FIVE-YEAR REVIEW REPORT (2010-2015) Fourth Five-Year Review for Agrico Chemical Company FLD980221857 Pensacola, Escambia County, Florida

June 2015



U.S. Environmental Protection Agency Region 4 Atlanta, Georgia

Approved by:

Franklin Hill, Director, Superfund Division

Date:



Fourth Five-Year Review Report for Former Agrico Chemical Company 118 E. Fairfield Drive at Interstate 110 Pensacola Escambia County, Florida

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List of Acronyms

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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
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
NWFWMD	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 (a wholly-owned subsidiary of AECOM)

Executive Summary

Introduction

The Agrico Chemical Company Superfund Site (Site) is located in Pensacola, Florida and includes 29.84 acres. In 1891, the Goulding Fertilizer Company began producing fertilizer at the Site. A sulfuric acid 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) and continued to produce fertilizer. By 1963, the plant was sold to Continental Oil Company, which is a legacy company of Phillips. 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 plant operations at the site, wastewater was discharged at the Site into unlined wastewater 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 residual sludges from the former waste water ponds. 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. Phases I and II of the RI characterized the nature and extent of the Site's groundwater contamination. Also in 1993, further assessment was conducted in Bayou Texar to investigate the potential impacts of groundwater contamination on Bayou Texar. Soil contaminants included fluoride, lead, and arsenic, while groundwater contamination included fluoride, arsenic, lead (lead has never been detected in groundwater), sulfate, nitrate, radium 226 and radium 228. The selected remedies include soil excavation, solidification and stabilization and containment and monitored natural attenuation (MNA). The triggering action for this Five-Year Review (FYR) was the signing of the previous FYR on June 30, 2010.

Remedial Components

The Site has two Operable Units (OUs) to address contamination. The Record of Decision (ROD) for OU-1 was signed in 1992 to address the Site's soil contamination. OU-1 Remedial Action construction activities were initiated in 1995 and certified complete by EPA in April 1997. Remedial Action components conducted in OU-1 include:

- Excavation and solidification/stabilization of approximately 45,000 cubic yards of arsenic and lead impacted soil contaminated sludge and soils from Site sludge ponds.
- Consolidation of approximately 110,000 cubic yards of fluoride-impacted soils.
- Construction of a Resource Conservation and Recovery Act (RCRA) cap over the solidified and stabilized soils and sludges within the containment area.

- Construction of a 700 ft long clay slurry wall along the northern perimeter of the containment area. .
- Implementation of institutional controls, including security fencing and access and deed restrictions (filed against property deed on July 11, 1997).

The ROD for OU-2 was signed in 1994 to address the Site's groundwater impacts. OU-2 remedial activities were initiated in 1999 and regular monitored natural attenuation groundwater sampling is on-going. The OU-2 remedial components include:

- Groundwater monitoring of the sand-and-gravel aquifer (on-going annual monitoring • since 1999). Natural attenuation processes were evaluated in 2009 and updated in 2013. The data show that mechanisms for attenuation are in place throughout the OU-2 area. These mechanisms and the OU-1 source remedy are propagating downgradient toward Bayou Texar, as expected. For the plume area, the highest concentrations for each constituent are declining and downgradient highs are less than historical peaks. Increases are still happening for a few individual wells, but the overall concentrations are still less than the historical highs. It is estimated from Huber's statistical evaluation that much of the groundwater will reach the target concentrations within two to three decades. However, the discharge area near Bayou Texar may take longer. The processes at this discharge boundary are more complex and do not follow the upgradient time line. Additionally, radium declines may lag behind the other constituents as its attenuation is dependent on increases in pH as the overall chemical conditions improve upgradient. Initial fate and transport modeling performed for the site in the early 1990s suggested targets would not be reached for at least 70 years. About 20 years has passed since the source controls were implemented. The 50 years remaining is still reasonable and well within the targets estimated with the statistical evaluation.
- Surface water monitoring of the Bayou Texar (on-going annual monitoring since 1999). The evaluation (URS, September 4, 2009) of the primary discharge area for the Agrico plume in Bayou Texar indicates there is no significant risk to populations of demersal fish or to benthic macroinvertebrate communities that inhabit the reach due to fluoride concentrations. Furthermore, results indicate the fluoride solubility in the majority of surface sediments and in all pore waters within the primary discharge area for the Agrico plume is controlled by mineral precipitation reactions. This reaction causes dissolved fluoride concentrations to be buffered in near surface sediment pore water and in surface water in this primary discharge reach of Bayou Texar.
- Completion of a door-to-door survey of irrigation wells in July 1999.
- The Northwest Florida Water Management District (NWFWMD) implemented a well construction moratorium on February 22, 2001.
- Request access from private landowners to plug and abandon impacted irrigation wells (60 irrigation wells identified, 18 wells sampled, 2 wells plugged and abandoned; 41 offer letters distributed for abandonment).
- Advisory Program (distributed on annual basis).
- Utilization of institutional controls to restrict new wells. The well construction moratorium initiated in February 2001 is still in effect and has no termination date. Well prohibition for the defined area which includes the Agrico area is part of NWFWMD's Rule 40A-3.

Remedial Action Objectives (RAOs)

The RAOs established for the Site from both RODs for OU-1 and OU-2 are listed below and include a discussion for each on how the objectives are being met.

• Prevent exposure to contaminated soil (direct contact, ingestion and inhalation of dust) and leachability of contaminants into the groundwater.

This objective has been satisfied through the site remedial actions completed.

• Prevent degradation of groundwater from on-site Agrico sources.

This objective has been satisfied through source control. OU-1 soils and sludge material were consolidated or treated by solidification in the unsaturated (above the water table) portions of the subsurface and covered with an impervious Resource Conservation and Recovery Act (RCRA) - approved cap. This action was completed in April 1997. Groundwater monitoring results collected for the past 17 years indicates that the OU-1 remedy remains effective.

• Prevent or minimize degradation of the groundwater resource resulting from the selected remedy for the Agrico Site, such as the spreading of the off-site plume and prevent adverse impacts to the other plumes emanating from the Escambia Treating Company Site to the north, the fertilizer constituent plume emanating from Site 348, and saltwater intrusion along Bayou Texar.

This objective was satisfied for the Agrico Site by the Agrico site source removal and the selection of the natural attenuation remedy. The Escambia Treating Site source has also been contained. The groundwater plumes for these two sites do co-exist in the same areas but the delineated areas of the plumes are not expanding. The Site 348 source has not been remediated and there is the potential that because of like constituents of concern, the Site 348 groundwater plume could potentially co-mingle with the Agrico southern plume area making the Agrico plume appear larger than what it is actually defined.

• Prevent or minimize future exposure to contaminated groundwater.

This objective was satisfied by the ongoing well construction permitting moratorium by the NWFWMD and the fact that no one was identified within the Agrico plume area utilizing their irrigation well to fill their swimming pools based on a swimming pool survey. Agrico data indicates that the size of the plume is shrinking. Furthermore, groundwater elevations collected since the early 1990s indicate that groundwater flow is consistently easterly toward Bayou Texar (which intercepts groundwater flow), with no northerly or southerly flow that could influence the direction of transport of the Agrico plume. This is further evidence that the Agrico plume area is well defined.

• Prevent or minimize future impacts to surface water due to discharge of impacted groundwater to Bayou Texar.

This objective is being satisfied by the monitored natural attenuation remedy. Since the onsite source area is remediated, no additional concentrations are expected to enter the groundwater at the Agrico Site. Off-site, it is expected that concentrations in the surficial zone groundwater will infiltrate vertically downward into the main producing zone, thereby limiting the lateral extent in the upper zone of the aquifer. Infiltration is accomplished by rainfall percolating through the surface soils and moving vertically to recharge the deeper portions of the aquifer (the main producing zone). The August 19, 2009 evaluation of monitored natural attenuation found that the mechanisms for attenuation in groundwater are in place throughout the area and the effects of the source remedy are being observed downgradient as expected. Conditions continue to be favorable for attenuation of concentrations in groundwater as reported in the October 23, 2013 evaluation (URS, 2013b). Decreases in concentrations for the Agrico COCs have now been observed in the most upgradient portion of the groundwater plume, and are imminent in the furthest downgradient wells.

Groundwater and surface water sample results indicate that the objective of preventing or minimizing impacts to Bayou Texar is being achieved. Sampling results for nitrate + nitrite in groundwater indicate there is no nitrite component, and the values represent nitrate only. Nitrate is expected to disperse in the groundwater, and surface water sampling related to the Agrico network indicates that water quality standards for Bayou Texar are not exceeded. Chloride and sulfate concentrations naturally occur in Bayou Texar waters at concentrations at least an order of magnitude higher than the highest concentration detected for these constituents in the groundwater within the OU-2 area. Although lead and arsenic are Agrico COCs, they attenuate and are not components of the groundwater adjacent to and discharging to the bayou. These constituents do occur in the bayou, but they are present because of storm water runoff flowing into the bayou via numerous outfalls. Regarding fluoride, findings of the September 4, 2009 assessment of biotic zone pore water and near bottom surface water indicate that there is no significant risk to populations of demersal fish or to benthic macroinvertebrate communities that inhibit the reach of Bayou Texar where Agrico groundwater discharges to the bayou. As the 2009 study indicated, it is likely that dissolved concentrations of fluoride in near surface sediment pore water and surface waters in Bayou Texar are controlled by mineral precipitation reactions.

Site Public Document Repository

Documents related to this site are available to the public for review at the West Florida Regional Library, Genealogy Branch. Information about the site can be found on EPA's web site: <u>http://www.epa.gov/region04/superfund/sites/npl/florida/agricchemfl.html</u>. Also a specific web site developed for the Agrico Site is located at <u>www.agricopensacola.com</u>. This site contains general information, Fact Sheets, and recent annual reports and five-year review reports. Local and regional public agencies regularly receive documents and information summaries regarding the site. These agencies include the following: the Emerald Coast Utilities Authority, the Northwest Florida Water Management District, the FDEP Pensacola District office, the City of Pensacola, the Escambia County Health Department, the Escambia County Neighborhood and Environmental Services Department, and the Florida Department of Transportation, District Three, Chipley office.

Technical Assessment

The assessment of the Site for this FYR is based on a review of Annual reports from 2010, 2011, 2012, 2013; data results from the November 2014 sampling event; other technical reports and site inspection reports prepared from 2010 - 2014; and the 2010 Five Year Review Report. 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. The vegetative cover on the cap remains in good condition and only minor repairs have been necessary over the past 5 years. As required by the Site operation & maintenance (O&M) plan, the site is regularly mowed and maintained in order to prevent erosion and to ensure the integrity of the cap. Changes to the site use are not being considered, at least in the near future.

Groundwater at the Site has been monitored regularly since 1999. Additionally, a thorough evaluation of the Monitored Natural Attenuation (MNA) processes for the site was conducted in 2009 and 2013. The results of these evaluations confirm that natural attenuation mechanisms are functioning as expected within the area of the plume and that MNA remains an effective remedy for the impacted groundwater for the site. The data show that mechanisms for attenuation are in place throughout the area and the positive effects of the source remedy (i.e. on-site remediation) are becoming effective downgradient, as projected and expected. The projected ranges of cleanup dates remain on the order of decades for a majority of the plume area. At the discharge boundary for Bayou Texar, it is expected that the timeframes will be longer due to the complex flow/transport mechanisms in this area, but within the 70 year clean up period calculated in 1992 by groundwater modeling methods. Nearly twenty years has elapsed since the source was removed.

Additionally, a comprehensive evaluation was conducted within the primary groundwater discharge area of Bayou Texar in 2009. The evaluation indicates there is no significant risk to populations of demersal fish or to benthic macroinvertebrate communities that inhabit the reach due to fluoride concentrations. The study showed that fluoride in the near-bottom surface water (the primary exposure regime for demersal fish) was consistently less than the Florida Water Quality Criterion for Class III Marine waters for fluoride (5 milligrams per liter). In fact, the concentration of fluoride in a majority of surface water samples was less than 1 mg/L. Fluoride in the top 10 centimeters of sediment (the bioactive zone) ranged from 32 to 339 micrograms per gram. Fluoride in the sediment pore water in the bioactive zone (the primary exposure regime for benthic macroinvertebrates) was less than 3 milligrams per liter in 30 of the 40 stations sampled. Fluoride in pore water exceeded the 5 milligrams per liter standard at only 3 of 40 stations. Spatial analysis for the area of the 40 stations indicated that the surface area weighted

average concentration of fluoride in the bioactive zone was less than the 5 milligram per liter standard. Continued monitoring (from 2010-2014) at the three stations where pore water exceeded the 5 mg/l for fluoride indicate that the near bottom surface water results are well below the 5 mg/l. Furthermore, results indicate the fluoride solubility in the majority of surface sediments and in all pore waters within the primary discharge area for the Agrico plume is controlled by mineral precipitation reactions. This reaction causes dissolved fluoride concentrations to be buffered in near surface sediment pore water and in surface water in this primary discharge reach of Bayou Texar.

Protectiveness Statements

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.

SITE IDENTIFICATION					
Site name (from Waste	eLAN): Agrico C	hemical Comp	any	· · · · · · · ·	
EPA ID (from WasteL	AN): FLD98022	1857			
Region: 4 St	tate: FL	City/County:	Pensacola/Esca	mbia	
		SITE	STATUS		
NPL status: 🛛 Final	Deleted	Other (specify	<i>'</i>)		
Remediation status (choose all that app	oly): 🔲 Under (Construction	Operating Complete	
Multiple OUs?* 🛛 Y	(ES 🗌 NO	Construction	completion dat	te: April 1997	
Has Site been put int	to reuse? 🗌 YE	S 🛛 NO			
		REVIE	WSTATUS		
Lead agency: 🛛 EPA	A 🗌 State 🗌 T	ribe 🗌 Other I	Federal Agency		
Author name: Scott I	Miller, EPA			······································	
Author title: Remedi	ial Project Man	ager	Author affilia	tion: U.S. EPA	
Review period**: 11/	13/14 to May 30	, 2015			
Date(s) of Site inspec	tion: 11/13/14		· · · · · ·	_	
Type of review: Image: Post-SARA Image: Pre-SARA Image: Pre-SARA Image: Post-SARA Image: Pre-SARA Image: Pre-SARA Image: Pre-SARA Image: Post-SARA Image: Post-SARA Image: Pre-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA Image: Post-SARA <tr< td=""></tr<>					
Review number: 1 (first) 2 (second) 3 (third) Other (specify) 4 th (fourth)					
Triggering action: Actual RA On-site Construction at OU# Actual RA Start at OU# Construction Completion Previous Five-Year Review Report Other (specify) Other (specify)					
Triggering action date (from WasteLAN): 6/30/2010					
Due date (five years af	fter triggering acti	on date): 6/30/2	015		

Table 1: Five-Year Review Summary Form

* ["OU" refers to operable unit.]

Table 1 -- Five-Year Review (2010-2015) Summary Form continued--

Issues:

1) Site 348, located nearby, has contaminants similar to those found at the Site.

2.) High concentrations of semi-volatile compounds are found within Agrico monitoring wells near primary discharge area to Bayou Texar. The northern portion of the Agrico plume is co-mingled with the Escambia Treating site plume.

Issues Resolved since last Five-Year Review:

1) The evaluation (URS, September 4, 2009) of the primary discharge area for the Agrico plume in Bayou Texar indicates there is no significant risk to populations of demersal fish or to benthic macroinvertebrate communities that inhabit the reach due to fluoride concentrations. Furthermore, results indicate the fluoride solubility in the majority of surface sediments and in all pore waters within the primary discharge area for the Agrico plume is controlled by mineral precipitation reactions. This reaction causes dissolved fluoride concentrations to be buffered in near surface sediment pore water and in surface water in this primary discharge reach of Bayou Texar.

Recommendations:

1) Follow up regarding the Site 348 study being conducted by FDEP to ensure that the respective cleanups of the Site and Site 348 are not impacting the downgradient area to cause the footprint of the Agrico plume to appear to grow beyond historical and current delineation patterns.

2). Follow up with Escambia Treatment site EPA RPM, to ensure that the respective cleanups of each site are not impacting natural attenuation processes working for the Agrico site.

Protectiveness Statement(s):

The remedy for OU-1 is protective since the integrity of the cap remains in very good condition. The solidified and stabilized soil and sludge place in the unsaturated zone beneath the site remain protected by the cap and the stormwater controls that were implemented for the site. On-Site storm drains and stormwater ponds are in good condition and function as designed. Site maintenance prevents erosion to the cap area. Access to OU-1 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 OU-1.

The remedy for OU-2 is protective because the source removal effectively has prohibited continued impacts to the groundwater and groundwater sampling results indicate that the concentrations have significantly decreased in the area of the former operations (OU-1) and the higher concentrations remaining are now downgradient of the site. The groundwater has been regularly monitored for 15 years and the area of groundwater impacts is well defined and not expanding. Groundwater flow remains constant to the east indicating that there are no pumping effects influencing the Agrico plume. Requirements noted in the OU-2 ROD in addition to groundwater and surface water monitoring have been completed or have been ongoing: (1) an irrigation well and swimming pool survey was completed in 1999; (2) institutional controls have been maximized with the NWFWMD well construction moratorium which remains effective; (3) an advisory notice is annually distributed to all contractors (well drilling, irrigation, and swimming pool).

While the Site's selected remedy continues to function properly, an ongoing FDEP study at nearby Site 348, which is an FDEP Site that includes the former Kaiser fertilizer plant and fertilizer storage Site, indicates that Site 348 has some of the same contaminants as the Site. For the Site's OU-2 remedy to remain protective in the future, the study conducted at Site 348 should be followed up to ensure that the Site 348 plume do not impact the area of the Agrico plume.

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.

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."

EPA in conjunction with AECOM conducted the FYR to evaluate the remedy implemented at the Agrico Chemical Company Site (the Site) in Pensacola, Escambia County, Florida. This FYR was conducted from November 2014 to June 2015. EPA is the lead agency for the FYR. Conoco, Inc. (Conoco) and Agrico Chemical Company were the potentially responsible parties (PRPs) responsible for developing and implementing the remedy for the PRP-financed cleanup at the Site. Note – in 2003, ConocoPhillips Company was the merger successor to Conoco, Inc. and in mid-2012, ConocoPhillips separated into two standalone companies and the activities associated with this Site are now managed by Phillips 66. The Williams Companies, Inc. (Williams) manages the Site on behalf of Agrico Chemical Company. 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 fourth FYR for the Site (2010-2015). The triggering action for this statutory review is the signing of the Site's third FYR, which occurred on June 30, 2010. 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. OU-1's remedy addresses soil contamination at the Site by containing contaminated materials under a Resource Conservation and Recovery Act (RCRA) cap. OU-2's remedy addresses groundwater contamination on and off Site through monitored natural attenuation (MNA).

2.0 Site Chronology

The following table summarizes the chronology for the Site.

Table 2: Chronology of Site Events

Event	Date
Goulding Fertilizer Company initiates operations at site	1891
Initial discovery of contamination first reported	1957
Agrico Chemical Company ceases operations at Pensacola Plant	June 1975
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	September 29, 1989
Consent Agreement (Administrative) and	_
Administrative Order on Consent requiring the PRPs to conduct soil and	
groundwater investigations	
Finalized NPL listing	October 4, 1989
Administrative Order on Consent modified to require the PRPs to	January 31, 1992
conduct the Remedial Design for OU-1	
Ecological Risk Assessment for OU-1 and Risk/Health Assessment for	March 12, 1992
OU-1	
Removal Assessment	September 1, 1992
PRP RI/FS for OU-1 and Record of Decision (ROD) for OU-1	September 29, 1992
Remedial Design/Remedial Action (RD/RA) negotiations and RD for	February 16, 1993
OU-1 begins	
Site-wide 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 OU-2	August 18, 1994
ROD for OU-2 issued	August 25, 1994
RD for OU-1 completion and RA for OU-1 start date	September 23, 1994
OU-1 Remedial construction initiated	1995
Site-wide RD/RA negotiations completed (for groundwater)	March 28, 1995
Consent Decree amended to include RD/RA and O&M for OU-2	May 30, 1995
Operation and Maintenance (O&M)Plan for OU-1	September 1996
Restrictive Covenant for the site filed against property deed Escambia	July 11, 1997
County Clerk of the Circuit Court	
OU-1 Construction Certified Complete	April 1997
RD for OU-2 start date	April 3, 1997
RA for OU-1 completion	November 6, 1997
RD for OU-2 completion	September 11, 1998
Irrigation well and swimming pool survey completed	July 1999
Construction Completion documented via Preliminary Close Out Report	September 23, 1999
Regular Annual Groundwater/Surface Water Monitoring Initiated	November 1999
Event	Date

First Five Year Review	June 28, 2000
Technical Assistance Grant (TAG) received	August 31, 2000
NWFWMD initiated well construction moratorium for OU-2 area	February, 22, 2001
Second Five Year Review	July 11, 2005
Evaluation of benthic studies at Bayou Texar	November 7, 2006
EPA approval of evaluation of Site's long-term monitoring program	January 22, 2007
EPA approval of discontinuing OU-1 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,	January 25, 2010
2009	
EPA approval of MNA evaluation with adding three wells to annual	February 5, 2010
sampling events	
EPA approval of Bayou Texar evaluation with the addition of three	June 30, 2010
surface water monitoring stations starting November 2010	
Third Five Year Review	June 30, 2010
Evaluation of MNA Report No. 2	October 23, 2013

3.0. Background

3.1 Physical Characteristics

The Site is located in Pensacola, Florida and occupies 29.84 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, a construction aggregate business to the north, I-110 to the east and Fairfield Drive to the south (**Figure 2**). Escambia County property parcel numbers for OU-1 include 052S30300000002, 052S301101000000, 052S301103030001, 052S302300000001, 052S303000001002, and 052S303000003002.

