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March 31, 2021

Ms. Jasmin Jefferies
Remedial Project Manager
Superfund Remedial and Technical Services Branch
U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia 30303-8960

**Subject:** **2020 Annual Report**
**OU-1 and OU-2 Agrico Site**
**Pensacola, Florida**
**EPA ID: FLD 98022 1857**

Dear Ms. Jefferies:

AECOM, on behalf of Phillips 66, successor to ConocoPhillips, and Williams Companies, Inc. representing Agrico Chemical Company, is submitting this 2020 Annual Report for the Agrico site in Pensacola, Florida. This report presents the results of monitoring and maintenance activities conducted during 2020 for the site.

A hard copy of the report will be sent directly to the site document repository, the West Florida Regional Library, Genealogy Branch in Pensacola.

AECOM will be uploading the electronic data for 2020 to the EPA DART system as per the guidance memorandum from EPA Region 4's Superfund Division Director, requiring that environmental sampling data be submitted to EPA in a Region 4 electronic format.

Should you have any questions or require additional information regarding this report, please contact Ms. Terry D. Vandell (Phillips 66) at (580) 767-6561 or Mr. Lee Andrews (Agrico Chemical Company Representative) at (918) 573-6912.

Sincerely,

Amy R. Mixon, P.E.
Project Manager

**FINAL**

# 2020 ANNUAL REPORT

# AGRICO SITE
# PENSACOLA, FLORIDA
## OPERABLE UNITS ONE (OU-1) AND TWO (OU-2)

EPA ID: FLD 980221857

*Submitted to*

US Environmental Protection Agency, Region 4
Atlanta, Georgia

*Prepared for*

Phillips 66
Ponca City, Oklahoma
and
Williams, Inc.
On behalf of
Agrico Chemical Company
Tulsa, Oklahoma

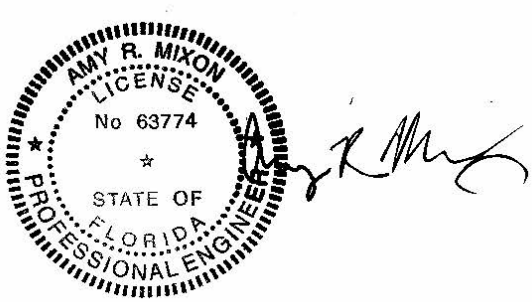
March 31, 2021

AECOM
1625 Summit Lake Drive
Tallahassee, Florida 32317
850-688-9941

# Certification By
# Florida Registered Professional Engineer

In accordance with Chapter 492, Florida Statutes, the *2020 Annual Report for the Agrico Chemical Site, Operable Unit One (OU-1) and Operable Unit Two (OU-2)* located in Pensacola, Florida has been prepared by or supervised by the undersigned registered Florida Professional Engineer. AECOM Technical Services, Inc., (AECOM) has prepared this Annual Report in a manner consistent with sound engineering practices and the customary level of care and skill exercised by members of the profession currently practicing in the same locality under similar circumstances.

Information developed and presented by others was used by AECOM in good faith as representative of the site conditions. The work performed by AECOM is in conformance with the current standards of practice.




Digitally signed by Amy R Mixon
Date: 2021.03.31 13:25:35 -04'00'

Amy R. Mixon, PE
Florida Professional Engineer
License No. 63774
Expiration Date 02/28/2023

This report has been electronically signed and sealed by Amy R. Mixon on 03/31/2021. Printed copies of this document are not considered signed and sealed.

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## Appendices

The activities being conducted for the Agrico Site in Pensacola, Florida are under the oversight of the U.S. Environmental Protection Agency (EPA), as outlined by the Consent Decrees (1994 and 1997) and the EPA Records of Decision (RODs) (1992 and 1994). The Site has been divided into two operable units (OUs). The first operable unit (OU-1) addressed the cleanup of on-site source material. The second operable unit (OU-2) addresses groundwater under the Site and downgradient of the Site. In 1995, remedial actions began for OU-1. Impacted soils and all sludge materials were collected and treated by solidification/stabilization. Additional fluoride-impacted soils were excavated. These soils, as well as the treated soils and sludge, were stabilized by placing them into an engineered, excavated, unlined area above the water-table and covering them with a multi-layered cap designed to prevent rainfall infiltration from contacting the materials. By keeping the underlying soil dry, the soils remain stabilized. The OU-1 remedial actions were certified complete by EPA in April 1997. With the source area controlled, EPA addressed OU-2, the groundwater, by selecting a monitored natural attenuation (MNA) remedy. The selected remedy involves actions aimed at limiting exposure while natural attenuation processes remediate the groundwater.

After extensive sampling of many constituents during the assessment phase (1990-1993), a risk evaluation was performed. The EPA selected seven constituents of concern (COCs) for initial long-term groundwater and surface water monitoring. For OU-1, these COCs included lead, arsenic, and fluoride. These were soil COCs and since the soils were stabilized on-site, monitoring of these constituents in the groundwater provided for assessing the integrity of the OU-1 remedy over time. For OU-2, these constituents include arsenic, fluoride, combined radium 226 plus radium 228, chloride, sulfate, and nitrate plus nitrite. The groundwater performance standards established by each of the RODs for OU-1 and OU-2 are as follows:

- Total Lead 0.015 milligrams per liter (mg/L)
- Total Arsenic 0.050 mg/L
- Fluoride 4.0 mg/L
- Radium 226 +228 5.0 pico Curies per liter (pCi/L)
- Chloride 250 mg/L
- Sulfate 250 mg/L
- Nitrate + nitrite 10 mg/L (analysis of nitrite indicates results at all groundwater monitoring locations are less than detection limit and a higher performance standard is appropriate; nitrite analysis discontinued as per EPA approval, January 22, 2007).

Beginning in November 2005, changes were approved for the long-term monitoring network. In 2005, an upgradient groundwater monitoring well (PIP-D) was added to the network. In 2007, the OU-1 monitoring well network was merged with the OU-2 monitoring network to form the long-term site-wide network. Initially all constituents were monitored in the OU-1 wells. In 2007, nitrite was eliminated as a constituent since it was determined that the nitrogen detected was only nitrate. Also, in 2007, surficial zone monitoring wells AC-5S, AC-24S, AC-26S, NWD-2S, and NWD-4S were changed from long-term monitoring to periodic monitoring. In 2009, periodic monitoring wells, AC-9D2, AC-24D, and AC-28D were changed to annual sampling locations. In 2010, arsenic and lead were discontinued from the list of analytes for the long-term network including monitoring wells located in OU-1. As per the EPA approved

(February 5, 2010) recommendation from the *Evaluation of Monitored Natural Attenuation in Groundwater Report* (August 19, 2009), arsenic has been deleted from the list of analytes for the long-term monitoring well network except at AC-2S and AC-3S. In 2010, the surface water long-term monitoring network changes included the deletion of the upstream monitoring of Carpenter's Creek (ACSW-BL). Other changes for 2010 included three additional monitoring stations in Bayou Texar. These stations included near-bottom surface water sampling for fluoride only. For 2019, the sampling program continued to be implemented in accordance with the Florida Department of Environmental Protection (FDEP) Memorandum dated March 10, 2015 and approved by EPA on May 29, 2015 that included the following:

1. At a minimum, annual groundwater monitoring will continue for the following wells: ACB-31S, AC-2S, AC-2D, AC-3D, AC-29D, AC-24D, AC-25D, AC-35D, AC-12D, and AC-13D for the existing set of parameters. Groundwater elevations shall continue to be measured in all Agrico monitoring wells prior to initiating sampling.

2. At a minimum, annual surface water monitoring should continue for the following locations: BT-02, BT-107, and BT-127 for fluoride only. A map showing the location of the surface water stations relative to the plume should be included.

3. The full plume network and surface water network should be sampled every 5 years to correspond with the Five-Year Review. The full plume network, with a few exceptions discussed in Section 5.1, was sampled in November 2019. The next comprehensive event is scheduled for November 2024.

4. Trend Plots for each contaminant of concern shall continue to be updated for each sampling event for the wells sampled.

5. Other annual activities should continue as in previous years for the Agency Coordination Memorandum, the Florida Department of Transportation (FDOT) inquiry for intrusive activity, the Advisory Notice to Water Well Contractors/Irrigation System Installers/Pool Contractors, and a check of the Northwest Florida Water Management District construction permits for new wells within the Delineated Area.

6. Site and cap integrity inspections shall continue semiannually and after major storm events.

During 2019, monitoring wells AC- 14D, AC- 26S, AC- 26D, and AC- 36D were recommended for removal from the monitoring well network because they had been destroyed by the City of Pensacola stormwater upgrade projects. FDEP requested the replacement of well AC-26D; however, COC concentrations in this well and in the other three wells have been below the target cleanup levels since the 2004 sampling event, and there are sufficient nearby monitoring wells still in place for accurate potentiometric and water quality delineation. EPA agreed with the recommendation of removing all four wells from the monitoring well network, but with the stipulation that if wells upgradient of these wells begin to show significant groundwater COC concentration increases, replacement wells would be required. Replacement of AC- 14D, AC- 26S, AC- 26D, and AC- 36D will be considered pending future groundwater quality data and trends in surrounding monitoring wells.

The Site is currently in the long-term Operations and Maintenance (O&M) phase, with MNA as the selected groundwater remedy.

This 2020 Annual Report presents the results of groundwater activities conducted for the annual sampling program. The 2020 O&M tasks were as follows:

- Annual groundwater sampling for the defined COCs (fluoride, radium 226, radium 228, chloride, sulfate, and nitrate) from 10 groundwater monitoring wells. Data collected during the annual sampling events are used to evaluate the effectiveness of the MNA remedy for groundwater.
- Annual surface water sampling in Bayou Texar from three locations for fluoride. This sampling is to assess the surface water quality for potential effects from the groundwater discharge.
- Distribution of annual advisory notices to water well contractors, irrigation system installers, and pool contractors to inform these contractors of the area where groundwater impacts related to the Agrico plume are located. The annual advisory also informs them of the well construction moratorium in effect by the Northwest Florida Water Management District (NWFWMD).
- Review of the NWFWMD well construction permit records to confirm that no wells have been inadvertently installed within the OU-2 moratorium area. Because of the existing well construction moratorium, the expectation is that no new wells will be permitted in this area.
- Activities related to coordination and dissemination of site information to local, regional, and state agencies.
- Site inspection reporting and site maintenance activity. Site maintenance activities for 2020 included repairs to fencing near the front gate that was damaged by tree limbs during Hurricane Sally, removal of vegetation from the south stormwater pond, and repairs of two areas of erosion adjacent to two of the Site storm water drains.

## OPERABLE UNIT ONE REMEDY

The OU-1 remedy addressed the cleanup of the source on-site. EPA approved the source remedy in the 1992 OU-1 ROD and it included excavation, solidification, and stabilization for on-site soils and sludge. Following the ROD issuance, actions by Conoco were initiated to re-acquire ownership of the property so that the OU-1 remedy could be implemented.

In 1995, remedial construction activities began. Lead and arsenic-impacted soils and all sludge materials were collected and treated by solidification/stabilization using cement. Other fluoride-impacted soils were collected for consolidation. These consolidated soils and treated soils and sludge were installed in lifts and compacted in the excavation based on engineering designs and standards. The material was placed approximately 20 feet above the saturated groundwater level within the unsaturated, dry portion of the sediments underlying the Site. The source control was certified by EPA to be complete in April 1997.

## OPERABLE UNIT TWO REMEDY

The remedy chosen by EPA for the impacted groundwater associated with the Agrico Site is MNA. The 2020 results indicate that the Agrico plume continues to be adequately defined. The 2020 sampling results compare favorably to past sampling results, which indicate that the source area remains controlled. The decreasing and stable trends in the surficial and main producing zones are a result of the OU-1 source control measures which have allowed natural attenuation processes to be effective downgradient. The source area remedy remains an effective measure in eliminating migration of COCs from the OU-1 area to the groundwater.

### *Monitored Natural Attenuation Results*

An evaluation of MNA at the Site was performed by William A. Huber, Ph.D., Quantitative Decisions (Rosemont, Pennsylvania) in 2009. Dr. Huber concluded in his report that the data show that mechanisms for attenuation are in place throughout the OU-2 area. These mechanisms and the OU-1 source remedy are resulting in decreasing concentrations that 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. Some limited increases are periodically observed in a few wells, but these concentrations are less than the historical highs. Huber's statistical evaluation estimated that much of the groundwater will reach the target concentrations within two to three decades (~ 2030). However, attenuation in the discharge area near Bayou Texar may take longer. The processes at the discharge boundary are more complex and do not follow the upgradient timeline. Additionally, radium declines may lag behind the other constituents and are 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 23 years (2020-1997) have passed since the source controls were implemented. Based on Huber's 2009 statistical evaluation, achieving the targets within the approximately 50 years remaining in the originally estimated timeframe (~ 2070) is still reasonable.

The statistical uncertainty for the Agrico data set is low. Data are consistent within each well and show relatively little random variability. This consistency indicates that allowed enough time, attenuation will eventually occur everywhere within the OU-2 area.

### *Groundwater Sampling Results*

Groundwater results for November 2020 continue to compare favorably to past results.

Concentration trends within the surficial shallow zone are mostly stable/decreasing. Impacts to the surficial zone are very limited. This is a direct result of effective source control and local hydrogeologic conditions.

For the deeper main producing zone, the trend in concentrations is generally downward and stable, also indicating continued plume stability.

Slight upward or downward ticks in the trends for the COCs are to be expected over time. It is the long-term trend for each COC that is important.

### *Groundwater Levels*

Water levels in both the shallow and deep aquifers near the Site increased on average approximately 1.5 feet as compared to 2019. Rainfall was higher in 2020 versus 2019 and was above average at 76.49 inches in 2020 versus an average annual of 62.53 inches (**Figure 7**).

Results of water level measurements collected in November 2020 indicate that groundwater flow remains toward Bayou Texar for both the surficial zone and main producing zone. In 2020, groundwater flow patterns closely followed historical patterns.

### *Bayou Texar Sampling Results*

The long-term surface water results indicate that groundwater from the Agrico Site is not adversely affecting Bayou Texar. All near-bottom surface water samples collected during the sampling event of November 2020 indicated that fluoride concentrations increased slightly from the 2019 values but remain within historical levels and well below the applicable surface water standard (SWS).

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.

### *NWFWMD Well Construction Moratorium*

For 2020, no additional irrigation wells were identified from the NWFWMD well construction permit records. The well construction moratorium initiated in February 2001 is still in effect and has no termination date. In a public meeting held on March 27, 2017, discussions with NWFWMD representatives indicated that they were not inclined to end the well construction moratorium. Well prohibition for the defined area which includes the Agrico area is part of NWFWMD's Rule 40A-3.

### *Advisory Notice*

The annual advisory notice was distributed to water well contractors, irrigation system installers, and pool contractors to inform them of the groundwater conditions and the existence of a well construction moratorium within the OU-2 area.

### *Institutional Controls Coordination*

A memorandum was distributed on March 25, 2020, to the local, regional, and state agencies listed below, soliciting information for any changes or proposed new regulatory rules or policies that may affect the institutional controls currently in place for the area. No agencies indicated any items that might affect the controls in place. A similar memorandum was also sent out in

March 2021, and results from the March 2021 memorandum will be captured in next years' report. The notified agencies included:

Florida Department of Environmental Protection (FDEP), Tallahassee and Pensacola
Emerald Coast Utilities Authority (ECUA) (formerly Escambia County Utilities Authority)
Northwest Florida Water Management District (NWFWMD)
City of Pensacola
Escambia County Health Department (ECHD)
Escambia County Neighborhood and Environmental Services Department
Florida Department of Transportation (FDOT), District Three (Chipley)

## FIVE-YEAR REVIEWS

Four Five-Year Reviews have been conducted by EPA for the Agrico Site. The First Five-Year Review occurred in 2000, the Second Five-Year Review occurred in 2004-2005, the Third Five-Year Review occurred in 2010, and the Fourth Five-Year Review occurred in 2015. In 2019, the Fifth Five-Year Review sampling event occurred, and the results were reported in EPA's 2020 Five-Year Review Report. Each of the reports have concluded that the remedy at the Site is functioning as intended by the RODs for OU-1 and OU-2 and remains protective of human health and the environment. The O&M activities were to be continued and conducted as approved. The next (sixth) Five-Year sampling event will occur in 2024 and will be reported in EPA's 2025 Review Report.

## BUTTERFLY HABITAT

In June 2014, President Obama issued a memorandum establishing a Pollinator Health Task Force, co-chaired by the U.S. Department of Agriculture (USDA) and EPA, to create a National Pollinator Health Strategy that promotes the health of honeybees, butterflies, and other pollinators. Early in 2015, EPA approached AECOM regarding the possibilities of the Agrico Site being used to enhance butterfly habitat. The responsible parties approved participation in this initiative, and in August 2015 a portion of the Site was converted to flowering plant beds. The goal is to establish a plant habitat that will attract butterflies to provide a safe area for feeding and support of the butterfly's life cycle. Maintenance of the habitat will continue in 2021.

## RECOMMENDATIONS

*(In accordance with Regulatory Agency Requirements)*

- Groundwater and surface water sampling will continue for 2021 as last modified by the March 10, 2015 FDEP Memorandum and updated by EPA concurrence of the recommendations included in the 2019 groundwater monitoring report.

- Operations and maintenance, including mowing related to OU-1, will continue in accordance with the OU-1 O&M Plan as amended November 18, 2009 and approved by EPA on January 25, 2010. This also includes maintenance of the butterfly habitat areas.

- The advisory notice to contractors and the query of the NWFWMD well construction permit database will continue on an annual basis.
- The Agency Coordination Memo and the FDOT inquiry for intrusive activity will continue on an annual basis.

AECOM Technical Services, Inc. (AECOM) through URS Corporation (URS), a wholly owned subsidiary, has prepared this 2020 Annual Report on behalf of Phillips 66 Company and Agrico Chemical Company represented by Williams Companies, Inc. (Williams). This annual report was prepared in accordance with the following:

- U.S. Environmental Protection Agency (EPA) Consent Decree (CD) dated May 4, 1994 and the March 10, 1997 amended Consent Decree for the Agrico Site (Agrico);
- The Record of Decision (ROD) for Operable Unit One (OU-1) issued on September 29, 1992;
- The Operation and Maintenance (O&M) Plan for OU-1 dated September 1996 including Appendix I – Groundwater Monitoring Plan by Woodward-Clyde Consultants;
- The ROD for Operable Unit Two (OU-2) issued August 25, 1994;
- The Scope of Work (SOW) which outlines the work to be performed as the remedy for OU-2;
- The EPA-approved (April 26, 1999) Remedial Action Work Plan and related plans;
- The O&M Plan dated November 1998;
- The *Evaluation of Long-Term Groundwater Monitoring Network – Section 12 - Recommendations*, Technical Memorandum Report dated November 30, 2006 and subsequent EPA approval of recommendations in EPA comment letter dated January 22, 2007;
- The EPA approval dated September 2, 2008 to discontinue OU-1 semi-annual sampling and to perform annual sampling. The last OU-1 semi-annual sampling event was conducted in May 2008;
- Minor O&M recommendations dated November 18, 2009 approved by the EPA on January 25, 2010;
- Recommendations in the report, *Evaluation of Monitored Natural Attenuation in Groundwater* (August 19, 2009- William Huber) and approved by EPA on February 5, 2010;
- EPA's Third Five-Year Review (June 2010) recommendations related to surface water sampling locations for Bayou Texar;
- Recommendations in the second report, *Evaluation of Monitored Natural Attenuation in Groundwater* (October 23, 2013-William Huber); and
- FDEP's recommendations in their memorandum outlining a modified annual sampling program issued on March 10, 2015 and approved by EPA on May 29, 2015.

This is the twenty-first annual report, since the initial one in 1999. The report documents both OU-1 and OU-2 activities performed at the Site for 2020. The comprehensive annual report was preceded by OU-1 semi-annual sampling results reported annually from 1997-1999. These OU-1 annual reports continued through 2005. The annual report for OU-2 was submitted separately from the OU-1 report from 1999 through 2005. One of the recommendations of the evaluation of the long-term monitoring network (URS, November 30, 2006) was to combine these networks. Beginning with the 2007 Annual Report, the groundwater requirements were

integrated so that OU-1 (on-site) and OU-2 (off-site) groundwater impacts could be readily evaluated. Per request by EPA, since November 2007, groundwater from the OU-1 monitoring wells has been analyzed for the same constituents of concern (COCs) as the OU-2 monitoring wells.

EPA approved (September 2, 2008) the integration of the groundwater monitoring requirements for OU-1 and OU-2 so that the monitoring satisfies the original OU-2 monitoring objective - monitoring of the surficial zone and main producing zone, on-site and off-site - downgradient of the Site for the purpose of evaluating the monitored natural attenuation (MNA) remedy. The original monitoring objective for OU-1 was only to evaluate the effectiveness of the Resource Conservation and Recovery Act (RCRA) cap remedy. The effectiveness was demonstrated by a statistical evaluation that confirmed the integrity of the containment system with data collected from 1997 to 2001. Data collected since 2001 continue to confirm cap effectiveness.

### *Summary of Sampling Modifications Initiated in November 2007*

- Semi-annual sampling of OU-1 groundwater monitoring wells was discontinued and changed to annual sampling to be conducted in November each year. The OU-1 surficial zone monitoring wells, ACB-31S, ACB-32S, AC-33S, AC-34S, and AC-7SR, were integrated into a site-wide groundwater monitoring network. The analyte list for these wells was changed to include the OU-2 analyte list. In addition to total lead, total arsenic and fluoride (COCs in the OU-1 ROD), the groundwater samples from these wells were analyzed for chloride, sulfate, nitrate, radium 226, and radium 228 (COCs in the OU-2 ROD).
- Nitrite has been deleted from the Site's analyte list as modified by implementation of EPA-approved long-term monitoring evaluation recommendations (URS, 2006d).
- Surficial zone monitoring wells AC-5S, AC-24S, AC-26S, NWD-2S, and NWD-4S were changed from long-term to periodic monitoring wells. Additionally, monitoring well NWD-3S was removed from the monitoring network because it was destroyed during off-site construction.
- The groundwater sampling purging procedure was changed from extracting a minimum of three well volumes to a low-flow purge procedure that allows for collecting water quality field parameters after one well volume is purged, and then one-quarter well volume thereafter until three stable water quality parameter readings are collected. This procedure is in accordance with the FDEP standard operating procedure (SOP) for sampling monitoring wells.
- Prior to November 2006, annual reports were prepared separately for OU-1 and OU-2. Annual reporting for these areas has been combined into one annual report.

### *Summary of Sampling Modifications Initiated in November 2009*

- Additional groundwater sampling was requested by the EPA in their comment letter dated October 15, 2009, regarding the *Evaluation of Monitored Natural Attenuation in Groundwater Report*. The additional wells included periodic monitoring wells AC-9D2, AC-24D, and AC-28D. Constituents to be analyzed from the groundwater from these

monitoring wells are the same as the long-term network constituents. The status of these wells was changed from periodic to long-term until sufficient sampling results have been collected on an annual basis.

### *Summary of Sampling Modifications Initiated in November 2010*

- Analysis of lead and arsenic were discontinued from the long-term network groundwater analyses for monitoring wells based on the EPA approval (February 5, 2010) of recommendations in the August 19, 2009, *Evaluation of Monitored Natural Attenuation in Groundwater*. In that report, the absence of arsenic and lead in groundwater samples collected from the monitoring well network was reported. The exception is for AC-2S and AC-3S. Total arsenic will continue to be analyzed for these two wells to verify the continued effectiveness of the OU-1 cap.
- Sampling of Carpenter's Creek at the 9th Avenue Bridge (ACSW-BL) was discontinued as per January 25, 2010 approval of the November 18, 2009, *Recommendations to Operations and Maintenance Plans for OU-1 and OU-2* (URS 2009d).
- Three surface water sampling locations were added to the sampling program and include BT-02, BT-107 and BT-127. These near-bottom surface water samples are analyzed for fluoride only (EPA recommendation in June 2010, Third Five-Year Review Report).

### *Summary of Sampling Modifications Initiated in November 2016*

Based on FDEP Memorandum dated March 10, 2015 and the subsequent EPA approval dated May 29, 2015:

- Only the following monitoring wells will be sampled annually for the same constituents as have been analyzed historically: AC-31S, AC-2S, AC-2D, AC-3D, AC-29D, AC-24D, AC-25D, AC-35D, AC-12D, and AC-13D.
- Water levels from all Agrico monitoring wells will be measured annually prior to initiating sampling.
- Surface water monitoring will include the following locations: BT-02, BT-107, and BT-127. Only fluoride will be analyzed from each sample collected.
- Trend plots for the above groundwater monitoring wells will be included in each annual report for all constituents.
- The annual Advisory Notice, the Annual Agency Coordination Memo, the Florida Department of Transportation (FDOT) annual inquiry regarding intrusive activity, and the annual checking of the Northwest Florida Water Management District (NWFWMD) records for newly constructed wells within the designated well construction moratorium area will continue as previously documented in the Site O&M plans.
- Site and cap integrity inspections will continue twice a year and after major storm events.
- The full Agrico groundwater monitoring network and surface water network will be sampled every 5 years as part of the EPA's Five-Year Review.

### *Summary of Sampling Modifications Initiated in November 2019*

Based on EPA concurrence (EPA memorandum dated June 2, 2020) with recommendations made in the *Annual Report for 2019, Operable Units One and Two (OU 1, OU 2), Agrico Site, Pensacola, Florida*, March 2020. AC- 14D, AC- 26S, AC- 26D, and AC- 36D have been removed from the monitoring well network. Evaluation of the need to replace one or more of these wells will be made following future sampling events and will be based on COC concentrations and trends in upgradient wells.

## 1.1 FIVE-YEAR REVIEWS

The EPA has conducted five Five-Year Reviews for the Agrico Site. The results of these reviews were presented in the February 2000, July 2005, June 2010, June 2015, and May 2020 EPA reports. Each of the five reviews concluded that (1) all areas were in compliance and (2) the remedy at the Site is functioning as intended by the RODs for OU-1 and OU-2 and remains protective of human health and the environment. The sixth EPA Five-Year Review report will be prepared in 2025 based on November 2024 data.

## 2.1 SITE DESCRIPTION

The Agrico Site is located at 118 East Fairfield Drive, at the northwest corner of Fairfield Drive and Interstate I-110 in Pensacola, Escambia County, Florida. The Site consists of 29.84 acres in Township 2 South, Range 30 West of Section 5, and the latitude and longitude at the center of this area is 302709.8914 degrees west and 871318.9648 degrees north, respectively. The Site is bordered by I-110 to the east, Fairfield Drive to the south, CSX railroad to the west, and a construction aggregate business (Vulcan Materials/Conrad Yelvington Distribution) to the north. An approximately 100-foot wide Gulf Power Company easement and overhead electrical lines pass through the Site at the eastern boundary of property. Site access is from the north side of Fairfield Drive, approximately 600 feet west of the I-110 overpass. Uncle Bob's Self Storage operates storage warehouses on an Agrico Site out-parcel in the south-central area. The Site location is shown on **Figure 1**.

## 2.2 SITE ACCESS AND DEED RESTRICTIONS

Access to the Agrico Site is restricted. The property is secured by a perimeter chain link security fence with locked gates, and the Site is regularly inspected. Restrictive and Site informational signs are posted advising the public of the on-site conditions, and an AECOM contact phone number is also posted for inquiries. Posted signs are present at the entry gates of the fenced OU-1 property. The wording on the signs is as follows:

Authorized Personnel Only

Please Do Not Disturb Soil Cover

Impacted Waste Material May Be Present Below the Ground Surface

For Information Call 850-465-3886

A Restrictive Covenant (**Appendix C**) for the Site was filed against the property deed with the Escambia County Clerk of the Circuit Court 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 ROD is prohibited, as per the covenant filed for the property.

## 2.3 DOCUMENT REPOSITORY

EPA maintains Site information at the University West Florida Library. This repository contains project documents, fact sheets, and reference material. EPA encourages the public to review these documents to gain a more thorough understanding of the Site. The address of the library is as follows:

University Archives and West Florida History Center
University of West Florida Libraries
Building 32
11000 University Pkwy
Pensacola, Florida 32514
850-474-2213

Through 2011, the West Florida Regional Library on West Gregory Street was the repository for the Agrico documents. In 2011, the documents were moved to the Library's Genealogy Branch, and in 2018, the Genealogy Branch transferred the documents to the University Archives and West Florida History Center.

EPA has Site information located at the following web site:

https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0400818

A specific web site developed for the Agrico Pensacola Site is located at:

http://www.agricopensacola.com/

This web site contains general information about the Agrico Site, contains the Site fact sheets, and provides contact information for EPA. A documents' page has been added, and electronic files for several reports have been uploaded to this page. The reports that are now accessible via this web site include:

- Evaluation of Monitored Natural Attenuation in Groundwater (URS, 2009)
- The Third Five-Year Review Report (E2 Inc., 2010)
- The 2011 Annual Report (URS, 2012)
- The 2012 Annual Report (URS 2013)
- Evaluation of Monitored Natural Attenuation in Groundwater (Report #2), (URS, October 2013)
- The 2013 Annual Report (URS 2014)
- The 2014 Annual Report (URS 2015)
- The Fourth Five-Year Review Report for Agrico Chemical Company (EPA, June 2015)
- The 2015 Annual Report (AECOM 2016)
- The 2016 Annual Report (AECOM 2017)
- The 2017 Annual Report (AECOM 2018)
- The 2018 Annual Report (AECOM 2019)
- The 2019 Annual Report (AECOM 2020)
- The Fifth Five-Year Review Report for Agrico Chemical Company (EPA, May 2020)

## 2.4 SITE HISTORY

The former facility at the Agrico Site was a superphosphate process facility not a continuous wet-process phosphoric acid facility that became dominant in the phosphoric fertilizer industry starting in the 1960s and 1970s and continuing during the modern era. According to the U.S. Department of Agriculture and Tennessee Valley Authority document titled *Superphosphate: Its History, Chemistry, and Manufacturing* (December 1964), the Irish firm known as W. & H. M. Goulding, Ltd. of Dublin, Ireland, opened the Goulding Fertilizer Company, Pensacola, Florida, factory in 1891 at the current Agrico Site location. The Goulding Fertilizer Company plant had an annual fertilizer production capacity of 45,000 tons. A sulfuric acid manufacturing plant co-existed on the Site. The source of sulfur was pyrite ore. The source of the phosphate for manufacturing the fertilizer was Central Florida mines, and the phosphate was transported to the facility via rail. The Pensacola plant started operations by manufacturing normal superphosphate, and then operated as a concentrated superphosphate plant (the second of its kind in the U.S. at the time) from 1898 to 1901. Operations by the Goulding Fertilizer Company

continued until 1911, when the factory was sold to an American interest, The American Agricultural Chemical Company (TAACC).

TAACC manufactured normal superphosphate and also continued the manufacturing of sulfuric acid using pyrite ore until 1920, when the source of sulfur dioxide was changed to elemental sulfur. TAACC operated the plant through 1963, when Continental Oil Company (Continental) purchased the assets of TAACC (U.S. Department of Agriculture, 1964).

After the acquisition of TAACC, Continental operated the agrichemical business as the Agrico Chemical Company, a wholly owned subsidiary of Continental. From 1963 to 1972, Agrico Chemical Company used the same manufacturing process as was used during the TAACC period (U.S. Department of Agriculture, 1964). From 1967 to 1968, in addition to producing virgin acid from sulfur, the plant purchased and utilized an unknown volume of spent sulfuric acid (Geraghty & Miller, 1993a and 1993b). Continental operated the plant until 1972.

In April 1972, The Williams Companies, Inc. (Williams) (Tulsa, Oklahoma) purchased the assets associated with Agrico Chemical Company from Continental Oil's Agrico Chemical Division. Under Williams, Agrico Chemical Company operated as a newly formed Delaware corporation and subsidiary of Williams. At this time, Agrico Chemical Company was one of the country's largest chemical fertilizer companies. In 1972, the Pensacola plant began manufacturing monoammonium phosphate in addition to superphosphate, and continued this manufacturing from 1972 to 1975. Normal superphosphate was combined with ammonia to produce monoammonium phosphate. The ammonification process produced nitrate. The macronutrient potassium was blended into the ammoniated phosphate product in various blends. The potassium source was potash, mostly potassium chloride, stored on-site, inside the plant, on concrete floors. In later years, two micronutrients, zinc and magnesium, were added to the ammoniated phosphate product blends at the plant. According to the plant manager and Agrico corporate purchasing agent, the macronutrient and micronutrient sources were purchased as pure products and not as by-products. The peak season for production at the Pensacola plant was March through June. Agrico Chemical Company operated the plant continuously until June 1975, when the plant was shut down (Geraghty & Miller 1993a and 1993b).

The former plant property was sold to Margod, a Florida partnership, and F.A. Baird, Jr. in August 1977. The former plant buildings and process equipment were demolished in late 1979. After demolition, only the concrete foundations remained in place. A storage warehouse was constructed on the southern portion of the property adjacent to Fairfield Drive between 1979 and 1981, with additional warehouse construction taking place between 1981 and 1986. The Agrico Chemical Company assets were sold to Freeport-McMoRan Resources Partners (Freeport McMoRan) in 1987. The Site property (except for the storage warehouse outparcel) was sold to Conoco, Inc. in 1995. The warehouse area is considered an out parcel of the original property. The majority of the remaining Site debris and concrete foundations were later consolidated and placed with the waste material under the RCRA cap during the OU-1 Remedial Action (RA) activities beginning in 1995. There are no permanent buildings from the original operations remaining on the Site. One foundation from an original Site building remains in the southwest portion of the property.

EPA conducted a hazardous waste site investigation at the facility in October 1983. The results of the study indicated that the on-site soils and on-site surface water impoundment were impacted with elevated levels of fluoride and lead. Groundwater was not sampled during that

investigation. However, an effort was made to locate private shallow wells in the vicinity of the Site, and none were located.

The Florida Department of Environmental Regulation (FDER) (now FDEP) conducted a groundwater assessment at the Site in January 1987 (Watts, et.al., July 1988) followed by a supplementary assessment in January and February 1989 (Watts, et.al., August 1989). The study concluded that the Site contaminants, primarily fluoride and sulfate, had impacted the area groundwater. While conducting the assessment for the former Agrico Site, FDER discovered contamination from the former Escambia Treating Company Site that had comingled with a portion of the Agrico plume.

EPA listed the Site on the National Priorities List (NPL) on October 4, 1989. Conoco, Inc. and Freeport McMoRan (parents of the Agrico Chemical Company) entered into an Administrative Order on Consent (AOC) on September 29, 1989. According to the terms of the AOC, the companies agreed to conduct source (soils) and groundwater investigations at the Site. The Site was remediated starting in 1995, and remediation of impacted soils and sludge was certified complete by EPA in April 1997.

Currently, Williams (on behalf of Agrico Chemical Company) and Phillips 66 (representing Conoco, Inc.) are responsible for implementing the activities associated with the O&M Plans for OU-1 and OU-2. In mid-2012, ConocoPhillips separated into two standalone companies. The environmental remediation activities conducted at the Agrico Site in the past by ConocoPhillips are now managed by Phillips 66.

## 2.5 OPERABLE UNIT ONE REMEDY

**Figure 2** shows a recent aerial photograph of the Site and the current features associated with OU-1 that represents the on-site source of contamination. A ROD for OU-1 issued by EPA Region 4 on September 29, 1992, selected the stabilization and cap remedy to address contamination of on-site soils and sludge. The selected remedy was based on a Site remedial investigation and feasibility study, including human health and environmental risk assessments, and site soil and groundwater characterization. Following the ROD issuance, Conoco initiated actions to re-acquire ownership of the property so that the remedy could be implemented.

In 1995, remedial construction activities began. Lead and arsenic-impacted soils and all sludge materials were collected and treated by solidification/stabilization using cement. Other fluoride-impacted soils were collected for consolidation. These consolidated soils and treated soils and sludge were installed in lifts and compacted in the excavation based on engineering designs and standards. The material was placed approximately 20 feet above the saturated groundwater level within the unsaturated, dry portion of the sediments underlying the Site. The source control was certified complete by EPA in April 1997.

On the surface, the material was covered with a 4-foot thick multi-layered engineered cap designed to prevent rainfall from contacting the underlying stabilized soils. The cap covers an area of 12 acres. The impervious nature of the cap causes storm water runoff volumes to be significantly greater than the volume generated before the construction of the remedy. For this reason, an elaborate system of piping and runoff collection devices was installed at the Site. The storm water collection system significantly minimizes runoff flowing off the Site. Runoff generated on-site is collected and contained on-site by returning it to one of two storm water

management impoundments constructed as part of the OU-1 remedial action. Because the north storm water impoundment is located upgradient from the stabilized soils, EPA required that a slurry wall be constructed between the north storm water impoundment and the stabilized containment area. The purpose of the slurry wall is to prevent infiltrating storm water from contacting the stabilized materials that are contained within the unsaturated subsurface containment area. A continuous limonite lens (a thin iron precipitation concretion) underlies the north storm water pond. This dense lens causes standing water for extended periods of time within this pond. Whereas, the south drainage pond is not underlain by the limonite layer and storm water readily infiltrates into the subsurface beneath this pond so that the south pond is dry most of the time.

**The following actions were performed as part of the OU-1 remedial action completed in April 1997:**

- Excavated and solidified approximately 45,000 cubic yards of arsenic- and lead-impacted soil and contaminated sludge and soils from Site sludge ponds.
- Consolidated approximately 110,000 cubic yards of fluoride-impacted soils.
- Within excavation areas, rubble from building foundations and consolidated soils were placed in a layered fashion, with the uppermost portion of the excavation filled with solidified/stabilized soils and sludge.
- Constructed an engineered 4-feet thick, seven-layer cap, consisting in part of impervious fabric, High Density Polyethylene (HDPE) liner, and geotextile materials, over the stabilized soils within the containment area.
- Constructed a 700-feet long, 2-feet thick slurry wall upgradient of the containment area to prevent infiltrating storm water from contacting consolidated/stabilized soils.
- Installed a drainage collection system so that storm water generated on-site is contained on-site in one of two storm water impoundments, preventing off-site runoff.
- Attached deed restrictions to the property controlling future uses of the property, assuring protection of the containment structure.
- Installed security fencing with locked gates to restrict unauthorized access to the property.
- Constructed five monitoring wells to serve as long-term groundwater sampling locations to evaluate the effectiveness of the implemented OU-1 remedial action. These five monitoring wells were monitored to demonstrate the effectiveness through 2007. After 2007, the wells were integrated and combined with the OU-2 wells to form a site-wide groundwater monitoring network. The purpose of this site-wide network is to demonstrate the effectiveness of the MNA remedy for groundwater.

### 2.5.1 Operations and Maintenance

Regular activities are conducted for the Site in accordance with the EPA-approved O&M Plan for OU-1 (September 20, 1996).

*Elements of the O&M for OU-1 are as follows:*

- General facility inspection and regular lawn care service for the Site. The grass is cut on at least a monthly basis between October and April and on at least a biweekly basis between May and September.
- Visual inspections of the drain inlet and outlet system are conducted after storm events with maintenance initiated, as required.
- Inspections of the Site are conducted at a minimum of twice a year and following major storm events.

The inspection reports for 2020 are presented in **Appendix D**.

## 2.6 OPERABLE UNIT TWO REMEDY

The ROD for OU-2 was issued by EPA Region 4 on August 25, 1994. The OU-2 ROD presents EPA's selected remedial action for treatment of groundwater. The following discussion is based on the August 1994 ROD and includes the rationale for the selected OU-2 remedy. The OU-2 area is shown on **Figure 3** and was delineated to correspond to the previously completed irrigation well survey area. This area encompasses a larger area than the defined groundwater impact area. The OU-2 area is roughly bound by Palafox Street to the west, E. Cross Street to the south, Fairfield Drive to the north, and Bayou Texar to the east.

The EPA selected MNA as the remedy, and MNA meets all EPA and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) criteria. The remedy is protective of human health and the environment and complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action. This remedy utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable. The reduction of toxicity, mobility, and volume of the Site groundwater contamination has been controlled through source control (OU-1) and MNA (OU-2).

EPA views the MNA remedy at least as protective of human health and the environment as the pump-and-treat technology alternatives that were previously considered for this Site. Additionally, MNA avoids potentially adverse impacts associated with the groundwater extraction and treatment alternatives.

## 2.7 ANNUAL O&M TASKS FOR OPERABLE UNITS ONE AND TWO

The field activities associated with this 2020 Annual Report included the following O&M tasks:

- Annual groundwater sampling of 10 long-term groundwater monitoring wells (for both OU-1 and OU-2).
- Annual surface water sampling at three surface water sampling locations within the primary groundwater discharge reach of Bayou Texar.
- Annual advisory notices distributed to water well contractors, irrigation system installers, and pool contractors. This list of contractors was compiled from the NWFWMD list of licensed water well contractors, from Escambia County construction permit records, and from the telephone directory.

- Coordination and dissemination of site information to local, regional, and state agencies.
- Annual Florida Department of Transportation inquiry of construction activities scheduled for Fairfield Drive between the CSX overpass and the I-110 interchange.
- Annual review of NWFWMD well construction permit records to identify any potential new well construction downgradient of the Agrico Site.
- Annual inquiry on status of NWFWMD well construction moratorium in the vicinity of the Escambia Treating Company and Agrico sites.
- Regular maintenance of property associated with the former Agrico Chemical Company (OU-1).

## 2.8 ANNUAL O&M TASKS FOR DEVELOPMENT OF POLLINATOR HABITAT

In June 2014, President Obama issued a memorandum establishing a Pollinator Health Task Force, co-chaired by the U.S. Department of Agriculture (USDA) and EPA, to create a National Pollinator Health Strategy that promotes the health of honeybees, butterflies, and other pollinators. Early in 2015, EPA approached AECOM regarding the possibilities of the Agrico Site being used to enhance butterfly habitat. The responsible parties approved participation in this initiative, and in August 2015 a portion of the site was converted to flowering plant beds. The goal is to establish a plant habitat that will attract butterflies to provide a safe area for feeding and support of the butterfly's life cycle.

- Flowering plant beds first initiated in August 2015
- Continued cultivation of plant beds to get established flowering plants
- Continued planting of flowering species to diversify flowering periods and increase the density of plants
- Routine watering and weeding of plant beds to maintain their health.

## 2.9 OTHER CONTAMINATION SOURCES IN THE VICINITY OF THE AGRICO SITE

Past sampling results conducted by ECUA for supply wells south of the Agrico area have indicated impacts to ECUA supply wells, which initiated an assessment by FDEP in the late 1990s. This assessment identified two areas, collectively referred to as Site 348. Both areas are located less than 0.5 miles south of the Agrico Site. One is the former fertilizer manufacturing operation known as Kaiser Fertilizer plant. The second is known as the former Southern Cotton Oil Company. This site was a fertilizer mixing and storage facility.

Reportedly, the sources which may have contributed to impacted groundwater affecting the ECUA wells (F & Scott Streets Well, the East Plant Well, Well No. 6, Well No. 8, and Well No. 9) are still under investigation by FDEP. Three of these ECUA wells have been shut down and pumping discontinued (East Plant, Well No. 8, and Well No. 9) due to groundwater impacts. The COCs identified by FDEP at Site 348 are similar to the Agrico COCs, including radium 228 and ammonia. The Agrico plume was not implicated as a source or a factor in the impacts to these wells (Mactec, 2010). Additionally, the former Agrico plant was not associated with the either of the operations identified by FDEP that are related to Site 348.

No pumping effects are occurring within the current Agrico plume boundary that will cause the plume to move outside the natural groundwater flow path. This is verified by the past 20 years of water level measurements and potentiometric surfaces that show the natural groundwater flow direction remains consistently to the east, toward Bayou Texar. Consistency of groundwater flow patterns is also demonstrated by the individual water level trend data). The discontinued municipal pumping in the downtown area due to impacts from non-Agrico sources, also significantly decreases the potential of the Agrico plume to migrate from its current plume boundary. These conditions and other groundwater flow conditions negate the potential for future Agrico plume migration that could affect any public water supply well.

Water level measurements collected during the past 20 years indicate that the remaining irrigation pumpage occurring within the OU-2 area is not significantly affecting the direction of groundwater flow. The primary groundwater flow controls are natural, including Bayou Texar, which functions as the eastern discharge boundary for the Agrico plume.

## 3.1 HYDROGEOLOGIC FRAMEWORK OF THE SAND-AND-GRAVEL AQUIFER

The vertical profile of the Sand-and-Gravel aquifer consists of beds of sand and gravel interbedded with beds of silt, clay, and fine sand sediments (**Figure 4**). The permeability of these beds is variable, both laterally and vertically. However, the subsurface sequence can be divided into three distinct zones. These zones vary greatly in thickness and lithology throughout Escambia County. In addition, individual beds of sand or clay within these zones are highly discontinuous, resulting in considerable heterogeneity within the zones. The major zones are the surficial zone, the low-permeability zone, and the main producing zone (Roaza, et al., 1991).

### 3.1.1 Surficial Zone

The surficial zone consists of the uppermost layer of sediments. It contains the unsaturated zone and the shallow surficial water table. The surficial zone varies in thickness, but it is generally less than 100 feet thick beneath the OU-2 monitoring area. The surficial zone consists primarily of quartz sand ranging in size from fine sand to gravel. Thin beds of limonite-cemented sandstone also occur. The zone contains thin beds of clay and silt that are highly discontinuous. These low-permeability beds occur both in the unsaturated and the saturated portions of the zone. Groundwater within the surficial zone primarily moves downward through the underlying lower-permeability zone to the main producing zone of the aquifer.

### 3.1.2 Low-Permeability Zone

The low-permeability zone underlies the surficial zone and is composed of sediments with overall lower permeability characteristics than sediments above or below the zone. This zone forms a semi-confining layer and helps to limit the vertical flow of groundwater between the overlying surficial zone and the underlying main producing zone. The actual lithology of this zone is variable, ranging from poorly sorted sand and silt to sandy clay to clay beds. Locally, well-sorted, water-bearing sands can also occur within this zone. Poor sorting and a higher percentage of clays and silts distinguish this zone from the other zones. The thickness of this zone in the subsurface underlying the facility ranges from about 20 to 50 feet (Roaza, et al., 1993).

The thickness and lithology of this zone is important because of its effect on vertical permeability. The low vertical permeability of this zone maintains the hydraulic head difference between the surficial and main producing zones in certain areas. This head difference imparts the vertical gradient responsible for the transport of dissolved constituents downward from the surficial zone to the main producing zone beneath the OU-1 area of the Site (see **Figures 5 and 6**).

### 3.1.3 Main Producing Zone

The main producing zone is the most productive portion of the Sand-and-Gravel aquifer and is the zone tapped by most water supply wells. The main producing zone is the deepest portion of the aquifer. The groundwater within this zone exists under semi-confined conditions. The main producing zone consists of moderate to well-sorted sand and gravel, along with minor interbedded layers of sandy clay and clay. Locally and regionally, variations occur in the

lithology of the main producing zone. Changes with depth tend to be gradual and include varying grain size distribution and changes in the degree of sorting.

The clay beds interbedded within this zone generally constitute 10 to 40 percent of the thickness. In some areas, the productive intervals can be correlated and appear to be continuous over a distance of many miles. The saturated thickness of the main producing zone near the Site is approximately 100 feet.

The main producing zone is recharged by leakage through the overlying low-permeability zone. The actual amount of recharge is determined by the hydraulic head difference between the surficial zone and the main producing zone, the vertical permeability of the low-permeability zone, and the presence of any pumping wells. Groundwater from this zone discharges into Bayou Texar from the east and the west, and the bayou represents a discharge boundary for groundwater in OU-2.

## 3.2 HYDRAULIC HEAD DIFFERENCES AND GROUNDWATER FLOW BOUNDARIES

Within the former Site boundary (OU-1), the hydraulic head for the surficial zone is slightly 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. The surficial zone plume has limited areal extent; and with source control and ongoing source depletion, significant trends toward decreasing concentrations within the plume have occurred in the surficial zone. 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 (see **Figures 4, 5,** and **6**). Bayou Texar is a groundwater discharge boundary; therefore, groundwater from the west and east discharge into the bayou. 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 flow component. Groundwater from the east (at least as far away as the Pensacola Airport) also discharges to the bayou. **Figure 4** shows the hydrogeologic conceptual model from the Agrico Site to Bayou Texar.

Within OU-2, groundwater generally flows laterally and vertically (both upward near the discharge boundary and downward in recharge areas) within the Sand-and-Gravel aquifer. The overall direction of groundwater flow is easterly toward Bayou Texar. Head variations between zones are important in controlling the vertical direction of groundwater flow. **Figures 5** and **6** show the potentiometric surfaces in November 2019 for the surficial zone and main producing zone, respectively. These surfaces are similar to those measured historically.

The flow direction downgradient of the Agrico Site is primarily controlled by the Bayou Texar discharge boundary conditions. Near the bayou, vertical head differences between aquifer zones cause groundwater to flow vertically from the main producing zone upwards, and groundwater discharges to the bayou. There is evidence that the bayou is a discharge boundary for both the surficial and main producing zones of the aquifer, and that groundwater does not pass under the bayou as underflow. Water levels within both zones to the north, east, and west of Bayou Texar indicate a groundwater flow direction toward the bayou boundary.

## 3.3 RAINFALL CONDITIONS

Rainfall records collected at the Pensacola Airport indicate that 2020 was characterized by about 13.96 inches above average normal rainfall (annual average is about 62.53 inches based on the 1900-2020 period of rainfall record), with a total accumulation of 76.49 inches during 2020. The total accumulation of rainfall in 2020 is approximately 23.93 inches more than occurred in 2019 and is similar to the total rainfall in 2015. Over the past 15 years, extremes in rainfall have occurred. There was abundant rainfall in 2005 followed by a drought in 2006. During 2006, the total rainfall was 45.26 inches, or 16.27 inches below normal. The hurricanes during 2005 produced a very wet year, with an annual total of 87.32 inches, or 25.79 inches above normal.

A significant storm event occurred in the Pensacola area during April 2014. Between April 29 and April 30, 2014, the area received rainfall totals ranging from 16 to 24 inches. Widespread flooding occurred in many parts of the county and within the vicinity of the Site. The rain ended about 6:30 am on April 30, 2014. The Site was inspected at 14:15 pm on April 30, 2014. The south drainage pond had topped the pond banks. Flood water was contained north of the Fairfield Drive railroad overpass and the railroad right-of-way. Flooding extended along the southern annex road to just east of the storage warehouse property where the storm water pond on this out parcel also topped the pond's banks. The north pond was full and topping its bank, but flooding was contained on Site. An inspection of the cap area indicated that the cap was intact, and no damage occurred.

During 2020, rainfall was above normal for the year and significantly higher than rainfall measured in 2019. **Figure 7** presents the annual rainfall data for the period of record from the NOAA Pensacola station. Also included on **Figure 7** is a graph showing the cumulative departure from normal rainfall. This cumulative departure graph generally mimics groundwater level trends.

An annual advisory notice (**Appendix C**) is sent to contractors conducting work in southern Escambia County. The advisory notice is sent to water well contractors, irrigation system installers, and pool contractors, informing them of groundwater conditions in the vicinity of the Agrico Site. The contractor listing is updated annually from yellow pages listing, well contractor licenses listing, and returned "not deliverable – no forwarding address" notices. For the purposes of the advisory notice, the area identified is approximately bounded on the north by Fairfield Drive, on the west side by Palafox Street, on the south side by Bobe Street, and on the east side by Bayou Texar. The notice states that the construction of wells in this area, including lawn irrigation wells, may be restricted due to the occurrence of impacted groundwater. The contractors are advised to contact the NWFWMD, the Northwest District of FDEP, or the Escambia County Health Department for further information. The annual advisory notice was distributed in December 2020 to the contractors listed in **Table 6**.

Currently, institutional controls are in place that provide protection to the public drinking water supply. As part of the OU-2 remedy, periodic checking is performed to determine the status of institutional controls established by local, regional, and state agencies. In order to verify that controls remain in place, annual letters are sent to the various agencies requesting information on any changes or proposed changes. Since these agencies also receive reports regarding groundwater conditions, the purposes of the communication are: 1) to address any questions the agencies have concerning groundwater conditions and 2) to receive a status report from the agencies concerning the existing regulations, planned rule changes, or new regulations which control groundwater use in the Agrico OU-2 area.

Institutional controls include the following:

1. Well construction and consumptive use approval (NWFWMD)

   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. In a public meeting held on March 27, 2017, discussions with NWFWMD representatives indicated that they were not inclined to end the well construction moratorium. Therefore, the moratorium remained in effect during 2020 and is expected to continue into the future since there is no expiration date for the moratorium.

   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 bayou serves as a flow boundary to the Agrico plume and prevents flow farther east.

   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.

2. Irrigation systems approval (ECHD)**:**

   A letter dated February 2, 2005 was received from the Director of the Environmental Health Services, Escambia County Health Department (ECHD), indicating that the ECHD no longer approves or disapproves irrigation systems. The coordination with the City of Pensacola Building Inspection office for installation of irrigation systems is ***no longer*** a function performed by ECHD.

   Based on this information, the only regulatory control as it relates to groundwater within the OU-2 area is managed by the NWFWMD in their well construction permit program.

3. The location of the Agrico plume is well defined, and ECUA is on the distribution list for reports related to the Agrico plume. Therefore, a future supply well location in the vicinity of the Site is highly improbable.
4. Existing wells are regularly sampled by ECUA, which reports these data as part of their permit reporting to FDEP. Any potential impacts to the supply wells caused by existing plumes can be assessed. For example, existing impacts from Site 348 are under assessment by FDEP based on analytical results from ECUA wells (F & Scott Well, East Plant Well, Well No. 8, and Well No. 9).
5. The Northwest District of the FDEP 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 area is the same as the OU-2 area defined on **Figure 3**. 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 62-254.
6. On February 8, 2021, the NWFWMD well construction database was queried, and no new wells were found confirming no new well construction for the moratorium area.
7. Deed restrictions on Agrico Property provide for certain future land use and subsurface limitations.

In March 2020, a memorandum was distributed to:

- Alex Webster– FDEP, Northwest District, Pensacola,
- Billy Hessman - FDEP, Tallahassee
- Tim Haag - ECUA
- Tom Brown– NWFWMD
- Derrick Owens - City of Pensacola
- Mark Spitznagel - ECHD
- Glenn Griffith, Escambia County

- Alan Hagans – FDOT, District Three (Chipley)

The June 15, 2020, response from Alan Hagans (FDOT-Chipley), District 3 Contamination Impacts Coordinator, indicated that all planned 2020 projects and those in the Five-Year Plan were non-intrusive activities (**Appendix C).** Results from the 2021 memorandum will be reported in next years' report.

## 5.1 GROUNDWATER SAMPLING

Annual groundwater samples were collected from the modified long-term monitoring network and from the five-year network in November 2020. A total of 10 monitoring wells were sampled.

Groundwater samples were collected in accordance with FDEP's SOPs for Field Sampling (Revised January 2017). Sample collection techniques, sample documentation, preservation requirements, sampling equipment decontamination procedures, the types and number of quality assurance/quality control (QA/QC) samples collected, and specifications that allow for the verification of the precision, accuracy, and completeness of data collected are all detailed in the sampling and analysis plan (SAP) included in the November 1998 O&M Plan.

### 5.1.1 Monitoring Well Network

#### *Monitoring Locations*

Locations of monitoring wells installed either in the surficial or main producing zones of the Sand-and-Gravel aquifer are shown on **Figure 1**. **Table 1** lists the wells in the Agrico monitoring network, including long-term monitoring wells which are sampled annually (includes measuring groundwater levels) and periodic monitoring wells where groundwater levels are measured annually and wells that are sampled and gauged during the Five-Year Review. **Table 2** presents the well construction details for all monitoring wells associated with the groundwater monitoring program for the Agrico Site.

#### *Sampling Constituents*

Groundwater was sampled in 2020 for the following COCs in both the surficial and deep zones:

- Fluoride
- Arsenic, Total (only from monitoring wells, AC-2S and AC-3S)
- Chloride
- Sulfate
- Nitrate
- Radium 226 and Radium 228 (naturally occurring); also reported as the sum of combined radium 226 + 228 results

Lead and arsenic are no longer included as analytical parameters for all groundwater samples. Arsenic is only analyzed in AC-2S and in AC-3S during the five-year sampling. Lead is not analyzed for any well locations.

### 5.1.2 Well Purging

Each monitoring well associated with the modified monitoring network and sampled during November 2020 was purged and sampled with an electric, 2-inch, stainless steel, low-flow submersible pump and polyethylene tubing. All wells were purged a minimum of one and a half

well volumes before sampling. No wells were purged dry during the November 2020 sampling event. Field parameters, including pH, specific conductivity, turbidity, temperature, dissolved oxygen, and oxidation reduction potential were collected from all wells during purging. A summary of groundwater field parameters is presented in **Table 3**.

### 5.1.3 Investigation Derived Waste

Development and purge water pumped from each well was collected in a temporary storage tank installed on a field trailer. When the mobile storage tank was filled to capacity, the recovered water was transferred to a larger temporary storage tank located on the Agrico OU-1 Site. In accordance with the FDEP guidelines, the wastewater is managed as industrial waste.

The IDW (non-hazardous groundwater purge water) is transported by Liquid Environmental Solutions (LES) to their Mobile, Alabama facility (EPA ID Number ALO 000 859 421). There it is treated and disposed of in accordance with state and federal regulations. An attempt to remove the purge water, approximately 1,000 gallons, was made on February 12, 2021, but the ground was too wet to allow access to the tank. The pick-up was completed on March 22, 2021.

### 5.1.4 Water Level Measurements

In November 2020, groundwater levels were measured in all Agrico network monitoring wells for OU-1 and OU-2

As recommended in the 2019 Annual Report, Agrico Site, Pensacola Florida, Operable Units One (OU-1) and Two (OU-2) and agreed upon in the June 2, 2020, EPA report review memorandum, AC-14D, AC-26S, AC-26D, and AC-36D have been removed from the monitoring well network, and water level measurements were not collected from these wells.

In 2019 AC-6D was located; however, the casing had been damaged possibly by heavy equipment. Repairs to the casing were completed on December12, 2019, and the new casing elevation was surveyed relative to existing monitoring wells.

Water levels measurements were collected on a single day prior to purging of wells scheduled for sampling, and these data and contours are consistent with historical data. Water level measurements are used to evaluate water level fluctuations and groundwater flow direction, and they are used to prepare potentiometric maps for the surficial and main producing zones of the Sand-and-Gravel aquifer.

Static groundwater levels from all identified monitoring wells associated with the Agrico Site (**Figure 1**) were measured to within ± 0.01 ft. Measurements were collected with an electronic water level tape using the top of casing (TOC) as the measuring point. The measurements were subsequently referenced to the TOC elevations and used to calculate groundwater elevations. This information was used to confirm that groundwater flow directions remain similar to previous years. Groundwater elevations are presented in **Table 4**.

## 5.2 BAYOU TEXAR SAMPLING

Three surface water sampling locations within the primary groundwater discharge reach of Bayou Texar were sampled as per the March 10, 2015, FDEP Memorandum. These locations are shown on **Figure 1**.

### *Surface Water Sampling*

Three near-bottom surface water samples (BT-02, BT-107, and BT-127) are located within the brackish water locations that are tidally influenced. Saline water from Pensacola Bay is drawn into the bayou during high tide. All surface water samples are collected at low tide.

Surface water sampling is conducted in accordance with the November 1998 SAP. The samples are collected from a boat. A discrete sample is collected at the deepest section of each transect. Samples are collected using a peristaltic pump and disposable polyethylene tubing attached to poly-vinyl chloride pipe, which is lowered to the appropriate depth. The depth of each sample collected is approximately 6 inches above the floor of the bayou. Field parameters, including pH, specific conductivity, turbidity, and temperature, are collected in conjunction with the surface water samples.

A summary of the 2020 surface water quality field parameters is presented in **Table 5**.

### *Sampling Constituents*

For sampling locations BT-02, BT-107, and BT-127, fluoride was the only constituent analyzed.

## 5.3 CHEMICAL ANALYSES

Groundwater and surface water quality samples collected during the November 2020 event were submitted to Test America Laboratories, Inc. (TA), Pensacola, Florida. All analyses were performed by the Pensacola laboratory (Certification No. E81010), except radium 226 and radium 228 which was analyzed by TA St. Louis (Certification No. E87689). All analyses were performed pursuant to NELAP requirements. TA is certified by EPA and the State of Florida. All analytical reports were prepared in accordance with TA's Level III report format. The following analytical methods were used to analyze the specific media in accordance with SW-846.

| CONSTITUENT | ANALYTICAL METHOD |
|---|---|
| Fluoride | SM4500 F C |
| Chloride | 300.0 (Ion Chromatography) |
| Sulfate | 300.0 (Ion Chromatography) |
| Nitrate | 353.2 Nitrate by calculation |
| Arsenic | 6010B |
| Radium 226 | 903.1 Mod (RL-RA—001)(Alpha Scintillation) |
| Radium 228 | 904 Mod (RL-RA—001)(Gas Proportional Counters) |

## 5.4 SAMPLING RESULTS

The November 2020 sampling activities completed the annual sampling requirement for the Agrico Site. A total of 10 annual monitoring network wells were sampled. **Figure 1** shows the required water quality sampling locations for the Agrico Site.

Field parameter details from the November 2020 sampling event are shown in **Table 3** and historical trends are shown on graphs within Section 5.5.

Details of Bayou Texar sampling results are presented in **Table 5** and **Table 9**.

The groundwater sampling results for the identified COCs detected in the surficial and main producing zones for the site-wide required water quality monitoring wells are discussed in this section. Details of results are provided in **Table 8, Figure 8,** and **Figure 9.**

**Appendix A** contains all laboratory analytical reports from the November 2020 sampling event.

## 5.5 GROUNDWATER FIELD PARAMETERS

In addition to the Agrico COCs, several field parameters are collected as part of the groundwater sampling program (**Table 3**). These parameters include water temperature, pH, dissolved oxygen, turbidity, specific conductance, and the oxidation-reduction potential. An understanding of these parameters can be important in understanding the relationships between COC concentrations and field parameter ranges in values, in defining and understanding ranges of background concentrations, and in evaluating overall COC concentration trends. A more detailed discussion of selected field parameters, including specific conductance, pH, dissolved oxygen, and the oxidation-reduction potential follows.

### 5.5.1 Specific Conductance

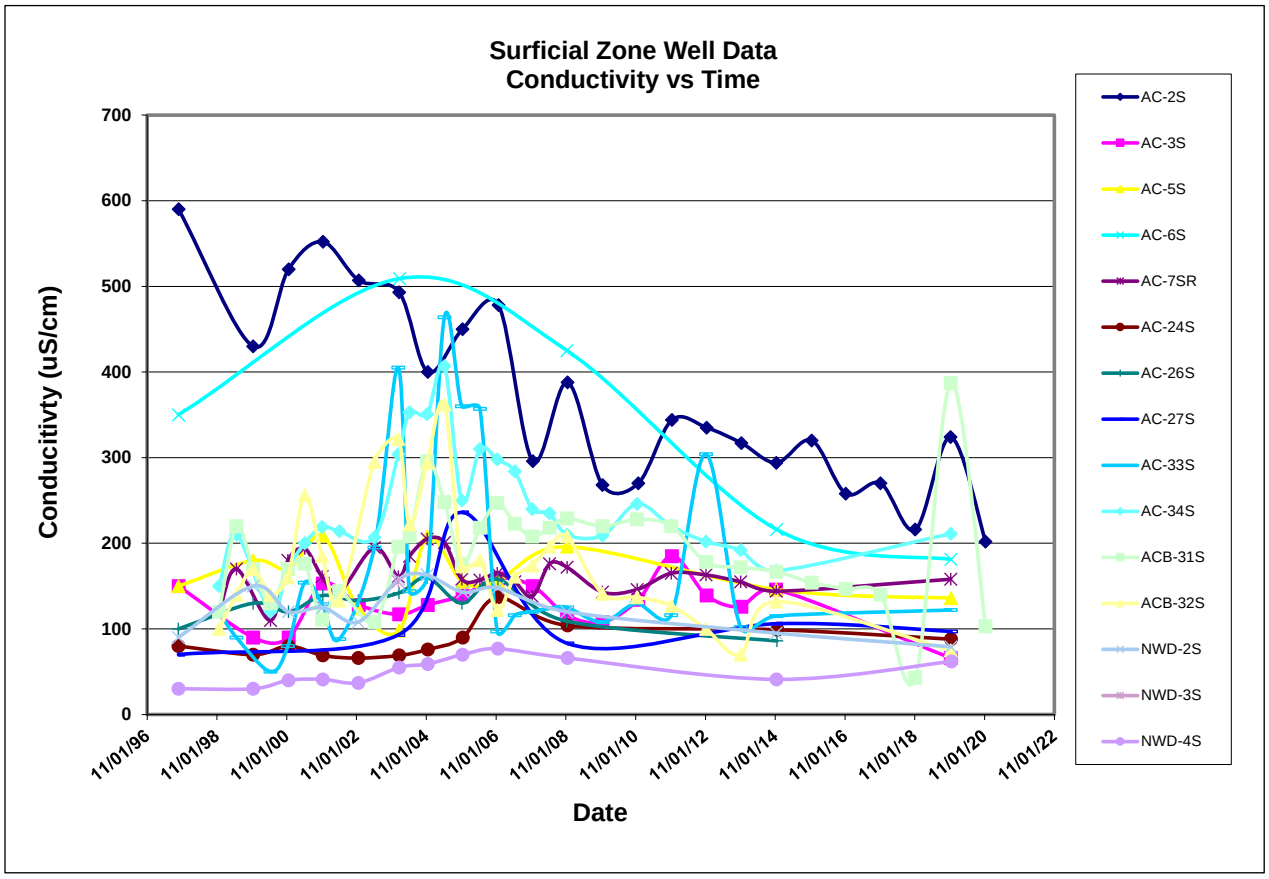
Specific conductance is a measure of how well a water sample conducts an electrical current. It is a straightforward measurement that can be made with reasonable accuracy in the field. It is, therefore, often used as a proxy for the total dissolved solids (TDS) analysis. The conductance values are measured in the field with a hand-held instrument and are recorded in micro Siemens per centimeter units (µS/cm).

