Five-Year Review Report

Second Five-Year Review Report
for
Normandy Park Apartments
FLD984229773

Hillsborough County, Florida

September 2011

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For:
United States Environmental Protection Agency
Region 4
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Approved by:

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Date: 9/27/11

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for
Normandy Park Apartments
11110 North 56th Street
Temple Terrace,
Florida

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List of Acronyms

AOC	Administrative Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirement
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CIC	Community Involvement Coordinator
COC	Contaminant of Concern
EPA	United States Environmental Protection Agency
FDEP	Florida Department of Environmental Protection
FFS	Focused Feasibility Study
FYR	Five-Year Review
GCR	Gulf Coast Recycling
IC	Institutional Control
MCL	Maximum Contaminant Level
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NA	not analyzed
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NS	not sampled
O&M	Operation and Maintenance
OU	Operable Unit
PRP	Potentially Responsible Party
RA	Remedial Action
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SRI	Streamlined Remedial Investigation
SWRAU	Site-Wide Ready for Anticipated Use
TBC	To-Be-Considered
WRS	WRS Infrastructure & Environment, Inc.

Executive Summary

Introduction

The Normandy Park Apartments Superfund site (the Site) is located at 11110 North 56th Street, Temple Terrace, Hillsborough County, Florida. From 1953 until 1963, Gulf Coast Recycling (GCR) operated a battery recycling and secondary lead smelting facility at the Site. The battery recycling and secondary lead smelting process resulted in the release of sulfuric acid and lead into the environment. In 1970, GCR built Normandy Park Apartments, a 144-unit apartment complex, on the property. In August 1991, in response to a citizen's complaint, the Hillsborough County Environmental Protection Commission investigated the Site. Further investigation by the Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency (EPA) indicated that soil and ground water were contaminated with antimony, lead, cadmium and arsenic.

In February 1995, EPA proposed the Site for listing on the National Priorities List (NPL). To date, EPA has used its enforcement discretion to defer placing the Site on the NPL in exchange for GCR's cooperation. On May 31, 2006, EnviroFocus Technologies, L.L.C. (EnviroFocus) purchased some of GCR's assets, including the responsibility to address the Normandy Park Apartments site. The triggering action for this Five-Year Review (FYR) was the signing of the previous FYR on September 28, 2006.

Remedy Components

On May 11, 2000, EPA issued the Site's single operable unit Record of Decision (ROD), which selected a remedy to address the soil and ground water contamination at the Site. The goal of the remedy was to eliminate the potential for exposure to surface soil contaminants and waste materials, provide for the remediation of potential ground water threats to the environment, ensure maintenance of the engineered remedy, and implement institutional controls in the form of deed restrictions to limit construction of ground water wells. The major components of the selected remedy include:

- Excavation of all exposed soil to a depth of two feet, with the exception of a twenty-foot radius around existing trees.
- Removal of the deck in the southern complex and soil excavation to the water table or as deep as possible without jeopardizing the structural stability of the adjacent swimming pool and apartment buildings.
- Placement of a permeable liner at the base of the excavated areas.
- Filling of all excavated areas with clean soil to pre-excavation grade, and sodding.
- Temporary storage of excavated soil in the open field south of the apartments to allow screening of the soils for compliance with landfill disposal regulations under the Resource Conservation and Recovery Act (RCRA).
- On-site treatment of the soil stored in the open field via ex-situ stabilization if the screening indicates that the soil does not meet RCRA Landfill Disposal Regulations.
- Off-site disposal of treated and untreated soil in a regulated landfill.
- Monitored natural attenuation of the ground water contaminants.

- Institutional controls to limit future use of soil and ground water.

Technical Assessment

The review of relevant documents, Applicable or Relevant and Appropriate Requirements (ARARs), risk assumptions and the site inspection indicate that the Site's remedy is operating and functioning as intended by the decision documents. No exposure pathways to contaminated ground water exist at the Site because a restrictive covenant is in place preventing the use of ground water from the surficial aquifer. In addition, the Site is located in a Florida Ground Water Delineated Area and the Southwest Florida Water Management District, in which water well regulations are in place restricting the use of ground water. The restrictive covenant also limits disturbances of the contaminated soil remaining under site structures (including paved areas and sidewalks) and around trees. If any of these structures are removed, the restrictive covenant requires that appropriate measures be taken to address the underlying contaminated soils.

In order to prevent exposure to contaminated soil, the site remedy required the removal of at least the top two feet of contaminated soil everywhere that the ground surface was exposed, excluding a specified distance around the existing trees. The excavated areas were filled with clean soil. In the excluded areas around existing trees, tree plazas were constructed with pavers or mulch was used to prevent exposure to the contaminated soil that remains on site. The Site is well-maintained, and the tree plazas and concrete pad, which is also known as the tennis courts, remain in good condition and are regularly repaired and replaced as needed. The vegetative cover is well-established. New mulch has been placed in the tree plaza areas in the past two years. Ground water is monitored and operation and maintenance (O&M) is completed regularly to ensure that the remedial components are well-maintained and functioning as intended.

Overall, the remedy is progressing as expected. Ground water is monitored semi-annually to evaluate contaminant of concern (COC) concentrations in relation to cleanup goals established in the ROD. Water quality data from the last five years for the Site's 11 monitoring wells indicate that antimony concentrations remain above the maximum contaminant level (MCL) in samples collected from eight monitoring wells. Concentrations in most wells have declined, although concentrations in MW-1 and MW-5 remain above the MCL and do not show declining trends towards meeting the cleanup goal. Antimony trends should be monitored following future ground water sampling events to determine whether additional measures are needed in order to attain the cleanup goal and whether there is an on-site or off-site source which may be causing the elevated antimony groundwater concentrations.

Lead concentrations were consistently below the MCL at eight of 11 monitoring wells, but are still above the MCL in MW-7A. Lead concentrations in MW-1 have fluctuated above and below the MCL in the past five years and were below the MCL in the most recent sampling event. Although there is an overall declining trend in MW-7A, the past three sampling events found lead concentrations greater than the previous three sampling events. Continued monitoring is needed to determine if additional measures are needed to address the lead contamination in MW-7A. However, the trend in the lead levels indicates that lead levels overall continue to decline.

Ground water samples collected during the fall 2006, 2007 and 2008 monitoring events were also analyzed for arsenic. Arsenic concentrations in all samples were below the MCL and subsequently arsenic was removed from the monitoring requirements in 2009 by EPA.

Institutional controls in the form of a restrictive covenant have been implemented to prevent the use of ground water at the Site and to notify future owners of the apartment complex of the contaminated soil remaining under the site structures (including paved areas and sidewalks). The restrictive covenant also requires that if any of these structures are removed, then appropriate measures must be taken to address the underlying contaminated soils. A copy of the restrictive covenant has been included in Appendix F. In addition, the area is designated as a Florida Ground Water Delineated Area indicating that groundwater is contaminated. Wells proposed within the delineated area have to be permitted by the Southwest Florida Water Management District (SWFWMD), who will ensure that potable wells will not withdraw contaminated groundwater.

ARARs have not changed since the Site's 2000 ROD. There have been no changes in exposure assumptions or toxicity data that would call into question the protectiveness of the remedy. Reference doses and cancer slope factors for contaminants of potential concern remain the same as the values used in the 1999 baseline risk assessment. The Site remains in use as the location of an apartment complex. The owners and management of the apartment complex work with EnviroFocus to ensure that all necessary safety precautions are taken when any digging is necessary at the Site and new residents are informed of the Site's history, remedy and current status.

Conclusion

The remedy at the Site currently protects human health and the environment because it is functioning as intended by the Site's decision documents. Contaminated source material has been excavated and remaining contaminated soil has been contained on site beneath clean fill, concrete caps, tree plazas and existing structures. Additionally, institutional controls for soil and ground water have been implemented in the form of a restrictive covenant. The Site is located in a Florida Ground Water Delineated Area and the Southwest Florida Water Management District, in which water well regulations are in place restricting the use of ground water. In order for the Site's remedy to be protective in the long-term, the source of elevated antimony in site ground water samples, historical data and the need for additional off-site soil sampling should be evaluated.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name *(from WasteLAN)*: Normandy Park Apartments Superfund Site		
EPA ID *(from WasteLAN)*: FLD984229773		
Region: 4	**State:** Florida	**City/County:** Temple Terrace, Hillsborough County

SITE STATUS	
NPL status: ☐ Final ☐ Deleted ☒ Other (specify) Proposed	
Remediation status (choose all that apply): ☐ Under Construction ☒ Operating ☐ Complete	
Multiple OUs?* ☐ YES ☒ NO	**Construction completion date** NA
Has site been put into reuse? ☒ YES ☐ NO	

REVIEW STATUS	
Lead agency: ☒ EPA ☐ State ☐ Tribe ☐ Other Federal Agency	
Author name: Rhode Bicknell and Treat Suomi (Reviewed by EPA)	
Author title: Associate and Senior Associate	**Author affiliation: Skeo Solutions**
Review period**: 01/12/2011 to 09/01/2011	
Date(s) of site inspection: 01/07/2011	
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 On-site Construction at OU# ☐ Actual RA Start at OU# ☐ Construction Completion ☒ Previous Five-Year Review Report ☐ Other (specify)	
Triggering action date *(from WasteLAN)*: 09/28/2006	
Due date *(five years after triggering action date)*: 09/28/2011	

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

Five-Year Review Summary Form (continued)

Issues:
1. There are elevated levels of antimony in Site ground water samples.
2. During the Five Year Review, concerns were raised about the adequacy of off-site soil sampling for lead in nearby residential areas.

Recommendations:
1. Evaluate the potential for on-site and off-site sources which may be causing the elevated antimony groundwater concentrations.
2. Evaluate historical data and the need for additional off-site soil sampling.

Protectiveness Statement(s):
The remedy at the Site currently protects human health and the environment because it is functioning as intended by the Site's decision documents. Contaminated source material has been excavated and remaining contaminated soil has been contained on site beneath clean fill, concrete caps, tree plazas and existing structures. Additionally, institutional controls for soil and ground water have been implemented in the form of a restrictive covenant. The Site is located in a Florida Ground Water Delineated Area and the Southwest Florida Water Management District, in which water well regulations are in place restricting the use of ground water. In order for the Site's remedy to be protective in the long-term, the source of elevated antimony in site ground water samples, historical data and the need for additional off-site soil sampling should be evaluated.

Other Comments:

Environmental Indicators

Current human exposures at the Site are under control.
Current ground water migration is under control.

Are Necessary Institutional Controls in Place?
☒ All ☐ Some ☐ None

Has the Site Been Designated as Site-Wide Ready for Anticipated Use (SWRAU)?
☐ Yes ☒ No

The site is not listed on the National Priorities List and therefore not eligible for SWRAU at this time.

Second Five-Year Review Report
for
Normandy Park Apartments 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 United States Environmental Protection Agency (EPA) prepares FYRs pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Oil and Hazardous Substances Pollution 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 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."

Skeo Solutions, an EPA Region 4 contractor, conducted the FYR and prepared this report regarding the remedy implemented at the Normandy Park Apartments Superfund site (the Site) in Temple Terrace, Hillsborough County, Florida. This FYR was conducted from January 2011 to September 2011. EPA is the lead agency for developing and implementing the remedy for the potentially responsible party (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 one operable unit (OU), which is addressed in this FYR.

2.0 Site Chronology

Table 1 lists the dates of important events for the Site.

Table 1: Chronology of Site Events

Event	Date
Initial discovery of contamination	February 24, 1992
Gulf Coast Recycling (GCR) entered an Administrative Order on Consent (AOC) with EPA for an Emergency Response and Removal Action	June 3, 1992
Removal Action Plan submitted	August 1992
EPA proposed the Site for listing on the National Priorities List (NPL)	February 13, 1995
Removal Action completed	October 24, 1995
EPA and GCR entered into an AOC to complete a Streamlined Remedial Investigation (SRI), Focused Feasibility Study (FFS) and Risk Assessment at the Site	September 30, 1998
GCR initiated the SRI and FFS	September, 1998
Remedial Design started	April, 1999
Combined SRI/FFS completed	March 11, 2000
EPA signed the Record of Decision (ROD)	May 11, 2000
Remedial Design/Remedial Action (RA) Work Plan submitted to EPA	April 11, 2001
Remedial Design completed	May 22, 2001
Consent Degree and Statement of Work filed	September 13, 2001
RA completed	November, 2001
RA Construction Report completed	January 25, 2002
First Five-Year Review (FYR) signed	September 28, 2006

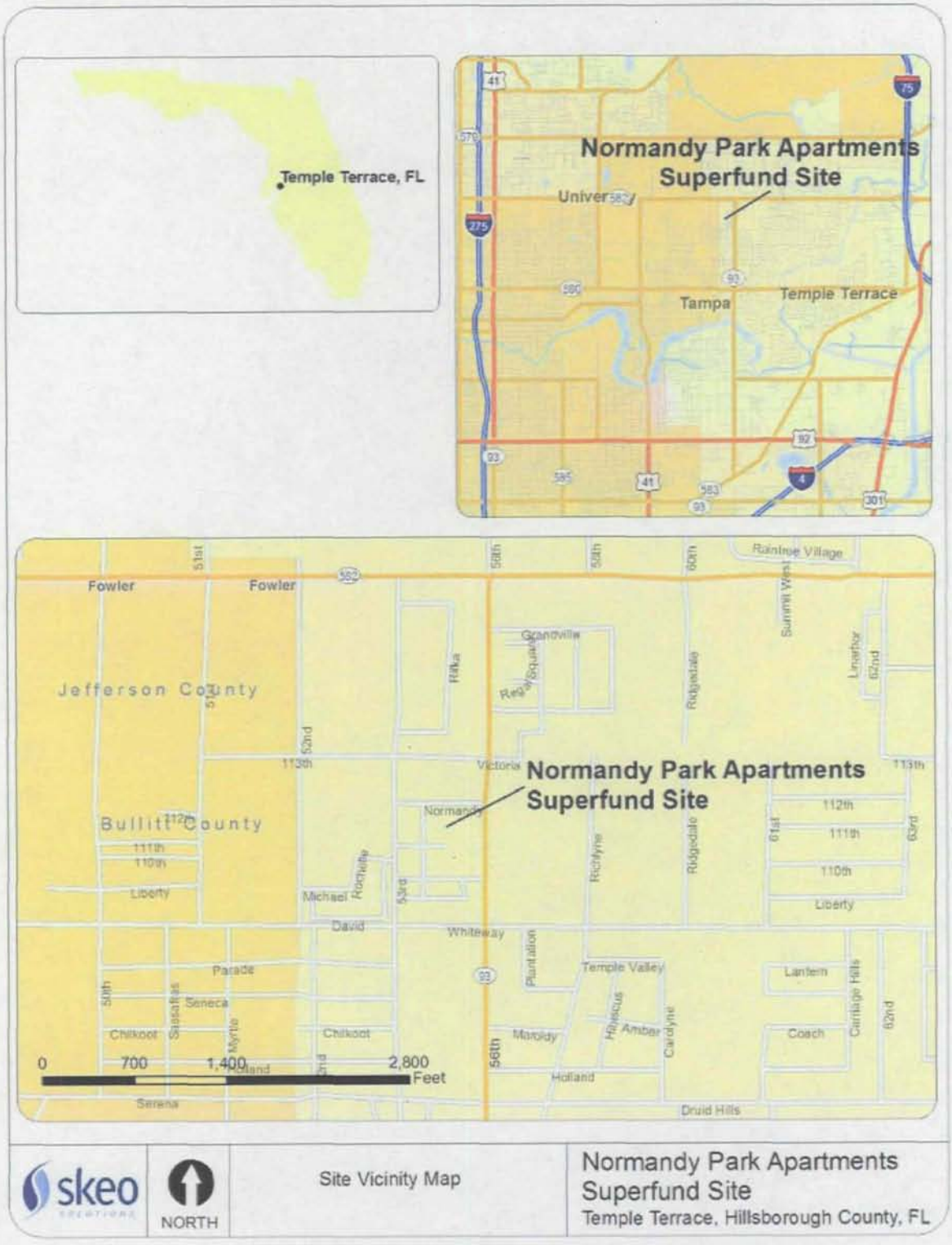
3.0 Background

3.1 Physical Characteristics

The Site occupies 8.25 acres and is located at 11110 North 56th Street, approximately one fourth mile south of Fowler Avenue between 56th Street and 53rd Street in the City of Temple Terrace, Hillsborough County, Florida (Figure 1). The site property's parcel number is T-15-28-19-54V-000023-B0000.0. The Site is located in a commercial and residential area just northeast of Tampa. A 144-residential-unit apartment complex, Normandy Park Apartments, is currently located on the Site. The northern courtyard consists of 80 residential units in eight buildings and the southern courtyard consists of 64 residential units in four buildings. The structures are two-story apartment buildings built in clusters with central courtyards (Figure 2). The courtyards are generally covered with grass and include mature trees. There are also parking lots, two swimming pools, an apartment clubhouse, a laundry facility and a playground located at the apartment complex. A stormwater retention pond is located in the southeast corner of the Site to collect stormwater. The apartments are bounded to the north by Temple Terrace City Hall, to the west by an undeveloped lot and Terrace Palms Apartments, to the south by an undeveloped lot owned by EnviroFocus, formerly Gulf Coast Recycling (GCR), and to the east by a retail shopping center.

Hydrogeological units beneath the Site include an upper aquifer system consisting of the surficial sand aquifer and rock aquifer, a low-permeability clay layer, an upper limestone area, a lower clay layer, and lower underlying limestone. The surficial zone contains mostly sand with varying amounts of organic debris and silt. The saturated portion of the surficial zone is referred to as the surficial aquifer. At the Site, the ground water of the surficial aquifer is encountered at about 7 to 8 feet below ground surface (bgs). The surficial aquifer is approximately 25 to 30 feet thick. Below the surficial aquifer is a clay layer that varies from approximately 0 to 15 feet in thickness, underlain by approximately 10 feet of limestone. Beneath this upper limestone is a clay layer that varies from 40 to 60 feet in thickness and below this clay is limestone comprising the Floridan aquifer, which consists of the karst limestone zone and is the drinking water source for much of western Florida. Ground water flow in the surficial aquifer at the site is east and southeast from a ground water "high" located west of the western property boundary (Figure 3).