Table 3: 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

Source: June 2010 Third Five Year Review Report

Soil and groundwater at the Site were contaminated as a result of industrial processes which included sulfuric acid production and fertilizer production. OU-1 is designated as the Site's soil contamination, and OU-2 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 temporarily retard vertical flow between the surficial and main producing zones. The groundwater in the sand-and-gravel aquifer flows in an easterly direction. Within the former Site

boundary (OU-1), the hydra333333333333 ulic head for the surficial zone is higher than the hydraulic head in the main producing zone, which causes the surficial zone to infiltrate and recharge the main producing zone. This causes the plume emanating from the Site to be transported and diverted to the main producing zone within about 0.4 mile of the Site. For this reason, the surficial zone plume has limited areal extent; and since source control has been completed, significant trends toward decreasing concentrations within the plume have occurred in the surficial zone (i.e. ongoing source zone depletion). Near the Bayou, the main producing zone hydraulic head is slightly higher than the surficial zone, causing the main producing zone to discharge into the bayou. Groundwater from the west and east directions of Bayou Texar discharge into the Bayou, the Bayou receives groundwater. This creates a boundary condition for the groundwater flow and plume transport. The Agrico plume discharges from the west into Bayou Texar along with the westerly groundwater component. Bayou Texar is a surface water feature located approximately 1.5 miles east of OU-1, and is considered a discharge area for groundwater flow that migrates from the Site, the Bayou also receives groundwater from the east, thus preventing groundwater from the Site to flow east of the bayou. The groundwater contamination follows the flow of groundwater in the aquifer, and has been detected east and down gradient of OU-1 up to Bayou Texar.





3.2 Land and Resource Use

The Site is located in an industrially zoned area and located within a one-mile radius of commercial, municipal, and residential land uses. There are no immediate plans involving reuse of this site. A mini-storage facility is located as an out parcel to the Site and is located within the south-central portion of the property, just along the Site's southern boundary. The Escambia 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 Five Year Review as "Site 348."

3.3 Institutional Controls

On February 22, 2001, the NWFWMD Board passed a moratorium on drilling new wells, including irrigation wells, in the Agrico and Escambia Treating Company areas. The moratorium will remain in effect and there is no termination date.

The moratorium affects the west side of the Bayou only because the Agrico plume does not extend across the Bayou due to hydrogeologic boundary flow conditions (the groundwater discharge to the Bayou and the Bayou receives groundwater recharge from both the east and west).

This moratorium is governed by the NWFWMD Rule 40A-3 which is incorporated into the rule as 40A-3.055 Prohibitions:

- (1) The construction of certain, specified types of water wells shall be prohibited in the following areas:
 - (a) Escambia Treating and Agrico Superfund Sites, South Escambia County – permitting of all water wells other than monitor wells or aquifer restoration wells shall be prohibited with the area inside and bounded on the west by CSX railroad corridor, on the east by Bayou Texar, on the south by East Cross Street projected in a straight line until it intersects Bayou Texar, and on the north by Hyatt Street, North Davis Highway, Wynnehurst Street, Kenneth Street, Boxwood Drive, Ash Drive, Ninth Avenue, and Hillbrook Way projected in a straight line until it intersects Bayou Texar.

The Northwest District for the Florida Department of Environmental Protection has designated the area that encompasses both the Agrico plume area and the ETC plume area as a contaminated area under Chapter 62-524, Florida Administrative Code (FAC). The FDEP designated area also includes a portion to the north of the Agrico OU-2 area that is associated with the ETC plume. Chapter 62-524 FAC is closely tied to the NWFWMD well construction permit program since the designated area requires more stringent processes by the permit applicant before a well construction permit can be issued by the NWFWMD. Since there is a moratorium on the issuance of a well construction permits within the designated area, the moratorium provides more stringent restrictions than Chapter 62-524.

A Restrictive Covenant for the Site was filed against the property deed with the Escambia County Clerk of the Circuit Court by Conoco Inc. (owner of site) and is dated July 11, 1997. The Restrictive Covenant states in summary that construction or related activities that would interfere with maintaining the Site remedial measures are prohibited by the legal deed restrictions. Any use of the property contrary to the Record of Decision is prohibited, as per the covenant filed for the property. The Restrictive Covenant for OU-1 is presented in **Appendix F.**

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

Table 4: Institutional Control (IC) Summary

Area of Interest – Soil and Groundwater at Agrico Chemical Company Property (Parcels: 052S301101000000, 052S30300000002, 052S303000003002, 052S302300000001, 052S303000001002)					
Media	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Instrument in Place
OU-1					
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.
OU-2					A DATA STATE
Ground Water	Yes	Yes	052S301101000000, 052S303000000002, 052S303000003002, 052S30230000001, 052S303000001002	Restrict installation of groundwater wells.	The Site lies within a NWFWMD Well Construction Moratorium Area and within the FDEP Florida Groundwater Delineation Area, which restricts well placement. ¹
1. Florid 2. Source	a's groundwater o e – June 2010 Thi	delineation informati	052S303000001002 on can be found online at: http: eview Report	//www.dep.state.fl.us/water/	Delineation Area, which restricts well placement. ¹ groundwater/delineate.htm

3.4 History of Contamination

Beginning in 1891, the Goulding Fertilizer Company began operations at the Site. A sulfuric acid 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 Phillips, 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. 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. Radium contained in the phosphate rock was not part of the waste stream. Instead the radium went out with the product. During fertilizer production, wastewater from the process was typically discharged into four unlined ponds at the Site. The low pH of the waste water infiltrating into the groundwater and contacting naturally occurring radium containing minerals in the subsurface is the secondary source of radium. It is primary represented by the isotope 228 which is another indication that the radium source was not from the primary production of fertilizer. If this would have been the case the primary isotope would have been 226. 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. The building foundations except for one near the south storm water pond were demolished and disposed under the cap during the remedial action for OU-1.

3.5 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 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. Due to conditions in the sales agreement between Williams and FMRP, Williams was responsible along with Conoco for implementing and managing the remediation associated with OU-1 and OU-2. 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 OU-1 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 OU-2 to address the Site's groundwater contamination was issued in August 1994.

3.6 Basis for Taking Action

The Baseline Risk Assessment (BLRA) 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 BLRA 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 OU-1 does not allow for residential uses in the future, residential exposure was not used to determine the contaminants of concern (COCs) for OU-1. The COC remediation goals for OU-1 are 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.

The BLRA 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. The COC remediation goals for OU-2 are based on federal or state primary and secondary drinking water standards.

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

OU-1 ROD

The remedy selected in the Site's September 1992 ROD for OU-1 addresses soil contamination resulting from the production of fertilizer and sulfuric acid. OU-1 ROD addresses the principal threat at the Site by treating the most highly contaminated soils and sludge material. Soils with lead, arsenic, or fluoride concentrations above the cleanup target levels were excavated and then solidified and stabilized and consolidated under a RCRA cap constructed on the Site.

The major components of the selected remedy for OU-1 include:

- Excavation and solidification/stabilization of contaminated sludge and soils from the Site.
- Construction of a RCRA cap over the treated and consolidated soils and sludge material.
- Construction of a clay slurry wall between the RCRA cap and the northern storm water pond.
- Implementation of institutional controls, including security fencing and access and deed restrictions.

OU-2 ROD

The remedy selected in the Site's August 1994 ROD for OU-2 addresses the Site's groundwater contamination. The implementation of the OU-1 remedy eliminated contamination from spreading into groundwater at the Site. Therefore, EPA selected a limited action remedy for OU-2, which includes MNA. Additional components of the selected remedy for OU-2 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 OU-1 and OU-2 include:

- Prevent exposure to contaminated soil (direct contact, ingestion, inhalation of dust) and leachability 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 not adversely impacting the plumes emanating from the Escambia Wood Treating Company Superfund Site and the Kaiser Site 348) 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

<u>OU-1</u>

The Remedial Design for OU-1 was completed on September 23, 1994. The Remedial Action activities for OU-1 began in 1995. The OU-1 ROD estimated that 32,500 cubic yards of contaminated soil would be addressed at the Site. The actual volume remediated was 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. Additionally, 100,000 cubic yards of soils impacted with fluoride were also collected for inclusion in the on-Site consolidation under a RCRA cap. Following the excavation and treatment of contaminated soils and sludges, lifts were installed in the excavation area. Building foundation rubble material was placed at the bottom of the containment area. On top of this rubble, treated soil and sludges were placed. The bottom of the containment area is about 20 feet above the saturated water table below the site. All treated material was placed within the unsaturated, dry portion of the subsurface.

The RCRA cap is a four-foot-thick, multi-layered engineered cap placed over the solidified and stabilized soil and sludge to prevent rainfall infiltration from coming into contact with the stabilized materials. The cap consists of seven layers, including an impervious fabric, a high-density polyethylene liner, and geotextile materials. To maintain the integrity of the cap, a stormwater runoff system was installed at OU-1, which includes the north and south stormwater drainage ponds (**Figure 2**). Because the north stormwater drainage pond is upgradient of the stabilized containment area, a 700-foot-long, two-foot-thick clay slurry wall between the north stormwater from water from coming into contact with the stabilized materials. A security fence around OU-1 was also installed to limit access the capped area at the Site. Remedial activities for OU-1 were completed on November 6, 1997. Groundwater results for the past 15 years indicate that OU-1's remedy components are performing adequately and no leaching is occurring to the stabilized materials at the Site. A restrictive covenant was placed on OU-1 on September 20, 1997 to limit any future land use at the Site.

<u>OU-2</u>

The RD for OU-2 began on April 3, 1994 and was completed on September 11, 1998. The installation of the groundwater monitoring well network for OU-2 was completed in July 1999 and the Site's OU-2 remedy implementation was completed on September 23, 1999. The wells were installed to assess the use of MNA for OU-2. Long-term groundwater monitoring was initiated in 1999. Sampling has been conducted annually for the past 15 years. To meet the additional requirements of the selected remedy for OU-2, 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 distributed annually to irrigation system contractors, well construction contractors, and pool construction contractors to inform them of the OU-2 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.

4.3 Operation and Maintenance (O&M)

The Site's September 1996 O&M Plan for OU-1 includes biannual Site inspections, Site inspections following major storm events, weekly security surveillance, regular mowing 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 OU-1 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 OU-1 was effective. OU-1 monitoring wells are now included in the Site-wide groundwater monitoring program.

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 OU-1 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.

The Site's November 1998 O&M Plan for OU-2, updated with approved changes in 2007 based on the November 30, 2006 Long-term Monitoring Well Network Evaluation, includes sampling OU-2 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 in all long-term monitoring wells in the surficial and main producing zones within OU-1 and OU-2 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 (NWFWMD).
- Identification and voluntary sampling and abandonment of irrigation wells within OU-2.
- Coordination and dissemination of Site information to local, regional, and state agencies.

In January 2010, EPA approved the following changes to the OU-1 and OU-2 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.

As part of EPA's approval (February 5, 2010) of the recommendations of the August 9, 2009, "Evaluation of Monitored Natural Attenuation, analysis of lead and arsenic were discontinued from the long-term network groundwater and surface water analyses.

Three surface water sampling locations were added to sampling program and included BT-2, BT-107, and BT-127. These near bottom surface water samples are analyzed for fluoride only and were required by EPA as part of the June 2010, Third Five-Year Review.

Estimated Annual O&M Costs

Estimated total annual O&M costs from the FS were \$25,000 for the OU-1 remedy and \$61,000 for the OU-2 remedy. The combined O&M annual costs estimated in the FS were \$86,000 (based on 1993 dollars). **Table 5** includes the annual O&M costs at the Site for the past five years.

Date R	ange	Total Cost (rounded to
From	То	the hearest \$1,000)
January 2010	December 2010	\$174,000
January 2011	December 2011	\$158,000
January 2012	December 2012	\$163,000
January 2013	December 2013	\$170,000
January 2014	December 2014	\$175,000

Table 5: Annual O&M Costs

5.0 Progress since the Last Review

The protectiveness statement from the 2010 Five Year Review for the Site stated the following:

"The remedy for OU-1 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 OU-1 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 OU-1.

The remedy for OU-2 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."

5.1 Status of Recommendations and follow-up actions from 2010 Review

EPA recommended that three additional surface water bottom sample locations be added to the annual monitoring program beginning in November 2010. Surface water collected from these locations would be analyzed for fluoride only. Results from all surface water sampling locations including these 3 additional locations have been less than 5.0 mg/L for fluoride from 2010 through 2014.

EPA recommended 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 areaweighted 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.

The average fluoride concentration in groundwater from monitoring well AC-35D is 151 mg/L for the 10 year period from 2000 to 2009. For the review period 2010 to 2014, the average fluoride concentration is 134 mg/L. This illustrates that natural attenuation processes are functioning and concentrations are decreasing with time.

Again, all surface water sampling results for fluoride for the period of record have been less than 5 mg/L. No significant increases in fluoride have occurred at the AC-35D location. In fact, the average concentration has declined from an average of 151 mg/L for the 2000 to 2009 period to an average of 145 mg/L for the period 2000 to 2014. For the above reasons, the trigger to re-evaluate groundwater discharge to the bayou has not been shown to be necessary.

6.0 Five-Year Review Process

6.1 Administrative Components

EPA Region 4 initiated the FYR in July 15, 2014 and scheduled its completion for June 30, 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. This FYR is being supported by the PRP contractor, URS and represented by Jeff Wagner. All documentation prepared by URS was reviewed by EPA. A review schedule was established that consisted of the following activities:

- Public Notice notification (EPA)
- Document review (URS)
- Data collection and review (URS)
- Site inspection (URS, EPA, FDEP)

• FYR Report development (URS) and review (EPA)

6.2 Community Involvement

On February 14, 2015, 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. EPA was not contacted 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 November 13, 2014, L'Tonya Spencer visited the West Florida Regional Library as part of the Site inspection. All relevant Site documents were found to be up-to-date through 2013 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 Annual Reports, the 2010 FYR, and other pertinent documents. A complete list of the documents reviewed can be found in Section 12.0.

6.31 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 remedies selected for the Site were designed to meet or exceed all chemical-specific ARARs and meet location- and action-specific ARARs. Chemical-specific ARARs identified in the selected remedy within the Site's 1992 ROD for soil contamination, and the Site's 1994 ROD for groundwater at the Site are listed in **Table 7 and Table 8**, respectively. The soil remedy is complete and MNA of groundwater continues at the Site.

6.32 Soil ARARs

The selected remedy in the Site's 1992 ROD for OU-1 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.

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

Table 6: Soil COCs and Remediation Goals for OU-1

6.33 Groundwater ARARs

The selected remedy in the Site's 1994 ROD for OU-2 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 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. Nitrite has been analyzed over the years and found not to be part of the Agrico plume. Arsenic in groundwater slightly exceeds the cleanup goal in one surficial well (AC-2S). Although the original standard was 0.05 mg/L, the analysis detection limits are such that 0.01 mg/L can be attained by the current analysis. However, this does not affect the protectiveness of the selected remedy because institutional controls are in place to restrict

groundwater use and new well construction is prohibited. The completed irrigation survey and the survey of swimming pools along with the fact that drinking water is supplied to the entire area from a municipal water supply prevent 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. None the less, although nitrate is what is reported, the analysis still requires that nitrite be calculated and the concentrations are less than 1 mg/L which is the new standard. The occurrence of radium exceedances which is primarily driven by the presence of elevated radium 228 concentrations is the result of secondary processes occurring deep in the subsurface. The presence of radium in the groundwater is caused by low pH (less 4.5 SU) infiltrating into the groundwater from unlined wastewater ponds during the time of operations. The low pH conditions in the groundwater contacted naturally occurring minerals in the sand-and-gravel aquifer sediments whereby geochemical reactions released the radium to the groundwater. Currently all Agrico plume area where radium exceedance occurred are present only in the main producing zone of the aquifer (more than 100 ft below land surface). Again this occurrence does not affect the protectiveness of the selected remedy because institutional controls are in place to restrict groundwater use and new well construction is prohibited. As is the case for arsenic, conditions related to radium also do not create an exposure pathway. Standards for the remaining COCs have not changed.

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	Same	No
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

Table 7: Previous and Current ARARs for OU-2 Groundwater COCs

a) The current federal groundwater standards (<u>http://www.epa.gov/safewater/contaminants/index.html</u>) and Florida groundwater standards (<u>http://www.dep.state.fl.us/water/drinkingwater/standard.htm</u>) 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 (2009-2014)

Groundwater monitoring has been conducted on a regular frequency since 1999. Groundwater results for a select number of monitoring wells are available from 1990, 1992, and 1997. OU-1 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, OU-1 and OU-2 groundwater monitoring wells have been sampled annually as part of the Site-wide groundwater monitoring program that consists of 23 monitoring wells. Additionally every 5 years to correspond with the EPA Five Year Reviews an additional 17 monitoring well are sampled. Appendix D presents the groundwater results for the period of record for the Site. Appendix E presents the historical surface water sampling results from Bayou Texar.

Source control was completed as of April 1997. Long-term groundwater monitoring for the natural attenuation groundwater remedy was initiated in November 1999. 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.

Overall concentrations have decreased for the COCs that exceed the clean-up target levels. These decreases continued for the period 2019 to 2014. As of 2014, only 1 of 14 surficial zone wells and 10 of 26 main producing zone monitoring wells show groundwater results that exceed clean up target levels for fluoride. All but one of the 40 monitoring wells showed decreasing concentrations from previous results. Arsenic target level of 0.01 mg/L is satisfied in all 40 monitoring wells except AC-2S. This is the only location where arsenic is detected above the target level. Historically, lead has not been detected in the groundwater. Nitrate is less than the target level for all 14 surficial zone monitoring wells. Only 2 of the 26 main producing zone monitoring wells exceeded the nitrate target level. Sulfate is less than the target level for all 14 surficial zone monitoring wells. Only 1 of the 26 main producing zone monitoring wells exceeded the sulfate target level. Chloride is less than the target level for all 14 surficial zone monitoring wells. Only 2 of 26 main producing zone monitoring wells exceeded the chloride is less than the target level for all 14 surficial zone monitoring wells. Only 2 of 26 main producing zone monitoring wells exceeded the chloride target level.

Radium 226 +228 has been detected in several monitoring wells in both the surficial and main producing zones in the past. Radium-228 is the dominant isotope, present in the groundwater as a result of low pH conditions caused from infiltrating wastewater contacting naturally occurring minerals containing primarily radium 228 and dissolution results in radium becoming a part of the groundwater plume. 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. Instead it is a secondary source of the former operations wastewater disposal in unlined wastewater ponds. If phosphate ore was the source, radium-226 would be the dominant isotope (Florida Institute of Phosphate Research, 2004). Currently, the radium exceedances are primarily contained within the main producing zone portion of the plume. The acidity of the surficial zone groundwater has returned to background conditions and attenuation is complete and the concentrations are less than the clean-up goal for this zone.

As of 2014, 13 of the 26 main producing zone wells exceeded the target level for combined radium 226 and radium 228. As in the surficial zone, it is expected that when pH conditions return to background levels the combined radium 226+228 concentrations will decrease. Due to different characteristics of the radium plume, the radium plume may attenuate at a slower rate than the fluoride plume. Acidic conditions below a pH of 4.5 SU remain within the Agrico

plume and therefore due to the occurrence of naturally occurring radium mineralogy in the aquifer additional radium may be released to the groundwater as the plume moves downgradient. Overall the concentrations found in the main producing zone for 2014 are less than the historical highs measured for the historical record.