Within the main producing zone during 2020, the specific conductance values ranged from 75 µS/cm to 919 µS/cm. Specific conductance decreased from the 2019 conductivity values in all wells except AC-12D and AC-25D. In the surficial zone, the conductivities averaged approximately 200 µS/cm lower than in 2019.

As groundwater recharges the Sand-and-Gravel aquifer in Escambia County, it encounters relatively little soluble material, and the water has characteristically low hardness (soft) and is relatively unmineralized. The aquifer is composed of mostly quartz sand, which is not very soluble. The abundant rainfall and the aquifer's high permeability keep the groundwater moving, and the residence time is such that the water does not tend to contain a significant quantity of dissolved mineral matter. Values are consistent with those measured in 2018, and several of the values recorded represent historically low measurements. Measurements will continue to be recorded during future events, and if the lower values continue, they could indicate a change in groundwater conditions in the area. As shown below, the levels are generally declining or stable.

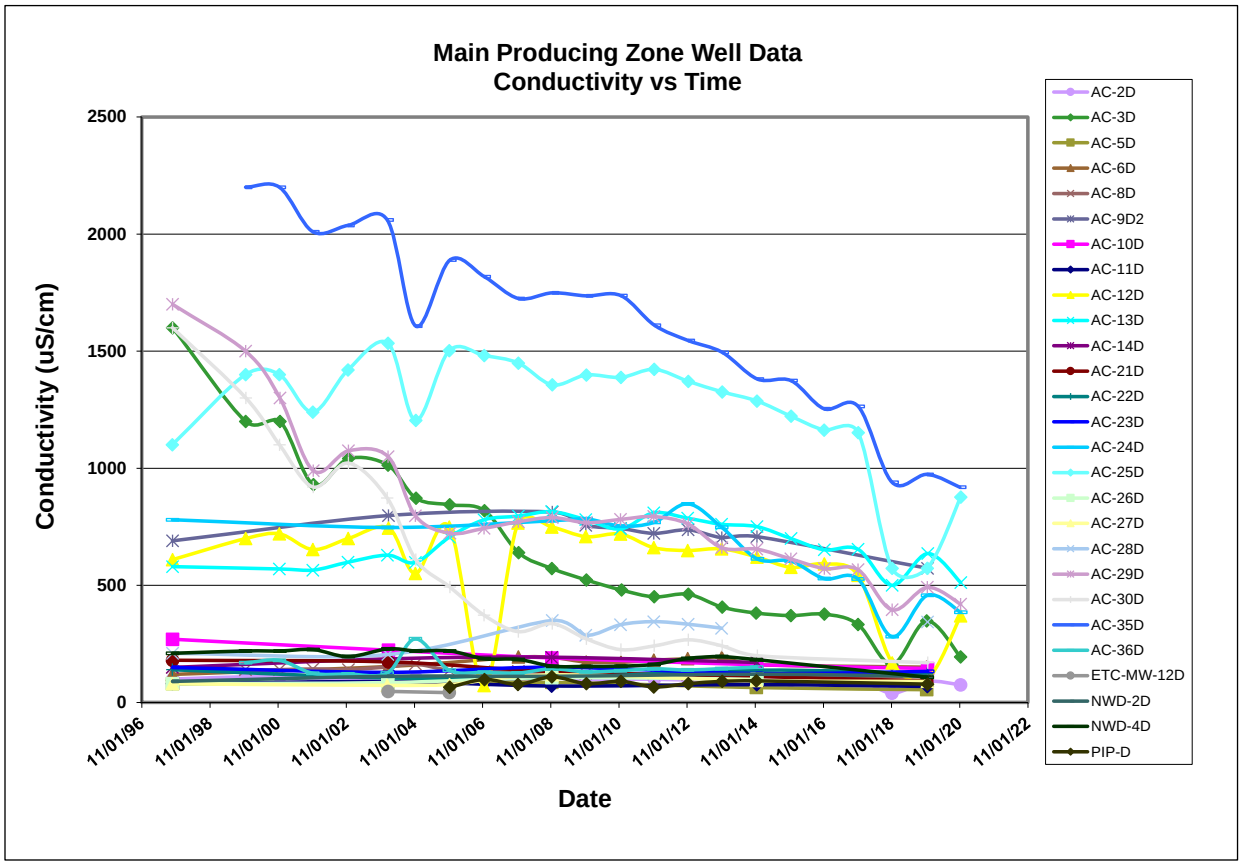
Surficial Zone Groundwater:

The shallow groundwater conductivity vs. time chart is shown below.



Main Producing Zone Groundwater:

The deep groundwater conductivity vs. time chart is shown below.




## 5.5.2 pH

Groundwater pH within the Sand-and-Gravel aquifer underlying Escambia County reflects generally acidic conditions (less than 7.0 standard units [su]). The reason for the acidic conditions is that rainwater has a pH generally less than 5.5 su inthe Escambia County area (Trapp, 1973). This low rainfall pH, coupled with the high recharge from rainfall to the aquifer and the relatively inert nature of the sandy sediments that comprise the aquifer, yields a groundwater pH that is acidic.

Information from the U. S. Geological Survey (USGS) collected in Escambia County was reviewed for groundwater pH data. The period 1968 to 1980 was an extensive data collection time in Escambia County by the USGS. A total of 222 observations of pH (Coffin, 1982) were collected from 69 sites distributed throughout southern Escambia County. The sites were located to characterize general groundwater conditions and were not associated with any assessment of known contamination sites. The range of pH for the 222 observations was 3.4 to 8.9 su. The average pH for the 12-year period was 5.28 su. Background pH conditions are variable and are controlled by local recharge conditions, seasonal rainfall patterns, and whether the groundwater is from a shallow or deep source. Generally, the groundwater occurring at shallow depths (less than 100 feet below land surface) is more acidic than deeper occurring groundwater that tends to approach neutral conditions.

In addition to the above pH data for groundwater, a review was conducted of long-term pH data for a surface water gaging station on the Perdido River at Barrineau Park. The Perdido River is the westernmost boundary for Escambia County. The station is located about the middle portion of the County and shows that base flow streamflow conditions have pH values generally less than 5 su. Since the base flow of this stream, as well as, other streams in the county is derived from groundwater, this is another line of evidence that groundwater pH conditions are acidic.

Geochemically, pH is an important factor in understanding the occurrence of radium in the groundwater beneath Escambia County. Historically, the impacts from radium are well documented within the County and many of these exceedances are not associated with known contaminated sites. As the USGS data indicate, the groundwater can have a naturally occurring background value as low as 3.4 su. Likewise, the data showed that 101 of the 222 observations of pH were less than 5 su indicating that acidic background conditions exist for the groundwater in southern Escambia County.

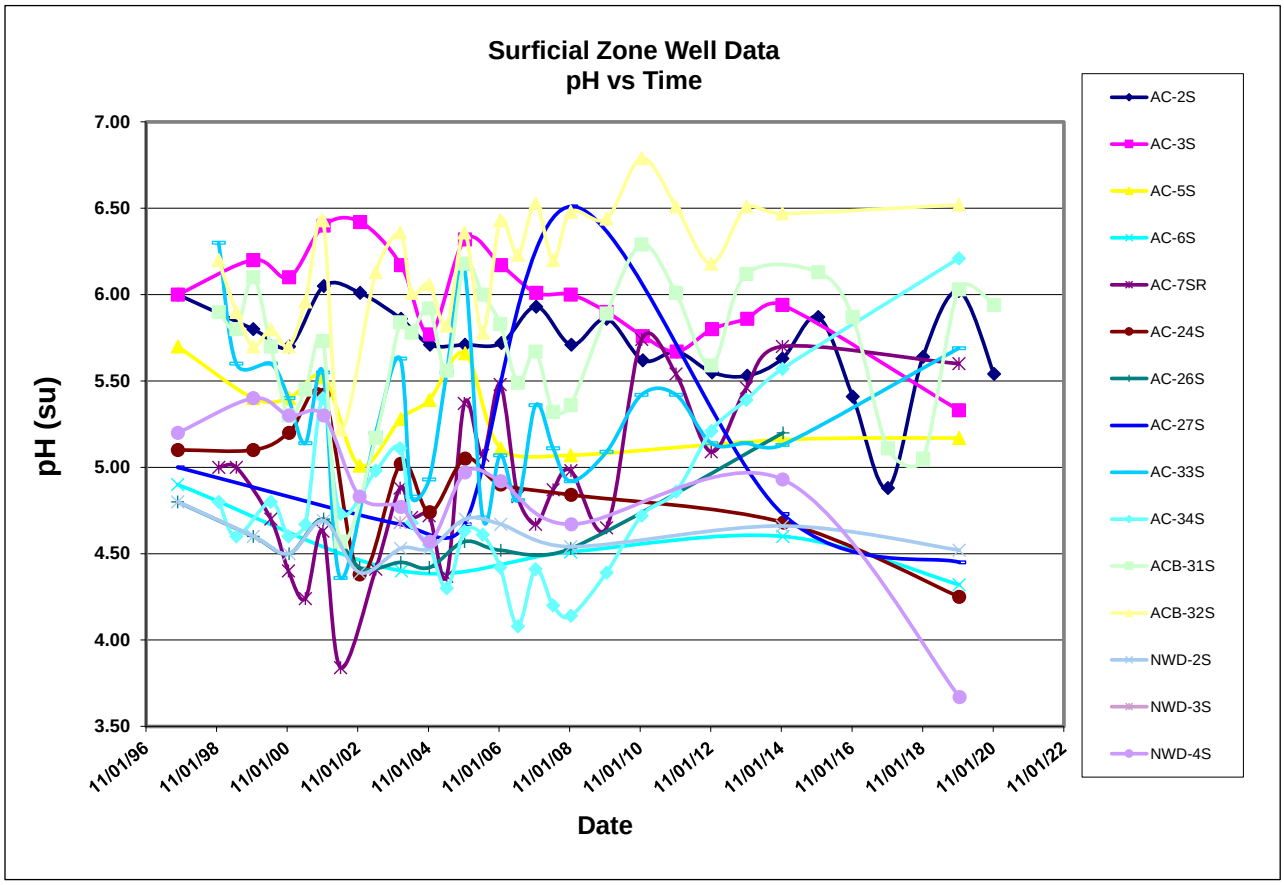
Exceedances of radium in Escambia County are believed to be associated with naturally occurring thorium minerals in the subsurface. USGS research (Zapecza and Szabo, 1988) at sites throughout the eastern United States indicate that when groundwater pH is approaching 4.5 to 5 su or lower and thorium is present, a process known as recoil mobilization is possible. This recoil process allows radium 228 to be released to the groundwater from the minerals containing thorium. For Escambia County as a whole, it is possible to activate this release with what are considered background groundwater conditions.

The acidity reflected by low pH in groundwater within the Agrico plume is most likely the result of former operational processes whereby wastewater was disposed in the former on-site impoundments at the former Agrico facility (Watts, et al, 1988). Since the completion of the OU-1 Remedial Action, the pH of shallow groundwater conditions within the plume has improved.

The trends in groundwater pH from the Agrico network monitoring wells are reflected in the following graphs for the surficial and main producing zones of the aquifer. Measurements in 2020 in the MPZ indicate that the lower pH levels in several wells over the last several sampling events increased to within historical ranges.

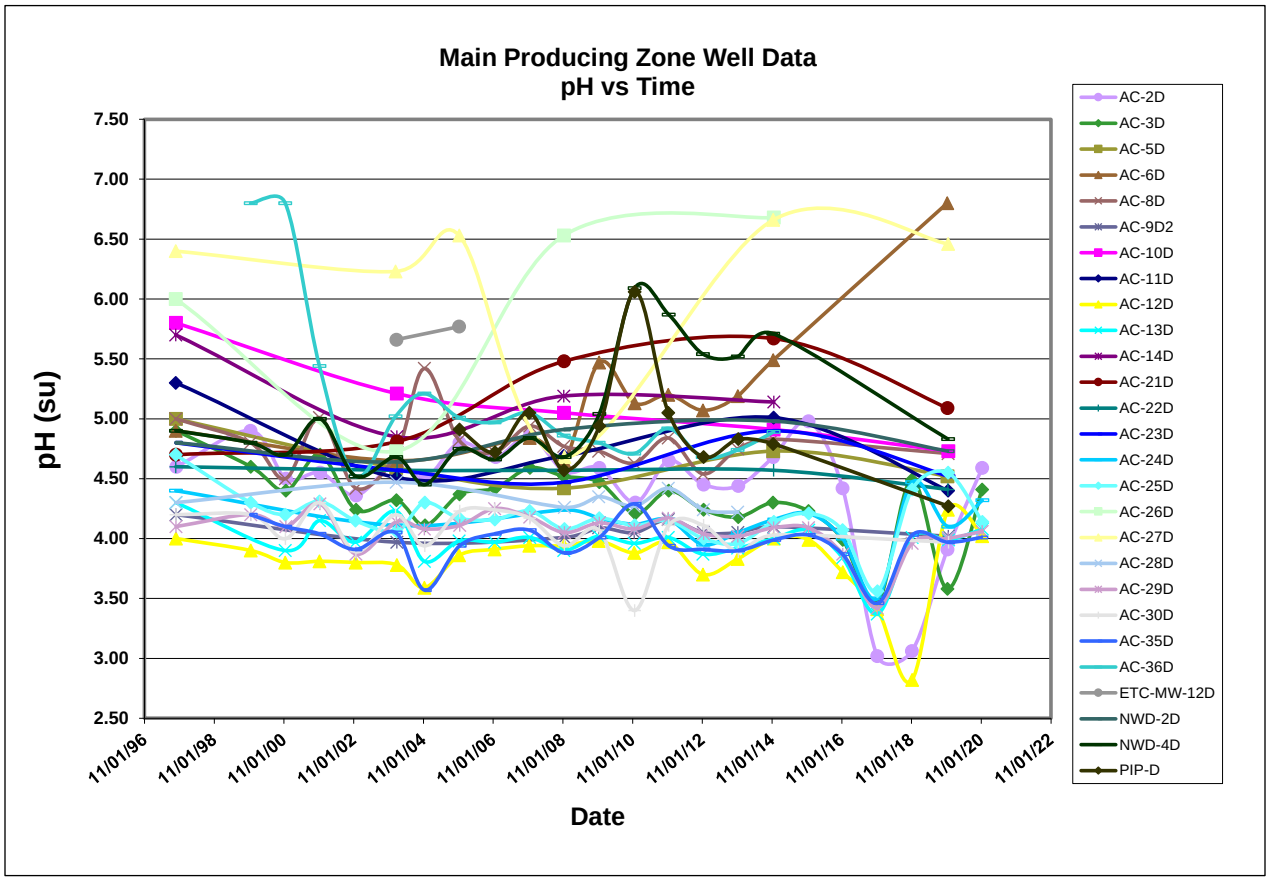
Surficial Zone Groundwater:

The surficial zone groundwater pH vs. time chart is shown below.

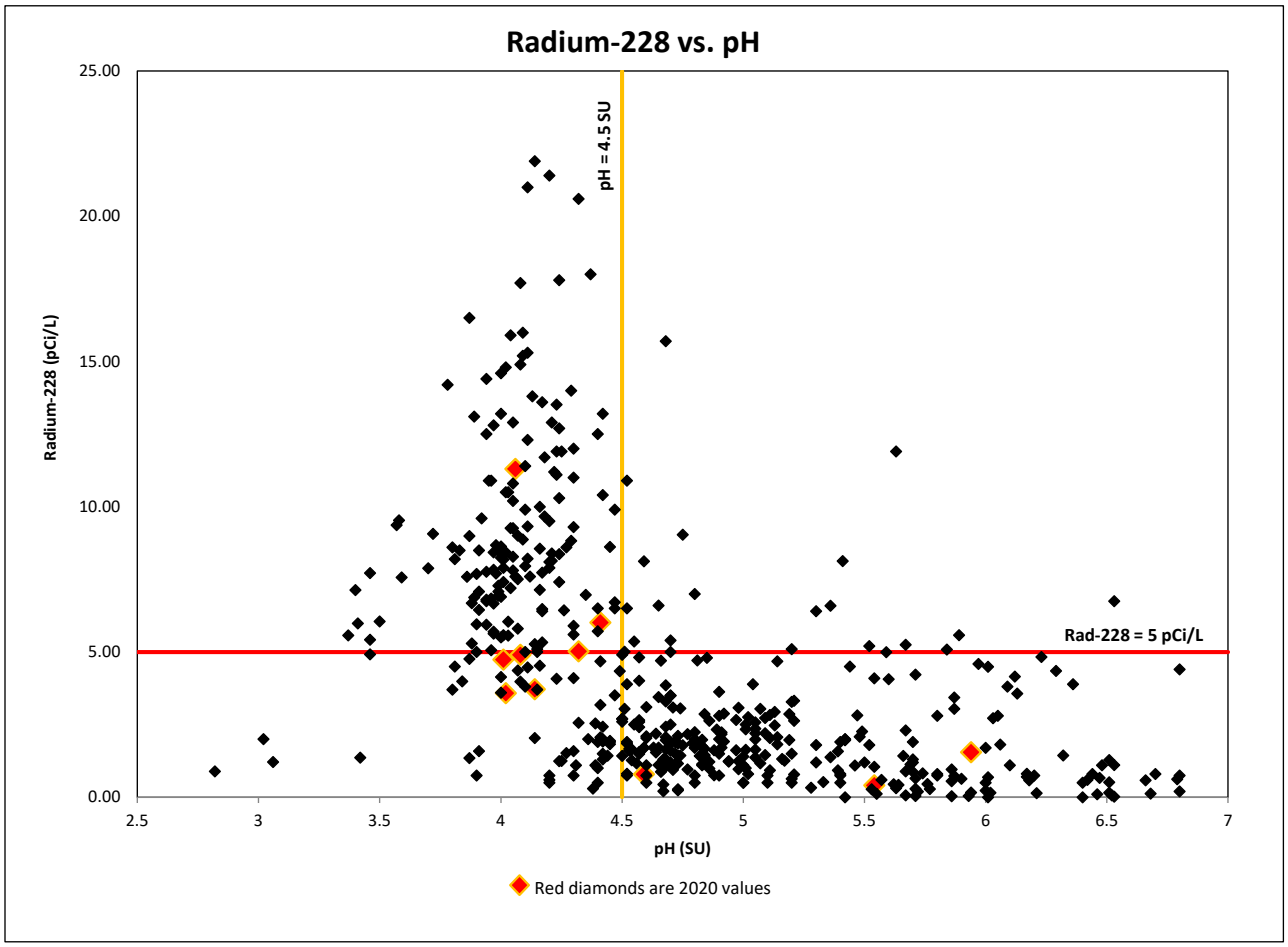


Main Producing Zone Groundwater:

The main producing zone groundwater pH vs. time chart is shown below.




The following graph is updated from the original graph (URS, 2007) to show data from all sampling events conducted for the Agrico Site. The data points marked as red diamonds represent results from the November 2020 sampling event. The graph shows the relationship between pH and radium 228 concentrations and illustrates that where the groundwater pH approaches about 5 to 4.5 su or lower, the radium 228 concentration generally exceed the 5 pCi/L drinking water standard for combined radium 226 + radium 228. It should be noted that the use of a pH of 4.5 su to demonstrate this relationship is within the range of pH that the recoil process generally is activated. The recoil activation range is plus or minus a pH of 4.5 su (Zapecza and Szabo, 1988).



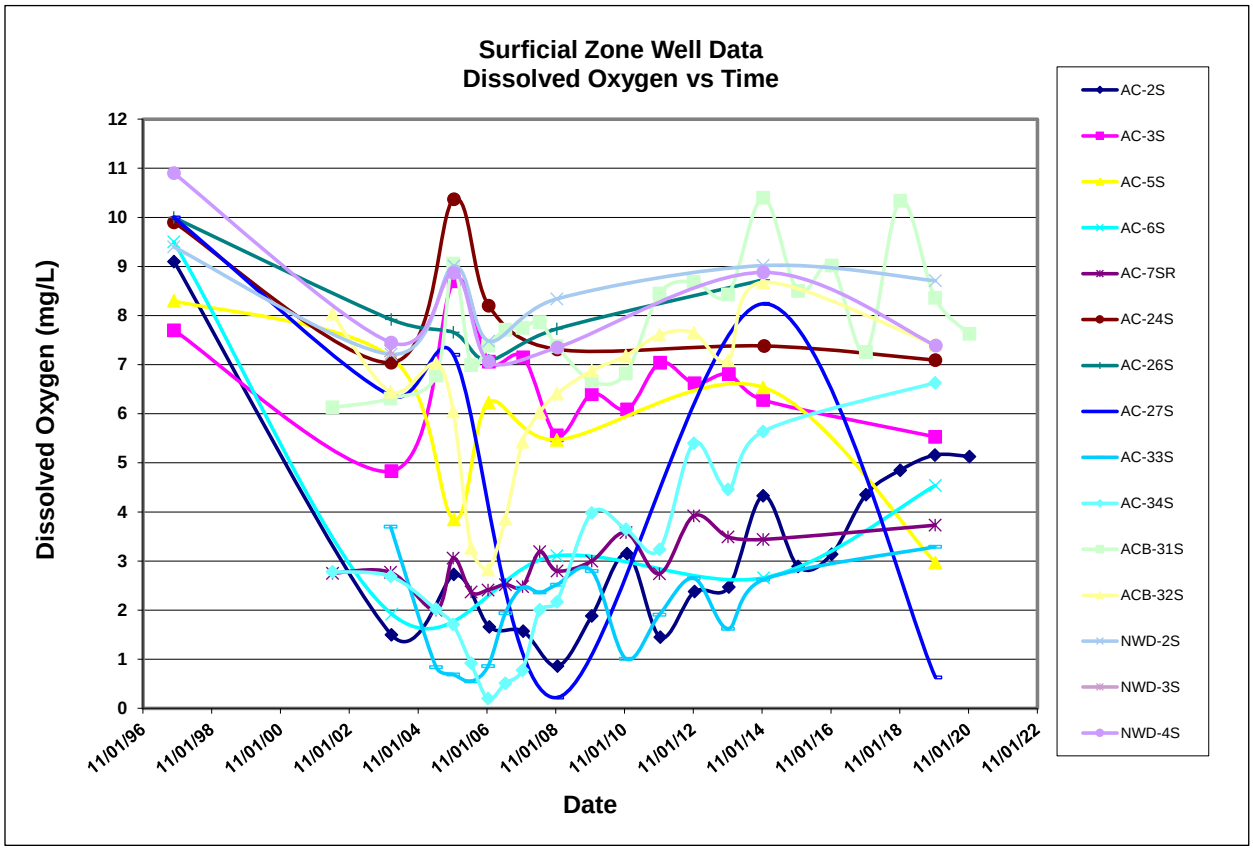

Acidic groundwater conditions are also associated with Site 348. This site is located approximately 3,000 feet south of the Agrico Site. Assessment reports for Site 348 (MACTEC, 2010) present pH and radium 228 data which show that low pH conditions result in exceedances of the radium standard of 5 pCi/L for combined radium 226 and radium 228. Data from Site 348 indicates that radium 228 is the predominant isotope present in the groundwater beneath Site 348. Site 348 is located in close proximity to nearby former municipal water supply wells. A 2008 sample collected by ECUA from the F & Scott well reported a combined radium 226 + 228 concentration of 5 pCi/L (www.ecua.fl.org – 2010 Water Quality Report).

### 5.5.3 Dissolved Oxygen

The solubility limit (saturation concentration) of oxygen in water (in equilibrium with air) at the temperatures, pressures, and salinities encountered in shallow groundwater at the Site is on the order of 8.5 mg/L (ppm). Oxygen's solubility limit increases as temperature decreases. Dissolved oxygen (DO) concentrations greater than 1 mg/L (aerobic conditions) are considered to support aerobic microbial metabolism, and conversely, DO concentrations less than 1 mg/L (anaerobic conditions) support anaerobic microbial systems.

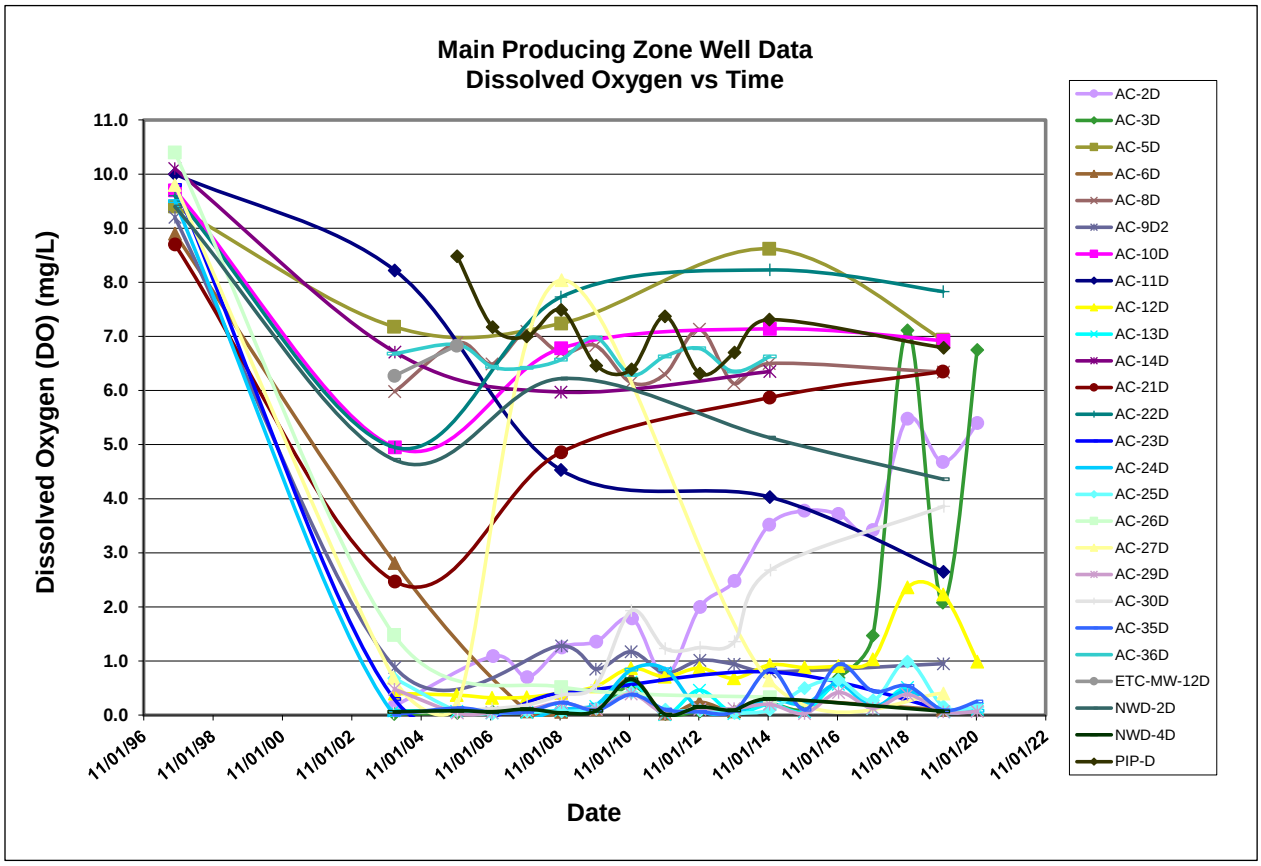
Surficial Zone Groundwater:

The shallow groundwater DO vs. time chart is shown below.



Main Producing Zone Groundwater:

The deep groundwater DO vs. time chart is shown below.




## 5.5.4 Oxidation-Reduction Potential

Oxidation-reduction potential (ORP) reactions control the behavior of many chemical constituents in groundwater. ORP refers to the electric potential required to transfer electrons from one compound or element (the oxidant) to another compound (the reductant). The process of oxidation involves losing electrons, while reduction involves gaining electrons. ORP is used as a qualitative measure of the state of oxidation in aqueous solutions. ORP (and Eh) are typically given in terms of millivolts (mV).

Although similar to ORP, Eh is reserved for consideration where the redox potential is measured with a relatively fragile standard hydrogen electrode (SHE). Positive Eh values indicate an oxidizing environment, while negative Eh values indicate a reducing environment. For field applications, ORP is typically measured using silver/silver chloride (Ag/AgCl) reference electrodes.

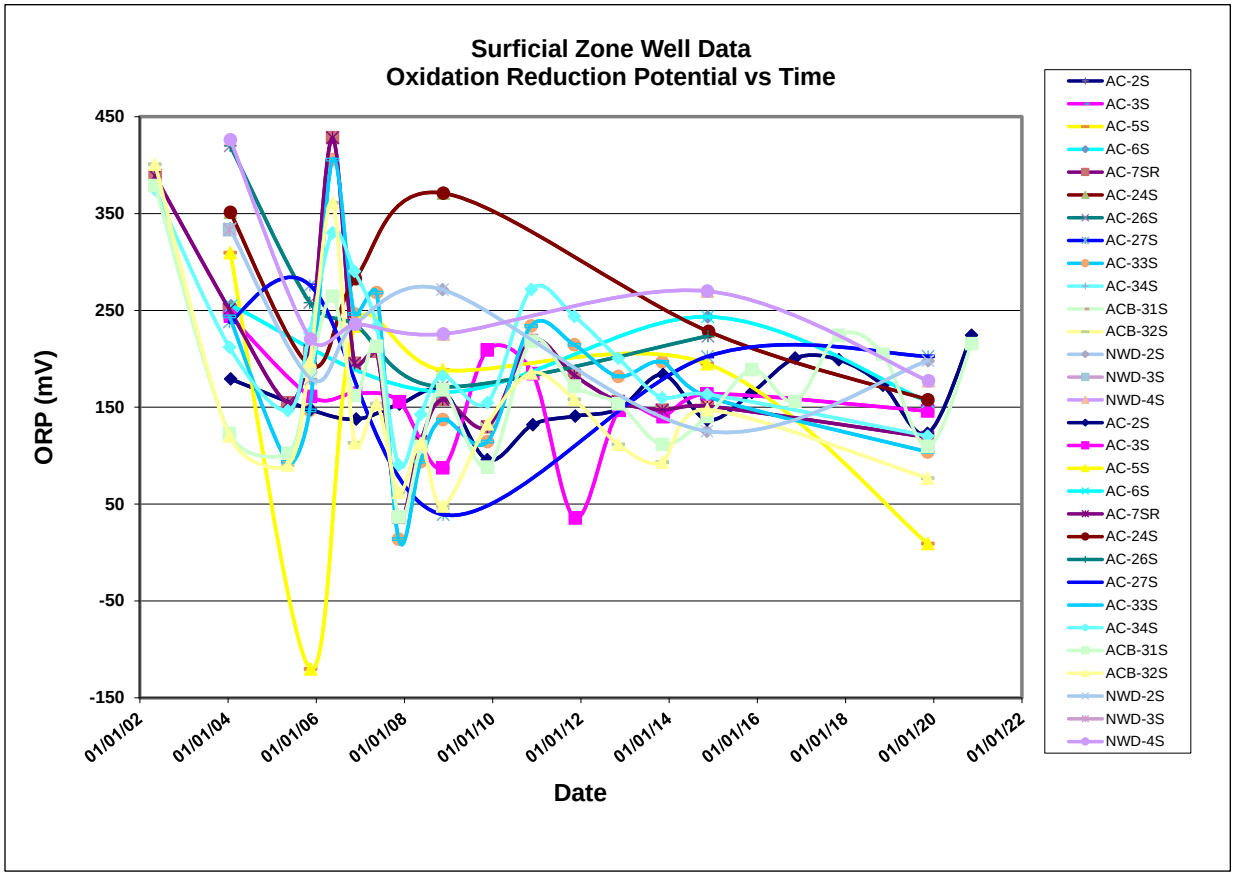
Field ORP readings can be converted to Eh values by adding the offset value provided by the manufacturer of the ORP calibration solution used (or by experimentation). ORP has been measured at the Site with an YSI (brand) instrument equipped with an Ag/AgCl electrode and calibrated against a Zobell 4 molar potassium chloride (KCl) solution where the offset to Eh is 200 mV. To convert the Site's field ORP readings to Eh, the offset value of 200 mV is added to

the Site's ORP readings. For example, ORP readings of +150 and -172 mV translate to Eh values of +350 and +28 mV, respectively. It is common for natural groundwater to present ORP between +300 mV to -400 mV (Eh between +500 mV to -200 mV).

Generally, oxygen-rich water is expected to exhibit positive ORP values (reflecting oxidizing conditions); and, conversely, anaerobic water often presents negative ORP values (reflecting reducing conditions). However, oxidation-reduction reaction couples are numerous and often competitive, so that natural environments affected by anthropogenic constituents can induce ORP behavior atypical of the otherwise classic correlation with DO. ORP is expected to reach equilibrium in groundwater that is at or approaching steady state. Changes in ORP can indicate a system that is out of equilibrium. ORP readings in 2020 are generally higher than those reported in 2019, but the values remain within the historical ranges.

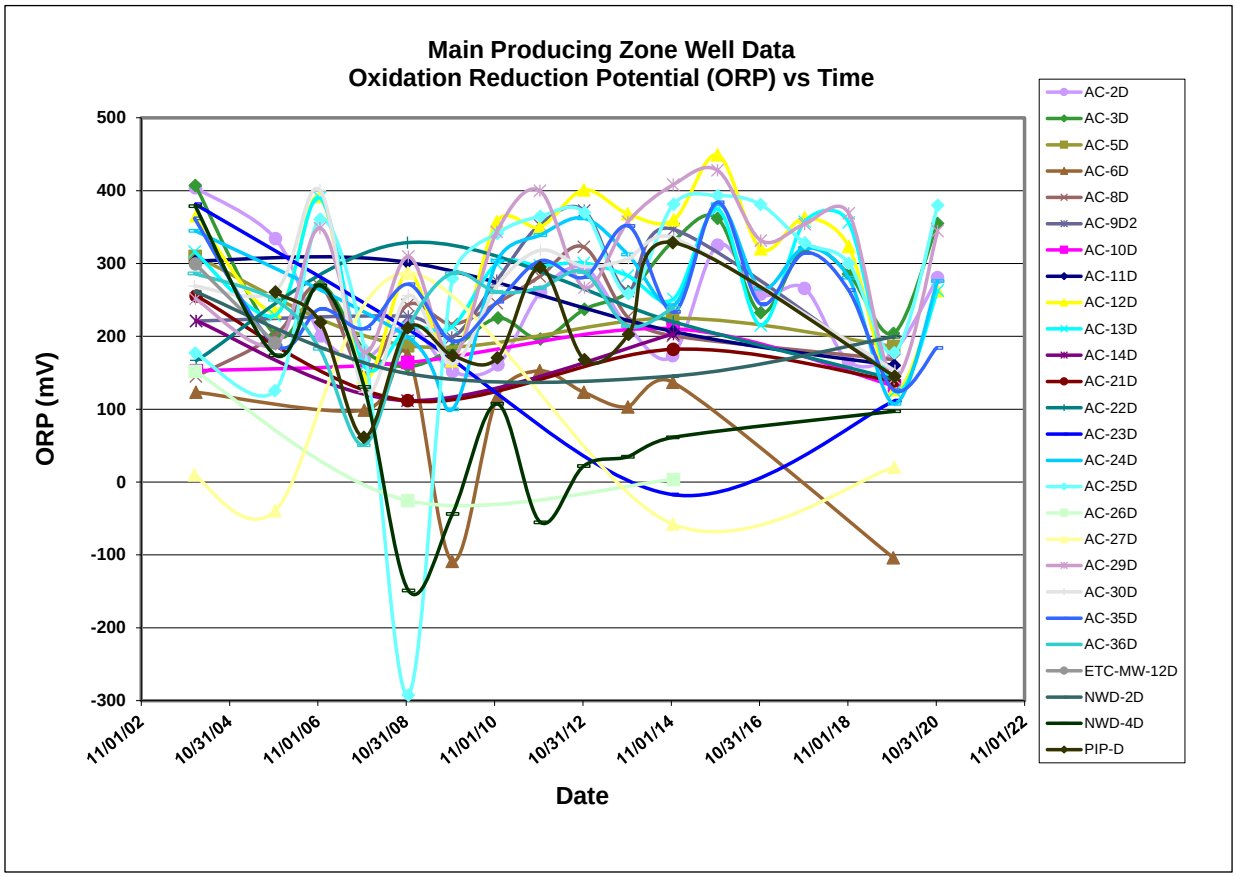
Surficial Zone Groundwater:

The shallow groundwater ORP vs. time chart is shown below.



Main Producing Zone Groundwater:

The deep groundwater ORP vs. time chart is shown below.




## 5.6 BAYOU TEXAR SAMPLING RESULTS

The modified surface water monitoring network is composed of three sampling locations within Bayou Texar. Freshwater from Carpenter's Creek flows into the saline estuary, Bayou Texar. **Figure 1** shows the locations of the surface water sampling sites. The samples are analyzed for fluoride only. Brackish water occurs at all three locations where samples are collected.

The surface water sampling results for fluoride at the three stations are shown in **Table 5** (field parameters) and **Table 9** (sampling results). The fluoride results did not exceed the surface water criteria of 5 mg/L at the sampling locations. Laboratory analytical reports are contained in **Appendix A**.

## 5.7 QA/QC REVIEW

TA job numbers for this annual report are 400-195622-1 and 400-195623-1. The following laboratory narratives describe the sample conditions and associated analytical QA/QC issues.

**Laboratory Report** 400-195622-1**:**

All samples were received in good condition within temperature requirements, properly preserved and on ice.

Method 300.0 –The equipment blank concentration detected was verified.

Metals – No analytical or quality issues were noted.

Sufficient sample volume was not available to perform a laboratory duplicate for Radium-226, preparation batch 160-489750 and Radium-228 preparation batch 160-489754; however, LCSs/laboratory control sample duplicates (LCSD) were prepared to demonstrate batch precision.

The gross (alpha/beta) detection goals were not met for several samples due to a reduction of the sample size attributed to high residual mass. Analytical results are reported with the MDC achieved.

Method 353.2 for several samples were diluted to bring the concentration of target analytes within the calibration range. Elevated reporting limits were provided.

Method 353.2 for analytical batches 511598 and 512594, the matrix spike/ matrix spike duplicate recoveries were outside advisory control limits for nitrate-nitrite. Sample matrix inference and /or non-homogeneity are suspected because the associated LCS recovery was within acceptance limits.

Method SM 4500 F C for several samples had been diluted to bring the concentration of target analytes within the calibration range. Elevated reporting limits were provided.

The MS/MSD recoveries for fluoride for Method SM 4500 F C for analytical batch 469081 were outside advisory control limits. Sample matrix interference and/or homogeneity are suspected because the associated LCS/LSD precision was within acceptance limits.

**Laboratory Report** 400-195623-1**:**

All water quality samples were received in good condition, properly preserved and within temperature requirements. No analytical or quality issues were noted.

One duplicate (DUP) sample DUP-1 at AC-2D and one equipment blank (EQ-1) was collected during the November 2020 sampling event. The duplicate sample did not show acceptable agreement with the respective individual Ra-226 and Ra-228 results, however, the total of the two isotope concentrations for the sample and the duplicate did show acceptable agreement. While the laboratory could not confirm, AECOM suspects that the radium 226 and radium 228 results were reversed for either the sample or the duplicate. Target analytes (chloride, sulfate, and fluoride) were reported above the laboratory detection limits in the equipment blank sample. The equipment blank concentrations were very low. Associated sample results have been qualified as estimated concentrations.

Results of the QA/QC samples are included with the laboratory reports in **Appendix A**.

## 5.8 GROUNDWATER SAMPLING RESULTS

The 2020 annual results continue to support that source control actions at the former Agrico Site are effective and that the MNA remedy is functioning as expected with Agrico COCs attenuating in groundwater under the former Site and down-gradient of the Site.

**Surficial Zone**

Within the surficial zone, historically the overall trend is downward and historically there has been an overall shrinking of the area of impacts for this zone. The downward trend in concentrations has been attributed to effective source control. The surficial zone plume is historically captured by the vertical hydraulic component of the contaminant transport within less than one-half mile downgradient of the former Site. Due to these conditions, the areal extent of impacts in the surficial zone is limited.

Presently, there are only two surficial monitoring wells being sampled annually for the Site. These wells are ACB-31S and AC-2S, and only AC-2S exhibits COC concentrations that continue to be above target clean-up goals in the surficial zone. Historical results show that all Agrico monitoring well locations on the former Agrico property have achieved clean-up goals. Location AC-2S is directly down-gradient of the former Agrico Site and up-gradient of the area where the surficial zone is preferentially hydraulically connected to the deeper main producing zone. For 2020, fluoride (29 mg/L) and arsenic (0.012 mg/L) exceed the clean-up target levels of 4 mg/L and 0.01 mg/L, respectively at this location. For fluoride, concentrations in shallow groundwater are attenuating, the peak concentration of 210 mg/L occurred in 2002 at well AC-2S. Since that time, fluoride concentrations have been on a decreasing trend. For arsenic, the concentration is also decreasing. The highest total arsenic concentration of 0.74 mg/L occurred at well AC-2S in 1990.

**Main Producing Zone**

Within the main producing zone, the overall flattening of the trends is what was predicted in the *Evaluation of Monitored Natural Attenuation* by William Huber, Ph.D., Quantitative Decisions, (URS, 2009) and further confirmed by subsequent data evaluations by Huber in the October 23, 2013, Report #2 (URS, 2013b). This flattening should be expected to continue for some time and eventually evolve into a slowly decreasing trend, accelerating as time goes on. Slight upward or downward ticks in the trend for individual monitoring well results are to be expected. It is the long-term trend for each COC that is important. Radium appears to be on a longer attenuation period than the other Agrico COCs. This is due to the fact that radium exceedances occur as the result of a secondary reaction and these exceedances were not the direct result of infiltration into the groundwater from the source area. Instead, acidic wastewater infiltrated into the groundwater and contacted naturally occurring mineralogy with radium content. The radium in turn was released from the subsurface sediments to the groundwater as the acidic plume is transported downgradient contacting newly exposed aquifer material with the radium mineralogy. As the acidity approaches background conditions, this will stop the release of radium and attenuation of combined radium should progress on a faster path.

**Figure 8** and **Figure 9** show the 2020 results for the current monitoring locations for fluoride and combined radium 226 + 228, respectively. Although several of the sampling locations for 2020 showed that the concentrations for fluoride were slightly higher than concentrations found in 2019, they remain below the maximum detected values. and combined radium 226 + 228

concentrations were lower than 2019 values in all wells except AC-12D. **Figure 10** and **Figure 11** show the trend graphs for fluoride, chloride, sulfate, nitrate and combined radium 226 + 228 for each of the annual sampling monitoring well locations.

## 6.1 OU-1 REMEDY

The source area remedy was completed in 1997. Since that time, the property has remained secured; institutional controls have been filed on the property deed and are on record with Escambia County; the integrity of the constructed cap has not been compromised by erosion or settlement; the grass cover on the cap has matured and stabilized the soils; and the storm water controls remain intact, preventing storm water runoff from leaving the Site except through infiltration to groundwater in the North and South Ponds. Results of the water and sediment sampling in the infiltration ponds during January 2004 indicated that soils on-site are not affecting the quality of water infiltrating these ponds. Concentrations of all COCs in groundwater of the surficial zone immediately downgradient of the cap have decreased significantly since the remedial actions were completed. Based on all of the groundwater sampling results, the source area is controlled, and the remaining COC impacts are from residual impacts caused prior to the remedial action. **Results from the 2020 sampling of monitoring wells downgradient of the cap area indicate that the OU-1 remedy remains effective and that source zone depletion is ongoing.**

## 6.2 OU-2 REMEDY

Annual groundwater and surface water monitoring has been performed at established long-term monitoring locations since 1999. Comprehensive sampling has been performed in conjunction with each Five-Year Review. The groundwater monitoring continues to be an effective means of evaluating the natural attenuation remedy as well as source zone depletion. The evaluation of the long-term groundwater monitoring network (URS, 2006d), approved by EPA on September 11, 2007, provides further information regarding the defined plume area and downgradient progression. The evaluations of monitored natural attenuation associated with the Agrico plume (URS, August 2009 and October 2013) further supports that the mechanisms for attenuation are in place throughout the area and the effects of the source zone remedy are evident in the surficial zone of the former source area (OU-1) and are also being observed downgradient (OU-2), as expected. **Results from the 2020 sampling of monitoring wells downgradient indicate that effective natural attenuation is proceeding as expected.**

### 6.2.1 Notifications

As part of the annual scope of work, notifications are provided to select groups. This includes issuing an Advisory Notice to contractors, a memorandum to local and regional agency contracts; and querying of NWFWMD permit records to determine if any new wells have been installed within the well construction moratorium area.

A standard advisory notice was distributed to contractors who potentially might be performing work related to new well installations in the area of OU-2. This notice informs the contractor of the boundaries of the existing moratorium on well construction. It also directs them to the NWFWMD, FDEP, or the Escambia County Health Department for more information.

According to NWFWMD permit records, no new irrigation wells were installed within the monitoring area during 2020.

On February 22, 2001, the NWFWMD Board passed a moratorium on drilling wells, including irrigation wells, in the Agrico OU-2 and the ETC groundwater plume areas. The moratorium remains in effect and provides the most stringent institutional controls for the area impacted by the plume. The moratorium has no termination date and is part of the Prohibitions in Rule 40A3. In February 2020, a coordination memorandum was distributed to local and regional agencies requesting input on any rule changes that may affect any institutional controls for the moratorium area (**Appendix C**).

Additionally, an annual inquiry regarding intrusive activity under Fairfield Drive was distributed to the FDOT in March 2020. FDOT reported that no intrusive activities are planned (Appendix C).

### 6.2.2 Sampling Results – Groundwater and Surface Water

The natural attenuation remedy is proceeding as anticipated, with 23 of the estimated 70 years elapsed (remediation of OU-1 was certified complete in April 1997). Conclusions from the monitored natural attenuation evaluations (URS, August 2009 and October 2013) indicate that much of the groundwater is expected to reach the target concentrations within two to three decades. Within the area of the Bayou Texar discharge boundary, the time to reach the targets may be longer. Fluoride results continue to exemplify cleanup progress for the Agrico Site. Additionally, it appears that the plume discharge area remains well defined and limited in areal extent. Groundwater results for November 2020 closely compare to historical results for both aquifer zones. Although slight increases in concentrations were detected at monitoring well locations for some COCs, the increases are well below the maximums detected and within the range of expected concentration fluctuations for a natural attenuation remedy where source control has been implemented and source-zone depletion is ongoing.

#### *Surficial Zone*

The surficial zone plume does not migrate to Bayou Texar. The plume in this zone infiltrates to the main producing zone within less than 0.4 mile downgradient of the Site (**Figure 4**). Monitoring of the groundwater within the surficial zone is limited to the OU-1 area and the vicinity of the vertical diversion area between AC-2S and AC-3S. The only impacts remaining for the surficial zone plume are in close proximity of monitoring well AC-2S. Historically, within the surficial zone, the overall trend in COC concentrations is downward and the overall area of impacts is shrinking. Due to the existing hydrogeologic/hydraulic conditions, the zone has limited areal impacts. For most of the OU-2 area, background conditions exist for the Agrico COCs within the surficial zone, since the potential for downgradient impacts beyond the surficial zone diversion area are absent. Any exceptions to background concentrations in these downgradient surficial zone wells are due to non-Agrico sources.

#### *Main Producing Zone*

Within the main producing zone, arsenic and lead plumes are not present. The primary indicator of the Agrico plume continues to be fluoride where concentrations exceed the performance standard of 4 mg/L. Also, elevated chloride and sulfate concentrations coexist with elevated fluoride concentrations. Radium appears to be on a longer attenuation period than the other Agrico COCs. This is due to the fact that radium (naturally occurring) exceedances occur as the

result of a secondary geochemical reaction, not the direct result of infiltration into the groundwater from the source area. Instead, low pH acidic wastewater infiltrated into the groundwater and contacted naturally occurring minerals with radium content. The naturally occurring radium was released from the subsurface saturated soil to the groundwater with the low pH acidic plume. As the pH approaches background conditions (neutralizes) downgradient, the release of the naturally occurring radium will subside, and both the pH and radium plumes will continue to shrink.

Historically, the main producing zone plume remains well defined, as the detailed evaluations (URS, 2006d, URS, August 2009, and URS, October 2013) confirmed, and exceedances of contaminant-specific performance standards only cover limited areal extents. Within the main producing zone, the stability and flattening of COC concentration trends is what was predicted and what is observed. At some locations, the flattening/COC stability is expected to continue for some time. This trend will eventually evolve into a slowly decreasing trend, accelerating with time as it has already developed in many locations. Sampling results for 2020 showed slightly higher concentrations within the plume for some constituents at a few locations. These increases did not exceed historical maximum concentrations.

Slight upward or downward ticks in COC trends for individual monitoring well results are to be expected as site conditions change (e.g. water level fluctuations, aquifer heterogeneity, etc.). It is the long-term trend for each COC in the impacted area that is important.

### 6.2.3 Bayou Texar

The 1993 Bayou Texar Assessment (Entrix, 1993a, 1993b, and 1993c) presented fluoride data that indicated groundwater originating from the Agrico Site was discharging to the bayou. The data also indicated that the discharge zone appeared to be well defined and limited in areal extent. EPA's review of the data concluded that fluoride would have to be discharging at a concentration of 4,050 mg/L or greater in order to exceed the surface water standard of 5 mg/L in the bayou. The maximum fluoride concentration in 2020 in the groundwater well closest to the western edge of Bayou Texar, lab estimate only, at 60 J mg/L in monitoring well AC-35D (**Figures 8**). The maximum historical fluoride concentration recorded for the Agrico plume was 180 mg/L in the same well AC-35D in 2010. Furthermore, in the OU-2 ROD, EPA (1994) concluded that it is unlikely that the discharge of the groundwater plume into Bayou Texar would result in impacts to fish or wildlife.

There are more than 60 storm water outfalls into Bayou Texar. Several studies have identified impacts caused by storm water from other locations contributing contaminants to the bayou. Mohrherr, et al. (2005) concluded that Bayou Texar is an urban water body that is impacted by a variety of pollutants and pollution sources. Mohrherr, et al. (2005) further concluded that their results corroborate the studies conducted for the Agrico Site indicating that fluoride levels are highest and increase with depth in the northern portion of the bayou where the Agrico plume discharges to the bayou. Mohrherr, et al. (2005) also concluded, as the long-term monitoring data for the bayou confirm, that the fluoride concentrations in the waters of Bayou Texar are below the Chapter 62-302, Class III Marine standard of 5 mg/L.

### *Surface Water*

Surface water concentrations remain below Chapter 62-302, Class III Marine Surface Water Standards for Agrico COCs, indicating that sufficient precipitation for the case of fluoride concentrations exists within the bayou. For other Agrico constituents, advection-dispersion is significantly affecting the COCs before and/or after it is discharged to the bayou so that the Agrico plume potential impacts are minimized with no significant risk to the bayou.

**Summary of Ecological Impact Evaluation of Bayou Texar Downgradient of Agrico's Groundwater Fluoride Plume**

On September 4, 2009, the results of the Phase I and Phase II Bayou Texar sampling for August 2008 and May 2009 were submitted to EPA. The results of the investigations indicated the following:

- Fluoride in the top 10 cm of sediment (the bioactive zone) within the groundwater plume discharge zone ranged from about 32 to 339 micrograms per gram (µg/g).
- Fluoride in the near-bottom surface water (the primary exposure regime for demersal fish) within the groundwater plume discharge zone was consistently less than the Florida Surface Water Quality Criterion for Class III Marine waters for fluoride, 5 mg/L. The concentration of fluoride in the majority of surface water samples was less than 1 mg/L.
- Fluoride in the sediment pore water in the bioactive zone (the primary exposure regime for benthic macro-invertebrates) within the groundwater plume discharge zone was less than 3 mg/L in 30 of the 40 stations sampled. Fluoride in pore water exceeded the 5 mg/L standard at only 3 of 40 stations. Spatial analysis determined that the surface area weighted average concentration of fluoride in the bioactive zone pore water was less than the 5 mg/L standard.

The conclusions of this assessment indicated that there is no significant risk to populations of demersal fish or to benthic macro-invertebrate communities that inhibit the reach of Bayou Texar where the Agrico groundwater discharges. Furthermore, the fluoride solubility in the majority of surface sediments and in all pore waters within the primary groundwater plume discharge reach is controlled by mineral precipitation reactions. These reactions are likely responsible for buffering dissolved concentrations of fluoride in near surface sediment pore water and the surface water in this reach of the bayou.

EPA has approved the ecological impact evaluation that was conducted for Bayou Texar (URS, 2009C). As part of the Third Five-Year review, EPA included four recommendations in the June 2010 Five-Year Report. These recommendations were as follows:

1. Continue annual groundwater monitoring.
2. Continue annual near-bottom Bayou Texar surface water monitoring at multiple stations including the 3 locations with pore water greater than 5 milligrams per liter as reported in the September 4, 2009 "Conceptual Site Model Ecological Impact Evaluation of Bayou Texar Downgradient of Agrico's Groundwater Fluoride Plume" (Phase II results).
3. If the levels of fluoride in near-bottom surface water or in adjacent Bayou Texar groundwater monitoring well, AC-35D, increase to levels significantly greater than that measured

historically (maximum of 180 mg/L in 2010) vs. only 40 mg/L in 2019, submit a work plan to evaluate the increase.

4. Conduct further risk evaluation studies will be conducted if the surface area weighted average for pore water is predicted to be greater than 5 milligrams per liter.

These first two recommendations are continuing tasks of the on-going long-term monitoring program for the Site. As of the November 2010 sampling event, the three locations where pore water results were greater than 5 mg/L were added to the long-term monitoring.

Since the surface water sampling was initiated for Bayou Texar and modified in 2010, no significant concentrations of fluoride have been detected as part of the near-bottom surface water sampling. For 2020, the fluoride concentrations are 1.3 mg/L (BT-107), 0.72 mg/L (BT-02), and 0.90 (BT-127). These values are higher than those detected during the 2019 sampling event but are lower than those detected during the 2018 sampling event and are well below the applicable SWS. Historical surface water fluoride concentrations further confirm that the Agrico groundwater discharges to Bayou Texar have no significant risk.

## 6.3 RECOMMENDATIONS

- Annual groundwater and surface water sampling continue for 2021 as stated in the March 10, 2015, FDEP Memorandum.
- Operations and maintenance including mowing related to OU-1 to continue in accordance with the OU-1 O&M Plan as amended November 18, 2009 and approved by EPA on January 25, 2010.
- The advisory notice to contractors and the query of the NWFWMD well construction permit database will continue on an annual basis.
- The Agency Coordination Memo and the FDOT inquiry for intrusive activity will continue on an annual basis.
- Continue to work with EPA regarding the groundwater remediation at the ETC Site.
- Continue to work to understand the impacts associated with Site 348 (a FDEP site) and work with EPA on gathering information pertaining to Site 348.

AECOM (formerly URS), 2015. Annual Report for 2014, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida, February 3, 2015.

AECOM, 2016. Annual Report for 2015, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida, March 4, 2016.

AECOM, 2017. Annual Report for 2016, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida, March 31, 2017.

AECOM, 2018. Annual Report for 2017, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida, March 8, 2018.

AECOM, 2019. Annual Report for 2018, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida, March 22, 2019.

AECOM, 2020. Annual Report for 2019, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida, March 23, 2020.

AMEC, 2013. Expanded Site Inspection Report – Palafox Street and Texar Dr. Ammonia Site, Pensacola, Escambia County, Florida; prepared for FDEP, Tallahassee, FL; FDEP Comet Site ID # 155367, EPA ID No. FLN000410706; June 2013.

Bortone, Stephen A, 1996. Biophysical Monitoring at Bayou Texar: Bathymetric, Sedimentologic and Macroinvertebrate Evaluation at Twelve Outfalls, University of West Florida.

Carmargo, J.A., 2003. Fluoride Toxicity to Aquatic Organisms: A Review. Chemosphere 50 (2003):251-264.

Cameron-Cole, LLC, 2011. Site Assessment Report, Former Kaiser Agricultural Chemical Company, 2710 North Palafox Street, Pensacola, Florida; prepared for Mr. James W. Bradley and Mr. Donald W. Moore; September 15, 2011.CDM Federal Programs Corp. 1998. Remedial Investigation/Feasibility Study for Source Soils for the Escambia Treating Company Site, Pensacola, Florida. February 9, 1998.

Camp, Dresser & McKee, Inc. (CDM), 1998. Final Remedial Investigation Feasibility Study for Source Soils for the Escambia Treating Company Site, Pensacola, Florida.

CDM, 2004. Data Summary Report for OU1 Additional Soil Investigation Remedial Investigation/Feasibility Study for the Escambia Treating Company Site, Pensacola, Florida.

CDM, 2005a. Final Feasibility Study Report for Source Soils, Operable Unit 1, Escambia Treating Company Site, Pensacola, Florida.

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

$E^2$ Inc., 2010. Five-Year Review Report (2005-2009) Third Five-Year Review Report for Agrico Chemical Company, FLD 980221857, Pensacola, Escambia County, Florida, June 2010. Prepared for U.S. Environmental Protection Agency, Region 4, Atlanta, Georgia.

Entrix, Inc., 1993a. Final Bayou Study Work Plan: Phase 1a and 1b Sediment Sampling Program.

Entrix, Inc., 1993b. Bayou Texar Study Phase I Report: Sediment and Pore water Sampling and Analysis. May 6, 1993.

Entrix, Inc., 1993c. Bayou Texar Study Phase I Addendum Report: Bulk Metals Analyses with Additional Interpretation of Pore water Analyses. May 26, 1993.

Florida Institute of Phosphate Research, 2004. Phosphate Primer.

Geraghty & Miller, Inc., 1990. Remedial Investigation and Feasibility Study Work Plan. Pensacola Fertilizer Site. Pensacola, Florida. June 1, 1990.

Geraghty & Miller, Inc., 1991a. Draft Remedial Investigation Additional Work Plan. Agrico Chemical Site. Pensacola, Florida. July 24, 1991.

Geraghty & Miller, Inc., 1991b. Draft Remedial Investigation. Pensacola Fertilizer Site. Pensacola, Florida. March 28, 1991.

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

Geraghty & Miller, Inc., 1992b. Phase II Remedial Investigation, Agrico Chemical Site, Pensacola, Florida. September 18, 1992.

Geraghty & Miller, Inc., 1993a. Final Feasibility Study. Agrico Chemical Site. Pensacola, Florida. June 23, 1993.

Geraghty & Miller, Inc., 1993b. Final Phase 2 Remedial Investigation. Agrico Chemical Site. Pensacola, Florida. November 26, 1993.

Gibbons, Robert D., 1994. Statistical Methods for Ground Water Monitoring, John Wiley & Sons, Inc.

Henningson, Durham, and Richardson, 1974. Bayou Texar Restoration Study.

Mactec Engineering & Consulting, 2010. Summary of Phase VIII Groundwater Investigation Findings Report, ECUA Well Field Site, Pensacola, Escambia County, Florida; prepared for FDEP (Site 348); February 2010.

Mohrherr, Dr. Carl J., Dr. Johan Liebens, Dr. J. Eugene Lepo, and Dr. K. Ranga Rao, 2005. Profiles of Selected Pollutants in Bayou Texar, Pensacola, FL; a component of the "Assessment of Environmental Pollution and Community Health in Northwest Florida"; EPA Cooperative Agreement Award X-9745502; University of West Florida. May 10, 2005.

Moshiri, Gerald A. and Salman Elawad, 1990. Physical, Biological, and Environmental Studies of Bayou Texar, Escambia County, Florida: Physical, Chemical and Biological Characteristics of the Water Column and Sediments; The Institute for Coastal and Estuarine Research, University of West Florida; Vol. II.

Northwest Florida Water Management District, 1978. Evaluation of the Sedimentation and Hydraulic Characteristics of Bayou Texar and Carpenter's Creek. Escambia County, Florida: Technical File #78-3.

Northwest Florida Water Management District, 1988. Storm water Evaluation for the Restoration of Bayou Texar. WRSR #88-3.

Northwest Florida Water Management District, 1989. Ambient Ground Water Quality in Northwest Florida: Water Resources Special Report 87-1 (Revised edition).

Northwest Florida Water Management District, 1996. Analysis of Ground Water Availability in the Cordova Park Area, Southeastern Escambia County, Florida. April 1996.

Northwest Florida Water Management District, December 1999. Susceptibility of Public Supply Wells to Ground Water Contamination in Southern Escambia County, Florida.

Northwest Florida Water Management District (Countryman, Baker, Pratt, and Miller), October/November 2000. Potentiometric Surface of the Surficial Zone of the Sand-and-Gravel Aquifer, Escambia County, Florida. Water Resources Map Series 01-1.

Northwest Florida Water Management District (Countryman, Baker, Pratt, and Miller), October/November 2000. Potentiometric Surface of the Main Producing Zone of the Sand-and-Gravel Aquifer, Escambia County, Florida. Water Resources Map Series 01-2.

Roaza, Honesto P., Thomas R. Pratt, Christopher J. Richards, Jay L. Johnson, and Jeffry R. Wagner, 1991. Conceptual Model of the Sand-and-Gravel Aquifer, Escambia County: Northwest Florida Water Management District, Water Resources Special Report 91-6.

Roaza, Honesto P., Thomas R. Pratt, and Christopher J. Richards, 1993. Numerical Modeling of Ground Water Flow and Contaminant Transport in the Sand-and-Gravel Aquifer, Escambia County, Florida: Northwest Florida Water Management District, Water Resources Special Report 93-4.

Richards, Christopher J., Thomas R. Pratt, and Katherine A. Milla, 1997. Wellhead Protection Area Delineation in Southern Escambia County, Florida: Northwest Florida Water Management District, Water Resource Special Report 97-4.

Stone, Gregory W. and James P. Morgan, 1990. Physical, Biological, and Environmental Studies of Bayou Texar, Escambia County, Florida: Sedimentation, Bathymetric Changes and Tidal Variability in Bayou Texar. The Institute for Coastal and Estuarine Research. University of West Florida.

Stone, Gregory W., Morgan, James P., Moshiri, Gerald A., and Elawad Salman, 1990. Physical, Biological, and Environmental Studies of Bayou Texar, Escambia County, Florida: Conclusions and Recommendations for Environmental Quality Improvement in Bayou Texar; The Institute for Coastal and Estuarine Research, University of West Florida. Vol. V.

Trapp, H., Jr., 1975. Hydrology of the Sand-and-Gravel Aquifer in Central and Southern Escambia County, Florida. U.S. Geological Survey Open-File Report FL 74027.

URS, January 2001. Annual Report. Ground Water Sampling Results –May and November 2000. Operable Unit One, Agrico Site, Pensacola, Florida.

URS, March 9, 2001. Annual Report for 2000. Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida.

URS, March 1, 2002. Annual Report for 2001, Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida.

URS, March 1, 2002. Ground Water Sampling Results – May and November 2001. Operable Unit One, Agrico Site, Pensacola, Florida.

URS, April 2, 2003. Annual Report for 2002. Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida.

URS, April 2, 2003. Annual Report for 2002. Operable Unit One (OU-1), Agrico Site, Pensacola, Florida.

URS, April 2, 2004. Annual Report for 2003, Operable Unit One (OU-1), Agrico Site, Pensacola, Florida.

URS, June 25, 2004. Annual Report for 2003, Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida.

URS, 2005a. Annual Report for 2004, Operable Unit One (OU-1), Agrico Site, Pensacola, Florida. February 11, 2005.

URS, 2005b. Annual Report for 2004, Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida. February 11, 2005.

URS, 2006a. Annual Report for 2005, Operable Unit One (OU-1), Agrico Site, Pensacola, Florida. February 20, 2006.

URS, 2006b. Annual Report for 2005, Operable Unit Two (OU-2), Agrico Site, Pensacola, Florida. April 6, 2006.

URS, 2007. Annual Report for 2006, Operable Units One (OU-1) and Two (OU-2), Agrico Site, Pensacola, Florida. March 30, 2007.