Figure 1: Site Location Map

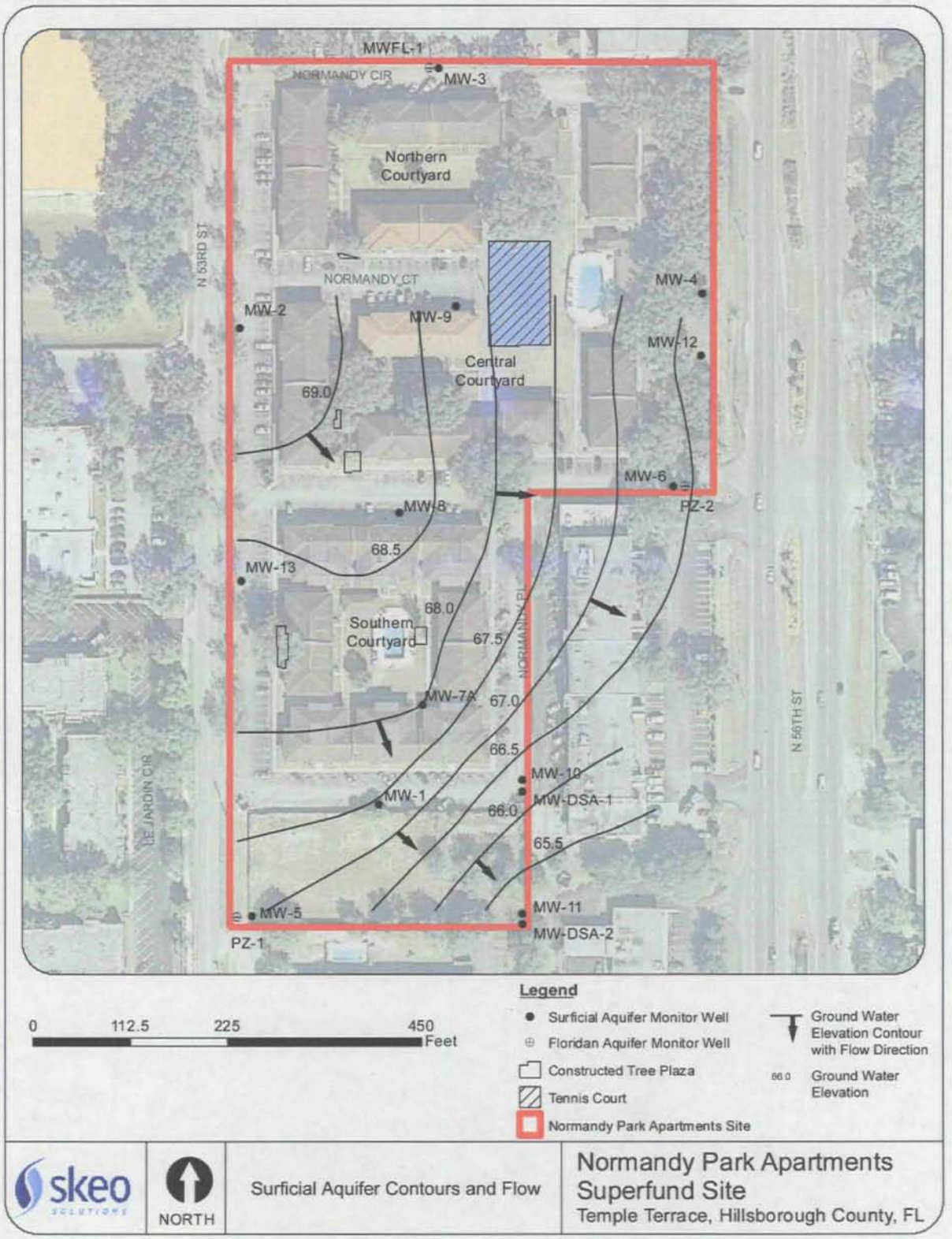


Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site, and is not intended for any other purpose.

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.

Figure 3: Surficial Aquifer Flow



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

From 1953 until 1963, GCR operated a battery recycling and secondary lead smelting facility at the Site. In 1970, GCR built Normandy Park Apartments on the site property, which remains on site today. The current and the future expected use of the Site is residential. The Site and surrounding area are zoned for mixed industrial and residential use. It is anticipated that these land uses will remain consistent in the future.

Private water supply wells that are used as a drinking water source are not known to be present in the immediate area of the Site. The area has been developed for many years and municipal water services the area businesses and residences. Future use of ground water in the area is anticipated to remain the same. A restrictive covenant is in place to prevent the use of ground water in the surficial aquifer and the Site is located in a Florida Ground Water Delineated Area in which water well regulations are in place restricting the use of ground water.

3.3 History of Contamination

From 1953 until 1963, GCR operated a battery recycling and secondary lead smelting facility at the Site. At the facility, the tops of spent lead batteries were removed by a hydraulic guillotine or opened by other means. The lead plates were separated and processed for recycling and the battery casings and solid components were crushed and disposed of. The lead plates were smelted on site. This process resulted in the release of sulfuric acid and lead into the environment.

In 1970, GCR built the Normandy Park Apartments on the site property. In August 1991, in response to a citizen's complaint, the Hillsborough County Environmental Protection Commission investigated the Site. In February 1992, FDEP referred the Site to EPA. EPA sampling confirmed widespread lead contamination throughout the Site at levels that threatened human health and the environment.

3.4 Initial Response

In 1992, an emergency response and removal action was undertaken at the apartment complex to address the immediate threat posed by high levels of lead in the soil. In June 1992, GCR entered into an Administrative Order on Consent (AOC) with EPA to abate the immediate threat. Under the direction of EPA's Emergency Response and Removal Program, GCR placed concrete caps over two lead-contaminated areas in the northern courtyard. In 1995, a wooden deck was constructed over the southern complex courtyard to prevent potential exposure to the soil underneath until a more permanent remedy was selected.

In February 1995, EPA proposed the Site for listing on the National Priorities List (NPL). To date, EPA has used its enforcement discretion to defer placing the Site on the NPL in exchange for GCR's cooperation. On May 12, 1998, EPA issued a special notice letter to GCR to conduct a Streamlined Remedial Investigation (SRI), Focused Feasibility Study

(FFS), and a Risk Assessment at the Site. Negotiations with GCR were successful and in September 1998, GCR entered into another AOC with EPA to conduct the SRI/FFS. The investigation was streamlined due to the availability of sufficient existing data to evaluate the nature and extent of contamination.

3.5 Basis for Taking Action

The results of the April 1999 SRI/FFS confirmed the presence of contaminants in site soils. During the SRI/FFS, a baseline risk assessment was conducted to evaluate the risk to human health associated with contamination from the Site. This analysis focused on the health effects that could result from long-term direct exposure to high concentrations of contaminants as a result of dermal contact. The risk assessment assumed that because lead was most prevalent and present at the highest concentrations, any action taken to abate the unacceptable risks from direct exposure to lead-contaminated soil would also address any unacceptable risks to the other contaminants present in the soil.

By assuming that lead was the primary contaminant of concern (COC), the baseline risk assessment did not evaluate the risks from other COC concentrations in site soil (i.e., arsenic, cadmium and antimony). While the risk assessment tested ground water for contaminants, it did not evaluate the surficial aquifer as a potential drinking water source. EPA identified these deficiencies and requested that GCR revise the risk assessment. In response to EPA's comments, GCR proposed a different approach. To be most protective, GCR proposed removing the entire surface soil pathway, regardless of contaminant concentrations; it would therefore be unnecessary to determine acceptable concentrations of other COCs, because all surface soil would be removed and replaced with clean fill. EPA agreed that revising the risk assessment would not affect the selection of the remedy and approved the incomplete risk assessment.

The result of this evaluation determined that the chemicals of potential concern for the site were lead, antimony and arsenic in the surface and subsurface soil and lead, antimony, arsenic and cadmium in the surficial aquifer. At many locations throughout the Site, the on-site surface soil contained concentrations of lead above the acceptable level of 420 milligrams per kilogram (mg/kg), as determined by the risk assessment. In addition, lead and antimony were present in the on-site surficial ground water at levels exceeding the state and federal primary drinking water standards of 0.015 milligrams per liter (mg/L) for lead and 0.006 mg/L for antimony.

4.0 Remedial Actions

In accordance with CERCLA and the NCP, the overriding goals for any remedial action (RA) are protection of human health and the environment and compliance with applicable or relevant and appropriate requirements (ARARs). A number of remedial alternatives were considered for the Site, and final selection was made based on an evaluation of each alternative against nine evaluation criteria that are specified in Section 300.430(e)(9)(iii) of the NCP. The nine criteria include:

1. Overall Protectiveness of Human Health and the Environment.
2. Compliance with ARARs.
3. Long-Term Effectiveness and Permanence.
4. Reduction of Toxicity, Mobility or Volume of Contaminants through Treatment.
5. Short-term Effectiveness.
6. Implementability.
7. Cost.
8. State Acceptance.
9. Community Acceptance.

4.1 Remedy Selection

The Site's single operable unit Record of Decision (ROD) was signed on May 11, 2000, and included a remedy to address contaminated soil and ground water. The goal of the remedy was to address surficial soil and ground water contamination and to eliminate threats by minimizing direct contact with contaminated media. The remedial action objectives in the 2000 ROD included:

- Eliminate the potential for exposure to surface soil contaminants and waste materials. Provide for the remediation of potential ground water threats to the environment.
- Ensure maintenance of the engineered remedy.
- Implement institutional controls in the form of deed restrictions to limit construction of ground water wells.

The major components of the selected remedy included:

- Excavation of all exposed soil to a depth of two feet, with the exception of a twenty-foot radius around existing trees.
- Removal of the deck in the southern complex and soil excavation to the water table or as deep as possible without jeopardizing the structural stability of the adjacent swimming pool and apartment buildings.
- Placement of a permeable liner at the base of the excavated areas.
- Filling of all excavated areas with clean soil to pre-excavation grade, and sodding.
- Temporary storage of excavated soil in the open field south of the apartments to allow screening of the soils for compliance with Landfill Disposal Regulations under the Resource Conservation and Recovery Act (RCRA).

- On-site treatment of the soil stored in the open field via ex-situ stabilization if the screening indicates that the soil does not meet RCRA Landfill Disposal Regulations.
- Off-site disposal of treated and untreated soil in a regulated landfill.
- Monitored natural attenuation of the ground water contaminants.
- Institutional controls to limit future use of soil and ground water.

Soil COCs were arsenic, lead and antimony. Because the proposed remedy would remove the entire surface soil pathway regardless of contaminant concentrations, EPA determined that it would not be necessary to determine acceptable concentrations of soil COCs; all surface soil would be removed and replaced with clean fill. Ground water COCs and respective cleanup goals are listed in Table 2.

Table 2: Ground Water COC Cleanup Goals

Ground Water COC	ROD Cleanup Goal (mg/L)
Antimony	0.006
Lead	0.015

4.2 Remedy Implementation

RA activities at the Site were undertaken by PRP contractor WRS Infrastructure & Environment, Inc. (WRS). WRS mobilized to the Site on March 19, 2001. Major RA components implemented at the Site include:

- Removal of the wood deck located in the southern complex courtyard and excavation of soil under the wood deck in the southern complex courtyard up to seven feet bgs.
- Treatment of excavated soil from the southern complex courtyard with Portland cement and tri-sodium phosphate prior to disposal.
- Excavation of soil in the central and northern apartment complexes to a depth of two feet bgs.
- Transportation of all contaminated soil to a Class I Industrial Landfill in Okeechobee, Florida.
- Placement of a non-woven polypropylene fabric over the bottom and sides of all of the soil excavations and filling excavation areas with clean fill obtained from an off-site location.
- Installation of an irrigation system and sodding the excavated areas once the area was backfilled and graded.
- Construction of tree plazas consisting of concrete pavers, wood decking or mulch over the areas being preserved around the existing trees.

The remedy selected in the Site's 2000 ROD indicated that soil within a 20-foot radius or the drip-line of the mature oak trees, whichever was greater, should not be excavated. Instead, these areas would be covered with a tree plaza to prevent contact with the soil

(Figure 2). In places where the soil lead concentration was less than 420 mg/kg, no tree plaza was constructed, although the area under the large oak tree in the west end of the central complex courtyard and the area adjacent to the playground area at the east end of the northern complex courtyard were covered with six inches of mulch. By using this guideline, potential damage to the root systems of the trees could be avoided. WRS completed the construction activities and demobilized on August 25, 2001.

After completion of the RA, ground water sampling was undertaken to monitor natural attenuation and ground water quality. A restrictive covenant is in place preventing the use of ground water from the surficial aquifer. In addition, the Site is located in a Florida Ground Water Delineated Area in which water well regulations are in place restricting the use of ground water. The restrictive covenant also limits disturbances of contaminated soil remaining in place under site structures (including paved areas and sidewalks) and around trees. If any of these structures are removed, the restrictive covenant requires that appropriate measures be taken to address the underlying contaminated soils.

4.3 Operation and Maintenance (O&M)

The O&M period for the Site began with the approval of the Remedial Action Construction Report by EPA in January 2002. According to the 2000 ROD, the O&M period for the Site is 20 years. Routine O&M activities at the Site include site inspections, maintenance of concrete capped areas, tree plaza maintenance and ground water monitoring. Site inspections and ground water monitoring were initially completed on a quarterly and semi-annual basis, and O&M reports are submitted to EPA on an annual basis.

GCR proposed changes to the Site's ground water monitoring plan. The changes were subsequently approved by EPA in a March 27, 2003 letter. Approved changes to the O&M plan included:

- Sampling of all monitoring program wells on a semi-annual basis, except for wells MW-7A and MW-11. These two wells are sampled quarterly.
- Analysis of samples for arsenic concentrations only once per year, during the October sampling event. (Because arsenic concentrations were consistently below the MCL, it was removed from the monitoring requirements in 2009 by EPA).
- Addition of semi-annual sampling of MW-5 for analysis of antimony only.

In addition to these changes, the installation of a surficial aquifer monitoring well was recommended along the western site property boundary, approximately midway between MW-2 and MW-5. This well (identified as MW-13) was recommended to provide a point for the measurement of ground water elevation that was needed to better define the direction of ground water flow along the western site property line and to identify and evaluate the extent of elevated antimony concentrations in site ground water. The installation of this well was approved by EPA and subsequently installed on June 17, 2004.

The 2000 ROD estimated annual average O&M costs at $72,092. Total O&M costs for this FYR period were reported as $118,587, less the specific costs for 2006 and 2008. There was an unexpected cost of $38,600 in 2010 to repair liner damage that occurred during a sewage line repair. Although the plumbing contractor was informed about the protocol for contaminated soils located on site below the liner, the protocol was disregarded. While repairing the main sewer line, the permeable liner was breached and contaminated soils were disrupted, necessitating action. The problem was discovered when battery chips were observed on the soil surface. As a result the area was fenced off and EnviroFocus conducted sampling down to two feet below the soil surface. Sampling and visual inspection confirmed that contaminated soils were brought to the surface during the incident. The disturbed and contaminated soil was removed from the site and transported to a Class 1 Industrial Landfill. A new permeable liner was installed in the area and the excavations were filled with a clean fill obtained from an off-site location.

Table 3: Summary of O&M Costs

Activity	Total Cost
2006	Not available
2007	$8,306
2008	Not available
2009	$3,032
2010 (including soil liner damage repair)	$42,032
2011	$1,294
Ground water sampling 2006-2011[a]	$49,000
Other[b]	$15,000
TOTAL	**$118,664**

a. Ground water sampling costs were not separated by year.
b. Unknown other costs

On May 31, 2006, EnviroFocus Technologies, L.L.C. (EnviroFocus) purchased some of GCR's assets including the responsibility for the Normandy Park Apartments site. S&ME (formerly QORE, Inc.) is the O&M contractor for EnviroFocus and is responsible for the semi-annual ground water sampling. Ground water monitoring is currently occurring in accordance with the Site's O&M Plan.

5.0 Progress Since the Last Five-Year Review

The protectiveness statement from the 2006 FYR for the Site stated the following:

The remedy is expected to be protective of human health and the environment after the ground water cleanup goals are achieved through monitored natural attenuation.

The 2006 FYR included six issues and recommendations. Each recommendation and its current status are discussed below.

Table 4: Progress on Recommendations from the 2006 FYR

Section	Recommendations	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
5.1	Prepare a written description of inspection and maintenance activities for site personnel.	GCR	01/01/2007	EnviroFocus maintains a log with descriptions of inspection and maintenance activities for site personnel.	01/01/2007
5.2	Prepare a written description of actions to be taken when contaminated soil is exposed. Meet with maintenance and management personnel yearly to review soil contamination restrictions. Verify quarterly with management staff that new maintenance personnel have been educated on soil contamination restrictions.	GCR	01/01/2007	A Contaminated Soils Plan has been written and shared with all Normandy Park Apartments maintenance and management personnel. All new employees are provided with training on the Plan.	10/09/2006
5.3	Prepare one-page information sheet to hand out to new tenants.	Normandy Park Apartment management/GCR	01/01/2007	The Lease to Rent at Normandy Park Apartments now includes information on the Site's history and contaminated soils. All new and prospective clients are given a copy of the lease.	12/01/2006
5.4	Evaluate the potential for an off-site source of antimony.	QORE	10/01/2007	Discussions have occurred between EPA and FDEP regarding potential sources of antimony.	02/09/2011

Section	Recommendations	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
5.5	Prior to conducting the next FYR, MW-6 and MW-9 will be sampled.	QORE	06/01/2011	MW-6 was too dry to sample. MW-9 results are not yet available.	02/02/2011
5.6	Discuss need for an additional monitoring well with EPA and FDEP.	EPA	10/01/2007	Discussions have occurred between EPA and FDEP regarding the need for an additional well.	02/09/2011

5.1 Maintenance Log

EnviroFocus maintains a log with a description of inspection and maintenance activities for both EnviroFocus activities and site personnel.

5.2 Contaminated Soils Plan

A Contaminated Soils Plan has been written and shared with all Normandy Park Apartments maintenance and management personnel. All new employees are made aware of the Plan. EnviroFocus meets at a minimum annually with Normandy Park Apartments maintenance and management personnel to review soil contamination restrictions.

5.3 Tenant Information Sheet

The Lease to Rent at Normandy Park Apartments now includes information of the Site's history and contaminated soils as part of their lease. All new and prospective clients are given a copy of the lease.

5.4 Elevated Antimony

Discussions have occurred between EPA and FDEP regarding potential off-site sources of antimony.

5.5 Additional Sampling for MW-6 and MW-9

In February 2011, attempts were made to sample MW-6, but the well was too dry to sample. MW-9 was sampled in February 2011. The results are not yet available at the time of this report.

5.6 Additional Monitoring Well

Discussions have occurred between EPA and FDEP regarding the need for an additional well. At the current time, there are no plans to install an additional well.

6.0 Five-Year Review Process

6.1 Administrative Components

EPA Region 4 initiated the FYR in January 2011 and scheduled its completion for September 2011. The EPA site review team was led by EPA Remedial Project Manager (RPM) Bill Denman and included EPA Community Involvement Coordinator (CIC) L'Tonya Spencer. Contractor support was provided to EPA by Skeo Solutions. In January 2011, EPA held a scoping call with the site 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 Notification

On January 28, 2011, a public notice was published in the *Tampa Tribune* newspaper announcing the commencement of the FYR process for the Site, providing contact information for Bill Denman and L'Tonya Spencer 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, Temple Terrace Public Library, 202 Bullard Parkway, Temple Terrace, Florida. 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 ROD, 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, RA, location or other circumstance at a CERCLA site. To-be-considered (TBC) criteria are

non-promulgated 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 TBC criteria do not have the status of ARARs, EPA's approach to determining if a RA is protective of human health and the environment involves consideration of TBC criteria along with ARARs.

