay Drum Co. Superfund site.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

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

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

Type of monitoring (e.g., self-reporting, drive by) self-reporting

Frequency monthly site inspections/annual institutional control document review

Responsible party/agency PRP and EPA

Contact	Michael Miller	Project Manager	mm/dd/yyyy	_____
	Name	Title	Date	Phone no.

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☒ Yes ☐ No ☐ N/A

Violations have been reported ☐ Yes ☒ No ☐ N/A

Other problems or suggestions: ☐ Report attached

_____

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

Remarks: Restrictive covenants are in place preventing the disturbance of the current remedies in place.

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☒ No vandalism evident

Remarks: There were no signs of any vandalism at the Site.

2. **Land use changes on site** ☐ N/A

Remarks: There are no anticipated changes to land use while cleanup continues at the Site.

3. **Land use changes off site** ☐ N/A

Remarks: The land use in the area surrounding the Site remains industrial.

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. Roads damaged ☐ Location shown on site map ☒ Roads adequate ☐ N/A

Remarks: _____

B. Other Site Conditions

Remarks: _____

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

1.	**Settlement** (Low spots)	☐ Location shown on site map	☒ Settlement not evident
	Arial extent _____		Depth _____
	Remarks: _____		
2.	**Cracks**	☐ Location shown on site map	☒ Cracking not evident
	Lengths _____	Widths _____	Depths _____
	Remarks: _____		
3.	**Erosion**	☐ Location shown on site map	☒ Erosion not evident
	Arial extent _____		Depth _____
	Remarks: _____		
4.	**Holes**	☐ Location shown on site map	☒ Holes not evident
	Arial extent _____		Depth _____
	Remarks: _____		
5.	**Vegetative Cover**	☐ Grass	☒ Cover properly established
	☐ No signs of stress	☐ Trees/Shrubs (indicate size and locations on a diagram)	
	Remarks: While there were some areas light in vegetation, overall the cover was adequately established and maintained.		
6.	**Alternative Cover** (armored rock, concrete, etc.)		☒ N/A
	Remarks: _____		
7.	**Bulges**	☐ Location shown on site map	☒ Bulges not evident
	Arial extent _____		Height _____
	Remarks: _____		
8.	**Wet Areas/Water Damage**	☒ Wet areas/water damage not evident	
	☐ Wet areas	☐ Location shown on site map	Arial extent _____
	☐ Ponding	☐ Location shown on site map	Arial extent _____
	☐ Seeps	☐ Location shown on site map	Arial extent _____
	☐ Soft subgrade	☐ Location shown on site map	Arial extent _____
	Remarks: _____		
9.	**Slope Instability**	☐ Slides	☐ Location shown on site map
	☒ No evidence of slope instability		
	Arial extent _____		
	Remarks: _____		
B. Benches		☐ Applicable	☒ N/A
	(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	**Flows Bypass Bench**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		

2.	**Bench Breached**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
3.	**Bench Overtopped**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
C. Letdown Channels		☐ Applicable	☒ N/A
	(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1.	**Settlement** (Low spots)	☐ Location shown on site map	☐ No evidence of settlement
	Arial extent _____		Depth _____
	Remarks: _____		
2.	**Material Degradation**	☐ Location shown on site map	☐ No evidence of degradation
	Material type_____		Arial extent _____
	Remarks: _____		
3.	**Erosion**	☐ Location shown on site map	☐ No evidence of erosion
	Arial extent _____		Depth _____
	Remarks: _____		
4.	**Undercutting**	☐ Location shown on site map	☐ No evidence of undercutting
	Arial extent _____		Depth _____
	Remarks: _____		
5.	**Obstructions**	Type _____	☐ No obstructions
	☐ Location shown on site map	Arial extent _____	
	Size _____		
	Remarks: _____		
6.	**Excessive Vegetative Growth**	Type _____	
	☐ No evidence of excessive growth		
	☐ Vegetation in channels does not obstruct flow		
	☐ Location shown on site map	Arial extent _____	
	Remarks: _____		
D. Cover Penetrations		☐ Applicable	☒ N/A
1.	**Gas Vents**	☐ Active	☐ Passive
	☐ Properly secured/locked	☐ Functioning	☐ Routinely sampled ☐ Good condition
	☐ Evidence of leakage at penetration		☐ Needs Maintenance ☐ N/A
	Remarks: _____		

2. **Gas Monitoring Probes**

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A

Remarks: _____

3. **Monitoring Wells** (within surface area of landfill)

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A

Remarks: _____

4. **Extraction Wells Leachate**

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A

Remarks: _____

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

Remarks: _____

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

1. **Gas Treatment Facilities**

☐ Flaring ☐ Thermal destruction ☐ Collection for reuse

☐ Good condition ☐ Needs Maintenance

Remarks: _____

2. **Gas Collection Wells, Manifolds and Piping**

☐ Good condition ☐ Needs Maintenance

Remarks: _____

3. **Gas Monitoring Facilities** (e.g., gas monitoring of adjacent homes or buildings)

☐ Good condition ☐ Needs Maintenance ☐ N/A

Remarks: _____

F. Cover Drainage Layer ☐ Applicable ☒ N/A

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

Remarks: _____

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

Remarks: _____

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

1. **Siltation** Area extent _____ Depth _____ ☐ N/A

☐ Siltation not evident

Remarks: _____

2. **Erosion** Area extent _____ Depth _____

☐ Erosion not evident

Remarks: _____

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

Remarks: _____

4. **Dam** ☐ Functioning ☐ N/A

Remarks: _____

H. Retaining Walls ☐ Applicable ☒ N/A

1. **Deformations** ☐ Location shown on site map ☐ Deformation not evident

Horizontal displacement _____ Vertical displacement _____

Rotational displacement _____

Remarks: _____

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

Remarks: _____

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

1. **Siltation** ☐ Location shown on site map ☒ Siltation not evident

Area extent _____ Depth _____

Remarks: _____

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A

☒ Vegetation does not impede flow

Area extent _____ Type _____

Remarks: _____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident

Area extent _____ Depth _____

Remarks: _____

4. **Discharge Structure** ☒ Functioning ☐ N/A

Remarks: _____

VIII. VERTICAL BARRIER WALLS ☒ Applicable ☐ N/A

1. **Settlement** ☐ Location shown on site map ☒ Settlement not evident

Area extent _____ Depth _____

Remarks: _____

2. **Performance Monitoring** Type of monitoring _____

☒ Performance not monitored

Frequency _____ ☐ Evidence of breaching

Head differential _____

Remarks: _____

IX. GROUNDWATER/SURFACE WATER REMEDIES ☒ Applicable ☐ N/A

A. Groundwater Extraction Wells, Pumps, and Pipelines ☐ Applicable ☒ N/A

1. **Pumps, Wellhead Plumbing, and Electrical**

   ☒ Good condition ☒ All required wells properly operating ☐ Needs Maintenance ☐ N/A