URS, 2006c. Technical Memorandum – Evaluation of Studies on Benthic Community Analysis and Sediment Toxicity Testing Conducted for Bayou Texar, Agrico Site, Pensacola, Florida. November 7, 2006.

URS, 2006d. Technical Memorandum Report – Evaluation of Long-Term Groundwater Monitoring Network. Agrico Site, OU-1 and OU-2, Pensacola, Florida. November 30, 2006.

URS, 2008. Annual Report for 2007, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida. March 28, 2008.

URS, 2009a. Annual Report for 2008, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida. March 31, 2009.

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

URS, 2009c. Conceptual Site Model Ecological Impact Evaluation of Bayou Texar Downgradient of Agrico's Groundwater Fluoride Plume. In cooperation with Anchor-QEA; September 4, 2009.

URS, 2009d. Recommendations to Operations and Maintenance Plans Operable Unit One (OU-1) and Operable Unit Two (OU-2) Agrico Site, Pensacola, Florida, November 18, 2009.

URS, 2010a. Annual Report for 2009, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida. March 15, 2010.

URS, 2011. Annual Report for 2010, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida March 31, 2011.

URS, 2012. Annual Report for 2011, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida. March 31, 2012.

URS, 2013a. Annual Report for 2012, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida. March 29, 2013.

URS, 2013b. Evaluation of Monitored Natural Attenuation in Groundwater, Report #2, October 23, 2013, Agrico Site, Pensacola, Florida, by Quantitative Decisions, William A. Huber, Ph.D., October 31, 2013.

URS, 2014. Annual Report for 2013, Operable Units One and Two (OU-1, OU-2), Agrico Site, Pensacola, Florida, March 7, 2014.

URS Greiner Woodward Clyde, January 1999. Annual Report. Ground Water Sampling Results – May and November 1998. Operable Unit One, Agrico Site, Pensacola, Florida.

URS Greiner Woodward Clyde, December 1999. Annual Report. Ground Water Sampling Results – May and November 1999. Operable Unit One, Agrico Site, Pensacola, Florida.

URS Greiner Woodward Clyde, 2000a. Remedial Action Implementation and First Annual Report (1999), OU-2, Agrico Site, Pensacola, Florida. February 2000.

URS Greiner Woodward Clyde, 2000b. Five-Year Review, Agrico Site, Pensacola, Florida. February 2000.

U.S. Army Corps of Engineers, Mobile District, 2005. Second Five-Year Review Report for Agrico Chemical Company, Operable Units 1 and 2, Pensacola, Escambia County, Florida, EPA ID: FLD980221857. Prepared for U.S. Environmental Protection Agency, Region 4. July 2005.

U.S. Department of Agriculture and Tennessee Valley Authority, 1964. Superphosphate: Its History, Chemistry, and Manufacturing. December 1964.

U.S. Environmental Protection Agency, 1992. Agrico Chemical Superfund Site, Record of Decision Operable Unit One. October 7, 1992.

U.S. Environmental Protection Agency, 1994. Record of Decision for Operable Unit Two, Agrico Chemical Superfund Site, Pensacola, Escambia County, Florida. August 25, 1994.

U. S. Environmental Protection Agency, 1994. Symposium on Natural Attenuation of Ground Water. 600/R-94/162.

U.S. Environmental Protection Agency, 2006. Record of Decision. Summary of Remedial Alternative Selection. Escambia Wood Treating Company Superfund Site. Operable Unit 01 (Soil). Pensacola, Escambia County, Florida. February 2006.

U.S. Environmental Protection Agency, 2008. Record of Decision. Summary of Remedial Alternative Selection. Escambia Wood Treating Company Superfund Site. Operable Unit 2 (Groundwater). Pensacola, Escambia County, Florida, September 2008.

Wagner, J.R., T.W. Allen, L.A. Clemens, and J.B. Dalton, 1984. Ambient Ground Water Monitoring Program - Phase I: NWFWMD, DER Contract No. WM65.

Watts, G., J.M. Wilson, K. Busen, and W.H. Colona, III, 1988. Agrico Chemical, Inc., Escambia County: FDER Groundwater Investigation Report No. 88-08.

Watts, Geoffrey B., and George E. Wiegand, 1989. Supplementary Contamination Report. Agrico Chemical Company - Escambia County: FDER, Site Investigation Section.

Wilkins, K.T., Wagner, J.R., and T.W. Allen, 1985. Hydrogeologic Data for the Sand-and-Gravel Aquifer in Southern Escambia County, Florida: Northwest Florida Water Management District Technical File Report 85-2.

Woodward-Clyde Consultants, 1993. Off-Site Monitoring Well Installation and Ground Water Sampling. Agrico Chemical Site. Pensacola, Florida: Technical Memorandum; Volumes 1 and 2.

Woodward-Clyde Consultants, 1998. Annual Report. Ground Water Sampling Results – May and November 1997. Operable Unit One, Agrico Site, Pensacola, Florida.

Woodward-Clyde Consultants, 1997. Work Plan - OU-2 Remedial Design. Agrico Chemical Site. Pensacola, Florida.

Woodward-Clyde Consultants, 1997. Preliminary Design Analysis, Operable Unit Two Agrico Site. Pensacola, Florida.

Woodward-Clyde International-Americas, 1998. Intermediate Design Analysis, Operable Unit Two Agrico Site. Pensacola, Florida.

Woodward-Clyde International-Americas, 1998. Pre-Final Design Analysis, Operable Unit Two Agrico Site. Pensacola, Florida.

Woodward-Clyde International-Americas, 1998. Remedial Action Work Plan and Related Plans (including Management Plan, Sampling and Analysis Plan, Health and Safety Plan and Operation and Maintenance Plan). Operable Unit Two, Agrico Site, Pensacola, Florida.

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

# TABLES

**TABLE 1**
**GROUNDWATER MONITORING WELL NETWORK**
**LONG-TERM AND PERIODIC MONITORING WELLS**

**Agrico Site**
**Pensacola, Florida**

| Well I.D. | Network Component | Description | Aquifer Zone |
|---|---|---|---|
| AC-2D | OU-2 LTGWMW | Downgradient Site, Below PS Concentration | MPZ |
| AC-2S | OU-2 LTGWMW | Elevated Concentration Area Well | SZ |
| AC-3S | OU-2 LTGWMW | Flow Path Well, Below PS Concentration | SZ |
| AC-3D | OU-2 LTGWMW | Elevated Concentrations, Flow Path Well | MPZ |
| AC-5D | PERIODIC | Outside of Plume | MPZ |
| AC-5S | PERIODIC | Outside of Plume, Background | SZ |
| AC-6D | OU-2 LTGWMW | Outside of Plume; Potentially Impacted by Site 348 (Kaiser) | MPZ |
| AC-6S | PERIODIC | Outside of Plume; Potentially Impacted by Site 348 (Kaiser) | SZ |
| AC-7SR | OU-1 LTGWMW | In Residual Plume Area | SZ |
| AC-8D | OU-2 LTGWMW | Outside Plume, Sentry Well | MPZ |
| AC-9D2 [(1)] | OU-2 LTGWMW | In Plume | MPZ |
| AC-10D | PERIODIC | Outside of Plume, Effects by Site 348 (Kaiser) Possible | MPZ |
| AC-11D | PERIODIC | Outside of Plume | MPZ |
| AC-12D | OU-2 LTGWMW | Flow Path Well Inside Plume | MPZ |
| AC-13D | OU-2 LTGWMW | Leading Edge of Plume | MPZ |
| AC-21D | PERIODIC | Outside of Plume, Potential Effects by Site 348 (Kaiser) | MPZ |
| AC-22D | PERIODIC | Outside of Plume, Effects by Site 348 (Kaiser) Possible | MPZ |
| AC-23D | PERIODIC | Sidegradient Fringe of Plume | MPZ |
| AC-24D | OU-2 LTGWMW | Flow Path Well Inside Plume | MPZ |
| AC-24S | PERIODIC | Outside of Plume, Downgradient of Diversion Area | SZ |
| AC-25D | OU-2 LTGWMW | Flow Path Well Inside Plume | MPZ |
| AC-27D | PERIODIC | Located on East Side of Groundwater Divide | MPZ |
| AC-27S | PERIODIC | Located on East Side of Groundwater Divide | SZ |
| AC-28D | OU-2 LTGWMW | Flow Path Well Inside Plume | MPZ |
| AC-29D | OU-2 LTGWMW | Elevated Concentrations, Flow Path | MPZ |
| AC-30D | OU-2 LTGWMW | Flow Path, Inside Plume | MPZ |
| ACB-31S | OU-1 LTGWMW | Upgradient but not necessarily Background | SZ |
| ACB-32S | OU-1 LTGWMW | Upgradient but not necessarily Background | SZ |
| AC-33S | OU-1 LTGWMW | Downgradient Cap Area | SZ |
| AC-34S | OU-1 LTGWMW | Downgradient Cap Area | SZ |
| AC-35D | OU-2 LTGWMW | Elevated Concentration, Flow Path | MPZ |
| NWD-2D | PERIODIC | Outside of Plume, Effects by Site 348 (Kaiser) Possible | MPZ |
| NWD-2S | PERIODIC | Downgradient of Diversion Area, Outside of Plume | SZ |
| NWD-4D | OU-2 LTGWMW | Outside of Plume, Sentry Location | MPZ |
| NWD-4S | PERIODIC | Outside of Plume, Sentry Location | SZ |
| PIP-D | OU-2 LTGWMW | Upgradient but not necessarily Background | MPZ |

**NOTES:**

MPZ = Main Producing Zone

SZ = Surficial Zone

PS = Performance Standard

The following wells associated with the site were not located as of September 1997: AC-3D2, AC-21S, AC-23S, AC-25S, NWD-D, NWD-I. Evaluation determined that the remaining wells were adequate for an accurate understanding of conditions at the Site.

Wells plugged with cement and abandoned according to NWFWMD regulations include AC-1S, AC-1D, AC-4S, AC-4D, AC-7S, AC-7D, AC-9D.

Former Periodic Well NWD-3S destroyed between November 2005 and November 2006. New construction location covers the former monitoring well location. Evaluation determined that the remaining wells were adequate for an accurate understanding of conditions at the Site.

Former monitoring wells AC-14D, AC-26S, AC-26D, and AC-36D were destroyed by the City of Pensacola stormwater project construction. These wells were removed from the network prior to the 2020 sampling event.

LTGWMW = Long-Term Groundwater Monitoring Well

Periodic = Annual water levels and sampling during Five-Year Reviews.

Annual = Beginning Nov. 2009; sampling will be conducted annually to assist in MNA evaluation; once MNA determinations made, these wells will revert to periodic.

(1) AC-9D2 is replacement well for AC-9D. AC-9D was plugged and abandoned on October 21, 1993.

# TABLE 2
# MONITORING WELL CONSTRUCTION DETAILS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Elevation Measuring Point (ft NGVD)[5] | Well Depth (ft bls)[6] | Screen Interval (ft bls) [2] | Diameter (inches)[2] | Aquifer Zone |
|---|---|---|---|---|---|
| AC-2D[(4)] | 92.74 | 149 | 147.2-149 | 4 | MPZ |
| AC-2S | 88.65 | 70 | 50 - 70 | 4 | SZ |
| AC-3S | 88.06 | 79 | 59 - 79 | 4 | SZ |
| AC-3D | 88.07 | 170 | 150 - 170 | 4 | MPZ |
| AC-5D | 82.4 | 171 | 151 - 171 | 4 | MPZ |
| AC-5S | 82.34 | 69 | 49 - 69 | 4 | SZ |
| AC-6D | 69.19 | 170 | 150 - 170 | 4 | MPZ |
| AC-6S | 69.32 | 70 | 50 - 70 | 4 | SZ |
| AC-7SR | 90.59 | 70 | 50 - 70 | 2 | SZ |
| AC-8D | 76.44 | 220 | 190 - 222 | 4 | MPZ |
| AC-9D2 [(1)] | 64.13 | 198 | 179 - 198 | 4 | MPZ |
| AC-10D | 79.48 | 224 | 190 - 224 | 4 | MPZ |
| AC-11D | 73.17 | 200 | 200 - 220 | 4 | MPZ |
| AC-12D | 79.23 | 211 | 191 - 211 | 4 | MPZ |
| AC-13D | 74.65 | 223 | 203 - 223 | 4 | MPZ |
| AC-14D [(8)] | 49.79 | 199 | 179 - 199 | 4 | MPZ |
| AC-21D [(7)] | 75.47 | 170 | 160 - 169.5 | 4 | MPZ |
| AC-22D | 76.58 | 170 | 160 - 169.5 | 4 | MPZ |
| AC-23D | 79.51 | 170 | 160 - 169.5 | 4 | MPZ |
| AC-24D | 79.60 | 215 | 205 - 215 | 4 | MPZ |
| AC-24S | 79.50 | 80 | 70 - 80 | 4 | SZ |
| AC-25D | 39.75 | 180 | 170 - 180 | 4 | MPZ |
| AC-26D[(9)] | 26.70 | 165 | 155 - 165 | 4 | MPZ |
| AC-26S[(9)] | 26.75 | 35 | 25 - 35 | 4 | SZ |
| AC-27D | 18.55 | 150 | 140 - 150 | 4 | MPZ |
| AC-27S | 18.50 | 35 | 25 - 35 | 4 | SZ |
| AC-28D | 74.89 | 201 | 181 - 201 | 4 | MPZ |
| AC-29D | 82.26 | 211 | 191 - 211 | 4 | MPZ |
| AC-30D | 85.73 | 211 | 191 - 211 | 4 | MPZ |
| ACB-31S | 91.92 | 70 | 50 - 70 | 2 | SZ |
| ACB-32S | 88.16 | 69.5 | 49.5 - 69.5 | 2 | SZ |
| AC-33S | 89.18 | 69.5 | 49.5 - 69.5 | 2 | SZ |
| AC-34S | 89.09 | 70 | 50 - 70 | 2 | SZ |
| AC-35D | 10.49 | 145 | 125 - 145 | 4 | MPZ |
| AC-36D[(9)] | 5.26 | 152 | 132 - 152 | 4 | MPZ |
| NWD-2D[(3)] | 76.80 | 180 | 160 - 180 | 4 | MPZ |
| NWD-2S[(3)] | 77.53 | 75 | 55 - 75 | 4 | SZ |
| NWD-3S[(7)] | 80.40 | 75 | 55 - 75 | 4 | SZ |
| NWD-4D | 34.70 | 120 | 100 - 120 | 4 | MPZ |
| NWD-4S | 34.70 | 45 | 35 - 45 | 4 | SZ |
| PIP-D | 39.10 | 180 | 160 - 180 | 4 | MPZ |

**NOTES:**

ROW = Road Right-of-Way

MPZ = Main Producing Zone

SZ = Surficial Zone

ft bls = feet below land surface

(1) AC-9D2 is replacement well for AC-9D. AC-9D plugged and abandoned on October 21, 1993.

(2) All wells are constructed of PVC casing and screen materials.

(3) Elevations for NWD-2D and NWD-2S were corrected in this Annual Report based on information from the NWFWMD database.

(4) Downhole Video Survey conducted in March 2004. Results indicate well filled in and only about 1 ft of screen remains.

(5) ft NGVD = feet above National Geodetic Vertical Datum of 1988.

(6) ft = feet

(7) NWD-3S destroyed as of 2006; AC-21D damaged as of 2007 (measured depth 163 ft bls; only 3 ft of screen remains). Evaluation determined that the remaining wells are adequate for an accurate understanding of conditions at the Site.

(8) AC-14D destroyed in 2018 during City of Pensacola stormwater system construction project.

(9) AC-26S, AC-26D, and AC-36D were not located during the 2019 sampling event, and based on recent City of Pensacola stormwater system construction, they appear to have been destroyed. EPA approved the 2019 report recommendation to remove these wells from the monitoring well network. However, should future groundwater data indicate the need, the monitor well replacement can be implemented.

**TABLE 3**
**GROUNDWATER FIELD PARAMETER RESULTS**

**Agrico Site**
**Pensacola, Florida**

| Well I.D. | Date | pH (su) | Conductivity **(µS/cm)** | **Temperature** ( °C) | Dissolved Oxygen **(mg/L)** | Oxidation Reduction Potential **(mV)** | **Turbidity** (NTU) |
|---|---|---|---|---|---|---|---|
| ACB-31S | 11/23/98 | 5.90 | 120 | 23.00 | NM | NM | 6.00 |
| | 05/25/99 | 5.80 | 220 | 26.00 | NM | NM | 2.00 |
| | 11/16/99 | 6.10 | 170 | 21.00 | NM | NM | 8.00 |
| | 05/16/00 | 5.70 | 130 | 24.00 | NM | NM | 7.00 |
| | 11/14/00 | 5.30 | 170 | 20.00 | NM | NM | 3.00 |
| | 05/08/01 | 5.45 | 176 | 22.50 | NM | NM | 999* |
| | 11/06/01 | 5.73 | 111 | 22.10 | NM | NM | 4.6 |
| | 05/06/02 | 4.57 | 144 | 22.60 | 6.13 | 379 | 15.4 |
| | 05/07/03 | 5.17 | 108 | 22.83 | NM | NM | 7.2 |
| | 01/13/04 | 5.84 | 196 | 23.86 | 6.31 | 123 | 0.8 |
| | 05/10/04 | 5.78 | 208 | 24.76 | NM | NM | 10.2 |
| | 11/09/04 | 5.92 | 296 | 23.70 | NM | NM | 9.3 |
| | 05/10/05 | 5.56 | 248 | 23.12 | 6.78 | 103 | 5.1 |
| | 11/08/05 | 6.18 | 176 | 23.71 | 9.06 | 187 | 5.0 |
| | 05/17/06 | 6.00 | 218 | 23.19 | 6.99 | 265 | 2.0 |
| | 11/14/06 | 5.83 | 247 | 23.25 | 7.39 | 162 | 2.1 |
| | 05/16/07 | 5.49 | 223 | 23.14 | 7.71 | 213 | 2.4 |
| | 11/15/07 | 5.67 | 208 | 22.50 | 7.75 | 37 | 0.6 |
| | 05/15/08 | 5.32 | 218 | 23.19 | 7.87 | 109 | 0.9 |
| | 11/13/08 | 5.36 | 229 | 23.43 | 7.38 | 168 | 1.2 |
| | 11/19/09 | 5.89 | 220 | 23.38 | 6.66 | 88 | 2.1 |
| | 11/16/10 | 6.29 | 228 | 22.59 | 6.82 | 218 | 0.9 |
| | 11/08/11 | 6.01 | 220 | 23.61 | 8.45 | 172 | 3.5 |
| | 11/06/12 | 5.59 | 178 | 23.73 | 8.69 | 154 | 0.4 |
| | 11/05/13 | 6.12 | 172 | 23.83 | 8.43 | 112 | 1.2 |
| | 11/12/14 | 5.97 | 167 | 20.84 | 10.40 | 140.6 | 0.24 |
| | 11/18/15 | 6.13 | 154 | 21.73 | 8.50 | 188.8 | 0.40 |
| | 11/08/16 | 5.87 | 147 | 23.45 | 9.02 | 156.1 | 0.78 |
| | 11/07/17 | 5.11 | 140 | 23.69 | 7.26 | 224.4 | 2.13 |
| | 11/06/18 | 5.05 | 43 | 24.01 | 10.34 | 204.8 | 1.20 |
| | 11/12/19 | 6.03 | 387 | 23.49 | 8.36 | 109.5 | 1.46 |
| | 11/10/20 | 5.94 | 103 | 23.77 | 7.63 | 215.8 | 0.48 |

**TABLE 3**
**GROUNDWATER FIELD PARAMETER RESULTS**

**Agrico Site**
**Pensacola, Florida**

| Well I.D. | Date | pH (su) | Conductivity **(µS/cm)** | **Temperature** ( °C) | Dissolved Oxygen **(mg/L)** | Oxidation Reduction Potential **(mV)** | **Turbidity** (NTU) |
|---|---|---|---|---|---|---|---|
| AC-2S | 09/27/97 | 6.00 | 590 | 24.00 | 9.10 | NM | 2.00 |
| | 11/16/99 | 5.80 | 430 | 22.00 | NM | NM | 1.00 |
| | 11/21/00 | 5.70 | 520 | 21.00 | NM | NM | 1.00 |
| | 11/15/01 | 6.05 | 552 | 20.00 | NM | NM | 39.50 |
| | 11/26/02 | 6.01 | 507 | 25.90 | NM | NM | 4.90 |
| | 01/23/04 | 5.86 | 493 | 24.75 | 1.50 | 179.2 | 2.50 |
| | 11/17/04 | 5.71 | 400 | 23.66 | NM | NM | 3.31 |
| | 11/15/05 | 5.71 | 450 | 23.49 | 2.73 | 147.6 | 9.31 |
| | 11/28/06 | 5.72 | 478 | 24.04 | 1.66 | 137.8 | 0.81 |
| | 11/21/07 | 5.93 | 296 | 24.39 | 1.57 | 153.3 | 0.00 |
| | 11/19/08 | 5.71 | 388 | 24.41 | 0.86 | 166.2 | 1.01 |
| | 11/18/09 | 5.86 | 268 | 24.34 | 1.88 | 95.8 | 1.18 |
| | 11/29/10 | 5.62 | 270 | 24.48 | 3.15 | 132.1 | 0.07 |
| | 11/16/11 | 5.67 | 344 | 24.77 | 1.45 | 140.9 | 3.96 |
| | 11/14/12 | 5.55 | 335 | 23.71 | 2.38 | 148.6 | 0.56 |
| | 11/12/13 | 5.53 | 317 | 23.99 | 2.47 | 183.8 | 1.07 |
| | 11/12/14 | 5.63 | 294 | 21.51 | 4.33 | 137.1 | 0.41 |
| | 11/18/15 | 5.87 | 320 | 22.21 | 2.89 | 165.3 | 0.59 |
| | 11/09/16 | 5.41 | 258 | 23.87 | 3.14 | 200.8 | 1.45 |
| | 11/07/17 | 4.88 | 270 | 23.92 | 4.35 | 199.1 | 2.01 |
| | 11/06/18 | 5.64 | 216 | 23.79 | 4.85 | 172.8 | 3.31 |
| | 11/12/19 | 6.02 | 324 | 23.19 | 5.16 | 123.1 | 0.61 |
| | 11/10/20 | 5.54 | 202 | 23.99 | 5.13 | 224.4 | 1.53 |
| AC-2D | 09/30/97 | 4.60 | 100 | 24.00 | 9.70 | NM | 0.00 |
| | 11/16/99 | 4.90 | 110 | 22.00 | NM | NM | 0.00 |
| | 11/21/00 | 4.50 | 110 | 21.00 | NM | NM | 0.00 |
| | 11/15/01 | 4.55 | 102 | 21.20 | NM | NM | 0.00 |
| | 11/26/02 | 4.36 | 102 | 23.70 | NM | NM | 0.36 |
| | 01/23/04 | 4.64 | 105 | 23.07 | 0.17 | 403.9 | 2.60 |
| | 11/17/04 | 4.50 | 105 | 22.40 | NM | NM | 1.10 |
| | 11/14/05 | 4.80 | 91 | 23.32 | 2.41 | 334.2 | 3.34 |
| | 11/28/06 | 4.68 | 90 | 23.30 | 1.09 | 200.8 | 1.70 |
| | 11/21/07 | 4.86 | 91 | 22.86 | 0.70 | 170.0 | 0.00 |
| | 11/19/08 | 4.56 | 109 | 23.65 | 1.25 | 214.9 | 1.87 |
| | 11/18/09 | 4.59 | 97 | 23.37 | 1.36 | 151.8 | 1.18 |
| | 11/29/10 | 4.30 | 99 | 22.90 | 1.79 | 161.0 | 0.65 |
| | 11/16/11 | 4.65 | 99 | 23.61 | 0.72 | 260.9 | 3.14 |
| | 11/14/12 | 4.45 | 96 | 23.59 | 2.00 | 293.8 | 2.15 |
| | 11/12/13 | 4.44 | 95 | 23.70 | 2.48 | 212.1 | 2.71 |
| | 11/12/14 | 4.68 | 94 | 21.28 | 3.52 | 173.6 | 1.31 |
| | 11/18/15 | 4.98 | 94 | 22.02 | 3.78 | 325.1 | 2.11 |
| | 11/09/16 | 4.42 | 88 | 24.02 | 3.72 | 257.9 | 2.08 |
| | 11/07/17 | 3.02 | 99 | 24.05 | 3.42 | 265.9 | 6.36 |
| | 11/06/18 | 3.06 | 40 | 24.42 | 5.48 | 165.3 | 6.94 |
| | 11/13/19 | 3.91 | 90 | 23.75 | 4.68 | 178.6 | 3.45 |
| | 11/11/20 | 4.59 | 75 | 24.05 | 5.40 | 280.5 | 6.45 |

**TABLE 3**
**GROUNDWATER FIELD PARAMETER RESULTS**

**Agrico Site**
**Pensacola, Florida**

| Well I.D. | Date | pH (su) | Conductivity **(µS/cm)** | **Temperature** ( °C) | Dissolved Oxygen **(mg/L)** | Oxidation Reduction Potential **(mV)** | **Turbidity** (NTU) |
|---|---|---|---|---|---|---|---|
| AC-3D | 09/27/97 | 4.90 | 1600 | 24.00 | 9.50 | NM | 0.00 |
| | 11/19/99 | 4.60 | 1200 | 23.00 | NM | NM | 0.00 |
| | 11/21/00 | 4.40 | 1200 | 21.00 | NM | NM | 0.00 |
| | 11/14/01 | 4.70 | 930 | 22.80 | NM | NM | 0.00 |
| | 11/26/02 | 4.24 | 1041 | 23.80 | NM | NM | 0.37 |
| | 01/22/04 | 4.32 | 1013 | 23.24 | 0.02 | 407.2 | 2.60 |
| | 11/17/04 | 4.11 | 872 | 22.81 | NM | NM | 3.24 |
| | 11/15/05 | 4.37 | 844 | 23.35 | 0.04 | 202.3 | 2.96 |
| | 11/22/06 | 4.42 | 819 | 23.48 | 0.06 | 270.9 | 1.30 |
| | 11/21/07 | 4.59 | 640 | 22.94 | 0.09 | 181.3 | 0.00 |
| | 11/13/08 | 4.52 | 572 | 23.77 | 0.07 | 158.7 | 2.20 |
| | 11/18/09 | 4.47 | 523 | 23.61 | 0.10 | 183.2 | 0.81 |
| | 11/29/10 | 4.21 | 480 | 22.83 | 0.55 | 225.2 | 1.43 |
| | 11/15/11 | 4.40 | 451 | 23.53 | 0.02 | 196.5 | 2.04 |
| | 11/13/12 | 4.24 | 462 | 23.63 | 0.07 | 237.2 | 0.79 |
| | 11/12/13 | 4.18 | 407 | 23.69 | 0.06 | 260.9 | 1.25 |
| | 11/11/14 | 4.30 | 382 | 20.74 | 0.21 | 329.5 | 0.16 |
| | 11/19/15 | 4.23 | 371 | 21.84 | 0.11 | 362.0 | 0.65 |
| | 11/11/16 | 3.99 | 377 | 24.00 | 0.69 | 232.5 | 0.71 |
| | 11/08/17 | 3.46 | 333 | 24.00 | 1.47 | 321.0 | 1.71 |
| | 11/06/18 | 4.49 | 163 | 24.40 | 7.11 | 285.8 | 1.11 |
| | 11/13/19 | 3.58 | 348 | 24.23 | 2.08 | 204.2 | 0.54 |
| | 11/10/20 | 4.41 | 194 | 23.97 | 6.75 | 355.1 | 0.72 |
| AC-12D | 09/27/97 | 4.00 | 610 | 24.00 | 9.00 | NM | NM |
| | 11/18/99 | 3.90 | 700 | 23.00 | NM | NM | 0.00 |
| | 11/15/00 | 3.80 | 720 | 23.00 | NM | NM | 0.00 |
| | 11/08/01 | 3.81 | 653 | 21.30 | NM | NM | 0.00 |
| | 11/22/02 | 3.80 | 700 | 24.00 | NM | NM | 0.54 |
| | 01/28/04 | 3.78 | 745 | 23.36 | 0.40 | 365.6 | 1.68 |
| | 11/11/04 | 3.59 | 551 | 22.93 | NM | NM | 0.00 |
| | 11/10/05 | 3.86 | 749 | 23.85 | 0.37 | 233.6 | 3.00 |
| | 11/16/06 | 3.91 | 72 | 23.67 | 0.32 | 392.2 | 0.11 |
| | 11/16/07 | 3.94 | 766 | 22.92 | 0.33 | 143.5 | 0.00 |
| | 11/13/08 | 3.94 | 749 | 23.83 | 0.41 | 287.4 | 2.20 |
| | 11/12/09 | 3.98 | 708 | 23.77 | 0.53 | 166.4 | 0.52 |
| | 11/18/10 | 3.88 | 719 | 23.02 | 0.87 | 357.5 | 0.94 |
| | 11/09/11 | 3.97 | 661 | 24.04 | 0.71 | 349.9 | 1.81 |
| | 11/08/12 | 3.70 | 649 | 23.77 | 0.87 | 401.0 | 0.32 |
| | 11/06/13 | 3.83 | 656 | 23.85 | 0.68 | 368.5 | 1.18 |
| | 11/20/14 | 4.00 | 621 | 21.08 | 0.93 | 360.0 | 0.39 |
| | 11/19/15 | 3.99 | 577 | 21.92 | 0.88 | 449.2 | 0.63 |
| | 11/10/16 | 3.72 | 592 | 23.93 | 0.91 | 320.4 | 0.83 |
| | 11/08/17 | 3.41 | 543 | 23.84 | 1.03 | 362.8 | 1.96 |
| | 11/07/18 | 2.82 | 169 | 24.38 | 2.36 | 323.4 | 0.71 |
| | 11/18/19 | 4.24 | 100 | 23.97 | 2.23 | 126.8 | 0.46 |
| | 11/11/20 | 4.02 | 370 | 23.63 | 0.99 | 262.8 | 1.16 |

**TABLE 3**
**GROUNDWATER FIELD PARAMETER RESULTS**

**Agrico Site**
**Pensacola, Florida**

| Well I.D. | Date | pH (su) | Conductivity **(µS/cm)** | **Temperature** ( °C) | Dissolved Oxygen **(mg/L)** | Oxidation Reduction Potential **(mV)** | **Turbidity** (NTU) |
|---|---|---|---|---|---|---|---|
| AC-13D | 09/27/97 | 4.30 | 580 | 24.00 | 9.50 | NM | NM |
| | 11/15/00 | 3.90 | 570 | 21.00 | NM | NM | 0.00 |
| | 11/08/01 | 4.15 | 565 | 23.10 | NM | NM | 0.00 |
| | 11/21/02 | 3.97 | 599 | 23.80 | NM | NM | 0.00 |
| | 01/16/04 | 4.23 | 629 | 23.29 | 0.08 | 316.2 | 0.55 |
| | 11/11/04 | 3.81 | 598 | 22.68 | NM | NM | 0.00 |
| | 11/10/05 | 3.98 | 706 | 23.81 | 0.07 | 228.9 | 0.17 |
| | 11/16/06 | 3.97 | 780 | 23.56 | 0.04 | 390.3 | 0.02 |
| | 11/19/07 | 4.01 | 796 | 22.82 | 0.05 | 159.7 | 0.00 |
| | 11/11/08 | 3.90 | 815 | 23.49 | 0.08 | 211.1 | 0.13 |
| | 11/12/09 | 4.02 | 781 | 23.66 | 0.16 | 213.1 | 0.22 |
| | 11/18/10 | 3.96 | 741 | 22.87 | 0.61 | 299.5 | 0.53 |
| | 11/09/11 | 4.01 | 810 | 23.97 | 0.01 | 297.3 | 0.54 |
| | 11/07/12 | 3.87 | 787 | 23.45 | 0.46 | 300.7 | 0.15 |
| | 11/06/13 | 3.92 | 761 | 23.66 | 0.03 | 283.4 | 0.56 |
| | 11/19/14 | 4.00 | 751 | 21.06 | 0.20 | 251.3 | 0.10 |
| | 11/20/15 | 4.07 | 700 | 21.81 | 0.06 | 374.7 | 0.43 |
| | 11/10/16 | 3.84 | 652 | 23.86 | 0.57 | 215.3 | 0.37 |
| | 11/08/17 | 3.37 | 654 | 23.62 | 0.12 | 357.5 | 1.50 |
| | 11/07/18 | 4.01 | 500 | 23.88 | 0.51 | 356.5 | 0.67 |
| | 11/25/19 | 3.99 | 636 | 23.41 | 0.06 | 124.5 | 0.15 |
| | 11/12/20 | 4.08 | 512 | 23.42 | 0.11 | 262.9 | 0.31 |
| AC-24D | 09/26/97 | 4.40 | 780 | 23.00 | 9.50 | NM | 0.00 |
| | 01/21/04 | 4.11 | 747 | 23.09 | 0.00 | 344.9 | 2.40 |
| | 11/18/08 | 4.24 | 776 | 22.77 | 0.11 | 198.5 | 0.32 |
| | 11/16/09 | 4.17 | 784 | 23.58 | 0.19 | 99.8 | 0.19 |
| | 11/23/10 | 4.12 | 753 | 22.80 | 0.84 | 303.8 | 0.30 |
| | 11/14/11 | 4.16 | 769 | 23.76 | 0.85 | 339.0 | 0.44 |
| | 11/09/12 | 3.95 | 848 | 22.53 | 0.10 | 362.1 | 1.17 |
| | 11/07/13 | 4.05 | 748 | 23.56 | 0.05 | 312.5 | 2.00 |
| | 11/24/14 | 4.16 | 613 | 23.58 | 0.29 | 243.0 | 1.03 |
| | 11/19/15 | 4.21 | 604 | 21.61 | 0.20 | 381.4 | 0.61 |
| | 11/10/16 | 4.00 | 529 | 23.69 | 0.58 | 265.6 | 0.42 |
| | 11/08/17 | 3.50 | 527 | 23.63 | 0.16 | 321.3 | 2.61 |
| | 11/07/18 | 4.47 | 281 | 23.81 | 0.45 | 280.6 | 0.79 |
| | 11/21/19 | 4.10 | 458 | 23.53 | 0.08 | 107.4 | 0.10 |
| | 11/12/20 | 4.32 | 385 | 23.33 | 0.08 | 276.1 | 0.33 |

**TABLE 3**
**GROUNDWATER FIELD PARAMETER RESULTS**

**Agrico Site**
**Pensacola, Florida**

| Well I.D. | Date | pH (su) | Conductivity **(µS/cm)** | **Temperature** ( °C) | Dissolved Oxygen **(mg/L)** | Oxidation Reduction Potential **(mV)** | **Turbidity** (NTU) |
|---|---|---|---|---|---|---|---|
| AC-25D | 09/24/97 | 4.70 | 1100 | 24.00 | 10.40 | NM | 0.00 |
| | 11/19/99 | 4.30 | 1400 | 23.00 | NM | NM | 0.00 |
| | 11/15/00 | 4.20 | 1400 | 22.00 | NM | NM | 1.00 |
| | 11/08/01 | 4.31 | 1240 | 21.00 | NM | NM | 9.30 |
| | 11/21/02 | 4.15 | 1420 | 22.90 | NM | NM | 0.05 |
| | 01/22/04 | 4.06 | 1534 | 22.61 | 0.68 | 177.3 | 4.19 |
| | 11/15/04 | 4.30 | 1204 | 22.69 | NM | NM | 4.49 |
| | 11/10/05 | 4.17 | 1502 | 23.28 | 0.08 | 125.4 | 1.10 |
| | 11/20/06 | 4.16 | 1481 | 22.79 | 0.03 | 360.9 | 1.50 |
| | 11/20/07 | 4.23 | 1449 | 22.26 | 0.07 | 181.9 | 0.25 |
| | 11/18/08 | 4.08 | 1356 | 22.23 | 0.07 | -292.3 | 0.82 |
| | 11/17/09 | 4.17 | 1398 | 22.74 | 0.12 | 279.6 | 0.29 |
| | 11/23/10 | 4.11 | 1388 | 22.31 | 0.42 | 341.2 | 2.31 |
| | 11/15/11 | 4.15 | 1422 | 23.11 | 0.10 | 364.9 | 0.47 |
| | 11/14/12 | 4.00 | 1371 | 23.07 | 0.09 | 369.8 | 0.40 |
| | 11/12/13 | 3.96 | 1326 | 23.10 | 0.04 | 258.7 | 0.78 |
| | 11/20/14 | 4.14 | 1287 | 20.74 | 0.10 | 381.4 | 0.77 |
| | 11/20/15 | 4.21 | 1222 | 20.89 | 0.50 | 393.3 | 0.54 |
| | 11/09/16 | 4.07 | 1163 | 23.11 | 0.65 | 381.0 | 0.55 |
| | 11/09/17 | 3.56 | 1152 | 23.00 | 0.27 | 328.5 | 1.36 |
| | 11/07/18 | 4.41 | 573 | 23.20 | 0.99 | 300.4 | 0.70 |
| | 11/20/19 | 4.55 | 573 | 22.79 | 0.16 | 177.5 | 0.12 |
| | 11/12/20 | 4.14 | 877 | 22.86 | 0.15 | 379.8 | 0.31 |
| AC-29D | 09/27/97 | 4.10 | 1700 | 23.00 | 9.10 | NM | NM |
| | 11/18/99 | 4.20 | 1500 | 22.00 | NM | NM | 0.00 |
| | 11/20/00 | 4.10 | 1300 | 22.00 | NM | NM | 1.00 |
| | 11/13/01 | 4.29 | 990 | 22.20 | NM | NM | 0.00 |
| | 11/25/02 | 3.87 | 1075 | 24.00 | NM | NM | 0.00 |
| | 01/23/04 | 4.14 | 1050 | 23.34 | 0.48 | 251.7 | 0.00 |
| | 11/12/04 | 4.08 | 797 | 22.61 | NM | NM | 2.74 |
| | 11/16/05 | 4.11 | 723 | 23.71 | 0.04 | 188.7 | 2.57 |
| | 11/17/06 | 4.25 | 744 | 23.68 | 0.05 | 348.8 | 0.00 |
| | 11/20/07 | 4.18 | 772 | 22.96 | 0.10 | 178.0 | 0.45 |
| | 11/18/08 | 4.05 | 790 | 23.55 | 0.23 | 309.6 | 0.11 |
| | 11/17/09 | 4.13 | 768 | 23.58 | 0.11 | 171.9 | 0.18 |
| | 11/19/10 | 4.08 | 782 | 23.02 | 0.39 | 343.5 | 0.62 |
| | 11/11/11 | 4.17 | 794 | 23.91 | 0.03 | 399.9 | 0.78 |
| | 11/13/12 | 4.04 | 762 | 23.74 | 0.11 | 267.0 | 0.30 |
| | 11/07/13 | 4.02 | 661 | 23.83 | 0.12 | 357.3 | 0.56 |
| | 11/17/14 | 4.09 | 655 | 21.13 | 0.20 | 408.3 | 0.81 |
| | 11/19/15 | 4.09 | 613 | 21.80 | 0.03 | 427.9 | 0.45 |
| | 11/11/16 | 3.87 | 572 | 23.95 | 0.42 | 331.7 | 0.45 |
| | 11/08/17 | 3.42 | 567 | 23.85 | 0.13 | 354.2 | 0.90 |
| | 11/07/18 | 3.96 | 396 | 24.16 | 0.38 | 369.0 | 0.73 |
| | 11/19/19 | 4.00 | 492 | 24.00 | 0.06 | 142.4 | 0.27 |
| | 11/11/20 | 4.06 | 420 | 23.61 | 0.07 | 344.5 | 0.29 |

**TABLE 3**
**GROUNDWATER FIELD PARAMETER RESULTS**

**Agrico Site**
**Pensacola, Florida**

| Well I.D. | Date | pH (su) | Conductivity **(µS/cm)** | **Temperature** ( °C) | Dissolved Oxygen **(mg/L)** | Oxidation Reduction Potential **(mV)** | **Turbidity** (NTU) |
|---|---|---|---|---|---|---|---|
| AC-35D | 11/18/99 | 4.20 | 2200 | 22.00 | NM | NM | 8.00 |
| | 11/15/00 | 4.10 | 2200 | 22.00 | NM | NM | 0.00 |
| | 11/08/01 | 4.04 | 2010 | 21.40 | NM | NM | 3.80 |
| | 11/21/02 | 3.91 | 2037 | 22.80 | NM | NM | 2.80 |
| | 01/15/04 | 4.05 | 2060 | 22.36 | 0.01 | 362.0 | 0.80 |
| | 11/15/04 | 3.57 | 1607 | 21.95 | NM | NM | 3.89 |
| | 11/16/05 | 3.94 | 1889 | 22.87 | 0.13 | 187.8 | 9.20 |
| | 11/20/06 | 4.04 | 1818 | 22.89 | 0.05 | 237.7 | 2.20 |
| | 11/20/07 | 4.07 | 1725 | 22.25 | 0.06 | 210.8 | 0.00 |
| | 11/19/08 | 3.88 | 1749 | 22.75 | 0.23 | 271.6 | 0.91 |
| | 11/19/09 | 4.01 | 1736 | 22.97 | 0.09 | 193.1 | 1.43 |
| | 11/23/10 | 4.29 | 1737 | 22.36 | 0.38 | 247.7 | 8.99 |
| | 11/16/11 | 3.94 | 1611 | 22.98 | 0.10 | 303.7 | 0.24 |
| | 11/15/12 | 3.91 | 1545 | 22.93 | 0.06 | 281.4 | 0.28 |
| | 11/13/13 | 3.90 | 1495 | 23.00 | 0.08 | 351.5 | 0.59 |
| | 11/24/14 | 3.99 | 1381 | 23.16 | 0.84 | 233.6 | 0.65 |
| | 11/20/15 | 4.03 | 1374 | 20.76 | 0.10 | 384.1 | 0.65 |
| | 11/08/16 | 3.87 | 1254 | 23.07 | 0.94 | 244.5 | 0.54 |
| | 11/09/17 | 3.46 | 1264 | 23.02 | 0.44 | 314.5 | 1.20 |
| | 11/07/18 | 4.03 | 940 | 23.14 | 0.54 | 263.4 | 0.72 |
| | 11/18/19 | 3.97 | 974 | 23.10 | 0.09 | 126.0 | 0.38 |
| | 11/02/20 | 4.01 | 919 | 22.98 | 0.25 | 184.1 | 0.31 |

**NOTES:**

su = standard units
µS/cm=microSiemens per centimeter
$^{0}$C = Degrees Celsius
mg/L = milligrams per Liter
mV = milliVolt
NTU = Nephelometric Turbidity Units
NM = Not Measured

* = turbidity reading above instrument capabilities
Wells purged with a bailer during the May 2001 sampling event
** = Well purged with a bailer

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| SURFICIAL ZONE | | | | |
| **AC-2S** | May-97 | 88.65 | NM | NM |
| | Sep-97 | | 51.40 | 37.25 |
| | Nov-97 | | NM | NM |
| | May-98 | | NM | NM |
| | Nov-98 | | NM | NM |
| | May-99 | | NM | NM |
| | Nov-99 | | 49.81 | 38.84 |
| | May-00 | | NM | NM |
| | Nov-00 | | 58.68 | 29.97 |
| | May-01 | | 59.37 | 29.28 |
| | Nov-01 | | 59.94 | 28.71 |
| | May-02 | | 61.29 | 27.36 |
| | Nov-02 | | 60.22 | 28.43 |
| | May-03 | | NM | NM |
| | Jan-04 | | 53.90 | 34.75 |
| | May-04 | | 54.44 | 34.21 |
| | Nov-04 | | 52.71 | 35.94 |
| | May-05 | | 46.87 | 41.78 |
| | Nov-05 | | 44.76 | 43.89 |
| | May-06 | | NM | NM |
| | Nov-06 | | 50.61 | 38.04 |
| | May-07 | | 52.94 | 35.71 |
| | Nov-07 | | 53.89 | 34.76 |
| | May-08 | | 53.02 | 35.63 |
| | Nov-08 | | 53.57 | 35.08 |
| | Nov-09 | | 55.93 | 32.72 |
| | Nov-10 | | 46.73 | 41.92 |
| | Nov-11 | | 46.73 | 41.92 |
| | Nov-12 | | 48.74 | 39.91 |
| | Nov-13 | | 49.19 | 39.46 |
| | Nov-14 | | 44.74 | 43.91 |
| | Nov-15 | | 48.39 | 40.26 |
| | Nov-16 | | 47.49 | 41.16 |
| | Nov-17 | | 44.45 | 44.20 |
| | Nov-18 | | 46.64 | 42.01 |
| | Nov-19 | | 48.91 | 39.74 |
| | Nov-20 | | 47.46 | 41.19 |
| **AC-3S** | May-97 | 88.06 | 54.49 | 33.57 |
| | Sep-97 | | 55.44 | 32.62 |
| | Nov-97 | | NM | NM |
| | May-98 | | 50.19 | 37.87 |
| | Nov-98 | | 50.21 | 37.85 |
| | May-99 | | 56.37 | 31.69 |
| | Nov-99 | | 57.31 | 30.75 |
| | May-00 | | NM | NM |
| | Nov-00 | | 61.93 | 26.13 |
| | May-01 | | NM | NM |
| | Nov-01 | | 62.97 | 25.09 |
| | May-02 | | NM | NM |
| | Nov-02 | | 63.37 | 24.69 |
| | May-03 | | NM | NM |
| | Jan-04 | | 56.37 | 31.69 |
| | May-04 | | 57.53 | 30.53 |
| | Nov-04 | | 56.10 | 31.96 |
| | May-05 | | 41.03 | 47.03 |
| | Nov-05 | | 47.79 | 40.27 |
| | May-06 | | 50.15 | 37.91 |
| | Nov-06 | | 53.68 | 34.38 |
| | May-07 | | 56.20 | 31.86 |
| | Nov-07 | | 57.44 | 30.62 |
| | May-08 | | 61.65 | 26.41 |
| | Nov-08 | | 56.90 | 31.16 |
| | Nov-09 | | 55.84 | 32.22 |
| | Nov-10 | | 49.74 | 38.32 |
| | Nov-11 | | 49.74 | 38.32 |
| | Nov-12 | | 52.24 | 35.82 |
| | Nov-13 | | 52.24 | 35.82 |
| | Nov-14 | | 47.85 | 40.21 |
| | Nov-15 | | 51.75 | 36.31 |
| | Nov-16 | | 50.27 | 37.79 |
| | Nov-17 | | 47.35 | 40.71 |
| | Nov-18 | | 49.77 | 38.29 |
| | Nov-19 | | 51.95 | 36.11 |
| | Nov-20 | | 50.60 | 37.46 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| SURFICIAL ZONE | | | | |
| **AC-5S** | May-97 | 82.34 | 43.86 | 38.48 |
| | Sep-97 | | 43.87 | 38.47 |
| | Nov-97 | | NM | NM |
| | May-98 | | 42.60 | 39.74 |
| | Nov-98 | | 42.32 | 40.02 |
| | May-99 | | 45.66 | 36.68 |
| | Nov-99 | | 46.65 | 35.69 |
| | May-00 | | 49.45 | 32.89 |
| | Nov-00 | | 50.98 | 31.36 |
| | May-01 | | 51.58 | 30.76 |
| | Nov-01 | | 52.09 | 30.25 |
| | May-02 | | 53.45 | 28.89 |
| | Nov-02 | | 51.73 | 30.61 |
| | May-03 | | NM | NM |
| | Jan-04 | | 46.17 | 36.17 |
| | May-04 | | 46.71 | 35.63 |
| | Nov-04 | | 44.94 | 37.40 |
| | May-05 | | 38.01 | 44.33 |
| | Nov-05 | | 36.86 | 45.48 |
| | May-06 | | 39.01 | 43.33 |
| | Nov-06 | | 42.38 | 39.96 |
| | May-07 | | 44.83 | 37.51 |
| | Nov-07 | | 45.34 | 37.00 |
| | May-08 | | 44.86 | 37.48 |
| | Nov-08 | | 45.49 | 36.85 |
| | Nov-09 | | 44.35 | 37.99 |
| | Nov-10 | | 38.33 | 44.01 |
| | Nov-11 | | 42.20 | 40.14 |
| | Nov-12 | | 40.62 | 41.72 |
| | Nov-13 | | 41.05 | 41.29 |
| | Nov-14 | | 36.75 | 45.59 |
| | Nov-15 | | 39.77 | 42.57 |
| | Nov-16 | | 39.15 | 43.19 |
| | Nov-17 | | 35.78 | 46.56 |
| | Nov-18 | | 38.54 | 43.80 |
| | Nov-19 | | 40.57 | 41.77 |
| | Nov-20 | | 38.86 | 43.48 |
| **AC-6S** | May-97 | 69.32 | NM | NM |
| | Sep-97 | | 43.97 | 25.35 |
| | Nov-97 | | NM | NM |
| | May-98 | | NM | NM |
| | Nov-98 | | NM | NM |
| | May-99 | | NM | NM |
| | Nov-99 | | 44.75 | 24.57 |
| | May-00 | | NM | NM |
| | Nov-00 | | 47.75 | 21.57 |
| | May-01 | | NM | NM |
| | Nov-01 | | 48.10 | 21.22 |
| | May-02 | | NM | NM |
| | Nov-02 | | 48.25 | 21.07 |
| | May-03 | | NM | NM |
| | Jan-04 | | 41.81 | 27.51 |
| | May-04 | | NM | NM |
| | Nov-04 | | 41.10 | 28.22 |
| | May-05 | | NM | NM |
| | Nov-05 | | 34.63 | 34.69 |
| | May-06 | | NM | NM |
| | Nov-06 | | 39.56 | 29.76 |
| | May-07 | | NM | NM |
| | Nov-07 | | 42.32 | 27.00 |
| | May-08 | | NM | NM |
| | Nov-08 | | 41.17 | 28.15 |
| | Nov-09 | | 40.47 | 28.85 |
| | Nov-10 | | 35.84 | 33.48 |
| | Nov-11 | | 39.58 | 29.74 |
| | Nov-12 | | 38.10 | 31.22 |
| | Nov-13 | | 37.59 | 31.73 |
| | Nov-14 | | 34.78 | 34.54 |
| | Nov-15 | | 37.31 | 32.01 |
| | Nov-16 | | 36.08 | 33.24 |
| | Nov-17 | | 33.75 | 35.57 |
| | Nov-18 | | 36.01 | 33.31 |
| | Nov-19 | | 37.62 | 31.70 |
| | Nov-20 | | 35.58 | 33.74 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| SURFICIAL ZONE | | | | |
| **AC-7SR** | May-97 | 90.59 | 52.58 | 38.01 |
| | Sep-97 | | NM | NM |
| | Nov-97 | | 53.29 | 37.30 |
| | May-98 | | 51.04 | 39.55 |
| | Nov-98 | | 51.05 | 39.54 |
| | May-99 | | 54.11 | 36.48 |
| | Nov-99 | | 54.76 | 35.83 |
| | May-00 | | 57.93 | 32.66 |
| | Nov-00 | | 59.70 | 30.89 |
| | May-01 | | 60.38 | 30.21 |
| | Nov-01 | | 60.90 | 29.69 |
| | May-02 | | 62.35 | 28.24 |
| | Nov-02 | | 61.09 | 29.50 |
| | May-03 | | 59.64 | 30.95 |
| | Jan-04 | | 54.99 | 35.60 |
| | May-04 | | 55.55 | 35.04 |
| | Nov-04 | | 53.70 | 36.89 |
| | May-05 | | 47.23 | 43.36 |
| | Nov-05 | | 45.68 | 44.91 |
| | May-06 | | 48.27 | 42.32 |
| | Nov-06 | | 51.46 | 39.13 |
| | May-07 | | 54.04 | 36.55 |
| | Nov-07 | | 55.04 | 35.55 |
| | May-08 | | 54.09 | 36.50 |
| | Nov-08 | | 54.75 | 35.84 |
| | Nov-09 | | 53.81 | 36.78 |
| | Nov-10 | | 47.79 | 42.80 |
| | Nov-11 | | 47.79 | 42.80 |
| | Nov-12 | | 49.71 | 40.88 |
| | Nov-13 | | 50.23 | 40.36 |
| | Nov-14 | | 45.79 | 44.80 |
| | Nov-15 | | 49.55 | 41.04 |
| | Nov-16 | | 48.61 | 41.98 |
| | Nov-17 | | 45.49 | 45.10 |
| | Nov-18 | | 47.56 | 43.03 |
| | Nov-19 | | 50.00 | 40.59 |
| | Nov-20 | | 48.33 | 42.26 |
| **AC-24S** | May-97 | 79.50 | NM | NM |
| | Sep-97 | | 57.32 | 22.18 |
| | Nov-97 | | NM | NM |
| | May-98 | | NM | NM |
| | Nov-98 | | NM | NM |
| | May-99 | | NM | NM |
| | Nov-99 | | 59.29 | 20.21 |
| | May-00 | | NM | NM |
| | Nov-00 | | 62.81 | 16.69 |
| | May-01 | | NM | NM |
| | Nov-01 | | 63.35 | 16.15 |
| | May-02 | | NM | NM |
| | Nov-02 | | 63.86 | 15.64 |
| | May-03 | | NM | NM |
| | Jan-04 | | 57.97 | 21.53 |
| | May-04 | | NM | NM |
| | Nov-04 | | NM | NM |
| | May-05 | | NM | NM |
| | Nov-05 | | 51.10 | 28.40 |
| | May-06 | | NM | NM |
| | Nov-06 | | 56.82 | 22.68 |
| | May-07 | | NM | NM |
| | Nov-07 | | 59.45 | 20.05 |
| | May-08 | | NM | NM |
| | Nov-08 | | 59.19 | 20.31 |
| | Nov-09 | | 57.75 | 21.75 |
| | Nov-10 | | 57.86 | 21.64 |
| | Nov-11 | | 57.08 | 22.42 |
| | Nov-12 | | 54.74 | 24.76 |
| | Nov-13 | | 54.86 | 24.64 |
| | Nov-14 | | 51.68 | 27.82 |
| | Nov-15 | | 55.72 | 23.78 |
| | Nov-16 | | CNL | CNL |
| | Nov-17 | | CNL | CNL |
| | Nov-18 | | 51.59 * | 27.91 |
| | Nov-19 | | 55.45 | 24.05 |
| | Nov-20 | | 52.97 | 26.53 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| SURFICIAL ZONE | | | | |
| **AC-26S** | May-97 | 26.75 | NM | NM |
| | Sep-97 | | 19.62 | 7.13 |
| | Nov-97 | | NM | NM |
| | May-98 | | NM | NM |
| | Nov-98 | | NM | NM |
| | May-99 | | NM | NM |
| | Nov-99 | | 20.36 | 6.39 |
| | May-00 | | NM | NM |
| | Nov-00 | | 20.74 | 6.01 |
| | May-01 | | NM | NM |
| | Nov-01 | | 20.88 | 5.87 |
| | May-02 | | NM | NM |
| | Nov-02 | | 20.58 | 6.17 |
| | May-03 | | NM | NM |
| | Jan-04 | | 20.04 | 6.71 |
| | May-04 | | NM | NM |
| | Nov-04 | | 19.36 | 7.39 |
| | May-05 | | NM | NM |
| | Nov-05 | | 18.29 | 8.46 |
| | May-06 | | NM | NM |
| | Nov-06 | | 19.60 | 7.15 |
| | May-07 | | NM | NM |
| | Nov-07 | | 19.54 | 7.21 |
| | May-08 | | NM | NM |
| | Nov-08 | | 19.61 | 7.14 |
| | Nov-09 | | 17.99 | 8.76 |
| | Nov-10 | | 18.26 | 8.49 |
| | Nov-11 | | 19.80 | 6.95 |
| | Nov-12 | | 19.12 | 7.63 |
| | Nov-13 | | 18.82 | 7.93 |
| | Nov-14 | | 18.52 | 8.23 |
| | Nov-15 | | 17.95 | 8.80 |
| | Nov-16 | | 18.23 | 8.52 |
| | Nov-17 | | 17.35 | 9.40 |
| | Nov-18 | | 17.21 | 9.54 |
| | Nov-19 | | Well Destroyed | |
| | Nov-20 | | Well Destroyed | |
| **AC-27S** | May-97 | 18.50 | NM | NM |
| | Sep-97 | | 13.94 | 4.56 |
| | Nov-97 | | NM | NM |
| | May-98 | | NM | NM |
| | Nov-98 | | NM | NM |
| | May-99 | | NM | NM |
| | Nov-99 | | 14.52 | 3.98 |
| | May-00 | | NM | NM |
| | Nov-00 | | 15.24 | 3.26 |
| | May-01 | | NM | NM |
| | Nov-01 | | 15.53 | 2.97 |
| | May-02 | | NM | NM |
| | Nov-02 | | 15.24 | 3.26 |
| | May-03 | | NM | NM |
| | Jan-04 | | 14.55 | 3.95 |
| | May-04 | | NM | NM |
| | Nov-04 | | 13.75 | 4.75 |
| | May-05 | | NM | NM |
| | Nov-05 | | 12.63 | 5.87 |
| | May-06 | | NM | NM |
| | Nov-06 | | 14.19 | 4.31 |
| | May-07 | | NM | NM |
| | Nov-07 | | 13.98 | 4.52 |
| | May-08 | | NM | NM |
| | Nov-08 | | 13.98 | 4.52 |
| | Nov-09 | | 11.78 | 6.72 |
| | Nov-10 | | 12.77 | 5.73 |
| | Nov-11 | | 14.09 | 4.41 |
| | Nov-12 | | 13.43 | 5.07 |
| | Nov-13 | | 13.63 | 4.87 |
| | Nov-14 | | 12.89 | 5.61 |
| | Nov-15 | | 12.32 | 6.18 |
| | Nov-16 | | 12.09 | 6.41 |
| | Nov-17 | | 11.42 | 7.08 |
| | Nov-18 | | 11.36 | 7.14 |
| | Nov-19 | | 12.42 | 6.08 |
| | Nov-20 | | 10.84 | 7.66 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| SURFICIAL ZONE | | | | |
| **AC-33S** | May-97 | 89.18 | 50.54 | 38.64 |
| | Sep-97 | | NM | NM |
| | Nov-97 | | 51.25 | 37.93 |
| | May-98 | | 48.93 | 40.25 |
| | Nov-98 | | 48.86 | 40.32 |
| | May-99 | | 52.12 | 37.06 |
| | Nov-99 | | 52.80 | 36.38 |
| | May-00 | | 55.96 | 33.22 |
| | Nov-00 | | 57.66 | 31.52 |
| | May-01 | | 58.32 | 30.86 |
| | Nov-01 | | 58.90 | 30.28 |
| | May-02 | | 60.43 | 28.75 |
| | Nov-02 | | 58.71 | 30.47 |
| | May-03 | | 57.60 | 31.58 |
| | Jan-04 | | 52.97 | 36.21 |
| | May-04 | | 53.56 | 35.62 |
| | Nov-04 | | 51.60 | 37.58 |
| | May-05 | | 45.37 | 43.81 |
| | Nov-05 | | 43.65 | 45.53 |
| | May-06 | | 46.42 | 42.76 |
| | Nov-06 | | 49.59 | 39.59 |
| | May-07 | | 52.17 | 37.01 |
| | Nov-07 | | 52.89 | 36.29 |
| | May-08 | | 52.12 | 37.06 |
| | Nov-08 | | 52.80 | 36.38 |
| | Nov-09 | | 51.79 | 37.39 |
| | Nov-10 | | 45.88 | 43.30 |
| | Nov-11 | | 45.88 | 43.30 |
| | Nov-12 | | 47.70 | 41.48 |
| | Nov-13 | | 48.30 | 40.88 |
| | Nov-14 | | 43.95 | 45.23 |
| | Nov-15 | | 47.62 | 41.56 |
| | Nov-16 | | 46.83 | 42.35 |
| | Nov-17 | | 43.56 | 45.62 |
| | Nov-18 | | 45.55 | 43.63 |
| | Nov-19 | | 48.25 | 40.93 |
| | Nov-20 | | 49.25 | 39.93 |
| **AC-34S** | May-97 | 89.09 | 51.35 | 37.74 |
| | Sep-97 | | NM | NM |
| | Nov-97 | | 52.09 | 37.00 |
| | May-98 | | 49.89 | 39.20 |
| | Nov-98 | | 49.93 | 39.16 |
| | May-99 | | 52.91 | 36.18 |
| | Nov-99 | | 53.62 | 35.47 |
| | May-00 | | 56.63 | 32.46 |
| | Nov-00 | | 58.46 | 30.63 |
| | May-01 | | 59.20 | 29.89 |
| | Nov-01 | | 59.73 | 29.36 |
| | May-02 | | 61.13 | 27.96 |
| | Nov-02 | | 60.01 | 29.08 |
| | May-03 | | 58.45 | 30.64 |
| | Jan-04 | | 53.74 | 35.35 |
| | May-04 | | 54.27 | 34.82 |
| | Nov-04 | | 52.48 | 36.61 |
| | May-05 | | 46.18 | 42.91 |
| | Nov-05 | | 44.42 | 44.67 |
| | May-06 | | 46.90 | 42.19 |
| | Nov-06 | | 50.14 | 38.95 |
| | May-07 | | 52.69 | 36.40 |
| | Nov-07 | | 53.47 | 35.62 |
| | May-08 | | 52.77 | 36.32 |
| | Nov-08 | | 53.34 | 35.75 |
| | Nov-09 | | 52.41 | 36.68 |
| | Nov-10 | | 46.39 | 42.70 |
| | Nov-11 | | 46.39 | 42.70 |
| | Nov-12 | | 48.44 | 40.65 |
| | Nov-13 | | 48.92 | 40.17 |
| | Nov-14 | | 44.44 | 44.65 |
| | Nov-15 | | 48.06 | 41.03 |
| | Nov-16 | | 47.21 | 41.88 |
| | Nov-17 | | 44.06 | 45.03 |
| | Nov-18 | | 46.24 | 42.85 |
| | Nov-19 | | 48.58 | 40.51 |
| | Nov-20 | | 47.01 | 42.08 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| SURFICIAL ZONE | | | | |
| **NWD-2S** | May-97 | 77.53 | NM | NM |
| | Sep-97 | | 39.75 | 37.78 |
| | Nov-97 | | NM | NM |
| | May-98 | | NM | NM |
| | Nov-98 | | NM | NM |
| | May-99 | | NM | NM |
| | Nov-99 | | 41.72 | 35.81 |
| | May-00 | | NM | NM |
| | Nov-00 | | 45.82 | 31.71 |
| | May-01 | | NM | NM |
| | Nov-01 | | 46.77 | 30.76 |
| | May-02 | | NM | NM |
| | Nov-02 | | 47.15 | 30.38 |
| | May-03 | | NM | NM |
| | Jan-04 | | 45.67 | 31.86 |
| | May-04 | | NM | NM |
| | Nov-04 | | 44.49 | 33.04 |
| | May-05 | | NM | NM |
| | Nov-05 | | 37.09 | 40.44 |
| | May-06 | | NM | NM |
| | Nov-06 | | 42.60 | 34.93 |
| | May-07 | | NM | NM |
| | Nov-07 | | 46.25 | 31.28 |
| | May-08 | | NM | NM |
| | Nov-08 | | 45.55 | 31.98 |
| | Nov-09 | | 44.70 | 32.83 |
| | Nov-10 | | 38.84 | 38.69 |
| | Nov-11 | | 42.82 | 34.71 |
| | Nov-12 | | NM | NM |
| | Nov-13 | | 41.32 | 36.21 |
| | Nov-14 | | 37.36 | 40.17 |
| | Nov-15 | | 41.01 | 36.52 |
| | Nov-16 | | 39.45 | 38.08 |
| | Nov-17 | | 36.72 | 40.81 |
| | Nov-18 | | 45.05 | 32.48 |
| | Nov-19 | | 41.15 | 36.38 |
| | Nov-20 | | 39.41 | 38.12 |
| **NWD-4S** | May-97 | 34.70 | NM | NM |
| | Sep-97 | | 19.33 | 15.37 |
| | Nov-97 | | NM | NM |
| | May-98 | | NM | NM |
| | Nov-98 | | NM | NM |
| | May-99 | | NM | NM |
| | Nov-99 | | 20.68 | 14.02 |
| | May-00 | | NM | NM |
| | Nov-00 | | 22.21 | 12.49 |
| | May-01 | | NM | NM |
| | Nov-01 | | 22.58 | 12.12 |
| | May-02 | | NM | NM |
| | Nov-02 | | 21.89 | 12.81 |
| | May-03 | | NM | NM |
| | Jan-04 | | 20.16 | 14.54 |
| | May-04 | | NM | NM |
| | Nov-04 | | NM | NM |
| | May-05 | | NM | NM |
| | Nov-05 | | 16.59 | 18.11 |
| | May-06 | | NM | NM |
| | Nov-06 | | 19.92 | 14.78 |
| | May-07 | | NM | NM |
| | Nov-07 | | 20.22 | 14.48 |
| | May-08 | | NM | NM |
| | Nov-08 | | 16.59 | 18.11 |
| | Nov-09 | | 18.59 | 16.11 |
| | Nov-10 | | 17.17 | 17.53 |
| | Nov-11 | | 19.48 | 15.22 |
| | Nov-12 | | 17.96 | 16.74 |
| | Nov-13 | | 17.93 | 16.77 |
| | Nov-14 | | 16.61 | 18.09 |
| | Nov-15 | | 17.37 | 17.33 |
| | Nov-16 | | 17.76 | 16.94 |
| | Nov-17 | | 15.54 | 19.16 |
| | Nov-18 | | 16.82 | 17.88 |
| | Nov-19 | | 18.43 | 16.27 |
| | Nov-20 | | 16.51 | 18.19 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| SURFICIAL ZONE | | | | |
| **ACB-31S** | May-97 | 91.92 | 50.26 | 41.66 |
| | Sep-97 | | NM | NM |
| | Nov-97 | | 51.22 | 40.70 |
| | May-98 | | 48.78 | 43.14 |
| | Nov-98 | | 48.50 | 43.42 |
| | May-99 | | 51.84 | 40.08 |
| | Nov-99 | | 52.74 | 39.18 |
| | May-00 | | 55.84 | 36.08 |
| | Nov-00 | | 57.22 | 34.70 |
| | May-01 | | 57.94 | 33.98 |
| | Nov-01 | | 58.53 | 33.39 |
| | May-02 | | 60.31 | 31.61 |
| | Nov-02 | | 57.38 | 34.54 |
| | May-03 | | 57.36 | 34.56 |
| | Jan-04 | | 53.11 | 38.81 |
| | May-04 | | 53.62 | 38.30 |
| | Nov-04 | | 51.34 | 40.58 |
| | May-05 | | 43.27 | 48.65 |
| | Nov-05 | | 43.34 | 48.58 |
| | May-06 | | 46.50 | 45.42 |
| | Nov-06 | | 49.48 | 42.44 |
| | May-07 | | 52.25 | 39.67 |
| | Nov-07 | | 50.98 | 40.94 |
| | May-08 | | 52.11 | 39.81 |
| | Nov-08 | | 52.37 | 39.55 |
| | Nov-09 | | 51.14 | 40.78 |
| | Nov-10 | | 45.76 | 46.16 |
| | Nov-11 | | 45.76 | 46.16 |
| | Nov-12 | | 47.70 | 44.22 |
| | Nov-13 | | 48.28 | 43.64 |
| | Nov-14 | | 44.00 | 47.92 |
| | Nov-15 | | 46.38 | 45.54 |
| | Nov-16 | | 47.14 | 44.78 |
| | Nov-17 | | 43.18 | 48.74 |
| | Nov-18 | | 45.31 | 46.61 |
| | Nov-19 | | 48.36 | 43.56 |
| | Nov-20 | | 45.83 | 46.09 |
| **ACB-32S** | May-97 | 88.16 | 48.11 | 40.05 |
| | Sep-97 | | NM | NM |
| | Nov-97 | | 48.92 | 39.24 |
| | May-98 | | 46.60 | 41.56 |
| | Nov-98 | | 46.52 | 41.64 |
| | May-99 | | 49.84 | 38.32 |
| | Nov-99 | | 50.62 | 37.54 |
| | May-00 | | 53.71 | 34.45 |
| | Nov-00 | | 55.41 | 32.75 |
| | May-01 | | 56.18 | 31.98 |
| | Nov-01 | | 56.77 | 31.39 |
| | May-02 | | 58.30 | 29.86 |
| | Nov-02 | | 56.65 | 31.51 |
| | May-03 | | 55.49 | 32.67 |
| | Jan-04 | | 50.81 | 37.35 |
| | May-04 | | 51.26 | 36.90 |
| | Nov-04 | | 49.25 | 38.91 |
| | May-05 | | 41.13 | 47.03 |
| | Nov-05 | | 40.99 | 47.17 |
| | May-06 | | 43.50 | 44.66 |
| | Nov-06 | | 46.77 | 41.39 |
| | May-07 | | 49.56 | 38.60 |
| | Nov-07 | | 49.32 | 38.84 |
| | May-08 | | 49.64 | 38.52 |
| | Nov-08 | | 49.95 | 38.21 |
| | Nov-09 | | 48.83 | 39.33 |
| | Nov-10 | | 42.83 | 45.33 |
| | Nov-11 | | 42.83 | 45.33 |
| | Nov-12 | | 45.18 | 42.98 |
| | Nov-13 | | 45.67 | 42.49 |
| | Nov-14 | | 41.20 | 46.96 |
| | Nov-15 | | 43.93 | 44.23 |
| | Nov-16 | | 44.11 | 44.05 |
| | Nov-17 | | 40.27 | 47.89 |
| | Nov-18 | | 42.67 | 45.49 |
| | Nov-19 | | 45.22 | 42.94 |
| | Nov-20 | | 43.42 | 44.74 |

**NOTES:**

ft NGVD = feet above National Geodetic Vertical Datum of 1988.

ft btoc = feet below top of casing.