Chemical-specific ARARs are specific numerical quantity restrictions on individually listed contaminants in specific media. Examples of chemical-specific ARARs include the maximum contaminant levels (MCLs) specified under the Safe Drinking Water Act (SDWA) as well as the ambient water quality criteria 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.

Ground Water ARARs

According to the Site's 2000 ROD, cleanup goals for antimony and lead in ground water were based on the more stringent of the SDWA MCLs and Florida Water Quality Standards and MCLs. ARARs from the 2000 ROD were compared to current SDWA MCLs and Florida MCLs (Table 5). ARARs for ground water COCs have not changed.

Table 5: Previous and Current ARARs for Ground Water COCs

COCs	2000 ROD ARARs (mg/L)	Current ARARs[a] (mg/L)	ARARs Change
Antimony	0.006	0.006	None
Lead	0.015	0.015	None

a. Based on the federal MCL. SDWA MCLs are available at http://water.epa.gov/drink/contaminants/index.cfm (last accessed 3/01/2011).

6.4 Data Review

Ground Water

Semi-annual ground water monitoring has been conducted at the Site since early 2001. Historically, samples were to be collected quarterly and analyzed for antimony, arsenic and lead. In 2009, EPA approved several changes to the monitoring plan. The changes included: removal of arsenic from the monitoring requirements; samples from MW-2 and MW-13 analyzed only for antimony; the addition of MW-13; semi-annual sampling of upper shallow aquifer wells (MW-1 through MW-13); and annual sampling of deep shallow aquifer wells (MW-DSA-1 and MW-DSA-2). This FYR evaluated the semi-annual ground water monitoring events from October 2006 to October 2010 (Table 6). Historical ground water monitoring data are included in Appendix G.

Antimony

In the past five years, antimony concentrations were detected above the MCL in eight of the 11 monitoring wells (Table 6). Samples for three wells did not exceed the MCL: MW-12, MW-DSA-1 and MW-DSA-2. Data trends are presented in Figures 4 through 14. Historical data are presented in Appendix G.

Antimony concentrations remain above the MCL in samples collected from eight monitoring wells. The historical data show ground water samples from seven of the eight wells have antimony concentrations that are similar to the concentrations measured in 2001 and 2002. Concentrations in MW-7A have declined since 2001, while concentrations in most other wells are low but have remained stable or declined slightly (Figures 6 through 11). In contrast, the concentrations in MW-1 have fluctuated above and below the 2001 concentration and show an overall increasing trend since 2001 (Figure 4). Concentrations in MW-2 have historically been below the MCL, but have increased in recent years and exceeded the MCL in the past five sampling events (Figure 5). The most recent sample from MW-2 contained antimony at the highest concentration since April 2004.

The highest concentrations of antimony were found in MW-5. Concentrations in MW-5 have remained stable around 0.12 mg/L. MW-5is located along the western property boundary in the southwestern corner of the Site (Figure 2). During the October 2011 ground water monitoring event, ground water flow at the Site appears to be to the east and southeast from a ground water "high" located west of the western property boundary. This flow pattern is similar to that reported during prior sampling events.

Table 6. Ground Water Monitoring Data

Monitoring Well	Sampling Date	Antimony	Arsenic	Lead
		MCL=0.006	**MCL=0.010**	**MCL=0.015**
MW-1	10/26/06	**0.059**	<0.010	**0.018**
	04/12/07	**0.063 (0.066)**	NA	**0.028 (0.017)**
	10/16/07	**0.066**	<0.010	**0.035**
	04/11/08	**0.054**	NA	0.0078
	10/09/08	**0.047(0.043)**	<0.0040	**0.053(0.0061I)**
	04/21/09	**0.053 (0.054)**	NA	0.015 (0.0047I)
	10/07/09	**0.075**	NA	0.015
	04/19/10	**0.061**	NA	0.015
	10/13/10	**0.058**	NA	0.0088(I)
MW-2	10/26/06	<0.0060	<0.010	<0.0050
	04/11/07	<0.0060	NA	<0.0050
	10/16/07	<0.0060	<0.010	0.0027 (I)
	04/10/08	<0.0036	NA	<0.0016
	10/09/08	**0.0062(I)**	<0.0040	0.0031(I)(<0.0020)
	04/21/09	**0.0071(I) (<0.0040)**	NA	0.012 (<0.0020)
	10/07/09	0.0057(I)	NA	NA

Monitoring Well	Sampling Date	Antimony	Arsenic	Lead
		MCL=0.006	**MCL=0.010**	**MCL=0.015**
	04/19/10	**0.016(I)**	NA	NA
	10/12/10	**0.036**	NA	NA
MW-5	10/26/06	**0.22**	NA	NA
	04/10/07	**0.095**	NA	NA
	10/16/07	**0.14**	NA	NA
	04/10/08	**0.14**	NA	NA
	10/08/08	**0.13**	NA	NA
	04/20/09	**0.090**	NA	NA
	10/06/09	**0.12**	NA	NA
	04/19/10	**0.09**	NA	NA
	10/12/10	**0.12**	NA	NA
MW-7A	07/31/06	**0.033**	NA	**0.33**
	10/26/06	**0.034**	<0.010	**0.31**
	01/22/07	**0.025**	NA	**0.19**
	04/11/07	**0.021**	NA	**0.26**
	07/24/07	**0.028**	0.006 (I)	**0.22**
	10/17/07	**0.032**	<0.010	**0.31**
	01/11/08	**0.047**	NA	**0.23**
	04/11/08	**0.058**	NA	**0.77**
	07/10/08	**0.099**	NA	**0.21**
	10/09/08	**0.066**	<0.0040	**0.38**
	01/06/09	**0.062**	NA	**0.13**
	04/21/09	**0.027**	NA	**0.14**
	07/14/09	**0.039**	NA	**0.14**
	10/07/09	**0.027**	NA	**0.20**
	04/19/10	**0.022**	NA	**0.22**
	10/13/10	**0.038**	NA	**0.21**
MW-8	10/26/06	**0.017**	<0.010	<0.0050
	04/11/07	**0.019 (0.014)**	NA	0.0069 (0.0016)
	10/16/07	**0.016**	0.0081 (I)	<0.0050
	04/10/08	**0.018**	NA	0.0023(I)
	10/08/08	**0.017(I)**	0.0072(I)	<0.0020
	04/21/09	**0.013(I)**	NA	<0.0020
	10/06/09	**0.013(I)**	NA	<0.0020
	04/19/10	**0.014(I)**	NA	<0.0020
	10/12/10	**0.017(I)**	NA	<0.0020
MW-10	10/26/06	**0.021**	<0.010	<0.0050
	04/11/07	**0.032**	NA	<0.0050
	10/16/07	**0.029**	0.0049 (I)	0.0028 (I)
	04/11/08	**0.024**	NA	0.0024 (I)
	10/08/08	**0.020(I)**	<0.0040	0.0025(I)
	04/21/09	**0.024**	NA	<0.0020
	10/07/09	**0.012(I)**	NA	<0.0020
	04/19/10	**0.017(I)**	NA	<0.0020
	10/13/10	**0.011(I)**	NA	<0.0020
MW-11	07/31/06	**0.039**	NA	<0.0050
	10/26/06	**0.031**	<0.010	<0.0050
	01/22/07	**0.02**	NA	0.0081
	04/10/07	**0.021**	NA	0.0067

Monitoring Well	Sampling Date	Antimony	Arsenic	Lead
		MCL=0.006	**MCL=0.010**	**MCL=0.015**
	07/24/07	**0.028 (0.027)**	<0.010	0.0025(I) (<0.0050)
	10/15/07	**0.040**	<0.010	<0.0050
	01/11/08	**0.023**	NA	0.0073
	04/10/08	**0.021 (0.022)**	NA	0.0030(I) (<0.0016)
	07/10/08	**0.029**	NA	<0.0020
	10/08/08	**0.015(I)**	<0.0040	0.0022(I)
	01/06/09	**0.018(I) (0.014(I))**	NA	0.0041(I) (<0.0020)
	04/20/09	**0.0091(I) (0.0077(I))**	NA	0.012 (0.0058(I))
	07/14/09	**0.027 (0.026)**	NA	0.0035(I) (0.0020(U))
	10/06/09	**0.023**	NA	0.0031(I)
	04/19/10	**0.024**	NA	<0.0020
	10/12/10	**0.031**	NA	0.0036(I)
MW-12	10/26/06	<0.0060	<0.010	<0.0050
	04/11/07	<0.0060	NA	<0.0050
	10/17/07	<0.0060	<0.010	<0.0050
	04/10/08	<0.0036	NA	<0.0016
	10/08/08	<0.0040	<0.0040	<0.0020
	04/21/09	<0.0040	NA	**0.025**
	10/07/09	<0.0040	NA	<0.0020
	04/19/10	<0.0040	NA	<0.0020
	10/13/10	<0.0040	NA	<0.0020
MW-13	10/26/06	**0.018**	<0.010	<0.0050
	04/10/07	<0.0060	NA	<0.0050
	10/16/07	**0.014**	<0.010	<0.0050
	04/10/08	<0.0036	NA	<0.0016
	10/09/08	**0.013(I)**	<0.0040	<0.0020
	04/21/09	**0.012(I)**	NA	0.0023(I)
	10/07/09	**0.0086(I)**	NA	NA
	04/19/10	**0.0081(I)**	NA	NA
	10/13/10	**0.016(I)**	NA	NA
MW-DSA-1	10/26/06	<0.0060	<0.010	<0.0050
	04/11/07	<0.0060	NA	<0.0050
	10/16/07	<0.0060	<0.010	<0.0050
	04/11/08	<0.0036	NA	<0.0016
	10/08/08	<0.0040	<0.0040	<0.0020
	04/21/09	<0.0040	NA	<0.0020
	10/07/09	<0.0040	NA	<0.0020
	04/19/10	NS	NS	NS
	10/13/10	<0.0040	NA	<0.0020
MW-DSA-2	10/26/06	<0.0060	<0.010	<0.0050
	04/10/07	<0.0060	NA	<0.0050
	10/15/07	<0.0060	<0.010	<0.0050
	04/10/08	<0.0036	NA	<0.0016
	10/08/08	<0.0040	<0.0040	<0.0020

Monitoring Well	Sampling Date	Antimony	Arsenic	Lead
		MCL=0.006	MCL=0.010	MCL=0.015
	04/20/09	<0.0040	NA	<0.0020
	10/06/09	<0.0040	NA	<0.0020
	04/19/10	NS	NS	NS
	10/12/10	<0.0040	NA	<0.0020

All units in mg/L.
NA = not analyzed
NS = not sampled - samples are collected semi-annually
I = analyte detected at estimated concentration between the practical quantitation limit and laboratory method detection limit
Concentrations in parentheses ( ) are dissolved concentrations for samples having high turbidity.
Note: Concentrations that exceed extraction standards are shaded and **bolded**.