   Remarks: _____

2. **Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances**

   ☒ Good condition ☐ Needs Maintenance

   Remarks: _____

3. **Spare Parts and Equipment**

   ☐ Readily available ☒ Good condition ☐ Requires upgrade ☐ Needs to be provided

   Remarks: _____

B. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A

1. **Collection Structures, Pumps, and Electrical**

   ☐ Good condition ☐ Needs Maintenance

   Remarks: _____

2. **Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances**

   ☐ Good condition ☐ Needs Maintenance

   Remarks: _____

3. **Spare Parts and Equipment**

   ☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

   Remarks: _____

C. Treatment System ☒ Applicable ☐ N/A

1. **Treatment Train** (Check components that apply)

   ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation

   ☐ Air stripping ☐ Carbon adsorbers

   ☐ Filters _____

   ☐ Additive (e.g., chelation agent, flocculent) _____

   ☒ Others Air sparging system

   ☒ Good condition ☐ Needs Maintenance

   ☐ Sampling ports properly marked and functional

   ☐ Sampling/maintenance log displayed and up to date

   ☐ Equipment properly identified

   ☐ Quantity of groundwater treated annually _____

   ☐ Quantity of surface water treated annually _____

   Remarks: _____

2. **Electrical Enclosures and Panels** (properly rated and functional)

☐ N/A ☒ Good condition ☐ Needs Maintenance

Remarks: _____

3. **Tanks, Vaults, Storage Vessels**

☐ N/A ☒ Good condition ☐ Proper secondary containment ☐ Needs Maintenance

Remarks: _____

4. **Discharge Structure and Appurtenances**

☐ N/A ☒ Good condition ☐ Needs Maintenance

Remarks: _____

5. **Treatment Building(s)**

☐ N/A ☒ Good condition (esp. roof and doorways) ☐ Needs repair

☐ Chemicals and equipment properly stored

Remarks: _____

6. **Monitoring Wells** (pump and treatment remedy)

☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition

☐ All required wells located ☐ Needs Maintenance ☐ N/A

Remarks: Some monitoring wells may be abondoned once the results from recent sampling are completed.

D. Monitoring Data

1. **Monitoring Data**

☒ Is routinely submitted on time ☐ Is of acceptable quality

2. **Monitoring data suggests:**

☐ Groundwater plume is effectively contained ☒ Contaminant concentrations are declining

E. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)

☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition

☐ All required wells located ☐ Needs Maintenance ☐ N/A

Remarks: _____

X. OTHER REMEDIES

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

_____

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

	Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). The remedy selected for OU1 and OU3 are functioning as designed to stabilize/solidify impacted soil/sediment, and the caps continue to prevent exposure to contaminated materials stored onsite. The selected remedy for OU2 is functioning as designed to treat and contain ground water contamination at the Site. Additional organic substrate injections have been recommended and are being completed to further address contamination. The remedy for OU4 is functioning as designed; however, further remediation efforts may be needed to address existing sediment contaminants levels to maintain long-term protectiveness.
B.	**Adequacy of O&M**
	Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. O&M procedures are being implemented as intended and are effective for continued long-term remedy protectiveness.
C.	**Early Indicators of Potential Remedy Problems**
	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. No unexpected or high O&M costs have been observed.
D.	**Opportunities for Optimization**
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. Although there have been opportunities for optimization, less data would be collected as a result. Therefore, there has been no optimization to ensure adequate data is available to monitor the progress of the selected remedial actions.

Appendix E: Photographs from Site Inspection Visit

The sign posted at the site entrance identifying it as a Superfund site.

View of the capped area on the Peak Oil Co. portion of the Site.

The air sparging system building located north of the wetlands at OU4.

The wetlands at OU4, located south of the Bay Drum Co. portion of the Site.

An air sparging well located in the wetlands at OU4.

The organic substrate injection being completed during the site inspection.

View of the Bay Drums Co. portion of the Site.

A metal warehouse used for storage, located on the Peak Oil Co. portion of the Site.

Appendix F: Restrictive Covenants

Project 2004-11-L
Peak Oil
Restrictive Covenants
Folio 65491.0000

INSTR # 2004166066
O BK 13795 PG 0078
Pgs 0078 - 86; (9pgs)
RECORDED 05/04/2004 03:58:16 PM
RICHARD AKE CLERK OF COURT
HILLSBOROUGH COUNTY
DEPUTY CLERK S Williams

DECLARATION OF RESTRICTIVE COVENANTS

This Declaration of Restrictive Covenants is executed this 17th day of March, 2004, by Hillsborough County, a political subdivision of the State of Florida ("Declarant"), having an address of P.O. Box 1110, Tampa, Florida 33601.

WITNESSETH:

WHEREAS, Declarant is the owner of a parcel of land located in Hillsborough County, State of Florida, more particularly described on **Exhibit "A"** attached hereto and made a part hereof together with any buildings and improvements thereon and appurtenances thereto (the "Property"); and

WHEREAS, the Property is part of the Peak Oil Superfund Site ("Site") which the United States Environmental Protection Agency ("USEPA"), pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, placed on the National Priorities List on June 10, 1986, following publication in the Federal Register; and

WHEREAS, certain potentially responsible parties ("PRPs") have joined together in an unincorporated association called the Peak Oil Site RD/RA Group (the "Peak Oil Group") in order to implement the requirements of certain Consent Decrees entered by the United States District Court for the Middle District of Florida more particularly described as: (i) Consent Decree, *United States of America v. Bill Currie Ford, Inc., et al.*, Case No. 97-1566-CIV-T-26C (United States Environmental Protection Agency CERCLA RD/RA Consent Decree for Operable Unit One Record of Decision at the Peak Oil Superfund Site, Tampa, Hillsborough County, Florida); and (ii) Consent Decree, *United States of America v. Akzo Nobel Coatings, et al.*, Case No. 97-1564-CIV-T-26A (United States Environmental Protection Agency CERCLA RD/RA Consent Decree for the Operable Unit Two and Operable Unit Four Records of Decision at the Peak Oil Site and Bay Drums Site, Tampa, Hillsborough County, Florida) (collectively the "Consent Decrees"); and

WHEREAS, USEPA has required that institutional controls be imposed on the Site in order to ensure that no damage is permitted to occur that might alter, modify or jeopardize the remedy to protect the public health and welfare and the environment.

