

Five-Year Review Report

(2005-2009)

**Third Five-Year Review Report
for
Agrico Chemical Company
FLD980221857**


**Pensacola
Escambia County, Florida**

June 2010

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for
Agrico Chemical Company
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Pensacola
Escambia County, Florida**

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List of Acronyms

AACC	American Agricultural Chemical Company
AOC	Administrative Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirement
BLRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
COC	Contaminant of Concern
CSM	Conceptual Site Model
ECUA	Emerald Coast Utilities Authority
EPA	United States Environmental Protection Agency
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDER	Florida Department of Environmental Regulation
FMRP	Freeport-McMoran Resource Partners
FYR	Five-Year Review
IC	Institutional Control
MCL	Maximum Contaminant Level
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MNA	Monitored Natural Attenuation
NCP	National Contingency Plan
NPL	National Priorities List
NFWMD	Northwest Florida Water Management District
O&M	Operation and Maintenance
OU	Operable Unit
pCi/L	picocuries per liter
ppm	parts per million
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RD/RA	Remedial Design/Remedial Action
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SAP	Sampling and Analysis Plan
TAG	Technical Assistance Grant
TBC	To-Be-Considered criteria
TCLP	Toxicity Characteristic Leaching Procedure
URS	URS Corporation
VOC	Volatile Organic Compound

Executive Summary

Introduction

The Agrico Chemical Company Superfund Site (Site) is located in Pensacola, Florida and includes approximately 35 acres. In 1891, the Goulding Fertilizer Company began producing fertilizer at the Site. A sulfur plant co-existed on the Site and was part of the fertilizer manufacturing operations. By 1911, the Site was sold to the American Agricultural Chemical Company (AACC). After 1920, the Site was used by several different companies to produce fertilizers. By 1963, the plant was sold to Continental Oil Company, which is a legacy company of ConocoPhillips. The Continental Oil Company operated the agrichemical business as the Agrico Chemical Company (Agrico). The Williams Companies, Inc. (Williams) acquired Agrico in 1972. By 1975, plant operations ceased. Agrico was later sold to Freeport-McMoran Resource Partners (FMRP) in 1987.

During Site operations, wastewater was discharged at the Site in unlined ponds. During a hazardous waste Site inspection conducted in 1983, the United States Environmental Protection Agency (EPA) discovered elevated levels of lead and fluoride in Site soils and surface water. Following an inspection conducted by the Florida Department of Environmental Regulation (FDER), now the Florida Department of Environmental Protection (FDEP), the Site was proposed for inclusion on EPA's National Priorities List (NPL) in 1988 and finalized on the NPL in 1989.

A remedial investigation (RI) was completed at the Site in 1993. Although phases I and II of the RI characterized the nature and extent of the Site's groundwater contamination, further groundwater investigations were required to investigate the potential impacts of groundwater contamination on Bayou Texar. Soil contaminants included fluoride, lead, and arsenic, while groundwater contamination included fluoride and metals, radionuclides, and volatile organic compounds (VOCs). The selected remedies include soil excavation and containment and monitored natural attenuation (MNA). The triggering action for this Five-Year Review (FYR) was the signing of the previous FYR on July 11, 2005.

Remedial Components

The Site has two Operable Units (OUs) to address contamination. The Record of Decision (ROD) for OU1 was signed in 1992 to address the Site's soil contamination. OU1 remedial components include:

- Excavation and solidification/stabilization of approximately 32,500 cubic yards of contaminated sludge and soils from Site sludge ponds.
- Consolidation of all stabilized sludge and soils into one sludge pond.
- Construction of a Resource Conservation and Recovery Act (RCRA) cap over the sludge pond.
- Construction of a slurry wall around the RCRA cap.
- Implementation of institutional controls, including security fencing and access and deed restrictions.

The ROD for OU2 was signed in 1994 to address the Site's groundwater contamination. OU2 remedial components include:

- Groundwater monitoring of the sand-and-gravel aquifer.
- Surface water monitoring of the Bayou Texar.
- Door-to-door survey of irrigation wells.
- Request access from private landowners to plug and abandon impacted irrigation wells.
- Advisory Program.
- Utilization of institutional controls to restrict new wells.

Remedial Action Objectives (RAOs)

The RAOs established for the Site from both RODs for OU1 and OU2 include:

- Prevent direct contact, ingestion, inhalation of dust and leaching of contaminants into groundwater.
- Prevent continued degradation of groundwater from on-Site sources.
- Prevent or minimize degradation of groundwater due to effects associated with the selected remedy, such as the spreading of off-Site plumes, including the organics plume emanating from the Escambia Wood Treating Company Superfund Site and salt water intrusion.
- Prevent or minimize future exposure to contaminated groundwater that would result in unacceptable risk.
- Prevent or minimize future impacts to surface water due to the discharge of contaminated groundwater to Bayou Texar.

Technical Assessment

The assessment of the Site for this FYR is based on a review of documents, which include RODs, reports, sampling and monitoring plans, community interviews, and the previous FYR report, as well as applicable or relevant and appropriate requirements (ARARs), risk assumptions, and a Site inspection. The selected remedies are functioning as intended by the RODs for the Site. There have been no changes to the physical conditions at the Site that would affect the selected remedies chosen for the Site. Contaminated soils remain contained on Site by solidification/stabilization and covered by a RCRA cap surrounded by a slurry wall to prevent contamination migration. The vegetative cover on the cap remains in good condition and only minor divots were observed during the Site inspection conducted for this FYR. The operation & maintenance (O&M) contractor at the Site has addressed the divots and maintains a drainage system to prevent erosion and ensure that the integrity of the cap is maintained. Future land uses that are compatible with the selected remedies at the Site, including installation of solar panels at OU1, are being considered.

Groundwater at the Site is monitored regularly to ensure that MNA remains effective. The 1996 OU1 O&M Plan at the Site required the submittal of a report for biannual Site inspections, and a security company monitors the Site for any signs of intrusion. In January 2010, EPA approved

updates to the 1996 OU1 O&M Plan, which included consolidating Site inspection reports into a single annual report. Because the O&M contractor conducts maintenance at OU1 on a frequent and regular basis to ensure that remedial components are maintained and functioning properly and since no security incidents have been reported during the past 12 years, the need for a security company is no longer necessary. Additional updates to the 1996 OU1 O&M Plan also include changing the schedule for cleanout of stormwater under drain piping from annually to once per three years and/or as needed, and changing the mowing schedule from a set schedule to an "as required" schedule to maintain the Site's vegetation.

Protectiveness Statements

The remedy for OU1 is protective because contaminated soil and sludge have been excavated and stored on Site in a former sludge pond using solidification/stabilization. The RCRA cap and slurry wall used to contain the solidified and stabilized soil and sludge are in good working condition and are preventing the spread of contamination. On-Site storm drains are being used to prevent erosion of the cap and regular O&M is completed to maintain the cap. Access to OU1 is limited by a locked fence and signs are posted with information about Site conditions and contact information. Any future land use is limited by a restrictive covenant to prevent any uses that would interfere with any of the remedial components required for OU1.

The remedy for OU2 is protective because groundwater in the sand-and-gravel aquifer continues to be monitored regularly. A surface water monitoring study was completed at Bayou Texar and an irrigation well survey was also conducted. Residents were notified about Site conditions and a contractor advisory notice is sent to irrigation system contractors, well construction contractors, and pool construction contractors on an annual basis to inform them of Site conditions. Groundwater institutional control requirements are being met because the Site is located within a Florida Groundwater Delineation Area and a well construction moratorium is in place for areas that have been impacted by the Site to restrict groundwater use. State, regional, and local agencies also receive an annual memorandum requesting information regarding any changes that might affect existing institutional controls.

Because the remedial actions selected for all OUs at the Site are operating as planned and are protective, the Site's remedy is protective of human health and the environment.

Five-Year Review (2005-2009) Summary Form

SITE IDENTIFICATION		
Site name (from WasteLAN): Agrico Chemical Company		
EPA ID (from WasteLAN): FLD980221857		
Region: 4	State: FL	City/County: Pensacola/Escambia
SITE STATUS		
NPL status: <input checked="" type="checkbox"/> Final <input type="checkbox"/> Deleted <input type="checkbox"/> Other (specify)		
Remediation status (choose all that apply): <input type="checkbox"/> Under Construction <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Complete		
Multiple OUs?* <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Construction completion date: 09/23/1999		
Has Site been put into reuse? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
REVIEW STATUS		
Lead agency: <input checked="" type="checkbox"/> EPA <input type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency		
Author name: Treat Suomi and Christy Fielden (Reviewed by EPA)		
Author title: Senior Associate and Associate		Author affiliation: E ² Inc.
Review period**: 4/29/2009 to 6/11/2010		
Date(s) of Site inspection: 10/6/2009		
Type of review:		
<input checked="" type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA <input type="checkbox"/> NPL-Removal only <input type="checkbox"/> Non-NPL Remedial Action Site <input type="checkbox"/> NPL State/Tribe-lead <input type="checkbox"/> Regional Discretion		
Review number: <input type="checkbox"/> 1 (first) <input type="checkbox"/> 2 (second) <input checked="" type="checkbox"/> 3 (third) <input type="checkbox"/> Other (specify)		
Triggering action:		
<input type="checkbox"/> Actual RA OnSite Construction at OU# <input type="checkbox"/> Actual RA Start at OU# <input type="checkbox"/> Construction Completion <input checked="" type="checkbox"/> Previous Five-Year Review Report <input type="checkbox"/> Other (specify)		
Triggering action date (from WasteLAN): 7/11/2005		
Due date (five years after triggering action date): 7/11/2010		

* ["OU" refers to operable unit.]

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

Five-Year Review (2005-2009) Summary Form continued

Issues:

1) The impacts of fluoride on ecological receptors in Bayou Texar need to be further evaluated if fluoride levels in near bottom surface water or in the adjacent Bayou Texar monitoring well AC-35D increase to levels significantly greater than that measured historically.

Recommendations:

1) The PRP will submit a work plan to evaluate a potential future increase in fluoride levels and conduct further risk evaluation studies if the surface area weighted average pore water is predicted to be greater than 5 milligrams per liter (mg/L).

Protectiveness Statement(s):

The remedy for OU1 is protective because contaminated soil and sludge have been excavated and contained on Site in a former sludge pond using solidification/stabilization. The RCRA cap and slurry wall used to contain the solidified and stabilized soil and sludge are in good working condition and are preventing the spread of contamination. On-Site storm drains are being used to prevent erosion of the cap and regular O&M is completed to maintain the cap. Access to OU1 is limited by a locked fence and signs are posted with information about Site conditions and contact information. Any future land use is limited by a restrictive covenant to prevent any uses that would interfere with any of the remedial components required for OU1.

The remedy for OU2 is protective because groundwater in the sand-and-gravel aquifer continues to be monitored regularly. A surface water monitoring study was completed at Bayou Texar and an irrigation well survey was also conducted. Residents were notified about Site conditions and a contractor advisory notice is sent to irrigation system contractors, well construction contractors, and pool construction contractors on an annual basis to inform them of Site conditions. Groundwater institutional control requirements are being met because the Site is located within a Florida Groundwater Delineation Area and a well construction moratorium is in place for areas that have been impacted by the Site to restrict groundwater use. State, regional, and local agencies also receive an annual memorandum requesting information regarding any changes that might affect existing institutional controls.

Because the remedial actions selected for all OUs at the Site are operating as planned and are protective, the Site's remedy is protective of human health and the environment.

Other Comments:

None.

Third Five-Year Review Report for Agrico Chemical Company Superfund Site

1.0 Introduction

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

The U.S. Environmental Protection Agency (EPA) prepares FYRs pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Contingency Plan (NCP). CERCLA Section 121 states:

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

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

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

E² Inc., an EPA Region 4 contractor, conducted the FYR and prepared this report to evaluate the remedy implemented at the Agrico Chemical Company Site (the Site) in Pensacola, Escambia County, Florida. This FYR was conducted from April 2009 to June 2010. EPA is the lead agency for the FYR. ConocoPhillips, Inc. (Conoco) and Agrico are the potentially responsible parties (PRPs) responsible for developing and implementing the remedy for the PRP-financed cleanup at the Site. The Williams Companies, Inc. (Williams) acts on behalf of Agrico to implement the Site remedy. The Florida Department of Environmental Protection (FDEP; formerly the Florida Department of Environmental Regulation, or FDER), 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 third FYR for the Site (2005-2009 Site evaluation). The triggering action for this statutory review is the signing of the Site's second FYR, which occurred on July 11, 2005. 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 two Operable Units (OUs), both of which are addressed in this FYR. OU1's remedy addresses soil contamination at the Site by containing contaminated materials under a Resource Conservation and Recovery Act (RCRA) cap. OU2's remedy addresses groundwater contamination on and off Site through monitored natural attenuation (MNA).

2.0 Site Chronology

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

Table 1: Chronology of Site Events

Event	Date
Initial discovery of contamination first reported	1957
EPA conducted initial response	October 1983
Preliminary assessment conducted by FDER	January – December 1987
Proposed National Priorities List (NPL) listing	June 24, 1988
Remedial Investigation/Feasibility Study (RI/FS) negotiations and Consent Agreement (Administrative) and Administrative Order on Consent requiring the PRPs to conduct soil and groundwater investigations	September 29, 1989
Finalized NPL listing	October 4, 1989
Administrative Order on Consent modified to require the PRPs to conduct the Remedial Design for OU1	January 31, 1992
Ecological Risk Assessment for OU1 and Risk/Health Assessment for OU1	March 12, 1992
Removal Assessment	September 1, 1992
PRP RI/FS for OU1 and Record of Decision (ROD) for OU1	September 29, 1992
Remedial Design/Remedial Action (RD/RA) negotiations and RD for OU1 begins	February 16, 1993
Sitewide RD/RA negotiations completed (for soils)	July 20, 1993
Consent Decree signed requiring the PRPs to complete the RA	May 3, 1994
PRP RI/FS for OU2 and ROD for OU2	August 18, 1994
RD for OU1 completion and RA for OU1 start date	September 23, 1994
Sitewide RD/RA negotiations completed (for groundwater)	March 28, 1995
Consent Decree amended to include RD/RA and O&M for OU2	May 30, 1995
RD for OU2 start date	April 3, 1997
RA for OU1 completion	November 6, 1997
RD for OU2 completion	September 11, 1998
Construction Completion documented via Preliminary Close Out Report	September 23, 1999
First FYR	June 28, 2000
Technical Assistance Grant (TAG) received	August 31, 2000
Second FYR	July 11, 2005
Evaluation of benthic studies at Bayou Texar	November 7, 2006
EPA approval of evaluation of Site's long-term monitoring program	September 11, 2007
EPA approval of discontinuing OU1 biannual sampling	September 2, 2008
Conceptual Site Model & Ecological Evaluation to EPA for Bayou Texar	September 4, 2009
EPA approval of O&M recommendations proposed on November 18, 2009	January 25, 2010
EPA approval of MNA evaluation with adding three wells to annual sampling events	February 5, 2010

3.0 Background

3.1 Physical Characteristics

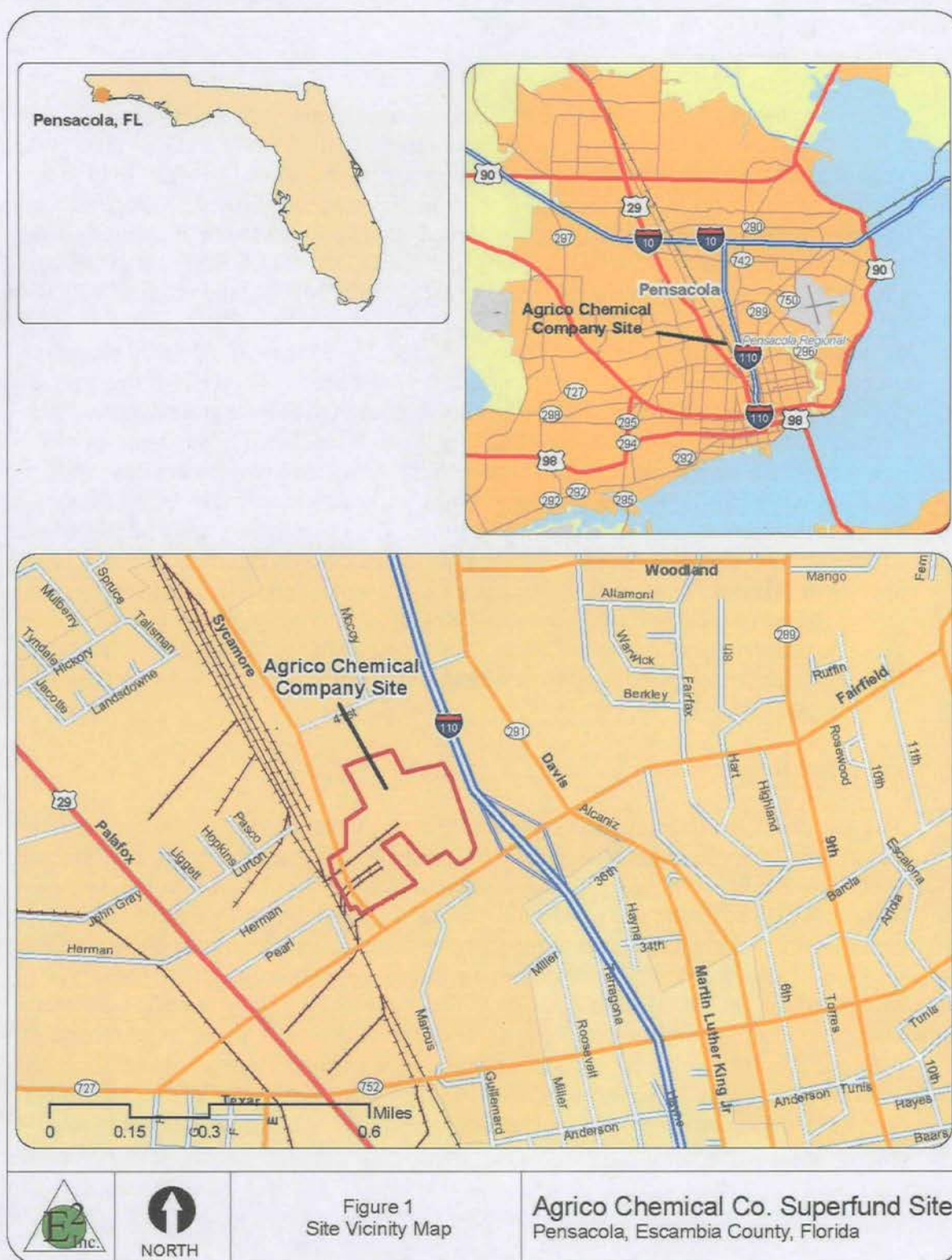
The Site is located in Pensacola, Florida and occupies approximately 35 acres (Figure 1). The Site is located northwest of the intersection of Fairfield Drive and Interstate 110 and is bordered by CSX railroad tracks to the west and an abandoned baseball field to the north (Figure 2). The Site is located in an industrial area. The Site is also located within a one-mile radius of commercial, municipal, and residential land uses. Escambia County property parcel numbers for OU1 include 052S303000000002, 052S301101000000, 052S301103030001, 052S302300000001, 052S303000001002, and 052S303000003002.