Figure 4: Antimony Concentrations in MW-1

Figure 5: Antimony Concentrations in MW-2

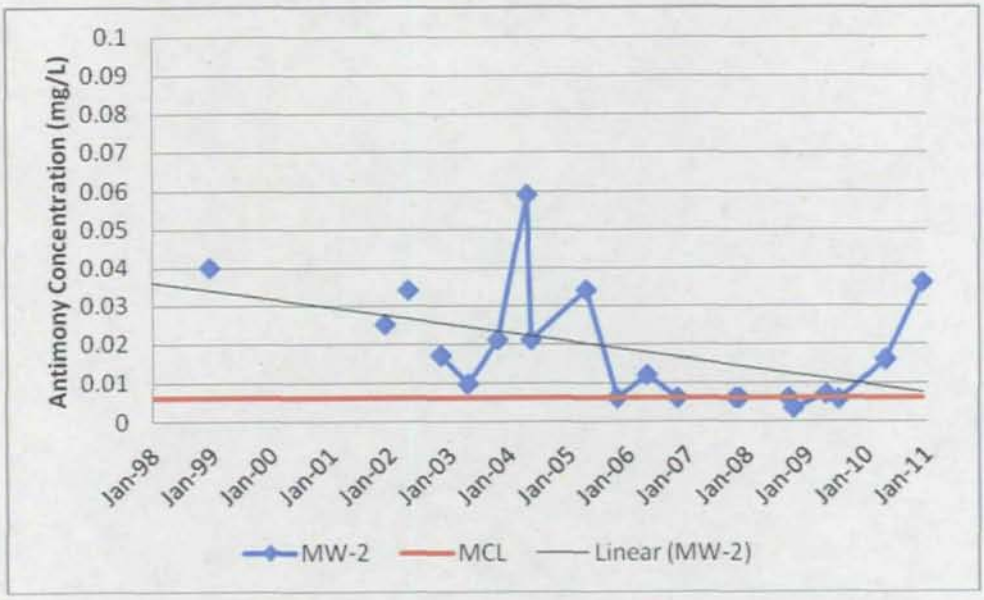


Figure 6: Antimony Concentrations in MW-5

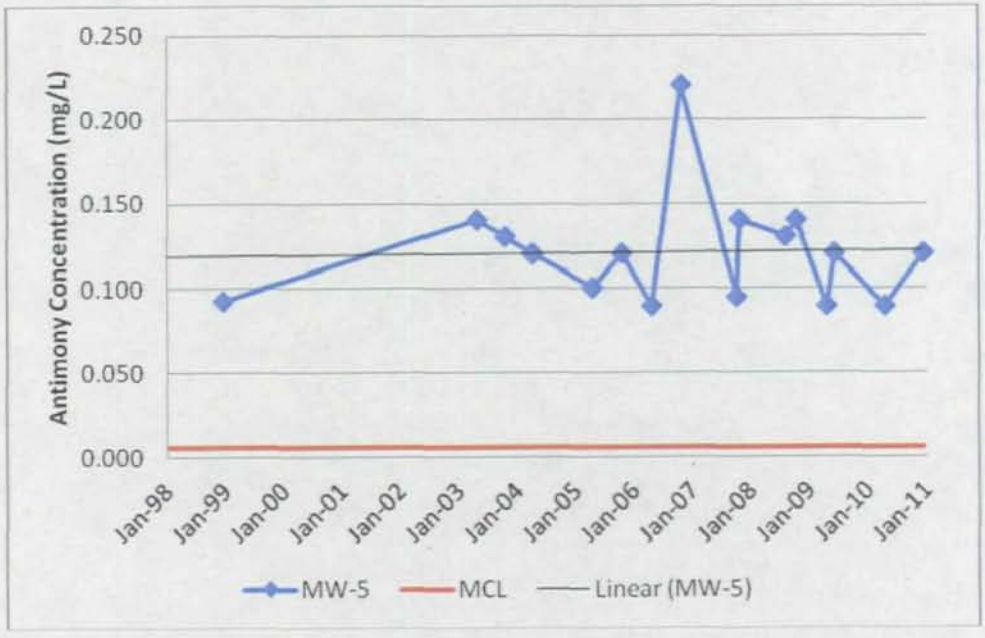


Figure 7: Antimony Concentrations in MW-7A

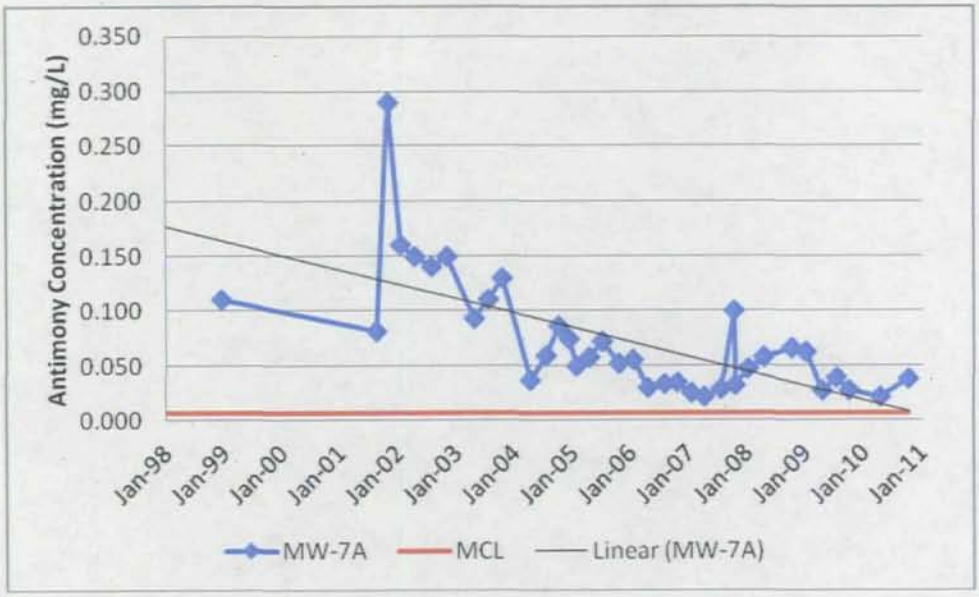


Figure 8: Antimony Concentrations in MW-8

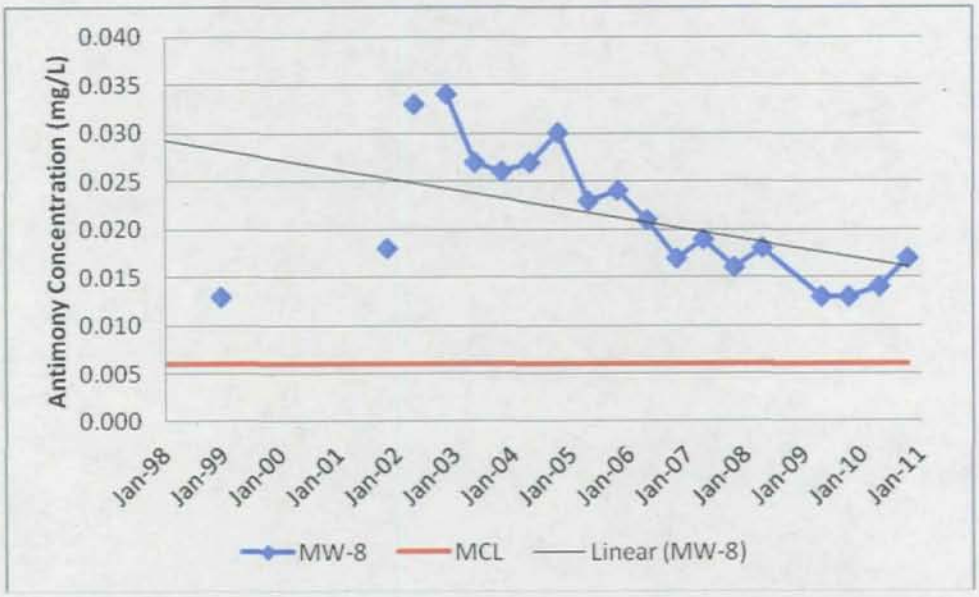


Figure 9: Antimony Concentrations in MW-10

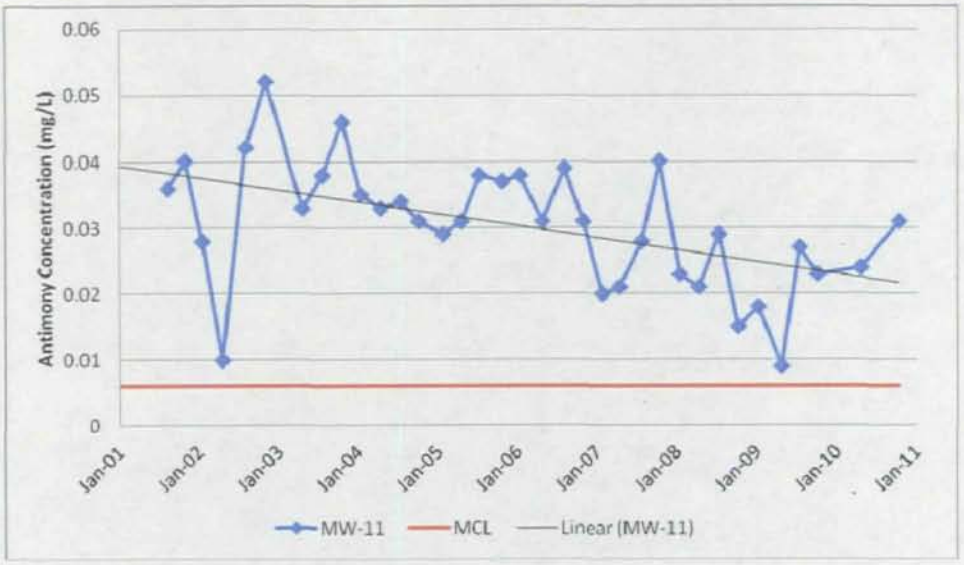


Figure 10: Antimony Concentrations in MW-11

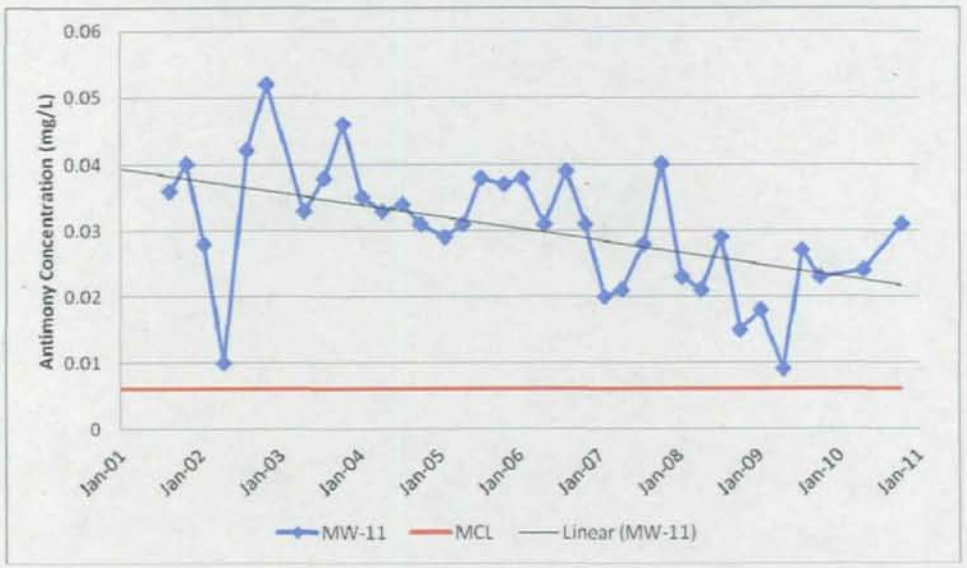


Figure 11: Antimony Concentrations in MW-12

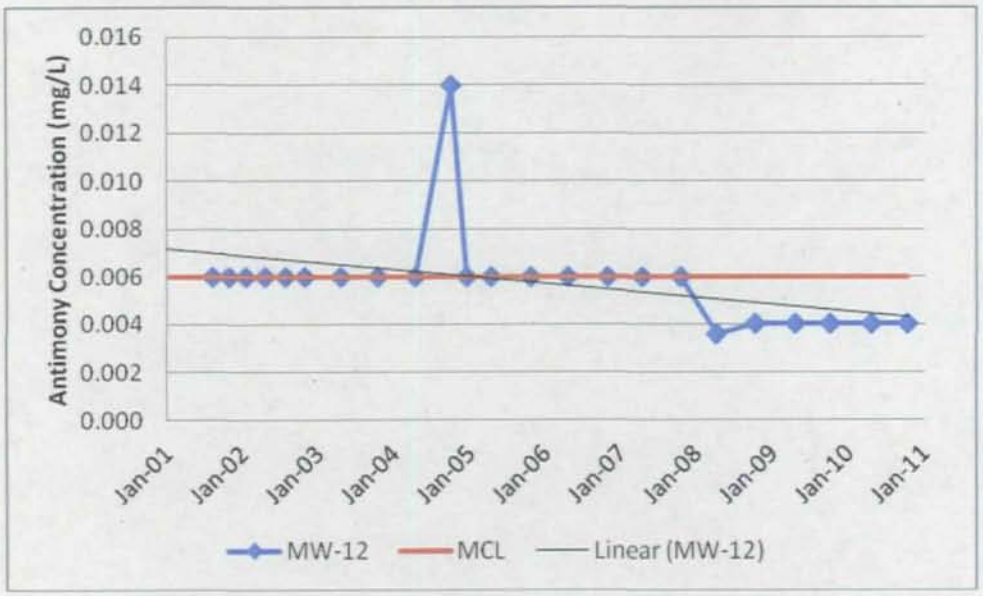
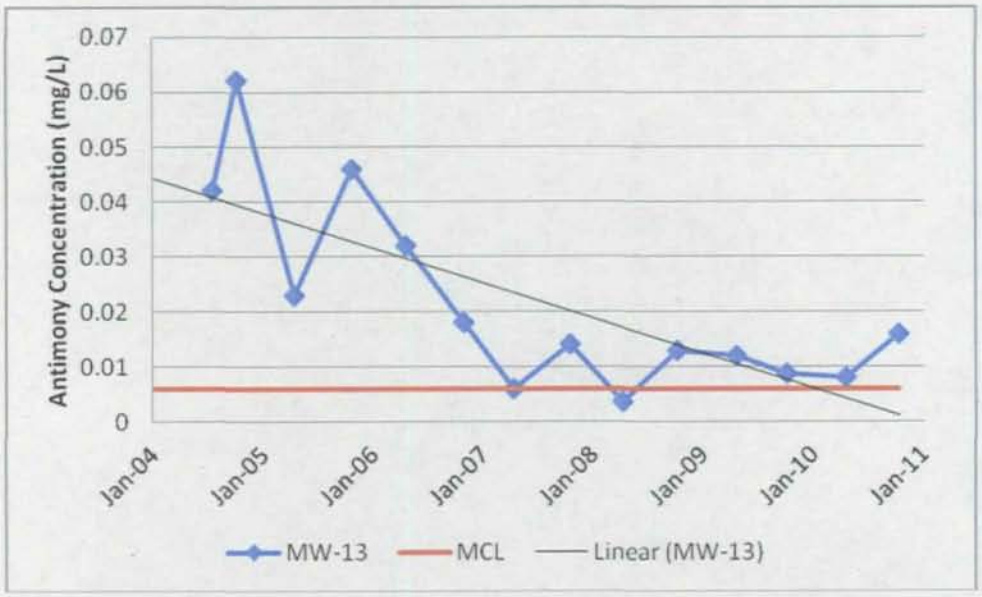


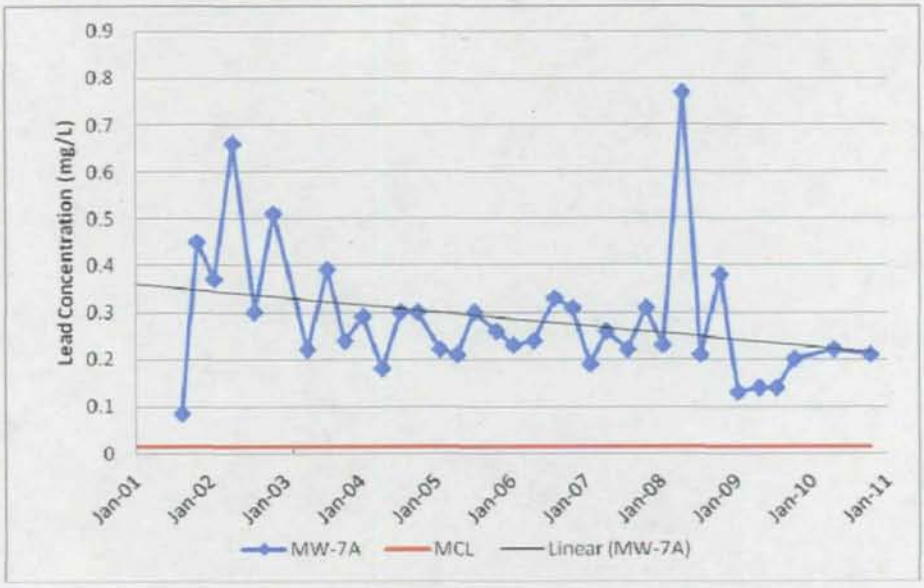
Figure 12: Antimony Concentrations in MW-13



Lead

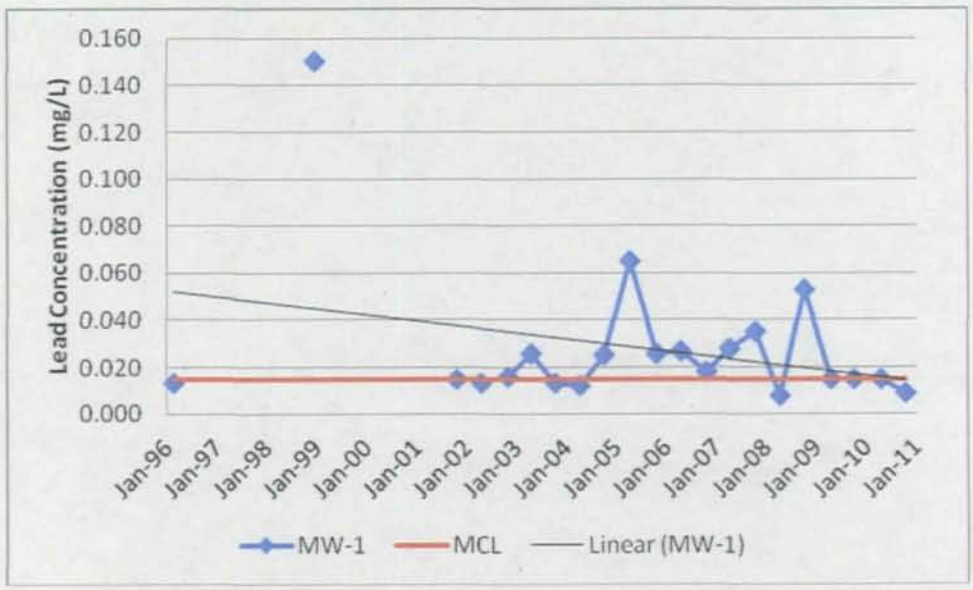
Lead concentrations were below the MCL in all sampling events at eight of the 11 monitoring wells (Table 6, above). Although MW-1 and MW-12 had lead concentrations above the MCL, they have both been at or below the MCL for lead since April and October 2009, respectively. Lead concentrations have been consistently above the MCL in MW-7A, but there is an overall downward trend in the past 10 years (Figure 13). Although there is an overall declining trend in MW-7A, the past three sampling events found lead concentrations greater than the previous three sampling events.

Figure 13: Lead Concentrations in MW-7A



MW-1 is the only other well in which the MCL for lead was repeatedly exceeded in the past five years (Table 6, above). Concentrations have declined in the past 10 years and have fluctuated above and below the MCL in recent sampling events (Figure 14). The most recent sample was below the MCL, but concentrations exceeded the MCL in four of the past nine sampling events. The lead MCL was also exceeded during the April 2009 sampling event in MW-12 (Table 6, above). However, the trend in the lead levels indicates that lead levels overall continue to decline.

Figure 14: Lead Concentrations in MW-1



Arsenic

Ground water samples collected during the fall 2006, 2007 and 2008 monitoring events were analyzed for arsenic. Arsenic concentrations in all samples were below the MCL (Table 6). Arsenic was removed from the monitoring requirements in 2009.

6.5 Site Inspection

The site inspection was held on February 8, 2011. Participants included Bill Denman, EPA RPM; L'Tonya Spencer, EPA CIC; Nancy Murchison, FDEP; Larry Maron, S&ME, PRP O&M Contractor; Angela Fogarty, EnviroFocus; and Treat Suomi and Rhode Bicknell from Skeo Solutions. The group toured the Site and general conditions were noted and photographed (Appendix E). Skeo Solutions also interviewed site inspection participants as well as Normandy Park Apartments staff. Results of the site inspection are available in the completed site inspection checklist in Appendix D.

The site inspection was led by EPA RPM Bill Denman, who explained the present status of site activities. The Site is currently monitored and maintained according to the Site's O&M Plan. The site inspection team observed that the remedy has performed as intended since the time of implementation and the tree plazas and concrete pads appear to be in good condition. New mulch has been placed in the tree plaza within the courtyard of the central apartment complex areas in the past two years. The asphalt is well-maintained. Ms. Fogarty from EnviroFocus commented that bricks around the tree plazas are regularly replaced.

On February 7, 2011, Skeo Solutions staff visited Temple Terrace Public Library, the designated site repository, as part of the site inspection. All decision documents and the Site's 2006 FYR were located in the repository.

Skeo Solutions staff also conducted research at the Hillsborough County Property Appraisers office and found the deed information pertaining to the Site listed in Table 7. A copy of the Deed Restrictions can be found in Appendix F.

Table 7: Deed Documents from Hillsborough County Property Appraisers Office

Date	Type of Document	Description	Book #	Page #
3/19/2007	Deed	Property transferred from Normandy Park Holdings Inc to Normandy Acquisition LP.	17581	1251
2/20/2006	Restrictive Covenant	The deed restriction placed on the site property restricts future land uses to be consistent with the remedy in place. The extraction and use of ground water from the Site is also prohibited.	16094	22
12/21/1999	Warranty Deed	Property transferred from Gulf Coast Recycling to Normandy Park Holdings Inc.	9980	0411
/31/1973	Deed	Property transferred from Vanguard Const Co Inc, Gretchen Glantz, Michael Glantz, Norma Ruth Poole, Stanley Poole, Judith A. Stewart and Ranald Stewart Jr to Gulf Coast Recycling.	2685	0180

Table 8 list the institutional controls associated with areas of interest at the Site.

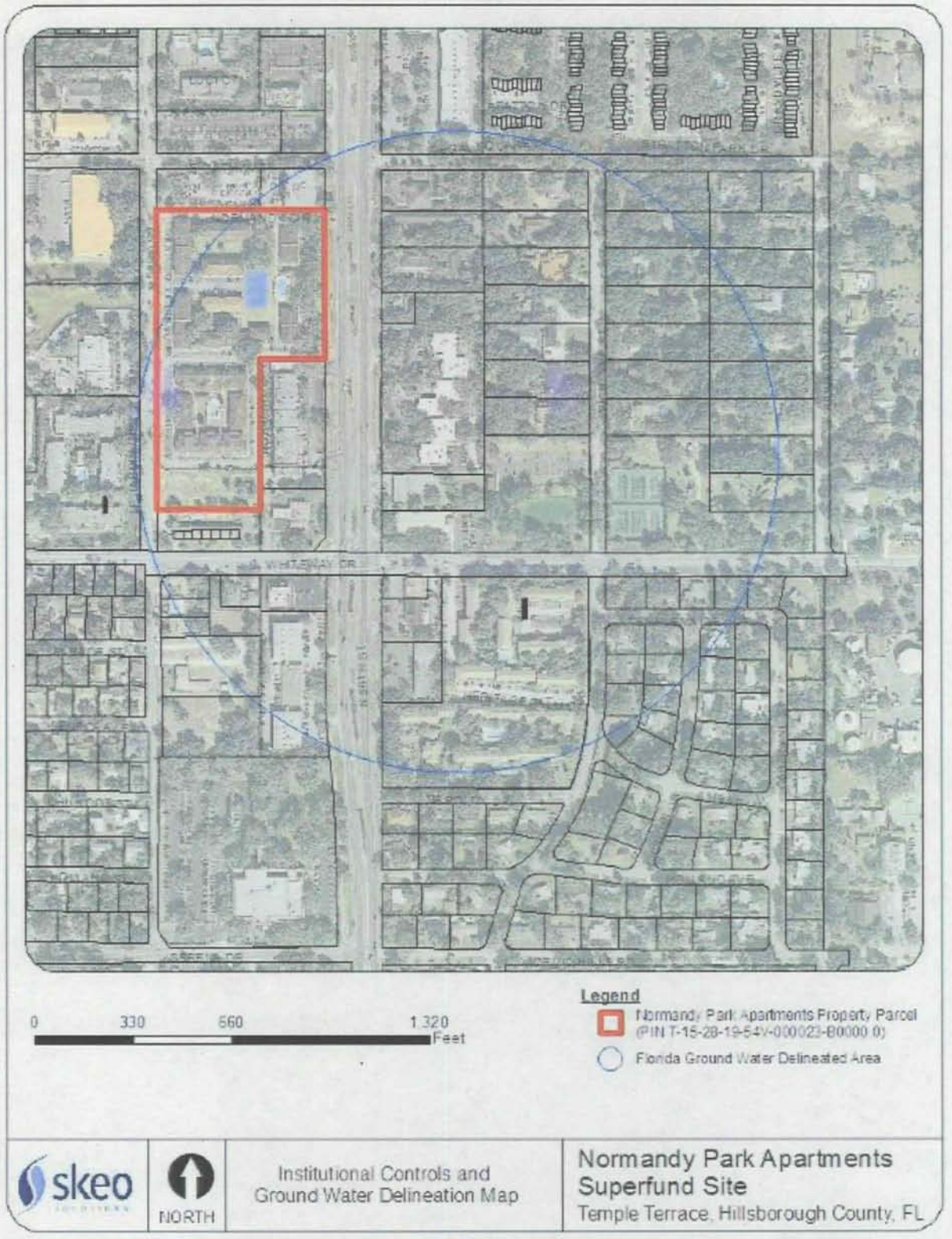
Table 8: Institutional Control (IC) Summary Table

Area of Interest – Normandy Park Apartments (Parcel: T-15-28-19-54V-000023-B0000.0)					
Media	**ICs Needed**	**ICs Called for in the Decision Documents**	**Impacted Parcel**	**IC Objective**	**Instrument in Place**
Ground Water	Yes	Yes	T-15-28-19-54V-000023-B0000.0	Restrict installation of ground water wells and the extraction or use of ground water from the Site.	The Site lies within a Florida Ground Water Delineated Area and the Southwest Florida Water Management District, which restricts well placement.[a] Restrictive covenant prohibits the extraction or use of ground water from the Site.
Soil	Yes	Yes	T-15-28-19-54V-000023-B0000.0	Restrict future site land uses to be consistent with remedy in place.	Restrictive covenant prohibits disturbance of soil two feet bgs, maintain asphalt and all byways as a capping remedial measure.

a. Florida's ground water delineation information can be found online at: http://www.dep.state.fl.us/water/groundwater/delineate.htm.