NM = Not measured

CNL = could not locate

* AC-24S was not located during the November 2016 and 2017 sampling due to pavement blocking the area.

** AC-26S has been lost to City of Pensacola stormwater project construction efforts, and it has been removed from the monitoring well network.

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| MAIN PRODUCING ZONE | | | | |
| **AC-2D** | Sep-97 | 92.74 | 57.74 | 35.00 |
| | Nov-99 | | 61.09 | 31.65 |
| | Nov-00 | | NM | NM |
| | Nov-01 | | 63.02 | 29.72 |
| | Nov-02 | | 62.53 | 30.21 |
| | Jan-04 | | 57.36 | 35.38 |
| | Nov-04 | | 56.39 | 36.35 |
| | Nov-05 | | 49.02 | 43.72 |
| | Nov-06 | | 54.55 | 38.19 |
| | Nov-07 | | 57.49 | 35.25 |
| | Nov-08 | | 57.20 | 35.54 |
| | Nov-09 | | 52.65 | 40.09 |
| | Nov-10 | | 50.83 | 41.91 |
| | Nov-11 | | 49.11 | 43.63 |
| | Nov-12 | | 53.03 | 39.71 |
| | Nov-13 | | 53.03 | 39.71 |
| | Nov-14 | | 49.20 | 43.54 |
| | Nov-15 | | 52.26 | 40.48 |
| | Nov-16 | | 51.76 | 40.98 |
| | Nov-17 | | 48.57 | 44.17 |
| | Nov-18 | | 50.83 | 41.91 |
| | Nov-19 | | 53.05 | 39.69 |
| | Nov-20 | | 51.21 | 41.53 |
| **AC-3D** | Sep-97 | 88.07 | 61.91 | 26.16 |
| | Nov-99 | | 63.15 | 24.92 |
| | Nov-00 | | 66.42 | 21.65 |
| | Nov-01 | | 67.42 | 20.65 |
| | Nov-02 | | 67.09 | 20.98 |
| | Jan-04 | | 62.17 | 25.90 |
| | Nov-04 | | 61.35 | 26.72 |
| | Nov-05 | | 55.02 | 33.05 |
| | Nov-06 | | 59.95 | 28.12 |
| | Nov-07 | | 62.71 | 25.36 |
| | Nov-08 | | 62.17 | 25.90 |
| | Nov-09 | | 60.78 | 27.29 |
| | Nov-10 | | 56.32 | 31.75 |
| | Nov-11 | | 60.06 | 28.01 |
| | Nov-12 | | 58.33 | 29.74 |
| | Nov-13 | | 58.41 | 29.66 |
| | Nov-14 | | 54.90 | 33.17 |
| | Nov-15 | | 57.96 | 30.11 |
| | Nov-16 | | 57.03 | 31.04 |
| | Nov-17 | | 54.60 | 33.47 |
| | Nov-18 | | 56.18 | 31.89 |
| | Nov-19 | | 58.11 | 29.96 |
| | Nov-20 | | 56.60 | 31.47 |
| **AC-5D** | Sep-97 | 82.40 | 50.16 | 32.24 |
| | Nov-99 | | 53.21 | 29.19 |
| | Nov-00 | | 54.83 | 27.57 |
| | Nov-01 | | 57.58 | 24.82 |
| | Nov-02 | | 55.47 | 26.93 |
| | Jan-04 | | 50.67 | 31.73 |
| | Nov-04 | | 49.60 | 32.80 |
| | Nov-05 | | 44.83 | 37.57 |
| | Nov-06 | | 47.18 | 35.22 |
| | Nov-07 | | 51.22 | 31.18 |
| | Nov-08 | | 49.67 | 32.73 |
| | Nov-09 | | 48.40 | 34.00 |
| | Nov-10 | | 43.27 | 39.13 |
| | Nov-11 | | 47.48 | 34.92 |
| | Nov-12 | | 47.24 | 35.16 |
| | Nov-13 | | 46.90 | 35.50 |
| | Nov-14 | | 41.88 | 40.52 |
| | Nov-15 | | 45.43 | 36.97 |
| | Nov-16 | | 44.11 | 38.29 |
| | Nov-17 | | 41.32 | 41.08 |
| | Nov-18 | | 43.08 | 39.32 |
| | Nov-19 | | 45.22 | 37.18 |
| | Nov-20 | | 44.44 | 37.96 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| MAIN PRODUCING ZONE | | | | |
| **AC-6D** | Sep-97 | 69.19 | 55.72 | 13.47 |
| | Nov-99 | | 50.20 | 18.99 |
| | Nov-00 | | 52.26 | 16.93 |
| | Nov-01 | | 53.43 | 15.76 |
| | Nov-02 | | 51.26 | 17.93 |
| | Jan-04 | | 47.22 | 21.97 |
| | Nov-04 | | 42.26 | 26.93 |
| | Nov-05 | | 40.98 | 28.21 |
| | Nov-06 | | 45.13 | 24.06 |
| | Nov-07 | | 47.60 | 21.59 |
| | Nov-08 | | 46.76 | 22.43 |
| | Nov-09 | | 44.71 | 24.48 |
| | Nov-10 | | 40.76 | 28.43 |
| | Nov-11 | | 45.21 | 23.98 |
| | Nov-12 | | 43.92 | 25.27 |
| | Nov-13 | | 43.74 | 25.45 |
| | Nov-14 | | 41.25 | 27.94 |
| | Nov-15 | | 42.80 | 26.39 |
| | Nov-16 | | 42.37 | 26.82 |
| | Nov-17 | | 40.00 | 29.19 |
| | Nov-18 | | NM - Damaged | |
| | Nov-19 | | 43.18 | 26.01 |
| | Nov-20 | | 41.21 | 27.98 |
| **AC-8D** | Sep-97 | 76.44 | 66.97 | 9.47 |
| | Nov-99 | | 63.81 | 12.63 |
| | Nov-00 | | 65.67 | 10.77 |
| | Nov-01 | | 65.88 | 10.56 |
| | Nov-02 | | 65.29 | 11.15 |
| | Jan-04 | | 61.30 | 15.14 |
| | Nov-04 | | 59.91 | 16.53 |
| | Nov-05 | | 56.35 | 20.09 |
| | Nov-06 | | 60.20 | 16.24 |
| | Nov-07 | | 61.93 | 14.51 |
| | Nov-08 | | 61.33 | 15.11 |
| | Nov-09 | | 59.89 | 16.55 |
| | Nov-10 | | 57.41 | 19.03 |
| | Nov-11 | | 60.63 | 15.81 |
| | Nov-12 | | 59.26 | 17.18 |
| | Nov-13 | | 58.71 | 17.73 |
| | Nov-14 | | 57.05 | 19.39 |
| | Nov-15 | | 58.91 | 17.53 |
| | Nov-16 | | 57.62 | 18.82 |
| | Nov-17 | | 55.71 | 20.73 |
| | Nov-18 | | 57.22 | 19.22 |
| | Nov-19 | | 58.62 | 17.82 |
| | Nov-20 | | 56.93 | 19.51 |
| **AC-9D2** | Sep-97 | 64.13 | 55.27 | 8.86 |
| | Nov-99 | | 55.39 | 8.74 |
| | Nov-00 | | 56.68 | 7.45 |
| | Nov-01 | | 57.01 | 7.12 |
| | Nov-02 | | 56.87 | 7.26 |
| | Jan-04 | | 54.56 | 9.57 |
| | Nov-04 | | 54.02 | 10.11 |
| | Nov-05 | | 51.37 | 12.76 |
| | Nov-06 | | 53.83 | 10.30 |
| | Nov-07 | | 54.73 | 9.40 |
| | Nov-08 | | 54.36 | 9.77 |
| | Nov-09 | | 52.58 | 11.55 |
| | Nov-10 | | 51.46 | 12.67 |
| | Nov-11 | | 53.87 | 10.26 |
| | Nov-12 | | 52.88 | 11.25 |
| | Nov-13 | | 52.68 | 11.45 |
| | Nov-14 | | 51.47 | 12.66 |
| | Nov-15 | | 52.37 | 11.76 |
| | Nov-16 | | 51.75 | 12.38 |
| | Nov-17 | | 50.45 | 13.68 |
| | Nov-18 | | 51.31 | 12.82 |
| | Nov-19 | | 52.31 | 11.82 |
| | Nov-20 | | 51.00 | 13.13 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| MAIN PRODUCING ZONE | | | | |
| **AC-10D** | Sep-97 | 79.48 | 70.39 | 9.09 |
| | Nov-99 | | 69.04 | 10.44 |
| | Nov-00 | | 70.67 | 8.81 |
| | Nov-01 | | 70.86 | 8.62 |
| | Nov-02 | | 70.53 | 8.95 |
| | Jan-04 | | 67.28 | 12.20 |
| | Nov-04 | | 66.79 | 12.69 |
| | Nov-05 | | 63.20 | 16.28 |
| | Nov-06 | | 66.47 | 13.01 |
| | Nov-07 | | 67.72 | 11.76 |
| | Nov-08 | | 67.24 | 12.24 |
| | Nov-09 | | 65.67 | 13.81 |
| | Nov-10 | | 63.93 | 15.55 |
| | Nov-11 | | 66.79 | 12.69 |
| | Nov-12 | | 65.55 | 13.93 |
| | Nov-13 | | 65.13 | 14.35 |
| | Nov-14 | | 63.66 | 15.82 |
| | Nov-15 | | 65.17 | 14.31 |
| | Nov-16 | | 64.12 | 15.36 |
| | Nov-17 | | 62.37 | 17.11 |
| | Nov-18 | | 63.68 | 15.80 |
| | Nov-19 | | 64.94 | 14.54 |
| | Nov-20 | | 63.24 | 16.24 |
| **AC-11D** | Sep-97 | 73.17 | 67.10 | 6.07 |
| | Nov-99 | | 66.69 | 6.48 |
| | Nov-00 | | 67.69 | 5.48 |
| | Nov-01 | | 67.72 | 5.45 |
| | Nov-02 | | 67.45 | 5.72 |
| | Jan-04 | | 65.01 | 8.16 |
| | Nov-04 | | 64.58 | 8.59 |
| | Nov-05 | | 62.06 | 11.11 |
| | Nov-06 | | 64.73 | 8.44 |
| | Nov-07 | | 65.32 | 7.85 |
| | Nov-08 | | 65.03 | 8.14 |
| | Nov-09 | | 63.38 | 9.79 |
| | Nov-10 | | 62.65 | 10.52 |
| | Nov-11 | | 65.06 | 8.11 |
| | Nov-12 | | 64.01 | 9.16 |
| | Nov-13 | | 63.43 | 9.74 |
| | Nov-14 | | 62.44 | 10.73 |
| | Nov-15 | | 63.45 | 9.72 |
| | Nov-16 | | 62.48 | 10.69 |
| | Nov-17 | | 61.00 | 12.17 |
| | Nov-18 | | 62.24 | 10.93 |
| | Nov-19 | | 63.28 | 9.89 |
| | Nov-20 | | 61.50 | 11.67 |
| **AC-12D** | Sep-97 | 79.23 | 67.46 | 11.77 |
| | Nov-99 | | 66.41 | 12.82 |
| | Nov-00 | | 68.29 | 10.94 |
| | Nov-01 | | 68.64 | 10.59 |
| | Nov-02 | | 68.38 | 10.85 |
| | Jan-04 | | 65.23 | 14.00 |
| | Nov-04 | | 64.78 | 14.45 |
| | Nov-05 | | 60.25 | 18.98 |
| | Nov-06 | | 63.79 | 15.44 |
| | Nov-07 | | 65.29 | 13.94 |
| | Nov-08 | | 64.78 | 14.45 |
| | Nov-09 | | 63.13 | 16.10 |
| | Nov-10 | | 60.87 | 18.36 |
| | Nov-11 | | 63.93 | 15.30 |
| | Nov-12 | | 62.62 | 16.61 |
| | Nov-13 | | 62.35 | 16.88 |
| | Nov-14 | | 60.48 | 18.75 |
| | Nov-15 | | 62.35 | 16.88 |
| | Nov-16 | | 61.25 | 17.98 |
| | Nov-17 | | 59.20 | 20.03 |
| | Nov-18 | | 60.75 | 18.48 |
| | Nov-19 | | 62.09 | 17.14 |
| | Nov-20 | | 60.39 | 18.84 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| MAIN PRODUCING ZONE | | | | |
| **AC-13D** | Sep-97 | 74.65 | 67.25 | 7.40 |
| | Nov-99 | | 66.97 | 7.68 |
| | Nov-00 | | 68.21 | 6.44 |
| | Nov-01 | | 68.43 | 6.22 |
| | Nov-02 | | 68.23 | 6.42 |
| | Jan-04 | | 65.99 | 8.66 |
| | Nov-04 | | 65.44 | 9.21 |
| | Nov-05 | | 63.01 | 11.64 |
| | Nov-06 | | 65.37 | 9.28 |
| | Nov-07 | | 66.16 | 8.49 |
| | Nov-08 | | 65.78 | 8.87 |
| | Nov-09 | | 63.87 | 10.78 |
| | Nov-10 | | 63.11 | 11.54 |
| | Nov-11 | | 65.55 | 9.10 |
| | Nov-12 | | 64.57 | 10.08 |
| | Nov-13 | | 64.29 | 10.36 |
| | Nov-14 | | 63.24 | 11.41 |
| | Nov-15 | | 64.01 | 10.64 |
| | Nov-16 | | 63.35 | 11.30 |
| | Nov-17 | | 61.98 | 12.67 |
| | Nov-18 | | 62.91 | 11.74 |
| | Nov-19 | | 63.88 | 10.77 |
| | Nov-20 | | 62.44 | 12.21 |
| **AC-14D** | Sep-97 | 49.79 | 45.49 | 4.30 |
| | Nov-99 | | 45.56 | 4.23 |
| | Nov-00 | | 46.05 | 3.74 |
| | Nov-01 | | 46.37 | 3.42 |
| | Nov-02 | | 46.13 | 3.66 |
| | Jan-04 | | 44.91 | 4.88 |
| | Nov-04 | | 44.30 | 5.49 |
| | Nov-05 | | 42.88 | 6.91 |
| | Nov-06 | | 44.52 | 5.27 |
| | Nov-07 | | 44.59 | 5.20 |
| | Nov-08 | | 44.45 | 5.34 |
| | Nov-09 | | 42.57 | 7.22 |
| | Nov-10 | | 42.73 | 7.06 |
| | Nov-11 | | 44.63 | 5.16 |
| | Nov-12 | | 43.93 | 5.86 |
| | Nov-13 | | 43.57 | 6.22 |
| | Nov-14 | | 43.16 | 6.63 |
| | Nov-15 | | 43.03 | 6.76 |
| | Nov-16 | | 42.76 | 7.03 |
| | Nov-17 | | 41.81 | 7.98 |
| | Nov-18 | | Well Destroyed** | |
| | Nov-19 | | Well Destroyed** | |
| | Nov-20 | | Well Destroyed** | |
| **AC-21D** | Sep-97 | 75.47 | 48.23 | 27.24 |
| | Nov-99 | | 49.66 | 25.81 |
| | Nov-00 | | 51.21 | 24.26 |
| | Nov-01 | | 53.63 | 21.84 |
| | Nov-02 | | 51.62 | 23.85 |
| | Jan-04 | | 46.83 | 28.64 |
| | Nov-04 | | 45.82 | 29.65 |
| | Nov-05 | | 40.22 | 35.25 |
| | Nov-06 | | 43.75 | 31.72 |
| | Nov-07 | | 60.11 | 15.36 |
| | Nov-08 | | NM | NM |
| | Nov-09 | | 44.64 | 30.83 |
| | Nov-10 | | 39.86 | 35.61 |
| | Nov-11 | | 44.03 | 31.44 |
| | Nov-12 | | 43.52 | 31.95 |
| | Nov-13 | | 43.20 | 32.27 |
| | Nov-14 | | 38.50 | 36.97 |
| | Nov-15 | | 41.63 | 33.84 |
| | Nov-16 | | 40.49 | 34.98 |
| | Nov-17 | | 37.89 | 37.58 |
| | Nov-18 | | 39.49 | 35.98 |
| | Nov-19 | | 41.59 | 33.88 |
| | Nov-20 | | 40.45 | 35.02 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| MAIN PRODUCING ZONE | | | | |
| **AC-22D** | Sep-97 | 76.58 | 63.27 | 13.31 |
| | Nov-99 | | NM | NM |
| | Nov-00 | | NM | NM |
| | Nov-01 | | NM | NM |
| | Nov-02 | | 61.81 | 14.77 |
| | Jan-04 | | 57.22 | 19.36 |
| | Nov-04 | | 56.59 | 19.99 |
| | Nov-05 | | 51.17 | 25.41 |
| | Nov-06 | | 55.56 | 21.02 |
| | Nov-07 | | 57.86 | 18.72 |
| | Nov-08 | | 57.04 | 19.54 |
| | Nov-09 | | 55.70 | 20.88 |
| | Nov-10 | | 52.15 | 24.43 |
| | Nov-11 | | 55.81 | 20.77 |
| | Nov-12 | | 54.33 | 22.25 |
| | Nov-13 | | 54.11 | 22.47 |
| | Nov-14 | | 51.68 | 24.90 |
| | Nov-15 | | 53.84 | 22.74 |
| | Nov-16 | | 52.79 | 23.79 |
| | Nov-17 | | 50.51 | 26.07 |
| | Nov-18 | | 52.09 | 24.49 |
| | Nov-19 | | 53.83 | 22.75 |
| | Nov-20 | | 51.98 | 24.60 |
| **AC-23D** | Sep-97 | 79.51 | 58.46 | 21.05 |
| | Nov-99 | | 60.16 | 19.35 |
| | Nov-00 | | 62.83 | 16.68 |
| | Nov-01 | | 63.42 | 16.09 |
| | Nov-02 | | 63.18 | 16.33 |
| | Jan-04 | | 59.35 | 20.16 |
| | Nov-04 | | 58.73 | 20.78 |
| | Nov-05 | | 53.34 | 26.17 |
| | Nov-06 | | 58.17 | 21.34 |
| | Nov-07 | | 60.00 | 19.51 |
| | Nov-08 | | 59.72 | 19.79 |
| | Nov-09 | | 58.05 | 21.46 |
| | Nov-10 | | 54.68 | 24.83 |
| | Nov-11 | | 58.01 | 21.50 |
| | Nov-12 | | 56.11 | 23.40 |
| | Nov-13 | | 56.23 | 23.28 |
| | Nov-14 | | 53.64 | 25.87 |
| | Nov-15 | | 56.02 | 23.49 |
| | Nov-16 | | 55.43 | 24.08 |
| | Nov-17 | | 52.86 | 26.65 |
| | Nov-18 | | 54.50 | 25.01 |
| | Nov-19 | | 56.51 | 23.00 |
| | Nov-20 | | 54.50 | 25.01 |
| **AC-24D** | Sep-97 | 79.60 | 65.14 | 14.46 |
| | Nov-99 | | 66.17 | 13.43 |
| | Nov-00 | | 68.29 | 11.31 |
| | Nov-01 | | 68.78 | 10.82 |
| | Nov-02 | | 68.55 | 11.05 |
| | Jan-04 | | 65.33 | 14.27 |
| | Nov-04 | | 64.78 | 14.82 |
| | Nov-05 | | 60.70 | 18.90 |
| | Nov-06 | | 64.35 | 15.25 |
| | Nov-07 | | 69.78 | 9.82 |
| | Nov-08 | | 65.50 | 14.10 |
| | Nov-09 | | 63.84 | 15.76 |
| | Nov-10 | | 61.46 | 18.14 |
| | Nov-11 | | 64.41 | 15.19 |
| | Nov-12 | | 62.86 | 16.74 |
| | Nov-13 | | 62.77 | 16.83 |
| | Nov-14 | | 60.85 | 18.75 |
| | Nov-15 | | 62.64 | 16.96 |
| | Nov-16 | | 61.93 | 17.67 |
| | Nov-17 | | 59.88 | 19.72 |
| | Nov-18 | | 61.27 | 18.33 |
| | Nov-19 | | 62.80 | 16.80 |
| | Nov-20 | | 61.05 | 18.55 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| MAIN PRODUCING ZONE | | | | |
| **AC-25D** | Sep-97 | 39.75 | 33.71 | 6.04 |
| | Nov-99 | | 34.28 | 5.47 |
| | Nov-00 | | 35.44 | 4.31 |
| | Nov-01 | | 35.76 | 3.99 |
| | Nov-02 | | 35.48 | 4.27 |
| | Jan-04 | | 33.99 | 5.76 |
| | Nov-04 | | 33.22 | 6.53 |
| | Nov-05 | | 31.30 | 8.45 |
| | Nov-06 | | 33.42 | 6.33 |
| | Nov-07 | | 33.83 | 5.92 |
| | Nov-08 | | 33.69 | 6.06 |
| | Nov-09 | | 32.07 | 7.68 |
| | Nov-10 | | 31.33 | 8.42 |
| | Nov-11 | | 33.27 | 6.48 |
| | Nov-12 | | 32.42 | 7.33 |
| | Nov-13 | | 32.17 | 7.58 |
| | Nov-14 | | 31.51 | 8.24 |
| | Nov-15 | | 31.85 | 7.90 |
| | Nov-16 | | 31.64 | 8.11 |
| | Nov-17 | | 30.35 | 9.40 |
| | Nov-18 | | 31.11 | 8.64 |
| | Nov-19 | | 32.08 | 7.67 |
| | Nov-20 | | 30.88 | 8.87 |
| **AC-26D** | Sep-97 | 26.70 | 20.11 | 6.59 |
| | Nov-99 | | 19.08 | 7.62 |
| | Nov-00 | | 20.47 | 6.23 |
| | Nov-01 | | 20.61 | 6.09 |
| | Nov-02 | | 20.40 | 6.30 |
| | Jan-04 | | 19.65 | 7.05 |
| | Nov-04 | | 19.02 | 7.68 |
| | Nov-05 | | 18.17 | 8.53 |
| | Nov-06 | | 18.98 | 7.72 |
| | Nov-07 | | 19.30 | 7.40 |
| | Nov-08 | | 19.08 | 7.62 |
| | Nov-09 | | 17.23 | 9.47 |
| | Nov-10 | | 17.27 | 9.43 |
| | Nov-11 | | 18.96 | 7.74 |
| | Nov-12 | | 18.53 | 8.17 |
| | Nov-13 | | 18.55 | 8.15 |
| | Nov-14 | | 17.94 | 8.76 |
| | Nov-15 | | 17.88 | 8.82 |
| | Nov-16 | | 17.70 | 9.00 |
| | Nov-17 | | 16.65 | 10.05 |
| | Nov-18 | | 17.09 | 9.61 |
| | Nov-19 | | Well Destroyed** | |
| | Nov-20 | | Well Destroyed** | |
| **AC-27D** | Sep-97 | 18.55 | 13.57 | 4.98 |
| | Nov-99 | | 13.46 | 5.09 |
| | Nov-00 | | 14.97 | 3.58 |
| | Nov-01 | | 15.05 | 3.50 |
| | Nov-02 | | 14.90 | 3.65 |
| | Jan-04 | | 14.13 | 4.42 |
| | Nov-04 | | 13.66 | 4.89 |
| | Nov-05 | | 12.42 | 6.13 |
| | Nov-06 | | 14.13 | 4.42 |
| | Nov-07 | | 13.91 | 4.64 |
| | Nov-08 | | 13.46 | 5.09 |
| | Nov-09 | | 11.22 | 7.33 |
| | Nov-10 | | 12.51 | 6.04 |
| | Nov-11 | | 13.91 | 4.64 |
| | Nov-12 | | 13.63 | 4.92 |
| | Nov-13 | | 13.43 | 5.12 |
| | Nov-14 | | 13.25 | 5.30 |
| | Nov-15 | | 12.21 | 6.34 |
| | Nov-16 | | 12.05 | 6.50 |
| | Nov-17 | | 10.78 | 7.77 |
| | Nov-18 | | 10.86 | 7.69 |
| | Nov-19 | | 11.34 | 7.21 |
| | Nov-20 | | 10.67 | 7.88 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| MAIN PRODUCING ZONE | | | | |
| **AC-28D** | Sep-97 | 74.89 | 65.34 | 9.55 |
| | Nov-99 | | 65.70 | 9.19 |
| | Nov-00 | | 67.07 | 7.82 |
| | Nov-01 | | 67.43 | 7.46 |
| | Nov-02 | | 67.29 | 7.60 |
| | Jan-04 | | 64.96 | 9.93 |
| | Nov-04 | | NM | NM |
| | Nov-05 | | 61.72 | 13.17 |
| | Nov-06 | | 64.19 | 10.70 |
| | Nov-07 | | 65.12 | 9.77 |
| | Nov-08 | | 64.78 | 10.11 |
| | Nov-09 | | 63.02 | 11.87 |
| | Nov-10 | | 61.83 | 13.06 |
| | Nov-11 | | 64.21 | 10.68 |
| | Nov-12 | | 63.20 | 11.69 |
| | Nov-13 | | 63.02 | 11.87 |
| | Nov-14 | | NM | NM |
| | Nov-15 | | NM | NM |
| | Nov-16 | | 62.13 | 12.76 |
| | Nov-17 | | 60.76 | 14.13 |
| | Nov-18 | | 61.69 | 13.20 |
| | Nov-19 | | 62.69 | 12.20 |
| | Nov-20 | | 61.35 | 13.54 |
| **AC-29D** | Sep-97 | 82.26 | 62.17 | 20.09 |
| | Nov-99 | | 62.86 | 19.40 |
| | Nov-00 | | 65.62 | 16.64 |
| | Nov-01 | | 66.29 | 15.97 |
| | Nov-02 | | 66.18 | 16.08 |
| | Jan-04 | | 61.62 | 20.64 |
| | Nov-04 | | 61.06 | 21.20 |
| | Nov-05 | | 55.47 | 26.79 |
| | Nov-06 | | 59.95 | 22.31 |
| | Nov-07 | | 62.30 | 19.96 |
| | Nov-08 | | 61.75 | 20.51 |
| | Nov-09 | | 60.21 | 22.05 |
| | Nov-10 | | 56.50 | 25.76 |
| | Nov-11 | | 60.12 | 22.14 |
| | Nov-12 | | 58.44 | 23.82 |
| | Nov-13 | | 58.37 | 23.89 |
| | Nov-14 | | 55.54 | 26.72 |
| | Nov-15 | | 58.32 | 23.94 |
| | Nov-16 | | 57.08 | 25.18 |
| | Nov-17 | | 54.66 | 27.60 |
| | Nov-18 | | 56.47 | 25.79 |
| | Nov-19 | | 58.22 | 24.04 |
| | Nov-20 | | 56.49 | 25.77 |
| **AC-30D** | Sep-97 | 85.73 | 71.39 | 14.34 |
| | Nov-99 | | 72.13 | 13.60 |
| | Nov-00 | | 74.17 | 11.56 |
| | Nov-01 | | 74.64 | 11.09 |
| | Nov-02 | | 74.48 | 11.25 |
| | Jan-04 | | 71.28 | 14.45 |
| | Nov-04 | | 70.75 | 14.98 |
| | Nov-05 | | 66.83 | 18.90 |
| | Nov-06 | | 70.27 | 15.46 |
| | Nov-07 | | 71.66 | 14.07 |
| | Nov-08 | | 71.35 | 14.38 |
| | Nov-09 | | 69.72 | 16.01 |
| | Nov-10 | | 67.34 | 18.39 |
| | Nov-11 | | 70.33 | 15.40 |
| | Nov-12 | | 68.92 | 16.81 |
| | Nov-13 | | 68.81 | 16.92 |
| | Nov-14 | | 66.94 | 18.79 |
| | Nov-15 | | 68.68 | 17.05 |
| | Nov-16 | | 67.88 | 17.85 |
| | Nov-17 | | 65.98 | 19.75 |
| | Nov-18 | | 67.29 | 18.44 |
| | Nov-19 | | 68.71 | 17.02 |
| | Nov-20 | | 67.03 | 18.70 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| MAIN PRODUCING ZONE | | | | |
| **AC-35D** | Sep-97 | 10.49 | NM | NM |
| | Nov-99 | | 5.22 | 5.27 |
| | Nov-00 | | 6.15 | 4.34 |
| | Nov-01 | | 6.36 | 4.13 |
| | Nov-02 | | 6.27 | 4.22 |
| | Jan-04 | | 5.11 | 5.38 |
| | Nov-04 | | 4.68 | 5.81 |
| | Nov-05 | | 3.50 | 6.99 |
| | Nov-06 | | 4.68 | 5.81 |
| | Nov-07 | | 5.07 | 5.42 |
| | Nov-08 | | 4.67 | 5.82 |
| | Nov-09 | | 3.06 | 7.43 |
| | Nov-10 | | 2.88 | 7.61 |
| | Nov-11 | | 4.30 | 6.19 |
| | Nov-12 | | 4.13 | 6.36 |
| | Nov-13 | | 4.06 | 6.43 |
| | Nov-14 | | 3.33 | 7.16 |
| | Nov-15 | | 3.29 | 7.20 |
| | Nov-16 | | 3.25 | 7.24 |
| | Nov-17 | | 2.50 | 7.99 |
| | Nov-18 | | 2.78 | 7.71 |
| | Nov-19 | | 3.47 | 7.02 |
| | Nov-20 | | 2.51 | 7.98 |
| **AC-36D** | Sep-97 | 5.26 | NM | NM |
| | Nov-99 | | 2.32 | 2.94 |
| | Nov-00 | | 2.90 | 2.36 |
| | Nov-01 | | 3.13 | 2.13 |
| | Nov-02 | | 2.90 | 2.36 |
| | Jan-04 | | 2.24 | 3.02 |
| | Nov-04 | | 1.66 | 3.60 |
| | Nov-05 | | 1.01 | 4.25 |
| | Nov-06 | | 1.98 | 3.28 |
| | Nov-07 | | 1.84 | 3.42 |
| | Nov-08 | | 1.72 | 3.54 |
| | Nov-09 | | 0.00 | 5.26 |
| | Nov-10 | | 0.50 | 4.76 |
| | Nov-11 | | 1.93 | 3.33 |
| | Nov-12 | | 1.55 | 3.71 |
| | Nov-13 | | 1.23 | 4.03 |
| | Nov-14 | | 1.21 | 4.05 |
| | Nov-15 | | 0.45 | 4.81 |
| | Nov-16 | | 0.37 | 4.89 |
| | Nov-17 | | 0.00 | 5.26 |
| | Nov-18 | | 0.08 | 5.18 |
| | Nov-19 | | Well Destroyed** | |
| | Nov-20 | | Well Destroyed** | |
| **NWD-2D** | Sep-97 | 76.80 | 51.69 | 25.11 |
| | Nov-99 | | 51.58 | 25.22 |
| | Nov-00 | | 53.63 | 23.17 |
| | Nov-01 | | 55.32 | 21.48 |
| | Nov-02 | | 53.89 | 22.91 |
| | Jan-04 | | 51.37 | 25.43 |
| | Nov-04 | | 50.51 | 26.29 |
| | Nov-05 | | 44.75 | 32.05 |
| | Nov-06 | | 48.84 | 27.96 |
| | Nov-07 | | 52.14 | 24.66 |
| | Nov-08 | | 50.87 | 25.93 |
| | Nov-09 | | 49.51 | 27.29 |
| | Nov-10 | | 45.09 | 31.71 |
| | Nov-11 | | 49.11 | 27.69 |
| | Nov-12 | | 48.02 | 28.78 |
| | Nov-13 | | 47.73 | 29.07 |
| | Nov-14 | | 44.15 | 32.65 |
| | Nov-15 | | 46.92 | 29.88 |
| | Nov-16 | | 45.94 | 30.86 |
| | Nov-17 | | 43.30 | 33.50 |
| | Nov-18 | | 39.36 | 37.44 |
| | Nov-19 | | 47.03 | 29.77 |
| | Nov-20 | | 45.61 | 31.19 |

# TABLE 4
# GROUNDWATER ELEVATIONS

## Agrico Site
## Pensacola, Florida

| Well I.D. | Date | Elevation TOC (ft NGVD) | Water Level (ft btoc) | Water Level Elevation (ft NGVD) |
|---|---|---|---|---|
| MAIN PRODUCING ZONE | | | | |
| **NWD-4D** | Sep-97 | 34.70 | 19.52 | 15.18 |
| | Nov-99 | | 20.92 | 13.78 |
| | Nov-00 | | 22.36 | 12.34 |
| | Nov-01 | | 22.74 | 11.96 |
| | Nov-02 | | 22.12 | 12.58 |
| | Jan-04 | | 20.32 | 14.38 |
| | Nov-04 | | NM | NM |
| | Nov-05 | | 16.92 | 17.78 |
| | Nov-06 | | 20.11 | 14.59 |
| | Nov-07 | | 20.55 | 14.15 |
| | Nov-08 | | 16.92 | 17.78 |
| | Nov-09 | | 18.81 | 15.89 |
| | Nov-10 | | 17.32 | 17.38 |
| | Nov-11 | | 19.68 | 15.02 |
| | Nov-12 | | 18.21 | 16.49 |
| | Nov-13 | | 18.19 | 16.51 |
| | Nov-14 | | 16.91 | 17.79 |
| | Nov-15 | | 17.68 | 17.02 |
| | Nov-16 | | 18.02 | 16.68 |
| | Nov-17 | | 15.99 | 18.71 |
| | Nov-18 | | 17.08 | 17.62 |
| | Nov-19 | | 18.63 | 16.07 |
| | Nov-20 | | 17.85 | 16.85 |
| **PIP-D** | Sep-97 | 86.05 | NM | NM |
| | Nov-99 | | NM | NM |
| | Nov-00 | | NM | NM |
| | Nov-01 | | NM | NM |
| | Nov-02 | | NM | NM |
| | Jan-04 | | NM | NM |
| | Nov-04 | | NM | NM |
| | Nov-05 | | NM | NM |
| | Nov-06 | | NM | NM |
| | Nov-07 | | NM | NM |
| | Nov-08 | | 47.63 | 38.42 |
| | Nov-09 | | 46.74 | 39.31 |
| | Nov-10 | | 41.05 | 45.00 |
| | Nov-11 | | 45.23 | 40.82 |
| | Nov-12 | | 43.24 | 42.81 |
| | Nov-13 | | 43.53 | 42.52 |
| | Nov-14 | | 39.15 | 46.90 |
| | Nov-15 | | 42.49 | 43.56 |
| | Nov-16 | | 42.25 | 43.80 |
| | Nov-17 | | 38.49 | 47.56 |
| | Nov-18 | | 40.74 | 45.31 |
| | Nov-19 | | 43.23 | 42.82 |
| | Nov-20 | | 41.59 | 44.46 |

**NOTES:**

ft NGVD = feet above National Geodetic Vertical Datum of 1988.

ft btoc = feet below top of casing.

NM = Not Measured

CNL = Could not locate

* AC-16D was not located during the November sampling due to equipment blocking the area. The field team remobilized in March 2019 and located the well. It appeared damaged, but depth to water was measured. Repairs to the well were made prior to the 2019 event.

** AC-14D, AC-26D, and AC-36D were not located during 2019. They were determined to have been destroyed by City of Pensacola stormwater project construction efforts and have been removed from the monitoring well network.

# TABLE 5
# SURFACE WATER FIELD PARAMETER RESULTS

## Agrico Site
## Pensacola, Florida

| Surface Water Location | Date | pH (su) | Conductivity (µS/cm) | Temperature ( $^0$C) | Dissolved Oxygen (mg/L) | Oxidation Reduction Potential (mV) | Turbidity (NTU) | Salinity (ppth) |
|---|---|---|---|---|---|---|---|---|
| BT-02 Bayou Texar (Brackish Water) | 11/17/2010 | 7.44 | 28,836 | 21.43 | 6.07 | 180.4 | 7.98 | 17.74 |
| | 11/17/2011 | 7.63 | 33,288 | 21.92 | 8.15 | -9.5 | 11.30 | 20.84 |
| | 11/8/2012 | 7.58 | 36,769 | 22.35 | 7.39 | 70.8 | 12.10 | 23.24 |
| | 11/11/2013 | 7.08 | 27,605 | 22.12 | 7.39 | 84.0 | 30.50 | NM |
| | 11/21/2014 | 7.23 | 33,886 | 17.31 | 102.3 | 122.0 | 5.67 | 21.49 |
| | 11/16/2015 | 7.53 | 9,987 | 18.35 | 83.3 | 191.0 | 12.6 | 5.66 |
| | 11/7/2016 | 7.07 | 22,000 | 23.64 | 6.2 | 150.0 | 6.6 | 13.24 |
| | 11/6/2017 | 6.87 | 10,662 | 25.41 | 5.59 | 123.2 | 3.64 | 5.54 |
| | 11/8/2018 | 6.46 | 18,764 | 6.26 | 23.96 | 171.6 | 25.8 | NM |
| | 11/13/2019 | 9.64 | 6,210 | 11.73 | 90.4 | 213.9 | 6.73 | 3.46 |
| | 11/10/2020 | 7.24 | 21,779 | 23.06 | 5.79 | 304.1 | 10.9 | NM |
| BT-107 Bayou Texar (Brackish Water) | 11/17/2010 | 7.39 | 29,165 | 21.45 | 6.14 | 193.5 | 5.30 | 18.05 |
| | 11/17/2011 | 7.51 | 32,523 | 21.61 | 7.96 | 9.9 | 9.80 | 20.48 |
| | 11/8/2012 | 7.23 | 36,230 | 22.27 | 7.01 | 73.6 | 10.80 | 22.94 |
| | 11/11/2013 | 6.89 | 28,619 | 22.69 | 6.37 | 81.2 | 7.85 | NM |
| | 11/21/2014 | 7.85 | 35,026 | 17.39 | 92.9 | 119.7 | 5.75 | 22.04 |
| | 11/16/2015 | 7.09 | 7,907 | 18.15 | 77.1 | 185.3 | 9.45 | 4.41 |
| | 11/7/2016 | 6.99 | 18,967 | 23.87 | 6.4 | 163.1 | 6.61 | 11.26 |
| | 11/6/2017 | 6.82 | 10,606 | 25.46 | 4.77 | 135.0 | 3.53 | 5.99 |
| | 11/8/2018 | 6.40 | 18,045 | 23.95 | 5.93 | 179.6 | 9.13 | NM |
| | 11/13/2019 | 7.80 | 11,199 | 13.13 | 8.22 | 192.1 | 6.54 | 6.26 |
| | 10/10/2020 | 7.21 | 21,559 | 22.87 | 5.92 | 230.3 | 7.57 | NM |
| BT-127 Bayou Texar (Brackish Water) | 11/17/2010 | 7.33 | 28,735 | 21.31 | 5.87 | 240.7 | 6.21 | 17.64 |
| | 11/17/2011 | 7.69 | 35,000 | 21.73 | 7.94 | -1.8 | 10.40 | 22.07 |
| | 11/8/2012 | 7.37 | 36,564 | 22.60 | 7.44 | 67.5 | 10.30 | 22.95 |
| | 11/11/2013 | 6.87 | 28,952 | 22.86 | 6.53 | 84.9 | 5.86 | NM |
| | 11/21/2014 | 6.96 | 34,062 | 17.53 | 7.73 | 117.6 | 9.27 | 21.43 |
| | 11/16/2015 | 5.38 | 18,851 | 20.21 | 63.1 | 203.8 | 4.03 | 9.39 |
| | 11/7/2016 | 6.92 | 18,618 | 24.48 | 8.7 | 185.0 | 8.81 | 11.03 |
| | 11/6/2017 | 6.70 | 11,683 | 25.79 | 5.25 | 147.1 | 4.46 | 6.54 |
| | 11/8/2018 | 6.23 | 16,252 | 23.79 | 6.56 | 187.7 | 12.3 | NM |
| | 11/13/2019 | 7.89 | 9,226 | 13.71 | 8.29 | 199.5 | 7.66 | 5.28 |
| | 11/10/2010 | 7.21 | 21,288 | 22.98 | 5.61 | 250.2 | 11.9 | NM |

**NOTES:**
SU = Standard Units
µs/cm= microSiemens per centimeter
$^0$C = Degrees Celsius
mg/L = milligram per Liter
mV = milliVolt
NTU = Nephelometric Turbidity Units
ppth=parts per thousand
NM = not measured

**TABLE 6**

**ADVISORY NOTICE DISTRIBUTION LIST**
**WATER WELL, IRRIGATION/PLUMBING, AND POOL CONTRACTORS**

**OU-2 AGRICO SITE**
**PENSACOLA, FLORIDA**

| NAME | COMPANY NAME | ADDRESS | CITY | STATE | POSTAL CODE |
|---|---|---|---|---|---|
| | FLORIDA IRRIGATION SUPPLY INC | 2810 COPTER ROAD | PENSACOLA | FL | 32514 |
| | WALLACE SPRINKLER INC | 3607 ANDREW AVE | PENSACOLA | FL | 32505-4108 |
| | ALL SEASONS POOL SERVICE | 29 ADKINSON DR | PENSACOLA | FL | 32506 |
| | ALL SERVICES POOL SPA` | 5585 WINDHAM RD | MILTON | FL | 32507 |
| | AVALON POOLS | 4230 TANFIELD RD | MILTON | FL | 32583 |
| | PACE POOL & SPA SERVICES, INC. | 4873 WEST SPENCER FIELD RD. | PACE | FL | 32571-1232 |
| | DOLPHIN POOLS | 3210 GULF BREEZE PKWY | GULF BREEZE | FL | 32563-2730 |
| | FAMILY POOL AND SPA & BILLIARD CENT | 3920 N. DAVIS HIGHWAY | PENSACOLA | FL | 32503 |
| | JOHNSON POOLS, INC | 401 MASSACHUSETTS AVE | PENSACOLA | FL | 32505-4207 |
| | PARKER POOLS | PO BOX 11769 | PENSACOLA | FL | 32524-1769 |
| | PENSACOLA POOLS INC | 4412 HIGHWAY 90 | PACE | FL | 32571 |
| | PENSACOLA POOLS INC | 3480 GULF BREEZE PKWY | GULF BREEZE | FL | 32563-3406 |
| | PINCH A PENNY POOL PATIO SPA | 3307 GULF BREEZE PKWY | GULF BREEZE | FL | 32563 |
| | SUNSET POOLS SPAS & WHIRLPOOL BAT | 4382 HIGHWAY 90 | PACE | FL | 32571 |
| | BEDROCK WELLS - AAA SPRINKLERS & L | 6201 N. BLUE ANGEL PKWY | PENSACOLA | FL | 32526-8006 |
| | MCGOWAN WATER WORKS INC | 3041 E. KINGSFIELD RD. | PENSACOLA | FL | 32514-9753 |
| | COFFEY S G WELL SVCE | 331 BURNT PINE RD | BREWTON | AL | 36426-5817 |
| | COFFEY'S GEORGE WELL SERVICE | 680 TRAVIS RD | BREWTON | AL | 36426-5120 |
| | RUSSELLS WELL AND PUMP SERVICES | 4053 KENTWOOD ST. | MILTON | FL | 32571-2432 |
| | WINDHAM & SON PUMPING SUPPLY | 5800 MULDOON RD. | PENSACOLA | FL | 32526-1699 |
| ALAN ARD | ARD'S CLOSED LOOP | 1931 TILLIMAN LN | PENSACOLA | FL | 32506 |
| GLENN ASHLEY | ASHLEY WELL DRILLING | 8056 WAKULLA SPGS RD | TALLAHASSEE | FL | 32305 |
| GREG BAILEY | GREG'S IRRIGATION | 4264 BARLOW RD | CRESTVIEW | FL | 32536 |
| RONNIE BARLOW | | 4575 J BARLOW ROAD | JAY | FL | 32565 |
| BOBBY BARLOW | BARLOW WATER SERVICES | P O BOX 539 | WEWAHITCHKA | FL | 32465 |
| FREDERICK BASFORD | BASFORD WELL DRILLING | 4513 LAFAYETTE ST | MARIANNA | FL | 32446 |
| CHARLES BASFORD | BASFORD WELL DRILLING | 4513 LAFAYETTE ST | MARIANNA | FL | 32446 |
| LESTER BASFORD | BASFORD WELL DRILLING | 4513 LAFAYETTE ST | MARIANNA | FL | 32446 |
| MACK H BEASLEY | MACK H BEASLEY WATER WELL SERVICE | 4940 BECK AVE | JAY | FL | 32565 |
| TERRY BERRY | BERRY'S WELL SERVICE | 225 SPENCER DR | FT WALTON BEACH | FL | 32547 |
| PAUL BRANSON | COFFEY'S WELL SERVICE | P O BOX 564 | JAY | FL | 32565 |
| TERRY BRANTON | BRANTON BROTHERS WELL DRILLING | 755 MALVERN RD | DOTHAN | AL | 36301 |
| MORGAN BROWN | | 28 MOONEY ROAD NE | FT WALTON BEACH | FL | 32547 |
| DOCK L BRYANT JR | B & B WELL DRILLING | 108 FETTING AVE | FT WALTON BEACH | FL | 32547 |
| BYRON BUTLER | | P O BOX 2820 | HAINES CITY | FL | 33845 |
| TROY E BYRD | | P O BOX 371 | ATMORE | AL | 36504 |
| HERBERT CHRISTIAN | CHRISTIAN TESTING LABS INC | P O BOX 3218 | MONTGOMERY | AL | 36109 |
| JL CLANTON | CLANTON'S WELL DRILLING | 6512 LOIS ST | PANAMA CITY | FL | 32404 |
| MARK COBB | C & S WELL SERVICE | 2712 TWILIGHT AVE | PANAMA CITY | FL | 32405 |
| SANDRA COFFEY | S G COFFEY WELL SERVICE | 409 BURNT PINE RD | BREWTON | AL | 35425-5859 |
| JIMMY H COFIELD | JIM'S WELL DRILLING | P O BOX 93 | FLOMATON | AL | 36441 |
| TE COLLEY | | 5558 ORIOLE ST | MILTON | FL | 32570 |
| ARTHUR COLLINGSWORTH | | 6806 KEITHLEY RD | PANAMA CITY | FL | 32404 |
| JAMES R CONNER | JAMIE CONNER WELL DRILLING SERVICE | 1278 LEAVINS RD | WESTVILLE | FL | 32464 |
| JOHN COOKE | COOKE'S WELL DRILLING SERVICE | 4924 SATIN DR | BASCOM | FL | 32423 |
| VERNON CREAMER | COASTAL WELL DRILLING | 11939 RACOON RD | SOUTHPORT | FL | 32409 |
| WILLIAM DAVIS | BILL DAVIS DRILLING SERVICES | 342 FOREST ROAD 13 | SOPCHOPPY | FL | 32355 |
| ROBERT DE VALCOURT | PERDIDO HEATING & AIR | 5555 BAUER RD | PENSACOLA | FL | 32507 |
| ROBIN DEAN | ROBIN DEAN WELL DRILLING | 1904 WAX MYRTLE RD | TALLAHASSEE | FL | 32310 |
| WESLEY DEAN | DEAN'S WELL DRILLING | PO BOX 1469 | WOODVILLE | FL | 32362-1469 |
| WESLEY DONALDSON | DONALDSON WELL DRILLING | 1321 BLUE ANGEL PKY | PENSACOLA | FL | 32506 |
| ROBERT M DORRIETY | | 5251 COY BURGESS RD | DEFUNIAK SPRINGS | FL | 32435 |
| CURT DOYLE | GEOTECHNICAL SERVICES INC | 904 BUTLER DR | MOBILE | AL | 36693 |
| BOB ECHOLD | NORTHWEST FLORIDA WATER MANGEME | 5453 DAVISSON RD | MILTON | FL | 32583-5329 |
| MATT GARCIA | | 1426 LOLA DR | TALLAHASSEE | FL | 32301 |
| DONALD GELDBAUGH | SOUTHERN COMPANY SERVICES INC | ONE ENERGY PLACE | PENSACOLA | FL | 32520 |
| ALPHA GIPSON | ALPHA GIPSON | 6131 AGELINA RD | PENSACOLA | FL | 32504 |
| TOMMIE GLASS | | 5970 COLTER ROAD | MILTON | FL | 32583-2834 |
| WENDELL HALL | | 6620 CHIPEWA ST | PANAMA CITY | FL | 32404 |
| JOSEPH HARRELL JR | GEO ENERGY DRILLING INC | P O BOX 1454 | CRAWFORDVILLE | FL | 32326 |
| HOWARD HAYES | | 20181 SE CL CAPPS RD | BLOUNTSTOWN | FL | 32424 |
| STEVE HOLT | HOLT WELL SERVICE | 8331 HWY 189 N | BAKER | FL | 32531 |
| EDGAR HUGHES | | 6302 CR 636 | CHANCELLOR | AL | 36316 |

**TABLE 6**

**ADVISORY NOTICE DISTRIBUTION LIST**
**WATER WELL, IRRIGATION/PLUMBING, AND POOL CONTRACTORS**

**OU-2 AGRICO SITE**
**PENSACOLA, FLORIDA**

| NAME | COMPANY NAME | ADDRESS | CITY | STATE | POSTAL CODE |
|---|---|---|---|---|---|
| LEWIS C JOHNSON | | 4537 JAY BARLOW RD | JAY | FL | 32565 |
| DAVID L JOHNSON | JOHNSON WELL DRILLING | 5056 OAK DR | BASCOM | FL | 32423 |
| JAMES JOHNSON | | 7716 SUNSHINE HILL RD | MOLINO | FL | 32577 |
| DON JONES | LARRY JACOBS & ASSOCIATES | 328 E GADSDEN ST | PENSACOLA | FL | 32501 |
| BILL KIGHT | | 3511 N CENTRY BLVD | MCDAVID | FL | 32568 |
| EVERETTE LEAVINS | EVERETTE B LEAVINS WELL DRILLING | 1239 LEAVINS RD | WESTVILLE | FL | 32464 |
| JAMES T LEWIS | ADVANCED BORING INC | 4931 WOOD CLIFF DR | PENSACOLA | FL | 32504 |
| ROBERT LIVINGSTON | | 4909 PARK ST | PANAMA CITY | FL | 32404 |
| JOHN MARTIN | | P O BOX 623 | DEFUNIAK SPRINGS | FL | 32435 |
| SAM MARTIN | SAM MARTIN WELL DRILLING | P O BOX 623 | DEFUNIAK SPRINGS | FL | 32435 |
| BILLY MCCLAIN | FLORIDA DEPARTMENT OF ENVIRONMEN | 2600 BLAIR STONE ROAD | TALLAHASSEE | FL | 32399 |
| GENE MCGOWAN | | 3041 E KINGSFIELD RD | PENSACOLA | FL | 32526 |
| MICHAEL MCGUYRE | MCGUYRE'S WELL DRILLING | 4090 BUFORD LN | MILTON | FL | 32583 |
| TE MILLS | MILLS WELL DRILLING & PUMPS | 5355 TOWER RD | TALLAHASSEE | FL | 32303 |
| BRICE MOODY | BRICEY MOODY WELL DRILLING | 160 SAN MARCOS DR | CRAWFORDFILLE | FL | 32327 |
| JOHN A MORRILL | | 3805 A SPRINGHILL RD | TALLAHASSEE | FL | 32310 |
| FRANK J MOSLEY | MOSLEY WELL & PUMP | 7685 FAIRBANKS FERRY RD | HAVANA | FL | 32333 |
| CLYFTON MYERS | MYERS PUMP & INSTALLATION | 1391 ACORN LN | PENSACOLA | FL | 32514 |
| JAMES PEEL | SOUTHERN TESTING & DRILLING INC | 1419 ORANGE HILL RD | CHIPLEY | FL | 32428 |
| TONY POWELL | | P O BOX 116 | URIAH | AL | 36480 |
| DOUGLAS RAY | FREETIME IRRIGATION | 107 22ND STREET | NICEVILLE | FL | 32578 |
| HARVEY REAVES | | P O BOX 426 | WOODVILLE | FL | 32362 |
| CARL REVELL JR | REVELL WELL DRILLING | P O BOX 123 | SOPCHOPPY | FL | 32358 |
| ROBERT ROACH | BOYLES BROTHERS DRILLING CO | P O BOX 1111 | NORTHPORT | AL | 35476 |
| RICHARD ROWE | | P O DRAWER 1389 | TALLAHASSEE | FL | 32302 |
| LAMAR ROWE | ROWE DRILLING COMPANY INC | P O DRAWER 1389 | TALLAHASSEE | FL | 32302 |
| ROBERT SCRIBNER | KCW ELECTRIC CO INC | 4765 SHELFER RD | TALLAHASSEE | FL | 32310 |
| WAYNE SIMMONS | SIMMONS WELL DRILLING | 3152 BOB SIKES ROAD | DEFUNIAK SPRINGS | FL | 32435 |
| MILFORD SIMS | | 3606 S LAKEWOOD DR | TALLAHASSEE | FL | 32310 |
| STEVE SMALLEY | NORTH FLORIDA WELL DRILLING | 24396 LONE STAR CT | TALLAHASSEE | FL | 32310 |
| DONALD SMITH | DONALD SMITH COMPANY INC | 746 E MAIN | HEADLAND | FL | 36345 |
| FILBERT SMITH | ARDAMAN AND ASSOCIATES | 3175 W THARPE ST | TALLAHASSEE | FL | 32303 |
| MIKE SPIVA | MIKE'S WATER WORKS | PO BOX 1299 | SANTA ROSA BEACH | FL | 32459-1289 |
| MICHAEL SUGGS | | 936 PIONEER RD | CHIPLEY | FL | 32428 |
| CLIFFORD TAYLOR | POLLOCK WELL DRILLING INC | 7307 EVEREST ST | PANAMA CITY | FL | 32404 |
| JAMES THOMASON | | 328 SEMINOLE ST | FT WALTON BEACH | FL | 32547 |
| VJ THOMPSON III | THOMASON DEEP WELL DRILLING | P O DRAWER 91537 | MOBILE | AL | 36691 |
| VONNIE TOLBERT | VONNIE'S WELLS | 7621 SAMANTHA CIRCLE | NAVARRE | FL | 32566 |
| JAMES TRINDELL | | 6 THREE SISTERS ROAD | CRAWFORDVILLE | FL | 32327 |
| DEN A TRUMBULL JR | CULLIGAN WATER SERVICES INC | 315 E 15TH ST | PANAMA CITY | FL | 32405 |
| VICTOR C WALLACE | WALLACE SPRINKLER & SUPPLY INC | P O BOX 1313 | GULF BREEZE | FL | 32562 |
| ALEX WALTERS | | 10704 ALEX DRIVE | FOUNTAIN | FL | 32438 |
| CHALES M WARD | CLYDE'S WELL SERVICE INC | 4537 J BARLOW ROAD | JAY | FL | 32565 |
| JAMES W WESTBROOK | J & W WELL DRILLING | P O BOX 135 | BASCOM | FL | 32423 |
| CHARLES WINDHAM | WILLIAMSON WELL DRILLING INC | 5800 MULDOON RD | PENSACOLA | FL | 32506 |
| TERRY WOODWARD | TERRY'S WELL SERVICE | 5001 CHIMES WAY | PENSACOLA | FL | 32507 |
| CHARLES WYCKOFF | | 12751 SMITH YOUNG RD | MOBILE | AL | 36695 |
| AGGRESSIVE PLUMBING BY R BROADLEY | | 1015 E LAKEVIEW AVE | PENSACOLA | FL | 32503 |
| ARNO'S PLUMBING AND HEATING | | 6917 SEA CRAB CIRCLE | NAVARRE | FL | 32566 |
| ARTO'S SEWER AND DRAIN PLUMBING CO INC | | P O BOX 18116 | PENSACOLA | FL | 32523 |
| BARBERI PLUMBING | | 1022 UNDERWOOD AVE | PENSACOLA | FL | 32504 |
| BELLVIEW PLUMBING CO INC | | 3101 MULDOON RD | PENSACOLA | FL | 32526 |
| BOYD PLUMBING | | 95 STONE BLVD. | CANTONMENT | FL | 32533 |
| CLYDE'S SERVICES | | 815 N 77TH AVE | PENSACOLA | FL | 32506 |
| COKER PLUBMING CO | | 521 MILLS AVE | PENSACOLA | FL | 32507 |
| COOPER GARY PLUMBING | | 5676 COUNTRY SQUIRE DR | MILTON | FL | 32570 |
| ESCAMBIA PLUMBING AND HEATING CO | | 1860 ATWOOD DR | PENSACOLA | FL | 32514 |
| FAVORITE PLUMBING CO | | 2828 N T STREET | PENSACOLA | FL | 32505 |
| JIM'S PLUMBING OF NAVARRE INC | | 1888 COMMODORE ST | NAVARRE | FL | 32566 |
| MMI MECHANICAL CONTRACTOR | | 4904 W SPENCER FIELD | PACE | FL | 32571 |
| MCCLUSKEY PLUMBING CO | | 808 W ZARRAGOSSA STREET | PENSACOLA | FL | 32501 |
| PAYNE & SON PLUMBING, HEATING, AIR CONDITIONING | | P O BOX 2575 | PENSACOLA | FL | 32513 |
| PENSACOLA PLUMBING CONTRACTORS | | 2313 BROOKWOOD PLACE | PENSACOLA | FL | 32533 |
| QUALITY ONE PLUMBING CO | | 5724 PALMETTO PL | MILTON | FL | 32570 |
| ROOT-A-SEWER INC | | 2701 LONG LEAF DR | PENSACOLA | FL | 32526 |