Soil and groundwater at the Site were contaminated as a result of industrial processes which included sulfuric acid production and fertilizer production. OU1 is designated as the Site's soil contamination, and OU2 is designated as the Site's groundwater contamination in the sand-and-gravel aquifer beneath the Site. The sand-and-gravel aquifer consists of three main layers: the surficial zone, the low-permeability zone, and the main producing zone. The low-permeability zone acts to restrict vertical flow between the surficial and main producing zones. The groundwater in the sand-and-gravel aquifer flows in an east-southeast direction and in an easterly direction as groundwater approaches Bayou Texar. Bayou Texar is a surface water feature located approximately 1.5 miles east of OU1 that ties into Pensacola Bay, and is considered a discharge area for groundwater that migrates from the Site. The groundwater contamination follows the flow of groundwater in the aquifer, and has been detected east and down gradient of OU1 up to Bayou Texar.

3.2 Land and Resource Use

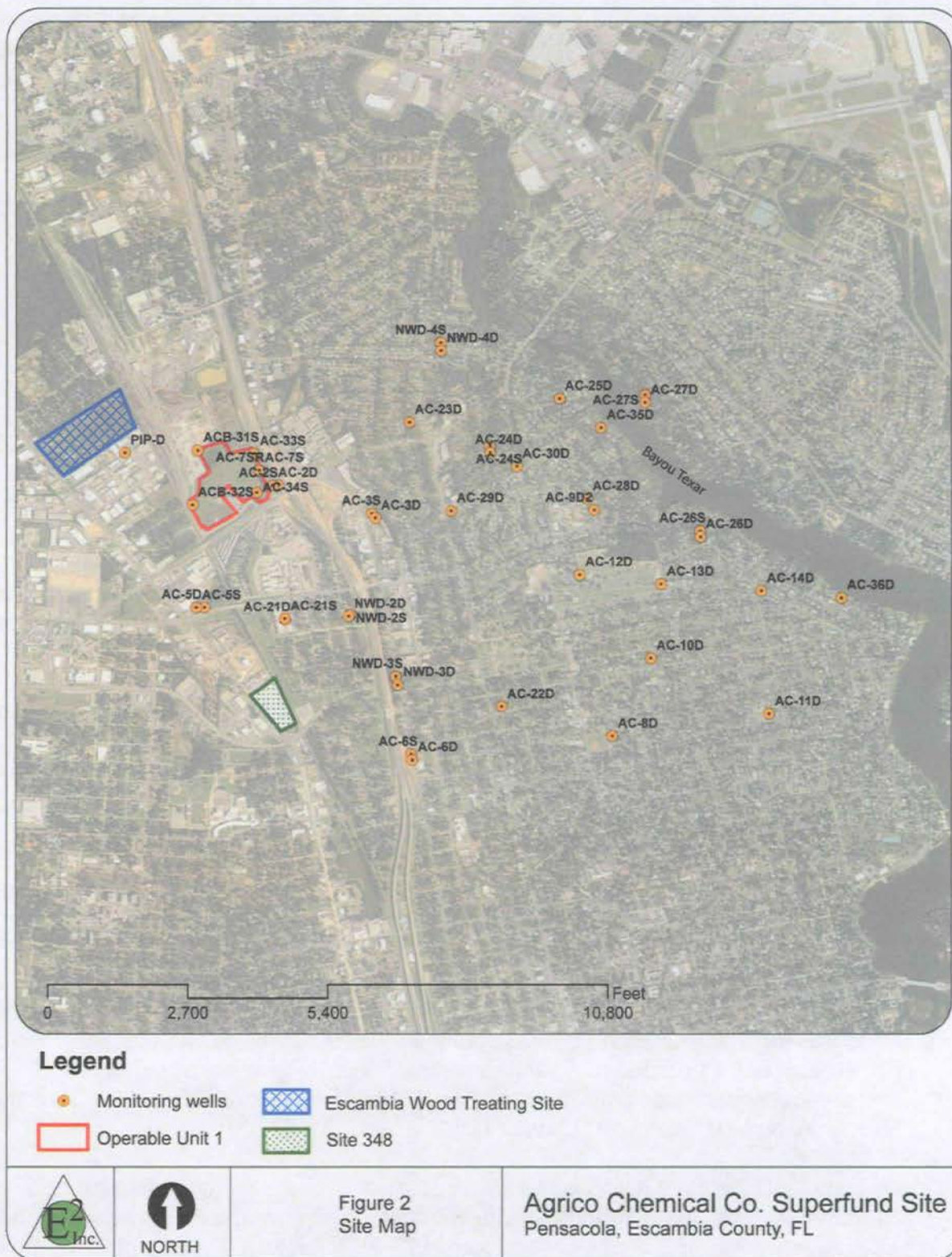
The Site is located in an industrially zoned area and is not currently in reuse. However, Escambia County has indicated interest in using the Site as a potential location for solar panel use, and is currently trying to obtain grant funding for the project. Land uses surrounding the Site include residential uses to the east, municipal and commercial uses to the south, and industrial uses to the west, which are located within a one-mile radius of the Site. The land use located nearest to the Site is a mini-storage facility, which is located within the south-central portion of the property, just along the Site's southern boundary. The Escambia Wood Treating Company Superfund Site is located north of the Site, and a former Kaiser fertilizer plant and a bulk fertilizer storage Site are located southwest of the Site. The former Kaiser fertilizer plant and the bulk fertilizer storage Site are being investigated by FDEP under Project No. 348, also referenced in this FYR as "Site 348."

Figure 1: Site Location Map



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

Figure 2: Detailed Site Map



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

3.3 History of Contamination

Beginning in 1891, the Goulding Fertilizer Company began operations at the Site. A sulfur plant co-existed at the Goulding facility and was part of the fertilizer manufacturing operations. Later the plant was sold to the American Agricultural Chemical Company (AACC) in 1911. Fertilizer production became the primary operation at the Site in 1920. By 1963, the plant was sold to the Continental Oil Company, which is a legacy company to ConocoPhillips, Inc. The Continental Oil Company operated the agrichemical business as the Agrico Chemical Company (Agrico). Williams acquired Agrico in 1972. By 1975, plant operations ceased. Agrico was later sold to Freeport-McMoran Resource Partners (FMRP) in 1987.

The fertilizer production process at the Site by AACC and Agrico included the use of sulfuric acid and water. Dinitrotoluenes were constituents of the sulfuric acid in concentrations which ranged from five parts per million (ppm) to 1,600 ppm. Superphosphate fertilizer production at the Site required the use of fluorapatite, which contained silica and trace metals such as aluminum, along with uranium at 20 ppm to 200 ppm as impurities. Site records indicate spent sulfuric acid was used at the Site between 1967 and 1968, although the amount of spent sulfuric acid could not be determined. In 1972, the plant also began producing monoammonium phosphate in addition to the superphosphate, and continued to do so until 1975. Normal superphosphate was combined with ammonia to produce the monoammonium phosphate. During this process, nitrate was produced. Potassium was blended into products to produce various blends of fertilizer. During fertilizer production, wastewater from the process was typically discharged into four unlined ponds at the Site. EPA defined the ponds as PFP I through PFP IV during the Site's RI/FS. There was also a drainage ditch beginning at PFP IV and continuing through PFP IV to East Fairfield Drive. PFP II received the majority of sludge from production processes. Plant operations ceased in 1975. In late 1979, the former plant buildings and processing equipment were demolished and disposed of off Site, leaving only concrete foundations at the Site.

3.4 Initial Response

Contamination was discovered at the Site during a hazardous waste investigation conducted by EPA in October 1983. The results of the investigation indicated that on-Site soils and surface water were contaminated with elevated levels of fluoride and lead. An effort was made to locate any private shallow wells in the area, but no wells were located. FDER (now FDEP) conducted a groundwater assessment at the Site in January 1987. Primary groundwater contaminants were found to be fluoride and sulfate. EPA listed the Site on the NPL on October 4, 1989.

On September 29, 1989, Conoco and FMRP (the parent company of Agrico) entered into an Administrative Order on Consent with EPA, which required the PRPs to conduct the source contamination and groundwater control RI/FS at the Site. The first phase of the RI was conducted in 1990 and 1991, which included soil and groundwater sampling and taking confirmatory sampling as necessary. In February 1992, a field study was

conducted as the second phase of the RI to define the nature and extent of impacts caused by the Site. The FS for Site soils was completed in July 1992, and the Site's 1992 ROD selecting the remedy to address soil contamination at OU1 was issued in September 1992.

Although phases I and II of the RI characterized the nature and extent of the Site's groundwater contamination, further groundwater investigations were required to investigate the potential impacts of groundwater contamination on Bayou Texar. These investigations were completed in 1993. The final RI/FS for the Site's groundwater was approved by EPA in November 1993. The Site's 1994 ROD for OU2 to address the Site's groundwater contamination was issued in August 1994.

3.5 Basis for Taking Action

The Baseline Risk Assessment (BRA) conducted at the Site in 1992 used the soil and groundwater sampling data collected during the RI/FS. The BLRA determined that no human exposure pathways to contaminated soil existed at the Site. However, the BRA also concluded that if the Site was developed for residential uses in the future, exposure to contaminated subsurface soils could occur through excavation for foundations or basements. Because the selected remedy for OU1 does not allow for residential uses in the future, residential exposure was not used to determine the contaminants of concern (COCs) for OU1. Table 2 lists the COCs for OU1 based on risk-based exposure to soil through direct contact, ingestion, and dust inhalation, as well as leachability-based exposure to contamination from a soil level that is protective for groundwater.

Table 2: Soil COCs and Remediation Goals for OU1

Contaminants	Remediation Goals (mg/kg)
Fluoride	1,463
Lead	500
Arsenic	16

The BRA determined that potential exposure to groundwater contamination through risk scenarios existing at the time of the BLRA, which included the use of public water supply and irrigation wells, was unlikely. Table 3 includes the COCs based on federal or state primary and secondary drinking water standards.

Table 3: Groundwater COCs and Remediation Goals for OU2

Contaminants	Remediation Goals
Arsenic	0.05 mg/L
Chloride	250 mg/L ^b
Fluoride	4 mg/L ^a
Sulfate	250 mg/L ^b
Nitrate/Nitrite	10 mg/L
Radium-226 and Radium-228 combined	5 pCi/L ^c

a) The maximum contaminant level (MCL) of 4 mg/L for fluoride is the cleanup level for groundwater. The Florida secondary standard of 2 mg/L contained in 17-550.320, F.A.C. applies at nearby municipal potable wells.

b) Chloride and sulfate were not included in the BRA because no toxicity values existed. The remedial goals presented are the Florida Applicable or Relevant and Appropriate Requirements (ARARs).

c) The MCL for Radium-226 and Radium-228 is 20 picocuries per liter (pCi/L).

4.0 Remedial Actions

In accordance with CERCLA and the NCP, the overriding goals for any remedial action 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(f)(5)(i) 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

OU1 ROD

The remedy selected in the Site's September 1992 ROD for OU1 addresses soil contamination resulting from the production of fertilizer and sulfuric acid. OU1 addresses the principal threat at the Site by treating the most highly contaminated soils and waste material. Stabilized waste materials and soils contaminated at low levels were consolidated under a RCRA cap constructed on the Site.

The major components of the selected remedy for OU1 include:

- Excavation and solidification/stabilization of contaminated sludge and soils from the Site.
- Consolidation of all stabilized sludge and soils into one sludge pond.
- Construction of a RCRA cap over the sludge pond.
- Construction of a slurry wall around the RCRA cap.
- Implementation of institutional controls, including security fencing and access and deed restrictions.

OU2 ROD

The remedy selected in the Site's August 1994 ROD for OU2 addresses the Site's groundwater contamination. The implementation of the OU1 remedy eliminated contamination from spreading into groundwater at the Site. Therefore, EPA selected a limited action remedy for OU2, which includes MNA. Additional components of the selected remedy for OU2 include:

- Groundwater monitoring of the sand-and-gravel aquifer.
- Surface water monitoring of the Bayou Texar.
- Door-to-door survey of irrigation wells.
- Request access from private landowners to plug and abandon impacted irrigation wells.
- Advisory Program.
- Utilization of institutional controls to restrict new wells.

The RAOs established for the Site from both RODs for OU1 and OU2 include:

- Prevent direct contact, ingestion, inhalation of dust and leaching of contaminants into groundwater.
- Prevent continued degradation of groundwater from on-Site sources.
- Prevent or minimize degradation of groundwater due to effects associated with the selected remedy, such as the spreading of off-Site plumes including the organics plume emanating from the Escambia Wood Treating Company Superfund Site and salt water intrusion.
- Prevent or minimize future exposure to contaminated groundwater that would result in unacceptable risk.
- Prevent or minimize future impacts to surface water due to the discharge of contaminated groundwater to Bayou Texar.

4.2 Remedy Implementation

OU1

The RD for OU1 began on February 16, 1993 and was completed on September 23, 1994. Remedial activities for OU1 began in 1995. The OU1 ROD estimated that 32,500 cubic yards of contaminated soil would be addressed at the Site. However, in 1997, approximately 45,000 cubic yards of soils and sludge materials contaminated with lead and arsenic were actually collected from on-Site sludge ponds and treated by solidification/stabilization using cement. One hundred thousand cubic yards of soils impacted with fluoride were also collected for inclusion in the on-Site consolidation. Following the excavation and treatment of contaminated soils and sludges, lifts were installed in the excavation area so that treated soil and sludges could be stored with old building foundations from previous Site activities. Treated materials were placed on Site, approximately 20 feet above the saturated groundwater level within the unsaturated, dry portion of the underlying sediments.

A four-foot-thick, multi-layered engineered cap was placed over the stabilized soil and sludge to prevent rainfall from coming into contact with the stabilized materials. The cap consists of seven layers, including impervious fabric, a high-density polyethylene liner, and geotextile materials. To maintain the integrity of the cap, a stormwater runoff system was installed at OU1, which includes the north and south stormwater drainage ponds (Figure 3). Because the north stormwater drainage pond is upgradient of the stabilized containment area, a 700-foot-long, two-foot-thick slurry wall between the north

stormwater drainage pond and the stabilized containment area was constructed to prevent stormwater from coming into contact with the stabilized materials. A security fence around OU1 was also installed to limit access the capped area at the Site. Remedial activities for OU1 were completed on November 6, 1997. OU1's remedy components are performing adequately to contain the stabilized materials at the Site. A restrictive covenant was placed on OU1 on September 20, 1997 to limit any future land use at the Site.

OU2

The RD for OU2 began on April 3, 1994 and was completed on September 11, 1998. The installation of the groundwater monitoring well network for OU2 was completed in July 1999 and the Site's remedy attained construction completion on September 23, 1999. The wells were installed to assess the use of MNA for OU2. Long-term groundwater monitoring was initiated in 1999; sampling continues to be completed annually. To meet the additional requirements of the selected remedy for OU2, an irrigation well survey was conducted in July 1999 to identify residences with wells in the area. Surface water in Bayou Texar is sampled annually; an advisory notice is sent by the O&M contractor on behalf of the Site's PRPs to irrigation system contractors, well construction contractors, and pool construction contractors to inform them of Site conditions. An annual memorandum is distributed to local, regional, and state agencies to solicit any information that may change institutional controls currently in place at the Site.

Figure 3: Detailed OU1 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.

4.3 Operation and Maintenance (O&M)

The Site's September 1996 O&M Plan for OU1 includes biannual Site inspections, Site inspections following major storm events, weekly security surveillance, regular lawn maintenance, cover system inspection, a topographic survey as needed, and stormwater collection system inspection and cleaning. The biannual Site inspections initially included groundwater sampling to ensure that the soil remedy selected for OU1 was working adequately to prevent any further groundwater contamination. In 2008, EPA discontinued the requirement for biannual groundwater sampling because the 2005 FYR determined that the selected remedy for OU1 was effective. OU1 monitoring wells are now included in the Site-wide groundwater monitoring program. The Site's November 1998 O&M Plan for OU2, updated with approved changes in 2007 based on the November 30, 2006 Long-term Monitoring Well Network Evaluation, includes sampling OU2 groundwater monitoring wells each November, annual surface water sampling in Bayou Texar, an irrigation well survey, and an annual advisory program for local contractors.