Figure 15 shows property boundaries at the Site and the Florida Ground Water Delineated Area. The Florida Ground Water Delineated Area restricts well installation.

Figure 15: Institutional Controls and Ground Water Delineated 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 landowner, and regulatory agencies that are involved in site activities or 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. Several residents were contacted by the apartment staff to request interviews. However, no residents replied or requested interviews. All of the interviews were conducted during the site inspection on February 8, 2011. Interviews are summarized below and complete interviews are included in Appendix C.

Bill Denman: Mr. Bill Denman is the EPA RPM for the Site. He believes that the remedy is performing as expected. Mr. Denman is unaware of any community problems at the Site and thinks that the Site could go to annual ground water monitoring in order to improve efficiency and reduce costs.

Nancy Murchison: Ms. Nancy Murchison of FDEP stated that the remedy is working fine and that O&M is moving along as expected. She is unaware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years. She expressed that she is comfortable with the current institutional controls. However, Ms. Murchison thought a one-page handout regarding site history and contaminants on site should be distributed to tenants, instead of including the information in the apartment lease.

Larry Maron: Mr. Larry Maron from O&M contractor S&ME believes that the remedy is working fine and that O&M activities have good oversight. He also believes that monitored natural attenuation seems to be working, except that there is still antimony from an unknown source reflected in ground water monitoring. Additionally, Mr. Maron detailed the events of the liner breach by a sewer repairman two years earlier. He believes that the schedule for ground water monitoring should be updated to annual monitoring.

Angela Fogarty: Ms. Angela Fogarty of EnviroFocus believes that the remedy is performing well. She stated that the biggest problem at the site is replacing pavers around the tree plazas. Part of the reason the pavers need to be continually replaced is due to children moving them. Ms. Fogarty expressed that antimony was identified in the ground water monitoring data. She is not aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup. Ms. Fogarty indicated that annual ground water monitoring should be considered in order to improve efficiency and reduce costs.

Wendy Savage: Ms. Wendy Savage of Normandy Park Apartments, Apartment Manager, believes that EnviroFocus is doing a good job at the Site and is very responsive. She thinks that there have been no effects on the surrounding community. She stated that information on the Site's history and status has been incorporated into the residential lease agreement. Ms. Savage feels well-informed about the Site. She also

stated that Ms. Fogarty is very responsive to any of their maintenance concerns and requests.

Ramon Rodriguez: Mr. Ramon Rodriguez of Normandy Park Apartments, Maintenance Supervisor, stated that EnviroFocus has kept them trained on what to do at the Site in regards to soil excavation and things to notice on site. He feels well-informed about the Site's history and status. Mr. Rodriguez also indicated that Ms. Fogarty is very responsive to any maintenance concerns and requests. Additionally, he confirmed that Ms. Fogarty conducts training on site-related regulations with all new staff.

7.0 Technical Assessment

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

The review of relevant documents, ARARs and risk assumptions and the site inspection indicate that the Site's remedy is operating and functioning as designed by the Site's decision documents. Soil and ground water institutional controls in the form of restrictive covenant, the Florida Ground Water Delineated Area and the Southwest Florida Water Management District water well regulations are in place. The removal of at least the top two feet of contaminated soil in all locations where the ground surface was exposed at the Site, excluding a specified distance around the existing trees, has been completed. Excavated areas were filled with clean soil. Tree plazas were constructed and pavers or mulch were placed within the drip line of existing, mature trees on site to prevent exposure to contaminated soil. The Site is regularly inspected and maintained in accordance with the Site's O&M Plan. The PRPs have requested that in order to reduce O&M costs, ground water monitoring be performed annually.

Overall, the remedy is progressing as expected. Ground water is monitored semi-annually to evaluate COC concentrations in relation to cleanup goals established in the ROD. Water quality data from the last five years for the Site's 11 monitoring wells indicate that antimony concentrations remain above the MCL in samples collected from eight monitoring wells. Concentrations in most wells have declined, although concentrations in MW-1 and MW-5 remain above the MCL and do not show declining trends towards meeting the cleanup goal. In addition, antimony concentrations in MW-2 have increased in recent sampling events. The highest concentrations of antimony are found in MW-5, which is located along the western property boundary in the southwestern corner of the Site. The potential for on-site and off-site sources which may be causing the elevated antimony concentrations needs to be evaluated. It is possible that antimony contamination is present in the subsurface soil on-site, below the water table, or in the zone of water-table fluctuation that is causing or contributing to the persistent groundwater antimony contamination. Another possibility is that there is a yet undiscovered off-site source for the elevated antimony levels in the MW-5 ground water samples. Antimony trends should be monitored, following future ground water sampling, to determine whether additional measures are needed in order to attain the cleanup goal and whether there is an on-site or off-site source of antimony contamination.

Lead concentrations were consistently below the MCL at eight of 11 monitoring wells, but are still above the MCL in MW-7A. Lead concentrations in MW-1 have fluctuated above and below the MCL in the past five years and were below the MCL in the most recent sampling event. Although there is an overall declining trend in MW-7A, the past three sampling events found lead concentrations greater than the previous three sampling events. Continued monitoring is needed to determine if additional measures are needed to address the lead contamination in MW-7A. However, the trend in the lead levels indicates that lead levels overall continue to decline.

Ground water samples collected during the fall 2006, 2007 and 2008 monitoring events were also analyzed for arsenic. Arsenic concentrations in all samples were below the MCL and subsequently arsenic was removed from the monitoring requirements in 2009 by EPA.

Institutional controls in the form of a restrictive covenant have been implemented to prevent the use of ground water at the Site and to notify future owners of the apartment complex of the contaminated soil remaining under the site structures (including paved areas and sidewalks). The restrictive covenant also requires that if any of these structures are removed, then appropriate measures must be taken to address the underlying contaminated soils. A copy of the restrictive covenant has been included in Appendix F. In addition, the area is designated as a Florida Ground Water Delineated Area and the Southwest Florida Water Management District has water well regulations in place to restrict the placement of new wells.

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

There have been no changes in exposure assumptions or toxicity data that would call into question the protectiveness of the remedy. Reference doses and cancer slope factors for contaminants of potential concern remain the same as the values used in the 1999 baseline risk assessment.

The 1999 risk assessment was conducted to determine the potential current and future risk, for adults and children during long-term unrestricted residential activities and adults during short-term occupational activities based on the lead concentrations in the soil. The 1999 risk assessment did not evaluate the other COCs in the soil (i.e., cadmium, antimony and arsenic) and did not evaluate the ground water as a potential drinking water source. The 1999 risk assessment was approved because it was determined that the deficiencies noted would not affect the selection of the remedy nor the remedy's level of protection to human health or the environment because the soil exposure pathway was to be eliminated and ground water cleanup goals were to be based on drinking water standards. The completed remedial action successfully eliminated the soil exposure pathway and there are currently no planned changes for the Site that would result in a completed soil pathway. The cleanup levels for ground water at the Site are based on the Federal and State of Florida primary drinking water standards for antimony and lead. There have been no changes to these standards.

The remedial action objectives in the 2000 ROD included:

- Eliminate the potential for exposure to surface soil contaminants and waste materials. Provide for the remediation of potential ground water threats to the environment.
- Ensure maintenance of the engineered remedy.
- Implement institutional controls in the form of deed restrictions to limit construction of ground water wells.

There have been no changes at the Site that would call into question the validity of the remedial action objectives.

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

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

7.4 Technical Assessment Summary

The review of relevant documents, Applicable or Relevant and Appropriate Requirements (ARARs), risk assumptions and the site inspection indicate that the Site's remedy is operating and functioning as intended by the decision documents. No exposure pathways to contaminated ground water exist at the Site because a restrictive covenant is in place preventing the use of ground water from the surficial aquifer. In addition, the Site is located in a Florida Ground Water Delineated Area and the Southwest Florida Water Management District, in which water well regulations are in place restricting the use of ground water. The restrictive covenant also limits disturbances of the contaminated soil remaining under site structures (including paved areas and sidewalks) and around trees. If any of these structures are removed, the restrictive covenant requires that appropriate measures be taken to address the underlying contaminated soils.

In order to prevent exposure to contaminated soil, the site remedy required the removal of at least the top two feet of contaminated soil everywhere that the ground surface was exposed, excluding a specified distance around the existing trees. The excavated areas were filled with clean soil. In the excluded areas around existing trees, tree plazas were constructed with pavers or mulch was used to prevent exposure to the contaminated soil that remains on site. The Site is well-maintained, and the tree plazas and concrete pad, which is also known as the tennis courts, remain in good condition and are regularly repaired and replaced as needed. The vegetative cover is well-established. New mulch has been placed in the tree plaza areas in the past two years. Ground water is monitored and operation and maintenance (O&M) is completed regularly to ensure that the remedial components are well-maintained and functioning as intended.

Overall, the remedy is progressing as expected. Ground water is monitored semi-annually to evaluate contaminant of concern (COC) concentrations in relation to cleanup goals established in the ROD. Water quality data from the last five years for the Site's 11 monitoring wells indicate that antimony concentrations remain above the maximum contaminant level (MCL) in samples collected from eight monitoring wells. Concentrations in most wells have declined, although concentrations in MW-1 and MW-5 remain above the MCL and do not show declining trends towards meeting the cleanup goal. Antimony trends should be monitored following future ground water sampling events to determine whether additional measures are needed in order to attain the cleanup

goal and whether there is an on-site or off-site source which may be causing the elevated antimony groundwater concentrations.

Lead concentrations were consistently below the MCL at eight of 11 monitoring wells, but are still above the MCL in MW-7A. Lead concentrations in MW-1 have fluctuated above and below the MCL in the past five years and were below the MCL in the most recent sampling event. Although there is an overall declining trend in MW-7A, the past three sampling events found lead concentrations greater than the previous three sampling events. Continued monitoring is needed to determine if additional measures are needed to address the lead contamination in MW-7A. However, the trend in the lead levels indicates that lead levels overall continue to decline.

Ground water samples collected during the fall 2006, 2007 and 2008 monitoring events were also analyzed for arsenic. Arsenic concentrations in all samples were below the MCL and subsequently arsenic was removed from the monitoring requirements in 2009 by EPA.

Institutional controls in the form of a restrictive covenant have been implemented to prevent the use of ground water at the Site and to notify future owners of the apartment complex of the contaminated soil remaining under the site structures (including paved areas and sidewalks). The restrictive covenant also requires that if any of these structures are removed, then appropriate measures must be taken to address the underlying contaminated soils. A copy of the restrictive covenant has been included in Appendix F. In addition, the area is designated as a Florida Ground Water Delineated Area indicating that groundwater is contaminated. Wells proposed within the delineated area have to be permitted by the Southwest Florida Water Management District (SWFWMD), who will ensure that potable wells will not withdraw contaminated groundwater.

ARARs have not changed since the Site's 2000 ROD. There have been no changes in exposure assumptions or toxicity data that would call into question the protectiveness of the remedy. Reference doses and cancer slope factors for contaminants of potential concern remain the same as the values used in the 1999 baseline risk assessment. The Site remains in use as the location of an apartment complex. The owners and management of the apartment complex work with EnviroFocus to ensure that all necessary safety precautions are taken when any digging is necessary at the Site, and new residents are informed of the Site's history, remedy and current status.

8.0 Issues

Table 9 summarizes the current site issues.

Table 9: Current Site Issues

Issue	Affects Current Protectiveness (Yes or No)	Affects Future Protectiveness (Yes or No)
Elevated levels of antimony in Site ground water samples.	No	Yes
During the Five Year Review, concerns were raised about the adequacy of off-site soil sampling for lead in nearby residential areas.	No	Yes

9.0 Recommendations and Follow-up Actions

Table 10 provides recommendations to address the current site issues.

Table 10: Recommendations to Address Current Site Issues

Issue	Recommendations / Follow-Up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness? (Yes or No)	
					Current	Future
Elevated levels of antimony in Site ground water samples.	Evaluate the potential for on-site and off-site sources which may be causing the elevated antimony groundwater concentrations.	PRP	EPA	02/01/2012	No	Yes
During the Five Year Review, concerns were raised about the adequacy of off-site soil sampling for lead in nearby residential areas.	Evaluate historical data and the need for additional off-site soil sampling.	PRP	EPA	02/01/2012	No	Yes

10.0 Protectiveness Statement

The remedy at the Site currently protects human health and the environment because it is functioning as intended by the Site's decision documents. Contaminated source material has been excavated and remaining contaminated soil has been contained on site beneath clean fill, concrete caps, tree plazas and existing structures. Additionally, institutional controls for soil and ground water have been implemented in the form of a restrictive covenant. The Site is located in a Florida Ground Water Delineated Area and the Southwest Florida Water Management District, in which water well regulations are in place restricting the use of ground water. In order for the Site's remedy to be protective in the long-term, the source of elevated antimony in site ground water samples, historical data and the need for additional off-site soil sampling should be evaluated.

11.0 Next Review

The Site is a statutory site that requires ongoing FYRs 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.

Appendix A: List of Documents Reviewed

Focused Baseline Human Health Risk Assessment, Normandy Park Apartments, Temple Terrace, Florida, Prepared by Hazardous Substance & Waste Management Research, Inc, April 1999

October 2005 Sampling Event, Remedial Action Ground Water Sampling, Normandy Park Apartments, Tampa, Florida for Gulf Coast Recycling, Inc., Prepared by QORE Property Sciences, January 11, 2006

October 2010 Semi-Annual Sampling Event, Remedial Action Ground Water Sampling, Normandy Park Apartments, Tampa, Florida for Gulf Coast Recycling, Inc. Prepared by S&ME, December 2, 2010

Streamlined Remedial Investigation, Normandy Park Apartments, 11110 North 56th Street, Temple Terrace, Florida. Prepared by QORE Property Sciences, June 30, 1999

Record of Decision, Summary of Remedial Alternative Selection for the Soil and Groundwater, Normandy Park Apartments, Temple Terrace, Hillsborough County, Florida. Prepared by United States Environmental Protection Agency March 11, 2000

Remedial Design/Remedial Action Work Plan, Normandy Park Apartments, Temple Terrace, Florida for Gulf Coast Recycling, Inc., Prepared by QORE Property Sciences, February 13, 2001

Revised Sampling and Analysis Plan, Remedial Design Ground Water Sampling, Normandy Park Apartments, Tampa, Florida for Gulf Coast Recycling, Inc., Prepared by QORE Property Sciences, February 13, 2001

Remedial Action Construction Report, Normandy Park Apartments, Temple Terrace, Florida for Gulf Coast Recycling, Inc., Prepared by QORE Property Sciences, January 25, 2002

Appendix B: Press Notice

U. S. Environmental Protection Agency, Region 4
Announces a Five-Year Review
for the Normandy Park Apartments Superfund Site,
Temple Terrace, Hillsborouqh County, Florida

Purpose/Objective: The U.S. Environmental Protection Agency (EPA) is conducting a Five-Year Review of the remedy for the Normandy Park Apartments Superfund site (Site) in Temple Terrace, 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 Normandy Park Apartments Superfund site occupies approximately 9 acres and is located at 11110 North 56th Street in Temple Terrace, Florida, near Tampa, Florida. Gulf Coast Recycling, Inc. (GCR) operated a battery recycling and secondary lead smelting facility on the Site between 1953 and 1963. At the facility, tops of spent lead batteries were cracked open or chopped off by a hydraulic guillotine. The lead plates were separated and processed for recycling and the battery casings were disposed of. The lead plates were smelted on site. The process resulted in the release of sulfuric acid and lead into the environment. From 1963 to 1968, the property was used as an open dump. In 1970, GCR built the 144 residential unit, Normandy Park Apartments, on the property. In August l991, in response to a citizen's complaint, the Hillsborough County Environmental Protection Commission investigated the Site. The analysis of soil samples revealed the presence of lead in on-site soils at concentrations of up to 35,000 milligrams per kilogram (mg/kg) and in the ground water at concentrations at up to 16.7 milligrams per liter (mg/l). Major contaminants of concern consist of antimony, arsenic, cadmium and lead. The Site was proposed for inclusion on the National Priorities List (NPL) in February 1995. EPA, however, used its enforcement discretion to defer placing the Site on the NPL in exchange for GCR's cooperation. GCR and EPA entered into an Administrative Order on Consent on September 30, 1998.

Cleanup Actions: The Record of Decision was issued in 2000.The major remedy components included: excavation of the top two feet of exposed soil around the entire apartment complex, which was replaced with clean fill and sodded; removal of the wooden deck in the southern complex and excavation of soil to the water table (7-8 feet) beneath the deck, which was replaced with clean fill and sodded; on-site screening of excavated soil in the open field behind the apartments; on-site treatment of the soil via ex-situ stabilization based on the results of on-site screening; off-site disposal of the treated soil in a regulated landfill; monitored natural attenuation of the ground water contaminants; and institutional controls to limit future use of soil and groundwater. Remediation activities were completed by August 2001. Quarterly and semi-

annual ground water sampling and monitoring has been conducted since August 2001 to determine contaminant concentration levels, and the effectiveness of the site system for area ground water.

Five-Year Review Schedule: The National Contingency Plan requires that remedial actions that result 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 2011.

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 Five-Year Review process, EPA staff 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:

Bill Denman, EPA Remedial Project Manager
Phone: 404-562-8939
E-mail: denman.bill@epa.gov

LaTonya Spencer, EPA CIC
Phone: 404-562-8463
E-mail: spencer.latonya@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 Temple Terrace Public Library,
202 Bullard Parkway, Temple Terrace, Florida 33617 and online:
http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0405823

Appendix C: Interview Forms

Normandy Park Apartments Superfund Site — **Five-Year Review Interview Form**

Site Name: Normandy Park Apartments **EPA ID No.:** FLD984229773
Interviewer Name: Rhode Bicknell **Affiliation:** Skeo Solutions
Subject Name: Larry Maron **Affiliation:** S&ME
Subject Contact Information: 813-623-6646
Time: 11:00 a.m. **Date:** 02/08/11
Interview Location: Normandy Park Apartments

Interview Format (circle one): In Person Phone Mail Other:

Interview Category: O&M Contractor

1. What is your overall impression of the project; including cleanup, maintenance and reuse activities (as appropriate)?
   Operation and maintenance has real good oversight.