APPROVED
Board of County Commissioners
DATE 3/17/2004
MICHAEL KELLY
Director
Real Estate Department

RETURN TO: REAL ESTATE DEPARTMENT

NOW, THEREFORE, Declarant implements the following restrictive covenants and grants the following easements.

1. Grant: Declarant, on behalf of itself, its successors and assigns, in consideration of other good and valuable consideration, does hereby give, grant, covenant and declare that the Property shall be subject to the restrictions on use and rights of access set forth below.

2. Purpose: It is the purpose of this instrument that these restrictions are real property rights which shall run with the land to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to contaminants.

3. Restrictions on Use: Subject to the terms of paragraph 5 below, the use, occupancy and activity of and at the Site are restricted as follows:

(a) The construction of any on-site water supply wells and/or irrigation wells on the Property is prohibited;

(b) Construction activities of any type on or through the remedial cap system or within 50 feet of the cap are prohibited (see Site Diagram attached as **Exhibit "B"** and made a part hereof depicting the location of the remedial cap system);

(c) Any activities on the cap that might damage, alter in any fashion (such as planting ornamental landscaping), adversely affect, or otherwise be detrimental to the cap system are prohibited;

(d) Any subsurface activities which might puncture, breech or weaken (either chemically or physically) the slurry wall system are prohibited (see **Exhibit "B"** depicting the location of the slurry wall system);

(e) Any activities which would damage or destroy the groundwater monitoring wells located on the Property, from time to time, including without limitation, those wells depicted on **Exhibit "B";** and

(f) Any activities which would damage, destroy or adversely impede the operation of any future groundwater extraction or treatment system.

(g) Any activities which would damage or destroy the fence and associated warning signs around the perimeter of the Site.

4. Right of Access: Declarant hereby grants access to USEPA and the Florida Department of Environmental Protection ("FDEP") including their successor agencies, and any private parties designated by the USEPA or FDEP, at all reasonable times and upon reasonable notice, to the Property and/or the Site for the purpose of conducting any activity related to the Consent Decrees including, but not limited to:

(a) continuing to comply with the requirements of the Consent Decrees;

(b) monitoring the Work;

(c) verifying any data or information submitted to the United States or the State;

(d) conducting investigations relating to contamination at or near the Site which may include the installation of additional groundwater monitoring wells;

(e) obtaining samples;

(f) assessing the need for, planning, or implementing additional response actions at or near the Site;

(g) assessing implementation of quality assurance and quality control practices as defined in the approved Quality Assurance Project Plans;

(h) implementing the Work pursuant to the conditions set forth in Paragraph 87 of the Consent Decrees;

(i) assessing Settling Performing Parties' compliance with the Consent Decrees; and

(j) determining whether the Site or other property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted, by or pursuant to the Consent Decrees.

5. Modification/Termination: The restrictive covenants contained herein may be modified or terminated with the approval in writing of USEPA.

6. Reserved Rights of Declarant: Declarant hereby reserves unto itself, its successors and assigns, all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, rights, covenants and easements granted herein.

7. Federal Authority: Nothing in this document shall limit or otherwise affect USEPA's rights of entry and access or USEPA's authority to take response actions under CERCLA, the NCP, or other federal law.

8. No Public Access and Use: No right of access or use by the general public to any portion of the Property is conveyed by this instrument.

9. Public Notice: Declarant agrees to include in each instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO A DECLARATION OF RESTRICTIVE COVENANTS, DATED _____, 2004, RECORDED IN THE OFFICE OF THE HILLSBOROUGH COUNTY, FLORIDA, COURT CLERK ON _____, 2004, IN DEED BOOK_____, PAGE_____.

10. Enforcement: Enforcement of these restrictions shall be by proceedings at law or in equity, brought by Declarant or by any owner of any portion of the Site or by the USEPA or by the FDEP, against any party violating or attempting to violate any covenant or restriction contained herein, either to restrain violation, to direct restoration of the Site, to correct the effect of such violation or to recover damages resulting from such violation. Any forbearance, delay or omission to exercise the rights of enforcement under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver of any of the rights under this instrument.

11. Notices: Any notice, demand, request, consent, approval or communication under this instrument to Declarant shall be in writing and shall be served personally or sent by first class mail, postage prepaid, addressed as follows:

To Declarant:
Hillsborough County Real Estate Department
Attention: Director
P.O. Box 1110
Tampa, FL 33601

With Copy To:
Hillsborough County Attorney's Office
Attention: Susan J. Fernandez
P.O. Box 1110
Tampa, FL 33601

A copy of each such communication shall also be sent to the following:

To EPA:

Attorney for Peak Oil Superfund Site
Office of Environmental Accountability
U.S. Environmental Protection Agency
Atlanta Federal Center
61 Forsyth St., SW
Atlanta, GA 30303

To FDEP:

District Director
Southwest District
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619

12. General Provisions:

a) Controlling Law: The interpretation and performance of this instrument shall be governed by the laws of the United States or, if there are no applicable federal laws, by the laws of the State of Florida.

b) Liberal Construction: Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the grant to effect the purpose of this instrument and the policy and purpose of CERCLA. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

c) Severability: If any provision of this instrument, or the application of it to any person or circumstance, is found to be invalid, the remainder of the provisions of the instrument, or the application of such provisions to persons or circumstances other than those to which it is found to be invalid, as the case may be, shall not be affected thereby.

d) No Forfeiture: Nothing contained herein will result in a forfeiture or reversion of Declarant's title in any respect.

e) Successors: The covenants, easements, terms, conditions, and restrictions of this instrument shall be binding upon, and inure to the benefit of, the USEPA and FDEP and their respective personal representatives, heirs, successors, and assigns and shall continue as a servitude running in perpetuity with the Site. The term "Declarant", wherever used herein, and any pronouns used in place thereof, shall include the persons and/or entities named at the beginning of this document, identified as "Declarant" and their personal representatives, heirs, successors, and assigns.

f) Captions: The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

g) Third-Party Beneficiary: Declarant hereby agrees that USEPA and FDEP shall be, on behalf of the public, third-party beneficiaries of the benefits, rights and obligations granted in this instrument; provided that nothing in this instrument shall be construed to create any obligations on the part of EPA or FDEP.