The O&M contractor has completed the following O&M tasks at the Site annually:

- Groundwater sampling for defined COCs, as well as total lead, in all long-term monitoring wells in the surficial and main producing zones within OU1 and OU2 to evaluate COC concentrations for MNA.
- Annual surface water sampling at Bayou Texar/Carpenter Creek for groundwater COCs and lead to assess surface water quality for potential effects from groundwater discharge.
- Distribution of an advisory notice to water well contractors, irrigation system installers, and pool contractors to inform the contractors of groundwater impacts in the area resulting from the Site's contamination and the well construction moratorium implemented by the Northwest Florida Water Management District (NFWFMD).
- Identification and voluntary sampling and abandonment of irrigation wells within OU2.
- Coordination and dissemination of Site information to local, regional, and state agencies.

Since O&M began and in accordance with the O&M Plans, the Site is routinely inspected by the O&M contractor, and inspection reports have been completed twice a year, as well as after any major storm events. Any damage found during the inspections are noted and repaired. The O&M contractor has maintained the capped area at OU1 by mowing the grass covering the capped area twice per month (once per month in the winter) to ensure that no erosion is occurring on the cap. O&M contractors also maintain vegetation growing along the fence line to ensure it does not interfere with the structural integrity of the fence.

In January 2010, EPA approved the following changes to the O&M Plans for the Site:

- Remove the requirement of having a local security company conduct bi-weekly drive-by security checks for the Site.
- Change the schedule for stormwater under drain piping cleanout from annually to once per three years and/or as needed.
- Submit a single annual report for all Site inspections and periodic storm-related inspections to consolidate the documentation of Site-related activities.
- Change mowing schedule from the current set schedule to a more flexible schedule to allow for mowing as necessary to maintain Site vegetation.
- Deletion of the surface water monitoring station on Carpenter's Creek and designated as ACSW-BL.

Estimated total annual O&M costs from the FS were \$25,000 for the OU1 remedy and \$61,000 for the OU2 remedy. The combined O&M annual costs estimated in the FS were \$86,000 (based on 1993 dollars). Table 4 includes the annual O&M costs at the Site for the past five years.

Table 4: Annual O&M Costs

Date Range		Total Cost (rounded to the nearest \$1,000)
From	To	
January 2005	December 2005	\$125,000
January 2006	December 2006	\$129,000
January 2007	December 2007	\$109,000
January 2008	December 2008	\$153,000
January 2009	December 2009	\$121,000

5.0 Progress Since the Last Five-Year Review

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

The remedy at the Agrico Site remains protective of human health and the environment. Monitoring data indicate the remedy is functioning as required. The remedy is expected to attain groundwater and surface water cleanup goals through natural attenuation during an estimated seventy-year time-frame (as specified in the OU-2 ROD for groundwater). In order to verify protectiveness, groundwater and surface water monitoring should continue until remedial action objectives are achieved.

The Site's 2005 FYR included six issues and recommendations. Each recommendation and the current status of each are discussed below.

Table 5: Progress on Recommendations from the 2005 FYR

Section	Recommendations	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
5.1	Groundwater sampling should be conducted at a location up gradient of the Site.	PRP	November 2005	Monitoring well PIP-D was added to the long-term monitoring program.	November 2005
5.2	Groundwater sampling should be conducted across Bayou Texar for one year to validate radium results.	PRP	November 2005	Monitoring wells AC-27S and AC-27D located on the east side of Bayou Texar were re-sampled and validated the radium results.	November 2005
5.3	Identify a more representative background location for monitoring radium, and sample this location as part of annual groundwater monitoring.	PRP	November 2005	Monitoring well ETC-MW-12DP was re-sampled and compared to previous radium concentrations. ETC-MW-12DP was eventually replaced by PIP-D.	November 2005
5.4	Update O&M Plan for OU2 to provide an improved natural attenuation monitoring approach for the Site.	PRP	November 2005	An evaluation of the long-term groundwater monitoring network was conducted, and recommendations for the monitoring network were developed.	September 2007
5.5	The Community Relations Plan should be updated to include a current contact listing of community members.	PRP	November 2005	Contact information was updated and submitted in the "2005 OU2 Annual Report."	2005 Annual Report – Dated November 2006
5.6	Site-specific benthic community analysis or sediment toxicity testing should be conducted at the Site.	PRP	April 2010	A conceptual Site model and sampling analysis plan were developed to study the potential effects of fluoride on ecological receptors in Bayou Texar.	June 2010

5.1 Upgradient Groundwater Sampling (Completed 2005)

Monitoring well PIP-D was added to the long-term monitoring program beginning in November 2005 during annual sampling. PIP-D is used to screen groundwater within the main producing zone and is located up gradient of the Site.

5.2 Bayou Texar Groundwater Sampling (Completed 2005)

Monitoring wells AC-27S and AC-27D were re-sampled in November 2005. The results were presented in the "2005 OU2 Annual Report." AC-27S sampling results showed that COCs were below cleanup standards in the surficial zone and concentrations were within a similar range as those existing in background conditions. AC-27D sampling results showed that fluoride, arsenic, chloride, sulfate, and nitrate/nitrite were below cleanup standards. The November 2005 sampling result for combined naturally occurring radium 226 + 228 was a concentration of 7.02 pCi/L, which was similar to the January 2004 sampling result of 5.92 pCi/L. The occurrence of radium at AC-27D based on groundwater flow and boundary condition is not attributable to the Site.

5.3 Background Sampling Location (Completed 2005)

Monitoring well ETC-MW-12DP was re-sampled in November 2005 and results showed that combined radium 226 + 228 was detected at a concentration of 1.03 pCi/L. This finding demonstrated that the January 2004 sampling concentration for combined radium 226 + 228 of 10.8 pCi/L was likely a function of laboratory analysis.

Because ETC-MW-12DP is impacted by COCs from the Escambia Wood Treating Company Superfund Site, and monitoring well PIP-D is not, PIP-D was added to the Site's long-term monitoring program.

5.4 Update the O&M Plan for OU2 (Completed 2006)

The groundwater monitoring network was evaluated and a report which included recommendations on how to improve the MNA system at the Site was submitted to EPA. EPA approved the report in 2007. Some of the key recommendations included modeling Escambia County hydrogeology, including OU2 COCs during November sampling events for OU1, and analyzing for nitrate only since nitrite concentrations were below detection levels during January 2004 sampling. The report also recommended discontinuing the use of monitoring wells NWD-2S, AC-24S, AC-26S, NWD-4S, and AC-5S because the surficial plume does not extend to these locations. Because the southern edge of the plume is close to Site 348, the report recommended closely monitoring Site 348's potential impacts on the Site and that FDEP fully define the extent of impacts for both the surficial and producing zones of the aquifer at Site 348.

5.5 Update the Community Response Plan (Completed 2005)

Updated contact information for community members was submitted to EPA, as reported in the "2005 OU2 Annual Report."

5.6 Site-specific Benthic Community Analysis (on-going)

Historical sampling since 1999 shows that surface water in Bayou Texar contains fluoride concentrations ranging from ambient levels to a maximum of 1.5 mg/L, substantially less than the Florida Surface Water Quality Criterion (Chapter 62-302.530, Florida Administrative Code) for Class III Marine waters for fluoride, which is 5 mg/L. However, since historical studies indicated that some sediment and sediment pore water contained fluoride in excess of background values, the second FYR recommended that benthic community analysis or sediment toxicity testing be conducted in Bayou Texar. This recommendation was further clarified in a letter from EPA to the responsible parties, dated December 12, 2006. In this letter, EPA recommended further evaluation of the potential adverse effects of fluoride to the benthic community, including benthic macroinvertebrates and bottom fish, in Bayou Texar. The studies concluded that there is no significant risk to populations of bottom fish or to benthic macroinvertebrate communities that inhabit the reach of Bayou Texar where the Agrico groundwater discharges. Given these results, annual groundwater monitoring and surface water monitoring of Bayou Texar will continue in accordance with the current operations and maintenance program.

In the December 12, 2006 letter, EPA recommended a Conceptual Site Model (CSM) be developed for Bayou Texar, and that it "include the transition zone where contaminated groundwater discharges to surface water" as a first step in conducting a scientific evaluation of potential ecological impacts from elevated fluoride. In response to this recommendation, URS Corporation (URS), on behalf of the responsible parties, developed a preliminary CSM of this transition zone and proposed a Sampling and Analysis Plan (SAP) to collect the additional data needed to complete the CSM. This additional data included sediment, pore water and near-bottom surface water data in areas of Bayou Texar where bottom fish and the benthic community are potentially exposed to fluoride emanating from the groundwater plume. This SAP (originally approved on December 14, 2007) also included decision criteria that called for further assessment of the benthic community in Bayou Texar should additional data indicate that the benthic community was exposed to fluoride in the pore water of sufficiently high concentration that it would potentially cause adverse effects to these receptors.

In August 2008, EPA, after consulting with FDEP, approved the SAP which included FDEP amendments and additional sediment, pore water and near-bottom surface water samples. These samples were collected in a two-phased field investigation conducted in August 2008 and May 2009.

The results of this investigation indicated that:

- Fluoride in the near-bottom surface water (the primary exposure regime for bottom fish) in the area of Bayou Texar where the groundwater plume discharges was consistently less than the Florida Surface Water Quality Criterion (Chapter 62-302.530, Florida Administrative Code) for Class III Marine waters for fluoride (5 milligrams per liter [mg/L]). In fact, the concentration of fluoride in the majority of surface water samples was less than 1 mg/L. These results were consistent with historical surface water data.
- Although historical studies indicated fluoride in the groundwater discharge zone exceeded the 5 mg/L standard in sediment pore water beneath the depths where the benthic community is found, the investigation conducted pursuant to this SAP focused on pore water in the bioactive zone of the surface sediment (the region of the sediment that macroinvertebrates inhabit). The results of this investigation indicated that fluoride in the sediment pore water in the bioactive zone was less than 3 mg/L in 30 of the 40 stations sampled. Pore water is the primary exposure medium for the benthic macroinvertebrates. Fluoride in pore water exceeded the 5 mg/L standard at only 3 of the 40 stations (less than 8% of the area sampled). The area-weighted average concentration of fluoride in the bioactive zone pore water (the exposure concentration for benthic macroinvertebrate communities) was less than the 5 mg/L Class III Marine waters fluoride standard.

Based upon these results and geochemical modeling using these data, it was concluded that:

- There is no complete exposure pathway between populations of bottom fish and concentrations of fluoride in near-bottom surface water that were high enough to potentially cause adverse effects to populations of bottom fish that might inhabit or utilize this reach of Bayou Texar.
- There is no complete exposure pathway between benthic receptors and concentrations of fluoride in sediment pore water that were high enough to potentially cause adverse effects in benthic macroinvertebrate communities that inhabit this reach of Bayou Texar.
- Fluoride solubility in the majority of surface sediments and in all pore waters within the groundwater plume discharge area is controlled by precipitation of the mineral fluorapatite. This reaction occurs because the dissolved fluoride associated with the groundwater plume combines with orthophosphate and bicarbonate alkalinity that occur in near surface pore waters of the bayou. The precipitation reaction decreases the dissolved concentration of fluoride in near-surface sediments, thereby limiting its mobility and bioaccessibility to the benthic community.

In summary, it was concluded that there is no significant risk to populations of bottom fish or to benthic macroinvertebrate communities that inhabit the reach of Bayou Texar where the Agrico groundwater discharges. Given these results, and following the decision criteria in the approved Conceptual Site Model SAP, no further evaluation of Bayou Texar is required.

EPA recommends, however, that if the levels of fluoride in monitoring well AC-35D, which is closest to Bayou Texar, increase to concentrations that are significantly above what have been measured over the last ten years of groundwater monitoring, that the responsible parties must submit a work plan to evaluate whether this increase in groundwater concentration will result in an area-weighted average fluoride concentration in pore water greater than the regulatory limit of 5 mg/L standard in the bioactive zone of the sediment. This work plan also will recommend further risk evaluation studies should it be concluded, as a result of sampling, that pore water concentrations of fluoride in the bioactive zone are greater than the 5 mg/L Class III Marine waters fluoride standard on an area-weighted basis.

6.0 Five-Year Review Process

6.1 Administrative Components

EPA Region 4 initiated the FYR in May 2009 and scheduled its completion for June 2010. The EPA Site review team was led by EPA Remedial Project Manager (RPM) Scott Miller and also included EPA Community Involvement Coordinator (CIC) L'Tonya Spencer and contractor support provided to EPA by Treat Suomi and Christy Fielden of E² Inc. In August 2009, EPA held a scoping call with the review team to discuss the Site and items of interest as they related to the protectiveness of the remedy currently in place. A review schedule was established that consisted of the following activities:

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

6.2 Community Involvement

On September 23, 2009, a public notice was published in the Pensacola News Journal announcing the commencement of the FYR process for the Site, providing contact information for Scott Miller and L'Tonya Spencer, and inviting community participation. The press notice is available in Appendix B. No people 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: West Florida Regional Library, 200 W. Gregory Street, Pensacola, Florida 32501. On October 5, 2009, E² Inc. staff visited the West Florida Regional Library as part of the Site inspection. All relevant Site documents were found to be up-to-date through 2009 at the library. Upon completion of the FYR, a public notice will be placed in the Pensacola News Journal 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 Site's 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 RAs must meet any federal standards, requirements, criteria, or limitations that are determined to be ARARs. ARARs are those standards, criteria, or limitations promulgated under federal or state law that

specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA Site. To-Be-Considered criteria (TBCs) are nonpromulgated advisories and guidance that are not legally binding, but should be considered in determining the necessary level of cleanup for protection of human health or the environment. While TBCs do not have the status of ARARs, EPA's approach to determining if a remedial action is protective of human health and the environment involves consideration of TBCs along with ARARs.

Chemical-specific ARARs are numerical quantity restrictions on individually listed contaminants in specific media. Examples of chemical-specific ARARs include the Maximum Contaminant Levels (MCLs) specified under the Safe Drinking Water Act 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 in place at the time of the remedy decision. Chemical-specific ARARs identified in the selected remedy within the Site's 1992 ROD for soil contamination, and the Site's 1994 ROD for groundwater at the Site are listed in Table 6 and Table 7, respectively. The soil remedy is complete and MNA of groundwater continues at the Site.

Soil ARARs

The selected remedy in the Site's 1992 ROD for OU1 established soil remediation goals for three COCs: fluoride, lead, and arsenic. A Site-specific remediation goal was calculated for fluoride in soil that would be protective for groundwater. The toxicity characteristic leaching procedure (TCLP) concentration was used to set the remediation goal for fluoride in soil and was based on a worst case, maximum concentration effect of leachate on groundwater set by the MCL of 4 mg/L. Health-based soil exposure scenarios were used to establish the remediation goals for lead and arsenic. The remediation goal for lead was based on the lead uptake/biokinetic model to determine the health risks to a hypothetical child resident scenario at the Site. The remediation goal for arsenic was established based on an industrial use scenario having a risk level of 10^{-6} based on ingestion and inhalation pathways. This review did not find any evidence suggesting any of the assumptions used in development of the groundwater protection and health based soil remediation goals have changed since the 1992 ROD. Therefore, current ARARs for soil remain the same as the original remediation goals.

Table 6: Soil Remediation Goals for OU1

Contaminant	Remediation Goals from the 1992 ROD (mg/kg)	Current Remediation Goals (mg/kg)	Have ARARs changed?
Fluoride	1,463	1,463	No
Lead	500	500	No
Arsenic	16	16	No

Groundwater ARARs

The selected remedy in the Site's 1994 ROD for OU2 established remediation goals for six COCs in groundwater: fluoride, arsenic, chloride, sulfate, nitrate/nitrite, and radionuclides (radium-226 and radium-228). Groundwater cleanup goals in the 1994 ROD were based on federal or state primary and secondary drinking water standards. The 1994 ROD had a combined cleanup standard for nitrate and nitrite of 10 mg/L, which was based on federal and state primary and secondary drinking water standards. Since then, separate standards have been established for nitrate and nitrite. This review compared the combined standard to the current standards for each contaminant individually. Current federal and state drinking water standards are more stringent for arsenic and nitrite. However, this does not affect the protectiveness of the selected remedy because institutional controls are in place to restrict groundwater use and well construction is prohibited, which prevents the creation of an exposure pathway. Additionally, EPA submitted a memorandum in January 2007 approving long-term monitoring evaluation recommendations, which included the removal of nitrite from the Site's analyte list because nitrite concentrations remained below the detection limit of 0.05 mg/L during 2004 groundwater sampling. As a result, nitrite analysis was no longer required beginning in November 2007. Standards for the remaining COCs have not changed.

Table 7: Previous and Current ARARs for OU2 Groundwater COCs

Contaminant	1994 ROD ARARs	Current ARARs ^a	Have ARARs changed?
Arsenic	0.05 mg/L	0.01 mg/L	Yes – More stringent
Chloride	250 mg/L ^b	250 mg/L	No
Fluoride ^c	4 mg/L	4 mg/L	No
Sulfate	250 mg/L ^b	250 mg/L	No
Nitrate/Nitrite combined ^d	10 mg/L	NA	NA
Nitrate	NA	10 mg/L	No
Nitrite	NA	1 mg/L	Yes – More stringent
Radium-226 and Radium-228 combined	5 pCi/L ^e	5 pCi/L	No

a) The current federal groundwater standards (<http://www.epa.gov/safewater/contaminants/index.html>) and Florida groundwater standards (<http://www.dep.state.fl.us/water/drinkingwater/standard.htm>) for the COCs reviewed are identical.

b) Chloride and sulfate were not included in the BLRA because no toxicity values exist. The remediation goals presented in the Site's 1994 ROD are the Florida ARARs.

c) The MCL of 4 mg/L for fluoride is the cleanup level for groundwater. The Florida secondary standard of 2 mg/L contained in F.A.C. 17-550.320, applies at nearby municipal potable wells.

d) The Site's 1994 ROD presented a combined standard for nitrate and nitrite. Current federal and state standards provide separate standards for nitrate and nitrite, which are 10 mg/L and 1 mg/L, respectively.

e) The proposed MCL for Radium-226 and Radium-228 in the Site's 1994 ROD was 20 picocuries per liter (pCi/L) for each.