2. What is your assessment of the current performance of the remedy in place at the Site?
   Working fine.

3. What are the findings from the monitoring data? What are the key trends in contaminant levels that are being documented over time at the Site?
   MNA seems to be working, except there is still antimony of an unknown source reflected in ground water monitoring. Site is visited at least monthly.

4. Is there a continuous on-site O&M presence? If so, please describe staff responsibilities and activities. Alternatively, please describe staff responsibilities and the frequency of site inspections and activities if there is not a continuous on-site O&M presence.
   PRP visits at least monthly and checks the tree plazas and walks around entire site.

5. Have there been any significant changes in site 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.

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 provide details.
   Plumbing contractor was called for a sewer line repair, was informed not to dig beyond a depth of two feet. However, digging occurred beyond a depth of two feet, went through the liner, repaired pipe and back-filled with soil both below and above the liner. Battery casings were mixed in with fill and visible. O&M contractor had to re-excavate to the original backfill, put in a new geo-liner, and back-fill with clean soil. Contaminated soil was sent off site for treatment.

7. Have there been opportunities to optimize O&M activities or sampling efforts? Please describe changes and any resulting or desired cost savings or improved efficiencies. Consider going to annual monitoring since wet and dry season applies to the Site.

8. Do you have any comments, suggestions or recommendations regarding O&M activities and schedules at the Site?
   No, don't think so.

Normandy Park Apartments Superfund Site **Five-Year Review Interview Form**

Site Name: Normandy Park Apartments **EPA ID No.:** FLD984229773
Interviewer Name: Rhode Bicknell **Affiliation:** Skeo Solutions
Subject Name: Bill Denman **Affiliation:** EPA Region 4
Subject Contact Information: 404-562-8939
Time: 11:40 a.m. **Date:** 02/08/11
Interview Location: Normandy Park Apartments

Interview Format (circle one): In Person Phone Mail Other:

Interview Category: EPA Remedial Project Manager

1. What is your overall impression of the project; including cleanup, maintenance and reuse activities (as appropriate)?
   It's good. The PRPs have been very cooperative.

2. What have been the effects of this Site on the surrounding community, if any?
   There haven't been any. Cleanup was able to progress with people staying in apartments.

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities since the implementation of the cleanup?
   No, even during implementation there were no complaints.

4. What is your assessment of the current performance of the remedy in place at the Site?
   It is performing as expected.

5. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?
   Yes.

6. Are you aware of any community concerns regarding the Site or the operation and management of its remedy? If so, please provide details.
   No.

7. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?
   The possibility of going to annual sampling may be considered.

Normandy Park Apartments Superfund Site **Five-Year Review Interview Form**

Site Name: Normandy Park Apartments **EPA ID No.:** FLD984229773
Interviewer Name: Rhode Bicknell **Affiliation:** Skeo Solutions
Subject Name: Angela Fogarty **Affiliation:** EnviroFocus
Subject Contact Information: 813-620-3505
Time: 11:30 a.m. **Date:** 02/08/11
Interview Location: Normandy Park Apartments

Interview Format (circle one): In Person Phone Mail Other:

Interview Category: Potentially Responsible Party (PRP)

1. What is your overall impression of the remedial activities at the Site?
   Good. Biggest problem is replacing pavers around the tree plazas. Some of the replacement is due to children.

2. What have been the effects of this Site on the surrounding community, if any?
   I haven't noted any.

3. What is your assessment of the current performance of the remedy in place at the Site?
   Good. The antimony situation is strange in that the lead samples are not also elevated, which we would expect with high antimony. I am curious as to surrounding area and flow.

4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?
   None.

5. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?
   Yes.

6. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?
   I am interested in reducing the sampling events from semi-annually to annually.

Normandy Park Apartments Superfund Site — **Five-Year Review Interview Form**

Site Name: Normandy Park Apartments **EPA ID No.:** FLD984229773
Interviewer Name: Rhode Bicknell **Affiliation:** Skeo Solutions
Subject Name: Nancy Murchison **Affiliation:** FDEP
Subject Contact Information: 850-243-8990
Time: 12:00 p.m. **Date:** 02/08/11
Interview Location: Normandy Park Apartments

Interview Format (circle one): In Person Phone Mail Other:

Interview Category: State Agency

1. What is your overall impression of the project; including cleanup, maintenance and reuse activities (as appropriate)?
   It is moving along as expected. No surprises.

2. What is your assessment of the current performance of the remedy in place at the Site?
   Fine with remedy as it is.

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?
   No.

4. Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities.
   No.

5. Are you aware of any changes to state laws that might affect the protectiveness of the Site's remedy?
   No.

6. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?
   Yes. The notification of contaminated soils on site needs to be a fact sheet and not in the lease.

7. Are you aware of any changes in projected land use(s) at the Site?
   No.

8. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?
   No other comments except about the lease, perhaps a fact sheet should be handed out instead of the lease notification.

Normandy Park Apartments Superfund Site **Five-Year Review Interview Form**

Site Name: Normandy Park Apartments **EPA ID No.:** FLD984229773
Interviewer Name: Treat Suomi **Affiliation:** Skeo Solutions
Subject Name: Wendy Savage **Affiliation:** Normandy Park Apartments
Subject Contact Information: Normandy Park Apartments 813-988-5877
Time: 12:00 P.M. **Date:** 02/08/11
Interview Location: Normandy Park Apartments

Interview Format (circle one): In Person Phone Mail Other:

Interview Category: Normandy Park Apartments Management

1. What is your overall impression of the project; including cleanup, maintenance and reuse activities (as appropriate)?
   I think it is a very interesting Site. I've received information from EnviroFocus. Some of the residents have shown me photos of the remediation work that occurred over the years. I think Envirofocus does a good job with things.

2. What have been the effects of the Site on the surrounding community, if any?
   I don't think there have really been any effects on the surrounding community. We have incorporated information on site activities and status into our lease agreement for the residents.

3. Is there a continuous on-site O&M presence? If so, please describe staff responsibilities and activities. Alternatively, please describe staff responsibilities and the frequency of site inspections and activities if there is not a continuous on-site O&M presence.
   Angela from Envirofocus is out regularly to inspect the Site and assist as needed.

4. Have there been any significant changes in site 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.
   If any maintenance issues arise, we call Envirofocus and Angela is very responsive and timely. Envirofocus meets with our maintenance staff and conducts training. Recently we needed to do additional landscaping and we contacted Envirofocus prior to beginning to ensure we were following proper procedures.

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?
   Yes, we feel informed and are satisfied with the information we receive.

6. Do you have any comments, suggestions or recommendations regarding any aspects of the project?
   Envirofocus is doing a great job. They are responsive and easy to work with.

Normandy Park Apartments Superfund Site **Five-Year Review Interview Form**

Site Name: Normandy Park Apartments **EPA ID No.:** FLD984229773
Interviewer Name: Treat Suomi **Affiliation:** Skeo Solutions
Subject Name: Ramone Rodriguez **Affiliation:** Normandy Park Apartments
Subject Contact Information: Normandy Park Apartments 813-988-5877
Time: 12:10 **Date:** 02/08/11
Interview Location: Normandy Park Apartments

Interview Format (circle one): In Person Phone Mail Other:

Interview Category: Normandy Park Apartments Management

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?
   Yes, I am.

2. What is your overall impression of the project; including cleanup, maintenance and reuse activities (as appropriate)?
   I think it has been a good project. It was good to clean up the Site.

3. Did you receive training regarding the maintenance requirements at this apartment complex in relation to the site activities? What is your impression of the training?
   Yes, I received the training. It was good. Angela from Envirofocus explained that if we see anything or need to do any work that we need to call Envirofocus first.

4. Have there been any significant changes in site 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 schedule is consistent. We have a two-person maintenance team and we haven't had any difficulties.

5. Have there been unexpected O&M difficulties or costs at the Site since start-up or in the last five years? If so, please provide details.
   No problems now, but in the past we had to work on the irrigation system.

6. Do you have any comments, suggestions or recommendations regarding any aspects of the project?
   No, I don't have any other comments.

Appendix D: Site Inspection Checklist

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

I. SITE INFORMATION

Site name: Normandy Park Apartments	**Date of inspection:** 02/08/2011
Location and Region: Temple Terrace, Florida, Region 4	**EPA ID:** FLD984229773
Agency, office or company leading the FYR: EPA Region 4	**Weather/temperature:** 56 and windy

Remedy Includes: (Check all that apply)

- ☒ Landfill cover/containment
- ☐ Access controls
- ☒ Institutional controls
- ☐ Ground water pump and treatment
- ☐ Surface water collection and treatment
- ☐ Other _____
- ☒ Monitored natural attenuation
- ☐ Ground water containment
- ☐ Vertical barrier walls

Attachments: ☐ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager** — Larry Maron (Name) — Principal Consultant (Title) — 02/08/2011 (Date)
   Interviewed ☒ at site ☐ at office ☐ by phone Phone no. 813-623-6646
   Problems, suggestions; ☐ Report attached _____

2. **O&M staff** — _____ (Name) — _____ (Title) — mm/dd/yyyy (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 EPA

Contact	Name	Title	Date	Phone No.
	Bill Denman	RPM	02/08/2011	404-562-8939

Problems; suggestions; ☒ Report attached see Appendix C

Agency EnviroFocus

Contact	Name	Title	Date	Phone No.
	Angela Fogarty	Environmental Specialist	02/08/2011	813-744-5006

Problems; suggestions; ☒ Report attached see Appendix C

Agency FDEP

Contact	Name	Title	Date	Phone No.
	Nancy Murchison	Environmental Manager	02/08/2011	850-245-8990

Problems; suggestions; ☒ Report attached see Appendix C

Agency _____

Contact	Name	Title	Date	Phone No.
	_____	_____	_____	_____

Problems; suggestions; ☐ Report attached see Appendix C

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

Apartment managers contacted several residents and provided them with EPA contractor Skeo Solutions' contact information and asked them to call for a quick interview. To date, no residents have contacted Skeo Solutions.

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: Contaminated Soil Plan

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

Remarks: _____

4.	**Permits and Service Agreements**			
	☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A
	☐ Effluent discharge	☐ Readily available	☐ Up to date	☒ N/A
	☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☒ N/A
	☐ Other permits _____	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: _____			
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.	**Ground water 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
	☐ _____	

2. **O&M Cost Records**

☐ Readily available ☒ Up to date

☐ Funding mechanism/agreement in place ☐ Unavailable

Original O&M cost estimate $72,092 per year ☐ Breakdown attached

Total annual cost by year for review period if available

From 01/2006 Date	To 12/2006 Date	NA Total cost	☐ Breakdown attached
From 01/2007 Date	To 12/2007 Date	$8,306 Total cost	☐ Breakdown attached
From 01/2008 Date	To 12/2008 Date	NA Total cost	☐ Breakdown attached
From 01/2009 Date	To 12/2009 Date	$3,032 Total cost	☐ Breakdown attached
From 01/2010 Date	To 12/2010 Date	$42, 032 Total cost	☐ Breakdown attached

In addition to annual costs, there were sampling costs from 2006 through April 2011 of $49,000 and other costs of $15,000. Further breakdowns of the charges were unavailable.

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

Describe costs and reasons: There was a $38,600 unanticipated O&M cost. Plumbing contractor was called for a sewer line repair, was informed not to dig beyond a depth of two feet. However, digging occurred beyond a depth of two feet, went through the liner. Repaired pipe and back-filled with soil both below and above the liner. Battery casings were mixed in with fill. O&M contractor had to re-excavate to the original backfill, put in a new geo-liner and backfill with clean soil. Contaminated soil was sent off site for treatment.

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: _____

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) PRP inspects site at least once a month.

Frequency Monthly

Responsible party/agency EnviroFocus

Contact	Angela Fogarty	Environmental Specialist	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: _____

D. General

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

Remarks: _____

2. **Land use changes on site** ☒ N/A

Remarks: _____

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

Remarks: _____

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: Na		
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: _____		
6.	**Alternative Cover** (armored rock, concrete, etc.)		☐ N/A
	Remarks: Soil was removed to a depth of two feet and a geo-liner was placed. In locations where soil was not removed, a concrete tennis court, tree plazas and sidewalks are continually maintained.		
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. GROUND WATER/SURFACE WATER REMEDIES ☒ Applicable ☐ N/A

A. Ground water 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 ☐ Bi□r□mediation

☐ Air stripping ☐ Carbon adsorbers

☐ Filters _____

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

☐ Others _____

☐ Good condition ☐ Needs Maintenance

☐ Sampling ports properly marked and functional

☐ Sampling/maintenance log displayed and up to date

☐ Equipment properly identified

☐ Quantity of ground water 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: _____

D. Monitoring Data

1. **Monitoring Data**

☒ Is routinely submitted on time ☒ Is of acceptable quality

2. **Monitoring data suggests:**

☒ Ground water 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 included removal of at least the top two feet of contaminated soil everywhere the ground surface was exposed, excluding a specified distance around the existing trees, and filling the excavation areas with clean fill. Tree plazas were constructed of wood and/or pavers and mulched within the drip line of the existing mature trees on site to prevent exposure to contaminated soil. Monitored natural attenuation was selected as the remedy for contaminated ground water and institutional controls were implemented to prevent the use of ground water at the Site and to notify future owners of the apartment complex of the contaminated soil remaining under site structures (including paved areas and sidewalks).

The remedy is functioning as intended. Tree plazas are well-maintained, monitoring of ground water is occurring as prescribed; residents are notified about contaminated soils remaining on site.

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.

No O&M issues were noted.

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.

Antimony has been identified in ground water monitoring samples above the specified standard. Discussions have occurred between the PRP, the O&M contractor, FDEP and EPA regarding the source and are ongoing.

D. Opportunities for Optimization

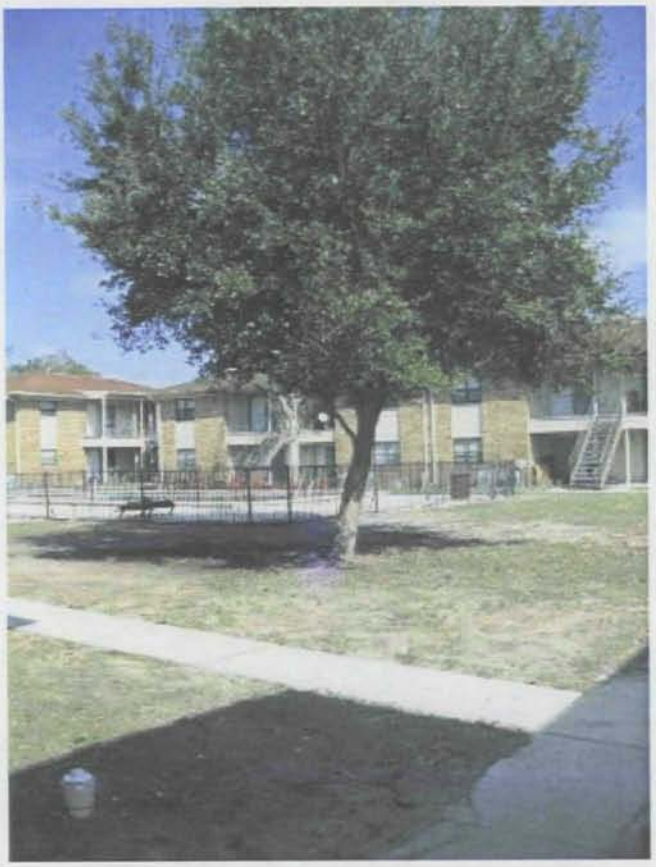
Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

Consider updating ground water monitoring schedule to annual monitoring.

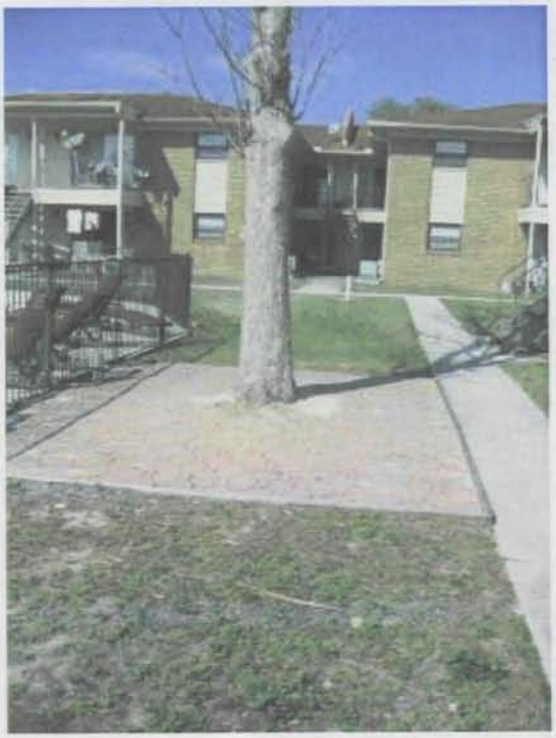
Appendix E: Photographs from Site Inspection Visit

Tennis court cover

Playground on site



Tree planted since construction of remedy



Tree plaza

MW-7

Swimming pool courtyard

Entrance to apartment complex

MW-2

Appendix F: Institutional Controls

INSTR # 2006068283
O BK 16094 PG 0022
Pgs 0022 - 33; (12pgs)
RECORDED 02/08/2006 04:53:41 PM
PAT FRANK CLERK OF COURT
HILLSBOROUGH COUNTY
DEPUTY CLERK Y Roche

This instrument prepared by:
William B. Taylor IV, Esquire
Macfarlane Ferguson & McMullen
P.O. Box 1531
Tampa, Florida 33601

DECLARATION OF RESTRICTIVE AND AFFIRMATIVE COVENANTS

1. This Declaration of Restrictive and Affirmative Covenants ("Declaration" or "this instrument") is given this 9TH day of JANUARY, 2006, by NORMANDY PARK HOLDINGS a FL corporation, ("Grantor"), having an address of 11110 N. 56TH STREET TAMPA, FL 33617 to the State of Florida Department of Environmental Protection ("Grantee").