IN WITNESS WHEREOF, Declarant has caused this instrument to be executed in its name this 19th day of March, 2004.

Attest: RICHARD AKE
Clerk of Circuit Court

BOARD OF COUNTY COMMISSIONERS HILLSBOROUGH COUNTY FLORIDA SEAL

HILLSBOROUGH COUNTY, FLORIDA

By: Mildred K. Dijon
Deputy Clerk

By:
Chairman, Board of County Commissioners

Approved as to Form and Legal Sufficiency

By:
Senior Assistant County Attorney

BOARD OF COUNTY COMMISSIONERS
HILLSBOROUGH COUNTY FLORIDA
DOCUMENT NO. 04-0510

Attachment: Exhibit A - Legal Description of the Property
Attachment: Exhibit B – Site Diagram

WlandVPeak Oil declaration of restrictive covenant REDLINE.DOC

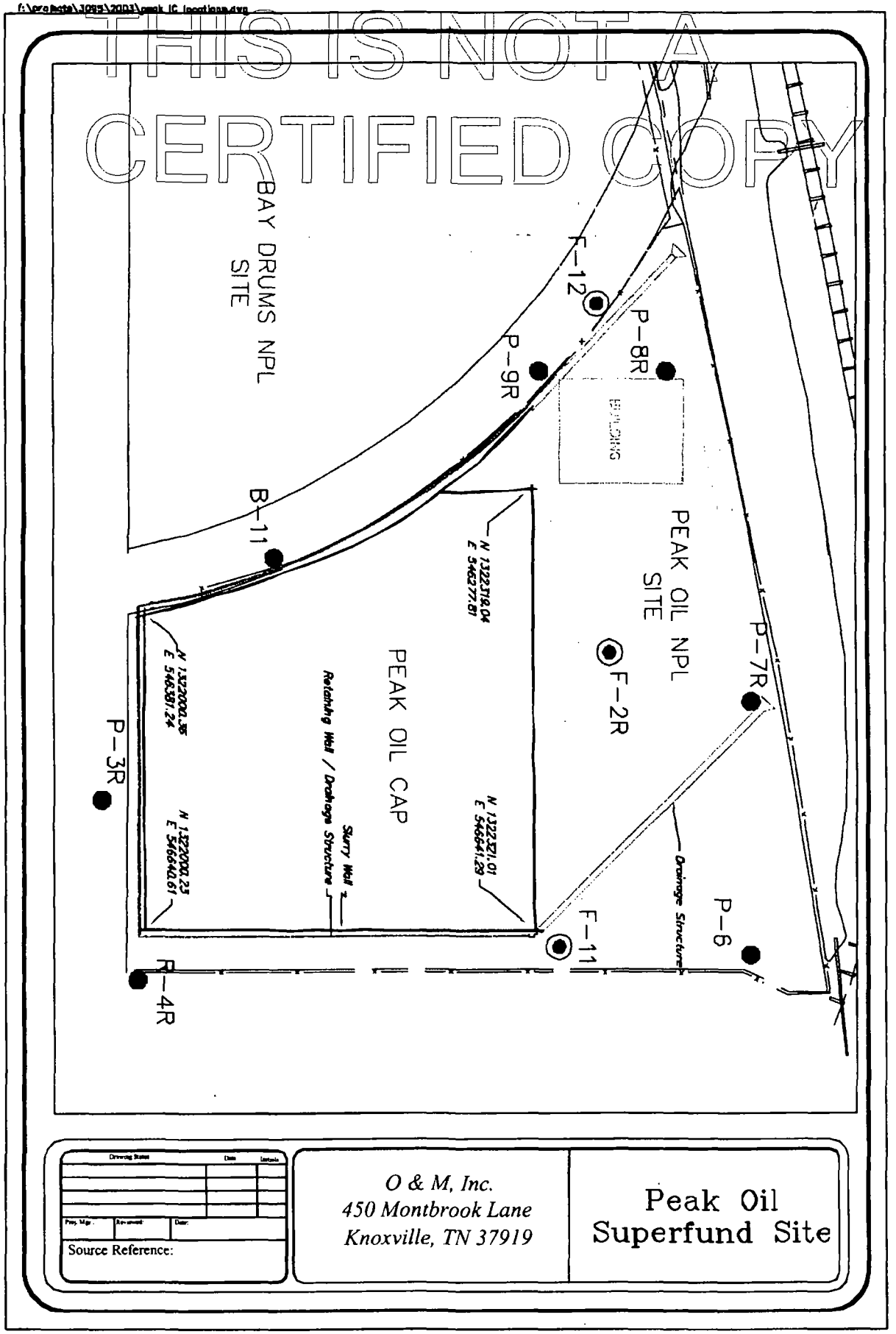
EXHIBIT A

LEGAL DESCRIPTION

Beginning 17 feet West of the NE corner of SW 1/4 of SE ¼ of Section 7, Township 29 South, Range 20 East, Hillsborough County, Florida; run South 120 feet; thence West 275.5 feet to a point on the Easterly right of way line of the Seaboard Coast Line Railroad; thence Northwesterly along said Railroad right of way line on a curve to the left, an arc distance of 124.92, chord bearing N15°44'06"W, chord distance 124.7 feet; thence continuing Northwesterly on said Railroad right of way line on a curve to the left, an arc distance of 455.06 feet, chord bearing N43°27'40"W, chord distance 443.58 feet, to a Point on the Southerly right of way of the Seaboard Coast Line Railroad; thence N77°44'35"E 9.61 feet; thence Northeasterly along a curve to the right an arc distance of 630.41 feet, chord bearing N79°25'34"E, chord distance 630.31 feet to a point on the East boundary of NW 1/4 of SE ¼ of said Section 7; thence South 31 feet; thence S25°34'03"W 39 feet; and thence South 374 feet to the point of beginning.