Two monitoring locations for the main producing zone are outside of the Agrico plume but the combined radium concentration exceeds the target level. AC-6D and NWD-4D are affected by upgradient sources not associated with the Agrico site. In the case of AC-6D, the radium exceedance is associated with acidity from the former Kaiser fertilizer site (Site 348). For NWD-4D, the radium exceedance is associated with acidity from the ETC site.

6.5 Site Inspection

On November 13, 2014, the Site inspection was performed by the following participants: Scott Miller and L'Tonya Spencer (EPA); Jeffry Wagner (URS); John Carey (Williams); and Walsta Jean-Baptiste (FDEP).

The 29.84-acre Site is not currently in use. OU-1 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 well wellheads were secured and locked and in good condition. 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. The fence surrounding OU-1 is in good condition and free of vegetation.

Site photos are presented in Appendix C.

As part of the Site inspection, EPA observed groundwater sampling being conducted as part of the annual sampling event.

The Site repository was visited by EPA as part of the FYR process. Relevant Site documents through 2013 were available. All relevant public documents are contained at the repository. Additionally, recent documents are available on the Agrico web site at agricopensacola.com.

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 OU-1 and OU-2. Since the last Five Year Review, there have been no changes to the physical conditions at the Site that would affect the selected remedies chosen for the Site.

The selected remedy for OU-1 is adequately containing impacted soil and sludge from the former sludge pond through solidification/stabilization. The RCRA cap covering the stabilized soil and sludge at OU-1 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 OU-1 to maintain the cap and ensure the effectiveness of the cap is not compromised. A stormwater drainage system is also maintained at OU-1 to prevent erosion and ponding on the capped portion of the Site. Access to OU-1 is limited by a locked gate and fencing, and signs are posted with information about Site conditions. As required by the Site operation & maintenance (O&M) plan, the site is regularly mowed and maintained in order to prevent erosion and to ensure the integrity of the cap. Changes to the site use are not being considered at least in the near future. Any future land use at OU-1 is limited by a restrictive covenant to prevent any uses that would interfere with any of the remedial components required at OU-1.

The selected remedy to use MNA to treat the groundwater contamination at OU-2 remains protective. Groundwater at the Site has been monitored regularly since 1999. Additionally, thorough evaluations of the Monitored Natural Attenuation (MNA) processes for the site were conducted in 2009 and 2013. The results of these evaluations confirm that natural attenuation mechanisms are functioning as expected within the area of the plume and that MNA remains an effective remedy for the impacted groundwater for the site. The data show that mechanisms for attenuation are in place throughout the area and the positive effects of the source remedy (i.e. onsite remediation) are becoming effective downgradient, as projected and expected. The projected ranges of cleanup dates remain on the order of decades for a majority of the plume area. At the discharge boundary for Bayou Texar, it is expected that the timeframes will be longer due to the complex flow/transport mechanisms in this area, but within the 70 year clean up period calculated in 1992 by groundwater modeling methods. Nearly twenty years has elapsed since the source was solidified/stabilized.

Additionally, a comprehensive evaluation was conducted within the primary groundwater discharge area of Bayou Texar in 2009. The evaluation indicates there is no significant risk to populations of demersal fish or to benthic macroinvertebrate communities that inhabit the reach due to fluoride concentrations. The study showed that fluoride in the near-bottom surface water (the primary exposure regime for demersal fish) was consistently less than the Florida Water Quality Criterion for Class III Marine waters for fluoride (5 milligrams per liter). In fact, the concentration of fluoride in a majority of surface water samples was less than 1 mg/L. Fluoride in the top 10 centimeters of sediment (the bioactive zone) ranged from 32 to 339 micrograms per gram. Fluoride in the sediment pore water in the bioactive zone (the primary exposure regime for benthic macroinvertebrates) was less than 3 milligrams per liter in 30 of the 40 stations sampled. Fluoride in pore water exceeded the 5 milligrams per liter standard at only 3 of 40 stations. Spatial analysis for the area of the 40 stations indicated that the surface area weighted average concentration of fluoride in the bioactive zone was less than the 5 milligram per liter standard. Continued monitoring (from 2010-2014) at the three stations where pore water exceeded the 5 mg/L for fluoride indicate that the near bottom surface water results are well below the 5 mg/l. Furthermore, results indicate the fluoride solubility in the majority of surface sediments and in all pore waters within the primary discharge area for the Agrico plume is controlled by mineral precipitation reactions. This reaction causes dissolved fluoride

concentrations to be buffered in near surface sediment pore water and in surface water in this primary discharge reach of Bayou Texar.

The institutional controls at the Site prevent the completion of human and environmental exposure pathways. The Site is located within a NWFWMD defined area with a perpetual moratorium on new well construction. This defined moratorium area is the same area as delineated FDEP as a Florida Groundwater Delineation Area, which also 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. The selected remedy for OU-2 continues to function as anticipated.

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.

Groundwater impacts are primarily contained within the deeper portion (greater than 100 ft below land surface) of the Sand-and-Gravel aquifer.

A swimming pool survey was conducted in 1999 and based on the results, it was concluded that groundwater from the main producing zone derived from irrigation wells is not a source of water for filling swimming pools.

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

The protectiveness of the Agrico remedy is not questioned. However, other sources of groundwater contamination such as Site 348, located south of the Site, have 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 Agrico Site, contamination from the former Kaiser fertilizer site (Site 348) could impact the current defined Agrico plume limits. In other words similar constituents from Site 348 could co-mingle in the downgradient flow path that would cause the

Agrico plume to appear to be expanding. This would especially be of concern if the ECUA F & Scott municipal well was discontinued in the future. It appears that the pumping of this well may hydraulically contain the Site 348 plume at this time. However, as is evidenced in current and historical sampling results for AC-6D, radium impacts do extend down gradient at concentrations greater than 5 pCi/L. It should also be noted that at least three ECUA municipal water wells were taken out of service due to radium impacts. Each of these wells is located downgradient of the Site 348.

7.4 Technical Assessment Summary

The assessment of the Site for this Five Year Review is based on a review of documents, which include RODs, Annual Reports, sampling and monitoring plans, and the previous Five Year Review report. 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. The vegetative cover on the cap remains in good condition. No future land uses at OU-1 are being considered.

Groundwater at the Site is evaluated based methodology from MNA EPA guidance as refined by Dr. William Huber (Quantitative Decisions, Rosemont, PA) to ensure that MNA remains effective. The Agrico MNA results show that mechanisms for attenuation are in place throughout the OU-2 area. These mechanisms and the OU-1 source remedy are propagating downgradient toward Bayou Texar, as expected. For the plume area, the highest concentrations for each constituent are declining and downgradient peaks are less than historical highs. Increases are still happening for individual wells, but the overall concentrations are still less than the historical highs. It is estimated from Huber's statistical evaluation that much of the groundwater will reach the target concentrations within two to three decades. However, the discharge area near Bayou Texar may take longer. The processes at this discharge boundary are more complex and do not follow the upgradient time line. Additionally, radium declines may lag behind the other constituents and is more dependent on increases in pH as the overall chemical conditions improve upgradient. Initial fate and transport modeling performed for the site in the early 1990s suggested targets would not be reached for at least 70 years. About 20 years has passed since the source controls were implemented. The 50 years remaining is still reasonable and well within the targets estimated with the statistical evaluation.

Surface water monitoring of the Bayou Texar has been conducted annually from 1999 through 2014. The evaluation (URS, September 4, 2009) of the primary discharge area for the Agrico plume in Bayou Texar indicates there is no significant risk to populations of demersal fish or to benthic macroinvertebrate communities that inhabit the reach due to fluoride concentrations. Furthermore, results indicate the fluoride solubility in the majority of surface sediments and in all pore waters within the primary discharge area for the Agrico plume is controlled by mineral precipitation reactions. This reaction causes dissolved fluoride concentrations to be buffered in near surface sediment pore water and in surface water in this primary discharge reach of Bayou Texar.

8.0 Issues

There are no issues associated with the Site.

The OU-1 area is controlled and well maintained. For the groundwater within OU-2, the data has been extensively evaluated by statistical evaluations using EPA MNA guidance with modifications by Dr. William Huber (Quantitative Decisions). Results indicate that attenuation processes are functioning throughout the OU-2 area. For the primary discharge area to Bayou Texar, it has been demonstrated through assessments and additional surface water monitoring for the period 2010 through 2014 that fluoride is not causing impacts to the bayou. Furthermore, results indicate the discharge area for the Agrico plume is controlled by mineral precipitation reactions. These reactions cause dissolved fluoride concentrations to be buffered in near surface sediment pore water and in surface water in this primary discharge reach of Bayou Texar.

9.0 Recommendations and Follow-up Actions

The following are the recommendations:

- Continued O&M of the OU-1 area.
- Continued evaluation of future groundwater monitoring data for MNA effectiveness.
- Continued information gathering of Site 348 regarding any assessment or remediation activities.
- Continued exchange of information regarding the groundwater remedy for the ETC Site

10.0 Protectiveness Statements

The remedy for OU-1 is protective since the integrity of the cap remains in very good condition. The solidified and stabilized soil and sludge place in the unsaturated zone beneath the site remain protected by the cap and the stormwater controls that were implemented for the site. On-Site storm drains and stormwater ponds are in good condition and function as designed. Site maintenance prevents erosion to the cap area. Access to OU-1 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 OU-1.

The remedy for OU-2 is protective because the source was solidified/stabilized and effectively has prohibited continued impacts to the groundwater and groundwater sampling results indicate that the concentrations have significantly decreased in the area of the former operations (OU-1) and the higher concentrations remaining are now downgradient of the site. The groundwater has been regularly monitored for 15 years and the area of groundwater impacts is well defined and not expanding. Groundwater flow remains constant to the east indicating that there are no pumping effects influencing the Agrico plume. All requirements noted in the OU-2 ROD in addition to groundwater and surface water monitoring have been completed: (1) an irrigation

well and swimming pool survey was completed in 1999; (2) institutional controls have been maximized with the NWFWMD well construction moratorium which remains effective; (3) an advisory notice is annually distributed to all contractors (well drilling, irrigation, and swimming pool).

While the Site's selected remedy continues to function properly, an ongoing FDEP study at nearby Site 348, which is an FDEP Site that includes the former Kaiser fertilizer plant and fertilizer storage Site, indicates that Site 348 has some of the same contaminants as the Agrico site. For the Agrico's OU-2 remedy to remain protective in the future, the study conducted at Site 348 should be followed up to ensure that the Site 348 plume does not impact the area of the Agrico plume.

Because the remedial actions selected for OU-1 and OU-2 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 Five Year Review that requires these reports as long as stabilized waste is left on Site under the RCRA cap. Additionally, due to the presence of the cap unrestricted use and unlimited exposure is not allowed. The next FYR will be due within five years of the signature/approval date of this Five Year Review.

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APPENDICES

Appendix A—Five Year Review Site Inspection Checklist

FIVE-YEAR REVIEW SIT	E INSPECTION CHECKLIST		
I. SITE IN	FORMATION		
Site name: Agrico Chemical Company Date of inspection: November 13, 2014			
Location and Region: Pensacola, FL/Region 4	EPA ID: FLD980221857		
Agency, office, or company leading the five-year review: EPA, Region 4	Weather/temperature: Rainy, Overcast, Windy, low 40's		
Remedy Includes: (Check all that apply) Landfill cover/containment Access controls Institutional controls Groundwater pump and treatment Surface water collection and treatment Other RCRA cap	 Monitored natural attenuation Groundwater containment Vertical barrier walls 		
Attachments: Inspection team roster attached	Site map attached		
II. INTERVIEWS	S (Check all that apply)		
No interviews were conducted	as part of this Five Year Review.		
1. O&M Site manager Name	Title Date		
Interviewed at Site at office by phone Ph Problems, suggestions; Report attached	one no		
2. O&M staff	mm/dd/yyyy		
Name	Title Date		
Interviewed i at Site i at office by phone Pl Problems, suggestions; Report attached	none no		

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 Contact Name Problems; suggestions; R	Title	Date	Phone No.	
	Agency Contact Name Problems; suggestions; [] R	Title	<u>mm/dd/yyyy</u> Date	Phone No.	
	Agency Contact Name Problems; suggestions;	Title	<u>mm/dd/yyyy</u> Date	Phone No.	
	Agency Contact Name Problems; suggestions; [] R	Title	<u>mm/dd/yyyy</u> Date	Phone No.	
	Agency Contact Name Problems; suggestions; 🔲 R	Title	<u>mm/dd/yyyy</u> Date	Phone No.	
4.	Other interviews (optional)	Report attached		<u></u>	
<u></u>			<u></u>		
			· · · · · · · · · · · · · · · · · · ·		
	·				
<u> </u>					
			·		
			·····		
····	III. ON-SITE DOCU	MENTS & RECORI)S VERIFIED (Check a		
1.	O&M Documents			······································	
	O&M manual	Readily available	Up to date	🗌 N/A	
	 As-built drawings	Readily available	Up to date	N/A	
	Maintenance logs	Readily available	Up to date	□ N/A	
	Remarks:	_			
2.	Site-Specific Health and S	Safety Plan	Readily available	Up to date N/A	
	Contingency plan/emerg	gency response	🛛 Readily available	Up to date N/A	
	Remarks:				

3.	O&M and OSHA Training Records		Read	ily available	Up to date	□ N/A
	Remarks:					
4.	Permits and Service Agreements					
	Air discharge permit		🗌 Read	ily available	Up to date	🛛 N/A
	Effluent discharge		🗌 Read	ily available	Up to date	🛛 N/A
	🗌 Waste disposal, POTW		Read	ily available	Up to date	🛛 N/A
1	Other permits					
	Remarks:					
5.	Gas Generation Records		Read	ily available	Up to date	N/A
	Remarks:					
6.	Settlement Monument Records		Read	ily available	Up to date	N/A
	Remarks:			-		
7.	Groundwater Monitoring Records		Read	ily available	Up to date	□ N/A
	Remarks:					
8.	Leachate Extraction Records		Read	ily available	Up to date	N/A
	Remarks:					
9.	Discharge Compliance Records					
	Air Readily	y available		Up to date	ı 🛛	N/A
	Water (effluent)	y available		Up to date	ו 🛛	N/A
	Remarks:					
10.	Daily Access/Security Logs		🗌 Read	ily available	Up to date	🛛 N/A
	Remarks:					
	I	V. O&M C	OSTS			
1.	O&M Organization					
	State in-house	Ľ] Contrac	tor for State		
	PRP in-house	Σ	Contrac	tor for PRP		
	E Federal Facility in-house] Contrac	tor for Federal	Facility	
	Other					

2.	O&M Cost Records					
	🔀 Readily available		Up to date			
	Funding mechanis	m/agreement in place				
	Original O&M cost e	stimate 🔲 Break	down attached			
		Total annual cost by y	ear for review perio	d if available		
	From <u>mm/dd/yyyy</u>	To <u>mm/dd/yyyy</u>		Breakdown attached		
	Date	Date	Total cost			
	From <u>mm/dd/yyyy</u>	To <u>mm/dd/yyyy</u>		Breakdown attached		
	Date	Date	Total cost			
	From <u>mm/dd/yyyy</u>	To <u>mm/dd/yyyy</u>		Breakdown attached		
	Date	Date	Total cost			
	From <u>mm/dd/yyyy</u>	To <u>mm/dd/yyyy</u>	<u></u>	Breakdown attached		
	Date	Date	Total cost			
	From <u>mm/dd/yyyy</u>	To <u>mm/dd/yyyy</u>		Breakdown attached		
	Date	Date	Total cost			
3.	Unanticipated or Uni	usually High O&M Co	sts During Review	Period		
	Describe costs and rea	sons:				
	V. ACCESS	AND INSTITUTIONA	L CONTROLS	Applicable N/A		
A. Fen	cing					
1.	Fencing good conditi	on 🔲 Location shown	on Site map 🛛 G	ates secured \square N/A		
	Remarks:			· · · · · · · · · · · · · · · · · · ·		
B. Oth	er Access Restrictions					
1.	Signs and other secu	rity measures	Location	shown on Site map N/A		
	Remarks: Signs are po contact information.	sted at gates to identify	the presence of wast	te materials on the Site and to provide		
C. Inst	C. Institutional Controls (ICs)					

1.	Implementation and enforcement				
	Site conditions imply ICs not properly implemented \Box Yes \Box No \boxtimes N/A			No 🛛 N/A	
	Site conditions imply ICs not being fully end	forced	🗌 Yes 🔲	No 🖾 N/A	
	Type of monitoring (e.g., self-reporting, driv	/e by)			
	Frequency <u>1-2 each month</u>				
	Responsible party/agency Phillips 66 and Ag	grico Chemical Co (Willia	<u>ams)</u>		
	Contact <u>Jeffry Wagner</u>	Project Manager	01/07/14	<u>850-402-</u> <u>6409</u>	
	Name	Title	Date	Phone no.	
	Reporting is up-to-date		🛛 Yes 🛛] No 🗌 N/A	
	Reports are verified by the lead agency		🛛 Yes 🛛] No 🗌 N/A	
	Specific requirements in deed or decision d	locuments have been met	🛛 Yes 🛛] No 🗌 N/A	
	Violations have been reported		🗌 Yes 🛛	🛾 No 🛛 N/A	
	Other problems or suggestions: 🗌 Report :	attached			
2	Adequacy X ICs are adequate	ICs are ina	dequate		
4.	Remarks:		dequite		
D. G	eneral			· · · · · · · · · · · · · · · · · · ·	
1.	Vandalism/trespassing 🔲 Location sho	own on Site map 🛛 🛛 N	o vandalism evid	lent	
L	Remarks: There were no signs of any vandalism at the Site.				
2.	Land use changes on Site N/A				
	Remarks: No changes in land use expected d	luring the next 5 year peri	iod.		
3.	Land use changes off Site	A	-		
	Remarks: There are no plans to change curre	ent off-Site land uses.			
	VI. GENERA	L SITE CONDITIONS			
A. R	ads Applicable N/A				
1.	Roads damaged	own on Site map 🛛 R	oads adequate	□ N/A	
	Remarks:		-		
B. O	ther Site Conditions			· · · · · · · · · · · · · · · · · · ·	
	Remarks: RCRA cap and storm draining con	trols in good condition.			
	VIL LANDFILL COVE	RS Applicable	• 🕅 N/A		
A. La	andfill Surface (RCRA Cap Surface)		<u>6-3</u> - ****		
1.	Settlement (Low spots) Location	shown on Site man	Settlement	not evident	
	Arial extent		Depth		

2.	Cracks	Location shown on Site map	Cracking not evident		
	Lengths	Widths	Depths		
	Remarks:				
3.	Erosion	Location shown on Site map	Erosion not evident		
	Arial extent		Depth		
	Remarks:		· · · · · · · · · · · · · · · · · · ·		
4.	Holes	Location shown on Site map	Holes not evident		
	Arial extent		Depth		
L	Remarks:				
5.	Vegetative Cover	Grass	Cover properly established		
	No signs of stress	Trees/Shrubs (indicate size and lo	ocations on a diagram)		
	Remarks:	·			
6.	Alternative Cover (armo	red rock, concrete, etc.)	□ N/A		
	Remarks:				
7.	Bulges	Location shown on Site map	Bulges not evident		
	Arial extent		Height		
	Remarks:				
8.	Wet Areas/Water	Wet areas/water damage not e	vident		
Dama	age				
	U Wet areas	Location shown on Site map	Arial extent		
	Ponding	Location shown on Site map	Arial extent		
	Seeps	Location shown on Site map	Arial extent		
	Soft subgrade	Location shown on Site map	Arial extent		
L	Remarks:				
9.	Slope Instability	Slides	Location shown on Site map		
	No evidence of slope in	nstability			
	Arial extent				
L	Remarks:	· · · ·			
B. Ben	i ches Appli	cable 🛛 N/A			
	(Horizontally constructed me order to slow down the veloc	ounds of earth placed across a steep land city of surface runoff and intercept and c	fill side slope to interrupt the slope in onvey the runoff to a lined channel.)		
1.	Flows Bypass Bench	Location shown on Site map	N/A or okay		
L	Remarks:	· · · · · · · · · · · · · · · · · · ·			
2.	Bench Breached	Location shown on Site map	🔀 N/A or okay		
	Remarks:				
3.	Bench Overtopped	Location shown on Site map	N/A or okay		
	Remarks:				
C. Let	down Channels	Applicable 🛛 N/A			
	(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)				