6.4 Data Review (2005-2008)

Groundwater monitoring continues to be conducted in the surficial and main producing zones of the sand-and-gravel aquifer at the Site. OU1 groundwater monitoring wells were sampled on a biannual basis in May and November each year until EPA approved discontinuing biannual sampling in September 2008. Beginning in November 2008, OU1 and OU2 groundwater monitoring wells have been sampled annually as part of the Site-

wide groundwater monitoring program. Appendix F provides groundwater monitoring sampling data from May 2005 through November 2008. MNA continues to be effective in reducing groundwater contaminant concentrations.

Source control was completed as of April 1997. Long-term groundwater monitoring for the natural attenuation groundwater remedy was initiated in May 1997. Groundwater sampling results consistently indicate that the source area is and remains controlled. The source area remedy remains an effective remedy in eliminating the migration of COCs from the former Site area to the groundwater.

Naturally occurring combined radium 226 + 228 has been detected in several monitoring wells in both the surficial and main producing zones within the past five years. Radium-228 is the dominant isotope, present in the groundwater possibly due to low pH conditions. The radium-228 concentrations are significantly greater than the radium-226 concentrations. This continued finding supports the case that the Site is not the source of the observed radium. If phosphate ore was the source, radium-226 would be the dominant isotope (Florida Institute of Phosphate Research, 2004). Concentration results for 2008 for combined radium appear overall to be similar to historical results. Combined radium will serve as indicators of the overall Site plume and will continue to decrease as the plume attenuates (ref. Monitored Natural Attenuation Report, URS, August 19, 2009 and Update February 3, 2010, approved by EPA February 5, 2010).

Monitoring wells ACB-31S and AC-6S in the surficial aquifer have had detections above cleanup goals in 2008 of 7.27 pCi/L and 6.31 pCi/L, respectively. ACB-31S is located up gradient of OU1, and AC-6S is located down gradient of both the Site and Site 348. The remaining exceedances have been detected in the main producing zone during annual sampling since November 2005 in monitoring wells AC-12D, AC-13D, AC-25D, AC-29D, AC-30D, and AC-3D. Monitoring wells NWD-4D and AC-35D have had exceedances since the 2006 annual sampling. During the most recent sampling completed in 2008, monitoring wells AC-6D, AC-9D2, AC-23D, AC-24D, AC-28D, and AC-29D had exceedances. The highest concentration was detected in AC-29D at a concentration of 12.34 pCi/L. Although there have been exceedances detected for combined radium within the past five years, the most recent concentrations detected during 2008 sampling for the main producing zone show that the concentrations of radium are decreasing compared to previous levels.

Fluoride has been detected in surficial zone monitoring wells AC-34S, AC-7SR, and AC-2S. AC-34S and AC-7SR are located on the south and east edges of OU1, respectively. AC-2S is located down gradient of both the Site and Site 348, and marks the down gradient extent of the fluoride plume in the surficial zone. The highest fluoride concentration detected in these wells within the past five years was in AC-2S at a concentration of 85 mg/L during November 2006 sampling. The remaining monitoring wells for the surficial zone have not had concentrations above cleanup goals during 2008 sampling. Monitoring wells AC-3D, AC-12D, AC-13D, AC-25D, AC-29D, AC-30D, and AC-35D for the main producing zone have had exceedances during November 2005 to November 2008 sampling. During November 2008 sampling, AC-9D2, AC-24D, and

AC-28D have exceeded cleanup standards. The highest concentration of fluoride detected since 2005 is 160 mg/L in AC-35D during November 2007 sampling. During the 2008 sampling event, the concentration in AC-35D has decreased to 120 mg/L. AC-35D is located on the western edge of Bayou Texar. Monitoring wells with exceedances are primarily located between OU1 and Bayou Texar.

Sulfate concentrations in monitoring wells for the surficial zone have been below cleanup goals for the past five years. Monitoring wells for the main producing zone that have had exceedances within the past five years include AC-3D, AC-12D, AC-13D, AC-35D, and AC-9D2. All of the wells are located east of OU1 and west of Bayou Texar. The majority of monitoring wells show decreasing concentrations of sulfate within the past five years. However, the highest concentration of sulfate within the past five years was detected during November 2008 in AC-35D at a concentration of 360 mg/L.

Nitrate concentrations in the surficial zone have been below cleanup goals for the past five years. In the main producing zone, nitrate has been detected in AC-12D, AC-13D, AC-29D, and AC-35D between November 2006 and November 2008. AC-3D had concentrations above cleanup goals in November 2005 and November 2006. Since then, concentrations have been below cleanup goals. The highest concentration of nitrate that has been detected in the past five years is 18 mg/L in AC-13D during November 2007 sampling. The nitrate concentration at AC-13D decreased to 13 mg/L during November 2008 sampling.

Nitrite has not been detected in groundwater above the 0.05 mg/L detection limit since 2004. Additionally, during past groundwater sampling prior to 2004, nitrite was not detected above 1 mg/L. Because nitrite was consistently not detected during groundwater analysis, nitrite was removed from the Site's analyte list in November 2007; therefore, no nitrite groundwater data has been collected since 2007.

Chloride has only been detected above cleanup goals once in the main producing zone in the past five years. Concentrations in AC-25D and AC-35D have been above the cleanup goal since November 2005 sampling. Both wells are located on the western edge of Bayou Texar.

Surface water in Bayou Texar has been sampled on an annual basis since November 2004. For 2008, the same analyte list used for groundwater monitoring was used for surface water monitoring. No COCs have been detected in surface water at concentrations that exceed surface water criteria (Chapter 62-302, Class III Marine Surface Water Standards).

6.5 Site Inspection

On October 6, 2009, the Site inspection was performed by the following participants: Scott Miller and L'Tonya Spencer of EPA; Jeffry Wagner of URS; Terry Vandell-Bell of Conoco; Phil Roberts of Williams; Walsta Jean-Baptiste of FDEP; and Treat Suomi and Christy Fielden of E² Inc.

The 35-acre Site is not currently in use. OU1 is secured with fencing and locked gates and signs are posted at the entrances to identify that waste materials may be present in Site soils. The Site's remedy is well-maintained. The O&M contractor mows the cap twice a month during wet months and once during dry months (winter months). The monitoring wells located at the Site are sampled annually. During the Site inspection, the monitoring wells were found to be secured and locked. The stormwater retention ponds were found to be in good condition. The cap was in good condition and did not show any major signs of erosion. The grass cover on the cap was well-established. There were small areas where mowers had pulled up grass. Mr. Wagner informed the Site inspection participants that these areas were damaged due to mowing too soon after a recent rain event and that there were already plans to put new grass in these areas to maintain the integrity of the cap. Future mowing practices will also ensure that minor damage to the vegetative cover on the cap does not occur during regular O&M. The fence surrounding OU1 had some trees and vines growing in and through it that the O&M contractor plans to remove to maintain the structure of the fence.

As part of the Site inspection, Mr. Wagner took participants to areas immediately surrounding the Site where the groundwater has been impacted by others, and to inspect monitoring wells located outside of OU1. Both Site 348 and the Emerald Coast Utilities Authority (ECUA) municipal supply well located south of OU1 were visited because contamination found in these areas contains some of the same contaminants being monitored at the Site. Remedial investigations are still being conducted at these areas. The contamination found at Site 348 and the ECUA municipal supply well has not been shown to be related to the cleanup activities at the Site. During the Site inspection, Bayou Texar and monitoring well AC-35D were found to be in good condition. Photographs from the Site inspection are included in Appendix E.

The Site repository was visited as part of the FYR process. Relevant Site documents through 2009 were available. All relevant public documents are contained at the repository.

E² Inc. staff conducted research at the Escambia County Public Records Office and found deed information pertaining to the Site, which is listed in Table 8.

Table 8: Deed Documents from the Escambia County Public Records Office

Date	Type of Document	Description	Book #	Page #
1997	Restrictive Covenant	Restrictive covenant made by Conoco Inc. to prohibit and restrict all surface and subsurface uses of the property at the Site.	4158	1087
1995	Cash Deed	The deed transfers a portion of the Site property to Conoco Inc. A temporary easement is included to allow entering the property from adjoining lands to remove contaminated soil, implementing the remedy, and providing security and monitoring. Following remediation, the property will be restored to its current condition as closely as possible.	3758	952

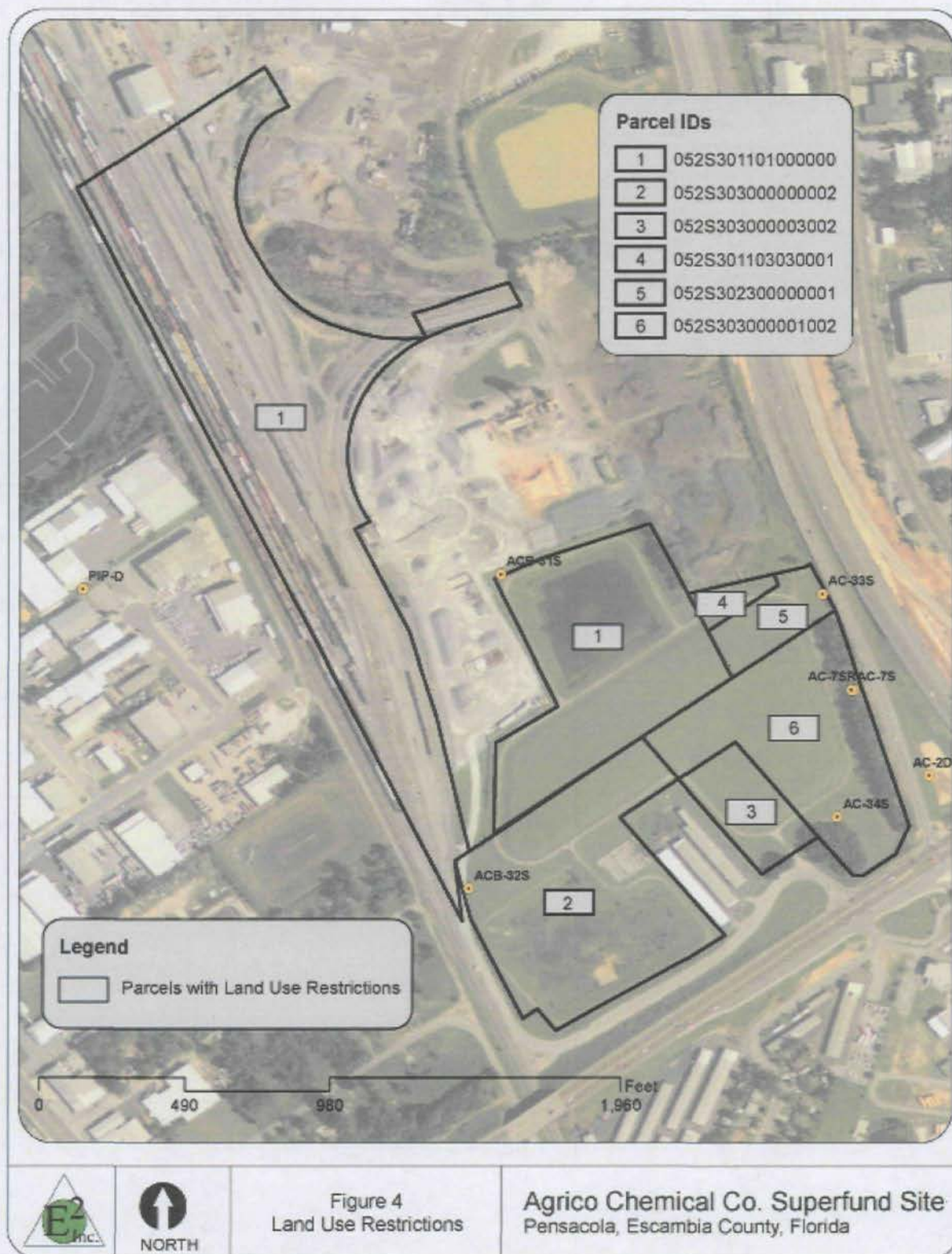
The following table lists the institutional controls associated with areas of interest at the Site.

Table 9: Institutional Control (IC) Summary Table

Area of Interest – Soil and Groundwater at Agrico Chemical Company Property (Parcels: 052S301101000000, 052S303000000002, 052S303000003002, 052S302300000001, 052S303000001002)					
Media	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Instrument in Place
OU1					
Soil	Yes	Yes	052S301101000000, 052S303000000002, 052S303000003002, 052S302300000001, 052S303000001002	Restrict access and use of the Site to prevent damage to the capped area.	Restrictive covenants and deed restrictions.
OU2					
Ground Water	Yes	Yes	052S301101000000, 052S303000000002, 052S303000003002, 052S302300000001, 052S303000001002	Restrict installation of groundwater wells.	The Site lies within a Florida Groundwater Delineation Area, which restricts well placement. ¹
1. Florida's groundwater delineation information can be found online at: http://www.dep.state.fl.us/water/groundwater/delineate.htm .					

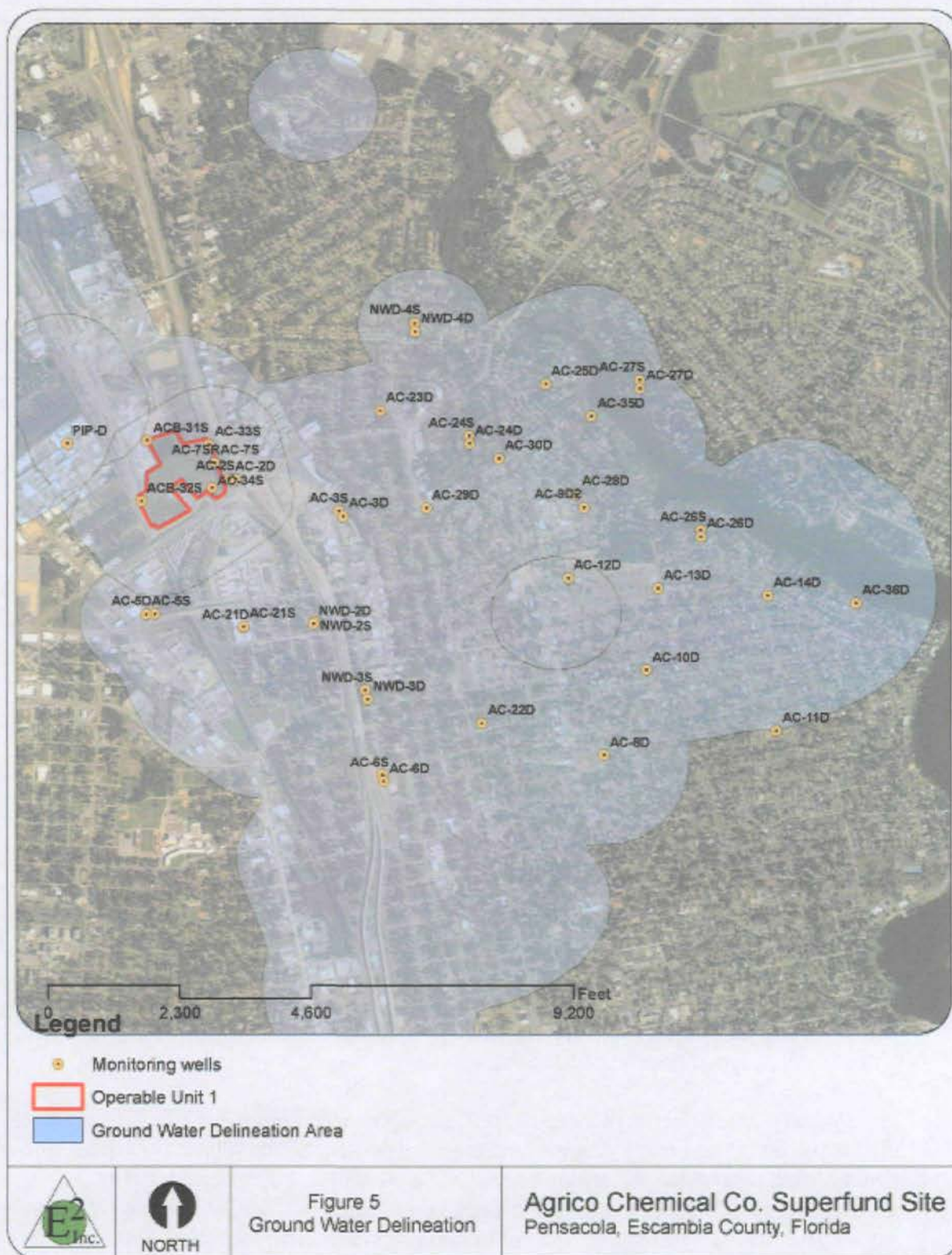
Figure 4 shows the property boundaries for OU1 at the Site that have restrictive covenants and deed restrictions. Figure 5 shows the Florida Groundwater Delineation Area where groundwater well installation is restricted at the Site.

Figure 4: Land Use Restrictions at the Site



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

Figure 5: Florida Groundwater Delineation Area Map



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

6.6 Interviews

During the FYR process, interviews were conducted with parties impacted by the Site, including the current landowners, regulatory agencies involved in Site activities, and nearby residents aware of the Site. Residents near the Site were contacted. However, only one resident indicated interest in being interviewed to inform this FYR. 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. All of the interviews were conducted during the Site inspection on October 6, 2009. Interviews are summarized below and complete interviews are included in Appendix C.

Resident 1: Resident 1 was aware of the Site and the remedial activities that have been conducted at the Site. Resident 1 believes that the project to clean up the Site has been handled well, and has not heard of any major issues with the Site since professionally being involved with the project over 20 years ago. Resident 1 remembers that the community near the Site property was initially very upset and showed concern about Site contamination, but the community further from the Site did not have as many concerns. Resident 1 has no concerns about the Site and is not aware of any problems with current Site activities.