EXHIBIT B

SITE DIAGRAM



Drawing Status / Date / Initials	*O & M, Inc.* *450 Montbrook Lane* *Knoxville, TN 37919*	Peak Oil Superfund Site
Proj. Mgr. / Reviewed / Date Source Reference:		

Exhibit "B"

WILLIAMS ◈ SCHIFINO

WILLIAMS SCHIFINO MANGIONE & STEADY P.A.

ATTORNEYS AT LAW

SITE: Peak Oil Bay Drum
BREAK: 10.1
OTHER: V64

August 2, 2004

Mr. Michael Stephenson
Assistant Regional Counsel
United States Environmental Protection Agency
Region 4
Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia 30303-8960

Re: Bay Drum Superfund Site

Dear Mr. Stephenson:

As we have discussed, enclosed please find a copy of the Declaration of Restrictive Covenants signed by the owner of the property, Mark King. If you have any questions, please do not hesitate to contact me.

Sincerely,

Scott I. Steady

SIS:vlm
Enclosure

One Tampa City Center, Suite 2600 Tampa, Florida 33602 · P.O. Box 380 (33601) · (813) 221-2626 Fax (813) 221-7335

INSTR # 2004221846
O BK 13919 PG 1682
Pgs 1682 - 1689; (8pgs)
RECORDED 06/09/2004 04:21:25 PM
RICHARD AKE CLERK OF COURT
HILLSBOROUGH COUNTY
DEPUTY CLERK Y Roche

Prepared by and Return to:
Scott I. Steady, Esquire
Williams Schifino Mangione & Steady, P.A.
201 North Franklin Street, Suite 2600
Tampa, Florida 33602

DECLARATION OF RESTRICTIVE COVENANTS

This Declaration of Restrictive Covenants is dated this 20th day of May, 2004, by Mark S. King ("Declarant"), having an address of 4603 East 14th Avenue, Tampa Florida 33605.

WITNESSETH:

WHEREAS, Declarant is the owner of a parcel of land located in Hillsborough County, State of Florida, more particularly described on Exhibit A attached hereto and made a part hereof together with any improvements thereon and appurtenances thereto (the "Property");

WHEREAS, the Property is part of the Bay Drum Superfund Site ("Site") which the United States Environmental Protection Agency ("USEPA"), pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, placed on the National Priorities List on June 10, 1986 following publication in the Federal Register; and

WHEREAS, certain potentially responsible parties ("PRPs") have joined together in an unincorporated association called the Bay Drum Site Group (the "Bay Drum Group") in order to implement the requirements of certain Consent Decrees entered by the United States District Court for the Middle District of Florida more particularly described as: (i) Consent Decree, *United States of America v. Akzo Nobel Coatings, Inc., et al.*, Case No. 97-1565-CIV-26E (United States Environmental Protection Agency CERCLA RD/RA Consent Decree for Operable Unit Three Record of Decision at the Bay Drum Superfund Site, Tampa, Hillsborough County Florida); and (ii) Consent Decree, *United States of America v. Akzo Nobel Coatings, et al.*, Case No. 97-1564-CIV-T-26A (United States Environmental Protection Agency CERCLA RD/RA Consent Decree for the Operable Unit Two and Operable Unit Four Records of Decision at the Peak Oil Site and Bay Drums Site, Tampa Hillsborough County, Florida) (collectively the "Consent Decrees"); and

WHEREAS, USEPA has required that institutional controls be imposed on the Site in order to ensure that no damage is permitted to occur that might alter, modify or jeopardize the remedy to protect the public health and welfare and the environment.

NOW, THEREFORE, Declarant implements the following restrictive covenants and grants the following easements.

1. Grant: Declarant, on behalf of itself, its successors and assigns, in consideration of other good and valuable consideration, does hereby give, grant, covenant and declare that the Property shall be subject to the restrictions on use and rights of access set forth below.

2. Purpose: It is the purpose of this instrument that these restrictions are real property rights which shall run with the land to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to hazardous substances contaminants which may remain on the Site.

3. Restrictions on use: Subject to the terms of paragraph 5 below, the use, occupancy and activity of and at the Site are restricted as follows:

(a) The construction of any on-site water supply wells and/or irrigation wells on the Property is prohibited;

(b) Construction activities of any type on or through the remedial cap system or within 50 feet of the cap are prohibited (see Site Diagram attached as Exhibit B and made a part hereof depicting the location of the remedial cap system);

(c) Any activities on the cap that might damage, alter, in any fashion (such as planting ornamental landscaping), adversely effect, or otherwise be detrimental to the cap system are prohibited;

(d) Any subsurface activities which might puncture, breach or weaken (either chemically or physically) the slurry wall system are prohibited (see Exhibit B depicting the location of the slurry wall system;

(e) Any activities which would damage or destroy the groundwater monitoring wells located on the Property, from time to time, including without limitation, those wells depicted on Exhibit B;

(f) Any activities which would damage, destroy or adversely impede the operation of any future groundwater extraction of treatment system; and

(g) Any activities which would damage or destroy the fence and associated warning signs around the perimeter of the Site.

4. Right of access: Declarant hereby grants access to USEPA and the Florida Department of Environmental Protection ("FDEP"), including their successor agencies, and any private parties designated by the USEPA or FDEP, at all reasonable times and upon reasonable notice, to the Property and/or the Site for the purpose of conducting any activity related to the Consent Decrees including, but not limited to:

(a) continuing to comply with the requirements of the Consent Decrees;

(b) monitoring the Work;

(c) verifying any data or information submitted to the United States or the State of Florida;

(d) conducting investigations relating to contamination at or near the Site which may include the installation of additional groundwater monitoring wells;

(e) obtaining samples;

(f) assessing the need for, planning, or implementing additional response actions at or near the Site;

(g) assessing implementation of quality assurance and quality control practices as defined in the approved Quality Assurance Project Plans;

(h) implementing the Work pursuant to the conditions set forth in Paragraph 87 of the Consent Decrees;

(i) assessing Settling Performing Parties' compliance with the Consent Decrees; and

(j) determining whether the Site or other property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted, by or pursuant to the Consent Decrees.