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**WATER WELL, IRRIGATION/PLUMBING, AND POOL CONTRACTORS**

**OU-2 AGRICO SITE**
**PENSACOLA, FLORIDA**

| NAME | COMPANY NAME | ADDRESS | CITY | STATE | POSTAL CODE |
|---|---|---|---|---|---|
| S & S PLUMBING AND MECHANICAL INC | | 7845 PINE FOREST RD | PENSACOLA | FL | 32526 |
| SANTA ROSA PLUMBING | | 5510 TOM SAWYER RD | MILTON | FL | 32583 |
| SPIVEY & SON PLUMBING INC | | 9820 VONNA JO DR | PENSACOLA | FL | 32506 |
| VAN PLUMBING | | 3248 CLEMSON RD | GULF BREEZE | FL | 32561 |
| WARRINGTON PLUMBING INC | | 910 W MAIN | PENSACOLA | FL | 32501 |
| BRAUN'S SPRINKLER SERVICE | | 10852 BERRYHILL RD | PENSACOLA | FL | 32506 |
| GORMAN CO INC | | 4149 WAREHOUSE LANE | PENSACOLA | FL | 32505 |
| PHOENIX LANDSCAPE & IRRIGATION INC | | P O BOX 924 | GULF BREEZE | FL | 32562 |
| RAINFALL LANDSCAPE & SPRINKLER | | 9850 NORTH LOOP RD | PENSACOLA | FL | 32507 |
| TIECO GULF COAST INC | | 540 W MICHIGAN AVE | PENSACOLA | FL | 32505 |
| TRIM A LAWN LAWN & GARDEN CENTER | | 1405 GULF BEACH HIGHWAY | PENSACOLA | FL | 32507 |
| MCGOWAN IRRIGATION | | 3041 E KINGSFIELD RD | PENSACOLA | FL | 32526 |
| GARVEY IRRIGATION | | PO BOX 250 | MOLINO | FL | 32577-0250 |
| KEN GRIFFIN LANDSCAPE CONTRACTORS INC | | 3004 WESTFIELD RD | GULF BREEZE | FL | 32563 |
| WATER WORKS SPRINKLER SYSTEMS & PONDS | | 4669 ANNA SIMPSON RD | MILTON | FL | 32583 |
| C & H PLUMBING | | 5239 OLD BERRYHILL RD | MILTON | FL | 32570 |
| DEALE PLUMBING | | 7019 WOODLEY DR | PENSACOLA | FL | 32503 |
| DOWNS PLUMBING & GAS | LARRY DOWNS | 5840 MULDOON RD | PENSACOLA | FL | 32526 |
| FLORIDA AIR CONDITIONING & PLUMBING | | 9310 BRIDLEWOOD RD | PENSACOLA | FL | 32526 |
| HIGH TECH PLUMBING & HEATING | | 8375 RALEIGH CIRCLE | PENSACOLA | FL | 32534 |
| HOMEOWNERS' ASSURANCE INC | | 4382 HIGHWAY 90 | PACE | FL | 32571 |
| PACE PLUMBING | | 4274 BELL LANE | PACE | FL | 32571 |
| TERRY SMITH PLUMBING INC | | 22 W NINE & ONE HALF MILE RD | PENSACOLA | FL | 32534 |
| ENSLEY SEPTIC TANK SERVICE | | 10491 BETMARK RD | PENSACOLA | FL | 32534 |
| ALTERNATE RAIN SYSTEMS | | 5353 N BLUE ANGEL PARKWAY | PENSACOLA | FL | 32526 |
| AMORE SPRINKLER CO | | 3652 GARDENVIEW RD | PACE | FL | 32571 |
| IRRIGATION ENGINEERING | | 920 E LLOYD ST | PENSACOLA | FL | 32503 |
| KILLER WELLS, INC. | | 2600 W. MICHIGAN AVE, LOT 35E | PENSACOLA | FL | 32525-2282 |
| PERDIDO IRRIGATION SYSTEMS | | 5555 BAUER ROAD | PENSACOLA | FL | 32507 |
| RIKER IRRIGATION | | 1144 W NINE MILE RD | PENSACOLA | FL | 32534 |
| M7N VENDING SERVICE | | 440 W. HANNAH STREET | PENSACOLA | FL | 32534 |
| GULF COAST POOL & SPA INC | | 2461 LANGLEY AVE | PENSACOLA | FL | 32504 |
| MANNING BROS POOL INC | | 9465 PENSACOLA BLVD | PENSACOLA | FL | 32534 |
| PANAMA POOLS OF NORTHWEST FLORIDA | | 291 POWELL ADAMS RD | PENSACOLA | FL | 32413 |
| PENSACOLA POOLS INC | | 8514 PENSACOLA BLVD | PENSACOLA | FL | 32534 |
| VAUGHN'S INC OF PENSACOLA | | 1290 NINE MILE ROAD | PENSACOLA | FL | 32534 |
| ALLPOOLS | | 8062 BRIOR OAK DRIVE | PENSACOLA | FL | 32514 |
| AVALON POOLS | | 4230 TANFIELD ROAD | MILTON | FL | 32583 |
| COX POOLS | | 22656 F CANAL ROAD | ORANGE BEACH | AL | 36561 |
| D K POOLS INC | | 4111 LILLIAN HWY | PENSACOLA | FL | 32505-2202 |
| L W POOLS | | 11600 MOBILE HIGHWAY | PENSACOLA | FL | 32526 |
| PINCH A PENNY POOL PATIO SPA | | 8090 N 9th AVE | PENSACOLA | FL | 32514 |
| SUNSET POOLS SPAS & WHIRLPOOL BATHS | | 4382 HIGHWAY 90 | PACE | FL | 32571 |
| SOUTH CENTRAL POOL SUPPLY | | 8808 Grow Dr | PENSACOLA | FL | 32514 |
| JOHNSON POOLS INC. | | 401 Massachusetts Ave | PENSACOLA | FL | 32505 |
| FAGANS CUSTOM POOLS INC. | | 13440 Serenity Cir | PENSACOLA | FL | 32506 |
| ATLANTIS POOL & SPA | | 2075 Elaine Cir | PENSACOLA | FL | 32504 |
| SUPERIOR POOLS PRODUCTS | | 3338 Mclemore Dr | PENSACOLA | FL | 32514 |
| AFFORDABLE TREE LAWN & POOL | | 2011 W. Garden Street | PENSACOLA | FL | 32502 |
| EMERALD COAST IRRIGATION LLC | | 3041 Kingsfield Road | PENSACOLA | FL | 32514 |
| JERRY PATE TURF & IRRIGATION INC. | | 301 Schubert Drive | PENSACOLA | FL | 32504 |
| GULFSIDE LANDSCAPING INC | | 8221 Kipling Street | PENSACOLA | FL | 32514 |
| GONZALEZ PLUMBING & SPRINKLER | | 1801 Government Street | PENSACOLA | FL | 32502 |
| AIR DESIGN SYSTEMS INC. | | 400 Lurton St | PENSACOLA | FL | 32505 |
| ALL PRO PLUMBING & DRAIN | | 1765 E Nine Mile Rd Ste 1 | PENSACOLA | FL | 32514 |
| ARTO'S SEWER & DRAIN SERVICE INC | | 2923 Rhythm St | PENSACOLA | FL | 32505 |
| CERTIFIED PLUMBING SEWER & GAS | | 7075 N Blue Angel Pkwy | PENSACOLA | FL | 32526 |
| PRICHARDS PLUMBING | | 40 Olive Rd | PENSACOLA | FL | 32514 |
| AGGRESSIVE PLUMBING | | 1220 Maura St | PENSACOLA | FL | 32503 |
| Terry Lambert Plumbing & Gas Service Inc | | 8145 Whitmire Dr | PENSACOLA | FL | 32514 |

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**WATER WELL, IRRIGATION/PLUMBING, AND POOL CONTRACTORS**

**OU-2 AGRICO SITE**
**PENSACOLA, FLORIDA**

| NAME | COMPANY NAME | ADDRESS | CITY | STATE | POSTAL CODE |
|---|---|---|---|---|---|
| KIMMON PLUMBING INC. | | 2560 Gulf Breeze Ave | PENSACOLA | FL | 32507 |
| GMC PLUMBING CONTRACTOR | | 664 Whitney Dr | PENSACOLA | FL | 32503 |
| CASEY HYMAN PLUMBING INC | | 5650 Dixie Dr | PENSACOLA | FL | 32503 |
| BALDWIN PLUMBING WORKS INC | | 3521 Bauer Rd | PENSACOLA | FL | 32506 |
| PLUMBERSMITH | | 9312 Bridlewood Rd | PENSACOLA | FL | 32526 |
| VIP POOLS | | 3303 N. Davis Hwy. | PENSACOLA | FL | 32503 |
| POOL CARE | | 600 Careondelay Drive | PENSACOLA | FL | 32506 |
| KENNY SMITHS POOL CARE | | 7134 Inniswold Drive | PENSACOLA | FL | 32526 |
| LORING IRRIGATION | | 2406 Escambia Avenue | PENSACOLA | FL | 32503 |
| THE FINISH LINE COMPANIES | | 3370 Pursell Lane | PENSACOLA | FL | 32526 |
| GULF STREAM LANDSCAPING & IRRIGATION | | 8449 Old Palafox Street | PENSACOLA | FL | 32504 |
| KEN GRIFFIN LANDSCAPE CONTRACTORS | | 3004 Westfield Road | GULF BREEZE | FL | 32563 |
| LAYNE CHRISTENSEN CO | | 3720 N. Palafox Street | PENSACOLA | FL | 32505 |
| K C W WATER WELL SERVICE | | 4765 Shelfer Road | TALLAHASSEE | FL | 32305 |
| DRILLING SOLUTIONS IINC. | | 5624 Pasture Lane | JAY | FL | 32565 |
| AQUA POOL & PATIO | | 5904 N. Palafox St | PENSACOLA | FL | 32503 |
| SURFSIDE POOLS | | 6677 Old Bagdad Hwy. | MILTON | FL | 32583 |

**TABLE 7**
**IRRIGATION WELL INFORMATION**

**Agrico Site**
**Pensacola, Florida**

| ID | PERMIT | NAME | STREET | DIAMETER (INCHES) | DEPTH FT. BLS | CASING FT. BLS | AQUIFER | ABANDONMENT OFFER LETTER SENT | IRRIGATION WELL SAMPLED | DATE SAMPLED | WELL ABANDONED | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | C.E. Anderson | 905 TEXAR DRIVE | 2 | 85 | 75 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 2 | 41(HC-1) | Holy Cross Cemetary Diocese of Pensacola | 1300 E. HAYES | 4 | 160 | 140 | MPZ | YES | YES | 11/28/2000 | | Two wells exist for cemetary, for sampling purposes labeled HC-1 and HC-2 |
| | 41(HC-2) | Holy Cross Cemetary Diocese of Pensacola | 1300 E. HAYES | 4 | 160 | 140 | MPZ | YES | YES | 11/28/2000 | | Two wells exist for cemetary, for sampling purposes labeled HC-1 and HC-2 |
| 3 | 81 | C. Hass | 349 SILVER ROAD | 4 | 82 | 82 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 4 | 82 | W.S. VanMetre | 1221 TEXAR | 4 | 95 | 95 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 5 | 97 | O. English | 3803 N. 10TH AVE. | 4 | 71 | 130 | 120 | yes | YES | 3/13/2001 | | |
| 6 | 103 | Dr. D. McGraw | 1680 TEXAR | 4 | 71 | 61 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 7 | 109 | K. Wolfersterger | 2700 MAGNOLIA AVE. | 4 | 115 | 100 | MPZ | YES | NO | | | |
| 8 | 110 | F & Kathleen Edsel, Jr | 2721 BLACKSHEAR | 4 | UNK | UNK | UNK | RETURNED | NO | | | |
| 9 | 111 | J. Colley | 1750 E. TEXAR DR. | 2 | 85 | 80 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 10 | | Curry | 2701 N. 16TH AVE. | 4 | 158 | 143 | MPZ | YES | YES | 3/15/2001 | | |
| 11 | 123 | D. Lavin | 3632 MENENDEZ DR. | 4 | 73 | 63 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 12 | 124 | Dr. B. Beidleman | 2909 BLACKSHEAR | 4 | 87 | 77 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 13 | 127 | F. McCallister | 2706 BLACKSHEAR | 4 | 85 | 75 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 14 | 135 | J. Klocke | 2914 BLACKSHEAR | 2 | 50 | 45 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 15 | 139 | R. Moulton | 3970 MENENDEZ DR. | 4 | 110 | 100 | MPZ | YES | NO | | | Well capped under land surface. Not Used |
| 16 | 140 | M. Johnson | 1650 E. HAYES ST. | 4 | 120 | 110 | MPZ | YES | YES | 11/28/2000 | | |
| 17 | 142 | L. Fishman | 3003 MAGNOLIA AVE | NA | NA | NA | NA | YES | NA | NA | | **No well found at location** |
| 18 | 143 | F. Clayborn | 1640 E. HAYES ST. | 4 | 125 | 110 | MPZ | YES | NO | | 2/27/2001 | Well exists. Irrigation System Not Used. |
| 19 | 144 | Dr. Willis (Family Practice) | 915 E. FAIRFIELD DR | 4 | 120 | 110 | MPZ | YES | YES | 5/10/2001 | | |
| 20 | 160 | B. Hodnelle, Jr. | 3966 MENENDEZ | 4 | 117 | 107 | MPZ | YES | NO | | | |
| 21 | | E. Davis | 4130 MENENDEZ | 2 | 45 | 40 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 22 | 194 | D. Conkle | 3080 BLACKSHEAR AVE | 2 | 68 | 63 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 23 | P9407748 | Henry Langhorn | 1725 EAST MAURA ST | 4 | 140 | 120 | MPZ | YES | NO | | | |
| 24 | P9503948 | Floral Tree Gardens | 3601 NORTH DAVIS HWY. | 4 | 115 | 100 | MPZ | YES | NO | | | |
| 25 | T8301727 | Fred Levin | 3600 MENENDEZ | 2 | 35 | 30 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 26 | T8402575 | W.L. Glaze | 2675 N. 17TH AVENUE | 4 | 140 | 120 | MPZ | RETURNED | NO | | | |
| 27 | T8403811 | Mrs. Dorothy Bearman | 1501 GAMARA ROAD | 4 | 110 | 100 | MPZ | YES | NO | | | |
| 28 | T8707396 | Richard and Sarah Sanchez | 1221 DURNFORD PLACE | 4 | 140 | 130 | MPZ | YES | YES | 3/1/2001 | | |
| 29 | T8800778 | William C. Baker | 1250 DRIFTWOOD DRIVE | 4 | 110 | 90 | MPZ | YES | NO | | | |

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**IRRIGATION WELL INFORMATION**

**Agrico Site**
**Pensacola, Florida**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | T8905178 | Leroy Gamlin | 1005 TUNIS STREET | 4 | 116 | 106 | MPZ | YES | NO | | | |
| 31 | T9005951 | Joseph Bores | 4100 MENENDEZ DRIVE | 4 | 130 | 120 | MPZ | YES | YES | 11/28/2000 | | |
| 32 | T9103343 | Charles R. Earnest | 1900 EAST LEONARD ST. | 4 | 151 | 121 | MPZ | YES | YES | 11/28/2000 | | Well Resampled 5-10-01 to confirm PCE detection |
| 33 | T9104961 | Dr. Peter C. Delevett | 1660 TEXAR DRIVE | 2 | 84 | 74 | SZ | NO | NO | | | |
| 34 | T9104962 | Paul Williams | 800 E. BAARS ST | 4 | 120 | 60 | MPZ | YES | NO | | | 808 E. Baars sharing well at 800 E. Baars |
| 35 | T9206908 | John C. Sowers | 3090 BLACKSHEAR AVE | 2 | 90 | 80 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 36 | T9304906 | J.E. Boatwright Jr. | 2575 PARADISE POINT DR | 4 | 120 | 100 | MPZ | YES | YES | 3/1/2001 | | |
| 37 | T9701332 | Elisabeth Holmes | 1781 E. LEONARD ST. | 2 | UNK | UNK | UNK | YES | NO | | | |
| 38 | T9800088 | James T. Baer | 1775 EAST TEXAR DR | 4 | UNK | UNK | UNK | YES | YES | 11/29/2000 | | |
| 39 | P9405922 | Randy Head | 2015 E. Maura St | NA | | | NA | YES | NA | | | **No well found at location** |
| 40 | 158 | N. Kinder | 1227 BARCIA DR. | UNK | UNK | UNK | UNK | YES | NO | | | |
| 41 | 162 | W. Veasie | 1271 DRIFTWOOD DR. | 4 | 96 | 73 | SZ | NO | no | | | Outside of area of expected impacts for SZ |
| 42 | 171 | D. Tringas | 2621 PARADISE POINT | UNK | UNK | UNK | UNK | YES | YES | 3/1/2001 | | |
| 43 | 172 | B. Samples | 1009 EAST TUNIS | UNK | UNK | UNK | UNK | YES | YES | 11/28/2000 | | |
| 44 | 178 | C. Davis | 1555 EAST CROSS ST. | 2 | UNK | UNK | UNK | YES | NO | | | |
| 45 | | Moss & Bessie Wilson | 3510 N. 9TH AVE | NA | NA | NA | NA | NO | NA | | | **No well found at location** |
| 46 | | John & Priscilla Snyder | 2912 BLACKSHEAR AVE | UNK | UNK | UNK | UNK | YES | NO | | | |
| 47 | | David & Jean Mayo | 3030 BLACKSHEAR AVE | UNK | UNK | UNK | UNK | YES | YES | 3/1/2001 | | |
| 48 | | Neroy & Lois Anderson | 1301 E FISHER ST | UNK | UNK | UNK | UNK | YES | NO | | | |
| 49 | | Jude & Nancy White | 1710 E CROSS ST | 4 | 140 | | UNK | YES | YES | 8/25/1999 | | Results in the First annual report OU-2 (2/2000) |
| 50 | | Mr. Glen McDonald | 2860 BLACKSHEAR AVE | UNK | UNK | UNK | UNK | RETURNED | NO | | | |
| 51 | | John & Sue Woodward | 2710 BLACKSHEAR AVE | 4 | 100 | 90 | MPZ | YES | YES | 3/1/2001 | | |
| 52 | 159 | Amos & Clementine Prevatt | 2712 BLACKSHEAR AVE | 2 | 55 | 45 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 53 | 80 | Howard & Joyce Rein | 2101 E CROSS ST | 4 | 130 | 120 | MPZ | YES | YES | 11/28/2001 | | |
| 54 | | Diocese of Pensacola | 1231 DURNFORD PL | UNK | UNK | UNK | UNK | YES | YES | 11/28/2001 | | Bishop's Residence |
| 55 | | Larry & Catherine Parks | 1210 DURNFORD PL | 4 | 145 | 130 | MPZ | YES | NO | | 2/27/2001 | |

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| ID | PERMIT | NAME | STREET | DIAMETER (INCHES) | DEPTH FT. BLS | CASING FT. BLS | AQUIFER | ABANDONMENT OFFER LETTER SENT | IRRIGATION WELL SAMPLED | DATE SAMPLED | WELL ABANDONED | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | | Dennis & Betty Peters | 3990 MENENDEZ DR | 4 | 78 | 65 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 57 | | Jack & Carolyn Fleming | 4010 MENENDEZ DR | UNK | UNK | UNK | UNK | YES | YES | 11/28/2000 | | |
| 58 | | Richard & Page Ciordia | 4020 MENENDEZ DR | 4 | 92 | 82 | SZ | NO | NO | | | Outside of area of expected impacts for SZ |
| 59 | | Garrett & Joyce Boyd | 1261 STOW AVE | UNK | UNK | UNK | UNK | YES | NO | | | |
| 60 | | Gene Schmidt | 4141 MENENDEZ DR | 4 | 115 | 100 | MPZ | YES | YES | 11/29/2000 | | |
| 62 | | C.E. Davis | 808 BAARS ST. | UNK | UNK | UNK | UNK | YES | YES | 3/13/2001 | | |
| 63 | P200104-707 | Escambia County Park Service | CARRIE MILLER PARK | 4 | 90 | 70 | SZ | NO | NO | | | Downgradient of FDEP Kaiser Site; drilled after moratory initiated. |

Notes:
Permit = Northwest Florida Water Management District Permit Number
Aquifer = SZ = Surficial zone of Sand-and-Gravel Aquifer; MPZ = Main producing zone of Sand-and-Gravel Aquifer;
Unknown = No well construction inform ; UNK= Data Unknown
NA = Not Applicable
ft. bls = feet below land surface
Data from the NWFWMD onlin mapping application : http://webapub.sjrwmd.com/agws10/nwwmdpermit/
No new wells found during the 2020 data query

| SUMMARY | TOTAL |
|---|---|
| NUMBER OF NOTIFICATIONS OF VOLUNTARY ABANDONMENT OFFER | 41 |
| NUMBER OF LOCATIONS WHERE SURFICIAL ZONE IRRIGATION WELLS EXIST BUT NO POTENTIAL FOR IMPACTS BY AGRICO-RELATED CONSTITUENTS | 8 |
| WRONG INFORMATION - NO WELL PRESENT AT LOCATION | 1 |
| NUMBER OF ADDITIONAL IRRIGATION WELLS IDENTIFIED (1 additional well identified at Holy Cross Cemetery) | 1 |
| TOTAL NUMBER OF IRRIGATION WELLS IDENTIFIED | 60 |
| TOTAL NUMBER OF WELLS ABANDONED THROUGH FEBRUARY 2001. | 0 |
| NUMBER OF WELLS SAMPLED THROUGH FEBRUARY 2001. | 12 |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD** | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| **Surficial Zone** | | | | | | | | | | |
| ACB-31S | 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 |
| | 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** |
| | 11/18/2015 | <0.032 | NA | NA | 2.6 | 38 | 1.4 | <0.292 +/- 0.20 | 3.28 +/- 0.68 | 3.57 |
| | 11/8/2016 | <0.10 | NA | NA | 1.9 | 35 | 1.9 | 0.464 +/- 0.25 | 3.04 +/- 0.57 | 3.5 |
| | 11/7/2017 | <0.10 | NA | NA | 2.1 | 29 | 1.7 | 0.228 +/- 0.17 | 2.83 +/- 0.58 | 3.06 |
| | 11/6/2018 | <0.10 | NA | NA | 2.6 | 21 | 1.2 | 0.252 +/- 0.109 | 2.58 +/- 0.468 | 2.83 |
| | 11/12/2019 | 0.11 | NA | NA | 4.8 | 120 | 3.9 | 0.521 +/- 0.147 | 2.72 +/- 0.564 | 3.24 |
| | 11/10/2020 | <0.10 | NA | NA | 4.4 J | 17 J | 1.1 | < 0.197 +/- 0.179 | 1.55 +/- 0.372 | 1.75 |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| **Surficial Zone** | | | | | | | | | | |
| AC-2S | 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 |
| | 11/17/2004 | 100 | 0.027 | NA | 7.1 | < 5. | 3 | 0.134 +/- 0.08 | 0.286 +/- 0.31 | 0.420 |
| | 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 |
| | 11/18/2015 | 33 | 0.027 | NA | 5.1 | 100 | 3.2 | 0.311 J+/- 0.17 | <0.472 U+/- 0.30 | 0.731 |
| | 11/9/2016 | 19 | 0.016 | NA | 3.6 | 61 | 3.2 | 0.0622 +/- 0.19 | 0.813 +/- 0.30 | 0.875 |
| | 11/7/2017 | 20 | 0.013 | NA | 4.2 | 75 | 3.4 | 0.205 +/- 0.19 | 0.757 +/- 0.32 | 0.962 |
| | 11/6/2018 | 23 | 0.014 | NA | 4.1 | 73 | 2.8 | 0.193 +/- 0.102 | 0.424 +/- 0.238 | 0.617 |
| | 11/12/2019 | 29 | 0.020 | NA | 3.8 | 80 | 2.6 | < 0.104 +/- 0.0786 | < 0.301 +/- 0.334 | 0.405 |
| | 11/10/2020 | 29 J | 0.012 | NA | 3.5 J | 68 J | 1.7 | < 0.123 +/- 0.178 | 0.406 +/- 0.213 | 0.529 |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD** | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| **Main Producing Zone** | | | | | | | | | | |
| **AC-2D** | **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 |
| | **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 |
| | **11/17/2004** | 2.7 | < 0.01 | NA | 9.1 | 14 | 2.6 | 1.09 +/- 0.17 | 1.42 +/- 0.37 | 2.51 |
| | **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 |
| | **11/12/2014** | 2.2 | NA | NA | 6.8 | 16 | 2 | 0.911 +/- 0.25 | 1.31 +/- 0.45 | 2.22 |
| | **11/18/2015** | 2.1 | NA | NA | 6.4 | 18 | 1.8 | 1.24 +/- 0.42 | 1.84 +/- 0.48 | 3.08 |
| | **11/9/2016** | 1.5 | NA | NA | 6.5 | 17 | 1.7 | 0.661 +/- 0.31 | 1.92 +/- 0.44 | 2.58 |
| | **11/7/2017** | 1.8 | NA | NA | 5.3 | 18 | 1.7 | 1.05 +/- 0.32 | 2.00 +/- 0.45 | 3.05 |
| | **11/6/2018** | 2.3 | NA | NA | 4.6 | 20 | 1.6 | 0.813 +/- 0.210 | 1.21 +/- 0.307 | 2.02 |
| | **11/13/2019** | 2.0 | NA | NA | 5.0 | 19 | 1.4 | 1.30 +/- 0.230 | 1.59 +/- 0.421 | 2.89 |
| | **11/11/2020** | 2.5 J | NA | NA | 4.8 J | 21 J | 1.1 | 1.22 +/- 0.357 | 0.793 +/- 0.267 | 2.01 |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| **Main Producing Zone** | | | | | | | | | | |
| AC-3D | 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 |
| | 11/17/2004 | 36 | < 0.01 | NA | 48 | 310 | 14 | 0.934 +/- 0.16 | 12.3 +/- 1.10 | 13.2 |
| | 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 |
| | 11/11/2014 | 14 | NA | NA | 16 | 230 | 5.9 | 0.902 +/- 0.26 | 11.0 +/- 1.5 | 11.9 |
| | 11/19/2015 | 13 | NA | NA | 14 | 120 | 4.7 | 1.42 +/- 0.40 | 12.1 +/- 1.60 | 13.52 |
| | 11/11/2016 | 11 | NA | NA | 15 | 120 | 5.4 | 0.772 +/- 0.29 | 7.80 +/- 1.2 | 8.57 |
| | 11/8/2017 | 9.3 | NA | NA | 9.2 | 100 | 4.9 | 1.07 +/- 0.34 | 7.72 +/- 1.1 | 8.79 |
| | 11/6/2018 | 7.6 | NA | NA | 5.0 | 81 | 3.1 | 1.26 +/- 0.259 | 4.34 +/- 0.628 | 5.60 |
| | 11/13/2019 | 9.8 | NA | NA | 9.8 | 110 | 4.5 | 1.34 +/- 0.242 | 9.53 +/- 1.16 | 10.87 |
| | 11/10/2020 | 8.2 J | NA | NA | 4.6 J | 100 J | 3.0 | 1.36 +/- 0.346 | 6.01 +/- 0.747 | 7.37 |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD** | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| **Main Producing Zone** | | | | | | | | | | |
| AC-12D | 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** |
| | 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** |
| | 11/19/2015 | **12** | NA | NA | 18 | 230 | 8.4 | 1.3 +/- 0.41 | 7.2 +/- 1.10 | **8.5** |
| | 11/10/2016 | **8.1** | NA | NA | 19 | 230 | 8.5 | 1.28 +/- 0.43 | 9.07 +/- 1.3 | **10.35** |
| | 11/8/2017 | **7.8** | NA | NA | 15 | 180 | 9.6 | 1.25 +/- 0.35 | 5.98 +/- 0.93 | **7.23** |
| | 11/7/2018 | 0.80 | NA | NA | 11 | 15 | 6.9 | 0.942 +/- 0.219 | 0.892 +/- 0.280 | 1.83 |
| | 11/18/2019 | <0.10 | NA | NA | 11 | 1.5 | 7.1 | 0.594 +/- 0.147 | 1.24 +/- 0.341 | 1.83 |
| | 11/11/2020 | **9.1 J** | NA | NA | 14 J | 150 J | 7.9 | 1.49 +/- 0.361 | 3.58 +/- 0.522 | **5.07** |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| **Main Producing Zone** | | | | | | | | | | |
| AC-13D | 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 |
| | 11/10/2005 | 11 | < 0.01 U | NA | 25 | 260 | 12 | 2.18 +/- 0.53 | 8.68 +/- 1.20 | 10.86 |
| | 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 |
| | 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 |
| | 11/20/2015 | 9.3 | NA | NA | 11 | 160 | 10 | 1.51 +/- 0.39 | 7.5 +/- 1.10 | 9.01 |
| | 11/10/2016 | 6.8 | NA | NA | 22 | 270 | 11 | 0.53 +/- 0.24 | 3.99 + /- 0.68 | 4.52 |
| | 11/8/2017 | 7.5 | NA | NA | 19 | 230 | 11 | 1.49 +/- 0.50 | 5.57 +/- 0.92 | 7.06 |
| | 11/7/2018 | 6.0 | NA | NA | 19 | 250 | 10 | 1.50 +/- 0.283 | 5.58 +/- 0.730 | 7.08 |
| | 11/25/2019 | 6.8 | NA | NA | 19 | 220 | 8.4 | 1.27 +/- 0.217 | 6.94* +/- 0.836 | 8.21 |
| | 11/12/2020 | 8 J | NA | NA | 17 J | 280 J | 9.6 | 1.57 +/- 0.381 | 4.90 +/- 0.665 | 6.47 |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| **Main Producing Zone** | | | | | | | | | | |
| AC-24D | 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 |
| | 11/16/2009 | 59 | < 0.01 U | NA | 190 | 79 | 5.8 | 2.44 +/- 0.25 | 6.4 +/- 0.60 | 8.8 |
| | 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 |
| | 11/7/2013 | 68 | NA | NA | 170 | 86 | 4.5 | 2.02 +/- 0.53 | 10.2 +/- 1.4 | 12.2 |
| | 11/24/2014 | 51 | NA | NA | 130 | 75 | 4.2 | 2.12 +/- 0.64 | 7.14 +/- 1.0 | 9.26 |
| | 11/19/2015 | 47 | NA | NA | 140 | 77 | 4.4 | 1.17 +/- 0.37 | 7.22 +/- 1 | 8.39 |
| | 11/10/2016 | 33 | NA | NA | 120 | 70 | 4.7 | 0.881 +/- 0.31 | 4.14 +/- 0.70 | 5.02 |
| | 11/8/2017 | 45 | NA | NA | 96 | 74 | 5.0 | 1.61 +/- 0.47 | 6.05 +/- 0.90 | 7.66 |
| | 11/7/2018 | 24 | NA | NA | 48 | 73 | 4.6 | 1.56 +/- 0.295 | 6.71 +/- 0.858 | 8.27 |
| | 11/21/2019 | 30 | NA | NA | 86 | 59 | 4.6 | 1.71 +/- 0.278 | 6.81 +/- 0.893 | 8.52 |
| | 11/12/2020 | 45 J | NA | NA | 89 J | 71 J | 4.6 | 1.88 +/- 0.381 | 5.02 +/- 0.673 | 6.90 |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| | | | | | | | | | | |
| AC-25D | 2/15/1992 | 19 | NA | <0.0050 | 120 | 7.1 | 11 | NA | NA | 7.9 |
| | 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 |
| | 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 |
| | 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 |
| | 11/20/2015 | 91 | NA | NA | 360 | 120 | 4.5 | 2.09 +/- 0.54 | 6.05 +/- 0.97 | 8.14 |
| | 11/9/2016 | 68 | NA | NA | 380 | 87 | 4.4 | 1.55 +/- 0.46 | 4.36 +/- 0.77 | 5.91 |
| | 11/9/2017 | 93 | NA | NA | 300 | 95 | 5.1 | 1.93 +/- 0.50 | 4.92 +/- 0.77 | 6.85 |
| | 11/7/2018 | 68 | NA | NA | 230 | 100 | 5.0 | 1.64 +/- 0.301 | 4.65 +/- 0.663 | 6.29 |
| | 11/20/2019 | 40 | NA | NA | 220 | 81 | 5.3 | 1.64 +/- 0.259 | 5.36 +/- 0.737 | 7.00 |
| | 11/12/2020 | 99 J | NA | NA | 280 J | 110 J | 4.7 | 1.70 +/- 0.403 | 3.72 +/- 0.559 | 5.42 |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| **Main Producing Zone** | | | | | | | | | | |
| AC-29D | 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 |
| | 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 |
| | 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 |
| | 11/19/2015 | 30 | NA | NA | 42 | 200 | 7.5 | 1.49 +/- 0.44 | 14.5 +/- 1.90 | 15.99 |
| | 11/11/2016 | 22 | NA | NA | 39 | 170 | 8.2 | 1.31 +/- 0.48 | 13.5 +/- 1.7 | 14.81 |
| | 11/8/2017 | 25 | NA | NA | 32 | 170 | 8.2 | 1.39 +/- 0.35 | 13.6 +/- 1.8 | 14.99 |
| | 11/7/2018 | 20 | NA | NA | 30 | 170 | 6.3 | 1.60 +/- 0.304 | 10.9 +/- 1.22 | 12.50 |
| | 11/19/2019 | 18 | NA | NA | 27 | 150 | 6.6 | 1.65 +/- 0.263 | 13.2 +/- 1.47 | 14.85 |
| | 11/11/2020 | 29 J | NA | NA | 25 J | 170 J | 6.8 | 1.84 +/- 0.410 | 11.3 +/- 1.25 | 13.14 |

**TABLE 8**
**COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE**

**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 STANDARD | | 4 | 0.01 | 0.015 | 250 | 250 | 10 | -- | -- | 5 |
| **Main Producing Zone** | | | | | | | | | | |
| AC-35D | 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 |
| | 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 |
| | 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 |
| | 11/20/2015 | 110 | NA | NA | 340 | 140 | 9.1 | 1.8 +/- 0.49 | 8.7 +/- 1.30 | 10.5 |
| | 11/9/2016 | 76 | NA | NA | 310 | 160 | 8.8 | 1.6 +/- 0.53 | 4.76 +/- 0.85 | 6.4 |
| | 11/9/2017 | 120 | NA | NA | 280 | 170 | 8.8 | 1.92 +/- 0.54 | 5.42 +/- 0.84 | 7.34 |
| | 11/7/2018 | 75 | NA | NA | 270 | 170 | 7.6 | 1.97 +/- 0.337 | 5.56 +/- 0.734 | 7.53 |
| | 11/18/2019 | 40 | NA | NA | 240 | 150 | 8.2 | 1.58 +/- 0.261 | 6.67 +/- 0.860 | 8.25 |
| | 11/12/2020 | 60 J | NA | NA | 230 J | 190 J | 8.2 | 2.04 +/- 0.426 | 4.74 +/- 0.631 | 6.78 |

# TABLE 8
# COMPARISON OF COC RESULTS AT GROUNDWATER MONITORING LOCATIONS FOR SURFICIAL ZONE AND MAIN PRODUCING ZONE

## Agrico Site
## Pensacola, Florida

**Notes:**

Monitoring wells ACB-31S, ACB-32S, AC-33S, AC-34S, and AC-7SR sampled semiannually from May 1997 through May 2008 and samples analyzed for fluoride, arsenic, and lead only (OU-1 COCs); Beginning in November 2007, these wells were incorporated into OU-2 network and samples analyzed for fluoride, arsenic, lead, chloride, sulfate, nitrate, radium 226, and radium 228.

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

Nitrite determined not to 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.

<, U = Analyzed for but not detected above limiting criteria of 0.256

1 = First date for arsenic is 1990 data results

F1 = The MS and/or MSD recovery is outside acceptance limits.

*Rad Qualifier = LCS or LCSD outside acceptance limits and RPD of the LCS or LCSD exceeds the control limits

B = Compound was found in the blank and sample

**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 through 2002 KNL, Tampa, FL

1/2004 STL - St. Louis

11/2004 through 2017 - STL/TA Richland

2018 and 2020 - TA St. Louis

**TABLE 9**
**COMPARISON OF COC RESULTS AT LONG-TERM MONITORING LOCATIONS FOR SURFACE WATER**

**Agrico Site**
**Pensacola, Florida**

| Sample Location ID | Date | Fluoride (mg/L) Class III Marine SWS = 5 mg/L* |
|---|---|---|
| **BT-02[(3)] Bayou Texar (Brackish Water)** | 08/2008 | 0.56 |
| | 11/2010 | 0.83 |
| | 11/2011 | 0.77 |
| | 11/2012 | 0.89 |
| | 11/2013 | 0.94 |
| | 11/2014 | 1.30 |
| | 11/2015 | 1.50 |
| | 11/2016 | 0.52 |
| | 11/2017 | 0.68 |
| | 11/2018* | 1.40 |
| | 11/2019 | 0.63 |
| | 11/2020 | 0.72 |
| **BT-107[(3)] Bayou Texar (Brackish Water)** | 05/2009 | 0.58 |
| | 11/2010 | 0.89 |
| | 11/2011 | 0.81 |
| | 11/2012 | 1.30 |
| | 11/2013 | 0.99 |
| | 11/2014 | 1.30 |
| | 11/2015 | 1.30 |
| | 11/2016 | 0.52 |
| | 11/2017 | 0.55 |
| | 11/2018 | 2.50 |
| | 11/2019 | 0.57 |
| | 11/2020 | 1.3 |
| **BT-127[(3)] Bayou Texar (Brackish Water)** | 05/2009 | 0.60 |
| | 11/2010 | 1.00 |
| | 11/2011 | 0.81 |
| | 11/2012 | 1.20 |
| | 11/2013 | 1.20 |
| | 11/2014 | 1.30 |
| | 11/2015 | 0.46 |
| | 11/2016 | 0.49 |
| | 11/2017 | 0.93 |
| | 11/2018 | 2.30 |
| | 11/2019 | 0.73 |
| | 11/2020 | 0.90 |

**TABLE 9**
**COMPARISON OF COC RESULTS AT LONG-TERM MONITORING LOCATIONS FOR SURFACE WATER**

**Agrico Site**
**Pensacola, Florida**

**Notes:**

* Chapter 62-302, Class III Marine Surface Water Standard for Fluoride is 5 mg/L

(1) Bayou Texar naturally occurring brackish water from Pensacola Bay

(2) Station Discontinued after 2009.

(3) Stations added in 2010; analysis is for fluoride only.

COC = constituent of concern

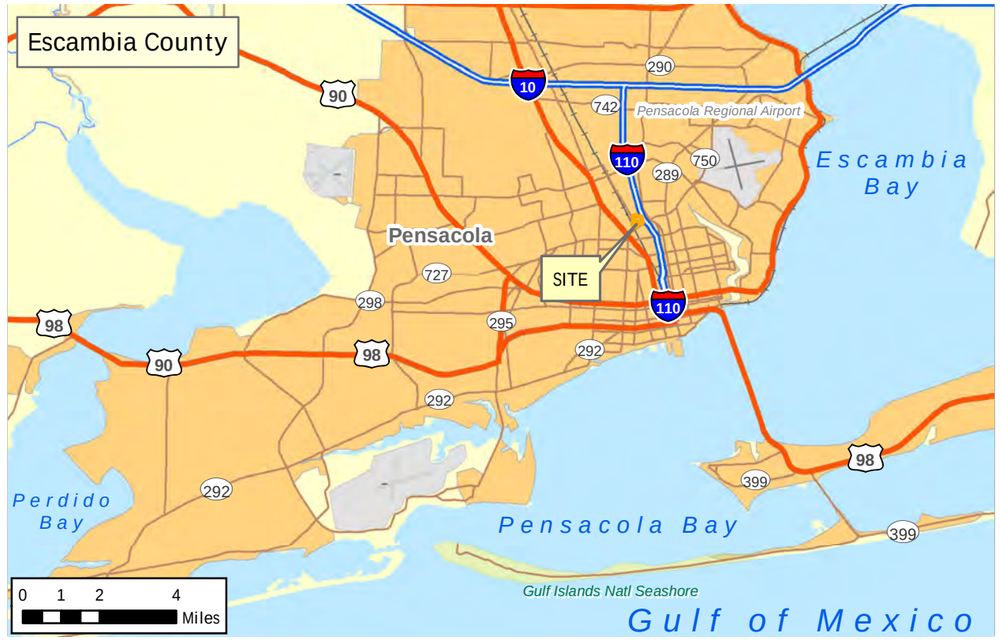
mg/L = milligrams per Liter

pCi/L = picoCuries per Liter

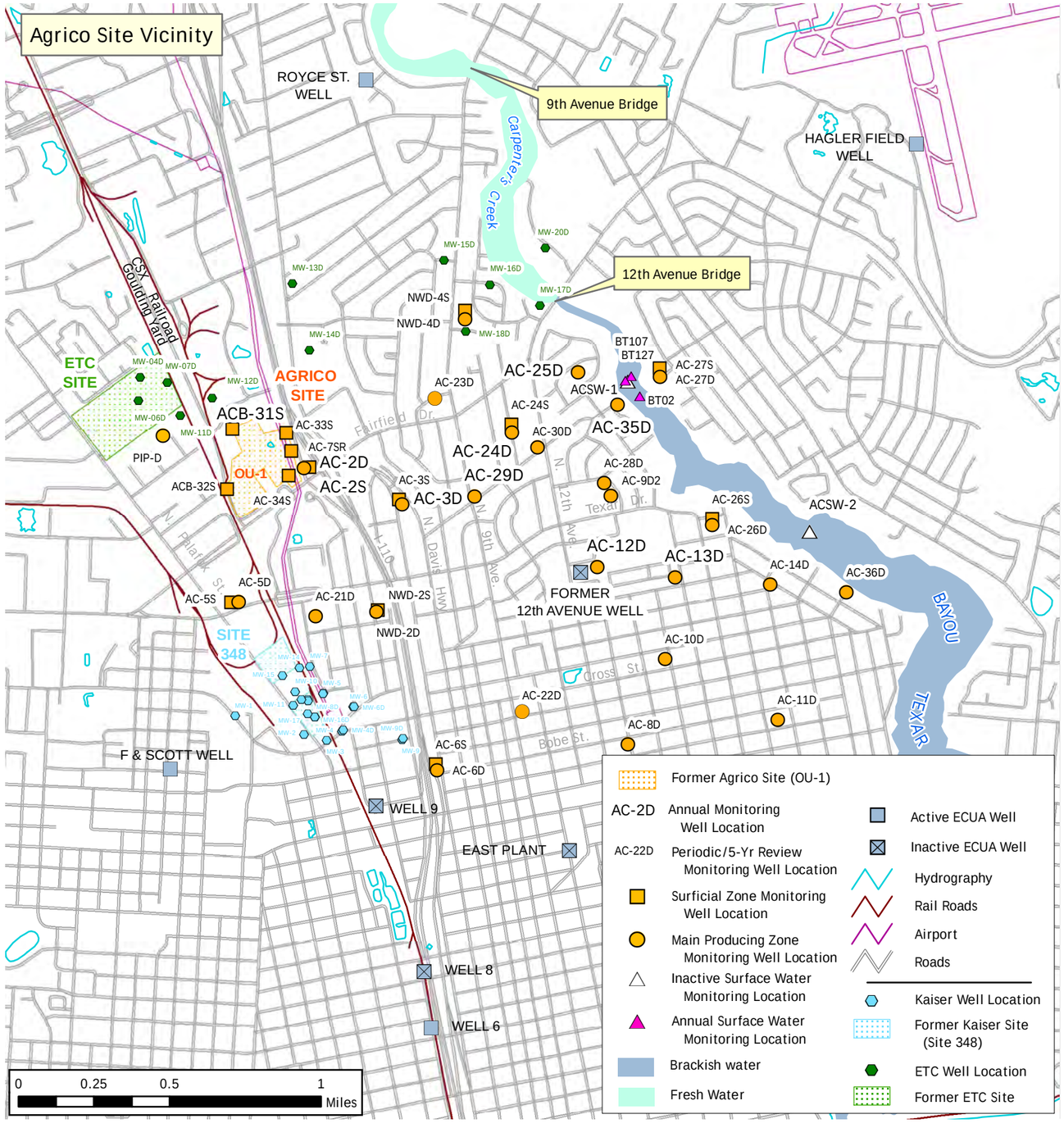
NA = Not Analyzed

*Listed as BT-102 on lab report and chain-of-custudy

# FIGURES








OU-1 and OU-2
AGRICO SITE
PENSACOLA, FLORIDA

AECOM

Base Map Data Provided By:
Florida Department of Environmental Protection
and Northwest Florida Water Management District
Aerial Source: ESRI

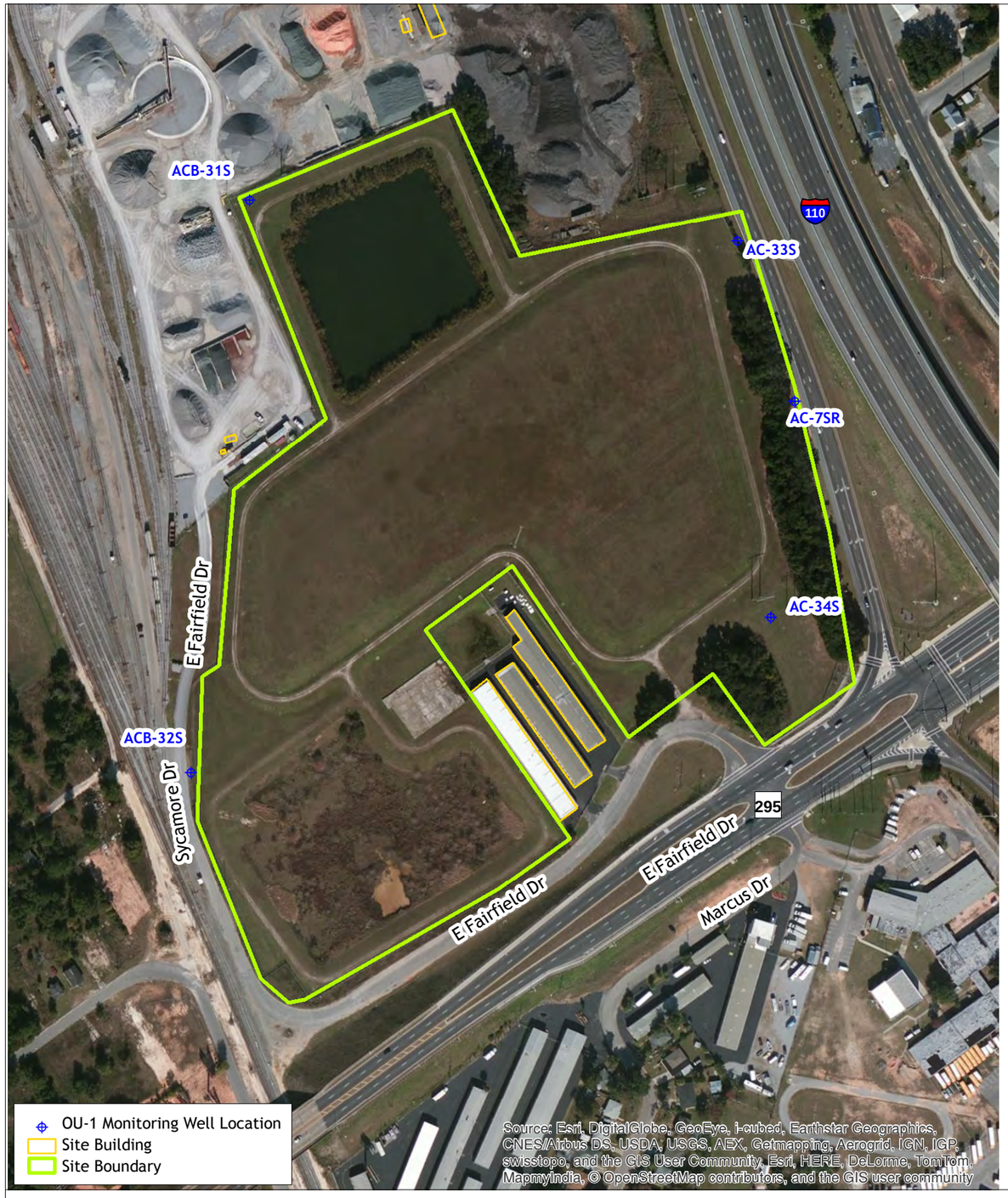
N W E S

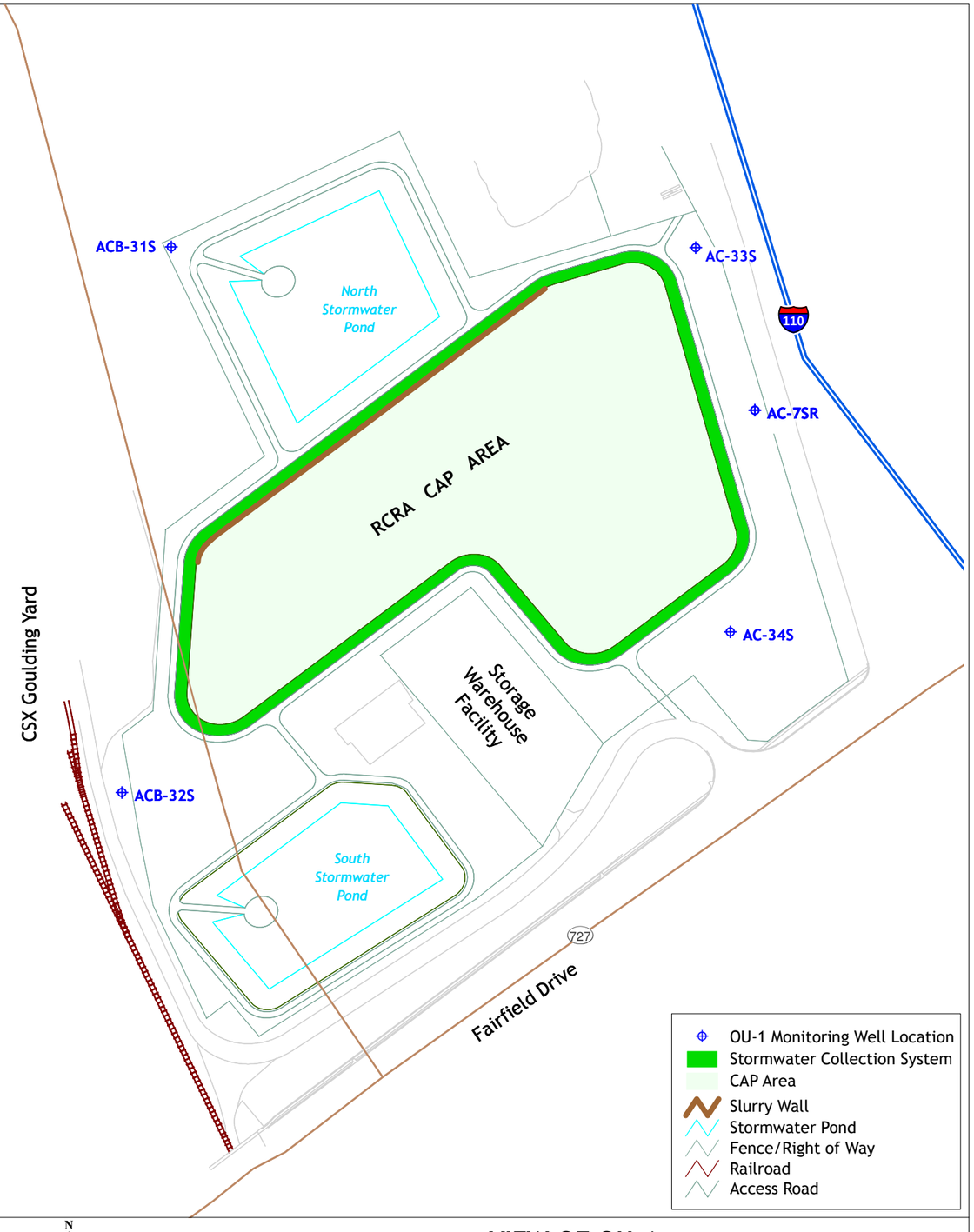
SITE LOCATION AND SITE-WIDE MONITORING LOCATIONS OU-1 AND OU-2

FIGURE 1

Candace_Beauvais - Tallahassee - 3/4/2016

Path: R:\Projects\GIS\Agrico\ou2\deliverables\aprs\annual_reports\2015\fig_01_site_layout.mxd




**OU-1 and OU-2**
**AGRICO SITE**
**PENSACOLA, FLORIDA**

AECOM

Base Map Data Provided By:
Florida Department of Environmental Protection
and Northwest Florida Water Management District
Aerial Source: ESRI

N W E S
250 125 0 250 500 Feet

**VIEW OF OU-1**
**(Former Facility Area)**
**With Current Features**

**FIGURE**
**2**

megan_clarisse - Tallahassee - 1/29/2016

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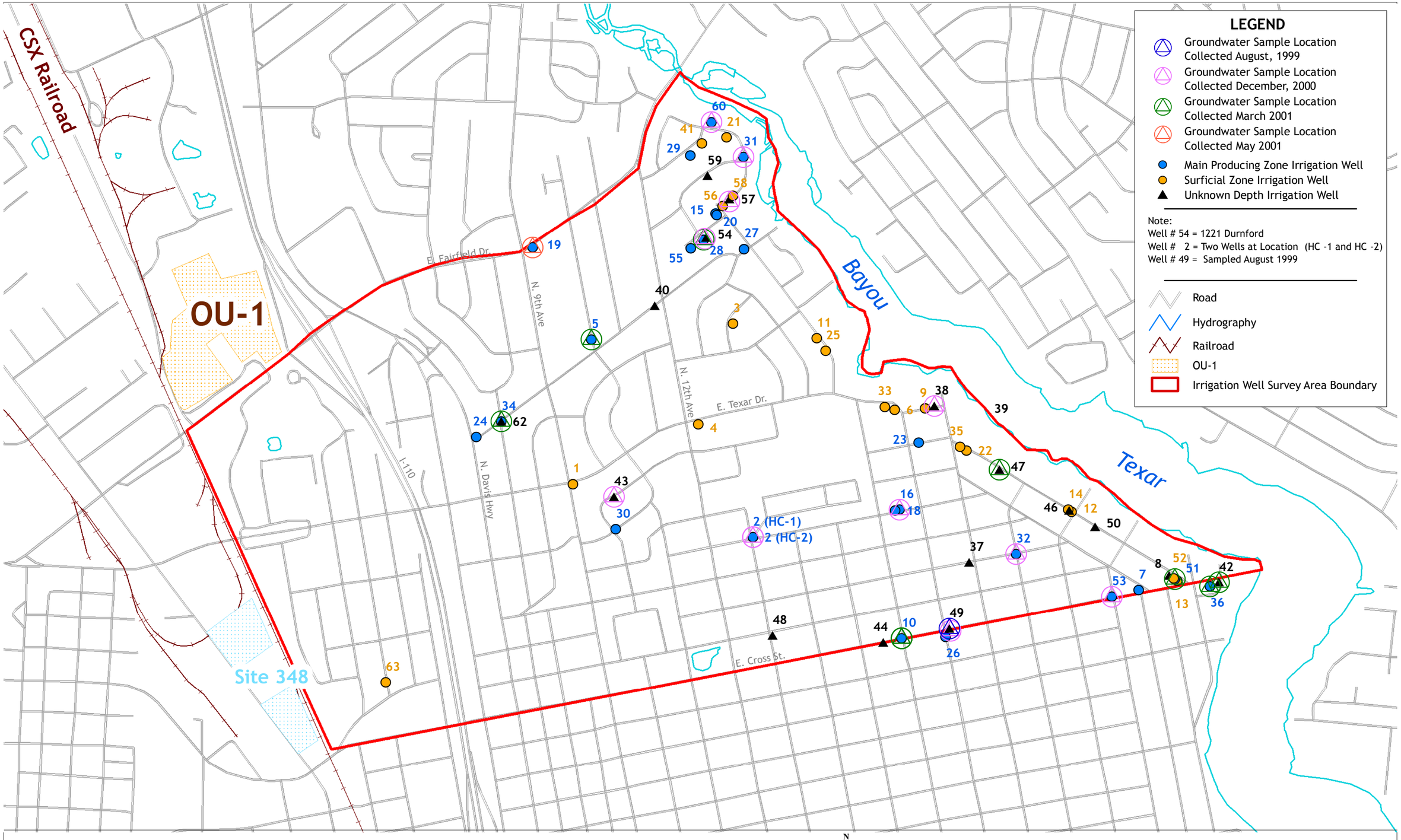


**OU-1 and OU-2**
**AGRICO SITE**
**PENSACOLA, FLORIDA**

AECOM

Base Map Data Provided By:
Florida Department of Environmental Protection
and Northwest Florida Water Management District

N
W E
S

0.25 0.125 0 0.25 0.5 Miles

*Projection: UTM, Zone 16, NAD27, Meters*

**IRRIGATION WELL LOCATIONS**

**FIGURE 3**

megan_clarisse - Tallahassee - 1/29/2016

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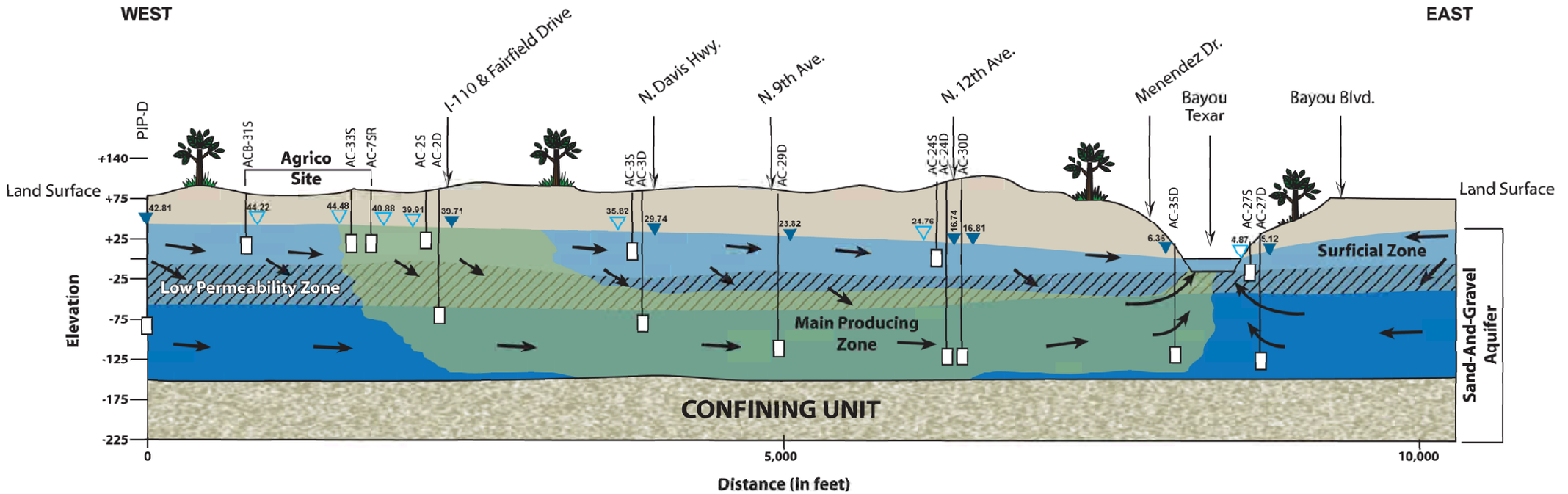



**Legend**

- Groundwater Flow
- Monitoring Well
- Screen Interval
- 35.59 Main Producing Zone Eleveations
- 34.56 Surficial Zone Well Elevations
- Area of Affected Groundwater

Note: Water Elevations (November 2012)

OU-1 and OU-2
AGRICO SITE
PENSACOLA, FLORIDA

AECOM

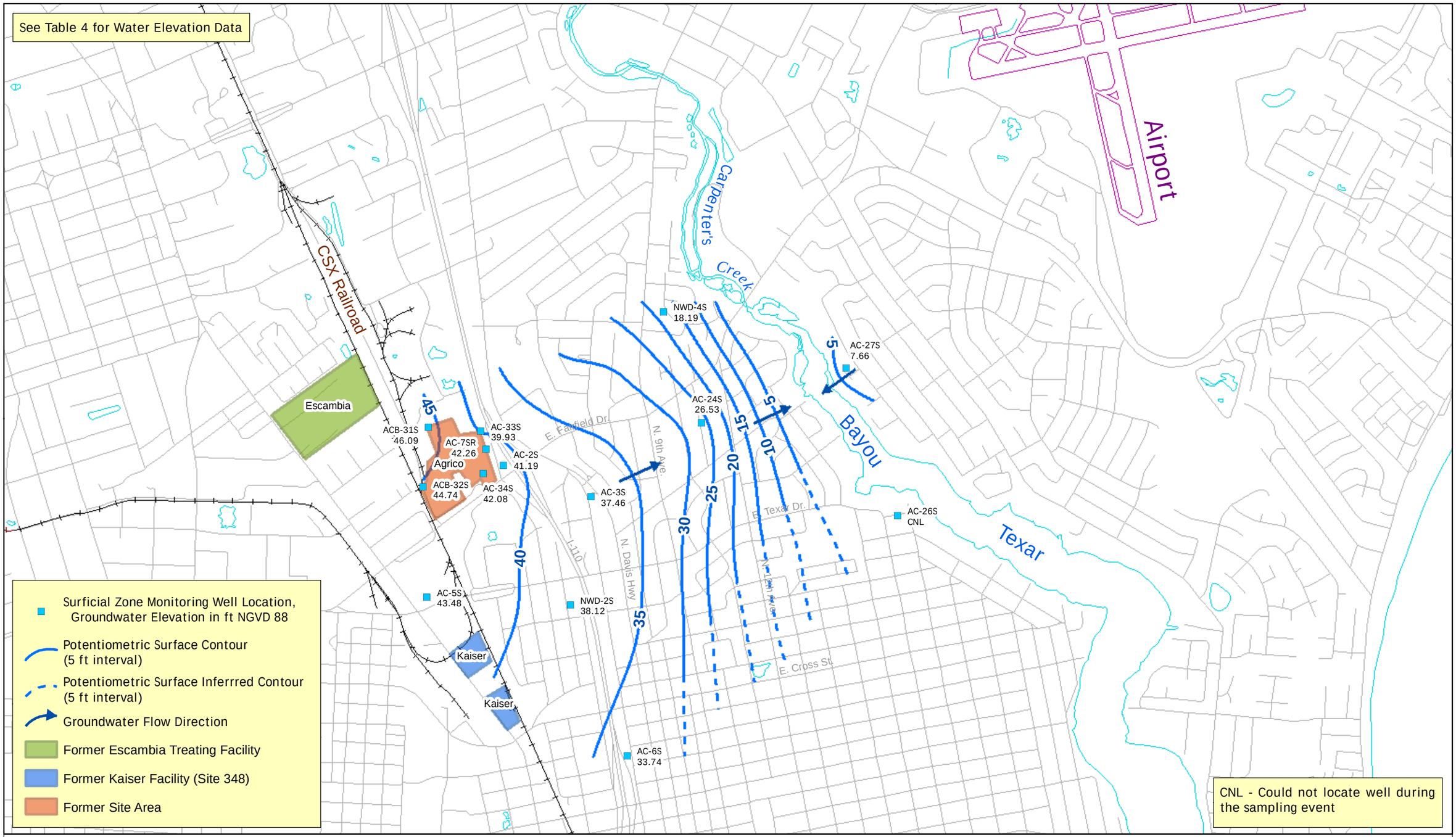
HYDROGEOLOGIC CONCEPTUAL MODEL
FROM AGRICO SITE TO BAYOU TEXAR

FIGURE
4

megan_clarisse - Tallahassee - 1/29/2016

R:\Projects\GIS\Agrico\ou2\deliverables\aprs\annual_reports\2015\fig_04_hyrogeologic_concept_model.mxd

See Table 4 for Water Elevation Data




OU-1 and OU-2
AGRICO SITE
PENSACOLA, FLORIDA

AECOM

Base Map Data Provided By:
Florida Department of Environmental Protection
and Northwest Florida Water Management District

N
W E
S

0.5 0.25 0 0.5 Miles

Coordinate System: UTM, Zone 16, NAD27

POTENTIOMETRIC SURFACE
SURFICIAL ZONE
November 2020

FIGURE
5

D. Hilton - Tallahassee - 2/26/2021

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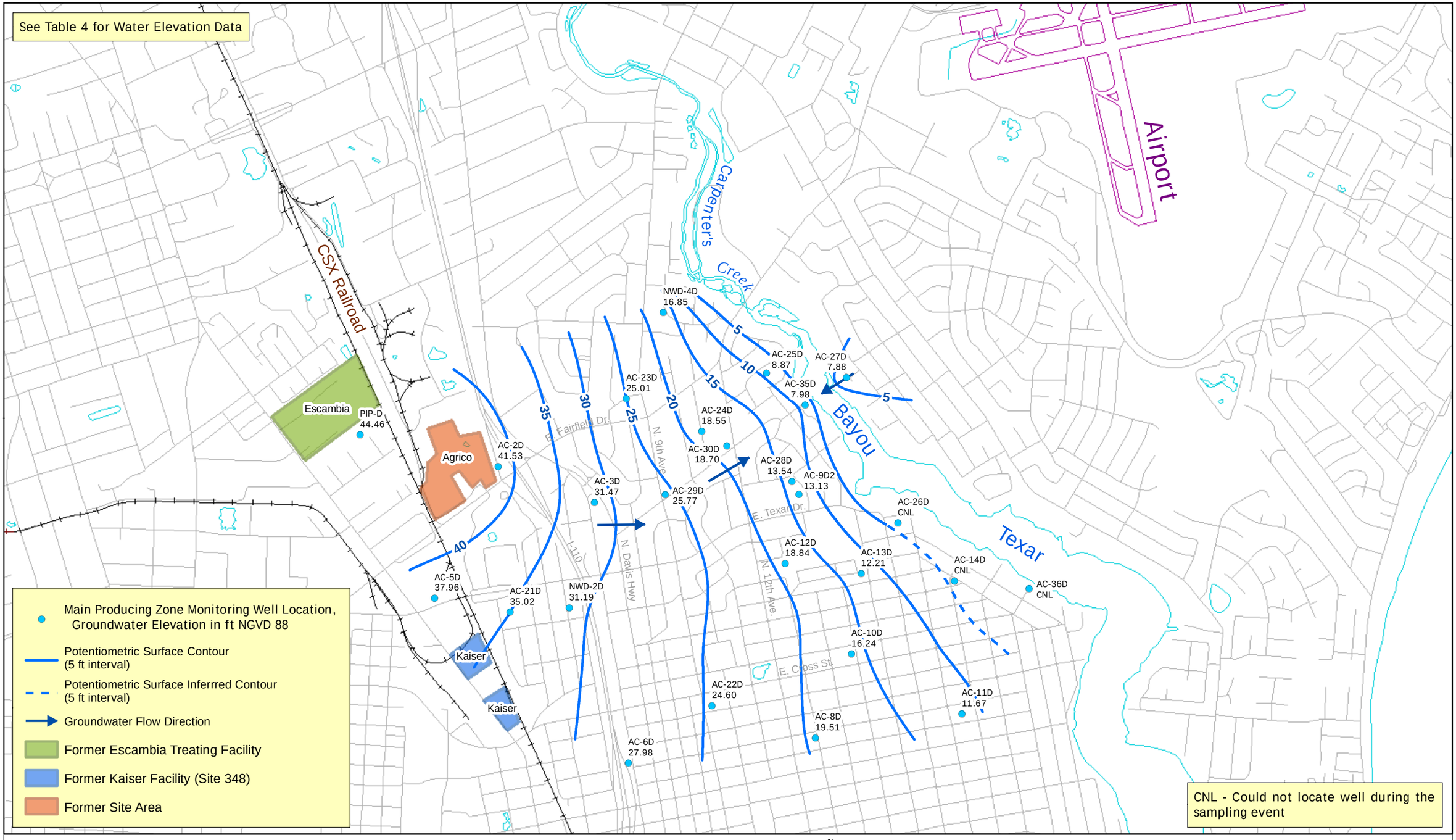
See Table 4 for Water Elevation Data