Walsta Jean-Baptiste: Ms. Jean-Baptiste of FDEP has been working at the Site since February 2009, and believes the Site is in good condition because the data shows that the remedy is performing as expected. There have been no irrigation impacts, and the cap and slurry wall are working well to contain contamination. She is unaware of any complaints about the Site, and has only heard of one inquiry about interest in purchasing the Site property within the past five years. FDEP is kept well-informed about the status of the Site because the O&M contractor provides FDEP with Site inspection reports.

Terry Vandell-Bell: Ms. Vandell-Bell of Conoco has been involved at the Site since 2007. Ms. Vandell-Bell believes the source materials were properly addressed during the remedial actions for OU1 and that MNA continues to occur at OU2. She is not aware of any complaints or issues at the Site. Ms. Vandell-Bell is aware that there has been some interest from real estate brokers about the Site, but that they have primarily spoken with the RPM about the current deed restrictions that are in place. The O&M contractor keeps her well-informed about Site activities and any issues that may arise at the Site. Her only suggestion for the Site was to cut back small trees and vines that are growing along the perimeter security fence to ensure the fence does not get damaged and thereby allow access to the capped portion of the Site.

Phil Roberts: Mr. Roberts, the lead project manager for Williams for this Site, believes the Site cleanup has been going well because the contamination plume is defined, and the contaminant concentrations are decreasing. The cleanup is being completed as anticipated, and the monitoring well system is working well. Mr. Roberts is not aware of any impacts the Site has had on the community. Mr. Roberts is satisfied with the institutional controls that are in place at the Site. He is kept well informed by the O&M

contractor about Site activities, and does not have any recommendations about the management of the Site.

Jeffrey Wagner: Mr. Wagner of URS is in charge of conducting O&M at the Site. His overall impression of the project is that the expectations for the Site's cleanup are being met, as shown in the data and annual reports. The data shows that higher contaminant concentrations are found further down gradient from the Site, with lower, decreasing concentrations immediately down gradient and adjacent to the Site as anticipated. The O&M activities at the Site are completed regularly, which include regular mowing, maintenance of the stormwater drainage system, and ensuring that the Site remains secure. Mr. Wagner is not aware of any changes at the Site that would cause difficulties related to O&M activities. He believes O&M at the Site has been optimized because the same staff has worked at the Site for several years, which has helped increase efficiency and reduces the potential for mistakes.

7.0 Technical Assessment

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

The review of documents, ARARs, risk assumptions, and the Site inspection indicates that the selected remedies are functioning as intended by the RODs for OU1 and OU2. The selected remedy for OU1 is adequately containing contaminated soil and sludge from the former sludge pond through solidification/stabilization. The RCRA cap covering the contaminated soil and sludge at OU1 is in good condition with a well-established vegetative cover. No major erosion or damage to the cap was observed during the Site inspection. O&M is completed regularly at OU1 to maintain the cap and ensure the effectiveness of the cap is not compromised. A stormwater drainage system is also maintained at OU1 to prevent erosion and ponding on the capped portion of the Site. Access to OU1 is limited by a locked fence, and signs are posted with information about Site conditions. Any future land use at OU1 is limited by a restrictive covenant to prevent any uses that would interfere with any of the remedial components required at OU1.

The selected remedy to use MNA to treat the groundwater contamination at OU2 remains protective. Groundwater in the sand-and-gravel aquifer is monitored regularly, and contaminant concentrations are decreasing. Naturally occurring combined radium 226 + 228 and fluoride have been detected at concentrations exceeding cleanup goals in both the surficial and main producing zones. Although combined radium 226 + 228 has exceeded cleanup goals in some samples during the past five years, the 2008 sampling demonstrated that MNA is occurring at the Site. Fluoride concentrations are also decreasing at the Site. The highest concentration of fluoride detected in AC-35D at 160 mg/L during November 2007 sampling has decreased to 120 mg/L during the 2008 sampling event. Sulfate and nitrate have been detected above cleanup goals in the main producing zone. Sulfate concentrations have been decreasing, although the highest detection occurred during November 2008 sampling in AC-35D at a concentration of 360 mg/L. Nitrate has only been detected above cleanup goals in AC-12D, AC-13D, AC-29D, and AC-35D between November 2006 and November 2008. The highest concentration of nitrate that has been detected in the past five years is 18 mg/L in AC-13D during November 2007 sampling, and nitrate concentrations continue to decrease. Nitrite concentrations have been below detection limits since the 2004 groundwater sampling event. Nitrite has since been removed from the Site's analyte list, as approved by an EPA memorandum submitted in January 2007. Chloride has only been detected in AC-25D and AC-35D at concentrations above cleanup goals. Both wells are located on the western edge of Bayou Texar.

EPA and FDEP concur with others¹ that radium in groundwater at the Site originates from naturally occurring thorium in subsurface minerals and not from phosphate fertilizer. An independent assessment by the University of West Florida concluded that radium at the Site is not a fertilizer-derived waste byproduct due to the low radium-226 concentrations (Mohrherr, Liebens, Lepo, and Rao, 2005).

¹ Geraghty & Miller, 1992a, 1992b, 1993a, 1993b; URS 2001, 2002, 2003, 2004, 2005, 2006a, 2006b, 2007, 2008, 2009a and 2009b.

According to the Institute of Phosphate Research (1993), if the Agrico phosphate fertilizer was the source of dissolved radium at the Site, groundwater would be highly enriched with uranium progeny radium-226. In contrast, the natural occurring enrichment detected in Site groundwater is thorium progeny radium-228.

EPA and FDEP also concur that documented exceedances of combined radium 226 + 228 in southern Escambia County groundwater are not attributed to the Site. This includes Site 348, located 0.4 miles south of the Site, where combined radium results of 40 pCi/L have been reported in surficial zone groundwater monitoring wells (Mactec, 2003). Naturally occurring thorium in aquifer minerals is also the origin of dissolved radium in these areas.

The U.S. Geological Survey has documented in studies throughout the eastern United States (Zapeza and Zoltan, 1988) that naturally occurring thorium in aquifer materials is relatively inert until contacted by low pH (< 5.0 s.u.) conditions. The pH change causes a chemical reaction that changes mineral surfaces and results in increased dissolution of radium-228 to groundwater.

The institutional controls at the Site prevent the completion of human and environmental exposure pathways. The Site is located within a Florida Groundwater Delineation Area, which restricts well construction. State, regional, and local agencies receive a memorandum annually requesting any changes that may impact current institutional controls at the Site. An advisory is also provided annually to inform contractors working in the area about current Site conditions. An irrigation well survey was completed as part of the selected remedy, and residents have been notified about current Site conditions as required by the 1994 ROD. Since the previous FYR, there have been a couple of inquiries about purchasing the Site, and how the institutional controls may affect its future use. Escambia County has also shown interest in solar panel usage on the Site. A surface water study was completed at Bayou Texar to ensure contaminated groundwater from the Site was not impacting surface water. The selected remedy for OU2 continues to function as anticipated.

Regular O&M at the Site is conducted to ensure the selected remedies continue to function properly. In January 2010, EPA approved updates to current O&M activities to optimize the selected remedies and help reduce costs for the remainder of the Site's cleanup. Updates to the Site's O&M no longer requires security surveillance at OU1 by a separate security company because the O&M contractor that maintains the capped area inspects OU1 on a frequent, regular basis during maintenance activities. As part of O&M at the Site, a Site inspection report is completed on a biannual basis. The Site inspections continue to be completed on a biannual basis; however, the results from each inspection will now be consolidated into an annual Site inspection report instead of in separate reports throughout the year.

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?

The exposure assumptions, toxicity data, and RAOs used at the time of the remedy selection are still valid. Some of the regulatory levels associated with the ARARs for the groundwater have changed since the Site's 1992 ROD. The regulatory levels for arsenic and nitrite have become more stringent. The federal and state MCLs for arsenic have changed from 0.05 mg/L to 0.01 mg/L, and the federal and state MCLs for nitrite have changed from 10 mg/L to 1 mg/L. Because institutional controls restricting groundwater use and the construction of wells are prohibited in areas affected by the Site, there are no completed exposure pathways. Therefore, the protectiveness of the Site's remedy has not been affected by the change in ARARs. Additionally, on January 22, 2007, EPA determined that nitrite analysis was no longer necessary and could be removed from the Site's analyte list because nitrite concentrations were consistently below the detection level of 0.05 mg/L during groundwater monitoring.

7.3 Question C: Has Any Other Information Come to Light That Could Call Into Question the Protectiveness of the Remedy?

Site 348, located south of the Site, has been found to have some of the same groundwater contaminants as the Site. Although the contamination at Site 348 is not a result of impacts from the Site, contamination from Site 348 could impact the Site. The study being completed at Site 348 by FDEP should be followed up to determine if cross-contamination has occurred or may occur.

7.4 Technical Assessment Summary

The assessment of the Site for this FYR is based on a review of documents, which include RODs, reports, sampling and monitoring plans, community interviews, and the previous FYR report, as well as ARARs, risk assumptions, and a Site inspection. The selected remedies are functioning as intended by the RODs for the Site. There have been no changes to the physical conditions at the Site that would affect the selected remedies chosen for the Site. Contaminated soils remain contained on Site by solidification/stabilization and covered by a RCRA cap surrounded by a slurry wall to prevent contamination migration. The vegetative cover on the cap remains in good condition and only minor divots were observed during the Site inspection conducted for this FYR. The O&M contractor at the Site has addressed the divots and maintains a drainage system to prevent erosion and ensure that the integrity of the cap is maintained. Future land uses that are compatible with the selected remedies at the Site, including storage of solar panels at OU1, are being considered.

Groundwater at the Site is monitored regularly to ensure that MNA remains effective. The 1996 OU1 O&M Plan at the Site required the submittal of a report for biannual Site inspections, and a security company monitors the Site for any signs of intrusion. In January 2010, EPA approved updates to the 1996 OU1 O&M Plan, which included consolidating Site inspection reports into a single annual report. Because the O&M

contractor conducts maintenance at OU1 on a frequent and regular basis during regular maintenance activities to ensure that remedial components are maintained and functioning properly and no security incidents have been reported during the past 12 years, the need for a security company is unnecessary. Additional updates to the 1996 OU1 O&M Plan also include changing the schedule for cleanout of stormwater under drain piping from annually to once per three years and/or as needed, and changing the mowing schedule from a set schedule to an "as required" schedule to maintain the Site's vegetation.

8.0 Issues

Table 10 summarizes current Site issues.

Table 10: Current Site Issues

Issue	Affects Current Protectiveness (Yes or No)	Affects Future Protectiveness (Yes or No)
The impacts of fluoride on ecological receptors in Bayou Texar need to be evaluated if fluoride levels in near bottom surface water or in the adjacent Bayou Texar monitoring well AC-35D increase to levels significantly greater than that measured historically.	No	Yes

9.0 Recommendations and Follow-up Actions

Table 11 provides recommendations to address the current Site issues.

Table 11: Site Recommendations

Issue	Recommendations/ Follow-Up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness? (Yes or No)	
					Current	Future
The impacts of fluoride on ecological receptors in Bayou Texar need to be evaluated if fluoride levels in near bottom surface water or in the adjacent Bayou Texar monitoring well AC-35D increase to levels significantly greater than that measured historically.	The PRP will submit a work plan to evaluate a future potential increase in fluoride levels and conduct further risk evaluation studies if the surface area weighted average pore water is predicted to be greater than 5 mg/L.	PRP	EPA	6/30/2010	No	Yes

10.0 Protectiveness Statements

The remedy for OU1 is protective because contaminated soil and sludge have been excavated and stored on Site in a former sludge pond using solidification/stabilization. The RCRA cap and slurry wall used to contain the solidified and stabilized soil and sludge are in good working condition and are preventing the spread of contamination. On-Site storm drains are being used to prevent erosion of the cap and regular O&M is completed to maintain the cap. Access to OU1 is limited by a locked fence and signs are posted with information about Site conditions and contact information. Any future land use is limited by a restrictive covenant to prevent any uses that would interfere with any of the remedial components required for OU1.

The remedy for OU2 is protective because groundwater in the sand-and-gravel aquifer continues to be monitored regularly. A surface water monitoring study was completed at Bayou Texar and an irrigation well survey was also conducted. Residents were notified about Site conditions and a contractor advisory notice is sent to irrigation system contractors, well construction contractors, and pool construction contractors on an annual basis to inform them of Site conditions. Groundwater institutional control requirements are being met because the Site is located within a Florida Groundwater Delineation Area and a well construction moratorium is in place for areas that have been impacted by the Site to restrict groundwater use. State, regional, and local agencies also receive an annual memorandum requesting information regarding any changes that might affect existing institutional controls.

Because the remedial actions selected for all OUs at the Site are operating as planned and are protective, the Site's remedy is protective of human health and the environment.

11.0 Next Review

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

Appendix A: List of Documents Reviewed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Information System (CERCLIS) Site Information accessed from Web Site:
<http://cfpub.epa.gov/supercpad/cnrSites/csitinfo.cfm?id=0400818>. April 2009-November 2009.

2005 Annual Report: Operable Unit 2, Agrico Site, Pensacola, Florida. Prepared by URS Corporation for Williams on Behalf of Agrico Chemical Company and ConocoPhillips Company. April 6, 2006.

2008 Annual Report: Agrico Site, Pensacola, Florida, Operable Units One and Two. Prepared by URS Corporation for ConocoPhillips Company and Williams on Behalf of Agrico Chemical Company. March 31, 2009.

EPA Record of Decision: Agrico Chemical Co. EPA ID: FLD980221857. OU 01 Pensacola, FL. September 29, 1992.

EPA Record of Decision: Agrico Chemical Co. EPA ID: FLD980221857. OU 02 Pensacola, FL. August 18, 1994.

Five-Year Review, Agrico Site, Pensacola, Florida. February 2000.

Second Five-Year Review for Agrico Chemical Company, Operable Units 1 and 2, Pensacola, Escambia County, Florida EPA ID: FLD980221857. July 2005.

Conceptual Site Model Ecological Impact Evaluation of Bayou Texar Downgradient of Agrico's Groundwater Fluoride Plume. Prepared by URS Corporation. September 4, 2009.

Amended Phase II Work Plan for Characterizing Pore Water in the Biotic Zone of Bayou Texar, Agrico Site, Pensacola, Florida. Memorandum from April 17, 2009.

Pensacola Agrico Chemical Superfund Site Update fact sheet. United States Environmental Protection Agency, Region 4. September 2008.

List of Documents Referenced

Coffin, John E. 1982. Summary of Ground-Water and Surface-Water Data For City of Pensacola and Escambia County, Florida: U.S. Geological Survey Open-File Report 82-361.

Florida Institute of Phosphate Research. 1993. Environmental Monitoring of Polk and Columbia Counties experimental phosphogypsum roads. Publication No. 05-033-101.

Geraghty & Miller, Inc. 1992a. Final Phase I Remedial Investigation, Agrico Chemical Site, Pensacola, Florida. March 12, 1992.

- Geraghty & Miller, Inc. 1992b. Phase II Remedial Investigation, Agrico Chemical Site, Pensacola, Florida. September 18, 1992.
- Geraghty & Miller, Inc. 1993a. Final Feasibility Study. Agrico Chemical Site. Pensacola, Florida. June 23, 1993.
- Geraghty & Miller, Inc. 1993b. Final Phase 2 Remedial Investigation. Agrico Chemical Site. Pensacola, Florida. November 26, 1993.
- MACTEC Engineering and Consulting, Inc., June 30, 2003. ECUA Water Supply Wells : #9, East Plant, F&Scott, Summary of Phase VII Investigation Findings, Site ID No. 348, Pensacola, Florida; prepared for FDEP, SIS, Tallahassee, Florida.
- Mohrherr, Dr. Carl J., Dr. Johan Liebens, Dr. J. Eugene Lepo, and Dr. K. Ranga Rao. 2005. Profiles of Selected Pollutants in Bayou Texar, Pensacola, FL; a component of the "Assessment of Environmental Pollution and Community Health in Northwest Florida"; EPA Cooperative Agreement Award X-9745502; University of West Florida. May 10, 2005.
- Trapp, H., Jr. 1975. Hydrology of the Sand-and-Gravel Aquifer in Central and Southern Escambia County, Florida. U.S. Geological Survey Open-File Report FL 74027.
- URS. March 9, 2001. Annual Report for 2000. Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida.
- URS. March 1, 2002. Annual Report for 2001, Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida.
- URS. April 2, 2003. Annual Report for 2002. Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida.
- URS. June 25, 2004. Annual Report for 2003, Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida.
- URS. 2005b. Annual Report for 2004, Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida. February 11, 2005.
- URS. 2006a. Annual Report for 2005, Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida. April 6, 2006.
- URS. 2006b. Technical Memorandum Report – Evaluation of Long-Term Groundwater Monitoring Network. Agrico Site, OU-1 and OU-2, Pensacola, Florida. November 30, 2006.
- URS. 2008. Annual Report for 2007, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida. March 28, 2008.
- URS. 2009a. Annual Report for 2008, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida. March 31, 2009.

URS. 2009b. Evaluation of Monitored Natural Attenuation in Groundwater, Agrico Site, Pensacola, Florida. Prepared by William A. Huber, Ph.D. (Quantitative Decisions), August 19, 2009.

URS. 2010. Update Submittal of Feb 3, 2010, to EPA Comments (October 15, 2009) re. Evaluation of Monitored Natural Attenuation in Groundwater Report (Aug 19, 2009)

Zapeczka, O.S., and Szabo, Zoltan, 1988. Natural radioactivity in groundwater – A Review, in Moody, D.W., Chase, E.B., and Paulson, R. W., comp., National Water Summary 1986 – Ground-water quality: Hydrologic conditions and events: U.S. Geological Survey Water Supply Paper 2325, p. 50-57.