5. Modification/Termination: The restrictive covenants contained herein may be modified or terminated with the approval in writing of USEPA.

6. Federal authority: Nothing in this document shall limit or otherwise affect USEPA's rights of entry and access or USEPA's authority to take response actions under CERCLA, the NCP, or other federal law.

7. No public access and use: No right of access or use by the general public to any portion of the Property is conveyed by this instrument.

8. Public notice: Declarant agrees to include in each instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO A DECLARATION OF RESTRICTIVE COVENANTS,

DATED _____, 2004, RECORDED IN THE OFFICE OF THE HILLSBOROUGH COUNTY, FLORIDA COURT CLERK ON _____, 2004, IN OFFICIAL RECORD BOOK_____, PAGE_____. THE UNDERLYING PROPERTY MAY CONTAIN HAZARDOUS SUBSTANCES OR CONTAMINANTS.

9. Enforcement: Enforcement of these restrictions shall be by proceedings at law or in equity, brought by Declarant or by any owner of any portion of the Site or by the USEPA or by the FDEP, against any party violating or attempting to violate any covenant or restriction contained herein, either to restrain violation, to direct restoration of the Site, to correct the effect of such violation or to recover damages resulting from such violation. Any forbearance, delay or omission to exercise the rights of enforcement under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver of any of the rights under this instrument.

10. Notices: Any notice, demand, request, consent, approval or communication under this instrument to Declarant shall be in writing and shall be served personally or sent by first class mail, postage prepaid, addressed as follows:

To Declarant:

Mark S. King
4603 East 14th Avenue
Tampa, Florida 33605

A copy of each such communication shall also be sent to the following:

To EPA:

Attorney for Bay Drum Superfund Site
Office of Environmental Accountability
U.S. Environmental Protection Agency
Atlanta Federal Center
61 Forsyth St., S.W.
Atlanta, GA 30303

To FDEP:

District Director
Southwest District
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, FL 33619

11. General provisions:

a) Controlling law: The interpretation and performance of this instrument shall be governed by the laws of the United States or, if there are no applicable federal laws, by the laws of the State of Florida.

b) Liberal construction: Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the grant to effect the purpose of this instrument and the policy and purpose of

CERCLA. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

c) Severability: If any provision of this instrument, or the application of it to any person or circumstance, is found to be invalid, the remainder of the provisions of the instrument, or the application of such provisions to persons or circumstances other than those to which it is found to be invalid, as the case may be, shall not be affected thereby.

d) No forfeiture: Nothing contained herein will result in a forfeiture or reversion of Declarant's title in any respect.

e) Successors: The covenants, easements, terms, conditions, and restrictions of this instrument shall be binding upon, and inure to the benefit of, the USEPA and FDEP and their respective personal representatives, heirs, successors, and assigns and shall continue as a servitude running in perpetuity with the Site. The term "Declarant," wherever used herein, and any pronouns used in place thereof, shall include the persons and/or entities named at the beginning of this document, identified as "Declarant" and their personal representatives, heirs, successors, and assigns.

f) Captions: The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

g) Third-Party Beneficiary: Declarant hereby agrees that USEPA and FDEP shall be, on behalf of the public, third-party beneficiaries of the benefits, rights and obligations granted in this instrument; provided that nothing in this instrument shall be construed to create any obligations on the part of USEPA or FDEP.

IN WITNESS WHEREOF, Declarant has caused this instrument to be executed this 20th day of May, 2004.

By: Mark S. King
Mark S. King

STATE OF FLORIDA

COUNTY OF HILLSBOROUGH

The foregoing instrument was acknowledged before me this 20th day of May,

2004, by Mark S. King, who (___) is personally known to me OR (✓) has produced a Florida driver license as identification.

Judithe R. Nielsen
Notary Public_____
My commission expires:_____

Attachment: Exhibit A - Legal Description of the Property
Attachment: Exhibit B – Site Diagram
118789

JUDITHE R. NIELSEN
MY COMMISSION # DD 023695
EXPIRES: May 7, 2005
1-800-3-NOTARY FL Notary Service & Bonding, Inc.

PARCEL I:

The West 318.03 feet of the East 1007.88 feet of the Northwest 1/4 of the Southeast 1/4 of Section 7, Township 29 South, Range 20 East, lying South of Atlantic Coast Line Railroad right-of-way.

PARCEL II:

From the Southeast corner of the Northwest 1/4 of the Southeast 1/4 of Section 7, Township 29 South, Range 20 East, run West along the South boundary of said Northwest 1/4 of the Southeast 1/4, a distance of 689.85 feet to the Point of Beginning; thence North 0° 19'24" West, to a point on the Southwesterly boundary of the Atlantic Coast Line Railroad right-of-way; thence Southeasterly on a 10° curve to the right along said right-of-way to a point on said South boundary of the Northwest 1/4 of the Southeast 1/4; thence West 309.70 feet to the Point of Beginning.

PARCEL III:

A tract in the Southwest 1/4 of the Southeast 1/4 of Section 7, Township 29 South, Range 20 East, described as follows:

From the Northeast corner of said Southwest 1/4 of the Southeast 1/4 of Section 7, which point is 1330.14 feet West of the Northeast corner of the Southeast 1/4 of the Southeast 1/4 of Section 7, run West along the North boundary of said Southwest 1/4 of the Southeast 1/4 of Section 7, a distance of 689.85 feet to a Point of Beginning. From said Point of Beginning, continue West along the North boundary of the Southwest 1/4 of the Southeast 1/4 of Section 7, a distance of 318.03 feet; run thence South 0° 19'24" East, a distance of 120.0 feet; run thence East, a distance of 318.03 feet; run thence North 0° 19'24" West, a distance of 120.0 feet to the Point of Beginning.