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1.	Settlement (Low spots)	Location show	n on Site man	No evidence of settlement
	Arial extent		I dia bine interp	Denth
	Remarks:		-	лорал <u>— — — — — — — — — — — — — — — — — — —</u>
2.	Material Degradation	Location show	n on Site map	No evidence of degradation
	Material type		· · · · · · · · · · · · · · · · · · ·	Arial extent
	Remarks:			
3.	Erosion	Location shown	n on Site map	No evidence of erosion
•	Arial extent		I ON 2002	Denth
	Remarks:		-	
4.	Undercutting	Location show	n on Site map	No evidence of undercutting
-	Arial extent			Depth
	Remarks:			
5.	Obstructions	Туре		No obstructions
	Location shown on Site	map A	rial extent	
	Size			
	Remarks:			· <u> </u>
6.	Excessive Vegetative Gro	wth T	уре	
	🛛 No evidence of excessiv	ve growth		
	Vegetation in channels	does not obstruct flow	v	
	Location shown on Site	map A	rial extent	
	Remar <u>ks:</u>			
D. Co	ver Penetrations	Applicable 🛛 1	N/A	
1.	Gas Vents	Active] Passive
	Properly secured/locked	I D Functioning	Routinely samp	oled Good condition
	Evidence of leakage at p	penetration	Needs Mainten	ance 🗌 N/A
	Remarks:			· · · · · · · · · · · · · · · · · · ·
2.	Gas Monitoring Probes			
	Property secured/locked	I [] Functioning	Routinely samp	oled Good condition
	Property secured/locked Evidence of leakage at providence	I I Functioning penetration	Routinely samp Needs Mainten	ance DVA
	Property secured/locked Evidence of leakage at p Remarks:	I I Functioning penetration	Routinely samp Needs Mainten	oled Good condition ance N/A
3.	Property secured/locked Evidence of leakage at p Remarks: Monitoring Wells (within s	I Functioning penetration surface area of landfil	Routinely samp Needs Mainten	eled Good condition ance N/A
3.	Property secured/locked Evidence of leakage at p Remarks: Monitoring Wells (within s Property secured/locked)	I Functioning penetration surface area of landfil I Functioning	Routinely samp Needs Mainten	oled Good condition ance N/A
3.	Property secured/locked Evidence of leakage at p Remarks: Monitoring Wells (within s Property secured/locked Evidence of leakage at p	Functioning penetration surface area of landfil Functioning penetration	Routinely samp Routinely samp Routinely samp Needs Mainten	oled Good condition ance N/A oled Good condition ance N/A
3.	Property secured/locked Evidence of leakage at p Remarks: Monitoring Wells (within s Property secured/locked Evidence of leakage at p Remarks:	I Functioning penetration surface area of landfil I Functioning penetration	 Routinely samp Needs Mainten Routinely samp Needs Mainten 	oled Good condition ance N/A oled Good condition ance N/A
3. 4.	Property secured/locked Evidence of leakage at p Remarks: Monitoring Wells (within s Property secured/locked Evidence of leakage at p Remarks: Extraction Wells Leachate	I Functioning penetration surface area of landfil I Functioning penetration	Routinely samp Needs Mainten Routinely samp Needs Mainten	oled Good condition ance N/A oled Good condition ance N/A
3.	Properly secured/locked Evidence of leakage at p Remarks: Monitoring Wells (within s Properly secured/locked Evidence of leakage at p Remarks: Extraction Wells Leachate Properly secured/locked	I I Functioning penetration surface area of landfil I I Functioning penetration	Routinely samp Needs Mainten Routinely samp Needs Mainten Needs Mainten Routinely samp	Image: Condition of the second sec
3. 4.	Property secured/locked Evidence of leakage at p Remarks: Monitoring Wells (within s Property secured/locked Evidence of leakage at p Remarks: Extraction Wells Leachate Property secured/locked Evidence of leakage at p	I I Functioning penetration surface area of landfil I I Functioning penetration I I Functioning penetration	 Routinely samp Needs Mainten Routinely samp Needs Mainten Routinely samp Routinely samp Needs Mainten 	Image: Condition of the system Image: Condition of the system Image: Condition of the system Image: Condition of the system Image: Image: Condition of the system Image: Condition of the system Image: Image: Image: Condition of the system Image: Condition of the system Image: Image: Image: Image: Condition of the system Image: Condition of the system Image: Image: Image: Image: Image: Condition of the system Image: Condition of the system Image: Image
3.	Properly secured/locked Evidence of leakage at p Remarks: Monitoring Wells (within s Properly secured/locked Evidence of leakage at p Remarks: Properly secured/locked Properly secured/locked Evidence of leakage at p Remarks:	I I Functioning penetration surface area of landfil I I Functioning penetration I I Functioning penetration	 Routinely samp Needs Mainten Routinely samp Needs Mainten Routinely samp Routinely samp Needs Mainten 	Image: Condition ance Image: Condition ance
3. 4. 5.	Property secured/locked Evidence of leakage at property secured/locked Monitoring Wells (within s Property secured/locked Evidence of leakage at property secured/locked Extraction Wells Leachate Property secured/locked Extraction Wells Leachate Extraction Wells Leachate Extraction Wells Leachate Settlement Monuments	I I Functioning penetration surface area of landfil I I Functioning penetration I I Functioning penetration	 Routinely samp Needs Mainten Routinely samp Needs Mainten Routinely samp Needs Mainten Routinely samp Needs Mainten 	oled Good condition ance N/A oled Good condition ance N/A oled Good condition ance N/A oled N/A

E. Ga	s Collection and Treatment	Applicable	N/A	
1.	Gas Treatment Facilities			
	Flaring	Thermal destructi	on	Collection for reuse
	Good condition	Needs Maintenan	ce	
	Remarks:			
2.	Gas Collection Wells, Man	ifolds and Piping		
	Good condition	Needs Maintenan	ce	
	Remarks:			
3.	Gas Monitoring Facilities ((e.g., gas monitoring of a	djacent home	es or buildings)
	Good condition	Needs Maintenan	ce	□ N/A
	Remarks:	<u>.</u>		
F. Co	ver Drainage Layer	Applicable 🛛 N/A		
1.	Outlet Pipes Inspected	Functioning		□ N/A
	Remarks:	<u>.</u>		
2.	Outlet Rock Inspected	Functioning		□ N/A
	Remarks:			
G. De	etention/Sedimentation Ponds	Applicable	\boxtimes	N/A
1.	Siltation Area ex	tent De	oth	□ N/A
	Siltation not evident	·		
	Remarks:			
2.	Erosion Area ex	tent Dep	pth	
	Erosion not evident			
	Remarks:			
3.	Outlet Works	ctioning		□ N/A
	Remarks:			
4.	Dam 🗌 Fun	ctioning		N/A
	Remarks:			
H. Re	etaining Walls	Applicable 🛛 N/A		
1.	Deformations	Location shown on	Site map	Deformation not evident
	Horizontal displacement		/ertical displa	cement
	Rotational displacement			
	Remarks:			
2.	Degradation	Location shown on	Site map	Degradation not evident
	Remarks:			
I. Per	rimeter Ditches/Off-Site Disch	arge 🗌 App	licable 🛛	N/A
1.	Siltation	Location shown on	Site map	Siltation not evident
	Area extent		-	Depth
	Remarks:			

2.	Vegetative Growth	Location shown on Site map	□ N/A
	Vegetation does no	t impede flow	
· ·	Area extent		Туре
	Remarks:		
3.	Erosion	Location shown on Site map	Erosion not evident
ĺ	Area extent		Depth
	Remarks:		
4.	Discharge Structure	Functioning	□ N/A
	Remarks:		
VIII.	VERTICAL BARRIER	RWALLS Applicable N/A	
1.	Settlement	Location shown on Site map	Settlement not evident
	Area extent		Depth
	Remarks:	·····	
2.	Performance Monitor	ring Type of monitoring	
	Performance not m	onitored	
	Frequency		Evidence of breaching
	Head differential	_	
	Remarks:		
IX, Ģ	ROUNDWATER/SUR	FACE WATER REMEDIES Applica	ble 🛛 N/A
A. Gr	oundwater Extraction	Wells, Pumps, and Pipelines	Applicable N/A
1.	Pumps, Wellhead Plu	mbing, and Electrical	
	Good condition	All required wells properly operating	🗋 Needs Maintenance 🛛 N/A
	Remarks:		· · · · · · · · · · · · · · · · · · ·
2.	Extraction System Pi	pelines, Valves, Valve Boxes, and Other A	Appurtenances
	Good condition	Needs Maintenance	
	Remarks:		
3.	Spare Parts and Equi	ipment	
ĺ	Readily available	Good Requires up	grade I Needs to be provided
		condition	
	Remarks:		
B. Şu	rface Water Collection	Structures, Pumps, and Pipelines 🛛 🖄	Applicable N/A
1.	Collection Structures	, Pumps, and Electrical	
	Good condition	Needs Maintenance	
<u> </u>	Remarks:		
2.	Surface Water Colle	ection System Pipelines, Valves, Valve Bo	xes, and Other Appurtenances
	Good condition	Needs Maintenance	
	Remarks:		

3.	Spare Parts and Equipment	
	Readily available Good Requires upgrade condition	Needs to be provided
- 1	Remarks:	
C. Tr	eatment System 🗌 Applicable 🖾 N/A	
1.	Treatment Train (Check components that apply)	
1	☐ Metals removal ☐ Oil/water separation ☐ Bio	remediation
	Air stripping Carbon absorbers	
	Filters	
	Additive (e.g., chelation agent, flocculent)	
1	Others	
	Good condition	
	Sampling ports properly marked and functional	
	Sampling/maintenance log displayed and up to date	
	Equipment properly identified	
	Quantity of groundwater treated annually	
	Quantity of surface water treated annually	
	Remarks:	
2.	Electrical Enclosures and Panels (properly rated and functional)	
	⊠ N/A ☐ Good ☐ Needs Maintenance	
	Remarks:	
3.	Tanks, Vaults, Storage Vessels	
	\square N/A \square Good \square Proper secondary containment	Needs Maintenance
	condition	—
	Remarks:	
4.	Discharge Structure and Appurtenances	
	⋈ N/A □ Good □ Needs Maintenance	
	condition	
- <u>-</u>		· <u> </u>
5.		🗖 Nooda annoia
	doorways)	
	Chemicals and equipment properly stored	
	Remarks:	
6.	Monitoring Wells (pump and treatment remedy)	
	Properly secured/locked Supervision Routinely sampled Functioning	Good condition
	All required wells located INeeds Maintenance	□ N/A
	Remarks:	

D. M	onitoring Data				
1.	Monitoring Data				
	Is routinely submitted on time Is of acceptable quality				
2.	Monitoring data suggests:				
	Groundwater plume is effectively contained Contaminant concentrations are declining				
E. Mo	onitored Natural Attenuation				
1.	Monitoring Wells (natural attenuation remedy)				
	🛛 Properly secured/locked 🛛 🖾 Functioning 🖾 Routinely sampled 🖾 Good condition				
	All required wells located Needs Maintenance N/A				
	Remarks:				
	X. OTHER RÉMÉDIES				
If ther	e 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.).				
1	Contaminated groundwater is being treated by MNA, and contaminated soil has been excavated and				
<u> </u>	placed on Site beneath a KCKA cap.				
в.	Adequacy of O&M				
	Describe issues and observations related to the implementation and scope of OacM procedures. In				
	The Site's remedy is currently operational and functional. The cap is maintained and groundwater is				
1	monitored regularly. A restrictive convenant has been put in place to limit land uses at the Site.				
С.	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.				
	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>.</u>	Opportunities for Optimization				
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.				

Appendix B.—Site Inspection

INSPECTION TEAM NOVEMBER 13, 2014

Scott Miller, EPA, Region 4 Walsta Baptiste, FDEP, Tallahassee L'Tonya Spencer, EPA, Region 4 John Carey, Agrico Chemical Company Representative Jeff Wagner, URS

Appendix B continued. --





Appendix C. - Site Photos









PHOTOGRAPHIC LOC				
Client Name: Agrico Chemical Site	Site Location: Pensacola, Florida	Project No. 12806620.00000		
PhotoDate:No.Nov52014				
Direction Photo Taken: East				
Description: Monitoring well AC-7S.				
IMG_0917				



U	RS		PHOTOGRAPHIC LOG
Client N Agrico C	ame: Chemical Site	Site Location: Pensacola, Florida	Project No. 12806620.00000
Photo No. 7	Date: Nov 2014		
Direction Taken: Northwest	n Photo		
Descript	ion:		and the second second
Monitoring 31S.	well ACB-		



UR	LS		PHOTOGRAPHIC LOG
Client Na Agrico Cl	ame: hemical Site	Site Location: Pensacola, Florida	Project No. 12806620.00000
Photo No. 9	Date: Nov 2014		
Direction Taken: Northwest	1 Photo		
Description Upper bound with E. Fairf the right. IMG_0925	on: lary of site ield Dr. on		



UR	S		PHOTOGRAPHIC LOG
Client Nan Agrico Che	ne: emical Site	Site Location: Pensacola, Florida	Project No. 12806620.00000
Photo No. 11	Date: Nov 2014		
Direction I Taken:	Photo		
Description	n:		
West edge of p pond (dry) on l	roperty, south eft.		
IMG_0929			





Photo No. 14	Date: Nov 2014		
Direction F Taken:	hoto		
Northeast			
Description		THE REAL PROPERTY AND	
Overview of sit Drive bridge.	e from Fairfield		
IMG_0944			
			7

UR	S	PI	HOTOGRAPHIC LOG
Client Name Agrico Chen	e: nical Site	Site Location: Pensacola, Florida	Project No. 12806620.00000
Photo No. 15	Date: Nov 2014		
Direction Photo Taken: Northeast			
Description: View near AC-35D, looking across Bayou Texar. IMG_0954			

TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	RMANCE	4	0.01	0.015	250	250	10	Con-Series	-	5
					Su	rficial Zone)			
C. C	5/9/1997	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/10/1997	<0.2	<0.010	<0.0050	NA	NA	NA	NA	NA	NA
	5/4/1998	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/23/1998	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/25/1999	<0.2	<0.01	<0,005	NA	NA	NA	NA	NA	NA
	11/17/1999	<0.2	<0.010	<0.0050	NA	NA	NA	NA	NA	NA
	5/15/2000	<0.2	<0.010	<0.0050	NA	NA	NA	NA	NA	NA
	11/14/2000	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/9/2001	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/15/2001	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/15/2002	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/19/2002	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/7/2003	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	1/13/2004	< 0.2 U	< 0.01 U	< 0.005 U	4.9	50	3.4 J	0.67 J+/- 0.21	5.08 +/- 0.92	5.8
	5/11/2004	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
ACB-31S	11/9/2004	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/10/2005	0.2	0.01	0.005	NA	NA	NA	NA	NA	NA
	11/8/2005	< 0.2 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	5/15/2006	<0.2 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/14/2006	< 0.2 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	5/16/2007	< 0.1 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/15/2007	< 0.2 U	< 0.01 U	< 0.005 U	7.9	50	4.8	0.829 +/- 0.16	5.25 +/- 0.61	6.08
	5/15/2008	< 0.2 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/13/2008	< 0.2 U	< 0.01 U	< 0.005 U	5.1	51	6.5	0.68 +/- 0.16	6.59 +/- 0.63	7.27
	11/19/2009	< 0.1 U	< 0.01 U	NA	5.3	44	4.9	0.708 +/- 0.18	5.58 +/- 0.55	6.29
	11/16/2010	<0.10	NA	NA	3.2	43	6.8	0.611 +/- 0.21	4.35 +/- 0.71	4.96
	11/8/2011	<0.10	NA	NA	5.5	52	3.4	0.498 +/- 0.18	4.49 +/- 0.93	4.99
	11/6/2012	<0.10	NA	NA	3.5	39	1.9	0.474 +/- 0.19	4.99 +/- 0.81	5.46
	11/5/2013	<0.10	NA	NA	3.1	36	2.4	0.184 +/- 0.17	4.15 +/- 0.74	4.33
	11/12/2014	<0.10	NA	NA	2.1	37	2.4	0.43 +/- 0.17	4.59 +/- 0.79	5.02

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	NDARD	4	0.01	0.015	250	250	10	1	-	5
			a fange fan de		Su	rficial Zone	,		a series and the street of	
	5/9/1997	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/10/1997	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/4/1998	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/23/1998	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/15/1999	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/17/1999	< 0.2	<0.010	<0.0050	NA	NA	NA	NA	NA	NA
	5/15/2000	<0.2	<0.010	<0.0050	NA	NA	NA	NA	NA	NA
	11/14/2000	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/9/2001	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/1/2001	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/15/2002	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/19/2002	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/7/2003	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	1/13/2004	< 0.2 U	0.011	< 0.005 U	7.2	55	8.3 J	0.62 J+/- 0.21	3.89 +/- 0.88	4.5
400 300	5/11/2004	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
ACB-325	11/9/2004	< 0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/10/2005	<0.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/8/2005	< 0.2 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	5/15/2006	< 0.2 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/14/2006	< 0.2 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	5/16/2007	< 0.1 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/15/2007	< 0.2 U	< 0.01 U	< 0.005 U	3.7	16	1.7	0.195 +/- 0.0690	1.11 +/- 0.34	1.31
	5/15/2008	< 0.2 U	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/13/2008	< 0.2 U	< 0.01 U	< 0.005 U	3.1	18	2.2	0.104 +/- 0.0870	1.1 +/- 0.30	1.2
	11/19/2009	< 0.1 U	< 0.01 U	NA	2	10	1.3	0.164 +/- 0.12	0.796 +/- 0.37	0.960
	11/16/2010	0.11	NA	NA	1.6	14	0.78	0.199 +/- 0.12	0.619 +/- 0.48	0.818
	11/8/2011	0.1	NA	NA	1.5	8.3	0.85	-0.0461 +/- 0.11	1.28 +/- 0.39	1.23
	11/6/2012	0.11	NA	NA	1	4.5	0.93	0.206 +/- 0.13	0.580 +/- 0.40	0.786
	11/5/2013	<0.10	NA	NA	1.2	2.8	0.34	0.290 +/- 0.16	0.517 +/- 0.43	0.807
	11/13/2014	0.12	NA	NA	1.4	13	0.55	0.194 +/- 0.11	0.663 +/- 0.32	0.857

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCl/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCl/L)
PERFO	NDARD	4	0.01	0.015	250	250	10	-		5
The second second					Su	rficial Zone	,			
CONSIGNATION OF THE	5/9/1997	0.81	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/10/1997	0.82	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/4/1998	1.7	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/23/1998	0.47	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/15/1999	0.29	0.017	0.0063	NA	NA	NA	NA	NA	NA
	11/17/1999	0.26	<0.010	<0.0050	NA	NA	NA	NA	NA	NA
	5/16/2000	0.25	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/14/2000	0.22	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/9/2001	0.32	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/15/2001	0.4	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/15/2002	0.33	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/19/2002	0.5	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/7/2003	0.63	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	1/14/2004	0.71	< 0.01 U	< 0.005 U	26	94	1.7	3.27 +/- 0.54	11.9 +/- 1.50	15.2
	5/11/2004	1.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
AC-335	11/9/2004	2.7	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/10/2005	0.6	0.01	0.005	NA	NA	NA	NA	NA	NA
	11/8/2005	0.75	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	5/15/2006	0.27	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/14/2006	1.4	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	5/16/2007	1.4	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/15/2007	0.64	< 0.01 U	< 0.005 U	7.5	26	1.5	0.437 +/- 0.14	1.38 +/- 0.34	1.82
	5/15/2008	0.94	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/14/2008	0.94	< 0.01 U	< 0.005 U	7.7	27	1.6	0.673 +/- 0.15	1.92 +/- 0.39	2.59
	11/19/2009	1.6	< 0.01 U	NA	6.5	23	1	0.475 +/- 0.13	2.73 +/- 0.41	3.21
	11/16/2010	0.77	NA	NA	8.5	25	0.59	0.522 +/- 0.19	1.99 +/- 0.50	2.51
	11/8/2011	0.61	NA	NA	1.9	20	0.45	0.391 +/- 0.15	2.00 +/- 0.44	2.39
	11/6/2012	0.67	NA	NA	6.6	90	0.36	0.930 +/- 0.28	4.68 +/- 0.78	5.61
	11/5/2013	0.78	NA	NA	5.7	20	0.24	0,410 +/- 0.20	2.07 +/- 0.47	2.48
	11/13/2014	0.63	NA	NA	3.4	28	0.18	0.435 +/- 0.15	2.47 +/- 0.50	2.91