OU-1 and OU-2
AGRICO SITE
PENSACOLA, FLORIDA

AECOM

Base Map Data Provided By:
Florida Department of Environmental Protection
and Northwest Florida Water Management District

N
W E
S

0.5 0.25 0 0.5 Miles

Coordinate System: UTM, Zone 16, NAD27

POTENTIOMETRIC SURFACE
MAIN PRODUCING ZONE
November 2020

FIGURE
6

D. Hilton - Tallahassee - 2/26/2021

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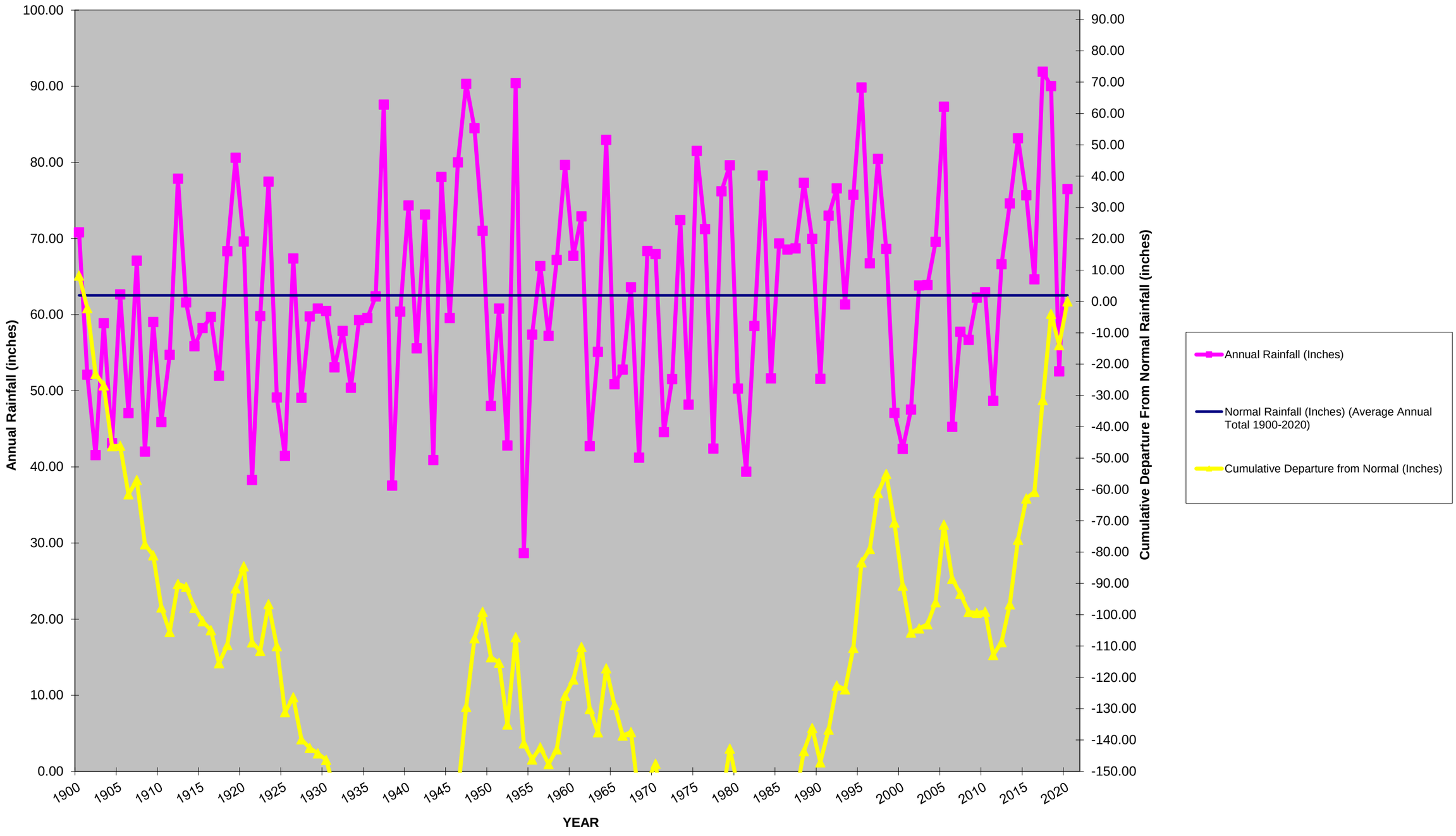
**Figure 7**
**Annual Rainfall and Cumulative Departure from Normal**
**NOAA Rainfall Station**
**Pensacola, Florida**



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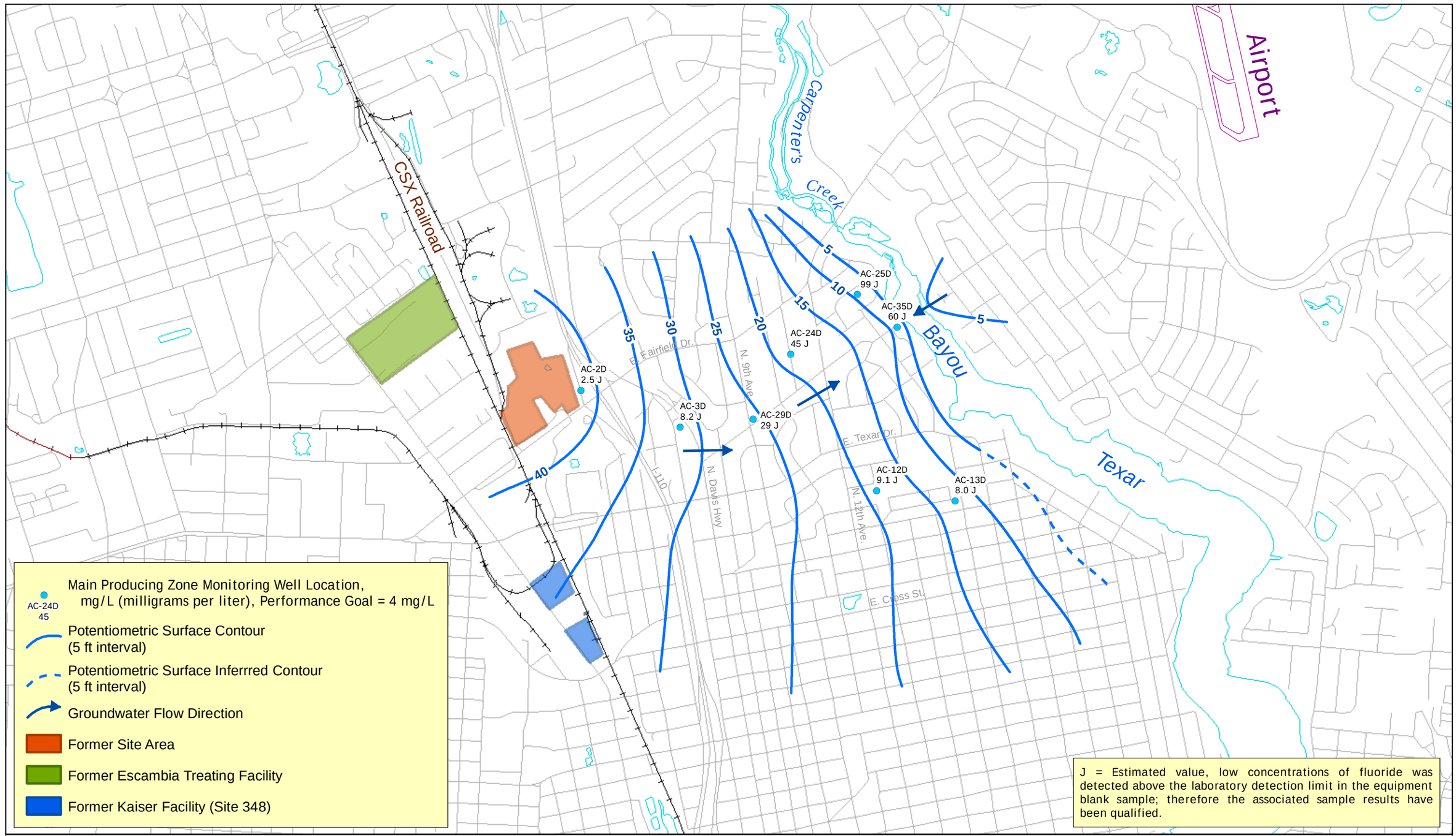


OU-1 and OU-2
AGRICO SITE
PENSACOLA, FLORIDA

AECOM

Base Map Data Provided By:
Florida Department of Environmental Protection
and Northwest Florida Water Management District

N
W E
S

0.5 0.25 0 0.5 Miles

*Coordinate System: UTM, Zone 16, NAD27*

# FLUORIDE CONCENTRATION

November 2020

FIGURE
8

D. Hilton - Tallahassee - 3/24/2021

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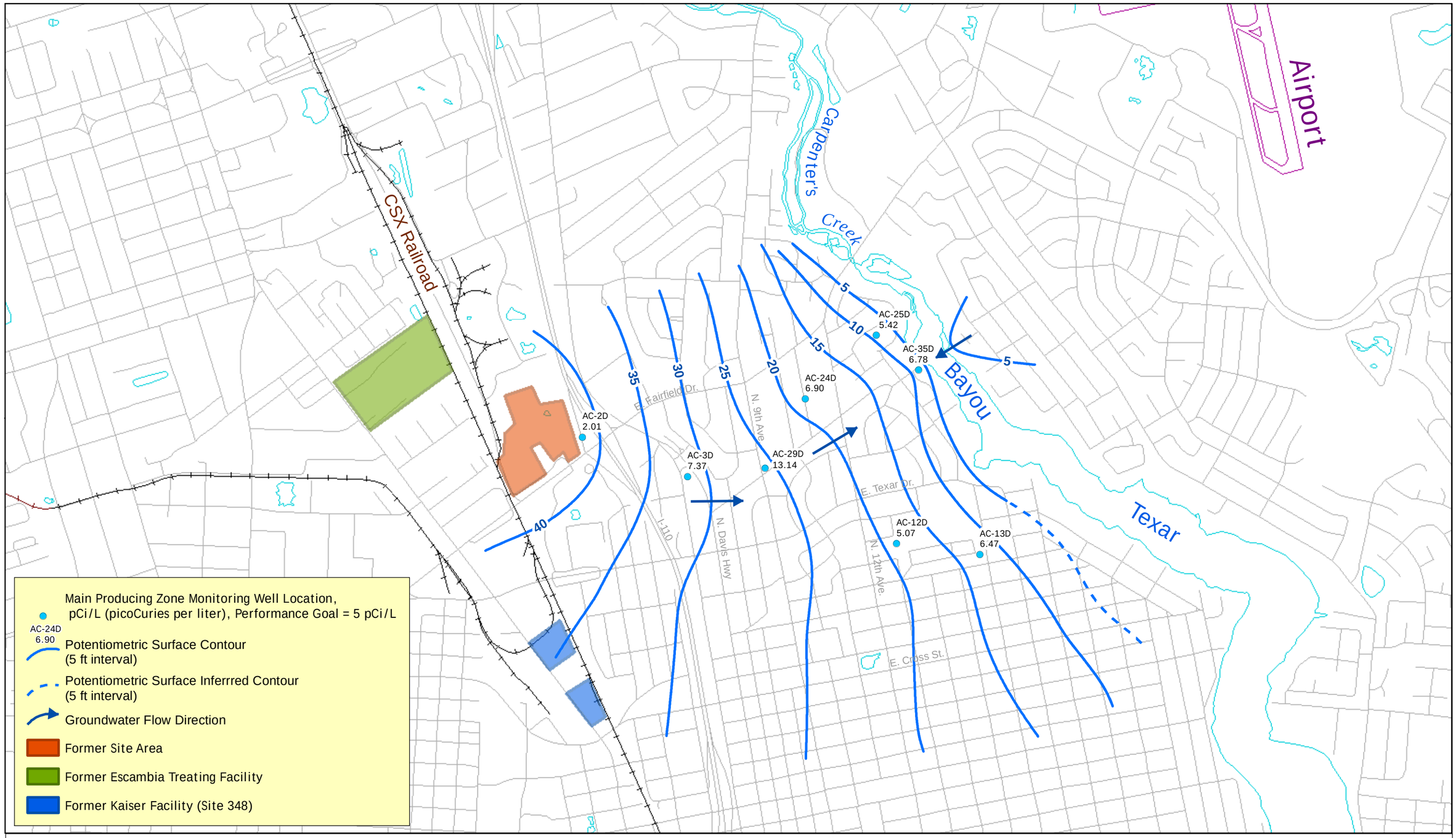


OU-1 and OU-2
AGRICO SITE
PENSACOLA, FLORIDA

Base Map Data Provided By:
Florida Department of Environmental Protection
and Northwest Florida Water Management District

N
W E
S

0.5 0.25 0 0.5 Miles

Coordinate System: UTM, Zone 16, NAD27

COMBINED RADIUM 226+228
CONCENTRATION
November 2020

FIGURE
9

D. Hilton - Tallahassee - 2/26/2021

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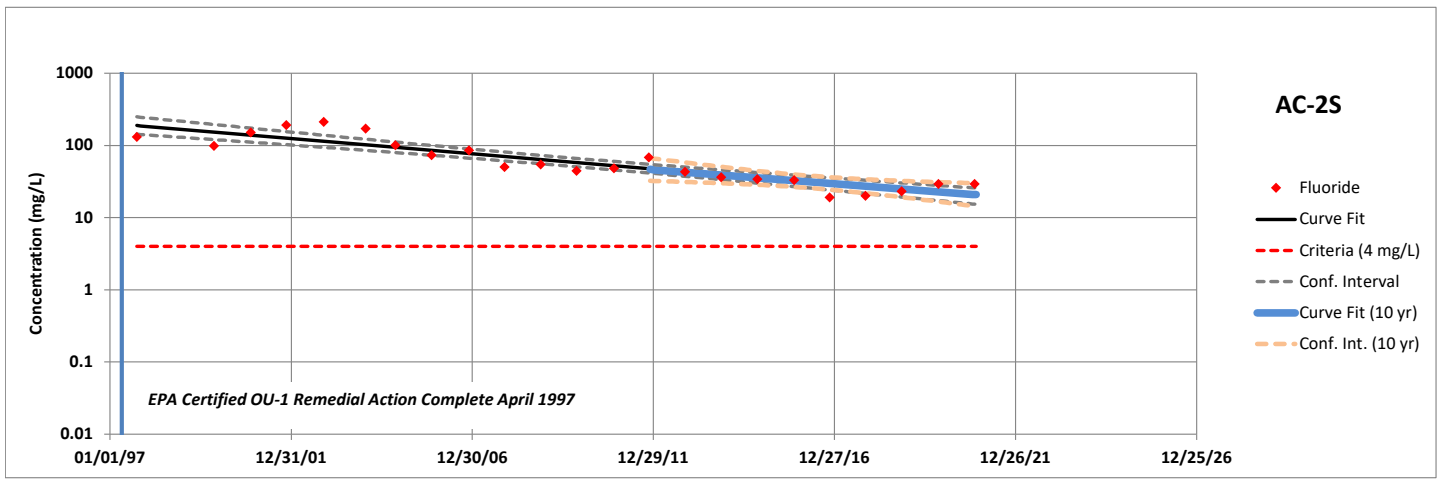
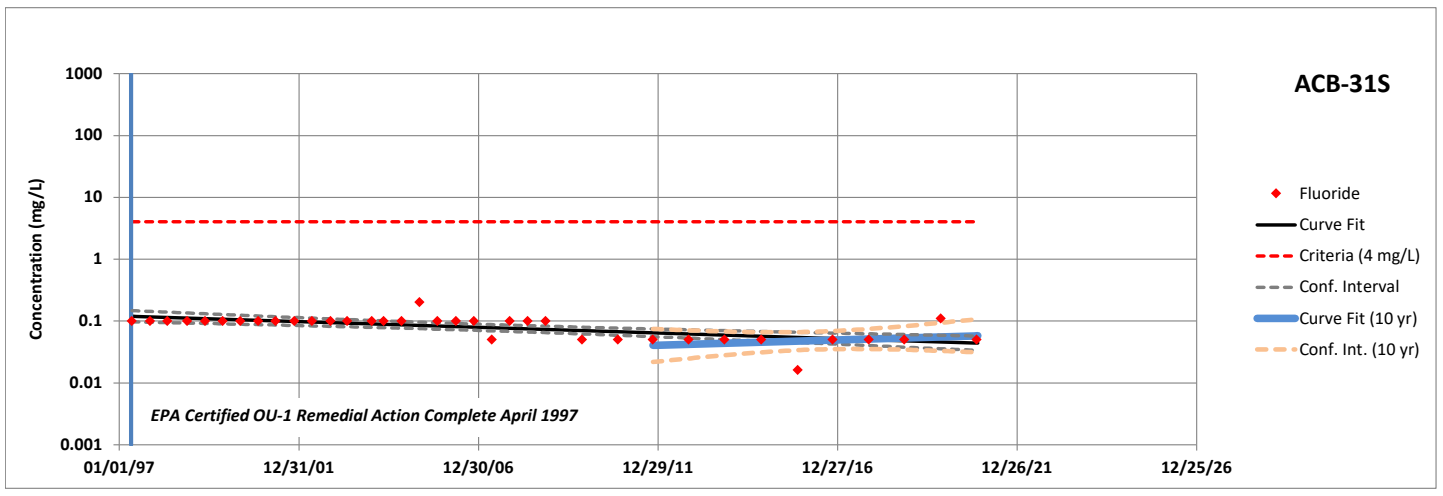
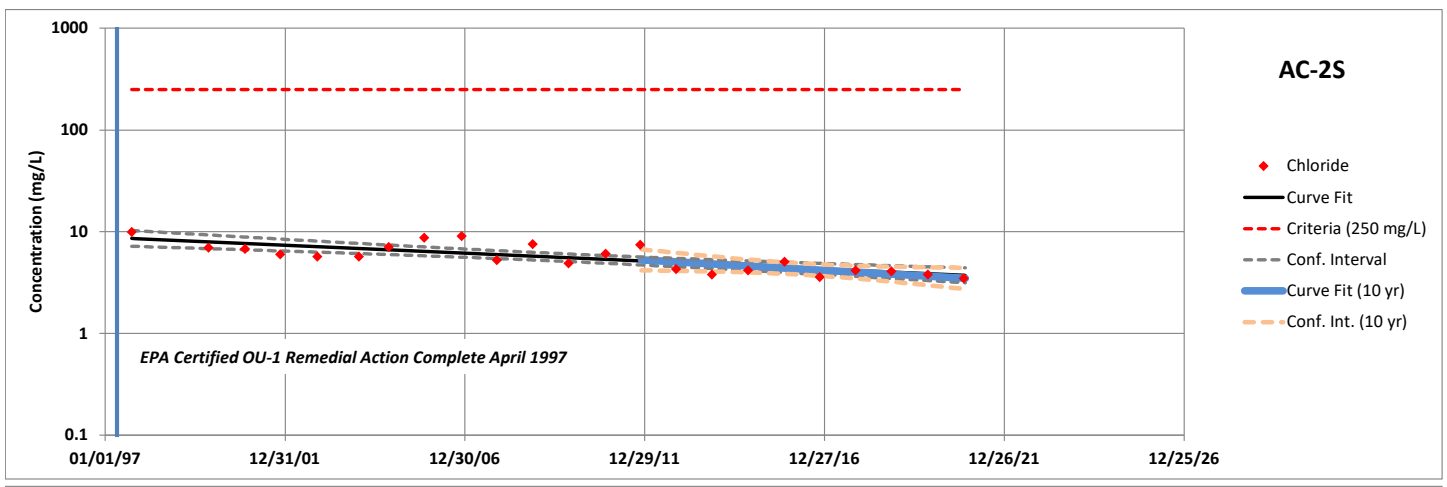
Figure 10

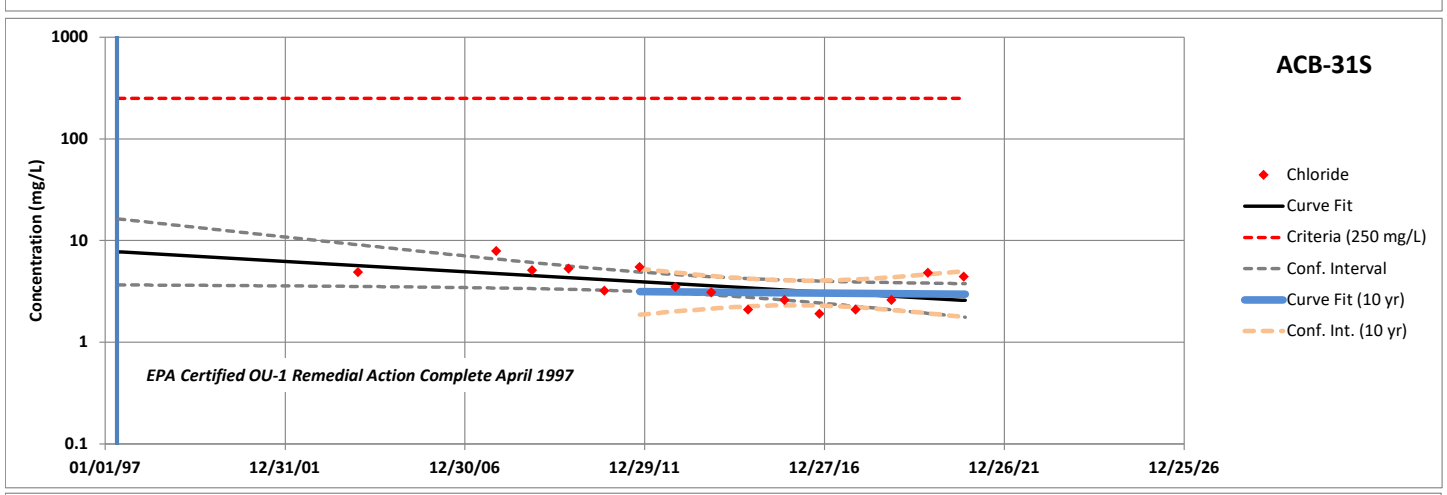
Concentration Trends Agrico Site Annual Network Wells

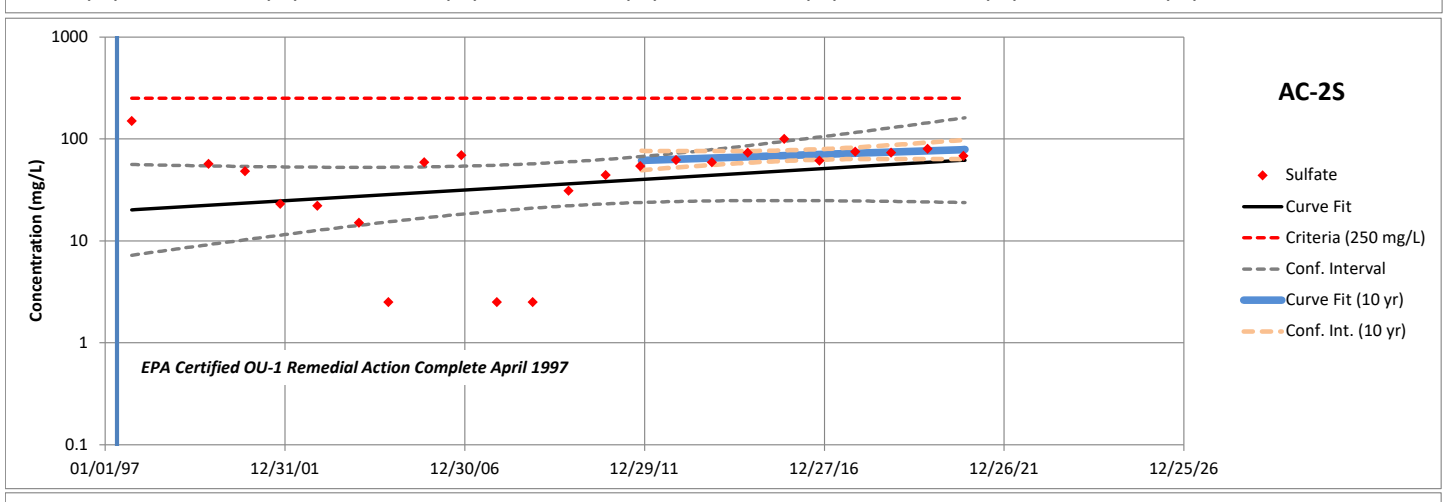
Agrico Site
Pensacola, Florida



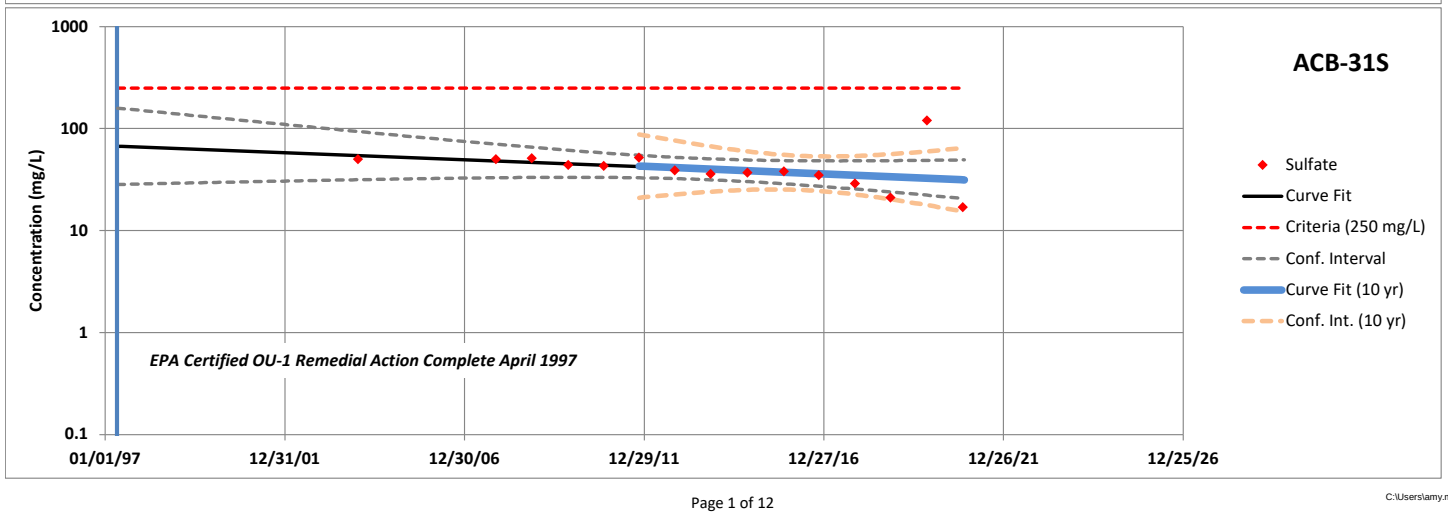
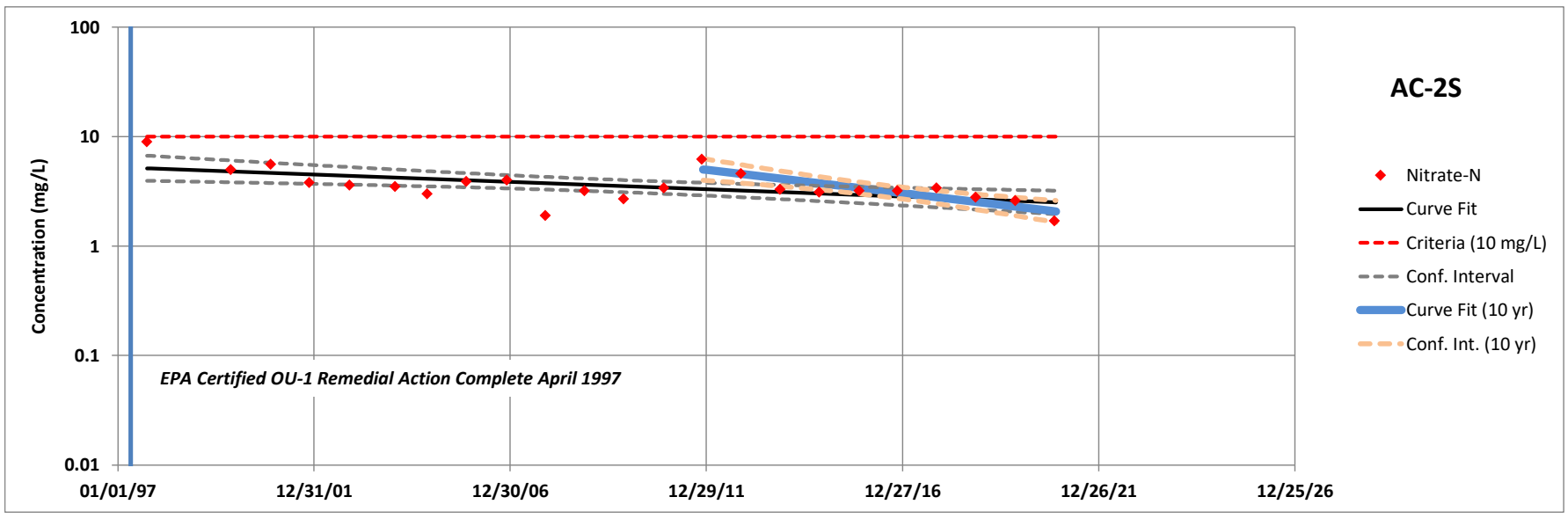
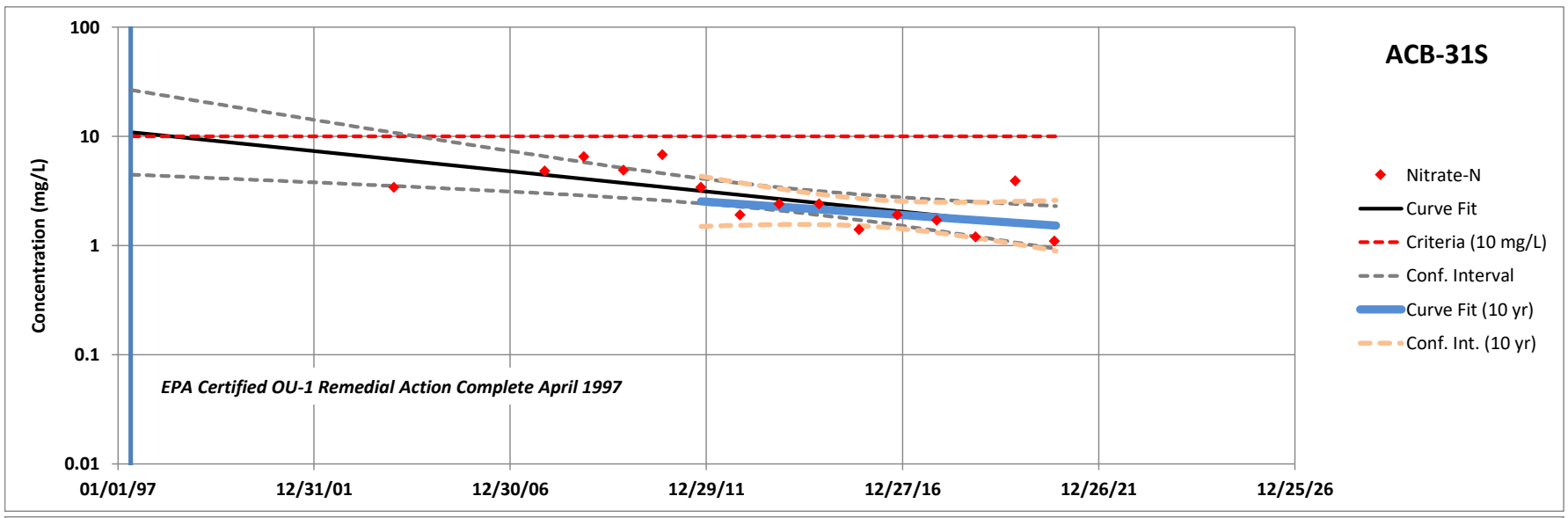



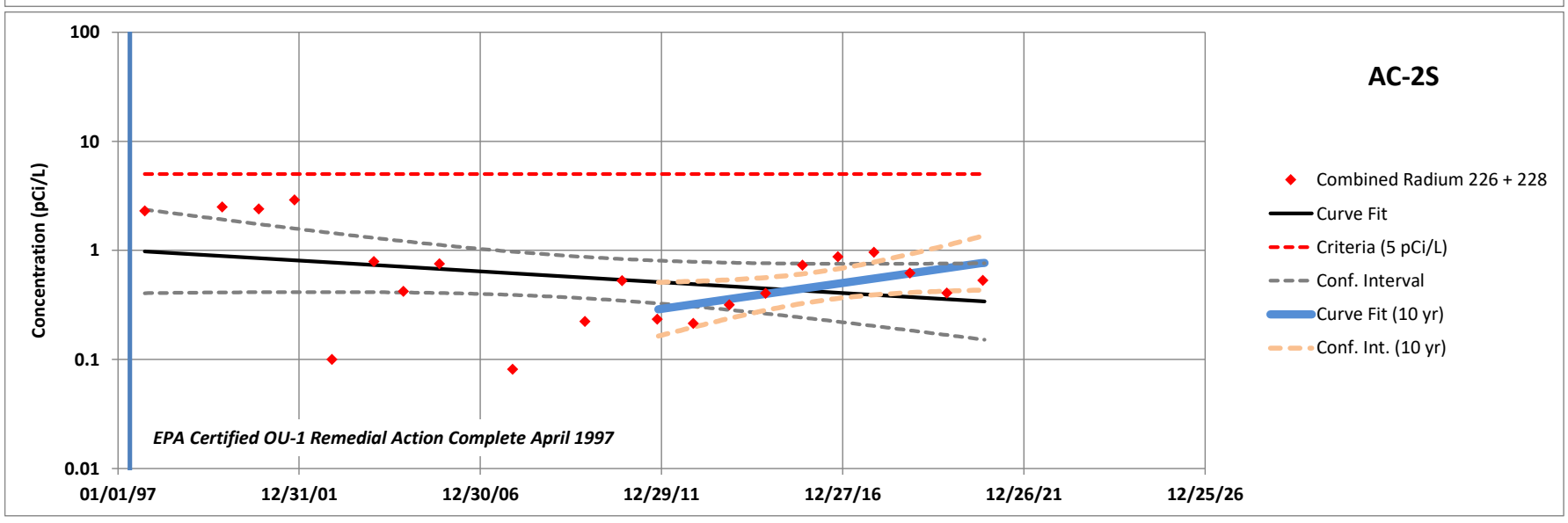
Figure 10 (Continued)

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



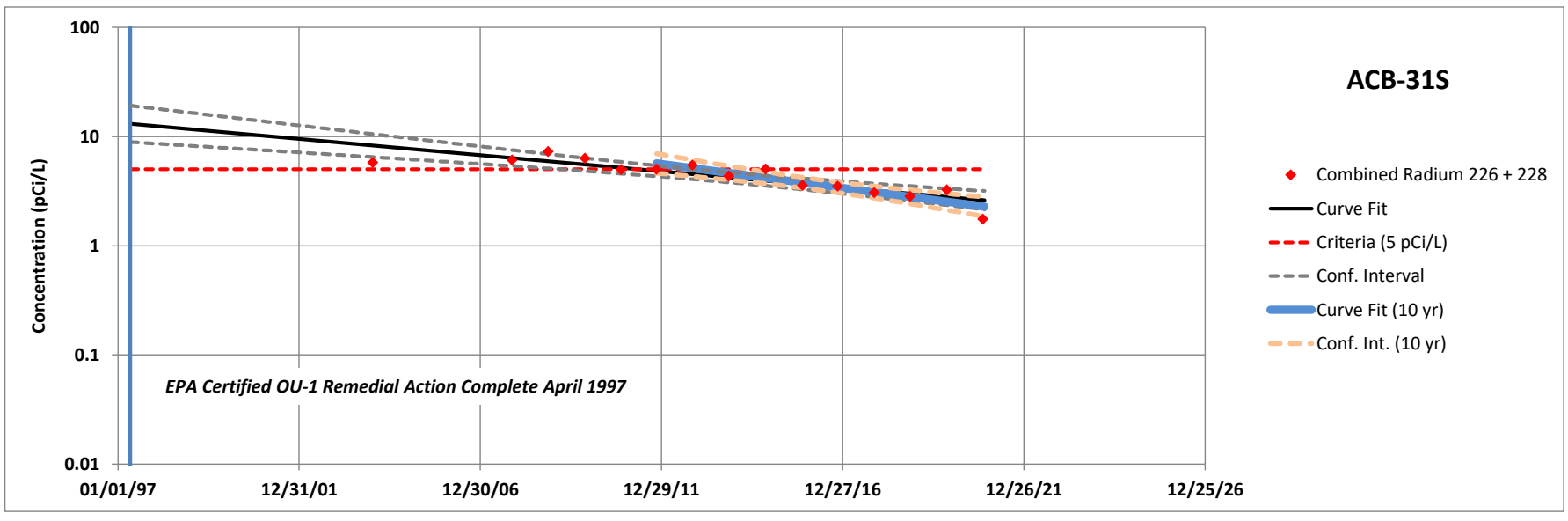
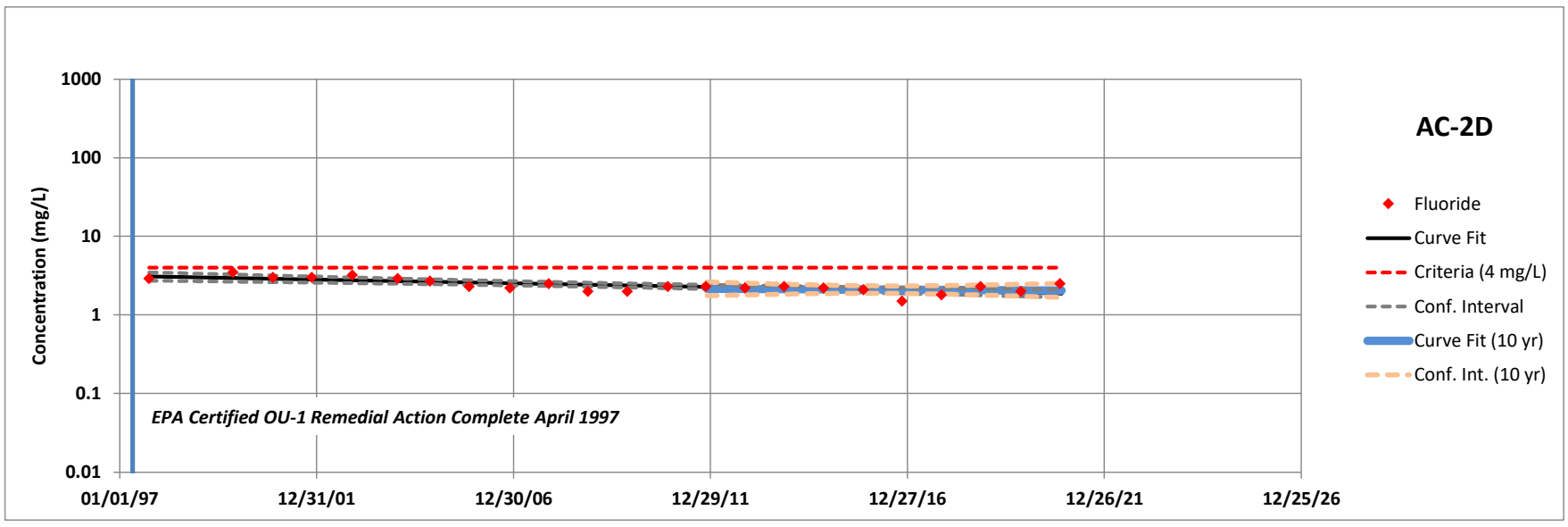
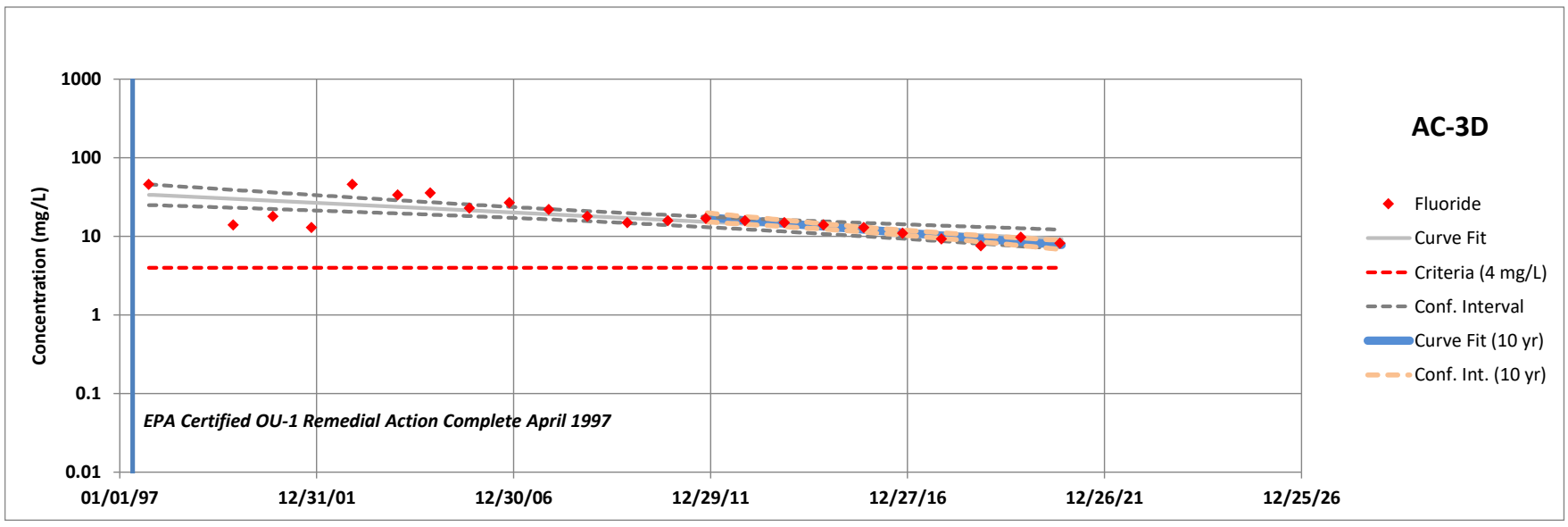



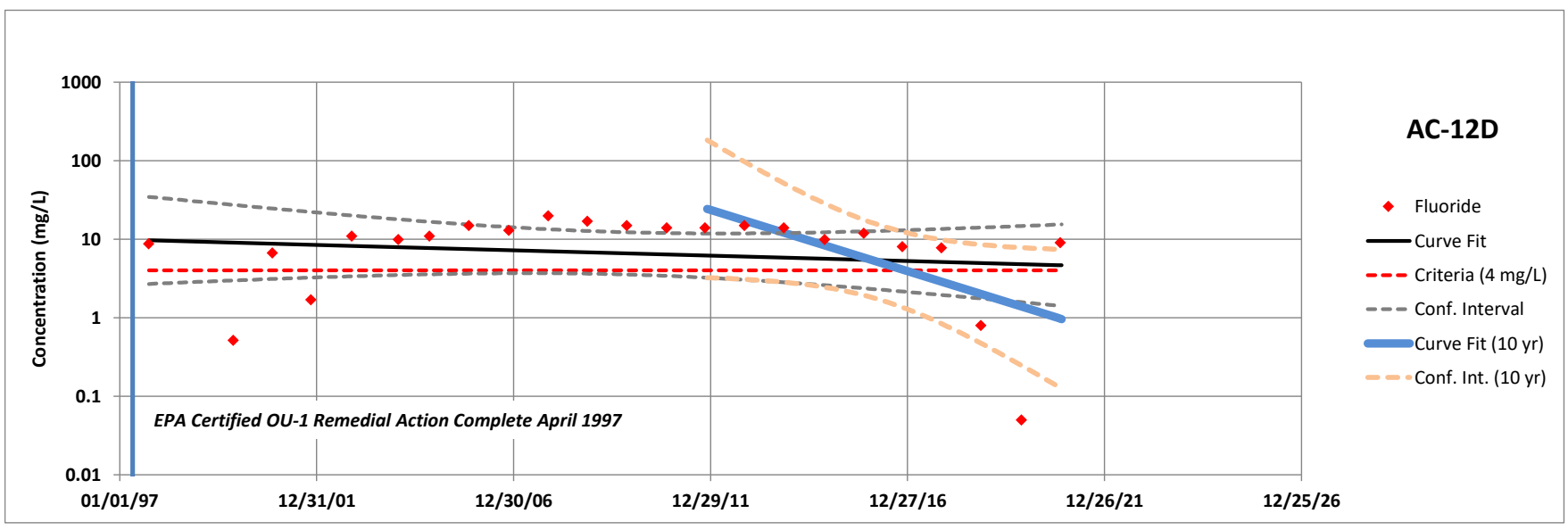
Figure 11

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



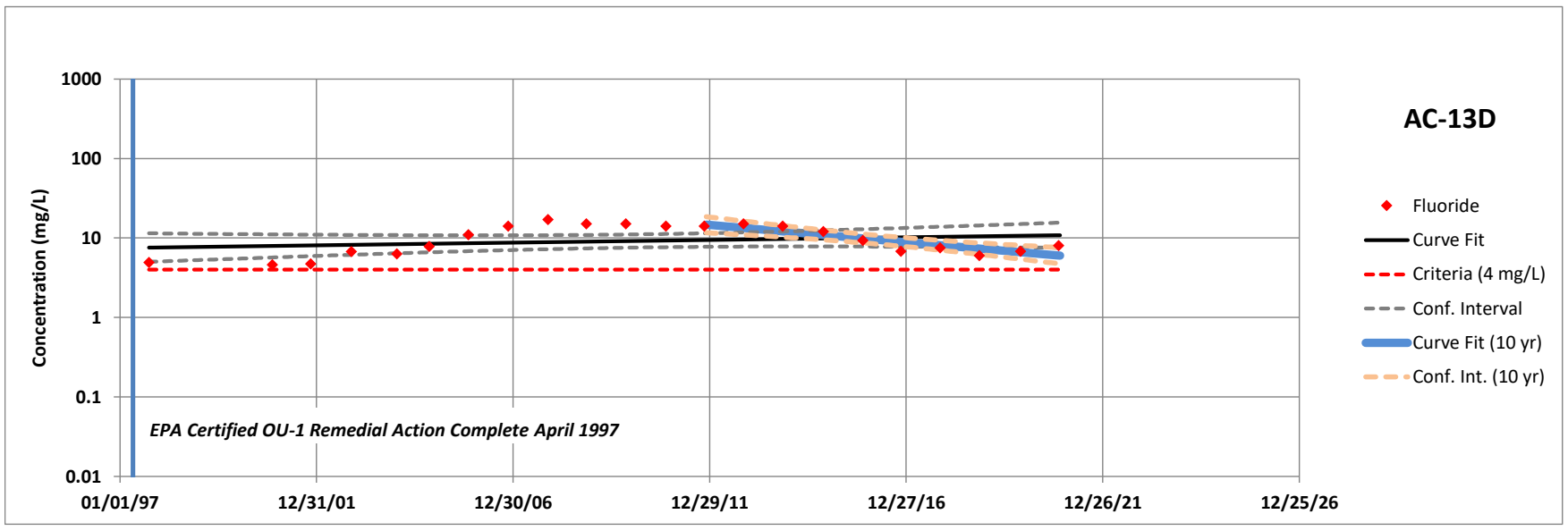
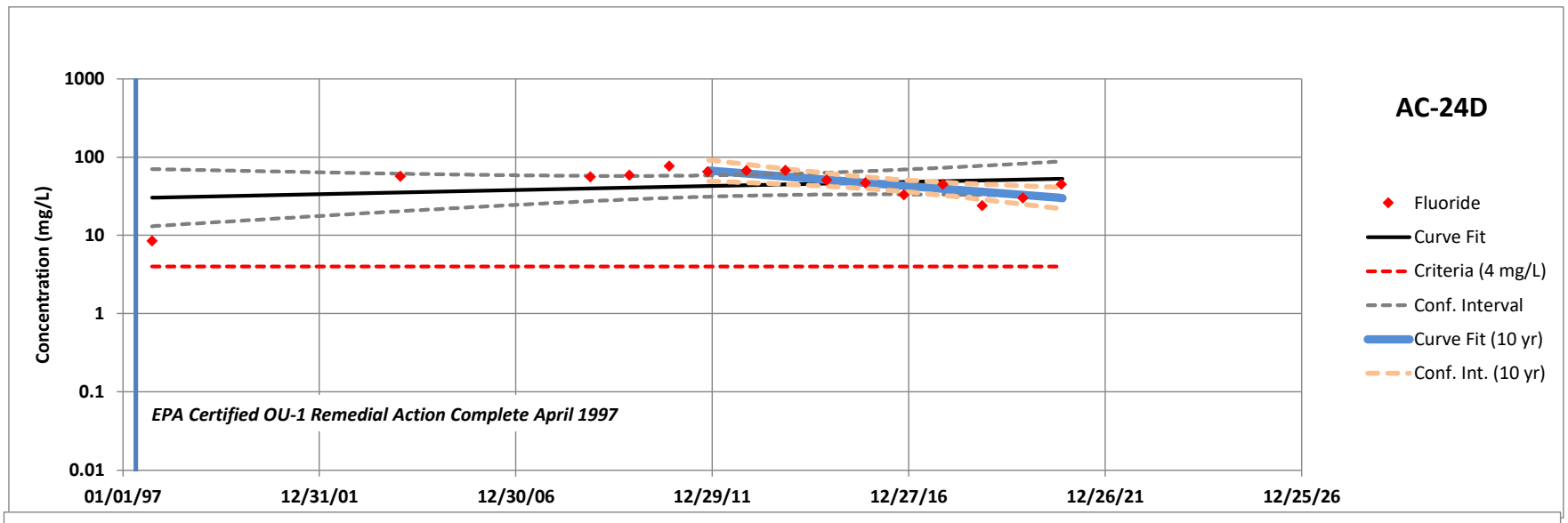
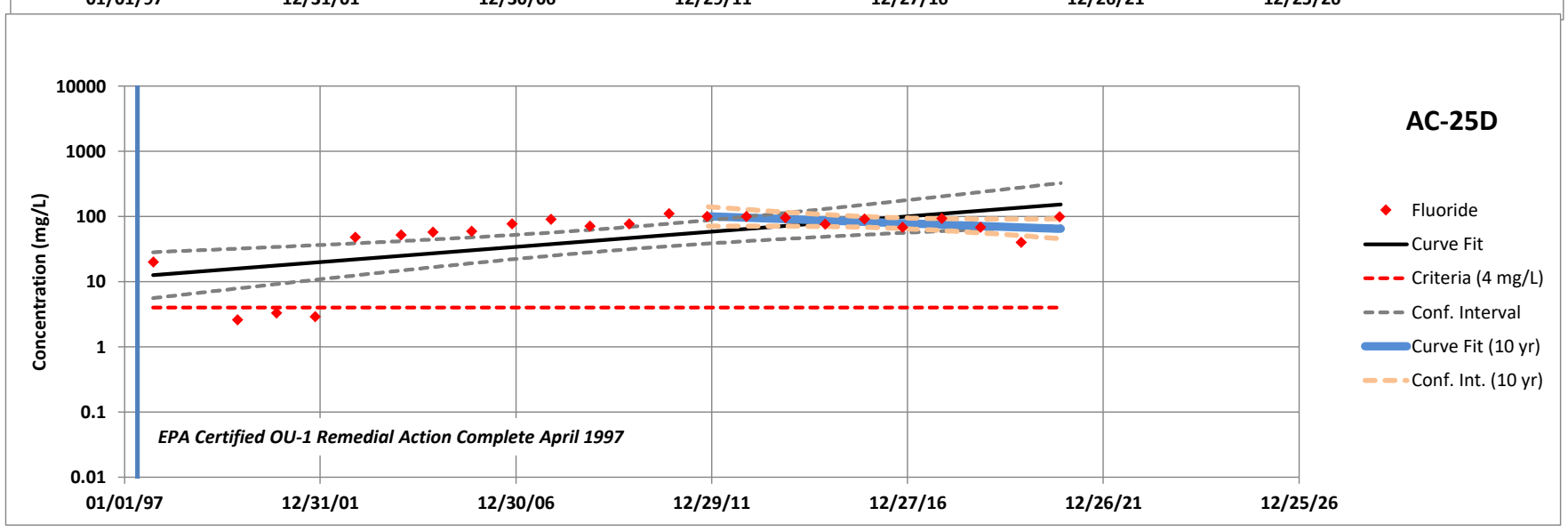



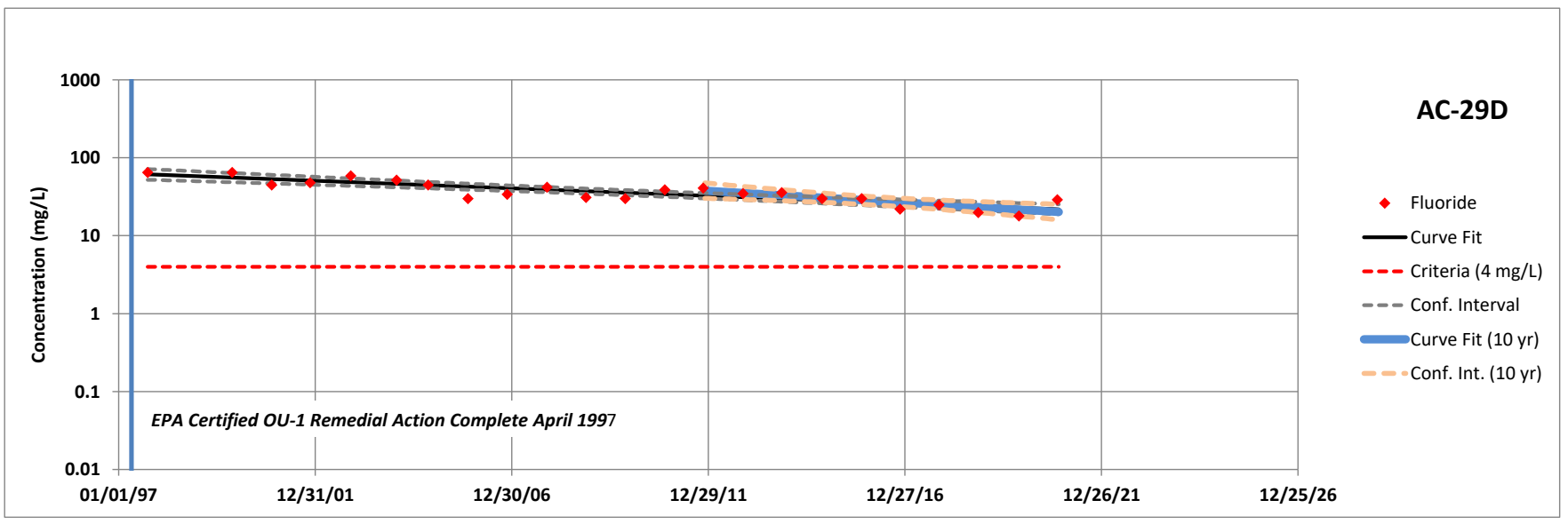
Figure 11 (Continued)

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



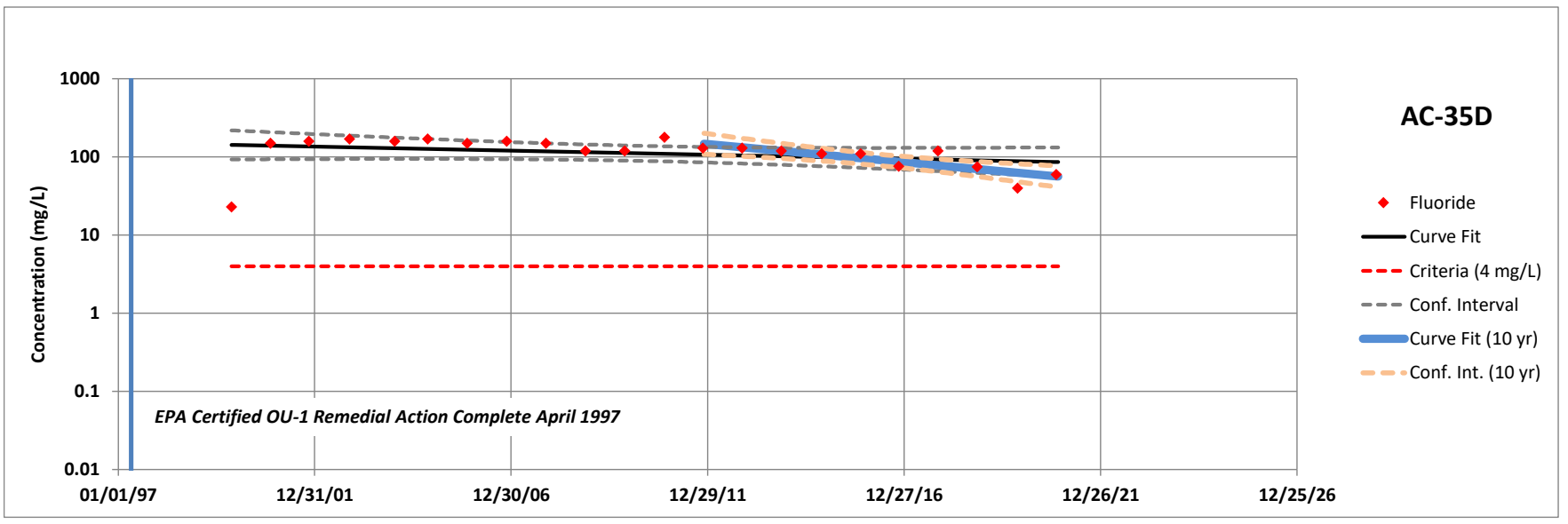
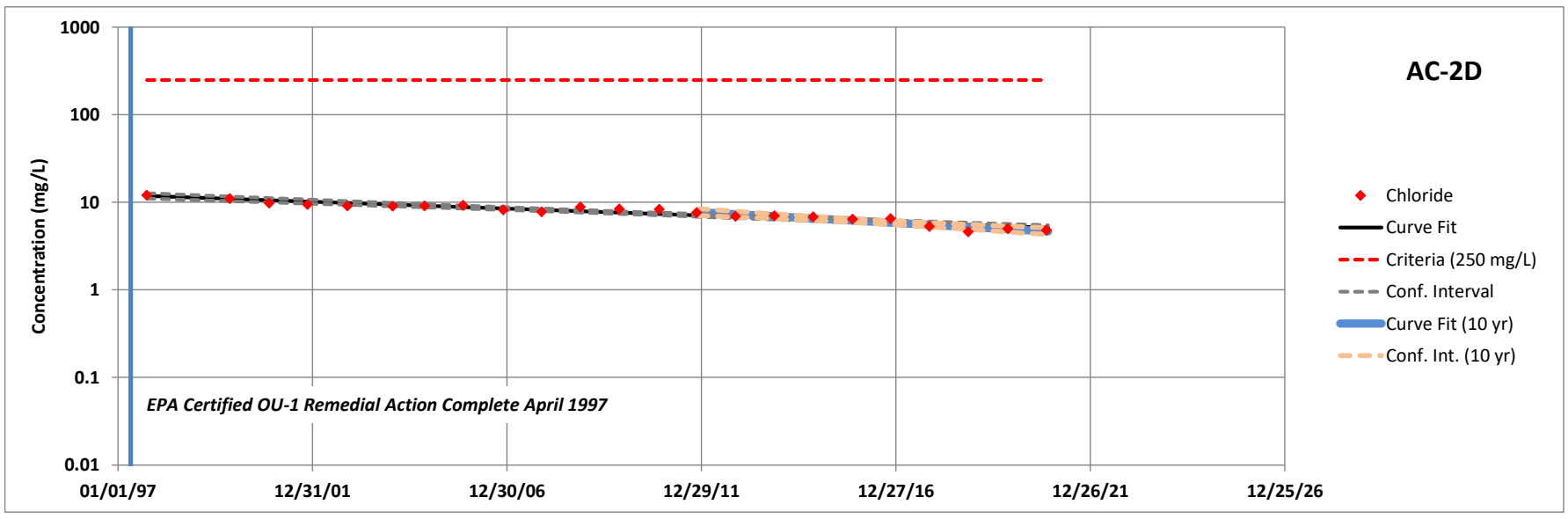
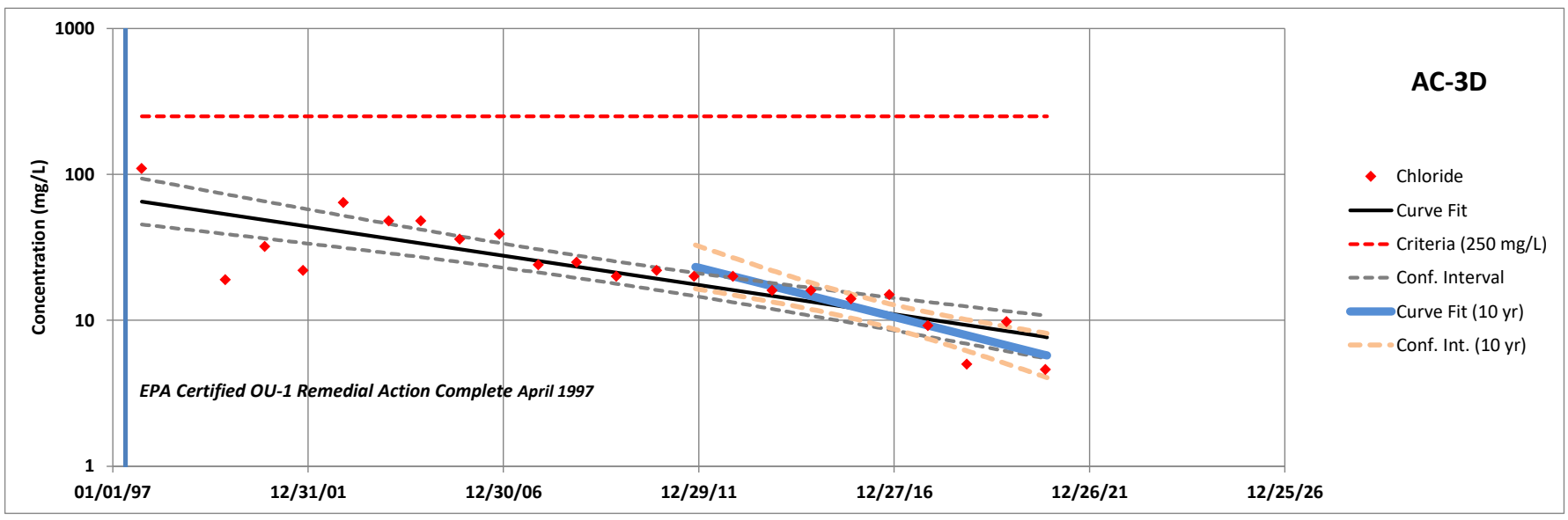



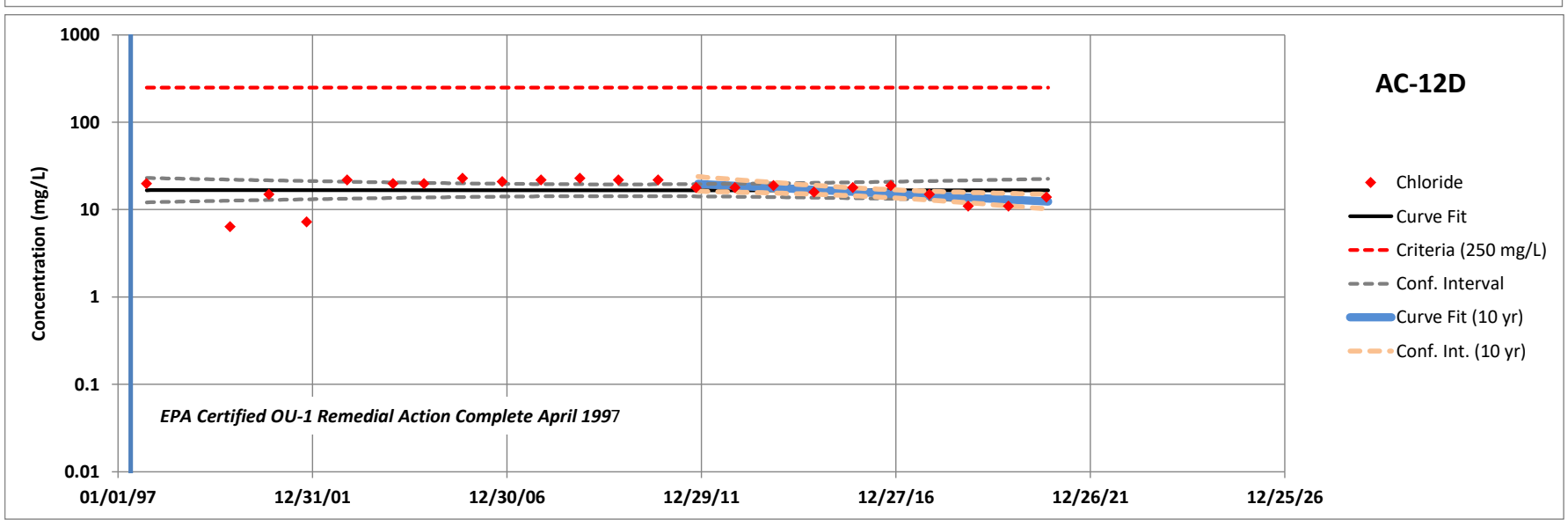
Figure 11 (Continued)