PARCEL IV:

A tract in the Southwest 1/4 of the Southeast 1/4 of Section 7, Township 29 South, Range 20 East, described as follows:

From the Northeast corner of said Southwest 1/4 of the Southeast 1/4 of Section 7; run North 89° 56'55" West, along the North boundary of said Southwest 1/4 of the Southeast 1/4 of Section 7, a distance of 330.15 feet to a Point of Beginning. From said Point of Beginning , continue North 89° 56'55" West, along the North boundary of the Southwest 1/4 of the Southeast 1/4 of Section 7, a distance of 309.70 feet; run thence South 0° 16'19" East, a distance of 120.0 feet; run thence South 89° 56'55" East, parallel to the North boundary of said Southwest 1/4 of the Southeast 1/4 of Section 7, a distance of 346.37 feet; run thence Northwesterly along a curve to the left, (radius 548.69 feet), an arc distance of 125.96 feet, (chord - 125.68 feet, chord bearing - North 17° 14'05" West), to the Point of Beginning; all of the above lying and being in Hillsborough County, Florida.

EXHIBIT "A"

Legal Description

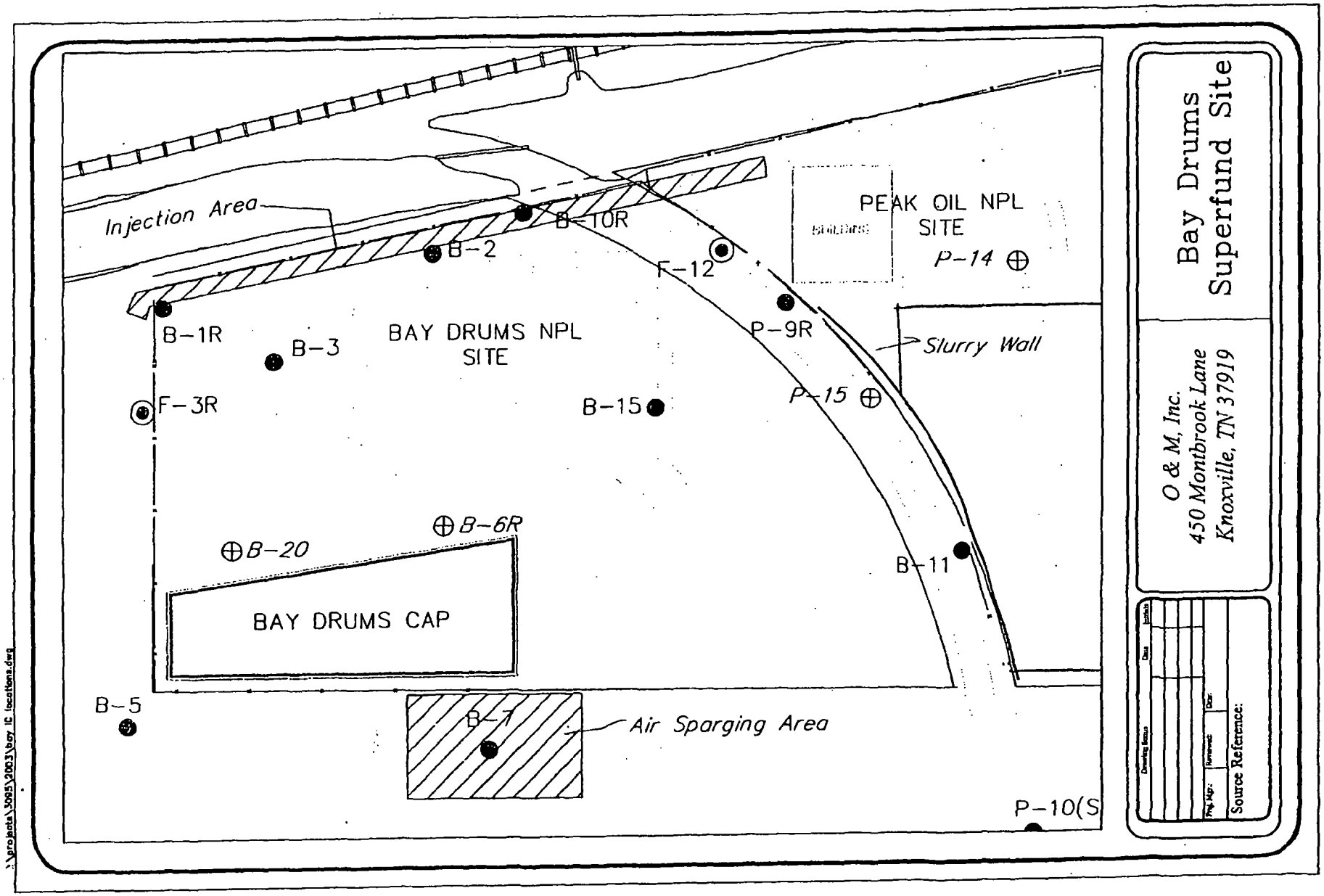

Injection Area
B-10R
B-2
PEAK OIL NPL SITE
P-14
F-12
B-1R
B-3
BAY DRUMS NPL SITE
P-9R
Slurry Wall
F-3R
B-15
P-15
B-6R
B-20
B-11
BAY DRUMS CAP
B-5
B-7
Air Sparging Area
P-10(S
Bay Drums Superfund Site
O & M, Inc.
450 Montbrook Lane
Knoxville, TN 37919
Source Reference:
\projects\3065\2003\bay_ic_locations.dwg

EXHIBIT "B"

Appendix G: Interview Forms

Interview Form for Peak Oil Co./Bay Drum Co. Five-Year Review

Site Name: Peak Oil Co./Bay Drum Co. **EPA ID No.: FLD004091807**
Interviewer Name: Christy Fielden **Affiliation: E^2 Inc.**
Subject's Name: Michael Miller, Clay McClarnon, Anton Plaines
Affiliation: de maximis, inc.
Time: 10:15am **Date: 3/11/2010**
Type of Interview (Circle one): In Person **Phone** **Mail** **Other_____**
Location of Interview: Peak Oil Co./Bay Drum Co. Site

O&M Contractor

1. What is your overall impression of the project?

   Having been involved with the Site for 15 years, I consider the Site a success in regard to OU1 and OU3. The air sparging system at OU2 is successfully working at both the Peak Oil site and the Bay Drums site.

2. Is the remedy functioning as expected? How well is the remedy performing?

   Yes. The remedies at OU1 and OU3 have worked well, and the air sparging system at OU2 continues to work well.