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	NDARD	4	0.01	0.015	250	250	10	-	-	5
					Su	rficial Zone	•	Sector Sector Sector		
	5/9/1997	16	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/10/1997	9.5	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/4/1998	6.3	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/23/1998	3.8	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/15/1999	3.5	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/17/1999	2.5	<0.010	<0.0050	NA	NA	NA	NA	NA	NA
	5/16/2000	2.6	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/14/2000	1.6	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/9/2001	1.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/15/2001	1.6	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/15/2002	1.4	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/19/2002	1.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/7/2003	1.9	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	1/14/2004	2	< 0.01 U	< 0.005 U	9.3	80	6.5	0.38 J+/- 0.18	2.04 +/- 0.58	2.42
	5/11/2004	9.7	0.011	< 0.005	NA	NA	NA	NA	NA	NA
AC-345	11/9/2004	9.2	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/10/2005	8	<0.01	<0.005	NA	NA	NA	NA	NA	NA
	11/8/2005	7.3	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	5/15/2006	6.4	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/14/2006	5.6	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	5/16/2007	4.6	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/15/2007	4.2	< 0.01 U	< 0.005 U	8.6	74	2.4	0.261 +/- 0.12	2.06 +/- 0.43	2.32
	5/15/2008	3.1	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/14/2008	2.4	< 0.01 U	< 0.005 U	7.2	68	2.8	0.159 +/- 0.0990	2.04 +/- 0.38	2.20
	11/19/2009	1.6	< 0.01 U	NA	5.9	60	2.3	0.152 +/- 0.12	2.54 +/- 0.42	2.69
	11/17/2010	1.9	NA	NA	5.1	68	6.6	0.149 +/- 0.085	1.14 +/- 0.34	1.29
	11/9/2011	1	NA	NA	3.3	67	2.9	0.296 +/- 0.15	0.984 +/- 0.31	1.28
	11/7/2012	0.97	NA	NA	2.1	37	2.8	0.152 +/- 0.12	0.785 +/- 0.29	0.937
	11/5/2013	0.77	NA	NA	4.1	52	2.1	0.218 +/- 0.14	0.927 +/- 0.36	1.15
	11/13/2014	1.2	NA	NA	3.2	39	2.6	0.0455 +/- 0.084	0.593 +/- 0.28	0.64

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	NMANCE	4	0.01	0.015	250	250	10	- 15 - 15 - 15 - 15 - 15 - 15 - 15 - 15	-	5
					Su	rficial Zone				a state the second state
	5/9/1997	19	0.014	0.012	NA	NA	NA	NA	NA	NA
	11/10/1997	9.1	0.012	0.011	NA	NA	NA	NA	NA	NA
	5/4/1998	10	0.017	0.028	NA	NA	NA	NA	NA	NA
	11/23/1998	6.7	< 0.01	0.011	NA	NA	NA	NA	NA	NA
	5/15/1999	7.4	0.02	0.022	NA	NA	NA	NA	NA	NA
	11/17/1999	64	<0.010	<0.0050	NA	NA	NA	NA	NA	NA
	5/16/2000	5.6	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/14/2000	51	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/9/2001	58	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/15/2001	5.6	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/15/2002	65	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	11/19/2002	4.8	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/7/2003	61	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	1/14/2004	64	< 0.01 11	< 0.005 U	64	38	28	0.58 J+/- 0.21	1.62 +/- 0.52	2.2
AC.7SR	5/11/2004	9.4	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
ACTON	11/9/2004	9.7	< 0.01	< 0.005	NA	NA	NA	NA	NA	NA
	5/10/2005	54	0.01	0.005	NA	NA	NA	NA	NA	NA
	11/8/2005	53	< 0.01 []	< 0.005 U	NA	NA	NA	NA	NA	NA
	5/15/2006	4.4	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/14/2006	57	< 0.01	< 0.005 11	NA	NA	NA	NA	NA	NA
	5/16/2007	41	< 0.01 U	< 0.005 U	NA	NA	NA	NA	NA	NA
	11/15/2007	36	< 0.01 U	< 0.005 U	6.9	35	2.3	0.339 +/- 0.12	0.974 +/- 0.34	1.31
	5/15/2008	6	< 0.01 U	0.0056	NA	NA	NA	NA	NA	NA
	11/14/2008	3.3	< 0.01 U	< 0.005 U	6.8	46	2.1	0.188 +/- 0.10	1.24 +/- 0.39	1.43
	11/19/2009	3.1	< 0.01 U	NA	7	32	2.1	0.239 +/- 0.10	1.11 +/- 0.31	1.35
	11/17/2010	3.7	NA	NA	5.1	27	1.7	0.240 +/- 0.11	0.820 +/- 0.30	1.06
	11/8/2011	2.9	NA	NA	3.8	30	1.8	0.322 +/- 0.14	1.05 +/- 0.30	1.37
	11/6/2012	0.94	NA	NA	5.8	34	1.9	0.272 +/- 0.16	1.45 +/- 0.44	1.72
	11/5/2013	2.4	NA	NA	5.0	28	1.4	0.172 +/- 0.16	1.09 +/- 0.36	1.26
	11/13/2014	18	NA	NA	33	28	12	1 324 +/- 0 12	0.877 + 0.30	120

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IABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	RMANCE	4	0.01	0.015	250	250	10	-		5
					Su	rficial Zone				
	4/15/1987	16	0.010	NA	7.4	143	NA	NA	NA	NA
	10/1/1990	63	0.74	<0.005	18	260	12	NA	NA	NA
	2/4/1992	94	0.164	< 0.005	20	290	15	0.4 +/- 0.10	1.2 +/- 1	1.6
	9/28/1997	130	0.058	NA	10	150	9	< 0.6 +/- 0.03	1.7 +/- 0.48	2.3
	11/17/1999	98	0.029	NA	7	57	5	< 1. +/- 0.94	< 1.5 +/- 0.90	2.5
	11/21/2000	150	0.048	NA	6.8	48	5.6	0.5 +/- 0.20	1.9 +/- 1.50	2.4
	11/15/2001	190	0.036	NA	6	23	3.8	0.1 +/- 0.07	2.8 +/- 1	2.9
	11/26/2002	210	0.042	NA	5.7	22	3.6	0.1 +/- 0.07	0. +/- 0.60	0.1
	1/23/2004	170	0.046	< 0.005 U	5.7	15	3.5	< 0.25 U+/- 0.17	< 1.1 U+/- 0.66	0.79
40.20	11/17/2004	100	0.027	NA	7.1	< 5.	3	0.134 +/- 0.08	0.286 +/- 0.31	0.420
AC-25	11/15/2005	73	0.021	NA	8.8	59	3.9	0.103 J+/- 0.0690	0.649 J+/- 0.34	0.752
	11/28/2006	85	0.029	NA	9.1	69	4	0.032 +/- 0.0750	-0.382 +/- 0.19	-0.35
	11/21/2007	50	0.016	NA	5.3	< 5. U	1.9	0.041 +/- 0.0790	0.0402 +/- 0.13	0.081
	11/19/2008	54	0.02	< 0.005 U	7.6	< 5. U	3.2	0.0442 +/- 0.0860	-0.0882 +/- 0.21	-0.0440
	11/18/2009	44	0.017	NA	.4.9	31	2.7	0.191 +/- 0.11	0.0314 +/- 0.19	0.222
	11/29/2010	48	0.024	NA	6.1	44	3.4	0.0772 +/- 0.082	0.449 +/- 0.26	0.526
	11/16/2011	68	0.024	NA	7.5	54	6.2	0.168 +/- 0.13	0.0656 +/- 0.27	0.234
	11/14/2012	43	0.016	NA	4.3	62	4.6	0.0957 +/- 0.16	0.118 +/- 0.24	0.214
	11/12/2013	36	0.016	NA	3.8	59	3.3	0.0439 +/- 0.13	0.273 +/- 0.27	0.317
	11/12/2014	34	0.02	NA	4.2	73	3.1	0.0951 +/- 0.10	0.309 +/- 0.40	0.404

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCl/L)
PERFO	RMANCE	4	0.01	0.015	250	250	10	-	-	5
					Su	rficial Zone				
Mar Service	4/15/1987	0.65	< 0.004	NA	4.1	59	1.9	NA	NA	NA
and the second	10/1/1990	0.21	< 0.01	<0.005	15	22	4	NA	NA	NA
	2/5/1992	< 0.2	< 0.01	0.0081	5.5	27	2.9	1.4 +/- 0.10	0.8 +/- 0.90	2.2
A STATE	9/28/1997	1.4	< 0.01	NA	3.8	24	0.92	< 0.6 +/- 0.05	< 1. +/- 0.46	1.6
	11/17/1999	< 0.2	< 0.01	NA	5.7	14	1.1	< 1. +/- 0.79	< 1.5 +/- 0.60	2.5
	11/21/2000	< 0.2	< 0.01	NA	11	16	2.7	0.3 +/- 0.10	1.1 +/- 1.20	1.4
a state of the state of	11/14/2001	< 0.2	< 0.01	NA	7.7	17	2.3	0.1 +/- 0.09	0. +/- 0.70	0.1
	11/26/2002	< 0.2	< 0.01	NA	3.4	13	1.1	0.4 +/- 0.07	0.6 +/- 0.70	1
	1/22/2004	< 0.2 U	< 0.01 U	< 0.005 U	2.9	7.9	1. J	< 0.34 U+/- 0.18	< 1.4 U+/- 0.86	1.22
AC 28	11/17/2004	< 0.2	< 0.01	NA	4.2	13	2.1	0.25 +/- 0.0820	0.285 +/- 0.30	0.54
AC-35	11/15/2005	< 0.2 U	< 0.01 U	NA	12	15	2.8	0.0862 U+/- 0.10	1.44 +/- 0.40	1.53
	11/22/2006	< 0.2 U	< 0.01 U	NA	8.9	16	2.8	0.243 +/- 0.15	0.81 +/- 0.29	1.1
100	11/21/2007	< 0.2 U	< 0.01 U	NA	5.5	20	2	0.191 +/- 0.11	0.687 +/- 0.25	0.878
	11/13/2008	< 0.2 U	< 0.01 U	< 0.005 U	3.6	11	1.1	0.204 +/- 0.10	0.226 +/- 0.27	0.430
	11/18/2009	< 0.1 U	< 0.01 U	NA	3.7	11	1.8	0.14 +/- 0.0790	0.634 +/- 0.38	0.77
	11/29/2010	< 0.1	< 0.01	NA	6.7	17	7.3	0.248 +/- 0.10	0.453 +/- 0.26	0.701
	11/15/2011	< 0.1	< 0.01	NA	3.8	30	3.9	0.147 +/- 0.11	0.888 +/- 0.35	1.04
the state of the	11/13/2012	<0.1	<0.010	NA	2.9	21	1.7	0.266 +/- 0.18	0.798 +/- 0.37	1.06
	11/12/2013	<0.1	<0.010	NA	2.4	17	1.5	0.229 +/- 0.16	0.955 +/- 0.41	1.18
Party services and the services	11/11/2014	<0.1	<0.0050	NA	2.5	15	2	0.030 +/- 0.082	0.159 +/- 0.38	0.19

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	NDARD	4	0.01	0.015	250	250	10	-	-	5
					Su	rficial Zone		Constant States		A STATE OF A STATE OF A STATE
	4/15/1987	0.26	NA	NA	7	90	NA	NA	NA	NA
	10/1/1990	<0.2	< 0.01	< 0.005	12	25	12	NA	NA	NA
	1/31/1992	< 0.2	< 0.01	< 0.005	9.3	27	6.4	NA	NA	NA
	9/26/1997	< 0.2	< 0.01	NA	8.6	27	4.3	< 0.6 +/- 0.05	1.3 +/- 0.44	1.9
	11/17/1999	< 0.2	< 0.01	NA	19	29	5.9	< 1. +/- 0.66	1.9	2.9
	11/21/2000	< 0.2	< 0.01	NA	24	30	4.9	0.5 +/- 0.20	0.8 +/- 1	1.3
10.50	11/13/2001	< 0.2	< 0.01	NA	35	31	1.5	0.7 +/- 0.10	1.8 +/- 0.90	2.5
AC-35	11/20/2002	< 0.2	< 0.01	NA	17	21	2.1	0.5 +/- 0.10	1. +/- 0.80	1.5
	1/20/2004	< 0.2 U	< 0.01 U	< 0.005 U	14	10	0.9	< 0.26 U+/- 0.18	< 0.66 U+/- 0.40	0.59
	11/10/2004	< 0.2	< 0.01	NA	46	13	1.2	0.481 +/- 0.11	1.58 +/- 0.30	2.06
	11/16/2005	< 0.2 U	< 0.01 U	NA	27	12	1.5	0.352 J+/- 0.13	1.42 +/- 0.43	1.77
	11/21/2006	< 0.2 U	< 0.01 U	NA	18	24	4.5	0.461 +/- 0.17	0.928 +/- 0.30	1.39
	11/13/2008	< 0.2 U	< 0.01 U	< 0.005 U	12	19	6.8	0.539 +/- 0.13	1.17 +/- 0.33	1.71
	11/12/2014	<0.10	NA	NA	9	24	4.5	0.596 +/- 0.21	1.32 +/- 0.48	1.92
					Su	rficial Zone				
A BUNDAN	4/15/1987	1.04	NA	NA	24.3	74	21.9	NA	NA	NA
	10/1/1990	1.9	< 0.01	0.0072	24	32	24	NA	NA	NA
	2/2/1992	0.6	< 0.01	< 0.005	15	28	6.7	NA	NA	NA
AC-6S	9/25/1997	0.75	< 0.01	NA	12	47	5.3	0.88 +/- 0.07	1.6 +/- 0.48	2.48
	1/27/2004	0.85	< 0.01 U	< 0.005 U	30	130	14	2.22 +/- 0.45	5.71 +/- 0.91	7.93
	11/12/2008	0.71	< 0.01 U	< 0.005 U	31	110	11	1.3 +/- 0.20	5.01 +/- 0.54	6.31
	11/17/2014	0.48	NA	NA	11	38	5.7	0.937 +/- 0.32	2.04 +/- 0.58	2.98

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TABLE 8	
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORIN	G
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE	1
Highlighted Results Meet Performance Standard	
(see last page for footnotes)	
Agrico Site, Pensacola, Florida	

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCl/L)
PERFO	NMANCE	4	0.01	0.015	250	250	10	-	-	5
					Su	rficial Zone				
	2/19/1992	< 0.2	< 0.01	< 0.005	8	7.4	1.6	NA	NA	NA
	9/27/1997	< 0.2	< 0.01	NA	8.4	9.7	1.4	< 0.6 +/- 0.03	< 1. +/- 0.45	1.6
	11/17/1999	< 0.2	< 0.01	NA	8	8.8	1.1	< 1. +/- 0.82	< 1.5 +/- 0.68	2.5
	11/21/2000	< 0.2	< 0.01	NA	8	6.7	1.7	0.4 +/- 0.10	5.1 +/- 1.10	5.5
	11/14/2001	< 0.2	< 0.01	NA	8.1	5.9	1.9	0.2 +/- 0.09	0. +/- 0.70	0.2
	11/20/2002	< 0.2	< 0.01	NA	9.2	4.3 J	1.8	0.3 +/- 0.10	0.3	0.6
AC-245	1/21/2004	< 0.2 U	< 0.01 U	< 0.005 U	9.9	< 5. U	1.8	< 0.29 U+/- 0.19	< 1.6 U+/- 0.9980	1.6
	11/16/2004	< 0.2	< 0.01	NA	8.9	< 5.	2.5	0.207 +/- 0.0850	1.44 +/- 0.32	1.65
	11/17/2005	< 0.2 U	< 0.01 U	NA	11	7.2	3.6	0.596 J+/- 0.18	2.36 +/- 0.53	2.96
	11/21/2006	< 0.2 U	< 0.01 U	NA	17	5.2	6.8	0.595 +/- 0.18	2. +/- 0.40	2.60
	11/18/2008	< 0.2 U	< 0.01 U	< 0.005 U	20	11	1.9	0.33 +/- 0.0990	1.42 +/- 0.33	1.8
	11/24/2014	<0.10	NA	NA	7.6	12	3.6	0.263 +/- 0.20	1.96 +/- 0.48	2.22
					Su	rficial Zone				
	2/11/1992	< 0.2	< 0.01	< 0.005	10	13	0.95	NA	NA	NA
	9/24/1997	< 0.2	< 0.01	NA	12	21	2.9	< 0.6 +/- 0.06	< 1. +/- 0.47	1.6
	11/17/1999	< 0.2	< 0.01	NA	20	17	2.1	1.8	3.1 +/- 0.76	4.9
	11/21/2000	< 0.2	< 0.01	NA	25	15	1.6	0.6 +/- 0.10	4.9 +/- 1.20	5.5
	11/14/2001	< 0.2	< 0.01	NA	23	23	2.3	0.6 +/- 0.10	2.5 +/- 0.90	3.1
	11/21/2002	< 0.2	< 0.01	NA	19	22	1.7	0.7 +/- 0.20	1.5 +/- 1	2.2
AC-265	1/20/2004	< 0.2 U	< 0.01 U	< 0.005 U	20	21	1.2	0.82 J+/- 0.25	1.83 +/- 0.42	2.7
	11/10/2004	< 0.2	< 0.01	NA	22	20	2.6	0.722 +/- 0.14	2.43 +/- 0.36	3.15
	11/9/2005	< 0.2 U	< 0.01 U	NA	18	20	1.7	0.444 J+/- 0.14	1.56 +/- 0.35	2.00
	11/20/2006	< 0.2 U	< 0.01 U	NA	26	19	2.9	0.512 +/- 0.19	1.85 +/- 0.39	2.36
	11/12/2008	< 0.2 U	< 0.01 U	< 0.005 U	11	19	0.74	0.424 +/- 0.12	1.62 +/- 0.43	2.04
	11/19/2014	<0.10	NA	NA	7.3	13	1	0.0821 +/- 0.11	0.634 +/- 0.33	0.72
					Su	inficial Zone)			
and the se	4/8/1992	< 0.2	< 0.01	< 0.005	18	< 5.	1.9	NA	NA	NA
	9/24/1997	< 0.2	< 0.01	NA	14	4.3	1.5	< 0.6 +/- 0.05	1.1 +/- 0.45	1.7
AC 278	1/13/2004	< 0.2 U	< 0.01 U	< 0.005 U	4.5	< 5. U	0.19	0.18 J+/- 0.12	< 0.88 U+/- 0.55	0.88
AC-215	11/11/2005	< 0.2 U	< 0.01 U	NA	47	< 5. U	6.4	1.71 +/- 0.38	0.418U+/- 0.29	2.13
	11/17/2008	< 0.2 U	< 0.01 U	< 0.005 U	4.7	8.6	0.089	0.167 +/- 0.09	0.157 +/- 0.23	0.324
	11/13/2014	<0.10	NA	NA	19	4.5	1.5	0.785 +/- 0.25	2.11 +/- 0.48	2.9

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFORMANCE		4	0.01	0.015	250	250	10	9-	-	5
Surficial Zone										
NWD-2S	10/1/1990	0.78	<0.01	<0.005	8.6	25	5,7	NA	NA	NA
	2/3/1992	4.2	< 0.01	< 0.005	8.2	19	4.6	NA	NA	NA
	9/25/1997	5.2	< 0.01	NA	4	25	3	< 0.6 +/- 0.07	1.2 +/- 0.42	1.8
	11/17/1999	4.5	< 0.01	NA	7.1	30	3.5	1.1 +/- 0.59	< 1.5 +/- 0.06	2.6
	11/21/2000	4.2	< 0.01	NA	4.3	32	3.4	1.56 +/- 0.30	2.6 +/- 0.90	4.2
	11/14/2001	3.7	< 0.01	NA	5.1	28	3.6	0.8 +/- 0.20	1.2 +/- 0.80	2
	11/20/2002	3.1	< 0.01	NA	4.4	28	2.8	0.7 +/- 0.10	1.1	1.8
	1/19/2004	3.2	< 0.01 U	< 0.005 U	12	26	5	0.66 J+/- 0.19	1.61 +/- 0.60	2.3
	11/10/2004	2.7	< 0.01	NA	14	28	5.1	0.628 +/- 0.15	1.67 +/- 0.32	2.30
	11/17/2005	2.2	< 0.01 U	NA	11	35	4	0.237 J+/- 0.11	1.86 +/- 0.46	2.10
	11/21/2006	2.1	< 0.01 U	NA	15	27	5.3	0.48 +/- 0.22	1.3 +/- 0.34	1.8
	11/12/2008	2	< 0.01 U	< 0.005 U	12	19	3.4	0.616 +/- 0.14	1.27 +/- 0.35	1.89
	11/11/2014	1.6	NA	NA	8.3	13	2.1	0.339 +/- 0.16	0.875 +/- 0.33	1.21
Surficial Zone										
NWD-4S	2/7/1992	< 0.2	< 0.01	0.0054	6.1	< 5.	1.3	0.7 +/- 0.20	1.5 +/- 0.80	2.2
	9/26/1997	< 0.2	< 0.01	NA	4.7	< 5.	0.41	< 0.6 +/- 0.04	< 1. +/- 0.40	1.6
	11/17/1999	< 0.2	< 0.01	NA	7.2	< 5.	0.31	1.4	< 1.5 +/- 0.81	2.9
	11/21/2000	< 0.2	< 0.01	NA	5.5	< 5.	0.4	0.5 +/- 0.10	6.4 +/- 1.20	6.9
	11/13/2001	< 0.2	< 0.01	NA	5	< 5.	0.44	0.5 +/- 0.10	1.8 +/- 0.80	2.3
	11/22/2002	< 0.2	< 0.01	NA	5.5	< 5.	0.35	0.6 +/- 0.20	1.1 +/- 0.80	1.7
	1/21/2004	< 0.2 U	< 0.01 U	< 0.005 U	9.6	< 5. U	1.2	0.5 J+/- 0.22	2.17 +/- 0.95	2.7
	11/16/2004	< 0.2	< 0.01	NA	9.8	< 5.	0.61	0.583 +/- 0.15	1.49 +/- 0.33	2.07
	11/15/2005	< 0.2 U	< 0.01 U	NA	15	< 5. U	0.28	0.741 J+/- 0.23	1.62 +/- 0.46	2.36
	11/21/2006	< 0.2 U	< 0.01 U	NA	17	< 5. U	1.2	0.79 +/- 0.19	0.973 +/- 0.34	1.8
	11/19/2008	< 0.2 U	< 0.01 U	< 0.005 U	9.4	< 5. U	2.6	0.951 +/- 0.15	1.08 +/- 0.31	2.03
	11/14/2014	< 0.10	NA	NA	4.3	4.8	0.41	0.515 +/- 0.22	1.17 +/- 0.37	1.69