Appendix B: Press Notices



U. S. Environmental Protection Agency, Region 4 Announces a Five-Year Review (2005-2009) for the Agrico Chemical Co. Superfund Site, Pensacola, Escambia County, FL

Purpose/Objective: The U.S. Environmental Protection Agency (EPA) is conducting a Five-Year Review of the remedy for the Agrico Chemical Co. Site (Site) in Pensacola, 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 Agrico Chemical Co. Site is located in Pensacola, Florida, and includes approximately 35 acres. From 1889 until 1920, the Site was originally used by a company that produced sulfuric acid from pyrite. The Site was then used by several companies to produce fertilizer. Among those companies was Agrico Chemical Co. who purchased the Site in 1972, and continued producing fertilizer until 1975. Wastewater from Site operations were discharged throughout the production of fertilizer into low-lying areas on the Site causing ponding to occur in four locations. EPA discovered on-Site soils and surface water contained elevated levels of lead and fluoride during a Hazardous Waste Site Investigation in October 1983. The Florida Department of Environmental Regulation (predecessor to the Florida Department of Environmental Protection) conducted a groundwater assessment at the Site and determined that groundwater was contaminated with fluoride and sulfates. As a result of these findings, the Site was proposed for inclusion on the National Priorities List (NPL) in 1988, and finalized on the NPL in 1989. Major contaminants at the Site included fluoride, lead, and arsenic in soil and sediments, and metals, radionuclides, and volatile organic compounds in groundwater and surface water.

Cleanup Actions: The Site has two operable units (OU) that address the soil, groundwater, and surface water contamination. On September 29, 1992 the Record of Decision for OU1 was signed selecting the remedy to treat the soil contamination. The major components of the remedy selected for OU1 include excavation and solidification/stabilization of contaminated soil and sludge from Site ponds, consolidation of contaminated soils into a single pond, construction of a cap over the pond, installation of a slurry wall surrounding the cap, and implementing institutional controls at the Site. The ROD for OU2, signed August 18, 1994, selected the final remedy to treat ground and surface water at the Site. The selected remedy for OU2 included monitoring groundwater and surface water, conducting a survey for irrigation wells, plugging and abandoning impacted irrigation wells, and implementing institutional controls.

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 protection of human health and the environment. The third of these Five-Year Reviews for this Site will be completed in July 2010.

EPA invites community participation in the Five-Year Review process.

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

Scott Miller
Phone: 404-562-9120
miller.scott@epa.gov

L'Tonya Spencer, Community Involvement Coordinator
Phone: 404-562-8463 / 1-800-435-9234 (Toll Free)
spencer.latonva@epa.gov

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

Local Document Repository
West Florida Regional Library
200 W. Gregory St.
Pensacola, FL 32501

Online: <http://cfpub.epa.gov/supercpad/curSites/csinfo.cfm?id=0400818>

Appendix C: Interview Forms

Interview Form for the Agrico Chemical Company Five-Year Review

Site Name: Agrico Chemical Company EPA ID No.: FLD980221857
Interviewer Name: L'Tonya Spencer Affiliation: EPA CIC
Subject's Name: Phil Roberts Affiliation: Williams, Lead Project Manager
Subject's Contact Information: phil.roberts@williams.com
Time: 10:45 am Date: 10/6/2009
Type of Interview (Circle one): In Person Phone _____ Mail _____ Other _____
Location of Interview: Agrico Site

1. What is your overall impression of the remedial activities at the Site?

Favorable. Cleanup is progressing as anticipated, and the monitoring system is working well.

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

There were a couple of inquiries from realtors. Otherwise there has not been much concern regarding the Site over the past four years.

3. How well do you believe the remedy currently in place is performing?

It is performing well. The plume is defined, the monitoring network is good, and contaminant concentrations are decreasing.

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

Only the realtor inquiries previously mentioned.

5. Have the institutional control requirements been implemented and enforced as designed?

Yes. The irrigation well advisories and water well records, and local agency inquiries are done annually.

6. Do you feel well informed about the Site's activities and progress? If not, what other methods of conveying information should EPA use?

The contractor keeps Williams well informed, and a fact sheet about the Site is available.

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

None.

Site Name: Agrico Chemical Company

EPA ID No.: FLD980221857

Interviewer Name: L'Tonya Spencer

Affiliation: EPA CIC

Subject's Name: Jeffry Wagner

Affiliation: URS, Manager Environmental Group

Subject's Contact Information: jeffry_wagner@usrcorp.com

Time: 10:55 am Date: 10/6/2009

Type of Interview (Circle one): In Person Phone Mail Other _____

Location of Interview: Agrico Site

1. What is your overall impression of the project?

This phase follows the ROD, and expectations are being met.

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

The remedy is functioning as shown in the data and annual reports.

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

The data shows that higher contaminant concentrations are further down gradient from the Site. Upgradient concentrations closest to and immediately down gradient from the Site are decreasing.

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

Mowing is completed twice each month in the wet seasons, and once in the dry seasons, stormwater retention ponds are maintained, and security regularly checks the Site and ensures it remains secure.

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

There has been no change to the schedule. The routines have been optimized.

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

No.

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

O&M has been optimized because the same staff has been working at the Site, which keeps O&M efficient and less mistakes are made.

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

Scott Miller is doing a great job working on the Site.

Site Name: Agrico Chemical Company

EPA ID No.: FLD980221857

Interviewer Name: L'Tonya Spencer

Affiliation: EPA CIC

Subject's Name: Terry Vandell-Bell

Affiliation: ConocoPhillips, Site Remediation Manager

Subject's Contact Information: terry.d.vandell@conocophillips.com

Time: 11:05 am Date: 10/6/2009

Type of Interview (Circle one): In Person Phone Mail Other _____

Location of Interview: Agrico Site

1. What is your overall impression of the remedial activities at the Site?

I have been involved since 2007, and was not involved in OUI activities. The source material has been properly addressed, and MNA at OU2 is working.

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

The remediation has been positive, and there has been very little negative impact on the community.

3. How well do you believe the remedy currently in place is performing?

Performing as expected.

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

There were two real estate brokers that inquired about the Site. Scott (the RPM) or Jeffry (the O&M contractor) spoke with them about deed restrictions.

5. Have the institutional control requirements been implemented and enforced as designed?

Yes.

6. Do you feel well informed about the Site's activities and progress? If not, what other methods of conveying information should EPA use?

Yes. Jeffry (the O&M contractor) is diligent reporting activities that go on at the Site and informing us of any problems that arise and how they will be fixed.

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

Trees and vines growing on and along the fence need to be cut more regularly so the fence does not become damaged.

Site Name: Agrico Chemical Company

EPA ID No.: FLD980221857

Interviewer Name: L'Tonya Spencer

Affiliation: EPA CIC

Subject's Name: Walsta Jean-Baptiste

Affiliation: FDEP

Subject's Contact Information: walsta.jean-baptiste@dep.st.fl.us

Time: 11:15 am Date: 10/6/2009

Type of Interview (Circle one): In Person Phone Mail Other _____

Location of Interview: Agrico Site

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

I've been working on the project since February 2009. The Site looks good. My main concern is that the institutional controls are still in place.

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

A recent inquiry whether the property owner interested in selling.

3. What effects have Site operations had on the surrounding community?

Seems quiet since the previous interest from the K Group attorney – illegal depositing.

4. How well do you believe the remedy currently in place is performing?

Based on the data, the remedy is performing well, and there are no irrigation impacts.

5. Are you aware of any community concerns regarding the Site or its operation and administration? If so, please give details.

Just an attorney lawsuit – primarily operating along the Bay area.

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

There are small areas in the cap that need to be fixed. The cap and slurry wall are operating well.

7. Do you feel well informed about the Site's activities and progress? If not, what other methods of conveying information should EPA use?

Yes, we're kept well informed. URS regularly sends reports to us.

Site Name: Agrico Chemical Company

EPA ID No.: FLD980221857

Interviewer Name: L'Tonya Spencer

Affiliation: EPA CIC

Subject's Name: Resident 1

Affiliation: Resident near Bayou Texar

Time: 5 pm Date: 10/6/2009

Type of Interview (Circle one): In Person Phone Mail Other _____

Location of Interview: Resident's home

1. Are you aware of the former environmental issues at the Agrico Chemical Company Superfund Site and what cleanup activities have taken place to date?

Yes.

2. What is your overall impression of the project?

The project was handled really well. I was professionally involved at the Site 20 years ago. I have heard much going on since. I assume everything is going well.

3. What effect has this Site had on the surrounding community, if any?

Immediately around the Site, people were very upset, but further away from the Site, people weren't as concerned.

4. Have there been any problems with unusual or unexpected activity at the Site, such as emergency response, vandalism, or trespassing?

Not that I know of.

5. Should EPA do more to keep involved parties and surrounding neighbors informed of activities at the Site? By what methods?

If there was an emergency, I would want to be notified.

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

No.

Appendix D: Site Inspection Checklist

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST															
I. SITE INFORMATION															
Site name: Agrico Chemical Company		Date of inspection: <u>10/6/2009</u>													
Location and Region: Pensacola, FL/Region 4		EPA ID: FLD980221857													
Agency, office, or company leading the five-year review: EPA, Region 4		Weather/temperature: Cloudy/70°													
Remedy Includes: (Check all that apply) <table border="0"> <tr> <td><input type="checkbox"/> Landfill cover/containment</td> <td><input checked="" type="checkbox"/> Monitored natural attenuation</td> </tr> <tr> <td><input checked="" type="checkbox"/> Access controls</td> <td><input type="checkbox"/> Groundwater containment</td> </tr> <tr> <td><input checked="" type="checkbox"/> Institutional controls</td> <td><input checked="" type="checkbox"/> Vertical barrier walls</td> </tr> <tr> <td><input type="checkbox"/> Groundwater pump and treatment</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Surface water collection and treatment</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Other <u>RCRA cap</u></td> <td></td> </tr> </table>				<input type="checkbox"/> Landfill cover/containment	<input checked="" type="checkbox"/> Monitored natural attenuation	<input checked="" type="checkbox"/> Access controls	<input type="checkbox"/> Groundwater containment	<input checked="" type="checkbox"/> Institutional controls	<input checked="" type="checkbox"/> Vertical barrier walls	<input type="checkbox"/> Groundwater pump and treatment		<input type="checkbox"/> Surface water collection and treatment		<input checked="" type="checkbox"/> Other <u>RCRA cap</u>	
<input type="checkbox"/> Landfill cover/containment	<input checked="" type="checkbox"/> Monitored natural attenuation														
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<input checked="" type="checkbox"/> Institutional controls	<input checked="" type="checkbox"/> Vertical barrier walls														
<input type="checkbox"/> Groundwater pump and treatment															
<input type="checkbox"/> Surface water collection and treatment															
<input checked="" type="checkbox"/> Other <u>RCRA cap</u>															
Attachments: <input type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached															
II. INTERVIEWS (Check all that apply)															
1. O&M Site manager	<u>Jeffry Wagner</u>	<u>Manager Environmental Group</u>	<u>6/9/2009</u>												
	Name	Title	Date												
Interviewed <input checked="" type="checkbox"/> at Site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____															
Problems, suggestions; <input checked="" type="checkbox"/> Report attached _____															
2. O&M staff	_____	_____	<u>mm/dd/yyyy</u>												
	Name	Title	Date												
Interviewed <input type="checkbox"/> at Site <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____															
Problems, suggestions; <input type="checkbox"/> Report attached _____															

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

Agency FDEP

Contact Walsta Jean-Baptiste _____ 10/6/2009 _____
 Name Title Date Phone No.

Problems; suggestions; ☒ Report attached _____

Agency _____

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

Problems; suggestions; ☐ Report attached _____

Agency _____

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

Problems; suggestions; ☐ Report attached _____

Agency _____

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

Problems; suggestions; ☐ Report attached _____

Agency _____

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

Problems; suggestions; ☐ Report attached _____

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

Phil Roberts, Lead Project Manager, Williams

Terry Vandell-Bell, Site Remediation Manager, ConocoPhillips Company

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

1.	O&M Documents	<input type="checkbox"/> O&M manual	<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
		<input type="checkbox"/> As-built drawings	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
		<input type="checkbox"/> Maintenance logs	<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks: _____					
2.	Site-Specific Health and Safety Plan		<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
	<input type="checkbox"/> Contingency plan/emergency response plan		<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks: _____					
3.	O&M and OSHA Training Records		<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks: _____					
4.	Permits and Service Agreements				
	<input type="checkbox"/> Air discharge permit		<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Effluent discharge		<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Waste disposal, POTW		<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Other permits _____				
Remarks: _____					
5.	Gas Generation Records		<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____					
6.	Settlement Monument Records		<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____					
7.	Groundwater Monitoring Records		<input type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks: _____					
8.	Leachate Extraction Records		<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____					
9.	Discharge Compliance Records				
	<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date		<input checked="" type="checkbox"/> N/A
	<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date		<input checked="" type="checkbox"/> N/A
Remarks: _____					
10.	Daily Access/Security Logs		<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____					
IV. O&M COSTS					
1.	O&M Organization				
	<input type="checkbox"/> State in-house		<input type="checkbox"/> Contractor for State		
	<input type="checkbox"/> PRP in-house		<input checked="" type="checkbox"/> Contractor for PRP		
	<input type="checkbox"/> Federal Facility in-house		<input type="checkbox"/> Contractor for Federal Facility		
	<input type="checkbox"/> Other _____				

2.	O&M Cost Records			
<input type="checkbox"/> Readily available		<input type="checkbox"/> Up to date		
<input type="checkbox"/> Funding mechanism/agreement in place				
Original O&M cost estimate _____		<input type="checkbox"/> Breakdown attached		
Total annual cost by year for review period if available				
From <u>mm/dd/yyyy</u>		To <u>mm/dd/yyyy</u>	_____	<input type="checkbox"/> Breakdown attached
Date		Date	Total cost	
From <u>mm/dd/yyyy</u>		To <u>mm/dd/yyyy</u>	_____	<input type="checkbox"/> Breakdown attached
Date		Date	Total cost	
From <u>mm/dd/yyyy</u>		To <u>mm/dd/yyyy</u>	_____	<input type="checkbox"/> Breakdown attached
Date		Date	Total cost	
From <u>mm/dd/yyyy</u>		To <u>mm/dd/yyyy</u>	_____	<input type="checkbox"/> Breakdown attached
Date		Date	Total cost	
From <u>mm/dd/yyyy</u>		To <u>mm/dd/yyyy</u>	_____	<input type="checkbox"/> Breakdown attached
Date		Date	Total cost	

3.	Unanticipated or Unusually High O&M Costs During Review Period			
Describe costs and reasons: _____				

V. ACCESS AND INSTITUTIONAL CONTROLS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A				
A. Fencing				
1.	Fencing damaged	<input type="checkbox"/> Location shown on Site map	<input checked="" type="checkbox"/> Gates secured	<input type="checkbox"/> N/A
Remarks: _____				
B. Other Access Restrictions				
1.	Signs and other security measures	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> N/A	
Remarks: <u>Signs are posted at gates to identify the presence of waste materials on the Site and to provide contact information.</u>				
C. Institutional Controls (ICs)				

1. Implementation and enforcement			
Site conditions imply ICs not properly implemented		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Site conditions imply ICs not being fully enforced		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Type of monitoring (e.g., self-reporting, drive by) _____			
Frequency <u>1-2 each month</u>			
Responsible party/agency _____			
Contact	<u>Jeffry Wagner</u>	_____	<u>mm/dd/yyyy</u>
	Name	Title	Date
			Phone no.
Reporting is up-to-date		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Reports are verified by the lead agency		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Specific requirements in deed or decision documents have been met		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Violations have been reported		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Other problems or suggestions: <input type="checkbox"/> Report attached			

2. Adequacy <input type="checkbox"/> ICs are adequate <input checked="" type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A			
Remarks: _____			
D. General			
1. Vandalism/trespassing <input type="checkbox"/> Location shown on Site map <input checked="" type="checkbox"/> No vandalism evident			
Remarks: <u>There were no signs of any vandalism at the Site.</u>			
2. Land use changes on Site <input type="checkbox"/> N/A			
Remarks: <u>There are discussions about using the Site for solar power equipment storage by the community.</u>			
3. Land use changes off Site <input type="checkbox"/> N/A			
Remarks: <u>There are no plans to change current off-Site land uses.</u>			
VI. GENERAL SITE CONDITIONS			
A. Roads <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1. Roads damaged <input type="checkbox"/> Location shown on Site map <input checked="" type="checkbox"/> Roads adequate <input type="checkbox"/> N/A			
Remarks: _____			
B. Other Site Conditions			
Remarks: _____			
VII. LANDFILL COVERS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
A. Landfill Surface			
1. Settlement (Low spots) <input type="checkbox"/> Location shown on Site map <input checked="" type="checkbox"/> Settlement not evident			
Aerial extent _____		Depth _____	
Remarks: _____			

2.	Cracks Lengths _____ Widths _____ Depths _____ Remarks: _____	<input type="checkbox"/> Location shown on Site map <input type="checkbox"/> Cracking not evident	<input type="checkbox"/> Cracking not evident <input type="checkbox"/> Cracking not evident
3.	Erosion Aerial extent _____ Remarks: _____	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> Erosion not evident <input type="checkbox"/> Erosion not evident
4.	Holes Aerial extent _____ Remarks: _____	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> Holes not evident <input type="checkbox"/> Holes not evident
5.	Vegetative Cover <input type="checkbox"/> No signs of stress Remarks: _____	<input type="checkbox"/> Grass <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram)	<input type="checkbox"/> Cover properly established <input type="checkbox"/> Cover properly established
6.	Alternative Cover (armored rock, concrete, etc.) Remarks: _____	<input type="checkbox"/> N/A	
7.	Bulges Aerial extent _____ Remarks: _____	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> Bulges not evident <input type="checkbox"/> Bulges not evident
8.	Wet Areas/Water Damage <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade Remarks: _____		
9.	Slope Instability <input type="checkbox"/> No evidence of slope instability Aerial extent _____ Remarks: _____	<input type="checkbox"/> Slides	<input type="checkbox"/> Location shown on Site map
B. Benches <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)			
1.	Flows Bypass Bench Remarks: _____	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> N/A or okay
2.	Bench Breached Remarks: _____	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> N/A or okay
3.	Bench Overtopped Remarks: _____	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> N/A or okay