3. What does the monitoring data show? Are there any trends that show contaminant levels are decreasing?

   The monitoring data shows that contaminant levels are decreasing.

4. Is there a continuous on-site O&M presence? If so, please describe staff and activities. If there is not a continuous on-site presence, describe staff and frequency of site inspections and activities.

   Site and cap inspections are completed monthly; there is an annual sampling program; injections are completed on an as-needed basis. There is also a telemetry system at the Site that is set to send out a notification if something goes wrong at the Site.

5. Have there been any significant changes in the O&M requirements, maintenance schedules or sampling routines since start-up or in the last five years? If so, do they affect the protectiveness or effectiveness of the remedy? Please describe changes and impacts.

No, the same O&M plan from the ROD is in use. An additional well may have been added, and additional sampling has been completed. Otherwise, there have been no significant changes.

6. Have there been unexpected O&M difficulties or costs at the site since start-up or in the last five years? If so, please give details.

   No.

7. Have there been opportunities to optimize O&M or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.

   Yes. However, optimization would be minimal. It is important to ensure adequate amounts of data have been collected at the Site, instead of taking advantage of potential optimization and later realizing more data is needed.

8. Do you have any comments, suggestions or recommendations regarding the project?

   No. Regular communications are maintained with Scott Miller, the RPM.

Site Name: Peak Oil Co./Bay Drum Co. **EPA ID No.:** FLD004091807
Interviewer Name: Christy Fielden **Affiliation:** E^2 Inc.
Subject's Name: Scott Martin **Affiliation:** EPA RPM
Subject's Contact Information: (404) 562-8916
Time: 11:45am **Date:** 3/11/2010
Type of Interview (Circle one): In Person Phone Mail Other_____
Location of Interview: Brandon Regional Library, Site repository

EPA RPM

1. What is your overall impression of the project?

   The project is going well. The Site is construction complete and this is its second FYR. Contamination in the aquifer is trending down. More injections are being done at OU2, and the PRP is willing to do additional remedial actions at OU4.

2. What effect has this site had on the surrounding community, if any?

   There is no major effect. There is no community group. The Site is located in an industrial area, and the aquifer is not used as a drinking water source.

3. How well do you believe the remedy currently in place is performing? Do you believe the monitoring data shows the remedy's effectiveness?

   The remedies are performing well and the Site is into 10 years of monitoring. There is solidification/stabilization at OU1 and OU3, and the remedy at OU2 is working. Review the performance of the remedy to see if there is potential to get the air sparging system to work better and faster.

4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action since implementation of the cleanup?

   No. There are occasional inquiries as part of phase I's from industries interested in the area.

5. Are you aware of any changes in projected land use at or near the Site?

   No. Future use at the Site will be limited because of the location and caps that will remain in place after the clean is complete.

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

Yes.

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

   No.

Site Name: Peak Oil Co./Bay Drum Co. **EPA ID No.:** FLD004091807
Interviewer Name: Christy Fielden **Affiliation:** E^2 Inc.
Subject's Name: David Arnold
Affiliation: SWFWMD, Well Construction Section
Subject's Contact Information: (352) 796-7211
Time: 1:30pm **Date:** 3/25/2010
Type of Interview (Circle one): In Person **Phone** Mail Other_____

SWFWMD, Well Construction Section

1. Are you aware of the former environmental issues at the Peak Oil /Bay Drum site and of the cleanup that took place there?

   Yes.

2. What are your views about current site condition, problems or related concerns?

   The major physical activities at the Site have been completed. The Well Construction Section is not aware of any problems.

3. What effect has this site had on the surrounding community?

   The Site has been included in the F.A.C. 62-524, which regulates the construction of wells for potable water use in delineated areas.

4. Has your department received any citizen complaints or inquiries regarding environmental issues or activities at this site?

   The Well Construction Section is not aware of any complaints or inquiries.

5. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your department regarding the Site? If yes, please give purpose and results.

   No activities have been conducted at the Site by the Well Construction Section. In 2006, the last potable water well near the Site was constructed to the southeast of the Site in and a permit was issued.

6. Are you aware of any changes to local laws that might affect the protectiveness of the remedy?

F.A.C. 62-524 between EPA and FDEP.

7. Do you feel well informed about the site's activities and progress? If not, what methods would you recommend EPA use to disseminate more information?

   Yes. Our section keeps up regularly with EPA's website.

8. Do you have any comments, suggestions or recommendations regarding the project?

   No.

Site Name: Peak Oil Co./Bay Drum Co. **EPA ID No.:** FLD004091807
Interviewer Name: Christy Fielden **Affiliation:** E^2 Inc.
Subject's Name: Kelsey Helton **Affiliation:** FDEP
Subject's Contact Information: (350) 245-8969
Time: 2:00pm **Date:** 3/29/2010
Type of Interview (Circle one): In Person **Phone** Mail Other_____

FDEP

1. Are you aware of the former environmental issues at the Peak Oil/Bay Drum site and of the cleanup that took place there?

   Yes.

2. What are your views about current site condition, problems or related concerns?

   The source remedies appear to be effective based on the ground water monitoring data. Initial bioremediation injections have not been completely effective at the Site; however, additional enhanced bioremediation injections have been proposed by the PRPs, and FDEP supports this next step.

3. What effect has this site had on the surrounding community?

   Not aware of any effects on the surrounding community.

4. Has your department received any citizen complaints or inquiries regarding environmental issues or activities at this site?

   No.

5. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your department regarding the site? If yes, please give purpose and results.

   Yes. FDEP participates in reviews for documents about the Site, and communicates with EPA on concerns with important site related issues.

6. Are you aware of any changes to local laws that might affect the protectiveness of the remedy?

   No.

7. Do you feel well informed about the site's activities and progress? If not, what methods would you recommend EPA use to disseminate more information?

   The Site cleanup is moving in the right direction. In addition to the remedy, the PRPs are completing sediment sampling for a sediment removal action. It has been determined that remaining metals and pesticides will not naturally degrade, and the sediment removal action is supported in lieu of continued monitoring.

8. Do you have any comments, suggestions or recommendations regarding the project?

   The project is headed in the right direction. FDEP believes the additional bio-remediation is good and is looking forward to the sediment removal.