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	PERFORMANCE		0.01	0.015	250	250	10	1	-	5
					Main P	roducing Z	one		And all a state of the	
	4/15/1987	5.1	< 0.004	NA	14.7	22	3.37	NA	NA	NA
	10/1/1990	5.1	< 0.01	<0.005	15	10	3.5	NA	NA	NA
	2/4/1992	5.2	< 0.01	0.0057	16	7.4	3.5	2.8 +/- 0.30	7. +/- 1.30	9.8
	9/30/1997	2.9	< 0.01	NA	12	26	5.6	0.6	< 1. +/- 0.45	1.6
	11/17/1999	3.5	< 0.01	NA	11	15	3.6	< 1. +/- 0.49	< 1.5 +/- 0.83	2.5
	11/21/2000	3	< 0.01	NA	9.8	19	4.4	1. +/- 0.20	2.7 +/- 0.90	3.7
a series of a series of	11/15/2001	3	< 0.01	NA	9.4	17	3.5	1. +/- 0.20	2.5 +/- 1	3.5
	11/26/2002	3.2	< 0.01	NA	9.1	18	2.5	1.1 +/- 0.20	2. +/- 0.80	3.1
	1/23/2004	2.9	< 0.01 U	< 0.005 U	9	13	2.5	1.05 +/- 0.25	1.54 +/- 0.71	2.59
AC-2D	11/17/2004	2.7	< 0.01	NA	9.1	14	2.6	1.09 +/- 0.17	1.42 +/- 0.37	2.51
100 2.0	11/14/2005	2.3	< 0.01 U	NA	9.2	16	2.8	0.983 J+/- 0.27	1.85 +/- 0.51	2.83
	11/28/2006	2.2	< 0.01 U	NA	8.2	15	2.5	0.896 +/- 0.14	1.16 +/- 0.28	2.06
	11/21/2007	2.5	< 0.01 U	NA	7.8	16	3.3	0.843 +/- 0.17	1.22 +/- 0.28	2.06
	11/19/2008	2	< 0.01 U	< 0.005 U	8.8	13	2.5	0.994 +/- 0.16	1.17 +/- 0.31	2.16
	11/18/2009	2	< 0.01 U	NA	8.4	15	2.3	1.2 +/- 0.18	1.7 +/- 0.34	2.9
	11/29/2010	2.3	NA	NA	8.3	16	2.6	1.31 +/- 0.39	1.59 +/- 0.39	2.90
	11/16/2011	2.3	NA	NA	7.6	17	2	1.06 +/- 0.22	1.71 +/- 0.42	2.77
	11/14/2012	2.2	NA	NA	6.9	17	2.1	0.744 +/- 0.27	1.94 +/- 0.54	2.68
	11/12/2013	2.3	NA	NA	7.0	17	5.3	0.887 +/- 0.27	1.43 +/- 0.41	2.32
The second second second	11/12/2014	2.2	NA	NA	6.8	16	2	0.911 +/- 0.25	1.31 +/- 0.45	2.22

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	RMANCE	4	0.01	0.015	250	250	10	Sec.	-	5
	1995 - 1995 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 -			a second	Main P	roducing Z	Cone			
NORSE -	4/15/1987	105	0.041	NA	376	686	52.2	NA	NA	NA
	10/1/1990	75	<0.01	<0.005	150	680	47	NA	NA	NA
	2/5/1992	80	< 0.01	0.0059	270	500	42	8.4 +/- 0.40	12	20.4
	9/28/1997	46	< 0.01	NA	110	460	27	0.81 +/- 0.07	NA	0.81
	11/19/1999	14	< 0.01	NA	19	< 5.	12	< 1. +/- 0.54	2.1	3.1
	11/21/2000	18	< 0.01	NA	32	240	15	1. +/- 0.20	6.5 +/- 1.20	7.5
	11/14/2001	13	< 0.01	NA	22	250	12	0.4 +/- 0.10	5.4 +/- 1.10	5.8
	11/26/2002	46	< 0.01	NA	64	380	16	1.3 +/- 0.20	17.8 +/- 2	19.1
	1/22/2004	34	< 0.01 U	< 0.005 U	48	300	13. J	5.04 +/- 0.77	20.6 +/- 2.50	25.6
40.30	11/17/2004	36	< 0.01	· NA	48	310	14	0.934 +/- 0.16	12.3 +/- 1.10	13.2
AC-3D	11/15/2005	23	< 0.01 U	NA	36	300	12	0.994 J+/- 0.28	18. +/- 2.30	19.0
	11/22/2006	27	< 0.01 U	NA	39	330	12	0.939 +/- 0.27	13.2 +/- 0.89	14.1
	11/21/2007	22	< 0.01 U	NA	24	220	7.8	1.06 +/- 0.22	8.12 +/- 0.56	9.18
	11/13/2008	18	< 0.01 U	< 0.005 U	25	180	8.5	1.22 +/- 0.19	10.9 +/- 0.79	12.1
	11/18/2009	15	< 0.01 U	NA	20	160	6.9	0.951 +/- 0.18	9.9 +/- 0.69	10.1
	11/29/2010	16	NA	NA	22	160	7.8	1.74 +/- 0.44	12.9 +/- 1.8	14.6
	11/15/2011	17	NA	NA	20	130	7.8	1.59 +/- 0.26	12.5 +/- 0.90	14.1
	11/13/2012	16	NA	NA	20	140	7.2	1.38 +/- 0.39	12.7 +/- 1.7	14.1
	11/12/2013	15	NA	NA	16	130	6.1	1.14 +/- 0.36	9.67 +/- 1.3	10.8
Call Street	11/11/2014	14	NA	NA	16	230	5.9	0.902 +/- 0.26	11.0 +/- 1.5	11.9

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	PERFORMANCE		0.01	0.015	250	250	10	-		5
					Main P	roducing 2	Cone			
	2/7/1992	< 0.2	< 0.01	< 0.005	13	14	7.6	4.5 +/- 0.30	5. +/- 0.70	9.5
	9/26/1997	< 0.2	< 0.01	NA	4	11	1.8	0.9 +/- 0.08	1.5 +/- 0.46	2.4
	11/18/1999	< 0.2	< 0.01	NA	6.2	< 5.	0.27	< 1. +/- 0.52	< 1.5 +/- 0.32	2.5
	11/21/2000	< 0.2	< 0.01	NA	4.9	< 5.	0.35	0.8 +/- 0.40	1.9 +/- 3	2.7
A State State	11/13/2001	< 0.2	< 0.01	NA	8.3	< 5.	0.53	0.9 +/- 0.20	0.5 +/- 0.70	1.4
	11/22/2002	< 0.2	< 0.01	NA	13	29	9.7	3.7 +/- 0.40	6.5 +/- 0.80	10.2
and the second second	1/21/2004	< 0.2 U	< 0.01 U	< 0.005 U	12	30	11	4.35 +/- 0.71	15.7 +/- 2.20	20.1
	11/16/2004	< 0.2	< 0.01	NA	7	32	10	3.78 +/- 0.28	8.62 +/- 0.62	12.4
	11/15/2005	< 0.2 U	< 0.01 U	NA	9.8	41	8.3	2.93 +/- 0.62	9.04 +/- 1.30	12.0
NWD-4D	11/21/2006	< 0.2 U	< 0.01 U	NA	8.2	52	5.8	1.75 +/- 0.28	4.7 +/- 0.52	6.45
-	11/19/2007	< 0.2 U	< 0.01 U	NA	7.7	42	7	1.86 +/- 0.28	2.86 +/- 0.47	4.72
	11/19/2008	< 0.2 U	< 0.01 U	< 0.005 U	8.6	39	1.5	1.91 +/- 0.19	3.85 +/- 0.50	5.76
	11/18/2009	< 0.1 U	< 0.01 U	NA	8.6	39	0.96	1.85 +/- 0.24	3.89 +/- 0.51	5.74
	11/23/2010	< 0.1 U	NA	NA	8,1	40	0.21	1.96 +/- 0.49	3.81 +/- 0.69	5.77
	11/15/2011	< 0.1	NA	NA	7.9	35	0.13	1.45 +/- 0.23	3.43 +/- 0.47	4.88
	11/8/2012	<0.1	NA	NA	8	47	<0.010	1.91 +/- 0.44	4.09 +/- 0.07	6.00
	11/8/2013	<0.1	NA	NA	8.2	53	<0.010	2.05 +/- 0.60	5.20 +/- 0.86	7.25
	11/14/2014	<0.1	NA	NA	10	28	<0.050	1.85 +/- 0.57	4.22 +/- 0.69	6.07

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	RMANCE	4	0.01	0.015	250	250	10	-	-	5
					Main P	roducing 2	one	No. and Anna Anna Anna		
	10/1/1990	<0.2	<0.01	<0.005	13	75	8.6	NA	NA	NA
	2/2/1992	< 0.2	< 0.01	< 0.005	12	51	6.4	NA	NA	NA
	9/25/1997	< 0.2	< 0.01	NA	9,1	18	4.6	2.7 +/- 0.12	2.8 +/- 0.54	5.5
	1/27/2004	< 0.2 U	< 0.01 U	< 0.005 U	11	16	7.7	4.58 +/- 0.69	6.6 +/- 1.30	11.18
	11/19/2007	< 0.2 U	< 0.01 U	NA	12	36	6.6	3.07 +/- 0.34	1.67 +/- 0.39	4.74
AC.6D	11/12/2008	< 0.2 U	< 0.01 U	< 0.005 U	13	42	5.9	3.79 +/- 0.32	3.45 +/- 0.48	7.24
AC-OD	11/17/2009	< 0.1 U	< 0.01 U	NA	12	31	4	3.64 +/- 0.35	2.82 +/- 0.53	6.46
	11/22/2010	< 0.1 U	NA	NA	12	32	5	4.59 +/- 0.92	2.94 +/- 0.60	7.53
	11/10/2011	< 0.1 U	NA	NA	10	29	5	5.14 +/- 0.45	3.28 +/- 0.54	8.42
	11/7/2012	< 0.1 U	NA	NA	11	37	5.1	4.10 +/- 0.93	3.04 +/- 0.58	7.14
	11/7/2013	< 0.1 U	NA	NA	12	37	5.0	3.65 +/- 0.83	2.86 +/- 0.60	6.51
	11/14/2014	<0.1	NA	NA	7	43	4.7	3.41 +/- 0.95	2.26 +/- 0.54	5.67

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFORMANCE		4	0.01	0.015	250	250	10	-		5
					Main P	roducing Z	one			
	4/15/1987	0.21	<0.002	NA	14	40	NA	NA	NA	NA
	10/1/1990	<0.2	< 0.01	<0.005	4.9	4	<0.05	NA	NA	NA
	4/10/1992	< 0.2	< 0.01	< 0.005	14	5.7	7.1	NA	NA	NA
	9/25/1997	< 0.2	< 0.01	NA	14	< 5.	6.7	< 0.6 +/- 0.07	< 1. +/- 0.44	1.6
	11/18/1999	< 0.2	< 0.01	NA	17	< 5.	8.1	1.7	1.9	3.6
	11/17/2000	< 0.2	< 0.01	NA	16	< 5.	9.1	0.9 +/- 0.20	2.7 +/- 0.90	3.6
-	11/13/2001	< 0.2	< 0.01	NA	16	< 5.	8.9	1. +/- 0.20	2.5 +/- 1	3.5
	11/25/2002	< 0.2	< 0.01	NA	17	< 5.	9.1	1.5 +/- 0.20	2. +/- 0.90	3.5
	1/27/2004	< 0.2 U	< 0.01 U	< 0.005 U	18	< 5. U	9.3	1.28 +/- 0.28	1.94 +/- 0.54	3.22
40.00	11/10/2004	< 0.2	< 0.01	NA	18	< 5.	9.4	1.04 +/- 0.15	1.96 +/- 0.35	3.00
AC-8D	11/9/2005	< 0.2 U	< 0.01 U	NA	16	< 5. U	8.1	0.837 J+/- 0.23	1.42 +/- 0.35	2.26
and the second	11/16/2006	< 0.2 U	< 0.01 U	NA	15	< 5. U	8.9	0.805 +/- 0.15	1.5 +/- 0.40	2.3
	11/19/2007	< 0.2 U	< 0.01 U	NA	15	< 5. U	7.8	0.74 +/- 0.19	1.23 +/- 0.39	2.0
	11/11/2008	< 0.2 U	< 0.01 U	< 0.005 U	16	< 5. U	7.0	0.776 +/- 0.19	0.96 +/- 0.34	1.7
A CARLES	11/11/2009	< 0.1 U	< 0.01 U	NA	15	3.3	7.4	0.933 +/- 0.17	1.16 +/- 0.40	2.09
	11/18/2010	< 0.1 U	NA	NA	14	3.5	6.1	0.668 +/- 0.18	1.71 +/- 0.44	2.38
	11/9/2011	< 0.1 U	NA	NA	13	3.7	6.5	0.863 +/- 0.22	1.45 +/- 0.36	2.31
	11/7/2012	< 0.1	NA	NA	12	4.2	6.3	0.918 +/- 0.28	1.65 +/- 0.43	2.57
	11/6/2013	< 0.1	NA	NA	13	4.5	5.3	0.941 +/- 0.37	1.79 +/- 0.45	2.73
	11/13/2014	< 0.1	NA	NA	13	4.8	5.3	0.207 +/- 0.11	1.14 +/- 0.35	1.35

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TABLE 8	
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORIN	IG
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZON	E
Highlighted Results Meet Performance Standard	
(see last page for footnotes)	
Agrico Site, Pensacola, Florida	

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCl/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	RMANCE	4	0.01	0.015	250	250	10	-	-	5
	Sector States				Main P	roducing Z	one	Marchine And And	Line services	
	9/27/1997	1	< 0.01	NA	5.3	5.6	0.45	< 0.6 +/- 0.04	< 1. +/- 0.44	1.6
	1/28/2004	37	< 0.01 U	< 0.005 U	56	230	13	3.06 +/- 0.49	12.8 +/- 1.60	15.9
	11/17/2008	33	< 0.01 U	< 0.005 U	47	220	13	1.51 +/- 0.24	7.9 +/- 0.67	9.4
	11/12/2009	36	< 0.01 U	NA	50	250	14	2.03 +/- 0.27	8.87 +/- 0.70	10.9
AC-9D2	11/19/2010	40	NA	NA	47	250	13	2.06 +/- 0.47	7.81 +/- 1.1	9.87
	11/10/2011	42	NA	NA	44	230	13	1.52 +/- 0.26	8.56 +/- 0.67	10.1
	11/12/2012	36	NA	NA	43	260	13	1.34+/- 0.097	8.28 +/-1.1	9.90
	11/7/2013	41	NA	NA	39	270	10	1.59 +/- 0.40	9.26 +/- 1.3	10.9
	11/20/2014	29	NA	NA	36	240	11	1.86 +/- 0.54	7.96 +/- 1.1	9.8
	al the second second				Main P	roducing 2	one			
	10/1/1990	24	<0.01	<0.005	.28	290	13	NA	NA	NA
	4/9/1992	2.6	< 0.01	< 0.005	8.2	39	2.8	NA	NA	NA
	9/27/1997	8.8	0.012	NA	20	320	11	1.5 +/- 0.09	6.9 +/- 0.58	8.4
	11/19/1999	0.52	< 0.01	NA	6.4	7.8	2.4	< 1. +/- 0.09	< 1.5 +/- 0.68	2.5
	11/17/2000	6.7	< 0.01	NA	15	130	6.8	0.5 +/- 0.10	3.7 +/- 1	4.2
	11/8/2001	1.7	< 0.01	NA	7.3	30	3.7	0.4 +/- 0.20	4.5 +/- 1.10	4.9
	11/22/2002	11	0.011	NA	22	310	10	1.9 +/- 0.30	8.6 +/- 1	10.5
	1/28/2004	10	0.015	0.0052	20	280	11	4.13 +/- 0.61	14.2 +/- 1.80	18.3
	11/11/2004	11	< 0.01	NA	20	310	12	1.84 +/- 0.22	7.57 +/- 0.59	9.41
AC-12D	11/10/2005	15	< 0.01 U	NA	23	290	12	1.65 +/- 0.40	7.59 +/- 1.10	9.24
	11/16/2006	13	< 0.01 U	NA	21	310	12	1.26 +/- 0.18	7.08 +/- 0.65	8.34
	11/16/2007	20	< 0.01 U	NA	22	300	12	1.62 +/- 0.21	7.76 +/- 0.60	9.38
	11/13/2008	17	< 0.01 U	< 0.005 U	23	310	12	1.73 +/- 0.21	6.75 +/- 0.59	8.48
	11/12/2009	15	< 0.01 U	NA	22	280	12	1.57 +/- 0.25	7.7 +/- 0.68	9.3
	11/18/2010	14	NA	NA	22	280	11	1.34 +/- 0.38	6.68 +/- 1.3	8.0
	11/9/2011	14	NA	NA	18	240	10	4.80 +/- 0.69	8.43 +/- 0.75	13.2
	11/8/2012	15	NA	NA	18	250	9.6	1.43 +/- 0.39	7.88 +/- 1.1	9.31
	11/6/2013	14	NA	NA	19	260	9.0	1.27 +/- 0.40	8.50 +/- 1.2	9.77
	11/20/2014	10	NA	NA	16	230	8.6	2.23 +/- 0.55	8.63 +/- 1.2	10.86

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TABLE 8	
COMPARISON OF COC RESULTS AT GROUNDWATER MONITO	DRING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING 2	ONE
Highlighted Results Meet Performance Standard	
(see last page for footnotes)	
Agrico Site, Pensacola, Florida	