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

3.	Monitoring Wells (within surface area of landfill)	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
		<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A	
Remarks: _____					
4.	Extraction Wells Leachate	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
		<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A	
Remarks: _____					
5.	Settlement Monuments	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed	<input type="checkbox"/> N/A	
Remarks: _____					
E. Gas Collection and Treatment		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A		
1.	Gas Treatment Facilities	<input type="checkbox"/> Flaring	<input type="checkbox"/> Thermal destruction	<input type="checkbox"/> Collection for reuse	
		<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance		
Remarks: _____					
2.	Gas Collection Wells, Manifolds and Piping	<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance		
Remarks: _____					
3.	Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings)	<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A	
Remarks: _____					
F. Cover Drainage Layer		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A		
1.	Outlet Pipes Inspected	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A		
Remarks: _____					
2.	Outlet Rock Inspected	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A		
Remarks: _____					
G. Detention/Sedimentation Ponds		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A		
1.	Siltation	Area extent _____	Depth _____	<input type="checkbox"/> N/A	
	<input type="checkbox"/> Siltation not evident				
Remarks: _____					
2.	Erosion	Area extent _____	Depth _____		
	<input type="checkbox"/> Erosion not evident				
Remarks: _____					
3.	Outlet Works	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A		
Remarks: _____					

4.	Dam	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____			
H. Retaining Walls <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	Deformations	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> Deformation not evident
Horizontal displacement _____		Vertical displacement _____	
Rotational displacement _____			
Remarks: _____			
2.	Degradation	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> Degradation not evident
Remarks: _____			
I. Perimeter Ditches/Off-Site Discharge <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	Siltation	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> Siltation not evident
Area extent _____		Depth _____	
Remarks: _____			
2.	Vegetative Growth	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> N/A
<input type="checkbox"/> Vegetation does not impede flow			
Area extent _____		Type _____	
Remarks: _____			
3.	Erosion	<input type="checkbox"/> Location shown on Site map	<input type="checkbox"/> Erosion not evident
Area extent _____		Depth _____	
Remarks: _____			
4.	Discharge Structure	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____			
VIII. VERTICAL BARRIER WALLS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Settlement	<input type="checkbox"/> Location shown on Site map	<input checked="" type="checkbox"/> Settlement not evident
Area extent _____		Depth _____	
Remarks: _____			
2.	Performance Monitoring	Type of monitoring _____	
<input checked="" type="checkbox"/> Performance not monitored			
Frequency _____		<input type="checkbox"/> Evidence of breaching	
Head differential _____			
Remarks: _____			
IX. GROUNDWATER/SURFACE WATER REMEDIES <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
A. Groundwater Extraction Wells, Pumps, and Pipelines		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Pumps, Wellhead Plumbing, and Electrical		
<input type="checkbox"/> Good condition		<input type="checkbox"/> All required wells properly operating	<input type="checkbox"/> Needs Maintenance <input checked="" type="checkbox"/> N/A
Remarks: _____			

2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks: _____
3.	Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks: _____
B. Surface Water Collection Structures, Pumps, and Pipelines <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Collection Structures, Pumps, and Electrical <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks: _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks: _____
3.	Spare Parts and Equipment <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks: _____
C. Treatment System <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	Treatment Train (Check components that apply) <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Metals removal <input type="checkbox"/> Air stripping <input type="checkbox"/> Filters _____ <input type="checkbox"/> Additive (e.g., chelation agent, flocculent) _____ <input type="checkbox"/> Others _____ </div> <div> <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance </div> <div> <input type="checkbox"/> Bioremediation </div> </div> <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ Remarks: _____
2.	Electrical Enclosures and Panels (properly rated and functional) <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks: _____
3.	Tanks, Vaults, Storage Vessels <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance Remarks: _____

4.	Discharge Structure and Appurtenances	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance
	Remarks: _____	
5.	Treatment Building(s)	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored
	Remarks: _____	
6.	Monitoring Wells (pump and treatment remedy)	<input checked="" type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A
	Remarks: _____	
D. Monitoring Data		
1.	Monitoring Data	<input checked="" type="checkbox"/> Is routinely submitted on time <input checked="" type="checkbox"/> Is of acceptable quality
2.	Monitoring data suggests:	<input checked="" type="checkbox"/> Groundwater plume is effectively contained <input checked="" type="checkbox"/> Contaminant concentrations are declining
E. Monitored Natural Attenuation		
1.	Monitoring Wells (natural attenuation remedy)	<input checked="" type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> 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.). <u>Contaminated groundwater is being treated by MNA, and contaminated soil has been excavated and stored on Site beneath a RCRA cap to prevent the creation of an exposure pathway.</u>	
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. <u>The Site's remedy is currently operational and functional. The cap is maintained and groundwater is monitored regularly. A restrictive covenant has been put in place to limit land uses at the Site.</u>	
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. <u>The remedy is functioning as intended. Groundwater is monitored, and the cap is being maintained. The O&M contractor visits the Site regularly for inspections and conducts repairs as needed.</u>	
D.	Opportunities for Optimization	

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.
A security company may no longer be needed to monitor the Site because O&M contractors are there regularly and monitor the Site for any potential trespassing or remedy issues.

Appendix E: Photographs from Site Inspection Visit



Monitoring well AC-7SR, located on the eastern edge of OU1.



Water drainage area to prevent erosion of the RCRA cap.



Sign posted at the Site's entrance gates to prevent trespassing.



View of the south stormwater pond at the Site.



View of the north stormwater pond at the Site.



Monitoring well AC-35D, located at the edge of Bayou Texar.



View of area where surface water samples were taken at Bayou Texar.

Appendix F: Site Groundwater Monitoring Data

Table F-1: Site Groundwater Monitoring Data

Well ID	Date	Fluoride	Total Arsenic	Total Lead	Chloride	Sulfate	Nitrate + Nitrite (before 2007) Nitrate (2007 and later)	Radium 226	Radium 226 Value Uncertainty +/-	Radium 228	Radium 228 Value Uncertainty	Combined Radium 226 + 228
Performance Standard		4	0.05	0.015	250	250	10					5
ACB-31S	5/10/05	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/8/05	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/06	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/06	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/2007	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/2007	<0.20	<0.010	<0.0050	7.9	50	4.8	0.829	0.227	5.25	0.851	6.079
	5/2008	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/2008	<0.20	<0.010	<0.0050	5.1	51	6.5	0.680	0.217	6.59	0.968	7.27
ACB-32S	5/10/05	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/8/05	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/06	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/06	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/2007	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/2007	<0.20	<0.010	<0.0050	3.7	16	1.7	0.195 J	0.0786	1.11	0.362	1.305 J
	5/2008	<0.20	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/2008	<0.20	<0.010	<0.0050	3.1	18	2.2	0.104	0.0898	1.10	0.321	1.204
AC-33S	5/10/05	0.6	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/8/05	0.75	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/06	0.27	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/06	1.4	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/2007	1.4	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/2007	0.64	<0.010	<0.0050	7.5	26	1.5	0.437	0.160	1.38	0.375	1.817
	5/2008	0.94	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/2008	0.94	<0.010	<0.0050	7.7	27	1.6	0.673	0.206	1.92	0.455	2.593

AC-34S	5/10/05	8.0	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/8/05	7.3	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/06	6.4	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/06	5.6	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/2007	4.6	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/2007	4.2	<0.010	<0.0050	8.6	74	2.4	0.261	0.127	2.06	0.492	2.321
	5/2008	3.1	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/2008	2.4	<0.010	<0.0050	7.2	68	2.8	0.159	0.104	2.04	0.453	2.199
AC-7SR	5/10/05	5.4	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/8/05	5.3	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/17/06	4.4	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/06	5.7	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	5/2007	4.1	<0.010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	11/2007	3.6	<0.010	<0.0050	6.9	35	2.3	0.339 J	0.137	0.974	0.357	1.313 J
	5/2008	6	<0.010	0.0056	NA	NA	NA	NA	NA	NA	NA	NA
	11/2008	3.3	<0.010	<0.0050	6.8	46	2.1	0.188	0.108	1.24	0.422	1.428
AC-2S	11/2005	73	0.021	NA	8.8	59	3.9	0.103	0.069	0.649	0.34	0.752
	11/2006	85	0.029	NA	9.1	69	4.0	0.032	0.076	U	0.19	0.032
	11/2007	50	0.016	NA	5.3	<5.0	2.0	0.0410 U	0.0797	0.0402 U	0.172	0.0812 U
	11/2008	54	0.02	<0.0050	7.6	<5.0	3.2	0.0442 U	0.0861	-0.0882 U	0.211	(0.044) U
AC-3S	11/2005	<0.20	<0.010	NA	12	15	2.8	0.0862	0.1	1.44	0.4	1.526
	11/2006	<0.20	<0.010	NA	8.9	16	2.8	0.243	0.157	0.81	0.327	1.053
	11/2007	<0.20	<0.010	NA	5.5	20	2.0	0.191 J	0.118	0.687 J	0.271	0.462 J
	11/2008	<0.20	<0.010	<0.0050	3.6	11	1.1	0.204	0.110	0.226	0.318	0.43
AC-5S	11/2008	<0.20	<0.010	<0.0050	12	19	6.8	0.539	0.1660	1.17	0.362	1.709
AC-6S	11/2008	0.71	<0.010	<0.0050	31	110	11	1.30	0.3280	5.01	0.77	6.31
AC-24S	11/2008	<0.20	<0.010	<0.0050	20	11	1.9	0.330	0.1200	1.42	0.3760	1.75
AC-26S	11/2008	<0.20	<0.010	<0.0050	11	19	0.4	0.424	0.1520	1.62	0.47	2.044
AC-27S	11/2008	<0.20	<0.010	<0.0050	4.7	8.6	0.089	0.167J	0.0957	0.157	0.28	0.324
NWD-2S	11/2008	2	<0.010	<0.0050	12	19	3.4	0.616	0.1870	1.27	0.39	1.886
NWD-4S	11/2008	<0.20	<0.010	<0.0050	9.4	<5.0	2.6	0.951	0.2430	1.08	0.34	2.031
AC-2D	11/2005	2.3	<0.010	NA	9.2	16	2.8	0.983	0.27	1.85	0.51	2.833
	11/2006	2.2	<0.010	NA	8.2	15	2.5	0.896	0.231	1.16	0.314	2.056
	11/2007	2.5	<0.010	NA	7.8	16	3.3	0.843 J	0.234	1.220	0.321	2.063 J
	11/2008	2.0	<0.010	<0.0050	8.8	13	2.5	0.994J	0.264	1.170	0.338	2.164
AC-3D	11/2005	23	<0.010	NA	36	300	12	0.994	0.28	18	2.3	18.994

	11/2006	27	<0.010	NA	39	330	12	0.939	<i>0.322</i>	13.2	<i>2.27</i>	14.139
	11/2007	22	<0.010	NA	24	220	7.8	1.060	<i>0.315</i>	8.120	<i>1.080</i>	9.18
	11/2008	18	<0.010	<0.0050	25	180	8.5	1.220	<i>0.318</i>	10.900	<i>1.480</i>	12.12
NWD-4D	11/2005	<0.20	<0.010	NA	9.8	41	8.3	2.93	<i>0.62</i>	9.04	<i>1.3</i>	11.97
	11/2006	<0.20	<0.010	NA	8.2	52	5.8	1.75	<i>0.443</i>	4.7	<i>0.746</i>	6.45
	11/2007	<0.20	<0.010	NA	7.7	42	7.0	1.860	<i>0.460</i>	2.860	<i>0.574</i>	4.72
	11/2008	<0.20	<0.010	<0.0050	8.6	39	1.5	1.910	<i>0.417</i>	3.850	<i>0.661</i>	5.76
AC-6D	11/2007	<0.20	<0.010	NA	12	36	6.6	3.070	<i>0.704</i>	1.670	<i>0.439</i>	4.74
	11/2008	<0.20	<0.010	<0.0050	13	42	5.9	3.790	<i>0.880</i>	3.450	<i>0.650</i>	7.24
AC-8D	11/2005	<0.20	<0.010	NA	16	<5.0	8.1	0.837	<i>0.23</i>	1.42	<i>0.35</i>	2.257
	11/2006	<0.20	<0.010	NA	15	<5.0	8.9	0.805	<i>0.224</i>	1.5	<i>0.438</i>	2.305
	11/2007	<0.20	<0.010	NA	15	<5.0	7.8	0.74 J	<i>0.243</i>	1.230	<i>0.418</i>	1.97 J
	11/2008	<0.20	<0.010	<0.0050	16	<5.0	7.0	0.776	<i>0.245</i>	0.960	<i>0.368</i>	1.736
AC-12D	11/2005	15	<0.010	NA	23	290	12	1.65	<i>0.4</i>	7.59	<i>1.1</i>	9.24
	11/2006	13	<0.010	NA	21	310	12	1.26	<i>0.323</i>	7.08	<i>1.05</i>	8.34
	11/2007	20	<0.010	NA	22	300	12	1.610	<i>0.395</i>	7.760	<i>1.130</i>	9.37
	11/2008	17	<0.010	<0.0050	23	310	12	1.730	<i>0.395</i>	6.750	<i>0.950</i>	8.48
AC-13D	11/2005	11	<0.010	NA	25	260	12	2.18	<i>0.53</i>	8.68	<i>1.2</i>	10.86
	11/2006	14	<0.010	NA	28	290	14	1.550	<i>0.390</i>	7.830	<i>1.200</i>	9.38
	11/2007	17	<0.010	NA	27	300	18	1.640	<i>0.389</i>	7.410	<i>1.080</i>	9.05
	11/2008	15	<0.010	<0.0050	28	360	13	1.320	<i>0.345</i>	5.950	<i>0.947</i>	7.27
AC-25D	11/2005	59	<0.010	NA	390	81	3.1	2.31	<i>0.52</i>	7.73	<i>1.2</i>	10.04
	11/2006	77	<0.010	NA	430	80	3.1	2.5	<i>0.608</i>	4.53	<i>0.761</i>	7.03
	11/2007	90	<0.010	NA	390	80	3.7	1.850	<i>0.474</i>	4.080	<i>0.676</i>	5.93
	11/2008	71	<0.010	<0.0050	480	77	3.7	2.200	<i>0.521</i>	3.980	<i>0.678</i>	6.18
AC-29D	11/2005	30	<0.010	NA	58	220	9.8	1.53	<i>0.37</i>	21	<i>2.7</i>	22.53
	11/2006	34	<0.010	NA	67	200	12	1.48	<i>0.367</i>	11.9	<i>1.61</i>	13.38
	11/2007	42	<0.010	NA	63	220	12	1.450	<i>0.383</i>	11.700	<i>1.520</i>	13.15
	11/2007	31	<0.010	<0.0050	65	200	11	1.540	<i>0.389</i>	10.800	<i>1.410</i>	12.34
AC-30D	11/2005	16	<0.010	NA	44	120	9.2	1.48	<i>0.34</i>	11.9	<i>1.6</i>	13.38
	11/2006	11	<0.010	NA	29	91	7.9	1.27	<i>0.304</i>	8.37	<i>1.19</i>	9.64
	11/2007	12	<0.010	NA	25	64	7.2	1.620	<i>0.403</i>	6.480	<i>0.932</i>	8.10
	11/2008	8.0	<0.010	<0.0050	25	60	6.0	1.690	<i>0.389</i>	6.800	<i>0.993</i>	8.49
AC-35D	11/2005	150	<0.010	NA	430	260	12	2.01	<i>0.5</i>	14.4	<i>1.9</i>	16.41
	11/2006	160	<0.010	NA	460	270	12	1.83	<i>0.505</i>	9.26	<i>1.31</i>	11.09

	11/2007	150	<0.010	NA	420	190	12	2.010	<i>0.488</i>	5.080	<i>0.828</i>	7.09
	11/2008	120	0.01	<0.0050	460	190	11	1.780	<i>0.417</i>	5.290	<i>0.866</i>	7.07
AC-36D	11/2005	<0.20	<0.010	NA	11	19	5.9	1.07	<i>0.27</i>	2.34	<i>0.52</i>	3.17
	11/2006	<0.20	<0.010	NA	11	18	5.9	1.21	<i>0.309</i>	2.66	<i>0.582</i>	3.87
	11/2007	<0.20	<0.010	NA	11	15	5.7	1.080	<i>0.298</i>	1.990	<i>0.419</i>	3.07
	11/2007	<0.20	<0.010	<0.0050	12	19	5.2	1.190	<i>0.337</i>	2.630	<i>0.501</i>	3.82
PIP-D	11/2005	<0.20	<0.010	NA	7.8	<5.0	3.4	0.835	<i>0.22</i>	2.23	<i>0.57</i>	2.831
	11/2006	<0.20	<0.010	NA	12	<5.0	5.3	1.19	<i>0.336</i>	1.89	<i>0.458</i>	3.08*
	11/2007	<0.20	<0.010	NA	7.6	5.3	3.8	0.850	<i>0.268</i>	1.640	<i>0.386</i>	2.49
	11/2008	<0.20	<0.010	<0.0050	10	8.2	4.1	1.320	<i>0.341</i>	2.410	<i>0.525</i>	3.73
AC-5D	11/2008	<0.20	<0.010	<0.0050	7.9	<5.0	3.6	0.922	<i>0.258</i>	1.300	<i>0.412</i>	2.222
AC-9D2	11/2008	33	<0.010	<0.0050	47	220	13	1.510	<i>0.384</i>	7.900	<i>1.120</i>	9.41
AC-10D	11/2008	<0.20	<0.010	<0.0050	8	29	6.1	1.130	<i>0.279</i>	2.200	<i>0.482</i>	3.33
AC-11D	11/2008	<0.20	<0.010	<0.0050	10	<5.0	3	0.828	<i>0.254</i>	1.930	<i>0.469</i>	2.758
AC-14D	11/2008	<0.20	<0.010	<0.0050	12	32	5.5	1.890	<i>0.499</i>	1.970	<i>0.455</i>	3.86
AC-21D	11/2008	<0.20	<0.010	<0.0050	10	24	4	2.030	<i>0.463</i>	2.080	<i>0.446</i>	4.11
AC22-D	11/2008	3.1	<0.010	<0.0050	9.4	15	3.9	1.340	<i>0.375</i>	2.650	<i>0.524</i>	3.99
AC-23D	11/2008	<0.20	<0.010	<0.0050	10	20	4.6	2.960	<i>0.669</i>	3.510	<i>0.588</i>	6.47
AC-24D	11/2008	56	<0.010	<0.0050	200	65	6.8	2.980	<i>0.678</i>	7.410	<i>1.080</i>	10.39
AC-26D	11/2008	<0.20	<0.010	<0.0050	3.8	9.8	0.07	0.161J	<i>0.082</i>	0.0167U	<i>0.279</i>	0.1777JU
AC-27D	11/2008	<0.20	<0.010	<0.0050	29	<5	2	1.120	<i>0.296</i>	2.430	<i>0.486</i>	3.55
AC-28D	11/2008	7.6	<0.010	<0.0050	31	49	6.8	2.070	<i>0.471</i>	6.430	<i>0.945</i>	8.50
NWD-2D	11/2008	<0.20	<0.010	<0.0050	11	13	5.2	0.901	<i>0.244</i>	1.710	<i>0.479</i>	2.611

Appendix G: Restrictive Covenant for the Site

DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS

THIS DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS ("Covenant") is made by CONOCO INC. ("CONOCO"), and shall take effect as of the date set forth below. The purpose of this Covenant is to restrict and prohibit all surface and subsurface uses of the property described herein, in perpetuity, except as specifically set forth herein.