WITNESSETH:

2. WHEREAS, Grantor is the sole fee simple owner of a parcel of land located in the county of Hillsborough, State of Florida, more particularly described on Exhibit A attached hereto and made a part hereof (the "Property"); and

3. WHEREAS, the Property is part of the Normandy Park Superfund Site ("Site"), which the U.S. Environmental Protection Agency ("EPA"), pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, proposed for the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register in February, 1995; and

4. WHEREAS, The Superfund Streamlined Remedial Investigation and Focused Feasibility Study confirmed that soil was contaminated with lead, antimony and arsenic, and that groundwater is contaminated with lead and antimony in concentrations that exceed standards or recommended exposure or ingestion levels; and

5. WHEREAS, in a Record of Decision dated May 11, 2000 (the "ROD"), the EPA Region 4 Regional Administrator selected a "remedial action" for the Site, which provides, in part, for the following actions:

- excavation of the top two feet of exposed soil around the apartment complex
- removal of wooden deck in the southern complex and excavation beneath
- treatment of excavated soil via stabilization and offsite disposal
  placement of clean fill in excavated areas
- monitored natural attenuation of groundwater
- placement of institutional controls in the form of deed restrictions/restrictive and
  affirmative covenants to limit future use of soil and groundwater, ensure maintenance of the engineered remedy, and authorize site access for certain purposes; and

6. WHEREAS, with the exception of continued monitored natural attenuation of the groundwater, the remedial action has been implemented at the Site; and

7. WHEREAS, the parties hereto have agreed 1) to impose on the Property use restrictions as covenants that will run with the land for the purpose of protecting human health and the environment; and 2) to grant an irrevocable right of access over the Property to the Grantee and its agents or representatives for purposes of implementing, facilitating and monitoring the remedial action; and

8. WHEREAS, Grantor wishes to cooperate fully with EPA and the Grantee in the implementation of all response actions at the Site and Grantor deems it desirable and in the best interest of all present and future owners of the Property that such remediation proceed and that the Property be held subject to certain irrevocable restrictions and licenses, all of which are more particularly hereinafter set forth;

NOW, THEREFORE:

9. Grant: Grantor, on behalf of itself, its successors and assigns, in consideration of the recitals above, the terms of the Consent Decree in the case of the United States v. Gulf Coast Recycling, Inc., Civil Action # 8:01-CIV-1191-T-24TBM, and other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, does hereby covenant and declare that the Property shall be subject to the restrictions on use set forth below, and does give, grant and convey to the Grantee, and its assigns, with general warranties of title, 1) an irrevocable use restriction and site access covenant of the nature and character, and for the purposes hereinafter set forth and 2), the perpetual right to enforce said covenants and use restrictions, with respect to the Property.

10. Purpose: *It is the* purpose *of* this instrument *to convey* to the Grantee *rights to*

facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to contaminants. The covenants, terms, conditions, restrictions and grants contained herein shall touch and concern the Property; shall run with the land; shall apply to and be binding upon and inure to the benefit of Grantor and Grantee, their successors and assigns; and shall continue as a servitude running in perpetuity with the Property and with title to the Property.

11. Restrictions on use: The following covenants, conditions, and restrictions apply to the use of the Property:

The owner of the property shall notify EPA and Grantee prior to the disturbance of any existing structures_ more particularly described on Exhibit B attached hereto and made a part hereof. These structures include but are not limited to *concrete* building foundations *and* asphalt parking lots. *With the* notification, *the* property owner shall also submit a plan for EPA and Grantee approval which addresses the soil underneath these structures consistent with the requirements of the ROD for the Site. The existing structures shall not be disturbed until EPA and Grantee have provided written approval of a plan for addressing the potentially contaminated soil underneath.

The owner of the Property will not construct any groundwater wells on the Property or use the groundwater for any purpose without receiving written prior approval from EPA and Grantee.

The owner of the Property shall maintain all asphalt byways and parking lots so as to ensure their protective purpose as a capping remedial measure consistent with the requirements of the ROD for the Site.

12. Irrevocable Covenant for Site Access: Grantor hereby grants to the Grantee, its agents and representatives, an irrevocable, permanent and continuing right of access at all reasonable times to the Property for purposes of:

a) Implementing the response actions in the ROD;

b) Verifying any data or information submitted to EPA and Grantee;

c) Verifying that no action is being taken on the Property in violation of the terms of this instrument or of any federal or state environmental laws or regulations;

d) Monitoring response actions on the Site and conducting investigations relating to contamination on or near the Site, including, without limitation, sampling of air, water, sediments, soils, and specifically, without limitation, obtaining split or duplicate samples;

e) Conducting periodic reviews of the remedial action, including but not limited to, reviews required by applicable statutes and/or regulations; and

f) Implementing additional or new response actions if the Grantee, in its sole discretion, determines i) that such actions are necessary to protect the environment because either the original remedial action has proven to be ineffective or because new technology has been developed which will accomplish the purposes of the remedial action in a significantly more efficient or cost effective manner; and, ii) that the additional or new response actions will not impose any significantly greater burden on the Property or unduly interfere with the then existing uses of the Property.

13. Modification: The above restrictions and covenants may be modified, or terminated in whole or in part, in writing, by the Grantee, executed by Grantee in recordable form, and such writing shall be recorded by Grantor.

14. (a) Reserved rights of Grantor: Grantor 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 and covenants granted herein.

(b) Reserved Rights of EPA: Nothing in this document shall limit or otherwise affect EPA's rights of entry and access or EPA's authority to take response actions under CERCLA, the NCP, or other federal law.

(c) Reserved Rights of Grantee: Nothing in this document shall limit or otherwise affect Grantee's rights of entry and access or authority to act under state or federal law.

15. Liability. Grantor shall take responsibility for any costs or liabilities related to the operation, upkeep or maintenance of the Property. Grantor will assume all liability for any injury or damage to the person or property of third parties which may occur on the Property arising from Grantor's ownership of the Property. Neither Grantor nor any person or entity claiming by or through Grantor shall hold Grantee liable for any damage or injury to person or personal property which may occur on the Property. Grantor shall pay any and all real property taxes and assessments levied by competent authority on the Property.

15. 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.

17. Notice requirement: Grantor agrees to include in any 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 AND AFFIRMATIVE COVENANTS, DATED _____ 2004, RECORDED IN THE PUBLIC LAND RECORDS ON _____, 20__, IN BOOK ____, PAGE ____, IN FAVOR OF, AND ENFORCEABLE BY, THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Within thirty (30) days of the date any such instrument of conveyance is executed, Grantor must provide Grantee with a certified true copy of said instrument and, if it has been recorded in the public land records, its recording reference.

18. Administrative Jurisdiction: The state agency having administrative jurisdiction over the interests acquired by the State of Florida by this instrument is the Grantee. EPA is a third party beneficiary to the interests acquired by the Grantee under this instrument.

19. Enforcement: The Grantee shall be entitled to enforce the terms of this instrument by resort to specific performance or legal process. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA. Enforcement of the terms of this instrument shall be at the discretion of the Grantee, and any forbearance, delay or omission to exercise its rights under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver by the Grantee of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Grantee under this instrument.

20. Damages: Grantee shall be entitled to recover damages for violations of the terms of this instrument, or for any injury to the remedial action, to the public or to the environment protected by this instrument.

21. Waiver of certain defenses: Grantor hereby waives any defense of laches, estoppel, or prescription.

22. Covenants: Grantor hereby covenants to and with the Grantee, that the Grantor is lawfully seized in fee simple of the Property, that the Grantor has a good and lawful right and power to sell and convey it or any interest therein, that the Property is free and clear of encumbrances, except those noted on Exhibit C attached hereto, and that the Grantor will forever warrant and defend the title thereto and the quiet possession thereof.

23. Notices: Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, referencing the Site

name and Site ID # 04XB, and addressed as follows:

To Grantor:

NORMANDY PARK HOLDINGS
11110 N. 56TH STREET
TAMPA, FL 33617

To Grantee:

Bureau Chief, Waste Cleanup
FDEP M.S. 4505
2600 Blair Stone Road
Tallahassee, FL 32399

To EPA:

U.S. EPA, Region 4
Waste Management Division
Superfund Remedial and Technical Services Branch
Section Chief, Section D
61 Forsyth Street, SW
Atlanta, GA 30303

24. Recording in Land Records. Grantor shall record this Declaration of Restrictive and Affirmative Covenants in timely fashion in the Official Records of Hillsborough County, Florida, and shall rerecord it at any time Grantee may require to preserve its rights. Grantor shall pay all recording costs and taxes necessary to record this document in the public records.

25. 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 law of the state where the Property is located.

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 this 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) Entire Agreement: This instrument sets forth the entire agreement of the parties with respect to rights and restrictions created hereby, and supersedes all prior

discussions, negotiations, understandings, or agreements relating thereto, all of which are merged herein.

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

f) Joint Obligation: If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

g) Successors: The term "Grantor", 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 "Grantor" and their personal representatives, heirs, successors, and assigns. The term "Grantee", 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 "Grantee" and their personal representatives, heirs, successors, and assigns. The rights of the Grantee and Grantor under this instrument are freely assignable, subject to the notice provisions hereof.

h) Termination of Rights and Obligations: A party's rights and obligations under this instrument terminate upon transfer of the party's interest in the Property, except that liability for acts or omissions occurring prior to transfer shall survive transfer.

i) 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.

j) Counterparts: The parties may execute this instrument in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling.

k) Nothing contained in this agreement shall preclude or in any other way hinder the sale and/or conversion of the property to condominiums.

IN WITNESS WHEREOF, Grantor has caused this Agreement to be signed in its name.

Executed this 9TH day of JANUARY, 2006.

By: _____

Its: MANAGER

[full mailing address of Grantor]

the corporation that executed the foregoing instrument, and acknowledged the said instrument to be free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute said instrument.

Witness my hand and official seal hereto affixed the day and year written above.

JOHN M. MURRAY
Notary Public, State of New York
No. 4618009
Qualified in Westchester County
Commission Expires May 31, 2007

John M. Murray
Notary Public in and for the
State of _____

My Commission Expires:_____

Signed, sealed and delivered in the presence of: **(two witnesses required)**

Emely Munroe	Emely Munroe	1-9-06
Witness	Print Name	Date
Louis Monaco	Louis Monaco	1-9-06
Witness	Print Name	Date

This Declaration is accepted this 19th day of January, 2006.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

By: _____

Attachments:

Exhibit A	-	Legal Description of the Property
Exhibit B		Existing Structures on the Property
Exhibit C		Existing Liens and Encumbrances on the Property

Appendix G: Ground Water Monitoring Data

TABLE 2
SUMMARY OF GROUND WATER QUALITY
NORMANDY PARK APARTMENTS
OCTOBER 2010

WELL NO	DATE	ANTIMONY mg/l (0.006)	ARSENIC mg/l (0.010)	LEAD mg/l (0.015)	pH	TEMP °C	CONDUCTIVITY µS	TURBIDITY NTUs
MW-1	02/20/96	ND	<0.010	0.015	ND	ND	ND	ND
	12/17/98	0.012	<0.010	0.15 (0.10)	6.12	26.7	98	128
	08/16/01	NS	NS	NS	NS	NS	NS	NS
	10/25/01	0.051	<0.010	0.015	1.45	38.1	243	5.6
	01/14/02	NS	NS	NS	NS	NS	NS	NS
	04/16/02	0.065	<0.010	0.013	6.17	26.3	451	2.1
	07/31/02	NS	NS	NS	NS	NS	NS	NS
	10/30/02	0.057	0.010	0.016	5.96	30.0	550	4.7
	03/17/03	0.038	NA	0.026	6.95	26.5	210	10.0
	10/15/03	0.041	<0.010	0.013	6.06	29.5	323	6.1
	03/13/04	0.048	NA	0.012	6.75	25.8	172	7.0
	10/08/04	0.012	<0.010	0.025	6.17	31.6	374	9.5
	04/13/05	0.026 (0.025)	NA	0.065 (0.052)	6.18	26.2	197	55 (30)
	10/20/05	0.033 (0.035)	<0.010	0.026 (0.0092)	5.80	31.1	322	16 (2.5)
	04/20/06	0.037 (0.037)	NA	0.027 (0.015)	6.07	27.1	195	23 (15)
	10/26/06	0.059	<0.010	0.018	5.71	30.0	352	9
	04/12/07	0.053 (0.055)	NA	0.028 (0.017)	6.41	27.5	241	25 (15)
	10/16/07	0.056	<0.010	0.035	6.51	30.2	331	5.3
	04/11/08	0.054	NA	0.0078	6.48	26.8	326	2.6
	10/09/08	0.017 (0.013)	<0.0010	0.053(0.00611(I))	6.33	30.6	312	13
	04/21/09	0.053 (0.054)	NA	0.015 (0.00147(I))	6.58	28.2	270	18
	10/07/09	0.073	NA	0.015	5.98	31.0	248	9.5
	04/19/10	0.061	NA	0.015	6.46	26.4	301	7.7
	10/13/10	0.058	NA	0.00886(I)	6.16	31.2	359	1.7
MW-2	02/20/96	ND	0.010	<0.0050	ND	ND	ND	ND
	12/17/98	0.01	<0.010	<0.0050	6.40	26.9	310	15.3
	08/16/01	NS	NS	NS	NS	NS	NS	NS
	11/21/01	0.025 (0.026)	<0.010	<0.0050	6.27	25.7	568	6.8
	01/14/02	NS	NS	NS	NS	NS	NS	NS
	04/16/02	0.034	<0.010	<0.0050	6.33	26.1	489	2.9
	07/31/02	NS	NS	NS	NS	NS	NS	NS
	10/30/02	0.017	<0.010	<0.0050	6.08	29.1	3340	5.1
	04/18/03	0.0097	<0.010	<0.0050	6.75	25.5	333	4.8
	10/15/03	0.021	<0.010	<0.0050	6.28	29.2	359	6.4
	03/13/04	0.059	NA	<0.0050	6.60	25.1	561	0.8
	10/05/04	0.021	0.010	0.0050	5.66	29.3	381	0.5
	03/13/05	0.034	NA	<0.0050	5.45	25.2	221	8.7
	10/20/05	<0.0060	<0.010	<0.0050	1.97	30.3	1109.7	7.6
	04/21/06	0.0097 (0.012)	NA	0.012 (<0.0050)	5.71	26.9	85.5	35 (15)
	10/25/06	<0.0060	<0.010	<0.0050	5.43	29.6	109.6	7.5
	04/11/07	<0.0060	NA	<0.0050	5.93	26.7	97.4	15 (5.8)
	10/16/07	0.0060	<0.010	0.0027 (I)	5.89	29.8	134	4.35
	04/10/08	<0.0026	NA	<0.0010	5.96	27.1	373	<5.70
	10/09/08	0.0067(I)	<0.0010	0.0051(I)(<0.00200)	6.26	30.3	200	<20.0
	04/21/09	0.0071(I)(<0.0010)	NA	0.012 (<0.00200)	5.91	26.8	149	<20
	10/07/09	0.00270(I)	NA	NA	5.83	31.1	225	31.3
	04/18/10	0.01e(I)	NA	NA	6.10	21.3	378	0.2
	10/12/10	0.036		NA	5.99	29.8	373	5.8

TABLE 2
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WELL NO.	DATE	ANTIMONY mg/l (0.006)	ARSENIC mg/l (0.010)	LEAD mg/l (0.015)	pH	TEMP. °C	CONDUCTIVITY µS	TURBIDITY NTUs
MW-5	12/16/98	0.093	<0.010	<0.0050	6.89	21.5	368	0.4
	04/17/03	0.14	NA	NA	6.92	24.0	294	3.8
	10/16/03	0.13	NA	NA	6.22	27.2	327	1.6
	04/13/04	0.12	NA	NA	6.72	23.2	567	0.6
	10/04/04	0.12	NA	NA	6.70	28.0	244	9.4
	04/13/05	0.10	NA	NA	6.16	22.8	249	5.5
	10/19/05	0.12	NA	NA	5.89	28.5	291	0.51
	04/20/06	0.09	NA	NA	5.86	24.3	275	1.4
	10/26/06	0.22	NA	NA	6.30	27.6	321	1.5
	04/10/07	0.085	NA	NA	6.37	24.1	457	4.3
	10/16/07	0.14	NA	NA	6.67	27.9	351	0.42
	04/10/08	0.14	NA	NA	6.30	24.9	156	2.3
	10/08/08	0.13	NA	NA	6.76	28.5	207	2.5
	04/20/09	0.090	NA	NA	6.76	24.3	320	4.6
	10/06/09	0.12	NA	NA	6.39	30.3	338	2.3
	04/19/10	0.09	NA	NA	6.62	22.0	207	2.1
	10/12/10	0.12		NA	6.47	28.0	176	1.3
MW-7A	12/17/98	0.11 (0.099)**	0.049**	0.24 (0.16)**	6.64**	23.3**	404**	548**
	08/13/01	0.081	<0.010	0.084	6.37	27.2	421	2.3
	10/26/01	0.29	<0.010	0.45	5.56	23.6	914	0.3
	01/15/02	0.16	<0.010	0.37	6.12	21.8	791	0.3
	04/17/02	0.15	<0.010	0.66	6.29	24.1	820	2.2
	07/31/02	0.14	<0.010	0.30	6.20	26.5	810	4.6
	10/31/02	0.15	<0.010	0.51	6.18	26.4	630	1.7
	04/18/03	0.093	NA	0.22	6.80	22.2	543	2.6
	07/18/03	0.11	NA	0.39	6.82	25.9	568	2.0
	10/16/03	0.13	<0.010	0.24	6.47	26.6	424	1.3
	01/12/04	0.074	NA	0.29	6.92	22.7	698	4.6
	04/13/04	0.037	NA	0.18	7.51	21.5	496	2.2
	07/13/04	0.059	NA	0.30	6.61	26.0	507	8.6
	10/05/04	0.086	<0.010	0.30	6.65	26.8	483	6.8
	01/20/05	0.049	NA	0.22	7.20	24.8	457	1.4
	04/13/05	0.057	NA	0.21	6.41	21.9	503	5
	07/07/05	0.072	NA	0.30	6.73	26.8	505	5.1
	10/20/05	0.052	<0.010	0.26	6.18	28.5	439	0.05
	01/12/06	0.055	NA	0.23	7.00	24.5	407	0.5
	04/21/06	0.030	NA	0.24	6.42	23.9	494	0.4
	07/31/06	0.033	NA	0.33	6.34	27.7	618	1.1
	10/26/06	0.034	<0.010	0.31	6.26	26.7	891	0.2
	01/22/07	0.025	NA	0.19	6.75	25.0	749	0.7
	04/11/07	0.021	NA	0.26	6.79	25.0	515	10
	07/24/07	0.028	0.006 (J)	0.22	6.80	26.7	492	3.78
	10/17/07	0.032	<0.010	0.31	6.78	26.5	447	0.48
	01/11/08	0.047	NA	0.23	6.75	26.4	665	4.80
	04/11/08	0.058	NA	0.77	6.11	27.2	437	2.40
	07/10/08	0.059	NA	0.21	6.08	33.1	469	13
	10/09/08	0.066	<0.0040	0.38	6.51	26.9	581	4.4
	01/06/09	0.062	NA	0.13	6.42	25.1	534	2.9
	04/21/09	0.027	NA	0.14	6.78	28.1	637	4.8
	07/14/09	0.039	NA	0.14	6.82	29.4	397	0.8
	10/07/09	0.027	NA	0.20	6.68	31.7	383	3.3
	04/19/10	0.032	NA	0.22	6.80	26.2	591	4.6
	10/13/10	0.038		0.21	6.43	29.8	608	1.9

TABLE 2
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NORMANDY PARK APARTMENTS
OCTOBER 2010