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	RMANCE	4	0.01	0.015	250	250	10	-	- 1	5
					Main P	roducing 2	Cone			
	10/1/1990	8.6	< 0.01	<0.005	16	220	8.3	NA	NA	NA
	2/3/1992	5.3	< 0.01	< 0.005	16	150	8.9	4.7 +/- 0.30	3.6 +/- 1.10	8.3
	9/27/1997	4.9	< 0.01	NA	20	260	12	1.3 +/- 0.09	4.1 +/- 0.59	5.4
	11/16/2000	4.6	< 0.01	NA	19	220	11	2.8 +/- 0.30	5	7.8
	11/8/2001	4.7	< 0.01	NA	17	210	10	1.9 +/- 0.20	3.7 +/- 1.10	5.6
	11/21/2002	6.7	< 0.01	NA	20	250	11	1.3 +/- 0.20	5.7 +/- 0.80	7
	1/16/2004	6.3	< 0.01 U	< 0.005 U	22	230	12	1.67 +/- 0.36	11.1 +/- 1.70	12.77
	11/11/2004	7.8	< 0.01	NA	23	260	12	1.55 +/- 0.19	8.2 +/- 0.64	9.75
10.00	11/10/2005	11	< 0.01 U	NA	25	260	12	2.18 +/- 0.53	8.68 +/- 1.20	10.86
AC-13D	11/16/2006	14	< 0.01 U	NA	28	290	14	1.55 +/- 0.22	7.83 +/- 0.78	9.38
	11/19/2007	17	< 0.01 U	NA	27	300	18	1.64 +/- 0.23	7.41 +/- 0.67	9.05
	11/11/2008	15	< 0.01 U	< 0.005 U	28	360	13	1.32 +/- 0.21	5.95 +/- 0.59	7.27
	11/12/2009	15	0.011	NA	28	300	14	2.28 +/- 0.31	10.5 +/- 0.95	12.78
A TANK	11/18/2010	14	NA	NA	23	290	12	1.45 +/- 0.39	6.84 +/- 1.0	8.29
	11/9/2011	14	NA	NA	26	300	13	1.64 +/- 0.25	8.18 +/- 0.69	9.82
	11/7/2012	15	NA	NA	24	290	12	2.05 +/- 0.54	8.99 +/- 1.3	11.0
	11/6/2013	14	NA	NA	24	310	11	1.98 +/- 0.50	9.60 +/- 1.4	11.6
	11/19/2014	12	NA	NA	21	250	11	1.23 +/- 0.39	8.24 +/- 1.3	9.47
					Main F	Producing 2	one			
	2/19/1992	36	< 0.01	0.005	200	50	1.9	NA	NA	NA
	9/27/1997	8.5	< 0.01	NA	31	8.8	1.3	0.63 +/- 0.06	< 1. +/- 0.42	1.63
	1/21/2004	57	< 0.01 U	< 0.005 U	180	37	3.7	2.32 +/- 0.47	15.3 +/- 2.20	17.6
	11/18/2008	56	< 0.01 U	< 0.005 U	200	65	6.8	2.98 +/- 0.28	7.41 +/- 0.62	10.4
AC-24D	11/16/2009	59	< 0.01 U	NA	190	79	5.8	2.44 +/- 0.25	6.4 +/- 0.60	8.8
HC-240	11/23/2010	77	NA	NA	190	84	6.4	2.09 +/- 0.50	7.60 +/- 1.1	9.7
	11/14/2011	65	NA	NA	160	76	6.8	2.96 +/- 0.35	10.0 +/- 0.86	13.0
	11/9/2012	67	NA	NA	190	78	5.5	1.48 +/- 0.42	10.9 +/- 1.5	12.4
and the second	11/7/2013	68	NA	NA	170	86	4.5	2.02 +/- 0.53	10.2 +/- 1.4	12.2
Land Contract	11/24/2014	51	NA	NA	130	75	4.2	2.12 +/- 0.64	7.14 +/- 1.0	9.26

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCl/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	PERFORMANCE		0.01	0.015	250	250	10	-	-	5
					Main P	roducing Z	one	As a state of the second		
	2/15/1992	19	NA	<0.0050	120	7.1	11	NA	NA	7.9
ALC: NO DECIMAL	9/24/1997	20	< 0.01	NA	270	44	2.1	2. +/- 0.10	3.5 +/- 0.52	5.5
	11/19/1999	2.6	< 0.01	NA	45	< 5.	1.9	< 1. +/- 0.62	< 1.5 +/- 0.75	2.5
	11/17/2000	3.3	< 0.01	NA	46	13	5.5	0.6 +/- 0.10	0.6 +/- 0.80	1.2
And Contraction	11/13/2001	2.9	< 0.01	NA	32	9.4	2.3	0.4 +/- 0.10	1.1 +/- 0.80	1.5
	11/21/2002	48	< 0.01	NA	410	80	2	2.9 +/- 0.30	5.1 +/- 0.80	8.0
	1/22/2004	52	< 0.01 U	< 0.005 U	410	65	2.3 J	4.48 +/- 0.72	7.6 +/- 1.20	12
	11/15/2004	57	< 0.01	NA	440	83	2.2	2.46 +/- 0.23	5.6 +/- 0.54	8.1
	11/10/2005	59	< 0.01 U	NA	390	81	3.1	2.31 +/- 0.52	7.73 +/- 1.20	10.0
AC-25D	11/20/2006	77	< 0.01 U	NA	430	80	3.1	2.5 +/- 0.35	4.53 +/- 0.55	7.03
	11/20/2007	90	< 0.01 U	NA	390	80	3.7	1.85 +/- 0.29	4.08 +/- 0.49	5.93
	11/18/2008	71	< 0.01 U	< 0.005 U	480	77	3.7	2.2 +/- 0.25	3.98 +/- 0.51	6.18
	11/17/2009	77	< 0.01 U	NA	420	88	3.5	1.84 +/- 0.24	5.33 +/- 0.55	7.17
	11/23/2010	110	NA	NA	440	89	4.3	2.29 +/- 0.62	4.47 +/- 0.73	6.76
	11/15/2011	100	NA	NA	390	78	4.7	2.31 +/- 0.29	5.0 +/- 0.56	7.3
	11/14/2012	100	NA	NA	370	94	4.2	2.38 +/- 0.55	5.50 +/- 0.85	7.88
	11/12/2013	96	NA	NA	370	80	4.4	2.64 +/- 0.75	5.06 +/- 0.83	7.70
	11/20/2014	76	NA	NA	320	91	3.7	1.7 +/- 0.52	5.27 +/- 0.88	6.97
Land Inches					Main P	roducing 2	one	And the state of the		
and the second second	10/14/1993	3.1	NA	NA	NA	13	NA	NA	NA	NA
	9/27/1997	0.42	< 0.01	NA	14	< 5.	6.1	1. +/- 0.08	5.9 +/- 0.59	6.9
	1/21/2004	5.9	< 0.01 U	< 0.005 U	26	24	6	1.93 +/- 0.43	6.5 +/- 1.30	8.4
	11/17/2008	7.6	< 0.01 U	< 0.005 U	31	49	6.8	2.07 +/- 0.24	6.43 +/- 0.59	8.5
40 200	11/12/2009	8.1	< 0.01 U	NA	31	55	6.7	2.29 +/- 0.26	6.97 +/- 0.64	9.26
AC-280	11/19/2010	9.5	NA	NA	30	67	6.7	2.70 +/- 0.56	8.60 +/- 0.56	11.3
	11/10/2011	9.3	NA	NA	23	56	6.8	3.27 +/- 0.35	10.4 +/- 0.81	13.7
	11/12/2012	9.5	NA	NA	30	74	6.4	3.48 +/- 0.99	10.3 +/- 1.4	13.8
	11/6/2013	9.6	NA	NA	28	69	5.5	3.57 +/- 1.0	11.2 +/- 1.6	14.8
	11/20/2014	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 8	
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING	G
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE	
Highlighted Results Meet Performance Standard	
(see last page for footnotes)	
Agrico Site, Pensacola, Florida	

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	PERFORMANCE		0.01	0.015	250	250	10	H I		5
	ensides enside				Main P	roducing 2	lone			
	9/27/1997	65	< 0.01	NA	180	340	20	0.66 +/- 0.05	9.9 +/- 0.65	10.56
	11/19/1999	65	< 0.01	NA	110	< 5.	14	2.3	8.1	10.4
	11/21/2000	45	< 0.01	NA	300	260	14	1.3 +/- 0.10	11.4 +/- 1.10	12.7
	11/13/2001	48	< 0.01	NA	100	280	13	1.4 +/- 0.20	14. +/- 1.60	15
	11/25/2002	59	< 0.01	NA	100	340	16	1.7 +/- 0.20	16.5 +/- 1.70	18
and the second	1/23/2004	52	< 0.01 U	< 0.005 U	93	310	16	3.42 +/- 0.55	21.9 +/- 2.50	25.3
	11/12/2004	45	< 0.01 U	NA	84	290	14	1.52 +/- 0.19	17.7 +/- 0.96	19.2
	11/16/2005	30	< 0.01 U	NA	58	220	9.8	1.53 +/- 0.37	21. +/- 2.70	22.5
AC-29D	11/17/2006	34	< 0.01 U	NA	67	200	12	1.48 +/- 0.18	11.9 +/- 0.90	13.4
	11/20/2007	42	< 0.01 U	NA	63	220	12	1.45 +/- 0.26	11.7 +/- 0.77	13.2
	11/18/2008	31	< 0.01 U	< 0.005 U	65	200	11	1.54 +/- 0.20	10.8 +/- 0.76	12.3
	11/17/2009	30	< 0.01 U	NA	61	220	9.5	1.54 +/- 0.21	13.8 +/- 0.83	15.3
	11/19/2010	39	NA	NA	62	240	11	1.64 +/- 0.37	14.9 +/- 1.9	16.5
	11/11/2011	41	NA	NA	54	220	12	1.76 +/- 0.27	13.6 +/- 0.81	15.4
	11/13/2012	35	NA	NA	52	230	10	1.08 +/- 0.30	15.9 +/- 2/1	17.0
	11/7/2013	36	NA	NA	45	220	8.1	0.836 +/- 0.27	14.8 +/- 2.0	15.6
	11/17/2014	30	NA	NA	39	74	8.3	1.53 +/- 0.47	15.2 +/- 2.0	16.7

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	PERFORMANCE		0.01	0.015	250	250	10	-	-	5
in the second					Main F	roducing 2	one			
	9/26/1997	15	< 0.01	NA	60	100	11	3. +/- 0.12	7.9 +/- 0.61	10.9
	11/22/1999	18	< 0.01	NA	70	130	12	2.5	9.5	12
	11/17/2000	11	< 0.01	NA	50	100	11	2.6 +/- 0.30	14.6 +/- 1.70	17.2
	11/13/2001	11	< 0.01	NA	44	92	9.8	3.4 +/- 0.30	9.3 +/- 1.40	12.7
	11/25/2002	61	< 0.01	NA	120	250	16	2.8 +/- 0.30	13.1 +/- 1.50	15.9
	1/15/2004	46	0.017	< 0.005 U	94	190	15	6.96 +/- 0.97	21.4 +/- 2.40	28.4
	11/16/2004	34	< 0.01	NA	56	180	15	1.98 +/- 0.21	12.5 +/- 0.78	14.5
	11/17/2005	16	< 0.01 U	NA	44	120	9.2	1.48 +/- 0.34	11.9 +/- 1.60	13.4
AC-30D	11/17/2006	11	< 0.01 U	NA	29	91	7.9	1.27 +/- 0.17	8.37 +/- 0.73	9.64
	11/20/2007	12	< 0.01 U	NA	25	64	7.2	1.62 +/- 0.25	6.48 +/- 0.57	8.10
	11/18/2008	8	< 0.01 U	< 0.005 U	25	60	6	1.69 +/- 0.22	6.8 +/- 0.63	8.49
	11/17/2009	6.7	< 0.01 U	NA	20	55	5.1	1.71 +/- 0.25	7.51 +/- 0.66	9.22
	11/22/2010	7.2	NA	NA	19	51	4.7	1.81 +/- 0.41	7.13 +/- 1.1	8.94
	11/14/2011	7	NA	NA	11	27	5.7	2.05 +/- 0.34	9.32 +/- 0.93	11.4
	11/14/2012	8	NA	NA	18	64	5.5	2.00 +/- 0.55	8.21 +/- 1.2	10.2
	11/12/2013	7.1	NA	NA	17	48	5.2	1.80 +/- 0.46	6.88 +/- 1.0	8.68
	11/25/2014	5	NA	NA	13	40	3.8	1.62 +/- 0.47	6.04 +/- 0.92	7.66

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Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	PERFORMANCE		0.01	0.015	250	250	10	-	-	5
					Main P	roducing 2	one	and the second second		
dense again	11/19/1999	23	< 0.01	NA	160	130	3.1	<1.+/-0.53	< 1.5 +/- 0.95	2.5
	11/16/2000	150	< 0.01	NA	120	220	12	1.5 +/- 0.20	5. +/- 1.20	6.5
	11/8/2001	160	0.012	NA	520	220	13	1.9 +/- 0.20	7.2 +/- 1.40	9.1
	11/21/2002	170	< 0.01	NA	550	230	11	2. +/- 0.30	8.5 +/- 1	10.5
	1/15/2004	160	0.015	< 0.005 U	530	210	13	4.58 +/- 0.69	12.9 +/- 1.60	17.5
A sector sector	11/15/2004	170	< 0.01	NA	520	260	14	2.22 +/- 0.21	9.37 +/- 0.69	11.6
	11/16/2005	150	< 0.01 U	NA	430	260	12	2.01 +/- 0.50	14.4 +/- 1.90	16.4
-	11/20/2006	160	< 0.01 U	NA	460	270	12	1.83 +/- 0.31	9.26 +/- 0.77	11.1
AC-35D	11/20/2007	150	< 0.01 U	NA	420	190	12	2.01 +/- 0.29	5.8 +/- 0.53	7.81
	11/19/2008	120	0.01	< 0.005 U	460	190	11	1.78 +/- 0.20	5.29 +/- 0.57	7.07
	11/19/2009	120	< 0.01 U	NA	430	200	9.3	2.33 +/- 0.28	8.44 +/- 0.68	10.8
	11/23/2010	180	NA	NA	580	240	13	2.52 +/- 0.64	8.83 +/- 1.2	11.4
	11/16/2011	130	NA	NA	370	170	11	1.71 +/- 0.28	5.94 +/- 0.61	7.65
	11/15/2012	130	NA	NA	350	200	9.6	1.91 +/- 0.51	6.45 +/- 0.98	8.36
	11/13/2013	120	NA	NA	360	190	9.5	2.01 +/- 0.54	7.69 +/- 1.1	9.70
	11/24/2014	110	NA	NA	300	190	9.6	2.59 +/- 0.64	7.28 +/- 1.1	9.87

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	PERFORMANCE		0.01	0.015	250	250	10	-	-	5
Same and a second					Main P	roducing 2	one			ta fa sector de la sector
States and	11/18/1999	0.79	< 0.01	NA	28	120	3.1	< 1. +/- 0.53	< 1.5 +/- 0.55	2.5
- Carlos	11/16/2000	< 0.2	< 0.01	NA	10	14	4.6	0.6 +/- 0.09	4.4 +/- 0.70	5
	11/8/2001	< 0.2	< 0.01	NA	10	15	5.1	0.6 +/- 0.20	4.5 +/- 1.10	5.1
	11/15/2002	<0.20	<0.010	NA	11	17	5.9	1.0 +/- 0.1	1.9 +/- 0.6	2.9
	1/14/2004	< 0.2 U	< 0.01 U	< 0.005 U	11	12	5.9	1.46 +/- 0.30	2.76 +/- 0.58	4.22
	11/11/2004	< 0.2	< 0.01	NA	14	15	5.2	1.02 +/- 0.17	2.63 +/- 0.38	3.65
	11/9/2005	< 0.2 U	< 0.01 U	NA	11	19	5.9	1.07 +/- 0.27	2.34 +/- 0.52	3.41
AC-36D	11/16/2006	< 0.2 U	< 0.01 U	NA	11	18	5.9	1.21 +/- 0.20	2.66 +/- 0.49	3.87
	11/16/2007	< 0.2 U	< 0.01 U	NA	11	15	5.7	1.08 +/- 0.21	1.99 +/- 0.35	3.07
ALL STATE	11/11/2008	< 0.2 U	< 0.01 U	< 0.005 U	12	19	5.2	1.19 +/- 0.22	2.63 +/- 0.41	3.82
	11/11/2009	< 0.1 U	< 0.01 U	NA	12	16	5.6	1.05 +/- 0.18	2.24 +/- 0.46	3.29
	11/18/2010	< 0.1 U	NA	NA	12	16	5.3	1.52 +/- 0.45	3.09 +/- 0.59	4.61
	11/9/2011	< 0.1 U	NA	NA	12	17	5.7	1.45 +/- 0.26	2.88 +/- 0.43	4.33
Constant of	11/6/2012	<0.10	NA	NA	11	16	5.2	1.28 +/- 0.37	3.30 +/- 0.65	4.58
	11/6/2013	<0.10	NA	NA	12	20	4.9	1.73 +/- 0.53	3.06 +/- 0.59	4.79
Skain Smaller	11/18/2014	<0.10	NA	NA	10	21	5	1.48 +/- 0.47	2.33 +/- 0.60	3.81
		AND AN ADA			Main P	roducing Z	one			
CHARLEN TO A	11/14/2005	< 0.2 U	< 0.01 U	NA	7.8	< 5. U	3.4	0.835 +/- 0.336	2.23 +/- 0.57	2.83
	11/22/2006	< 0.2 U	< 0.01 U	NA	12	< 5. U	5.3	1.19 +/- 0.22	1.89 +/- 0.35	3.08
	11/16/2007	< 0.2 U	< 0.01 U	NA	7.6	5.3	3.8	0.85 +/- 0.20	1.64 +/- 0.32	2.5
	11/13/2008	< 0.2 U	< 0.01 U	< 0.005 U	10	8.2	4.1	1.32 +/- 0.21	2.41 +/- 0.45	3.73
PIP-D	11/18/2009	< 0.1 U	< 0.01 U	NA	8.9	5	3.5	0.994 +/- 0.18	1.24 +/- 0.33	2.23
States a	11/24/2010	< 0.1 U	NA	NA	9.8	4.9	3.7	1.28 +/- 0.37	1.81 +/- 0.47	3.09
	11/11/2011	< 0.1 U	NA	NA	3.3	2.1	2.9	1.01 +/- 0.20	1.37 +/- 0.39	2.38
	11/13/2012	<0.10	NA	NA	9.1	4.4	3.5	0.957 +/- 0.31	2.07 +/- 0.48	3.03
	11/13/2013	<0.10	NA	NA	9.3	5.4	4.1	1.11 +/- 0.30	1.98 +/- 0.44	3.09
	11/14/2014	<0.10	NA	NA	9	5.6	3.7	1.39 +/- 0.42	1.86 +/- 0.41	3.25

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCl/L)
PERFO	RMANCE	4	0.01	0.015	250	250	10	-	-	5
					Main P	roducing 2	Cone			
	10/1/1990	<0.2	<0.01	0.013	9.7	140	5.2	NA	NA	NA
	4/9/1992	< 0.2	< 0.01	< 0.005	10	65	3.6	NA	NA	NA
	9/27/1997	< 0.2	< 0.01	NA	12	97	6.6	0.93 +/- 0.07	2.8 +/- 5.20	3.7
AC-10D	1/28/2004	< 0.2 U	< 0.01 U	< 0.005 U	14	42	7.7	1.91 +/- 0.36	3.32 +/- 0.81	5.23
	11/12/2008	< 0.2 U	< 0.01 U	< 0.005 U	8	29	6.1	1.13 +/- 0.18	2.2 +/- 0.40	3.32
	11/18/2014	<0.10	NA	NA	11	22	5	1.02 +/- 0.29	2.17 +/- 0.51	3.19
THE SALES	Not the second				Main P	roducing 2	one			
12 - 12 12 - 11	10/1/1990	<0.2	<0.01	0.0058	10	<5	4.3	NA	NA	NA
	4/9/1992	< 0.2	< 0.01	< 0.005	9.5	< 5.	3.5	NA	NA	NA
-	9/24/1997	< 0.2	< 0.01	NA	11	< 5.	3.8	0.66 +/- 0.06	1.2 +/- 0.45	1.9
AC-IID	1/27/2004	< 0.2 U	< 0.01 U	< 0.005 U	11	< 5. U	4.9	1.28 +/- 0.29	3.04 +/- 0.75	4.32
	11/11/2008	< 0.2 U	< 0.01 U	< 0.005 U	10	< 5. U	3	0.828 +/- 0.19	1.93 +/- 0.41	2.76
	11/18/2014	<0.10	NA	NA	8.9	1.4	2.3	0.851 +/- 0.25	1.63 +/- 0.46	2.48
					Main P	roducing	lone			
States Land	10/1/1990	0.028	<0.01	<0.005	9	34	4.2	NA	NA	NA
	4/8/1992	< 0.2	< 0.01	0.0219	9.4	33	3.5	NA	NA	NA
	9/24/1997	< 0.2	< 0.01	NA	10	18	4.2	< 0.6 +/- 0.07	1.2 +/- 0.44	1.8
AC-14D	1/28/2004	< 0.2 U	< 0.01 U	< 0.005 U	11	39	5.8	2.05 +/- 0.37	4.8 +/- 1	6.9
	11/11/2008	< 0.2 U	< 0.01 U	< 0.005 U	12	32	5.5	1.89 +/- 0.30	1.97 +/- 0.40	3.86
	11/19/2014	<0.10	NA	NA	11	26	5.3	1.41 +/- 0.39	1.82 +/- 0.47	3.23