RECITALS

WHEREAS, CONOCO is the owner of real property lying and being in Escambia County, Florida; and

WHEREAS, the intent of CONOCO is that this Covenant apply to and be binding on all property owned by CONOCO as of the date of this document and which lies in the area bounded by North Palafox Street, Brent Lane, North Davis Highway, and Fairfield Drive (the "Property"), as more particularly described on Composite Exhibit "A" consisting of 4 pages, attached and made a part hereof; and

WHEREAS, a RCRA cap is located on the Property containing pollutants in excess of certain standards allowed by federal and state law, as more particularly described in the Record of Decision, Agrico Chemical Superfund Site, September 28, 1992; and

WHEREAS, the Record of Decision described above mandated that CONOCO perform remedial action and impose access and use restrictions on the Property; and

WHEREAS, CONOCO seeks by this Covenant to fully comply with the Record of Decision requirement to restrict access to and use of the Property;

NOW THEREFORE, in consideration of the acceptance by the United States Environmental Protection Agency of the remedial action conditions and limitations stated in the Record of Decision, and acknowledging that the same constituted good and valuable consideration, CONOCO does hereby impose on the Property, in perpetuity, the following reasonable and lawful access and use restrictions.

COVENANTS

1. Access to the Property is restricted (1) to those authorized CONOCO agents and governmental agents or their representatives and officials who must enter the Property to inspect, maintain, or repair fencing or other remedial action measures constructed pursuant to or to be maintained in connection with the Record of Decision, (2) to those persons entitled to exercise the personal servitude of passage

in accordance with and for the limited purposes stated in the Act of Servitude recorded in the Official Records of Escambia County at OR Book 3758, Page 0955, and (3) to those persons who must have access to the Property to service and maintain existing public utilities and electrical power lines.

2. The erection, construction, or placing of any road, parking lot, building, sign, billboard or other advertising, utilities (public or commercial), towers, antennas, or any other structure on or above the ground is prohibited, except (a) as such structures may be required for the purpose of maintaining the remedial measures as required by paragraph 1 herein, or (b) as Conoco, or its agents or assigns, may erect or construct on those portions of the Property on which is not located the RCRA cap and as will not interfere with the maintenance of the remedial measures.

3. Use of the Property for temporary or permanent storage of equipment, inventory, or materials is prohibited, except as the same may be necessary to maintain the remedial measures as required by paragraph 1 herein.

4. The dumping or placing of soil or other substance or material as landfill or the dumping or placing of trash, waste, or unsightly or offensive materials on the Property is prohibited.

5. The removal or harvesting for any commercial purpose of trees, shrubs, or other vegetation is prohibited.

6. The excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance on or under the Property is prohibited, except as may be necessary to maintain the remedial measures as required by paragraph 1 herein.

7. Any drilling, mining, or other removal of soil, water, minerals, gases, or other substances from the surface or subsurface of the Property is prohibited, except as required to comply with the Record of Decision.

8. Any other use of the Property contrary to the Record of Decision is prohibited even though not specifically enumerated herein.

9. The restrictions imposed herein are perpetual restrictions imposed by the lawful owner of the Property and will run with the land and be binding on all successor owners, lessees or other transferees of the Property, as well as all successors and assigns of CONOCO.

10. This Covenant may be enforced by CONOCO, any other Potentially Responsible Party with respect to the Property the United States Environmental Protection Agency or the Florida Department of Environmental Protection, or their successors and assigns.

11. Enforcement of this Covenant shall be by action against any person or persons violating or attempting to violate any provision herein, either in equity or in law.

12. Invalidation of any provision of this Covenant by judgment or court order shall in no way affect any other provision of this Covenant, which shall remain in full force and effect in perpetuity.

IN WITNESS WHEREOF, the Covenantor has executed this Declaration of Covenants, Conditions and Restrictions for the Property described herein, this 11th day of July, 1997.

Signed, sealed and delivered
in the presence of:

ANN LUNDSTROM

Name: Ann Lundstrom

DOROTHY AKERS

Name: Dorothy Akers

STATE OF TEXAS
COUNTY OF HARRIS

The foregoing instrument was acknowledged
before me this 11th day of July,
1997, by Dennis R. Parker,
as V.P. SHEA of CONOCO INC.,
a Delaware corporation, and who is personally
known to me or who has produced
U.S. Passport 131824098 as identification.

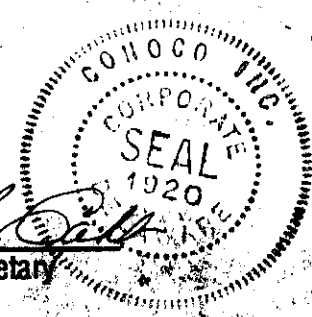
COVENANTOR:

CONOCO INC., a Delaware corporation

By: Dennis R. Parker (SEAL)
Dennis R. Parker
Its: Vice President, SHEA

Attest:

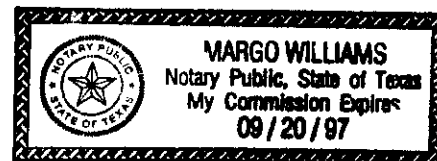
[Signature]
Assistant Secretary



[Signature]
Notary Public

Commission No.: _____
My Commission Expires: 9-20-97

This instrument prepared by:
✓ Jesse W. Rigby, of
CLARK, PARTINGTON, HART, LARRY
BOND, STACKHOUSE & STONE
One Pensacola Plaza
125 W. Romana Street, Suite 800
Pensacola, Florida 32501



PARCEL 1:

Commence at the Northwest corner of Section 4, Township 2 South, Range 30 West, Escambia County, Florida; thence North 52°36'16" East along the South line of Section 5, Township 2 South, Range 30 West for a distance of 1194.20 feet to the Easterly R/W line of the Louisville and Nashville Railroad (100' R/W); thence North 24°26'14" West along said Easterly R/W line for a distance of 295.98 feet to the Northerly R/W line of Fairfield Drive (SR #289-A); thence North 52°33'46" East along said Northerly R/W for a distance of 76.08 feet; thence South 37°26'14" East along said R/W for a distance of 90.00 feet; thence North 57°38'32" East along said R/W for a distance of 451.36 feet; thence North 50°39'13" East along said R/W for a distance of 150.08 feet; thence North 37°26'14" West for a distance of 490.00 feet; thence North 52°33'46" East for a distance of 200.00 feet to a point which is the Point of Beginning. From said Point of Beginning, continue North 52°33'46" East for a distance of 200.00 feet; thence South 37°26'14" East for a distance of 400.00 feet to the R/W line of Fairfield Drive (SR #289-A); thence continue South 37°26'14" East along said R/W for a distance of 165.00 feet; thence South 82°26'14" East along said R/W for a distance of 35.36 feet; thence North 52°33'46" East along said R/W for a distance of 177.70 feet to the Westerly R/W line of Interstate Highway 110 (SR #8-A); thence North 16°26'14" West along said Westerly R/W line for a distance of 823.07 feet; thence South 52°39'08" West for a distance of 697.67 feet; thence South 37°26'14" East for a distance of 179.49 feet to the Point of Beginning, containing 7.0 acres, more or less, and lying and being in Section 5, Township 2 South, Range 30 West, Escambia County, Florida, and subject to a 100 foot wide Gulf Power Company Easement. [As recorded in OR Book 3767, Page 0377, Escambia County, Florida.]

PARCEL 2:

Commence at the Northwest corner of Section 4, Township 2 South, Range 30 West, Escambia County, Florida; thence North 52°36'16" East along the South line of Section 5, Township 2 South, Range 30 West for a distance of 1194.20 feet to the Easterly R/W line of the Louisville & Nashville Railroad (100' R/W); thence North 24°26'14" West along said Easterly R/W line for a distance of 295.98 feet to the Northerly R/W line of Fairfield Drive (SR #289-A); thence North 52°33'46" East along said Northerly R/W for a distance of 76.08 feet; thence South 37°26'14" East along said R/W for a distance of 90.00 feet; thence North 57°38'32" East along said R/W for a distance of 451.36 feet; thence North 50°39'13" East along said R/W for a distance of 150.08 feet; thence North 28°20'06" East along said R/W for a distance of 219.32 feet to the Point of Beginning; thence North 52°33'46" East along said R/W for a distance of 200.00 feet; thence North 37°26'14" West for a distance of 400.00 feet; thence South 52°33'46" West for a distance of 200.00 feet; thence South 37°26'14" East for a distance of 400.00 feet to the Point of Beginning, containing 1.84 acres more or less and all lying and being in Section 5, Township 2 South, Range 30 West, Escambia County, Florida. [As recorded in OR Book 3767, Page 0377, Escambia County, Florida.]

PARCEL 3:

A tract being 1,6769 acres in Section 5, Township 2 South, Range 30 West, Escambia County, Florida, being more particularly described as:

Commence at the Northwest Corner of Section 4, Township 2 South, Range 30 West of said Escambia County, Florida; thence North 52°36'16" East along the South line of Section 5, Township 2 South, Range 30 West for 1194.20 feet to the Easterly R/W line of the CSX Railroad (100 foot R/W); thence North 24°26'14" West along said Easterly R/W line for 295.98 feet to the Northerly R/W line of Fairfield Drive (SR #289-A); thence North 52°33'46" East along said Northerly R/W for 25.64 feet; thence North 24°26'14" West for 370.51 feet; thence North 14°47'54" West for 199.93 feet; thence North 52°39'08" East for 970.81 feet; thence North 24°20'24" West for 175.71 feet; thence North 52°38'15" East for 257.88 feet to the Westerly R/W line of a Gulf Power Company Easement (100 feet R/W) as recorded in O.R. Book 298 at Page 512 of the public records of said county and the Point of Beginning; thence along said Westerly R/W line North 18°04'37" West 38.40 feet; thence departing said Westerly R/W line North 75°28'00" East for 93.40 feet; thence South 52°38'15" West for 98.77 feet to the Westerly R/W line of the aforesaid Gulf Power Easement and the Point of Beginning, AND

Commence at the Northwest Corner of Section 4, Township 2 South, Range 30 West of said Escambia County, Florida; thence North 52°36'16" East along the South line of Section 5, Township 2 South, Range 30 West for 1194.20 feet to the Easterly R/W line of the CSX Railroad (100 foot R/W); thence North 24°26'14" West along said Easterly R/W line for 295.98 feet to the Northerly R/W line of Fairfield Drive (SR #289-A); thence North 52°33'46" East along said Northerly R/W for 25.64 feet; thence North 24°26'14" West for 370.51 feet; thence North 14°47'54" West for 199.93 feet; thence North 52°39'08" East for 970.81 feet for the Point of Beginning; thence continue North 52°39'08" East for 416.63 feet to the Westerly R/W of Interstate I-110 (R/W varies); thence along said Westerly R/W North 16°22'22" West for 43.75 feet to the point of curvature of a curve concave to the Northeast having a radius of 2969.83 feet; thence along the arc of said curve through a central angle of 01°33'56" for an arc distance of 108.46 feet (Chord Bearing North 26°08'39" West, Chord Distance 108.46 feet); thence departing said Westerly R/W South 75°29'00" West for 62.02 feet; thence South 52°38'15" West for 356.65 feet; thence South 24°20'24" East for 175.71 feet to the Point of Beginning. [As recorded in OR Book 3758, Page 0952, Escambia County, Florida.]

PARCEL 4:

A portion of Section 5, Township 2 South, Range 30 West, Escambia County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Section 4, Township 2 South, Range 30 West of said Escambia County, Florida; thence North 52°36'16" East along the South line Section 5, Township 2 South, Range 30 West for 1194.20 feet to the Easterly R/W line of the CSX Railroad (100' R/W); thence North 24°26'14" West along said Easterly R/W for 295.98 feet to the Northerly R/W line of Fairfield Drive (SR #289-A); thence North 52°33'46" East along said Northerly R/W for 25.64 feet; thence North 24°26'14" West for 370.51 feet; thence North 14°47'54" West for 199.93 feet; thence North 52°39'08" East for 970.81 feet; thence North 24°20'24" West for 175.71 feet to the Point of Beginning; thence continue North 24°20'24" West for 140.43; thence North 75°28'00" East for 259.23 feet to the Westerly R/W line of a Gulf Power Company Easement (100' R/W) as recorded to O.R. Book 298 at page 512 of the Public Records of said county; thence along said Westerly R/W line South 18°04'37" East for 38.40 feet; thence departing said Westerly R/W line South 52°38'15" West for 257.88 feet to the Point of Beginning, containing 0.519 acres more or less.

PARCEL 5:

A portion of Section 5, Township 2 South, Range 30 West, Escambia County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Section 4, Township 2 South, Range 30 West of said Escambia County, Florida; thence North 52°36'16" East along the South line Section 5, Township 2 South, Range 30 West for 1194.20 feet to the Easterly R/W line of the CSX Railroad (100' R/W); thence North 24°26'14" West along said Easterly R/W line for 295.98 feet to the Northerly R/W line of Fairfield Drive (SR #289-A); thence North 52°33'46" East along said Northerly R/W for 25.64 feet; thence North 24°26'14" West for 370.51 feet; thence North 14°47'54" West for 199.93 feet; thence North 52°39'08" East for 118.25 feet for the Point of Beginning; thence continue North 52°39'08" East for 852.56 feet; thence North 24°20'24" West for 636.38 feet; thence South 65°39'36" West for 480.00 feet; thence South 24°20'24" East for 466.12 feet; thence South 52°38'43" West for 218.02 feet; thence South 2°28'32" West for 350.75 feet to the Point of Beginning; containing 9.1316 acres more or less.

Being more particularly shown on plat of survey dated March 19, 1995 prepared by Paul F. McCartney, Professional Land Surveyor Number 3140, Carlan Consulting Group, Inc., P.O. Box 2518, Pensacola, Florida 32513, incorporated herein by reference.

Being a portion of the property acquired by The Louisville and Nashville Railroad Company, a predecessor of Grantor, from Louis Boley, et ux, by deed dated November 17, 1896, recorded among the Public Land Records of Escambia County, Florida, in Book 17, Page 86.

On December 29, 1982 The Louisville and Nashville Railroad Company merged into Seaboard Coast Line Railroad Company, and the name of the surviving corporation changed to Seaboard System Railroad, Inc. On July 1, 1986, Seaboard System Railroad, Inc. changed its name to CSX Transportation, Inc.

PARCEL 6:

Commence at the Northwest corner of Section 4, Township 2 South, Range 30 West, Escambia County, Florida; thence North 52°36'16" East along the South line of Section 5, Township 2 South, Range 30 West, for a distance of 1194.20 feet to the easterly R/W line of the Louisville and Nashville Railroad (100' R/W); thence North 24°26'14" West along said easterly R/W line for a distance of 295.98 feet to the northerly R/W line of Fairfield Drive (SR #298-A); thence North 52°33'46" East along said northerly R/W for a distance of 25.64 feet to the Point of Beginning; then continue North 52°33'46" East along said R/W for a distance of 50.44 feet; thence South 37°26'14" East along said R/W for a distance of 90.00 feet; thence North 57°38'32" East along said R/W for a distance of 451.36 feet; thence North 50°39'13" East along said R/W for a distance of 150.08 feet; thence North 37°26'14" West for a distance of 490.00 feet; thence North 52°33'46" East for a distance of 200.00 feet; thence run North 37°26'14" West for a distance of 179.49 feet; thence South 52°39'08" West for a distance of 689.92 feet; thence South 14°47'54" East for a distance of 199.93 feet; thence South 24°26'14" East parallel to said Railroad R/W for a distance of 370.51 feet to the Point of Beginning. Containing 9.67 acres, more or less, and lying and being in Section 5, Township 3 South, Range 30 West, Escambia County, Florida.

RCD Aug 07, 1997 12:39 pm
Escambia County, Florida

Ernie Lee Magaha
Clerk of the Circuit Court
INSTRUMENT 97-407567