WELL NO.	DATE	ANTIMONY mg/l (0.006)	ARSENIC mg/l (0.010)	LEAD mg/l (0.015)	pH	TEMP. °C	CONDUCTIVITY uS	TURBIDITY NTUs
MW-8	12/16/98	0.013	<0.010	<0.0050	6.18	21.8	445	4.5
	08/10/01	NS	NS	NS	NS	NS	NS	NS
	10/26/01	0.018	<0.010	<0.0050	5.90	24.7	198	4.9
	01/14/02	NS	NS	NS	NS	NS	NS	NS
	04/17/02	0.033 (0.032)	0.015 (0.011)	0.0070 (<0.0050)	6.24	26.2	155	45 (21)
	07/31/02	NS	NS	NS	NS	NS	NS	NS
	10/31/02	0.034	<0.010	<0.0050	6.36	27.5	293	3.0
	04/26/03	0.027	NA	<0.0050	6.89	24.3	323	3.3
	10/15/03	0.026	<0.010	<0.0050	6.01	27.3	226	7.4
	04/13/04	0.027	NA	<0.0050	6.30	24.0	127	8.5
	10/05/04	0.030	<0.010	0.0057	6.31	27.7	211	9.9
	04/13/05	0.023	<0.010	<0.0050	5.88	24.2	115.6	7.9
	10/20/05	0.024	<0.010	<0.0050	5.59	29.1	119.5	5.8
	04/21/06	0.021	NA	<0.0050	5.88	25.8	203	1.7
	10/26/06	0.017	<0.010	<0.0050	5.77	28.4	245	4.7
	04/11/07	0.019 (0.014)	NA	0.0069 (0.0016)	5.77	26.6	169	40 (2.2)
	10/16/07	0.016	0.0081 (J)	<0.0050	5.84	29.0	197	2.2
	04/10/08	0.018	NA	0.0023(I)	5.47	27.3	123	10
	10/08/08	0.017(I)	0.0072(J)	<0.0020	5.84	30.5	338	10
	04/21/09	0.013(I)	NA	<0.0020	5.91	26.1	235	10
	10/06/09	0.013(I)	NA	<0.0020	5.37	29.1	377	3.1
	04/19/10	0.014(I)	NA	<0.0020	5.66	27.3	211	10.9
	10/12/10	0.017(I)		<0.0020	5.78	28.8	198	3.3
MW-10	08/10/01	0.021	<0.010	<0.0050	5.84	24.2	442	1.4
	10/25/01	0.020	<0.010	<0.0050	5.43	28.4	444	1.6
	01/14/02	0.028	<0.010	<0.0050	5.94	24.4	463	0.5
	04/17/02	0.030	<0.010	<0.0050	5.76	28.2	494	3.3
	07/31/02	0.028	<0.010	<0.0050	5.70	29.4	586	1.5
	10/30/02	0.031	<0.010	<0.0050	5.74	30.5	355	1.7
	04/18/03	0.020	NA	<0.0050	6.63	26.7	274	7.4
	10/16/03	0.028	<0.010	<0.0050	6.35	30.1	351	2.4
	04/13/04	0.060	NA	<0.0050	6.68	26.2	343	7.8
	10/04/04	0.033	<0.010	<0.0050	6.45	31.1	190.2	3.5
	04/13/05	0.013	NA	<0.0050	6.15	26.1	348	8.2
	10/20/05	0.027	<0.010	<0.0050	5.93	31.1	320	2.8
	04/20/06	0.12	NA	<0.0050	6.52	28.4	261	3.5
	10/26/06	0.021	<0.010	<0.0050	6.31	31.3	242	2.0
	04/11/07	0.032	NA	<0.0050	6.43	27.7	327	5.3
	10/16/07	0.029	0.0049 (J)	0.0028 (I)	6.56	30.0	428	5.2
	04/11/08	0.024	NA	0.0024 (I)	6.47	27.9	464	10
	10/08/08	0.026(I)	<0.0040	0.0025(I)	6.25	31.2	495	10
	04/21/09	0.024	NA	<0.0020	6.64	27.2	175	5.7
	10/07/09	0.012(I)	NA	<0.0020	6.14	31.5	262	4.6
	04/19/10	0.017(I)	NA	<0.0020	6.67	27.6	176	2.1
	10/13/10	0.011(I)		<0.0020	6.29	31.4	123	2.5

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WELL NO	DATE	ANTIMONY mg/l (0.006)	ARSENIC mg/l (0.010)	LEAD mg/l (0.015)	pH	TEMP °C	CONDUCTIVITY uS	TURBIDITY NTUs
MW-11	08/10/01	0.026	<0.010	<0.0050	<0.0050	23.2	192	0.5
	10/25/01	0.010	<0.010	<0.0050	6.28	26.3	458	0.8
	01/15/02	0.028	<0.010	0.0088	6.47	21.0	433	0.7
	04/17/02	0.010	<0.010	0.022	5.89	25.9	226	3.1
	07/31/02	<0.012)	(<0.010)	(0.0048)	5.81	27.8	765	14 (4.4)
	10/31/02	0.052	<0.010	<0.0050	5.91	27.2	257	32 (23)
	04/18/03	0.033	NA	<0.0050	6.81	25.9	370	3.8
	07/18/03	0.028	NA	0.0060	6.85	27.5	293	9.3
	10/15/03	0.016	<0.010	<0.0050	6.53	27.3	321	7.4
	01/12/04	0.035	NA	<0.0050	6.75	22.7	441	5.2
	04/13/04	0.023	NA	<0.0050	6.70	23.3	300	7.4
	07/13/04	0.034	NA	<0.0050	6.41	27.1	350	8.8
	10/04/04	0.031	<0.010	0.0074	6.48	27.3	309.8	31
	01/20/05	0.029	NA	<0.0050	7.21	24.0	429	2.8
	04/13/05	0.031	NA	<0.0050	6.24	23.8	357	6.48
	07/07/05	0.038	NA	<0.0050	5.95	27.8	372	4.1
	10/18/05	0.027	<0.010	<0.0050	6.25	28.1	333	1.3
	01/12/06	0.038	NA	<0.0050	6.66	23.1	335	3.3
	04/26/06	0.031	NA	0.0050	6.29	25.3	336	1.6
	07/31/06	0.039	NA	<0.0050	6.25	28.1	356	9.9
	10/26/06	0.031	<0.010	<0.0050	5.77	26.7	287	6.9
	01/22/07	0.02	NA	0.0082	6.06	24.8	328	6.6
	04/10/07	0.021	NA	0.0067	6.07	21.1	391	9.0
	07/24/07	0.028 (0.027)	<0.010	0.0025(J) (<0.0050)	6.29	28.6	340	13.7
	10/15/07	0.010	<0.010	<0.0050	6.41	27.9	335	3.33
	01/11/08	0.023	NA	0.0073	6.27	25.7	390	3.10
	04/10/08	0.021 (0.022)	NA	0.0030(J) (<0.0016)	6.18	26.8	213	17.0
	07/10/08	0.029	NA	<0.0020	6.22	29.8	533	4.0
	10/08/08	0.015(J)	<0.0040	0.0022(J)	6.63	30.0	585	3.2
	01/06/09	0.0180) (0.0160)	NA	0.0011(J) (<0.0020)	6.05	25.1	359	10
	04/20/09	0.0091(J) (0.0077(J))	NA	0.012 (0.0058(J))	5.72	24.7	253	12
	07/14/09	0.027 (0.026)	NA	0.0035(J) (0.0020(U))	5.89	28.9	223	25
	10/06/09	0.023	NA	0.0031(J)	5.98	28.6	288	3.7
	04/19/10	0.021	NA	<0.0020	6.44	25.3	375	1.3
	10/12/10	0.031		0.0036(J)	6.12	28.3	288	1.7

TABLE 2
SUMMARY OF GROUND WATER QUALITY
NORMANDY PARK APARTMENTS
OCTOBER 2010

WELL NO.	DATE	ANTIMONY mg/l (0.006)	ARSENIC mg/l (0.010)	LEAD mg/l (0.015)	pH	TEMP. °C	CONDUCTIVITY µS	TURBIDITY NTUs
MW-12	08/30/01	<0.0060	<0.010	<0.0050	6.09	22.6	319	0.2
	10/25/01	<0.0060	<0.010	<0.0050	5.91	25.9	336	0.0
	01/14/02	<0.0060	<0.010	<0.0050	5.72	22.0	350	0.0
	04/18/02	<0.0060	<0.010	<0.0050	6.01	25.1	285	1.0
	07/29/02	<0.0060	<0.010	<0.0050	6.00	26.9	336	0.0
	10/30/02	<0.0060	<0.010	<0.0050	6.35	27.0	390	1.6
	04/17/03	<0.0060	NA	<0.0050	6.88	24.2	353	0.6
	10/16/03	<0.0060	<0.010	<0.0050	6.13	26.3	392	0.8
	04/13/04	<0.0060	NA	<0.0050	6.20	23.6	373	3.4
	10/04/04	0.014	<0.010	<0.0050	6.23	27.4	318	0.6
	12/13/04	<0.0060	NA	NA	6.38	25.1	642	3.0
	04/13/05	<0.0060	NA	<0.0050	6.35	23.2	363	5.2
	10/20/05	<0.0060	<0.010	<0.0050	6.20	27.8	350	0.0
	04/21/06	<0.0060	NA	<0.0050	5.49	25.2	389	0.0
	10/26/06	<0.0060	<0.010	<0.0050	5.97	27.5	392	1.1
	04/11/07	<0.0060	NA	<0.0050	6.05	25.4	333	0.5
	10/17/07	<0.0060	<0.010	<0.0050	6.11	27.0	376	0.01
	04/10/08	<0.0036	NA	<0.0016	6.05	25.6	413	1.6
	10/08/08	<0.0040	<0.0040	<0.0020	6.06	28.0	385	1.8
	04/21/09	<0.0040	NA	0.025	6.09	24.9	509	16
	10/07/09	<0.0040	NA	<0.0020	5.97	28.5	386	4.4
	04/19/10	<0.0040	NA	<0.0020	5.89	24.1	525	3.4
	10/13/10	<0.0040	NA	<0.0020	5.56	29.8	357	1.1
MW-13	07/13/04	0.042	NA	<0.0050	6.20	29.5	535	7.8
	10/05/04	0.062	<0.010	<0.0050	5.22	30.3	309	0.1
	04/13/05	0.023	NA	<0.0050	6.1	26.2	405	1.7
	10/20/05	0.046	<0.010	<0.0050	5.89	31.2	389	0.0
	04/21/06	0.032	NA	<0.0050	6.0	27.5	308	5.1
	10/26/06	0.018	<0.010	<0.0050	6.13	30.8	277	7.6
	04/10/07	<0.0060	NA	<0.0050	5.86	27.6	294	8.6
	10/16/07	0.014	<0.010	<0.0050	5.94	30.3	267	1.17
	04/10/08	<0.0036	NA	<0.0016	5.55	28.7	428	3.6
	10/09/08	0.013(J)	<0.0040	<0.0020	6.13	30.8	321	1.5
	04/21/09	0.012(J)	NA	0.0023(J)	5.74	27.9	548	9.5
	10/07/09	0.0086(J)	NA	NA	5.28	31.5	397	6.41
	04/19/10	0.0081(J)	NA	NA	5.33	26.1	611	8.11
	10/13/10	0.016(J)	NA	NA	5.71	32.6	371	1.6

TABLE 2
SUMMARY OF GROUND WATER QUALITY
NORMANDY PARK APARTMENTS
OCTOBER 2010

WELL NO.	DATE	ANTIMONY mg/l (0.006)	ARSENIC mg/l (0.010)	LEAD mg/l (0.015)	pH	TEMP. °C	CONDUCTIVITY µS	TURBIDITY NTUs
MW-D5A-1	08/10/01	<0.0060	<0.010	<0.0050	4.06	23.9	454	2.3
	10/25/01	<0.0060	<0.010	<0.0050	3.77	25.2	427	0.3
	03/14/02	<0.0060	<0.010	<0.0050	3.71	21.8	468	0.2
	04/17/02	<0.0060	<0.010	<0.0050	3.62	26.5	435	1.1
	07/31/02	<0.0060	<0.010	<0.0050	3.47	27.2	500	0.1
	10/30/02	<0.0060	<0.010	<0.0050	3.80	28.5	518	3.4
	01/18/03	<0.0060	NA	<0.0050	3.49	26.9	625	0.9
	10/16/03	<0.0060	<0.010	<0.0050	3.81	27.9	532	1.4
	01/13/04	<0.0060	NA	<0.0050	3.77	26.0	726	1.7
	10/05/04	<0.0060	<0.010	<0.0050	3.67	29.1	613	4.5
	01/13/05	<0.0060	NA	<0.0050	3.66	25.5	580	4.5
	10/20/05	<0.0060	<0.010	<0.0050	3.56	29.6	474	0.13
	01/20/06	<0.0060	NA	<0.0050	3.75	27.8	434	0.15
	10/26/06	<0.0060	<0.010	<0.0050	3.70	29.9	410	1.50
	01/11/07	<0.0060	NA	<0.0050	3.77	27.8	364	1.0
	10/16/07	<0.0060	<0.010	<0.0050	3.65	28.9	400	0.2
	01/11/08	<0.0036	NA	<0.0016	3.88	27.1	442	2.9
	10/08/08	<0.0040	<0.0040	<0.0020	3.86	30.6	461	4.8
	01/21/09	<0.0040	NA	<0.0020	3.79	23.9	422	4.6
	10/07/09	<0.0040	NA	<0.0020	3.48	31.0	436	2.1
	01/19/10	Annual sampling in October starting October 2009						
	10/13/10	<0.0040	NA	<0.0020	3.5	29.2	485	0
MW-D5A-2	08/10/01	<0.0060	<0.010	<0.0050	4.26	21.8	856	0.5
	10/25/01	<0.0060	<0.010	<0.0050	5.25	26.1	185	0.3
	03/15/02	<0.0060	<0.010	<0.0050	1.54	22.8	144	0.0
	04/17/02	<0.0060	<0.010	<0.0050	4.02	24.9	135	2.9
	07/29/02	<0.0060	<0.010	<0.0050	3.72	28.0	160	0.1
	10/30/02	<0.0060	<0.010	<0.0050	3.51	26.5	215	3.0
	01/18/03	<0.0060	NA	<0.0050	4.20	24.9	169	0.7
	10/15/03	<0.0060	<0.010	<0.0050	5.09	28.0	215	0.9
	01/13/04	<0.0060	NA	<0.0050	4.18	23.9	202	3.6
	10/04/04	<0.0060	<0.010	<0.0050	4.75	26.3	150.2	8.4
	01/13/05	<0.0060	NA	<0.0050	3.73	26.5	275	5.1
	10/19/05	<0.0060	<0.010	<0.0050	3.82	26.7	215	0.8
	01/20/06	<0.0060	NA	<0.0050	3.99	25.4	275	0.35
	10/26/06	<0.0060	<0.010	<0.0050	3.75	27.1	201	0.00
	01/10/07	<0.0060	NA	<0.0050	3.93	24.5	320	1.9
	10/15/07	<0.0060	<0.010	<0.0050	3.57	27.0	362	0.15
	01/10/08	<0.0036	NA	<0.0016	3.65	28.7	383	0.85
	10/08/08	<0.0040	<0.0040	<0.0020	4.09	29.2	245	0.21
	01/20/09	<0.0040	NA	<0.0020	3.59	24.9	353	3.5
	10/06/09	<0.0040	NA	<0.0020	3.39	30.6	278	1.5
	01/19/10	Annual sampling in October starting October 2009						
	10/12/10	<0.0040	NA	<0.0020	3.77	27.5	224	0.33

TABLE 2
SUMMARY OF GROUND WATER QUALITY
NORMANDY PARK APARTMENTS
OCTOBER 2010

WELL NO.	DATE	ANTIMONY mg/l (0.006)	ARSENIC mg/l (0.010)	LEAD mg/l (0.015)	pH	TEMP. °C	CONDUCTIVITY µS	TURBIDITY NTUs
PZ-1	02/20/96	ND	<0.010	<0.0050	ND	ND	ND	ND
	12/15/98	<0.0060	<0.010	0.0055*	7.82	25.4	320	13.3
	08/10/01	NS	NS	NS	NS	NS	NS	NS
	11/08/01	<0.0060	<0.010	<0.0050	6.96	20.1	118.9	2.2
	01/14/02	NS	NS	NS	NS	NS	NS	NS
	04/17/02	<0.0060	<0.010	<0.0050	7.46	21.7	220	10.0
	07/21/02	NS	NS	NS	NS	NS	NS	NS
	10/31/02	<0.0060	<0.010	<0.0050	6.76	25.6	292	3.1
	04/17/03	<0.0060	NA	<0.0050	7.87	26.7	274	5.2
	10/15/03	<0.0060	<0.010	<0.0050	6.70	25.5	291	9.4
	04/14/04	<0.0060	NA	<0.0050	7.66	25.8	242	7.9
	10/05/04	<0.0060	<0.010	<0.0050	7.26	26.2	222	8.9
	04/13/05	<0.0060	NA	<0.0050	6.80	26.8	236	7.2
	10/19/05	<0.0060	<0.010	<0.0050	6.78	27.2	224	8.0
	04/20/06	<0.0060	NA	<0.0050	7.38	26.9	183	7.9
	10/25/06	<0.0060	<0.010	<0.0050	7.04	26.5	231	9.0
	04/11/07	<0.0060	NA	<0.0050	7.18	27.8	223	7.6
	10/16/07	<0.0060	0.0056 (J)	<0.0050	7.35	26.2	241	8.63
	04/14/08	<0.0036	NA	<0.0016	7.45	26.1	265	10
	10/08/08	<0.003 (<0.006)	<0.286 (<0.0030)	<0.0020 (<0.0020)	7.31	26.1	298	20
	04/20/09	<0.0060	NA	<0.0020	7.78	26.3	246	10
	Oct. 09	Piezometer PZ-1 removed from groundwater monitoring starting October 2009						

ND = does not exceed MDL
NS = not sampled - samples are collected semi-annually
NA = not analyzed - arsenic is now analyzed once per year in October
* = concentration of sample collected on March 25, 1999 was < 0.0050
** = sample collected from monitor well MW-7
(J) = analyte detected at estimated concentration between the practical quantitation limit and laboratory method detection limit
MCL = Maximum Contaminant Limit, Rule 62-550, FAC, in parentheses beneath parameter
Concentrations in parentheses ( ) are dissolved concentrations for samples having High turbidity
January and July sampling events discontinued starting October 2009
MW-DSA-1 and MW-DSA-2 changed to annual sampling starting October 2009
Arsenic deleted from monitoring starting October 2009
Floridan aquifer well PZ-1 removed from monitoring starting october 2009

mg/l = milligrams per liter
mS = milliSiemens per centimeter
NTU = Nephelometric turbidity unit
°C = degrees Centigrade