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TABLE 8	
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING	;
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE	
Highlighted Results Meet Performance Standard	
(see last page for footnotes)	
Agrico Site, Pensacola, Florida	

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	NDARD	4	0.01	0.015	250	250	10	-	the set - Parts	5
Mar Antonia					Main P	roducing 2	Cone			
	10/1/1990	<0.2	<0.01	0.0053	15	9.8	6	NA	NA	NA
	2/2/1992	< 0.2	< 0.01	< 0.005	13	11	5.5	NA	NA	NA
40.240	9/26/1997	< 0.2	< 0.01	NA	21	11	5.9	2.3 +/- 0.12	3.5 +/- 0.50	5.8
AC-210	1/29/2004	< 0.2 U	< 0.01 U	< 0.005 U	19	16	8.1	3.72 +/- 0.57	4.71 +/- 0.79	8.43
a set of	11/12/2008	< 0.2 U	< 0.01 U	< 0.005 U	10	24	4	2.03 +/- 0.23	2.08 +/- 0.38	4.11
	11/17/2014	<0.10	NA	NA	7.5	9.8	3.1	1.69 +/- 0.39	2.30 +/- 0.52	3.99
					Main P	roducing 2	one			
and the second second	10/1/1990	2.2	<0.01	<0.005	15	17	8.6	NA	NA	NA
State and	9/25/1997	0.81	< 0.01	NA	14	6	7.7	0.65 +/- 0.06	1.1 +/- 0.47	1.8
AC-22D	1/29/2004	1.2	< 0.01 U	< 0.005 U	8.9	10	5	1.55 +/- 0.33	4.01 +/- 0.68	5.56
	11/11/2008	3.1	< 0.01 U	< 0.005 U	9.4	15	3.9	1.34 +/- 0.23	2.65 +/- 0.42	3.99
	11/18/2014	5	NA	NA	12	13	4.4	1.11 +/- 0.30	2.59 +/- 0.56	3.7
					Main P	roducing 2	one	- <u>36</u> -58.7		
A State of the	10/1/1990	<0.2	<0.01	<0.005	24	28	4.5	NA	NA	NA
Line-And	2/6/1992	< 0.2	< 0.01	< 0.005	26	17	5.8	NA	NA	NA
10 330	9/26/1997	< 0.2	< 0.01	NA	12	9.5	3.1	1. +/- 0.08	1.7 +/- 0.43	2.7
AC-23D	1/22/2004	< 0.2 U	< 0.01 U	< 0.005 U	8.9	15	5.2J	3.74 +/- 0.63	4.81 +/- 0.9950	8.55
	11/18/2008	< 0.2 U	< 0.01 U	< 0.005 U	10	20	4.6	2.96 +/- 0.26	3.51 +/- 0.44	6.47
	11/11/2014	<0.10	NA	NA	9.1	20	2.5	2.51 +/- 0.62	3.63 +/- 0.66	6.14

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TABLE 8
COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING
LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE
Highlighted Results Meet Performance Standard
(see last page for footnotes)
Agrico Site, Pensacola, Florida

Well ID	Date	Fluoride (mg/L)	Arsenic (mg/L)	Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate-N (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Combined Radium 226 + 228 (pCi/L)
PERFO	PERFORMANCE		0.01	0.015	250	250	10	- 18 ¹	-	5
Sector States			(And the second		Main P	roducing 2	Cone			
Sector Sector	2/11/1992	< 0.2	< 0.01	< 0.005	6.2	6.9	1.1	NA	NA	NA
	9/24/1997	< 0.2	< 0.01	NA	3.3	10	0.18	< 0.6 +/- 0.04	< 1. +/- 0.43	1.6
AC-26D	1/20/2004	< 0.2 U	< 0.01 U	< 0.005 U	4.9	< 5. U	1.4	< 0.21 U+/- 0.15	< 0.55 U+/- 0.32	0.21
	11/12/2008	< 0.2 U	< 0.01 U	< 0.005 U	3.8	9.8	0.07	0.161 +/- 0.0760	0.0167 +/- 0.14	0.178
	11/19/2014	<0.10	NA	NA	2.8	7.5	< 0.050	0.0322 +/- 0.11	0.122 +/- 0.24	0.154
					Main P	roducing 2	Cone			
A SHARE SH	4/8/1992	< 0.2	< 0.01	0.0272	6.7	11	0.3	NA	NA	NA
	9/24/1997	< 0.2	< 0.01	NA	4.7	14	< 0.05	< 0.6 +/- 0.06	< 1. +/- 0.41	1.6
A State State State	1/13/2004	< 0.2 U	< 0.01 U	< 0.005 U	16	5	3	1.09 +/- 0.26	4.83 +/- 0.92	5.92
AC-27D	11/11/2005	< 0.2 U	< 0.01 U	NA	4.6	9.6	0.12	0.266 J+/- 0.11	6.75 +/- 1	7.02
	11/18/2008	< 0.2 U	< 0.01 U	< 0.005 U	29	< 5. U	2	1.12 +/- 0.18	2.43 +/- 0.40	3.55
	11/13/2014	0.1	NA	NA	4	10	0.095	0.136 +/- 0.096	0.582 +/- 0.36	0.718
					Main P	roducing	one			
Read Street of Street	10/1/1990	<0.2	<0.01	< 0.005	10	<5	5.4	NA	NA	NA
	1/31/1992	< 0.2	< 0.01	< 0.005	13	6.4	5.1	NA	NA	NA
	9/26/1997	3.6	< 0.01	NA	9.7	< 5.	3.8	< 0.6 +/- 0.04	1.4 +/- 0.44	2.0
AC-5D	1/20/2004	< 0.2 U	< 0.01 U	< 0.005 U	10	< 5. U	4.5	1.15 +/- 0.28	1.7 +/- 0.46	2.9
	11/13/2008	< 0.2 U	< 0.01 U	< 0.005 U	7.9	< 5. U	3.6	0.922 +/- 0.17	1.3 +/- 0.38	2.2
a friday	11/12/2014	<0.10	NA	NA	7	1.4	2.8	0.660 +/- 0.19	1.44 +/- 0.5	2.1
	and the second second second				Main P	roducing	Zone			
	10/1/1990	<0.2	<0.01	<0.005	11	5.8	4.9	NA	NA	NA
	2/3/1992	0.2	< 0.01	< 0.005	9.5	< 5.	4.4	NA	NA	NA
	9/25/1997	< 0.2	< 0.01	NA	8.8	< 5.	3.9	< 0.6 +/- 0.06	2. +/- 0.44	2.6
NVVD-2D	1/19/2004	< 0.2 U	< 0.01 U	< 0.005 U	10	7.5	5.6	0.79 J+/- 0.21	2.19 +/- 0.60	3.0
	11/13/2008	< 0.2 U	< 0.01 U	< 0.005 U	11	13	5.2	0.901 +/- 0.17	1.71 +/- 0.44	2.61
PAGE AND	11/11/2014	< 0.10	NA	NA	12	7.6	6	0.813 +/- 0.25	0.966 +/- 0.32	1.78

S:\WilliamsConoco\Deliverables\2015/2014 Annual Report\Tables\Table 8_Comparison_COC_121014.xls

TABLE 8

COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE

Agrico Site

Pensacola, Florida

Notes:

Montoring wells ACB-31S, ACB-32S, AC-33S, AC-34S and AC-7SR sampled semiannually from May 1997 through May 2008 and samples analyzed for fluonde, arsenic, and lead only (OU-1 COCS); Beginning in November 2007, these wells incorporated into OU-2 network and samples analyzed for fluonde, arsenic, lead, chinode, suffate, nitrate, ratium 228 and radium 228.

* Radium samples analyzed by STL St Louis for January 2004 event were determined by STL to be baised high results

** Nitrite determined not be part of Agrico plume constituents; Analysis change to nitrate only as per 1/07 EPA approval

COC = constituent of concern

mg/L = milligrams per Liter

pCi/L = picocuries per Liter

BOLD = exceeds constituent performance standard

Highlight = Below performance standard.

NA = Not Analyzed

NS = Not Sampled

I = The reported value is between the laboratory method detection limit and the practical quantitation limit.

J = Estimated Value

Q = Sample was analyzed outside recommended analytical holdtime criteria.

V = The analyte was detected in both the sample and the associated method blank

 $<_{\rm c}$ U = Analyzed for but not detected above limiting criteria of 0.256

1 = First date for arsenic is 1990 data results

Radium 226 + 228 Analytical Laboratories:

1987 State of Florida Department of Environmental Regulation Laboratory 1992 Savannah Laboratories - Contract Lab Unknown 1997 Savannah Laboratories - Contract Lab Unknown 1999 General Engineering Laboratory - Charleston, SC 2000 KNL, Tampa, FL 2001 KNL, Tampa, FL 2002 KNL, Tampa, FL 1/2004 STL - St. Louis 11/2004 through 2014 - STL/TA Richland

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S.WrilliamsConocolDeliverables2016/2014 Annual ReportsTables/Table 8_Comparison_COC_121014.xb.2/2/2016

Appendix E.—Historical Surface Water Sampling Results from Bayou Texar Sampling Locations

Sample Location ID	Date	Fluoride (mg/L)	Total Arsenic (mg/L)	Total Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate + Nitrite (before 2007) Nitrate (2007 and later) (mg/L)	Combined Radium 226 + 228 (pCi/L)
	11/1999	1.2	<0.010	NA	14000 ⁽¹⁾	2300(1)	0.74	1.69
	11/2000	1	<0.010	NA	26000	1700	0.14	2.0
	11/2001	1.1	0.0065	NA	1000	1700	0.26	1.5
	11/2002	1.3	<0.010	NA	8400	1200	0.49	0.9
	1/2004	1.5	<0.010	<0.0050	8900	1300	0.45	<1.0
	11/2004	1.3	<0.010	NA	3900	900	0.43	1.44
ACGNIA	11/2005	1.1	<0.010	NA	8600	1200	0.52	1.18
Bayou	11/2006	1.3	<0.010	NA	4900	1100	0.63	1.45
Texar	11/2007	1.1	<0.010	NA	10000	1500	0.74	1.33
Brackish Water)	11/2008	0.89	<0.010	<0.0050	14000	2000	0.21	0.748
the states	11/2009	0.99	<0.010	NA	7500	890	0.46	0.989
	11/2010	0.94	NA	NA	27000	1600	0.27	1.376
A Start Lang	11/2011	0.78	NA	NA	12000	1700	0.23	0.58
a the second	11/2012	1.3	NA	NA	13000	1700	0.31	1.08
a. Stander	11/2013	0.91	NA	NA	8700	1200	0.47	1.41
	11/21/2014	1.1	NA	NA	18000	1900	0.45	1.40
	11/1999	0.82	<0.010	NA	15000	2300	0.15	<1.5
	11/2000	0.63	<0.010	NA	21000	1700	0.39	<1.8
	11/2001	0.74	<0.010	NA	14000	2200	<0.050	2.0
	11/2002	0.59	<0.010	NA	9300	1400	0.15	<1.0
	1/2004	0.66	<0.010	<0.0050	10000	1400	0.19	0.38
Section 1	11/2004	0.69	<0.010	NA	5900	1100	0.19	0.572
ACEW2	11/2005	0.80	<0.010	NA	11000	1700	0.32	1.66
Bayou	11/2006	0.73	<0.010	NA	5200	1200	0.38	1.04
Texar	11/2007	0.82	<0.010	NA	12000	1600	0.27	0.95
Brackish Water)	11/2008	0.60	<0.010	<0.0050	15000	2200	0.68	0.641
	11/2009	0.59	<0.010	NA	12000	1500	0.13	0.712
	11/2010	0.65	NA	NA	28000	1800	0.082	0.894
	11/2011	0.73	NA	NA	13000	730	0.17	1.277
Star Pay tar. Tar.	11/2012	0.73	NA	NA	14000	1900	0.066	0.691
	11/2013	0.78	NA	NA	13000	1800	0.19	1.21
A states of the states	11/2014	0.82	NA	NA	17000	1800	0.45	0.945

APPENDIX E Historical Surface Water Sampling Results from Bayou Texar Sampling Locations

Agrico Site Pensacola, Florida

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APPENDIX E

Historical Surface Water Sampling Results from Bayou Texar Sampling Locations

Sample Location ID	Date	Fluoride (mg/L)	Total Arsenic (mg/L)	Total Lead (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate + Nitrite (before 2007) Nitrate (2007 and later) (mg/L)	Combined Radium 226 + 228 (pCi/L)
	08/2008	0.56	NA	NA	NA	NA.	NA	NA
	11/2010	0.83	NA	NA	NA	NA	NA	NA
BT-02 ⁽³⁾	11/2011	0.77	NA	NA	NA	NA	NA	NA
(Brackish Water)	11/2012	0.89	NA	NA	NA	NA	NA	NA
	11/2013	0.94	NA	NA	NA	NA	NA	NA
	11/2014	1.30	NA	NA	NA	NA	NA	NA
	05/2009	0.58	NA	NA	NA	NA	NA	NA
	11/2010	0.89	NA	NA	NA	NA	NA	NA
BT-107 ⁽³⁾	11/2011	0.81	NA	NA	NA	NA	NA	NA
Bayou Texar	11/2012	1.30	NA	NA	NA	NA	NA	NA
Didentish videon	11/2013	0.99	NA	NA	NA	NA	NA	NA
	11/2014	1.30	NA	NA	NA	NA	NA	NA
	05/2009	0.60	NA	NA	NA	NA	NA	NA
	11/2010	1.00	NA	NA	NA	NA	NA	NA
BT-127 ⁽³⁾	11/2011	0.81	NA	NA	NA	NA	NA	NA
Bayou Texar	11/2012	1.20	NA	NA	NA	NA	NA	NA
(Drackish tracti)	11/2013	1.20	NA	NA	NA	NA	NA	NA
and the second	11/2014	1.30	NA	NA	NA	NA	NA	NA
	11/1999	<0.20	<0.010	NA	9.4	<5.0	2.1	<1.5
	11/2000	<0.20	<0.010	NA	9.4	8.8	1.4	2.5
	11/2001	<0.20	<0.010	NA	8.0	<5.0	1.8	2.4
	11/2002	<0.20	<0.010	NA	8.8	<5.0	1.2	2.4
ACSIA/ BI (2)	1/2004	<0.20	<0.010	<0.0050	8.5	5.1	1.4	1.53
Carpenter	11/2004	<0.20	<0.010	NA	8.7	7.1	1.1	1.08
Creek	11/2005	<0.20	<0.010	NA	10	5.1	1.2	2.08
(Freshwater)	11/2006	<0.20	<0.010	NA	11	<5.0	1.1	1.55
	11/2007	<0.20	<0.010	NA	9.8	<5.0	1.4	1.67
	11/2008	<0.20	<0.010	<0.0050	9.2	5.9	1.1	1.926
	11/2009	<0.20	<0.010	NA	7.3	5.7	0.73	0.895
Contraction of the	11/2010	and the second second		Disconti	nued Sampling	and the second second		

Agrico Site Pensacola, Florida

Bayou Texar naturally occurring brackish water from Pensacola Bay
Station Discontinued after 2009.
Stations added in 2010; analysis is for fluoride only.

Notes:

COC = constituent of concern

mg/L = milligrams per Liter

pCi/L = picocuries per Liter NA = Not Analyzed

Radium 226 + 228 Analytical Laboratories: 1992 Savannah Laboratories - Contract Lab Unknown 1997 Savannah Laboratories - Contract Lab Unknown 1999 General Engineering Laboratory - Charleston, SC 2000 KNL, Tampa, FL 2001 KNL, Tampa, FL 2002 KNL, Tampa, FL 1/2004 STL - St. Louis 11/2004 Horugh 2014, STL/TA Richland 11/2004 through 2014- STL/TA Richland

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Appendix F.—Restrictive Covenant for OU-1

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DR BK 4 1 50 P61 00 INSTRUMENT 97-407567

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

 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 // day of <u>Ouly</u>, 1997.

Signed, sealed and delivered in the presence of:

Name: San furtin

DOLOTHY AKERS

Name: Dout

STATE OF TEXAS COUNTY OF HARRIS

The foregoing instrument was acknowledged 📕 day of _ before me this // 1997. by Dernio Z. 12 in MAN. P. SHEA of CONOCO INC..

a Delaware corporation, and who is personally known to me or who has produced U-<u>5 facest 13/82 Vor</u>es identification. COVENANTOR:

CONOCO INC., a Delaware corporation

By: (SEAL)

Dennis R. Parker Its: Vice President, SHEA

000 Attest ssistant 5

Nota

Commission No.: My Commission Expires:

WARGO WILLIAMS Hutary Pedile, State of Texas My Commission Explore (0/20/87

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

OR BK 4158 P61090 Escambia County, Florida INSTRUMENT 97-407567

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 $52^{\circ}36'16"$ 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 $24^{\circ}26'14"$ 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 $52^{\circ}33'46"$ East along said Northerly R/W for a distance of 76.08 feet; thence South $37^{\circ}26'14"$ East along said R/W for a distance of 90.00 feet; thence North $57^{\circ}38'32"$ East along said R/W for a distance of 451.36 feet; thence North $50^{\circ}39'13"$ East along said R/W for a distance of 150.08 feet; thence North $28^{\circ}20'06"$ East along said R/W for a distance of 219.32 feet to the Point of Beginning; thence North $52^{\circ}33'46"$ East along said R/W for a distance of 200,00 feet; thence North $37^{\circ}26'14"$ West for a distance of 400.00 feet; thence South $52^{\circ}33'46"$ West for a distance of 200.00 feet; thence South $37^{\circ}26'14"$ West for a distance of 400.00 feet; thence South $52^{\circ}33'46"$ West for a distance of 200.00 feet; thence South $37^{\circ}26'14"$ West for a distance of 400.00 feet; thence South $52^{\circ}33'46"$ West for a distance of 200.00 feet; thence South $37^{\circ}26'14"$ East for a distance of 400.00 feet to the Point of Beginning 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.]

1

EXHIBIT "A"

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 $52^{\circ}36'16"$ 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 $24^{\circ}26'14"$ 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 $52^{\circ}33'46"$ East along said Northerly R/W for 25.64 feet; thence North $24^{\circ}26'14"$ West for 370.51 feet; thence North $14^{\circ}47'54"$ West for 199.93 feet; thence North $52^{\circ}39'08"$ East for 970.81 feet for the Point of Beginning; thence continue North $52^{\circ}39'08"$ East for 416.63 feet to the Westerly R/W of Interstate I-110 (R/W varies); thence along said Westerly R/W North $16^{\circ}22'22"$ 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 $01^{\circ}33'56"$ for an arc distance of 108.46 feet (Chord Bearing North $26^{\circ}08'39"$ West, Chord Distance 108.46 feet); thence departing said Westerly R/W South $75^{\circ}29'00"$ West for 62.02 feet; thence South $52^{\circ}38'15"$ West for 356.65 feet; thence South $24^{\circ}20'24"$ East for 175.71 feet to the Point of Beginning. [As recorded in OR Book 3758, Page 0952, Escambia County, Florida.]

EXHIBIT "A"

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 $52^{\circ}36'16"$ 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 $24^{\circ}26'14"$ West along said Easterly R/W for 295.98 feet to the Northerly R/W line of Fairfield Drive (SR #289-A); thence North $52^{\circ}33'46"$ East along said Northerly R/W for 25.64 feet; thence North $24^{\circ}26'14"$ West for 370.51 feet; thence North $14^{\circ}47'54"$ West for 199.93 feet; thence North $52^{\circ}39'08"$ East for 970.81 feet; thence North $24^{\circ}20'24"$ West for 175.71 feet to the Point of Beginning; thence continue North $24^{\circ}20'24"$ West for 140.43; thence North $75^{\circ}28'00"$ 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 $18^{\circ}04'37"$ East for 38.40 feet; thence departing said Westerly R/W line South $52^{\circ}38'15"$ 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 $52^{\circ}36'16"$ 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 $24^{\circ}26'14"$ 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 $52^{\circ}33'46"$ East along said Northerly R/W for 25.64 feet; thence North $24^{\circ}26'14"$ West for 370.51 feet; thence North $14^{\circ}47'54"$ West for 199.93 feet; thence North $52^{\circ}39'08"$ East for 118.25 feet for the Point of Beginning; thence continue North $52^{\circ}39'36"$ West for 852.56 feet; thence North $24^{\circ}20'24"$ West for 636.38 feet; thence South $65^{\circ}39'36"$ West for 218.02 feet; thence South $24^{\circ}20'24"$ East 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.

3

EXHIBIT "A"

DR BK 4158 P61093 Escambia County, Elorida INSTRUMENT 97-407567

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" Bast 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

EXHIBIT "A"