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



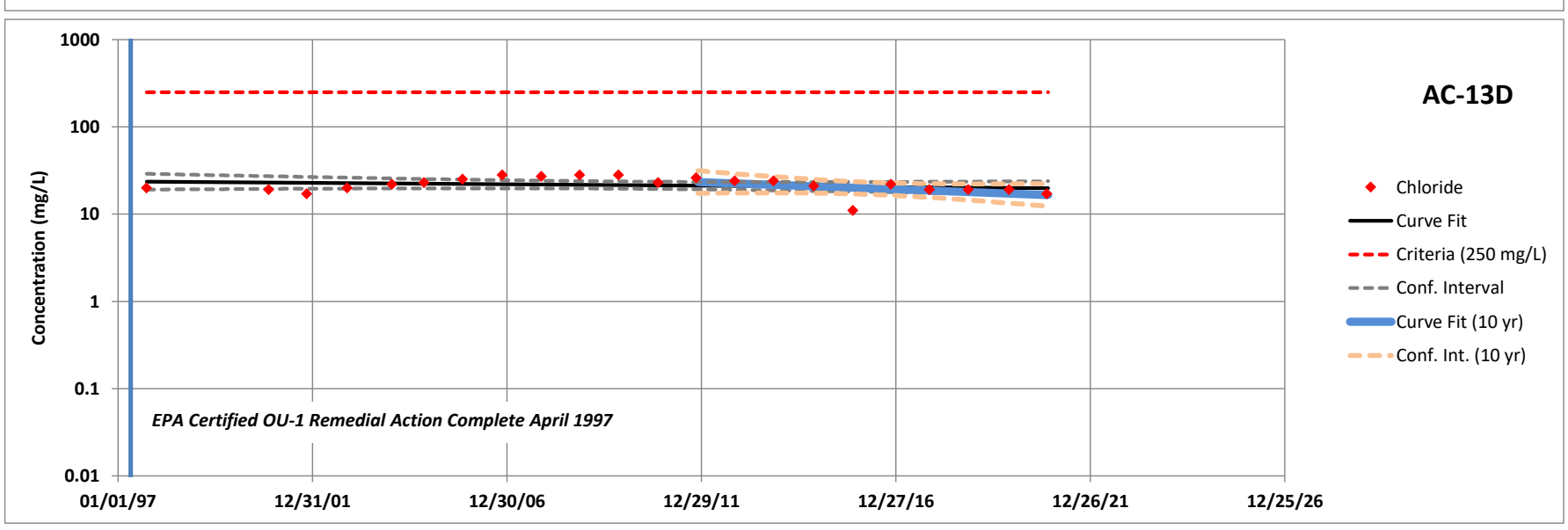
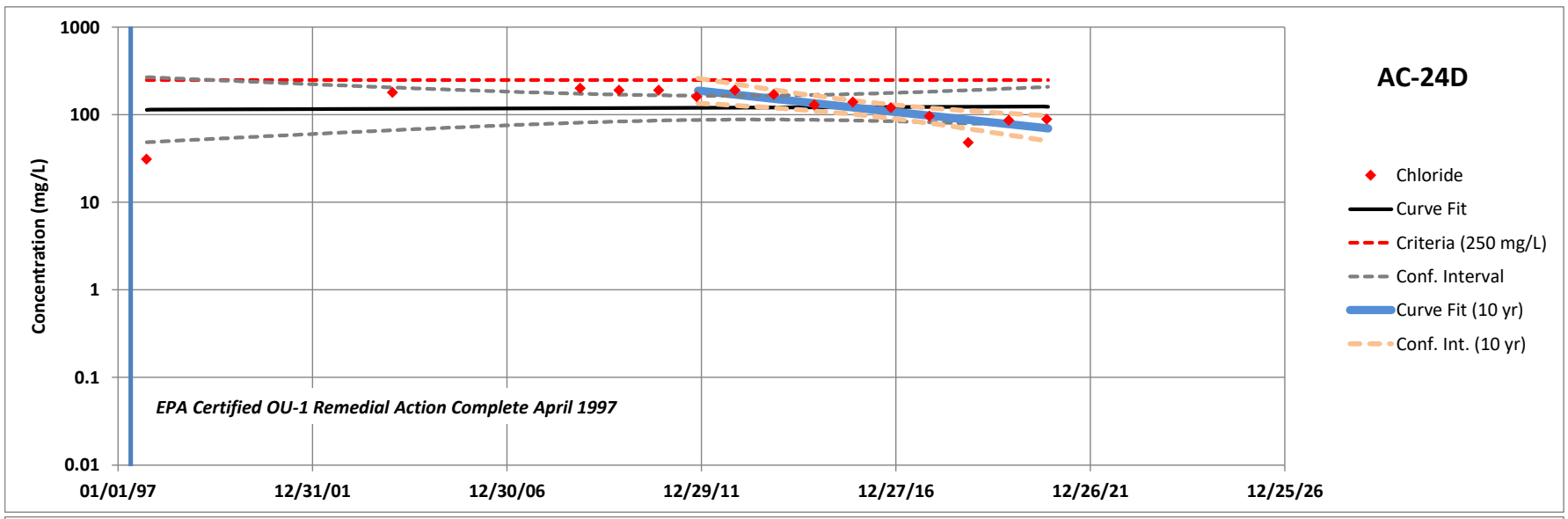
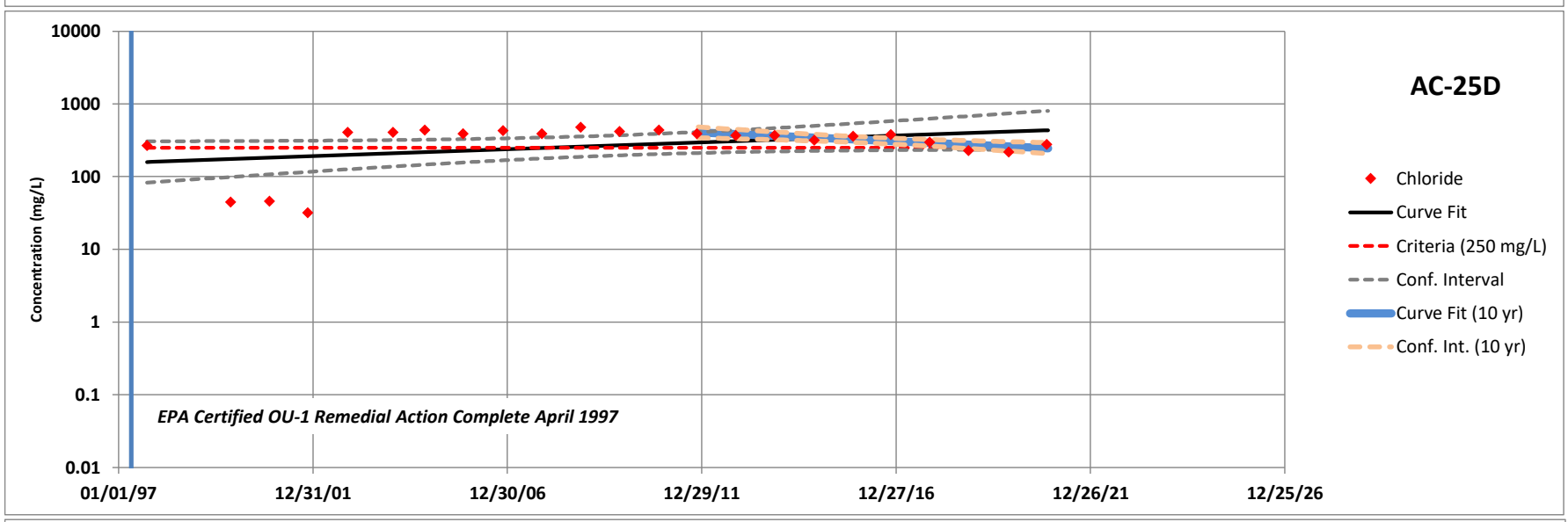



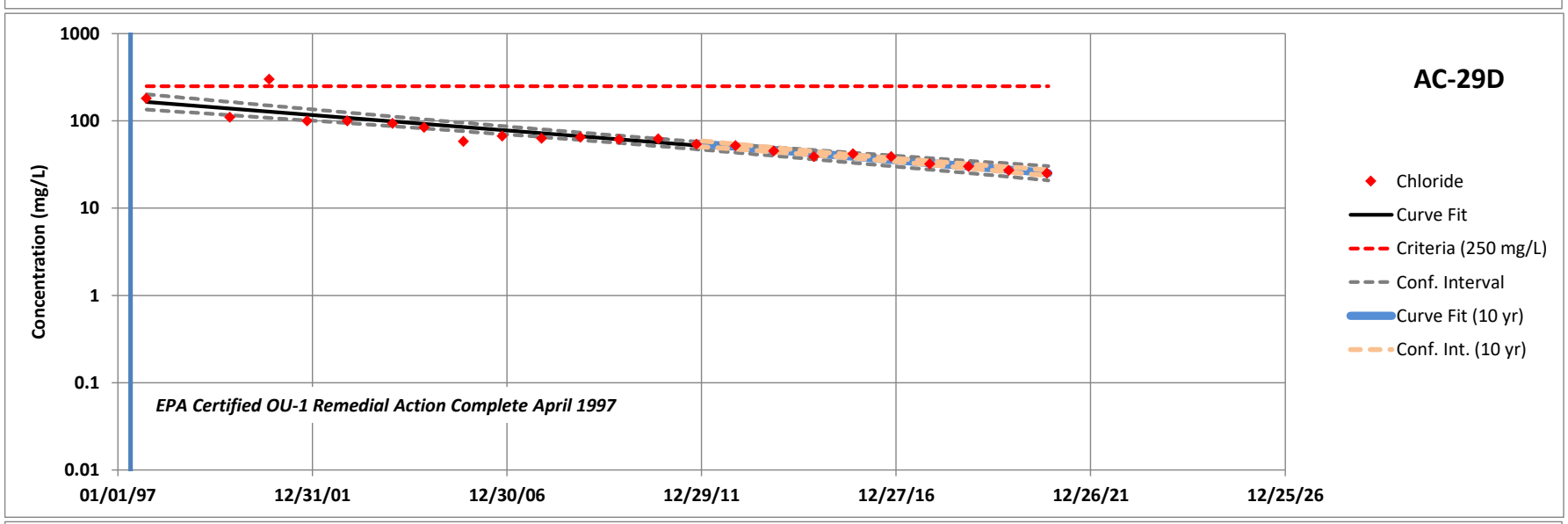
Figure 11 (Continued)

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



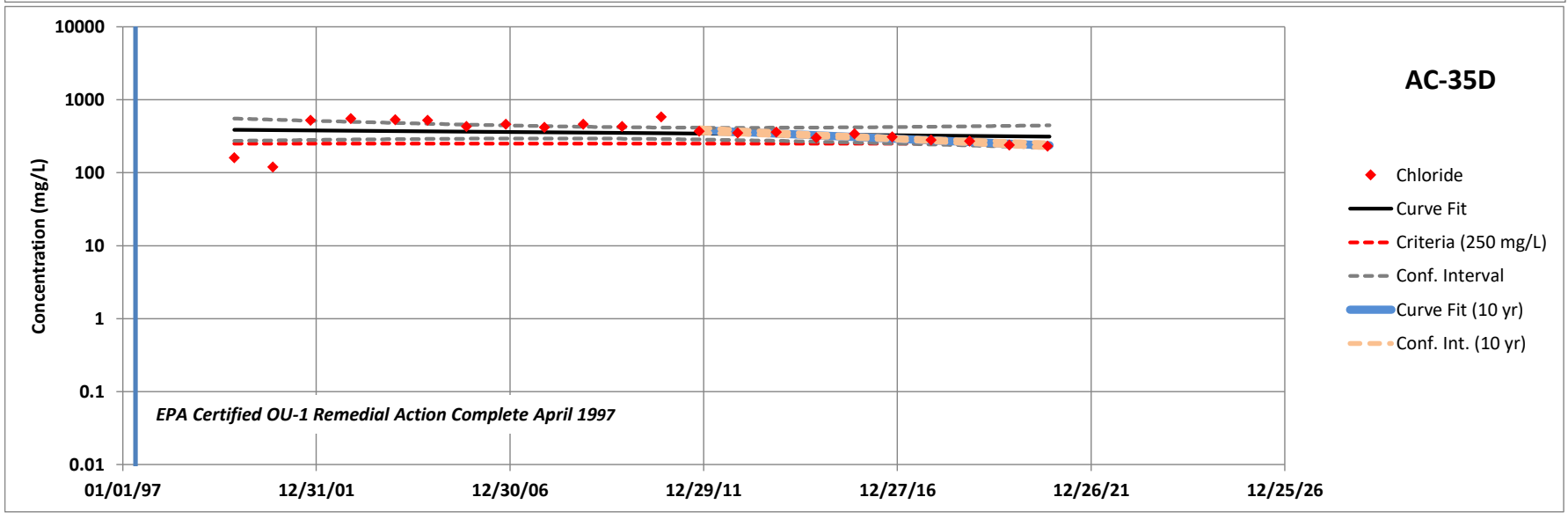
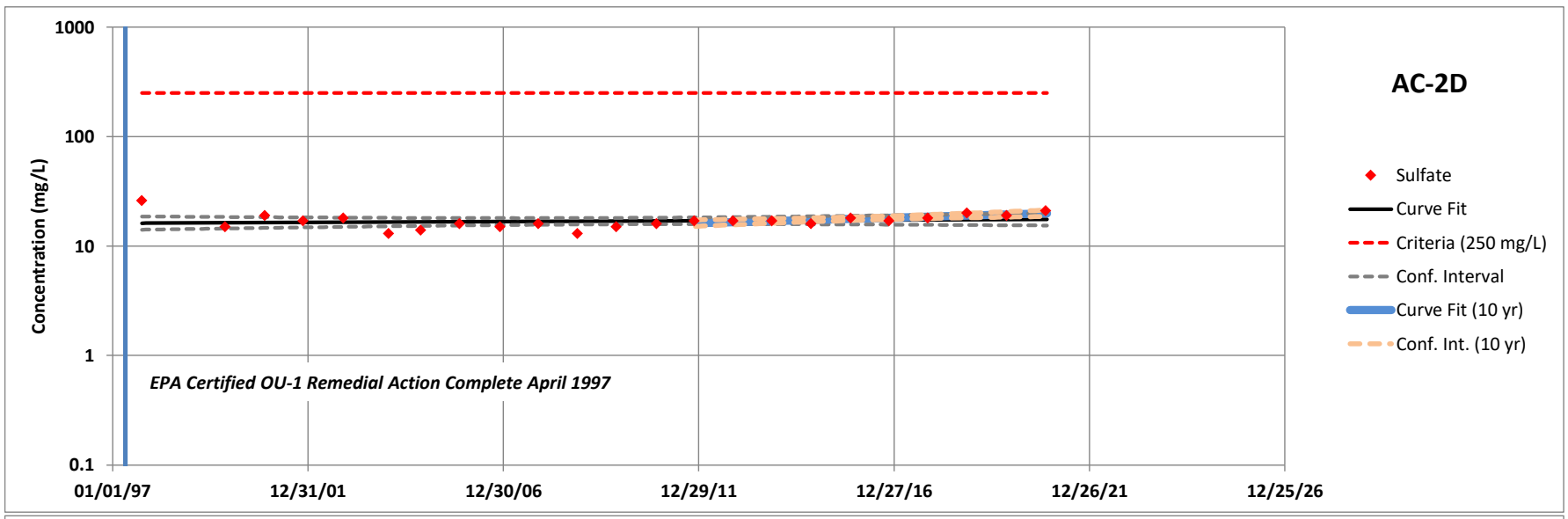
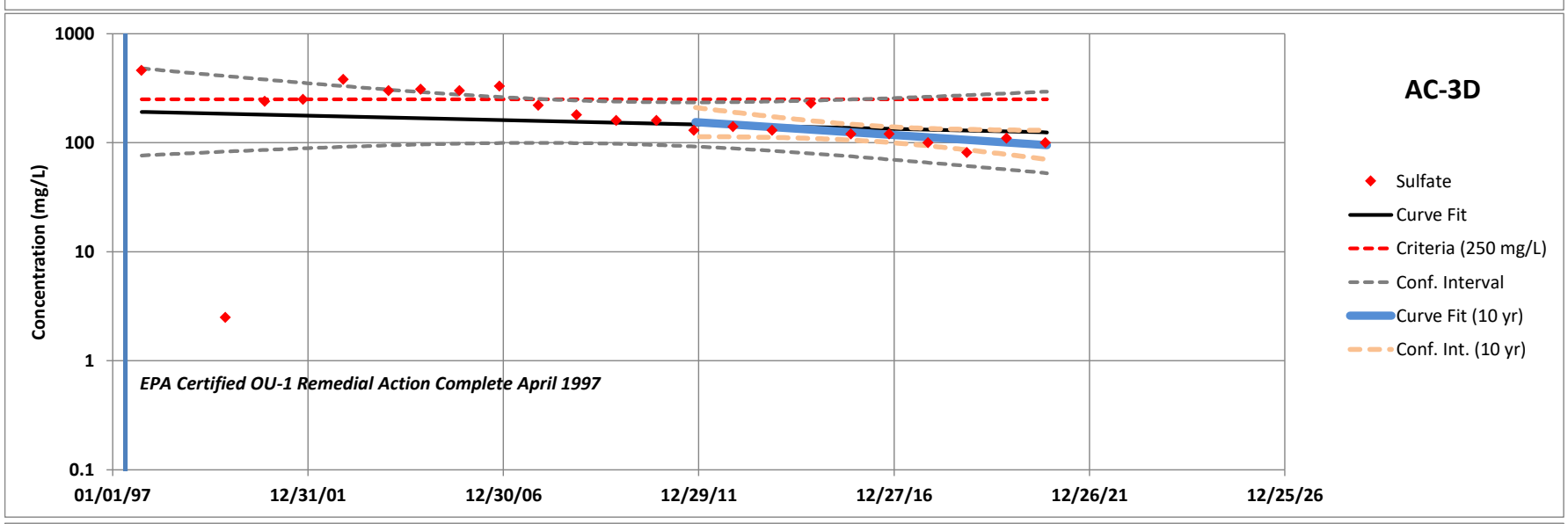



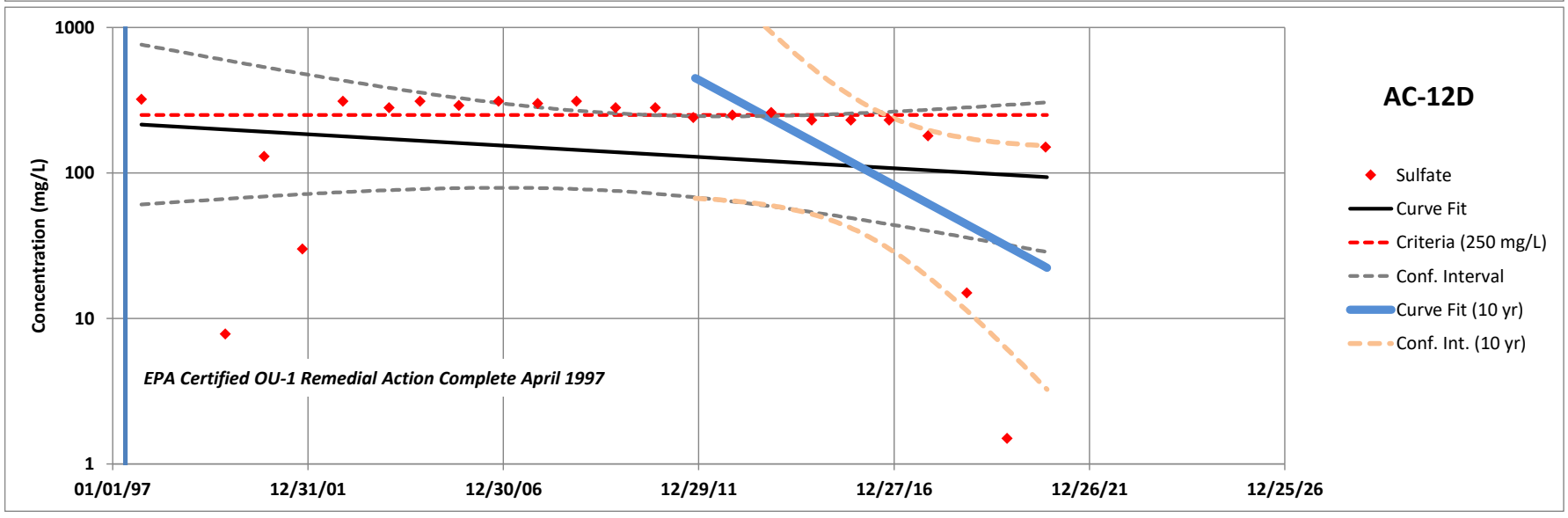
Figure 11 (Continued)

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



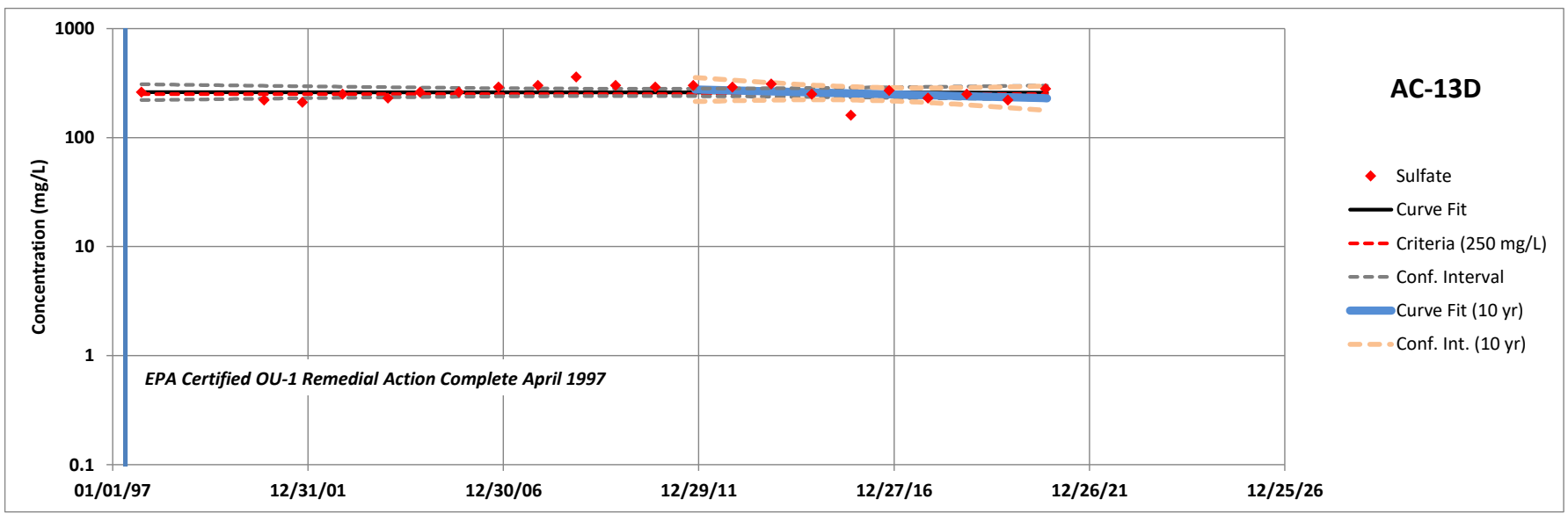
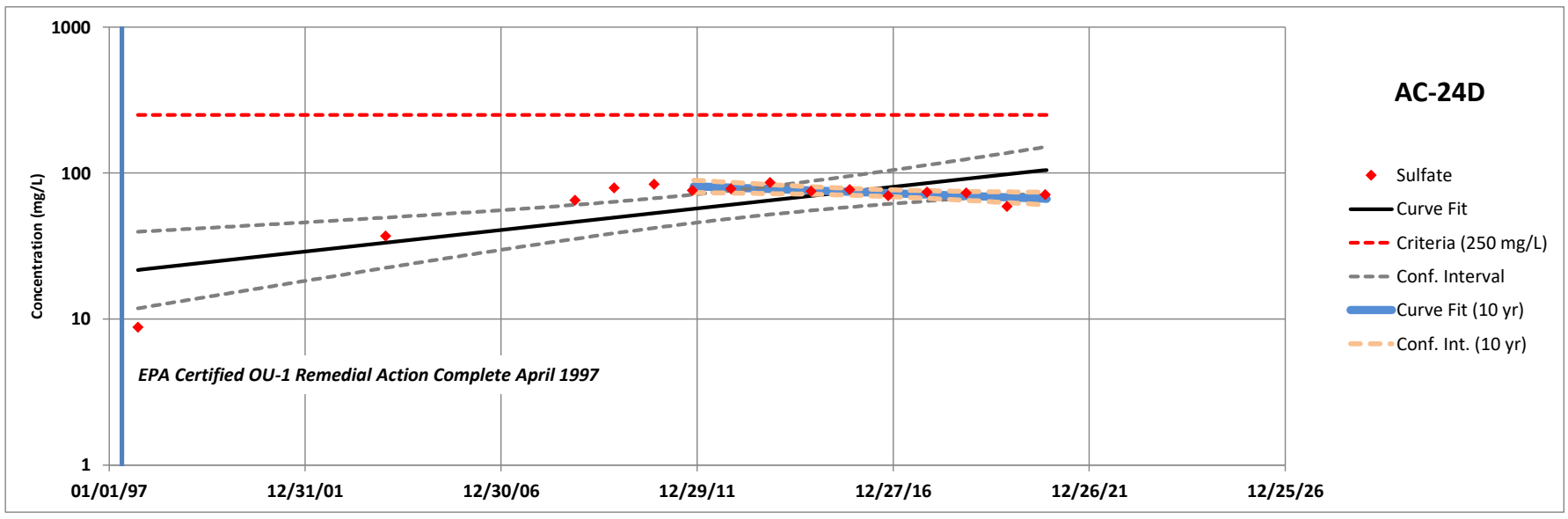
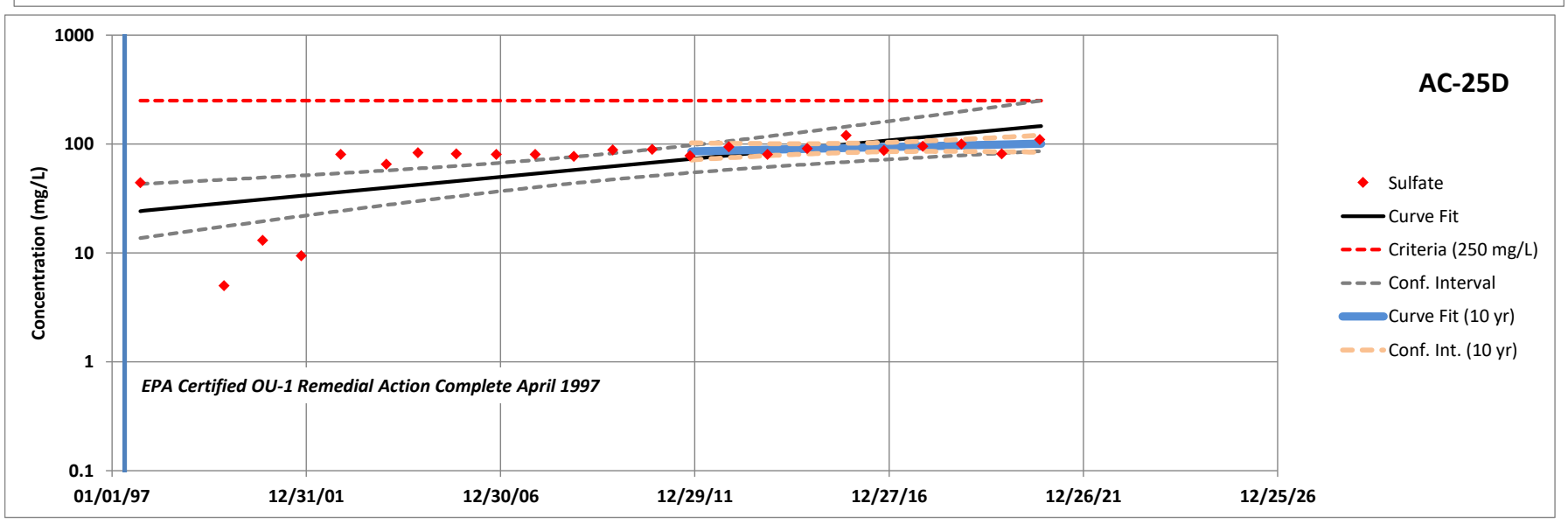



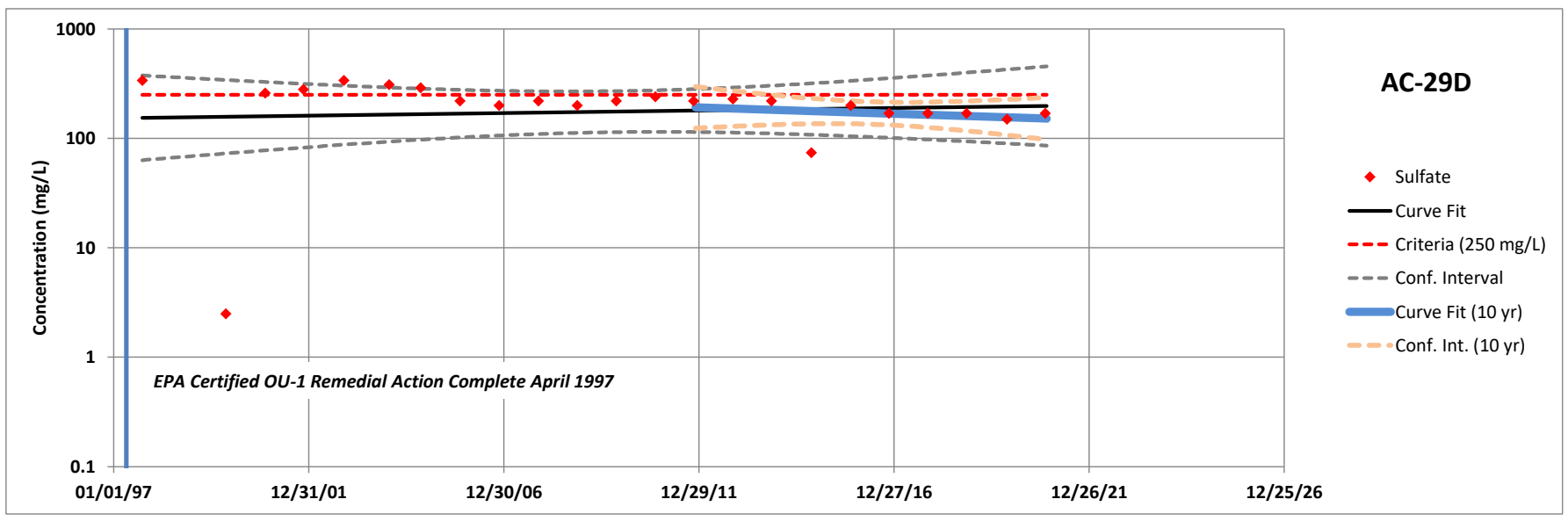
Figure 11 (Continued)

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



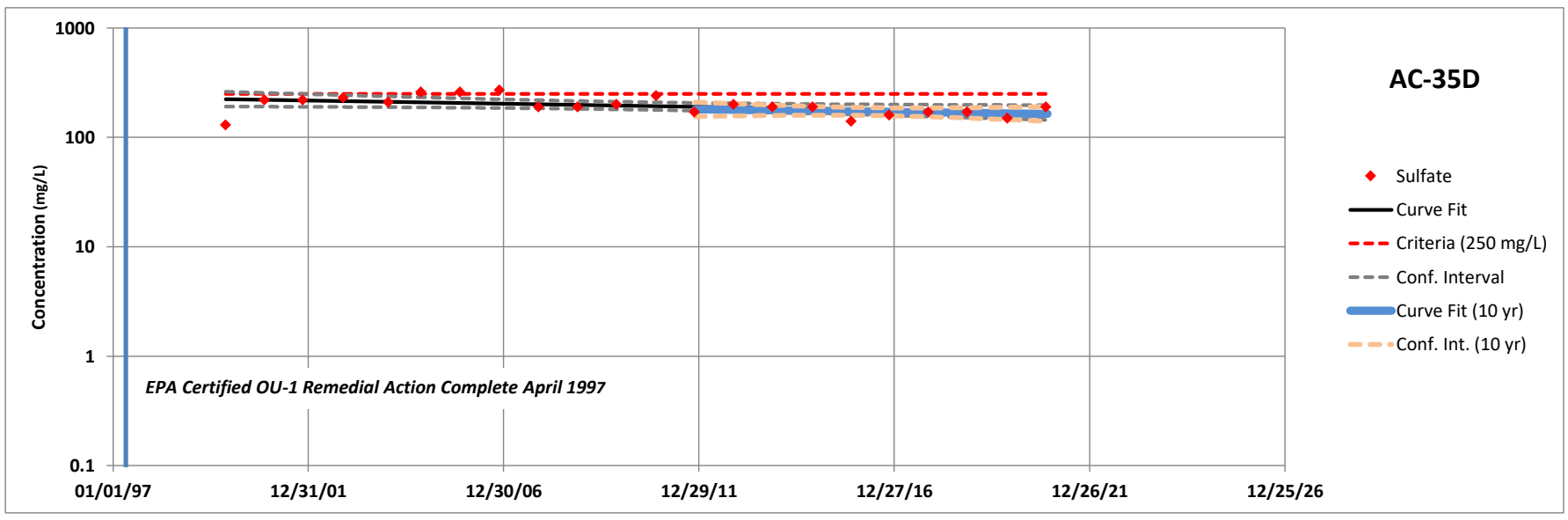
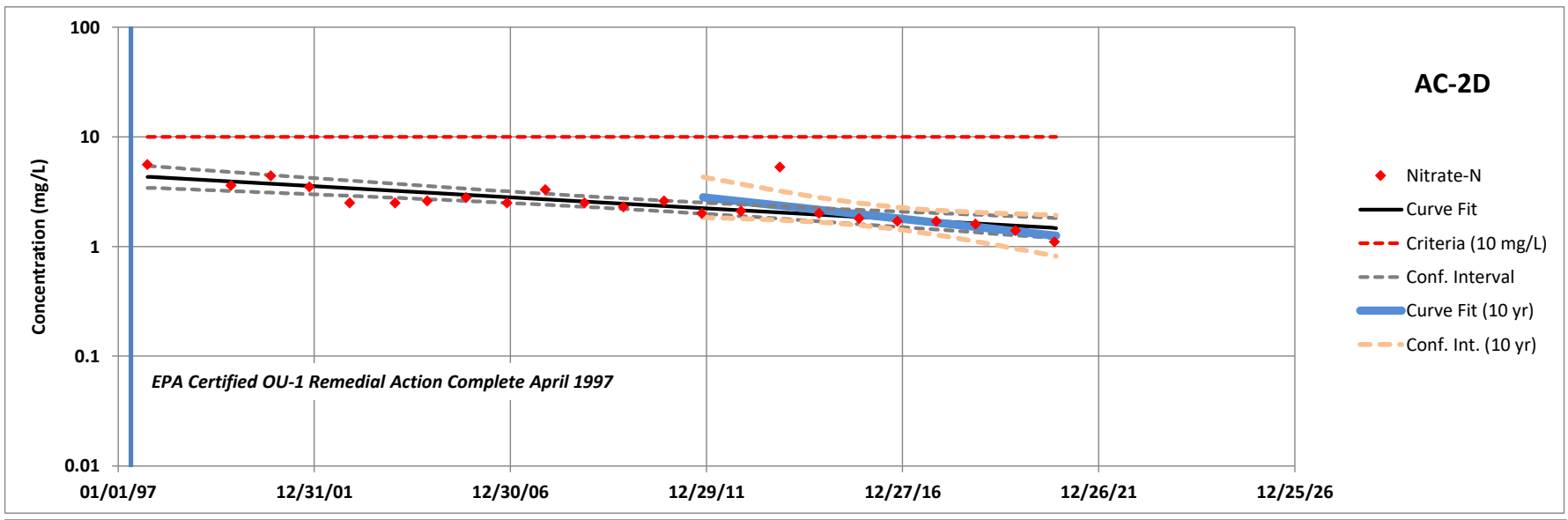
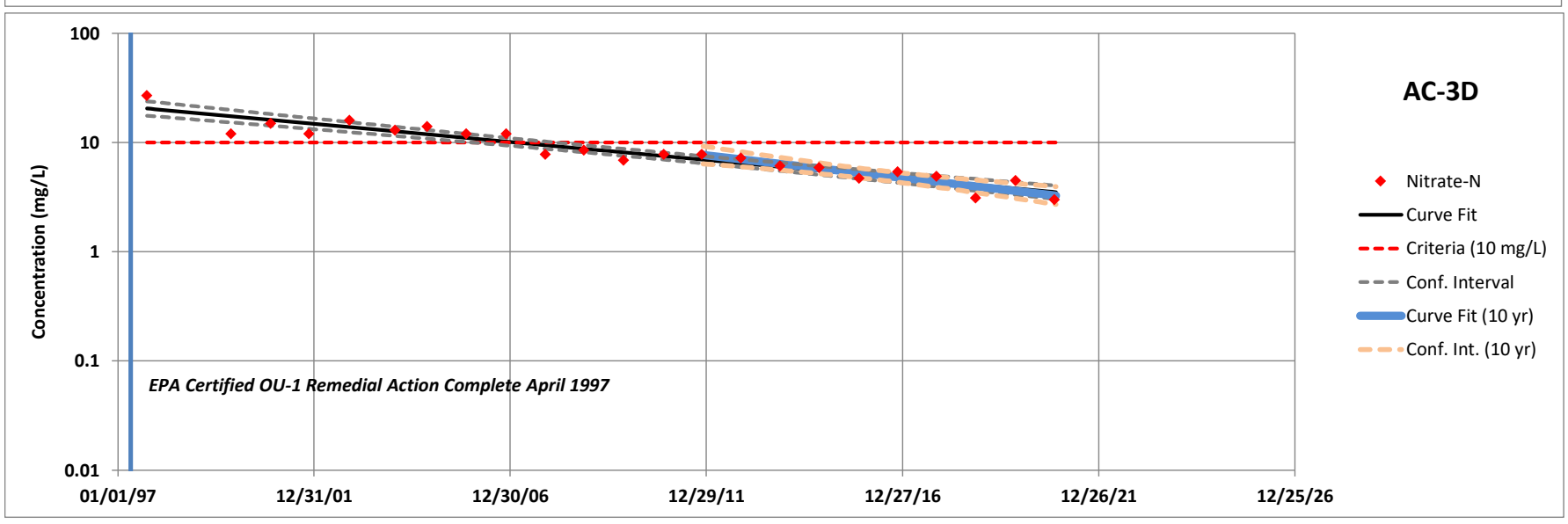



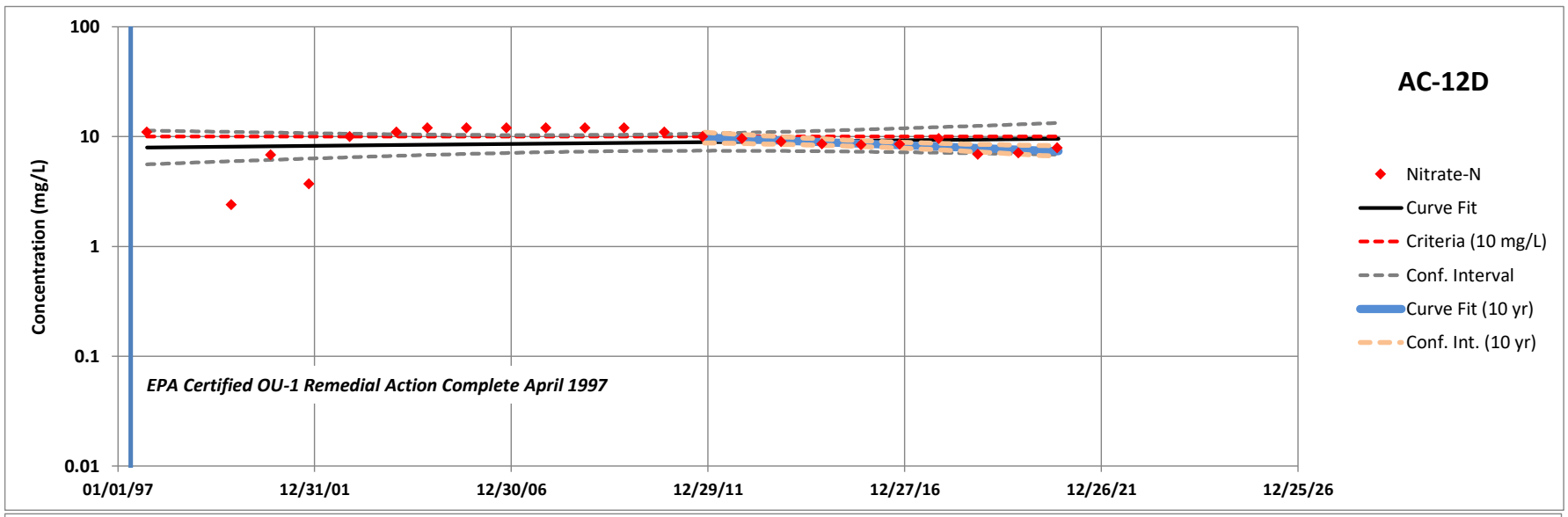
Figure 11 (Continued)

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



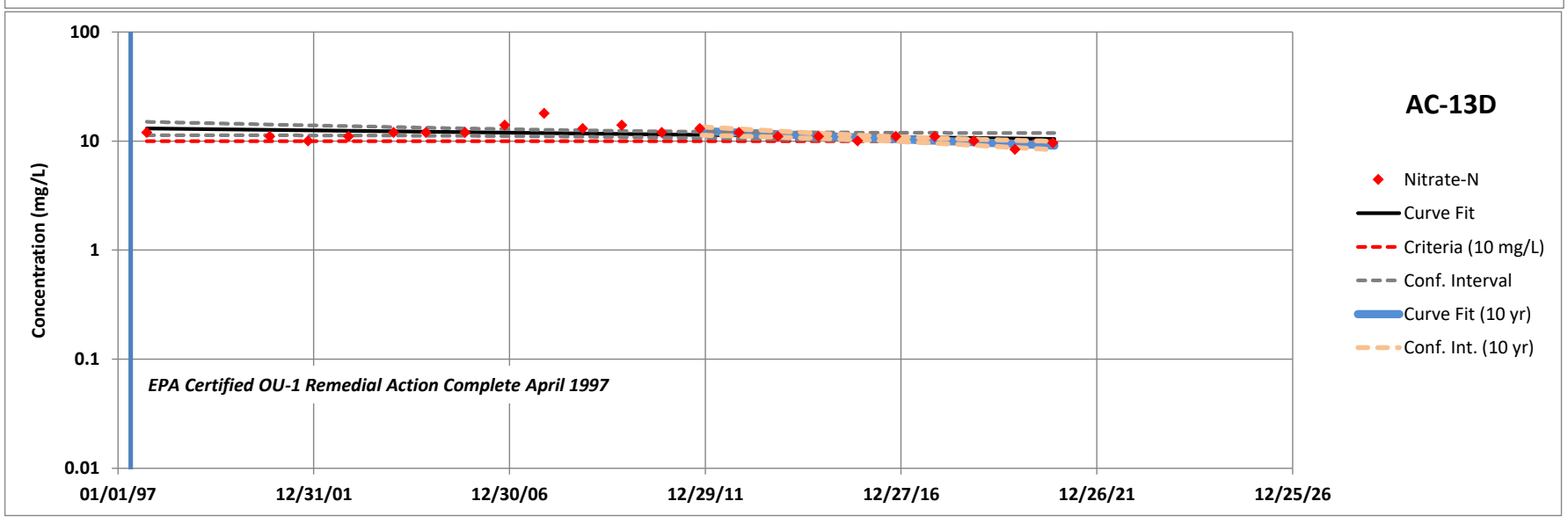
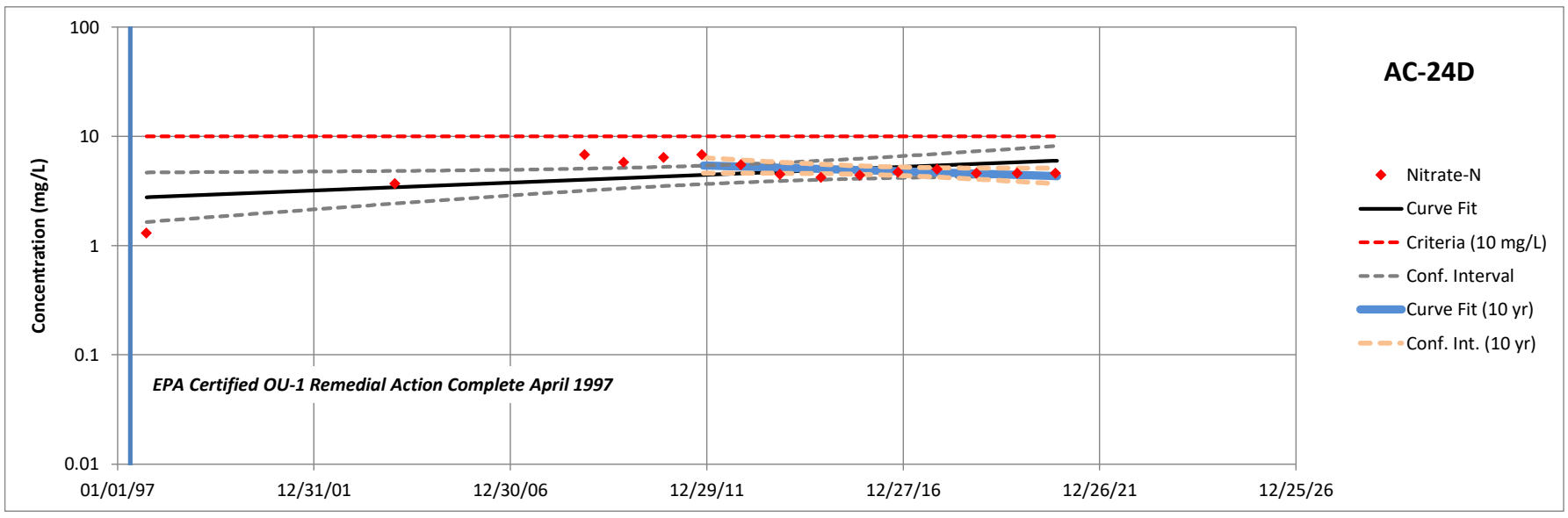
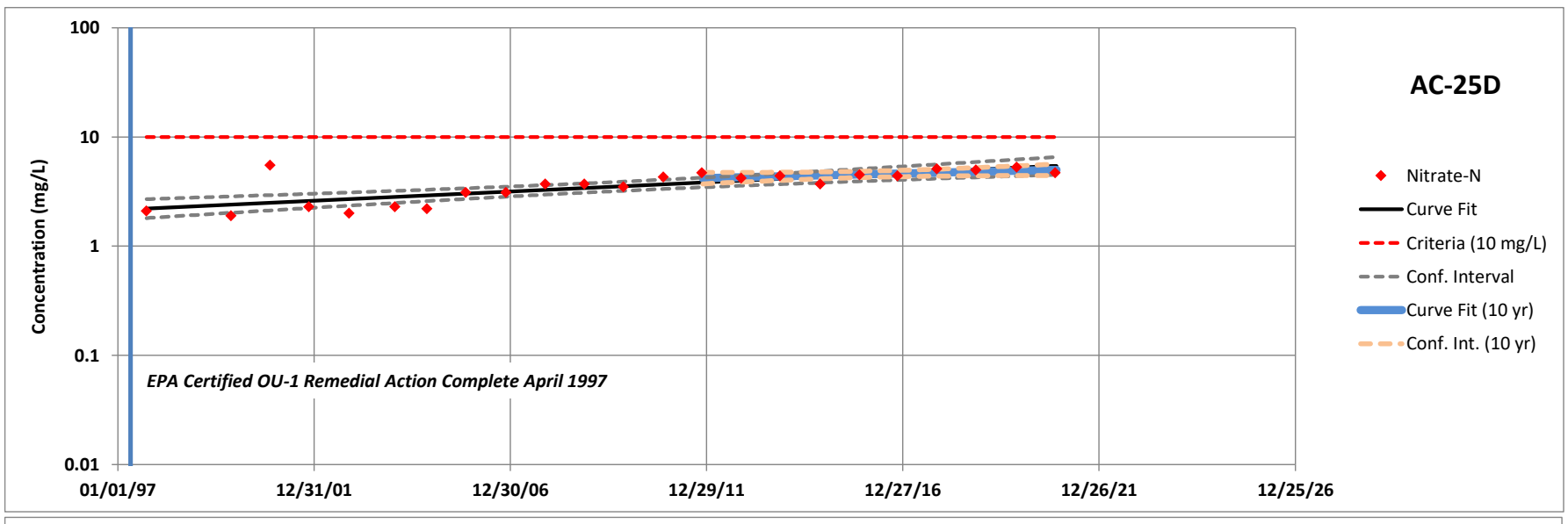



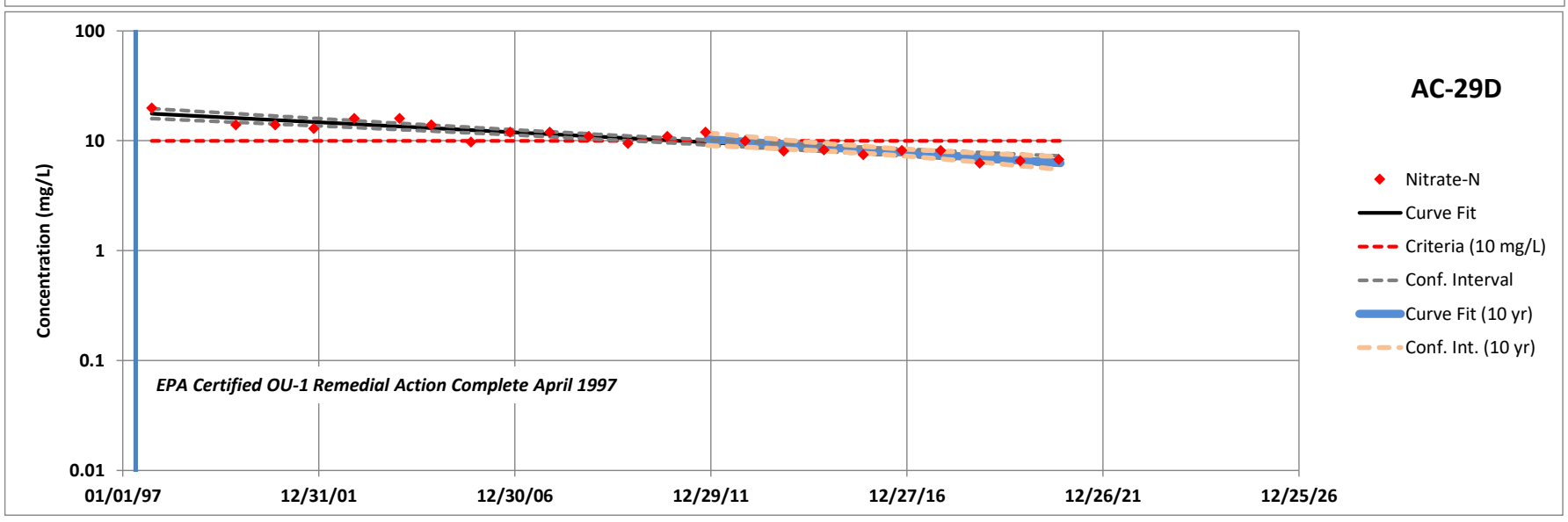
Figure 11 (Continued)

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



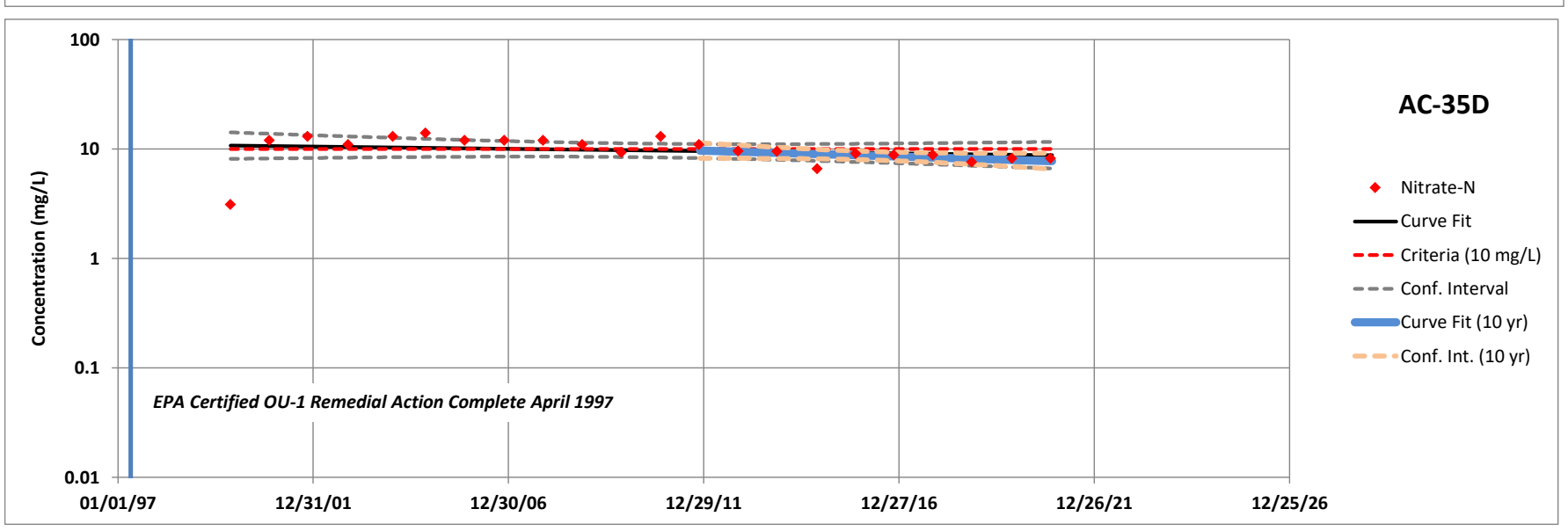
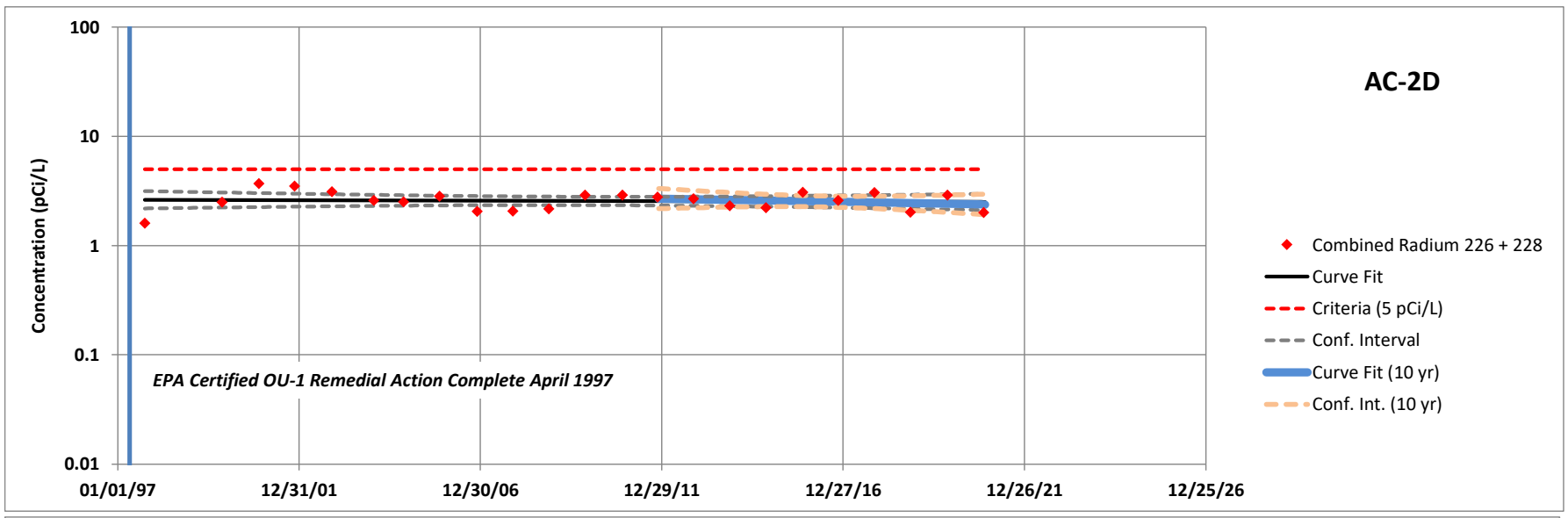
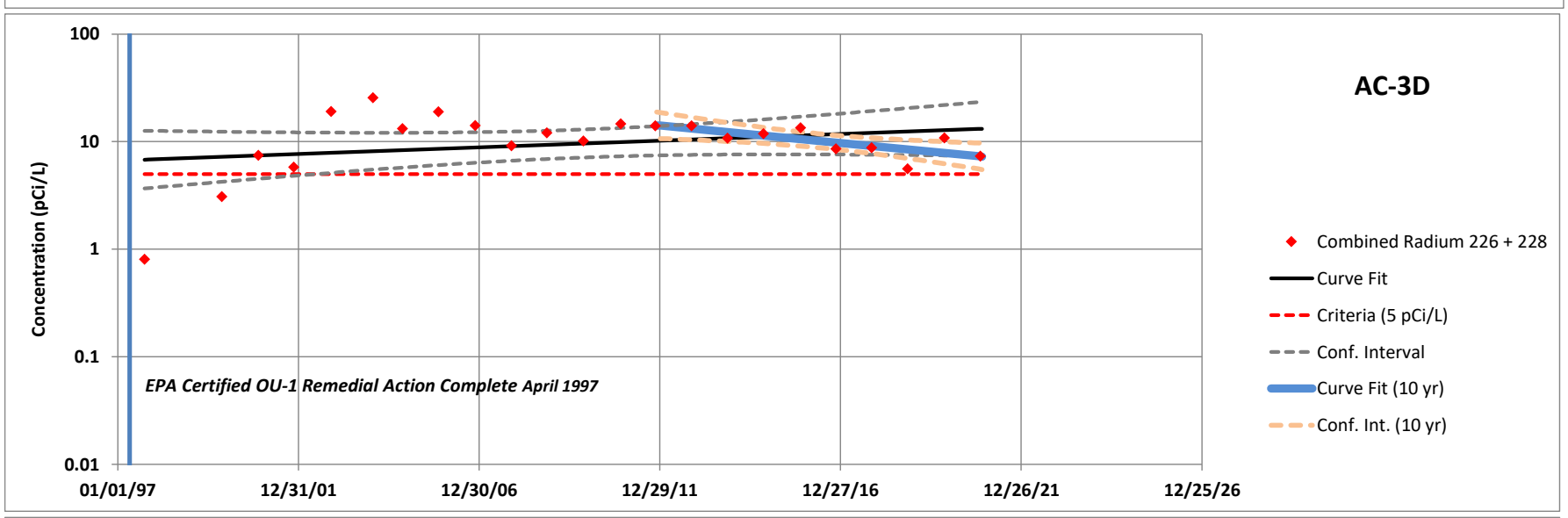



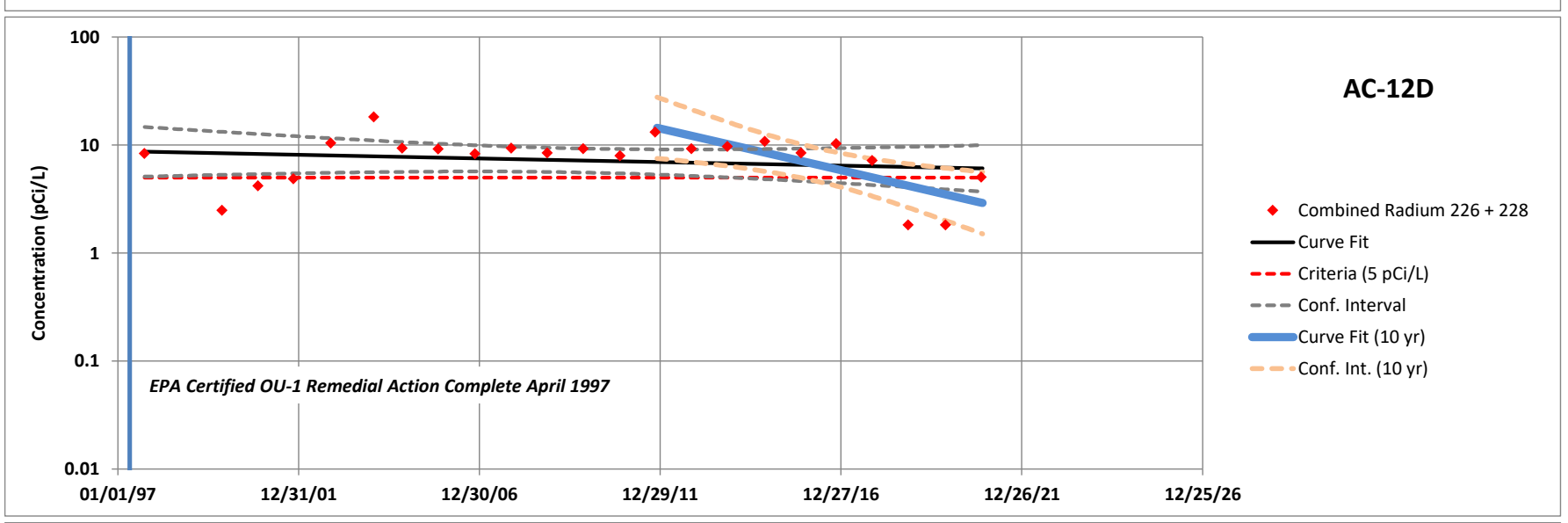
Figure 11 (Continued)

Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



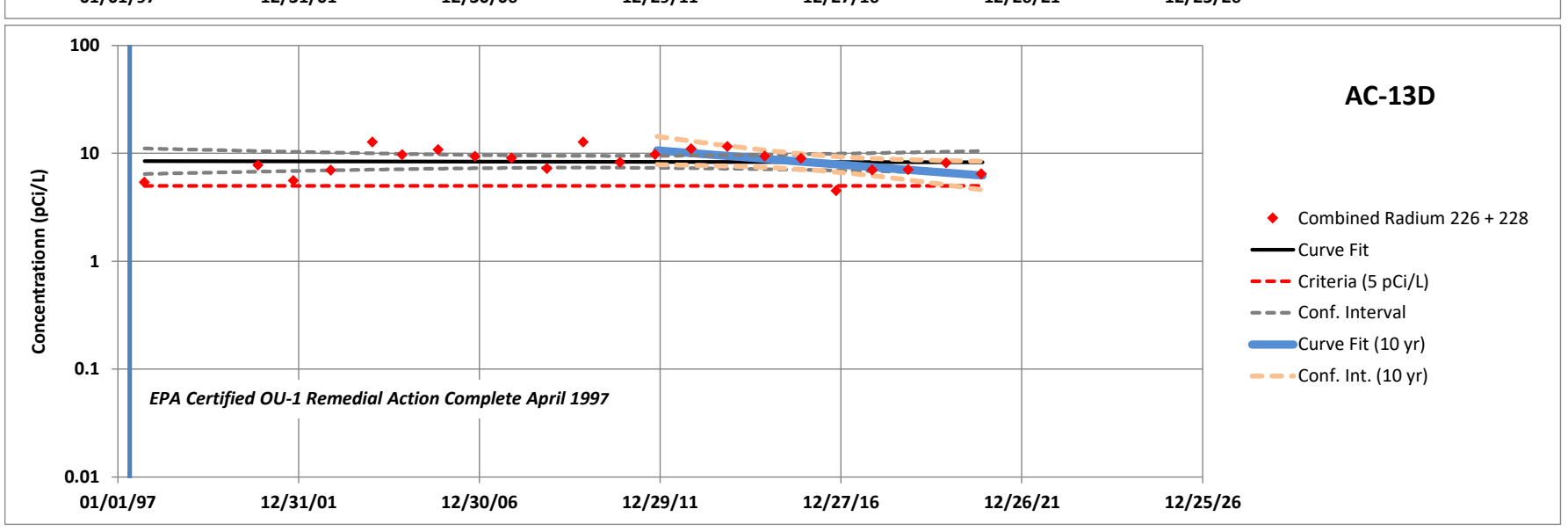
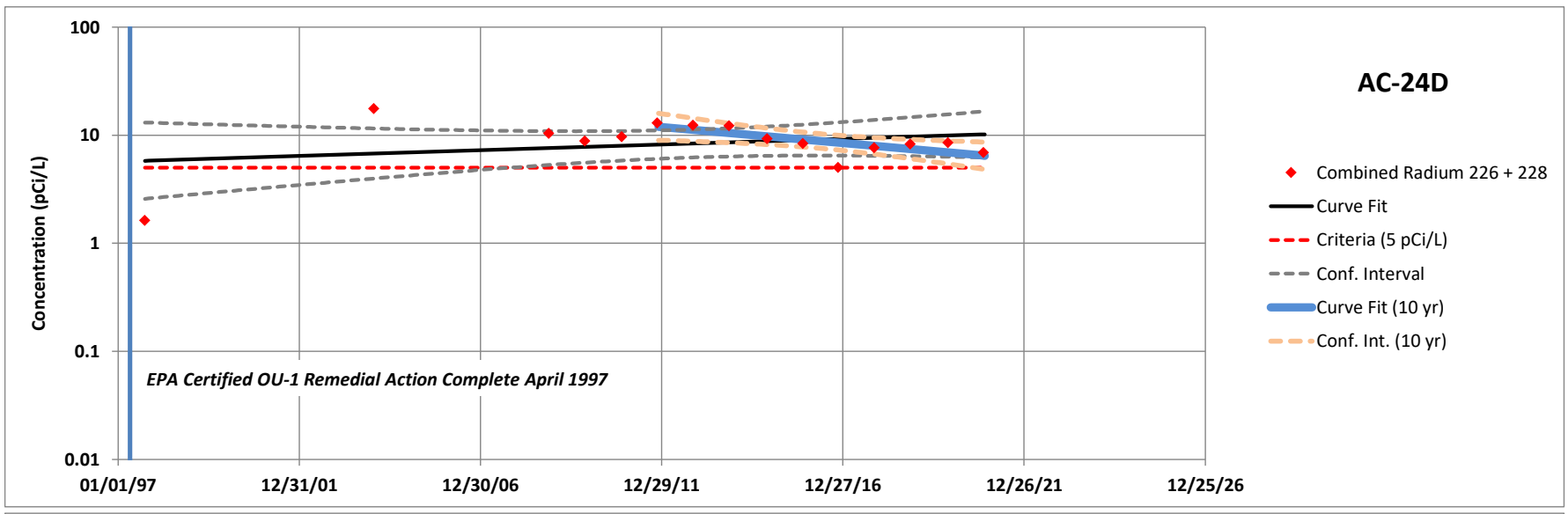
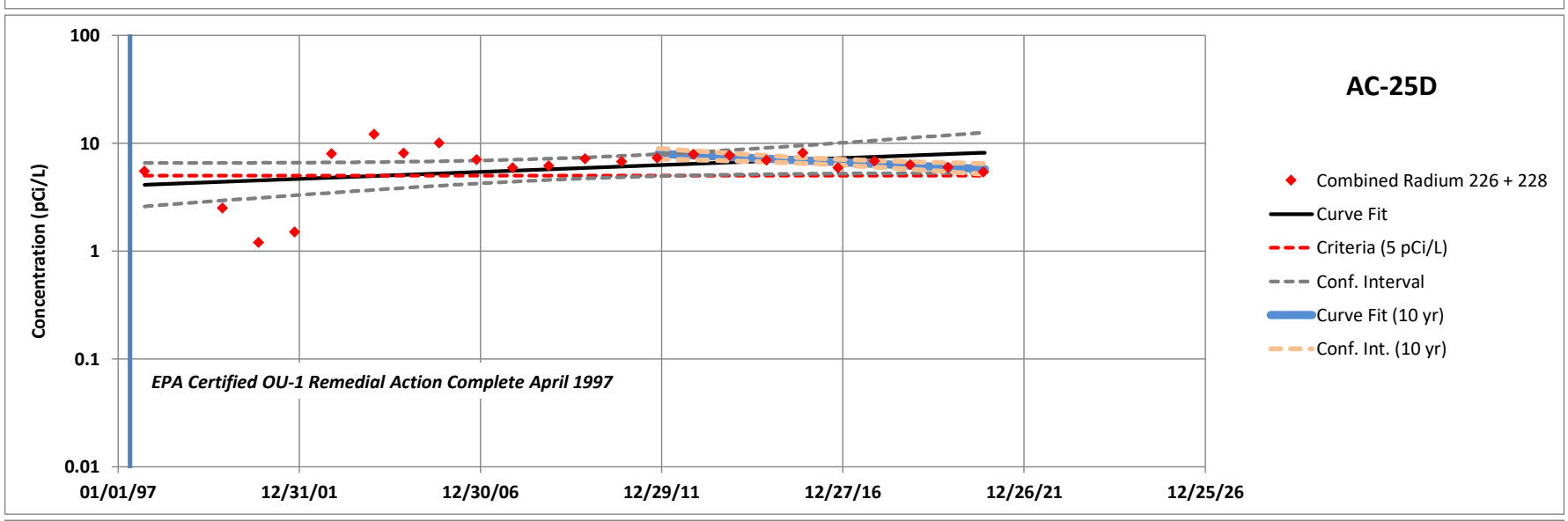



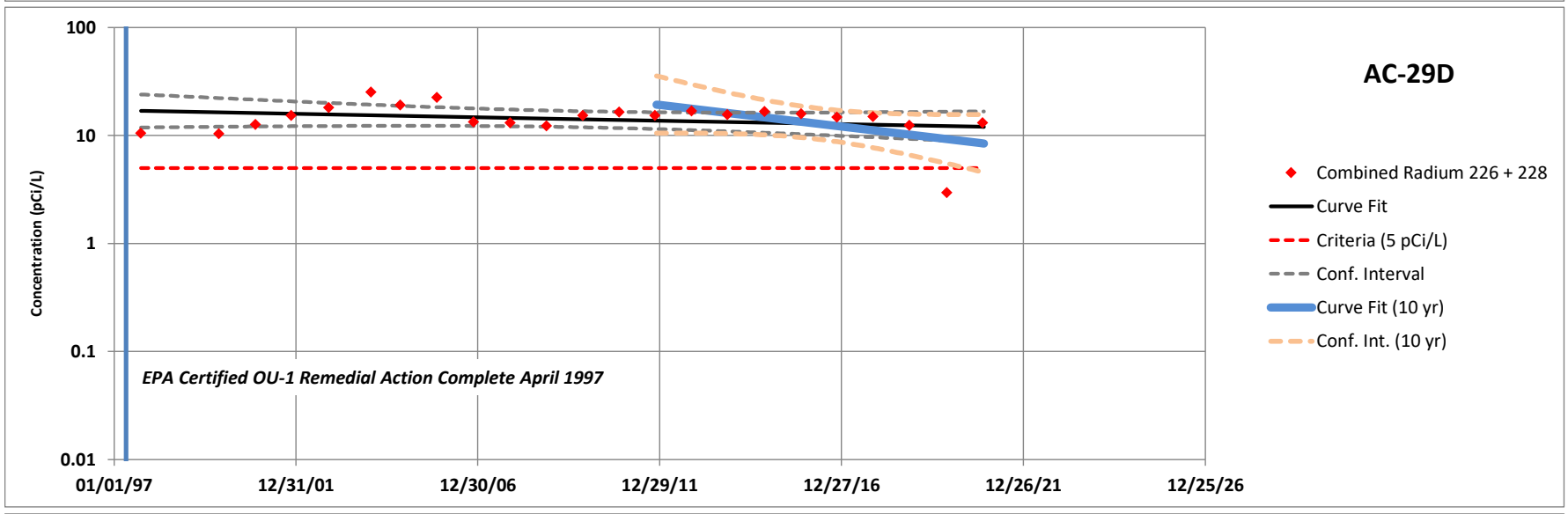
Figure 11 (Continued)

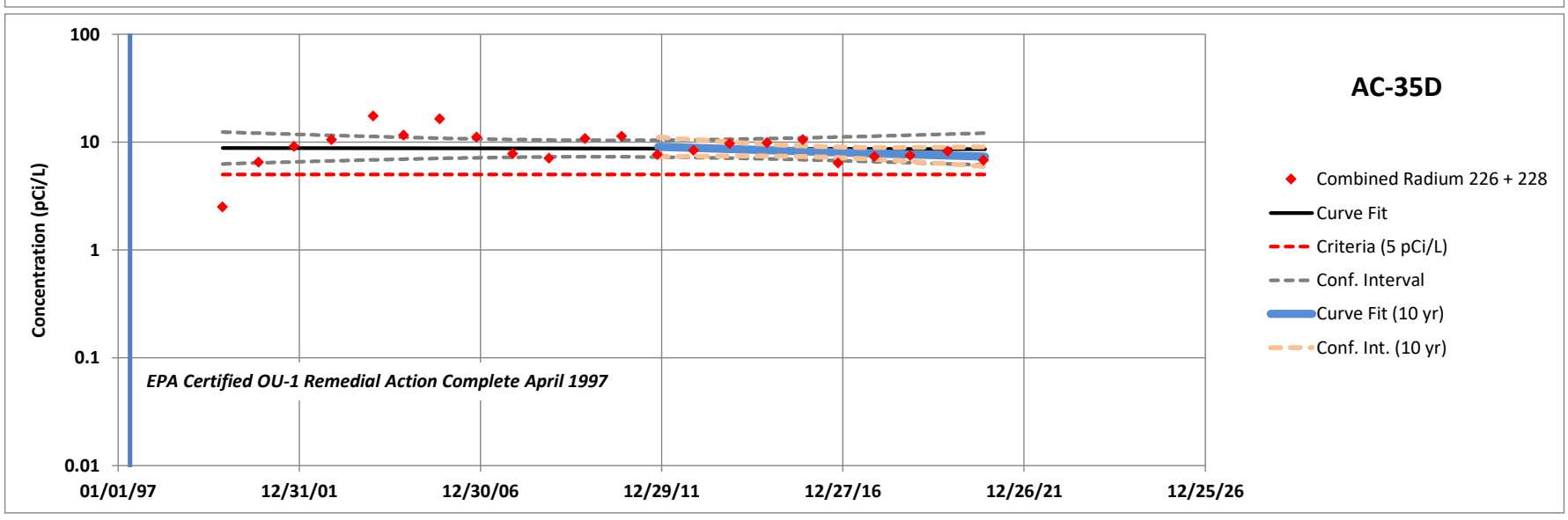
Concentration Trends Agrico Site Annual Network Wells

Agrico Site
Pensacola, Florida



# APPENDIX A

eurofins | Environment Testing America

# ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-195622-1
Client Project/Site: Agrico Pensacola - Annual

For:
AECOM
1625 Summit Lake Drive
Suite 200
Tallahassee, Florida 32317

Attn: Ms. Amy Mixon

Noël Savoie

*Authorized for release by:*
*12/24/2020 2:32:35 PM*

Noel Savoie, Project Manager I
(850)254-0107
Noel.Savoie@Eurofinset.com

# Table of Contents

## Job ID: 400-195622-1

### Laboratory: Eurofins TestAmerica, Pensacola

**Narrative**

**Job Narrative**
**400-195622-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/11/2020 7:18 AM, 11/11/2020 4:14 PM and 11/12/2020 3:33 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.1º C, 0.4º C and 19.9º C.

**HPLC/IC**
Method 300.0: The hit in the equipment blank was confirmed.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**RAD**
Method PrecSep_0: Radium 228 Prep Batch 160-489754:
Insufficient sample volume was available to perform a sample duplicate for the following samples: EQ-1 (400-195622-1), ACB-31S (400-195622-2), AC-3D (400-195622-3), AC-2S (400-195622-4), AC-2D (400-195687-1), DUP-1 (400-195687-2), AC-12D (400-195687-3), AC-29D (400-195687-4), AC-35D (400-195757-1), AC-25D (400-195757-2), AC-13D (400-195757-3) and AC-24D (400-195757-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method PrecSep-21: Radium 226 Prep Batch 160-489750:
Insufficient sample volume was available to perform a sample duplicate for the following samples: EQ-1 (400-195622-1), ACB-31S (400-195622-2), AC-3D (400-195622-3), AC-2S (400-195622-4), AC-2D (400-195687-1), DUP-1 (400-195687-2), AC-12D (400-195687-3), AC-29D (400-195687-4), AC-35D (400-195757-1), AC-25D (400-195757-2), AC-13D (400-195757-3) and AC-24D (400-195757-4). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Method Screen: Gross Alpha/Beta Prep Batch 160-490068
The gross (alpha/beta) detection goals were not met for the following samples due to a reduction of the sample size attributed to high residual mass. Analytical results are reported with the MDC achieved. EQ-1 (400-195622-1), ACB-31S (400-195622-2), AC-3D (400-195622-3), AC-2S (400-195622-4), AC-2D (400-195687-1), DUP-1 (400-195687-2), AC-12D (400-195687-3), AC-29D (400-195687-4), AC-35D (400-195757-1), AC-25D (400-195757-2), AC-13D (400-195757-3) and AC-24D (400-195757-4)

Method Screen: RAD SCREEN Prep batch: 490068
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. EQ-1 (400-195622-1), ACB-31S (400-195622-2), AC-3D (400-195622-3), AC-2S (400-195622-4), AC-2D (400-195687-1), DUP-1 (400-195687-2), AC-12D (400-195687-3), AC-29D (400-195687-4), AC-35D (400-195757-1), AC-25D (400-195757-2), AC-13D (400-195757-3) and AC-24D (400-195757-4)

Methods 904.0: Radium-228 prep batch 160-489754:
The LCS/LCSD recovered at 65% and 73% for Ra-228. The limits in our LIMS system at 75-125% reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of 61-138% per method requirements. Although there is a qualifier, the LCS passes. No further action is required. (LCS 160-489754/1-A) and (LCSD 160-489754/2-A)

Methods 904.0: Radium-228 prep batch 160-489754:
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. EQ-1 (400-195622-1), ACB-31S (400-195622-2), AC-3D (400-195622-3), AC-2S (400-195622-4), AC-2D (400-195687-1), DUP-1 (400-195687-2), AC-12D (400-195687-3), AC-29D (400-195687-4), AC-35D (400-195757-1), AC-25D (400-195757-2), AC-13D (400-195757-3), AC-24D (400-195757-4), (LCS 160-489754/1-A), (LCSD 160-489754/2-A) and (MB 160-489754/24-A)

## Job ID: 400-195622-1 (Continued)

### Laboratory: Eurofins TestAmerica, Pensacola (Continued)

Methods 903.0: 903 Prep Batch 160-489750
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. EQ-1 (400-195622-1), ACB-31S (400-195622-2), AC-3D (400-195622-3), AC-2S (400-195622-4), AC-2D (400-195687-1), DUP-1 (400-195687-2), AC-12D (400-195687-3), AC-29D (400-195687-4), AC-35D (400-195757-1), AC-25D (400-195757-2), AC-13D (400-195757-3) and AC-24D (400-195757-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
Method 353.2: The following samples were diluted to bring the concentration of target analytes within the calibration range: AC-3D (400-195622-3), AC-12D (400-195687-3), AC-29D (400-195687-4), AC-35D (400-195757-1), AC-25D (400-195757-2), AC-13D (400-195757-3) and AC-24D (400-195757-4). Elevated reporting limits (RLs) are provided.

Method 353.2: The matrix spike/matrix spike duplicate (MS/MSD) recoveries for analytical batches 511598 and 512594 were outside advisory control limits for Nitrate-Nitrite. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method SM 4500 F C: The following samples were diluted to bring the concentration of target analytes within the calibration range: AC-2S (400-195622-4), AC-29D (400-195687-4), AC-35D (400-195757-1), AC-25D (400-195757-2) and AC-24D (400-195757-4). Elevated reporting limits (RLs) are provided.

Method SM 4500 F C: The matrix spike/matrix spike duplicate for analytical batch 513080 was outside advisory control limits for Fluoride. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: AECOM
Project/Site: Agrico Pensacola - Annual

Job ID: 400-195622-1

## Client Sample ID: EQ-1 — Lab Sample ID: 400-195622-1

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2.5 | | 0.50 | | mg/L | 1 | | 300.0 | Total/NA |
| Sulfate | 1.2 | | 1.0 | | mg/L | 1 | | 300.0 | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

## Client Sample ID: ACB-31S — Lab Sample ID: 400-195622-2

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.4 | | 0.50 | | mg/L | 1 | | 300.0 | Total/NA |
| Sulfate | 17 | | 1.0 | | mg/L | 1 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 1.1 | F1 | 0.050 | | mg/L | 1 | | 353.2 | Total/NA |
| Nitrate as N | 1.1 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |

## Client Sample ID: AC-3D — Lab Sample ID: 400-195622-3

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.6 | | 0.50 | | mg/L | 1 | | 300.0 | Total/NA |
| Sulfate | 100 | | 1.0 | | mg/L | 1 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 3.0 | | 0.25 | | mg/L | 5 | | 353.2 | Total/NA |
| Nitrate as N | 3.0 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 8.2 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

## Client Sample ID: AC-2S — Lab Sample ID: 400-195622-4

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3.5 | | 0.50 | | mg/L | 1 | | 300.0 | Total/NA |
| Sulfate | 68 | | 1.0 | | mg/L | 1 | | 300.0 | Total/NA |
| Arsenic | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Nitrate Nitrite as N | 1.7 | | 0.050 | | mg/L | 1 | | 353.2 | Total/NA |
| Nitrate as N | 1.7 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 29 | | 1.0 | | mg/L | 10 | | SM 4500 F C | Total/NA |

## Client Sample ID: AC-2D — Lab Sample ID: 400-195687-1

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.8 | | 0.50 | | mg/L | 1 | | 300.0 | Total/NA |
| Sulfate | 21 | | 1.0 | | mg/L | 1 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 1.1 | | 0.050 | | mg/L | 1 | | 353.2 | Total/NA |
| Nitrate as N | 1.1 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 2.5 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

## Client Sample ID: DUP-1 — Lab Sample ID: 400-195687-2

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.8 | | 0.50 | | mg/L | 1 | | 300.0 | Total/NA |
| Sulfate | 22 | | 1.0 | | mg/L | 1 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 1.1 | | 0.050 | | mg/L | 1 | | 353.2 | Total/NA |
| Nitrate as N | 1.1 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 2.4 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

## Client Sample ID: AC-12D — Lab Sample ID: 400-195687-3

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 14 | | 0.50 | | mg/L | 1 | | 300.0 | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: AC-12D (Continued)

Lab Sample ID: 400-195687-3

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 150 | | 1.0 | | mg/L | 1 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 7.9 | F1 | 0.50 | | mg/L | 10 | | 353.2 | Total/NA |
| Nitrate as N | 7.9 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 9.1 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

## Client Sample ID: AC-29D

Lab Sample ID: 400-195687-4

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 25 | | 0.50 | | mg/L | 1 | | 300.0 | Total/NA |
| Sulfate | 170 | | 1.0 | | mg/L | 1 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 6.8 | | 0.25 | | mg/L | 5 | | 353.2 | Total/NA |
| Nitrate as N | 6.8 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 29 | | 1.0 | | mg/L | 10 | | SM 4500 F C | Total/NA |

## Client Sample ID: AC-35D

Lab Sample ID: 400-195757-1

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 230 | | 2.5 | | mg/L | 5 | | 300.0 | Total/NA |
| Sulfate | 190 | | 5.0 | | mg/L | 5 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 8.2 | | 0.25 | | mg/L | 5 | | 353.2 | Total/NA |
| Nitrate as N | 8.2 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 60 | | 1.0 | | mg/L | 10 | | SM 4500 F C | Total/NA |

## Client Sample ID: AC-25D

Lab Sample ID: 400-195757-2

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 280 | | 2.5 | | mg/L | 5 | | 300.0 | Total/NA |
| Sulfate | 110 | | 5.0 | | mg/L | 5 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 4.7 | | 0.20 | | mg/L | 4 | | 353.2 | Total/NA |
| Nitrate as N | 4.7 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 99 | | 1.0 | | mg/L | 10 | | SM 4500 F C | Total/NA |

## Client Sample ID: AC-13D

Lab Sample ID: 400-195757-3

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 17 | | 5.0 | | mg/L | 10 | | 300.0 | Total/NA |
| Sulfate | 280 | | 10 | | mg/L | 10 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 9.6 | | 0.25 | | mg/L | 5 | | 353.2 | Total/NA |
| Nitrate as N | 9.6 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 8.0 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

## Client Sample ID: AC-24D

Lab Sample ID: 400-195757-4

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 89 | | 0.50 | | mg/L | 1 | | 300.0 | Total/NA |
| Sulfate | 71 | | 1.0 | | mg/L | 1 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 4.6 | | 0.20 | | mg/L | 4 | | 353.2 | Total/NA |
| Nitrate as N | 4.6 | | 0.050 | | mg/L | 1 | | Nitrate by calc | Total/NA |
| Fluoride | 45 | | 1.0 | | mg/L | 10 | | SM 4500 F C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Sample Summary

Client: AECOM
Job ID: 400-195622-1
Project/Site: Agrico Pensacola - Annual

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Water | 11/10/20 12:30 | 11/11/20 07:18 | |
| 400-195622-2 | ACB-31S | Water | 11/10/20 13:47 | 11/11/20 07:18 | |
| 400-195622-3 | AC-3D | Water | 11/10/20 15:30 | 11/11/20 07:18 | |
| 400-195622-4 | AC-2S | Water | 11/10/20 16:30 | 11/11/20 07:18 | |
| 400-195687-1 | AC-2D | Water | 11/11/20 10:05 | 11/11/20 16:14 | |
| 400-195687-2 | DUP-1 | Water | 11/11/20 00:00 | 11/11/20 16:14 | |
| 400-195687-3 | AC-12D | Water | 11/11/20 11:40 | 11/11/20 16:14 | |
| 400-195687-4 | AC-29D | Water | 11/11/20 14:27 | 11/11/20 16:14 | |
| 400-195757-1 | AC-35D | Water | 11/12/20 08:14 | 11/12/20 15:33 | |
| 400-195757-2 | AC-25D | Water | 11/12/20 09:48 | 11/12/20 15:33 | |
| 400-195757-3 | AC-13D | Water | 11/12/20 11:41 | 11/12/20 15:33 | |
| 400-195757-4 | AC-24D | Water | 11/12/20 14:21 | 11/12/20 15:33 | |

Client: AECOM
Job ID: 400-195622-1
Project/Site: Agrico Pensacola - Annual

## Client Sample ID: EQ-1
**Lab Sample ID: 400-195622-1**
**Date Collected: 11/10/20 12:30**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **2.5** | | 0.50 | | mg/L | | | 12/06/20 00:59 | 1 |
| **Sulfate** | **1.2** | | 1.0 | | mg/L | | | 12/06/20 00:59 | 1 |

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.010 | | 0.010 | | mg/L | | 11/13/20 12:56 | 11/18/20 17:43 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | <0.050 | | 0.050 | | mg/L | | | 11/30/20 13:13 | 1 |
| Nitrate as N | <0.050 | | 0.050 | | mg/L | | | 11/11/20 18:37 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 11/19/20 15:00 | 1 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/11/20 18:37 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 5.48E-3 | U | 1.53E-1 | 1.53E-1 | 1.00E+0 | 3.04E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.24E+1* | | *40 - 110* | *11/20/20 07:59* | *12/17/20 11:16* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.50E-1 | U * | 1.94E-1 | 1.95E-1 | 1.00E+0 | 3.23E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:54 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.24E+1* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:54* | *1* |
| *Y Carrier* | *1.03E+2* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:54* | *1* |

## Client Sample ID: ACB-31S
**Lab Sample ID: 400-195622-2**
**Date Collected: 11/10/20 13:47**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **4.4** | | 0.50 | | mg/L | | | 12/06/20 01:12 | 1 |
| **Sulfate** | **17** | | 1.0 | | mg/L | | | 12/06/20 01:12 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Nitrate Nitrite as N** | **1.1** | **F1** | 0.050 | | mg/L | | | 11/30/20 13:14 | 1 |
| **Nitrate as N** | **1.1** | | 0.050 | | mg/L | | | 11/11/20 18:37 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/19/20 15:00 | 1 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/11/20 18:37 | 1 |

## Client Sample ID: ACB-31S
**Lab Sample ID: 400-195622-2**

**Date Collected: 11/10/20 13:47**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.97E-1 | U | 1.78E-1 | 1.79E-1 | 1.00E+0 | 2.72E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.18E+1* | | *40 - 110* | *11/20/20 07:59* | *12/17/20 11:16* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **1.55E+0** | * | 3.44E-1 | 3.72E-1 | 1.00E+0 | 4.14E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:54 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.18E+1* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:54* | *1* |
| *Y Carrier* | *1.04E+2* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:54* | *1* |

## Client Sample ID: AC-3D
**Lab Sample ID: 400-195622-3**

**Date Collected: 11/10/20 15:30**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **4.6** | | 0.50 | | mg/L | | | 12/06/20 01:25 | 1 |
| **Sulfate** | **100** | | 1.0 | | mg/L | | | 12/06/20 01:25 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Nitrate Nitrite as N** | **3.0** | | 0.25 | | mg/L | | | 11/20/20 18:07 | 5 |
| **Nitrate as N** | **3.0** | | 0.050 | | mg/L | | | 11/11/20 18:37 | 1 |
| **Fluoride** | **8.2** | | 0.10 | | mg/L | | | 11/19/20 15:00 | 1 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/11/20 18:37 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **1.36E+0** | | 3.24E-1 | 3.46E-1 | 1.00E+0 | 2.40E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *9.03E+1* | | *40 - 110* | *11/20/20 07:59* | *12/17/20 11:16* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **6.01E+0** | * | 5.03E-1 | 7.47E-1 | 1.00E+0 | 2.99E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:54 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *9.03E+1* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:54* | *1* |
| *Y Carrier* | *1.02E+2* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:54* | *1* |

## Client Sample ID: AC-2S
**Lab Sample ID: 400-195622-4**

**Date Collected: 11/10/20 16:30**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3.5 | | 0.50 | | mg/L | | | 12/06/20 01:37 | 1 |
| Sulfate | 68 | | 1.0 | | mg/L | | | 12/06/20 01:37 | 1 |

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.012 | | 0.010 | | mg/L | | 11/13/20 12:56 | 11/18/20 17:47 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 1.7 | | 0.050 | | mg/L | | | 11/30/20 13:17 | 1 |
| Nitrate as N | 1.7 | | 0.050 | | mg/L | | | 11/11/20 18:37 | 1 |
| Fluoride | 29 | | 1.0 | | mg/L | | | 12/03/20 14:56 | 10 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/11/20 18:37 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.23E-1 | U | 1.78E-1 | 1.78E-1 | 1.00E+0 | 3.02E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.88E+1* | | *40 - 110* | *11/20/20 07:59* | *12/17/20 11:16* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 4.06E-1 | * | 2.10E-1 | 2.13E-1 | 1.00E+0 | 3.07E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:54 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.88E+1* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:54* | *1* |
| *Y Carrier* | *1.06E+2* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:54* | *1* |

## Client Sample ID: AC-2D
**Lab Sample ID: 400-195687-1**

**Date Collected: 11/11/20 10:05**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.8 | | 0.50 | | mg/L | | | 12/06/20 01:50 | 1 |
| Sulfate | 21 | | 1.0 | | mg/L | | | 12/06/20 01:50 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 1.1 | | 0.050 | | mg/L | | | 11/20/20 17:24 | 1 |
| Nitrate as N | 1.1 | | 0.050 | | mg/L | | | 11/11/20 18:40 | 1 |
| Fluoride | 2.5 | | 0.10 | | mg/L | | | 12/03/20 14:40 | 1 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/11/20 18:40 | 1 |

## Client Sample ID: AC-2D
**Lab Sample ID: 400-195687-1**

**Date Collected: 11/11/20 10:05**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.22E+0 | | 3.40E-1 | 3.57E-1 | 1.00E+0 | 2.61E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.67E+1* | | *40 - 110* | *11/20/20 07:59* | *12/17/20 11:18* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 7.93E-1 | * | 2.57E-1 | 2.67E-1 | 1.00E+0 | 3.38E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:55 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.67E+1* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:55* | *1* |
| *Y Carrier* | *1.02E+2* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:55* | *1* |

## Client Sample ID: DUP-1
**Lab Sample ID: 400-195687-2**

**Date Collected: 11/11/20 00:00**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4.8 | | 0.50 | | mg/L | | | 12/06/20 02:03 | 1 |
| Sulfate | 22 | | 1.0 | | mg/L | | | 12/06/20 02:03 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 1.1 | | 0.050 | | mg/L | | | 11/20/20 17:29 | 1 |
| Nitrate as N | 1.1 | | 0.050 | | mg/L | | | 11/11/20 18:37 | 1 |
| Fluoride | 2.4 | | 0.10 | | mg/L | | | 12/03/20 14:31 | 1 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/11/20 18:37 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 8.44E-1 | | 2.77E-1 | 2.88E-1 | 1.00E+0 | 2.69E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.36E+1* | | *40 - 110* | *11/20/20 07:59* | *12/17/20 11:18* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.16E+0 | * | 2.90E-1 | 3.09E-1 | 1.00E+0 | 3.50E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:55 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.36E+1* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:55* | *1* |
| *Y Carrier* | *1.04E+2* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:55* | *1* |

## Client Sample ID: AC-12D
**Lab Sample ID: 400-195687-3**

**Date Collected: 11/11/20 11:40**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 14 | | 0.50 | | mg/L | | | 12/06/20 00:21 | 1 |
| Sulfate | 150 | | 1.0 | | mg/L | | | 12/06/20 00:21 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 7.9 | F1 | 0.50 | | mg/L | | | 11/20/20 17:47 | 10 |
| Nitrate as N | 7.9 | | 0.050 | | mg/L | | | 11/11/20 18:43 | 1 |
| Fluoride | 9.1 | | 0.10 | | mg/L | | | 12/03/20 14:16 | 1 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/11/20 18:43 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.49E+0 | | 3.35E-1 | 3.61E-1 | 1.00E+0 | 2.28E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.76E+1* | | *40 - 110* | *11/20/20 07:59* | *12/17/20 11:18* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 3.58E+0 | * | 4.04E-1 | 5.22E-1 | 1.00E+0 | 3.21E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:55 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.76E+1* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:55* | *1* |
| *Y Carrier* | *1.08E+2* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:55* | *1* |

## Client Sample ID: AC-29D
**Lab Sample ID: 400-195687-4**

**Date Collected: 11/11/20 14:27**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 25 | | 0.50 | | mg/L | | | 12/06/20 03:19 | 1 |
| Sulfate | 170 | | 1.0 | | mg/L | | | 12/06/20 03:19 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 6.8 | | 0.25 | | mg/L | | | 11/30/20 13:18 | 5 |
| Nitrate as N | 6.8 | | 0.050 | | mg/L | | | 11/11/20 18:43 | 1 |
| Fluoride | 29 | | 1.0 | | mg/L | | | 12/03/20 15:00 | 10 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/11/20 18:43 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.84E+0 | | 3.75E-1 | 4.10E-1 | 1.00E+0 | 2.31E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

## Client Sample ID: AC-29D
**Lab Sample ID: 400-195687-4**

**Date Collected: 11/11/20 14:27**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

| Carrier | %Yield | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 8.39E+1 | | 40 - 110 | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.13E+1 | * | 6.98E-1 | 1.25E+0 | 1.00E+0 | 3.63E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:55 | 1 |

| Carrier | %Yield | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 8.39E+1 | | 40 - 110 | 11/20/20 09:45 | 12/16/20 12:55 | 1 |
| Y Carrier | 1.05E+2 | | 40 - 110 | 11/20/20 09:45 | 12/16/20 12:55 | 1 |

## Client Sample ID: AC-35D
**Lab Sample ID: 400-195757-1**

**Date Collected: 11/12/20 08:14**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 230 | | 2.5 | | mg/L | | | 12/06/20 02:28 | 5 |
| Sulfate | 190 | | 5.0 | | mg/L | | | 12/06/20 02:28 | 5 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 8.2 | | 0.25 | | mg/L | | | 11/30/20 13:50 | 5 |
| Nitrate as N | 8.2 | | 0.050 | | mg/L | | | 11/12/20 21:08 | 1 |
| Fluoride | 60 | | 1.0 | | mg/L | | | 12/03/20 15:04 | 10 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/12/20 21:08 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 2.04E+0 | | 3.84E-1 | 4.26E-1 | 1.00E+0 | 2.23E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

| Carrier | %Yield | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 9.15E+1 | | 40 - 110 | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 4.74E+0 | * | 4.56E-1 | 6.31E-1 | 1.00E+0 | 3.46E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:56 | 1 |

| Carrier | %Yield | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 9.15E+1 | | 40 - 110 | 11/20/20 09:45 | 12/16/20 12:56 | 1 |
| Y Carrier | 1.05E+2 | | 40 - 110 | 11/20/20 09:45 | 12/16/20 12:56 | 1 |

## Client Sample ID: AC-25D
**Lab Sample ID: 400-195757-2**

**Date Collected: 11/12/20 09:48**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 280 | | 2.5 | | mg/L | | | 12/06/20 02:41 | 5 |
| Sulfate | 110 | | 5.0 | | mg/L | | | 12/06/20 02:41 | 5 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 4.7 | | 0.20 | | mg/L | | | 11/30/20 14:00 | 4 |
| Nitrate as N | 4.7 | | 0.050 | | mg/L | | | 11/12/20 21:09 | 1 |
| Fluoride | 99 | | 1.0 | | mg/L | | | 12/03/20 15:12 | 10 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/12/20 21:09 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.70E+0 | | 3.72E-1 | 4.03E-1 | 1.00E+0 | 2.39E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.03E+1* | | *40 - 110* | *11/20/20 07:59* | *12/17/20 11:18* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 3.72E+0 | * | 4.43E-1 | 5.59E-1 | 1.00E+0 | 3.68E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:56 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *8.03E+1* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:56* | *1* |
| *Y Carrier* | *1.05E+2* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 12:56* | *1* |

## Client Sample ID: AC-13D
**Lab Sample ID: 400-195757-3**

**Date Collected: 11/12/20 11:41**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 17 | | 5.0 | | mg/L | | | 12/06/20 03:57 | 10 |
| Sulfate | 280 | | 10 | | mg/L | | | 12/06/20 03:57 | 10 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 9.6 | | 0.25 | | mg/L | | | 11/30/20 13:52 | 5 |
| Nitrate as N | 9.6 | | 0.050 | | mg/L | | | 11/12/20 21:09 | 1 |
| Fluoride | 8.0 | | 0.10 | | mg/L | | | 12/03/20 15:33 | 1 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/12/20 21:09 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.57E+0 | | 3.54E-1 | 3.81E-1 | 1.00E+0 | 2.49E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

## Client Sample ID: AC-13D
**Lab Sample ID: 400-195757-3**

**Date Collected: 11/12/20 11:41**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

| Carrier | %Yield | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 8.48E+1 | | 40 - 110 | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 4.90E+0 | * | 4.89E-1 | 6.65E-1 | 1.00E+0 | 3.77E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:56 | 1 |

| Carrier | %Yield | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 8.48E+1 | | 40 - 110 | 11/20/20 09:45 | 12/16/20 12:56 | 1 |
| Y Carrier | 1.05E+2 | | 40 - 110 | 11/20/20 09:45 | 12/16/20 12:56 | 1 |

## Client Sample ID: AC-24D
**Lab Sample ID: 400-195757-4**

**Date Collected: 11/12/20 14:21**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 89 | | 0.50 | | mg/L | | | 12/06/20 02:15 | 1 |
| Sulfate | 71 | | 1.0 | | mg/L | | | 12/06/20 02:15 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 4.6 | | 0.20 | | mg/L | | | 11/30/20 14:01 | 4 |
| Nitrate as N | 4.6 | | 0.050 | | mg/L | | | 11/12/20 21:09 | 1 |
| Fluoride | 45 | | 1.0 | | mg/L | | | 12/03/20 15:54 | 10 |
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/12/20 21:09 | 1 |

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.88E+0 | | 2.69E-1 | 3.18E-1 | 1.00E+0 | 1.52E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

| Carrier | %Yield | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 8.42E+1 | | 40 - 110 | 11/20/20 07:59 | 12/17/20 11:18 | 1 |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 5.02E+0 | * | 4.89E-1 | 6.73E-1 | 1.00E+0 | 3.59E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 12:56 | 1 |

| Carrier | %Yield | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 8.42E+1 | | 40 - 110 | 11/20/20 09:45 | 12/16/20 12:56 | 1 |
| Y Carrier | 1.04E+2 | | 40 - 110 | 11/20/20 09:45 | 12/16/20 12:56 | 1 |

## Qualifiers

### HPLC/IC

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| F1 | MS and/or MSD recovery exceeds control limits. |

### Rad

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

## HPLC/IC

### Analysis Batch: 647217

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Total/NA | Water | 300.0 | |
| 400-195622-2 | ACB-31S | Total/NA | Water | 300.0 | |
| 400-195622-3 | AC-3D | Total/NA | Water | 300.0 | |
| 400-195622-4 | AC-2S | Total/NA | Water | 300.0 | |
| 400-195687-1 | AC-2D | Total/NA | Water | 300.0 | |
| 400-195687-2 | DUP-1 | Total/NA | Water | 300.0 | |
| 400-195687-3 | AC-12D | Total/NA | Water | 300.0 | |
| 400-195687-4 | AC-29D | Total/NA | Water | 300.0 | |
| 400-195757-1 | AC-35D | Total/NA | Water | 300.0 | |
| 400-195757-2 | AC-25D | Total/NA | Water | 300.0 | |
| 400-195757-3 | AC-13D | Total/NA | Water | 300.0 | |
| 400-195757-4 | AC-24D | Total/NA | Water | 300.0 | |
| MB 680-647217/2 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 680-647217/3 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 680-647217/4 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| 400-195687-3 MS | AC-12D | Total/NA | Water | 300.0 | |
| 400-195687-3 MSD | AC-12D | Total/NA | Water | 300.0 | |
| 400-195687-4 MS | AC-29D | Total/NA | Water | 300.0 | |
| 400-195687-4 MSD | AC-29D | Total/NA | Water | 300.0 | |

## Metals

### Prep Batch: 510645

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Total Recoverable | Water | 3005A | |
| 400-195622-4 | AC-2S | Total Recoverable | Water | 3005A | |
| MB 400-510645/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 400-510645/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 511284

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Total Recoverable | Water | 6010C | 510645 |
| 400-195622-4 | AC-2S | Total Recoverable | Water | 6010C | 510645 |
| MB 400-510645/1-A | Method Blank | Total Recoverable | Water | 6010C | 510645 |
| LCS 400-510645/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 510645 |

## General Chemistry

### Analysis Batch: 510367

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Total/NA | Water | SM 4500 NO2 B | |
| 400-195622-2 | ACB-31S | Total/NA | Water | SM 4500 NO2 B | |
| 400-195622-3 | AC-3D | Total/NA | Water | SM 4500 NO2 B | |
| 400-195622-4 | AC-2S | Total/NA | Water | SM 4500 NO2 B | |
| 400-195687-1 | AC-2D | Total/NA | Water | SM 4500 NO2 B | |
| 400-195687-2 | DUP-1 | Total/NA | Water | SM 4500 NO2 B | |
| 400-195687-3 | AC-12D | Total/NA | Water | SM 4500 NO2 B | |
| 400-195687-4 | AC-29D | Total/NA | Water | SM 4500 NO2 B | |
| MB 400-510367/6 | Method Blank | Total/NA | Water | SM 4500 NO2 B | |
| LCS 400-510367/7 | Lab Control Sample | Total/NA | Water | SM 4500 NO2 B | |
| MRL 400-510367/3 | Lab Control Sample | Total/NA | Water | SM 4500 NO2 B | |
| 400-195687-3 MS | AC-12D | Total/NA | Water | SM 4500 NO2 B | |

## General Chemistry (Continued)

### Analysis Batch: 510367 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195687-3 MSD | AC-12D | Total/NA | Water | SM 4500 NO2 B | |

### Analysis Batch: 510573

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195757-1 | AC-35D | Total/NA | Water | SM 4500 NO2 B | |
| 400-195757-2 | AC-25D | Total/NA | Water | SM 4500 NO2 B | |
| 400-195757-3 | AC-13D | Total/NA | Water | SM 4500 NO2 B | |
| 400-195757-4 | AC-24D | Total/NA | Water | SM 4500 NO2 B | |
| MB 400-510573/5 | Method Blank | Total/NA | Water | SM 4500 NO2 B | |
| LCS 400-510573/17 | Lab Control Sample | Total/NA | Water | SM 4500 NO2 B | |
| MRL 400-510573/3 | Lab Control Sample | Total/NA | Water | SM 4500 NO2 B | |
| 400-195757-1 MS | AC-35D | Total/NA | Water | SM 4500 NO2 B | |
| 400-195757-1 MSD | AC-35D | Total/NA | Water | SM 4500 NO2 B | |

### Analysis Batch: 511410

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Total/NA | Water | SM 4500 F C | |
| 400-195622-2 | ACB-31S | Total/NA | Water | SM 4500 F C | |
| 400-195622-3 | AC-3D | Total/NA | Water | SM 4500 F C | |
| MB 400-511410/2 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 400-511410/36 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 511571

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Total/NA | Water | Nitrate by calc | |
| 400-195622-2 | ACB-31S | Total/NA | Water | Nitrate by calc | |
| 400-195622-3 | AC-3D | Total/NA | Water | Nitrate by calc | |
| 400-195622-4 | AC-2S | Total/NA | Water | Nitrate by calc | |
| 400-195687-1 | AC-2D | Total/NA | Water | Nitrate by calc | |
| 400-195687-2 | DUP-1 | Total/NA | Water | Nitrate by calc | |
| 400-195687-3 | AC-12D | Total/NA | Water | Nitrate by calc | |
| 400-195687-4 | AC-29D | Total/NA | Water | Nitrate by calc | |

### Analysis Batch: 511598

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-3 | AC-3D | Total/NA | Water | 353.2 | |
| 400-195687-1 | AC-2D | Total/NA | Water | 353.2 | |
| 400-195687-2 | DUP-1 | Total/NA | Water | 353.2 | |
| 400-195687-3 | AC-12D | Total/NA | Water | 353.2 | |
| MB 400-511598/48 | Method Blank | Total/NA | Water | 353.2 | |
| LCS 400-511598/49 | Lab Control Sample | Total/NA | Water | 353.2 | |
| MRL 400-511598/6 | Lab Control Sample | Total/NA | Water | 353.2 | |
| 400-195687-3 MS | AC-12D | Total/NA | Water | 353.2 | |
| 400-195687-3 MSD | AC-12D | Total/NA | Water | 353.2 | |

### Analysis Batch: 512594

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Total/NA | Water | 353.2 | |
| 400-195622-2 | ACB-31S | Total/NA | Water | 353.2 | |
| 400-195622-4 | AC-2S | Total/NA | Water | 353.2 | |
| 400-195687-4 | AC-29D | Total/NA | Water | 353.2 | |

## General Chemistry (Continued)

### Analysis Batch: 512594 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195757-1 | AC-35D | Total/NA | Water | 353.2 | |
| 400-195757-2 | AC-25D | Total/NA | Water | 353.2 | |
| 400-195757-3 | AC-13D | Total/NA | Water | 353.2 | |
| 400-195757-4 | AC-24D | Total/NA | Water | 353.2 | |
| MB 400-512594/14 | Method Blank | Total/NA | Water | 353.2 | |
| LCS 400-512594/15 | Lab Control Sample | Total/NA | Water | 353.2 | |
| MRL 400-512594/13 | Lab Control Sample | Total/NA | Water | 353.2 | |
| 400-195622-2 MS | ACB-31S | Total/NA | Water | 353.2 | |
| 400-195622-2 MSD | ACB-31S | Total/NA | Water | 353.2 | |

### Analysis Batch: 513080

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-4 | AC-2S | Total/NA | Water | SM 4500 F C | |
| 400-195687-1 | AC-2D | Total/NA | Water | SM 4500 F C | |
| 400-195687-2 | DUP-1 | Total/NA | Water | SM 4500 F C | |
| 400-195687-3 | AC-12D | Total/NA | Water | SM 4500 F C | |
| 400-195687-4 | AC-29D | Total/NA | Water | SM 4500 F C | |
| 400-195757-1 | AC-35D | Total/NA | Water | SM 4500 F C | |
| 400-195757-2 | AC-25D | Total/NA | Water | SM 4500 F C | |
| 400-195757-3 | AC-13D | Total/NA | Water | SM 4500 F C | |
| 400-195757-4 | AC-24D | Total/NA | Water | SM 4500 F C | |
| MB 400-513080/5 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 400-513080/9 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 400-195687-3 MS | AC-12D | Total/NA | Water | SM 4500 F C | |
| 400-195687-3 MSD | AC-12D | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 513558

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195687-3 MS | AC-12D | Total/NA | Water | Nitrate by calc | |
| 400-195687-3 MSD | AC-12D | Total/NA | Water | Nitrate by calc | |

### Analysis Batch: 514344

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195757-1 | AC-35D | Total/NA | Water | Nitrate by calc | |
| 400-195757-2 | AC-25D | Total/NA | Water | Nitrate by calc | |
| 400-195757-3 | AC-13D | Total/NA | Water | Nitrate by calc | |
| 400-195757-4 | AC-24D | Total/NA | Water | Nitrate by calc | |

## Rad

### Prep Batch: 489750

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Total/NA | Water | PrecSep-21 | |
| 400-195622-2 | ACB-31S | Total/NA | Water | PrecSep-21 | |
| 400-195622-3 | AC-3D | Total/NA | Water | PrecSep-21 | |
| 400-195622-4 | AC-2S | Total/NA | Water | PrecSep-21 | |
| 400-195687-1 | AC-2D | Total/NA | Water | PrecSep-21 | |
| 400-195687-2 | DUP-1 | Total/NA | Water | PrecSep-21 | |
| 400-195687-3 | AC-12D | Total/NA | Water | PrecSep-21 | |
| 400-195687-4 | AC-29D | Total/NA | Water | PrecSep-21 | |
| 400-195757-1 | AC-35D | Total/NA | Water | PrecSep-21 | |

## Rad (Continued)

### Prep Batch: 489750 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195757-2 | AC-25D | Total/NA | Water | PrecSep-21 | |
| 400-195757-3 | AC-13D | Total/NA | Water | PrecSep-21 | |
| 400-195757-4 | AC-24D | Total/NA | Water | PrecSep-21 | |
| MB 160-489750/24-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-489750/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| LCSD 160-489750/2-A | Lab Control Sample Dup | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 489754

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195622-1 | EQ-1 | Total/NA | Water | PrecSep_0 | |
| 400-195622-2 | ACB-31S | Total/NA | Water | PrecSep_0 | |
| 400-195622-3 | AC-3D | Total/NA | Water | PrecSep_0 | |
| 400-195622-4 | AC-2S | Total/NA | Water | PrecSep_0 | |
| 400-195687-1 | AC-2D | Total/NA | Water | PrecSep_0 | |
| 400-195687-2 | DUP-1 | Total/NA | Water | PrecSep_0 | |
| 400-195687-3 | AC-12D | Total/NA | Water | PrecSep_0 | |
| 400-195687-4 | AC-29D | Total/NA | Water | PrecSep_0 | |
| 400-195757-1 | AC-35D | Total/NA | Water | PrecSep_0 | |
| 400-195757-2 | AC-25D | Total/NA | Water | PrecSep_0 | |
| 400-195757-3 | AC-13D | Total/NA | Water | PrecSep_0 | |
| 400-195757-4 | AC-24D | Total/NA | Water | PrecSep_0 | |
| MB 160-489754/24-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-489754/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| LCSD 160-489754/2-A | Lab Control Sample Dup | Total/NA | Water | PrecSep_0 | |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 680-647217/2**
**Matrix: Water**
**Analysis Batch: 647217**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <0.50 | | 0.50 | | mg/L | | | 12/05/20 15:13 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 12/05/20 15:13 | 1 |

**Lab Sample ID: LCS 680-647217/3**
**Matrix: Water**
**Analysis Batch: 647217**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 10.0 | 9.83 | | mg/L | | 98 | 90 - 110 |
| Sulfate | 10.0 | 10.7 | | mg/L | | 107 | 90 - 110 |

**Lab Sample ID: LCSD 680-647217/4**
**Matrix: Water**
**Analysis Batch: 647217**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10.0 | 9.85 | | mg/L | | 98 | 90 - 110 | 0 | 15 |
| Sulfate | 10.0 | 10.9 | | mg/L | | 109 | 90 - 110 | 1 | 15 |

**Lab Sample ID: 400-195687-3 MS**
**Matrix: Water**
**Analysis Batch: 647217**

**Client Sample ID: AC-12D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 14 | | 10.0 | 23.4 | | mg/L | | 98 | 80 - 120 |
| Sulfate | 150 | | 10.0 | 164 | 4 | mg/L | | 88 | 80 - 120 |

**Lab Sample ID: 400-195687-3 MSD**
**Matrix: Water**
**Analysis Batch: 647217**

**Client Sample ID: AC-12D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 14 | | 10.0 | 23.6 | | mg/L | | 100 | 80 - 120 | 1 | 15 |
| Sulfate | 150 | | 10.0 | 165 | 4 | mg/L | | 96 | 80 - 120 | 1 | 15 |

**Lab Sample ID: 400-195687-4 MS**
**Matrix: Water**
**Analysis Batch: 647217**

**Client Sample ID: AC-29D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 25 | | 10.0 | 34.5 | | mg/L | | 98 | 80 - 120 |
| Sulfate | 170 | | 10.0 | 177 | 4 | mg/L | | 81 | 80 - 120 |

**Lab Sample ID: 400-195687-4 MSD**
**Matrix: Water**
**Analysis Batch: 647217**

**Client Sample ID: AC-29D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 25 | | 10.0 | 34.6 | | mg/L | | 99 | 80 - 120 | 0 | 15 |
| Sulfate | 170 | | 10.0 | 177 | 4 | mg/L | | 83 | 80 - 120 | 0 | 15 |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 400-510645/1-A**
**Matrix: Water**
**Analysis Batch: 511284**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 510645**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.010 | | 0.010 | | mg/L | | 11/13/20 12:56 | 11/18/20 16:00 | 1 |

**Lab Sample ID: LCS 400-510645/2-A**
**Matrix: Water**
**Analysis Batch: 511284**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 510645**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 1.00 | 1.05 | | mg/L | | 105 | 80 - 120 |

## Method: 353.2 - Nitrogen, Nitrate-Nitrite

**Lab Sample ID: MB 400-511598/48**
**Matrix: Water**
**Analysis Batch: 511598**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | <0.050 | | 0.050 | | mg/L | | | 11/20/20 17:06 | 1 |

**Lab Sample ID: LCS 400-511598/49**
**Matrix: Water**
**Analysis Batch: 511598**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 0.500 | 0.512 | | mg/L | | 102 | 90 - 110 |

**Lab Sample ID: MRL 400-511598/6**
**Matrix: Water**
**Analysis Batch: 511598**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 0.0500 | <0.050 | | mg/L | | 52 | 50 - 150 |

**Lab Sample ID: 400-195687-3 MS**
**Matrix: Water**
**Analysis Batch: 511598**

**Client Sample ID: AC-12D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 7.9 | F1 | 10.0 | 8.99 | F1 | mg/L | | 11 | 90 - 110 |

**Lab Sample ID: 400-195687-3 MSD**
**Matrix: Water**
**Analysis Batch: 511598**

**Client Sample ID: AC-12D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 7.9 | F1 | 10.0 | 8.75 | F1 | mg/L | | 9 | 90 - 110 | 3 | 4 |

## Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

**Lab Sample ID: MB 400-512594/14**
**Matrix: Water**
**Analysis Batch: 512594**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | <0.050 | | 0.050 | | mg/L | | | 11/30/20 13:01 | 1 |

**Lab Sample ID: LCS 400-512594/15**
**Matrix: Water**
**Analysis Batch: 512594**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 0.500 | 0.538 | | mg/L | | 108 | 90 - 110 |

**Lab Sample ID: MRL 400-512594/13**
**Matrix: Water**
**Analysis Batch: 512594**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 0.0500 | 0.0510 | | mg/L | | 102 | 50 - 150 |

**Lab Sample ID: 400-195622-2 MS**
**Matrix: Water**
**Analysis Batch: 512594**

**Client Sample ID: ACB-31S**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 1.1 | F1 | 1.00 | 1.82 | F1 | mg/L | | 77 | 90 - 110 |

**Lab Sample ID: 400-195622-2 MSD**
**Matrix: Water**
**Analysis Batch: 512594**

**Client Sample ID: ACB-31S**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate Nitrite as N | 1.1 | F1 | 1.00 | 1.86 | F1 | mg/L | | 81 | 90 - 110 | 2 | 4 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 400-511410/2**
**Matrix: Water**
**Analysis Batch: 511410**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/19/20 15:00 | 1 |

**Lab Sample ID: LCS 400-511410/36**
**Matrix: Water**
**Analysis Batch: 511410**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 4.00 | 4.33 | | mg/L | | 108 | 90 - 110 |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: MB 400-513080/5**
**Matrix: Water**
**Analysis Batch: 513080**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 12/03/20 14:02 | 1 |

**Lab Sample ID: LCS 400-513080/9**
**Matrix: Water**
**Analysis Batch: 513080**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 4.00 | 3.67 | | mg/L | | 92 | 90 - 110 |

**Lab Sample ID: 400-195687-3 MS**
**Matrix: Water**
**Analysis Batch: 513080**

**Client Sample ID: AC-12D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 9.1 | | 1.00 | 9.67 | 4 | mg/L | | 58 | 75 - 125 |

**Lab Sample ID: 400-195687-3 MSD**
**Matrix: Water**
**Analysis Batch: 513080**

**Client Sample ID: AC-12D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 9.1 | | 1.00 | 9.87 | 4 | mg/L | | 78 | 75 - 125 | 2 | 4 |

## Method: SM 4500 NO2 B - Nitrogen, Nitrite

**Lab Sample ID: MB 400-510367/6**
**Matrix: Water**
**Analysis Batch: 510367**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/11/20 18:37 | 1 |

**Lab Sample ID: LCS 400-510367/7**
**Matrix: Water**
**Analysis Batch: 510367**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.300 | 0.312 | | mg/L | | 104 | 90 - 110 |

**Lab Sample ID: MRL 400-510367/3**
**Matrix: Water**
**Analysis Batch: 510367**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Nitrite as N | 0.100 | <0.10 | | mg/L | | 99 | 50 - 150 |

## Method: SM 4500 NO2 B - Nitrogen, Nitrite (Continued)

**Lab Sample ID: 400-195687-3 MS**
**Matrix: Water**
**Analysis Batch: 510367**

**Client Sample ID: AC-12D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | <0.10 | | 0.200 | 0.201 | | mg/L | | 91 | 80 - 118 | | |

**Lab Sample ID: 400-195687-3 MSD**
**Matrix: Water**
**Analysis Batch: 510367**

**Client Sample ID: AC-12D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | <0.10 | | 0.200 | 0.202 | | mg/L | | 91 | 80 - 118 | 1 | 9 |

**Lab Sample ID: MB 400-510573/5**
**Matrix: Water**
**Analysis Batch: 510573**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | <0.10 | | 0.10 | | mg/L | | | 11/12/20 21:08 | 1 |

**Lab Sample ID: LCS 400-510573/17**
**Matrix: Water**
**Analysis Batch: 510573**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | | | 0.300 | 0.270 | | mg/L | | 90 | 90 - 110 | | |

**Lab Sample ID: MRL 400-510573/3**
**Matrix: Water**
**Analysis Batch: 510573**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | | | 0.100 | <0.10 | | mg/L | | 82 | 50 - 150 | | |

**Lab Sample ID: 400-195757-1 MS**
**Matrix: Water**
**Analysis Batch: 510573**

**Client Sample ID: AC-35D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | <0.10 | | 0.200 | 0.185 | | mg/L | | 93 | 80 - 118 | | |

**Lab Sample ID: 400-195757-1 MSD**
**Matrix: Water**
**Analysis Batch: 510573**

**Client Sample ID: AC-35D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrite as N | <0.10 | | 0.200 | 0.186 | | mg/L | | 93 | 80 - 118 | 1 | 9 |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-489750/24-A**
**Matrix: Water**
**Analysis Batch: 492301**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 489750**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -2.044E-2 | U | 1.15E-1 | 1.15E-1 | 1.00E+0 | 2.45E-1 | pCi/L | 11/20/20 07:59 | 12/17/20 16:21 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *9.06E+1* | | *40 - 110* | *11/20/20 07:59* | *12/17/20 16:21* | *1* |

**Lab Sample ID: LCS 160-489750/1-A**
**Matrix: Water**
**Analysis Batch: 492601**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 489750**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 1.13E+1 | 1.027E+1 | | 1.12E+0 | 1.00E+0 | 1.70E-1 | pCi/L | 91 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *9.73E+1* | | *40 - 110* |

**Lab Sample ID: LCSD 160-489750/2-A**
**Matrix: Water**
**Analysis Batch: 492601**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 489750**

| Analyte | | | Spike Added | LCSD Result | LCSD Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | DER | DER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 1.13E+1 | 1.022E+1 | | 1.12E+0 | 1.00E+0 | 1.81E-1 | pCi/L | 90 | 75 - 125 | 6.47 E-2 | 3 |

| *Carrier* | *LCSD %Yield* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *8.94E+1* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-489754/24-A**
**Matrix: Water**
**Analysis Batch: 492108**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 489754**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.030E-1 | U | 2.19E-1 | 2.19E-1 | 1.00E+0 | 3.73E-1 | pCi/L | 11/20/20 09:45 | 12/16/20 13:12 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *9.06E+1* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 13:12* | *1* |
| *Y Carrier* | *1.08E+2* | | *40 - 110* | *11/20/20 09:45* | *12/16/20 13:12* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-489754/1-A**
**Matrix: Water**
**Analysis Batch: 492106**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 489754**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 7.58E+0 | 4.898E+0 | * | 6.25E-1 | 1.00E+0 | 2.94E-1 | pCi/L | 65 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *9.73E+1* | | *40 - 110* |
| *Y Carrier* | *1.08E+2* | | *40 - 110* |

**Lab Sample ID: LCSD 160-489754/2-A**
**Matrix: Water**
**Analysis Batch: 492106**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 489754**

| Analyte | | | Spike Added | LCSD Result | LCSD Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | DER | DER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 7.58E+0 | 5.567E+0 | * | 7.04E-1 | 1.00E+0 | 2.79E-1 | pCi/L | 73 | 75 - 125 | 1.42 E+0 | 3 |

| *Carrier* | *LCSD %Yield* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *8.94E+1* | | *40 - 110* |
| *Y Carrier* | *1.04E+2* | | *40 - 110* |

## Client Sample ID: EQ-1
**Lab Sample ID: 400-195622-1**

**Date Collected: 11/10/20 12:30**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 00:59 | UI | TAL SAV |
| Total Recoverable | Prep | 3005A | | | 50 mL | 50 mL | 510645 | 11/13/20 12:56 | KWN | TAL PEN |
| Total Recoverable | Analysis | 6010C | | 1 | | | 511284 | 11/18/20 17:43 | GESP | TAL PEN |
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 512594 | 11/30/20 13:13 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 511571 | 11/11/20 18:37 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 511410 | 11/19/20 15:00 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:37 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 999.56 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:16 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 999.56 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:54 | CMM | TAL SL |

## Client Sample ID: ACB-31S
**Lab Sample ID: 400-195622-2**

**Date Collected: 11/10/20 13:47**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 01:12 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 512594 | 11/30/20 13:14 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 511571 | 11/11/20 18:37 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 511410 | 11/19/20 15:00 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:37 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.10 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:16 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.10 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:54 | CMM | TAL SL |

## Client Sample ID: AC-3D
**Lab Sample ID: 400-195622-3**

**Date Collected: 11/10/20 15:30**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 01:25 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 5 | 10 mL | 10 mL | 511598 | 11/20/20 18:07 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 511571 | 11/11/20 18:37 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 511410 | 11/19/20 15:00 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:37 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.03 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:16 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.03 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:54 | CMM | TAL SL |

## Client Sample ID: AC-2S
**Lab Sample ID: 400-195622-4**

**Date Collected: 11/10/20 16:30**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 01:37 | UI | TAL SAV |
| Total Recoverable | Prep | 3005A | | | 50 mL | 50 mL | 510645 | 11/13/20 12:56 | KWN | TAL PEN |
| Total Recoverable | Analysis | 6010C | | 1 | | | 511284 | 11/18/20 17:47 | GESP | TAL PEN |
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 512594 | 11/30/20 13:17 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 511571 | 11/11/20 18:37 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 10 | 10 mL | 10 mL | 513080 | 12/03/20 14:56 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:37 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.45 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:16 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.45 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:54 | CMM | TAL SL |

## Client Sample ID: AC-2D
**Lab Sample ID: 400-195687-1**

**Date Collected: 11/11/20 10:05**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 01:50 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 511598 | 11/20/20 17:24 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 511571 | 11/11/20 18:40 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:40 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:40 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.18 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:18 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.18 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:55 | CMM | TAL SL |

## Client Sample ID: DUP-1
**Lab Sample ID: 400-195687-2**

**Date Collected: 11/11/20 00:00**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 02:03 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 511598 | 11/20/20 17:29 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 511571 | 11/11/20 18:37 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:31 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:37 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.79 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:18 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.79 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:55 | CMM | TAL SL |

## Client Sample ID: AC-12D
**Lab Sample ID: 400-195687-3**

**Date Collected: 11/11/20 11:40**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 00:21 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 10 | 10 mL | 10 mL | 511598 | 11/20/20 17:47 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 511571 | 11/11/20 18:43 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:16 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:43 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.11 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:18 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.11 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:55 | CMM | TAL SL |

## Client Sample ID: AC-29D
**Lab Sample ID: 400-195687-4**

**Date Collected: 11/11/20 14:27**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 03:19 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 5 | 10 mL | 10 mL | 512594 | 11/30/20 13:18 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 511571 | 11/11/20 18:43 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 10 | 10 mL | 10 mL | 513080 | 12/03/20 15:00 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:43 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.26 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:18 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.26 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:55 | CMM | TAL SL |

## Client Sample ID: AC-35D
**Lab Sample ID: 400-195757-1**

**Date Collected: 11/12/20 08:14**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 5 mL | 5 mL | 647217 | 12/06/20 02:28 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 5 | 10 mL | 10 mL | 512594 | 11/30/20 13:50 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 514344 | 11/12/20 21:08 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 10 | 10 mL | 10 mL | 513080 | 12/03/20 15:04 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510573 | 11/12/20 21:08 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.63 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:18 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.63 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:56 | CMM | TAL SL |

## Client Sample ID: AC-25D
**Lab Sample ID: 400-195757-2**

**Date Collected: 11/12/20 09:48**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 5 mL | 5 mL | 647217 | 12/06/20 02:41 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 4 | 10 mL | 10 mL | 512594 | 11/30/20 14:00 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 514344 | 11/12/20 21:09 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 10 | 10 mL | 10 mL | 513080 | 12/03/20 15:12 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510573 | 11/12/20 21:09 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.32 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:18 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.32 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:56 | CMM | TAL SL |

## Client Sample ID: AC-13D
**Lab Sample ID: 400-195757-3**

**Date Collected: 11/12/20 11:41**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 10 | 5 mL | 5 mL | 647217 | 12/06/20 03:57 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 5 | 10 mL | 10 mL | 512594 | 11/30/20 13:52 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 514344 | 11/12/20 21:09 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 15:33 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510573 | 11/12/20 21:09 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 1000.38 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 1.0 mL | 1.0 mL | 492301 | 12/17/20 11:18 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 1000.38 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:56 | CMM | TAL SL |

## Client Sample ID: AC-24D
**Lab Sample ID: 400-195757-4**

**Date Collected: 11/12/20 14:21**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 02:15 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 4 | 10 mL | 10 mL | 512594 | 11/30/20 14:01 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 514344 | 11/12/20 21:09 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 10 | 10 mL | 10 mL | 513080 | 12/03/20 15:54 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510573 | 11/12/20 21:09 | DN1 | TAL PEN |
| Total/NA | Prep | PrecSep-21 | | | 999.28 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 492301 | 12/17/20 11:18 | CMM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 999.28 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 492106 | 12/16/20 12:56 | CMM | TAL SL |

# Lab Chronicle

Client: AECOM
Job ID: 400-195622-1
Project/Site: Agrico Pensacola - Annual

## Client Sample ID: Method Blank
**Lab Sample ID: MB 160-489750/24-A**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 1000 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 492301 | 12/17/20 16:21 | CMM | TAL SL |

## Client Sample ID: Method Blank
**Lab Sample ID: MB 160-489754/24-A**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep_0 | | | 1000 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492108 | 12/16/20 13:12 | SCB | TAL SL |

## Client Sample ID: Method Blank
**Lab Sample ID: MB 400-510367/6**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:37 | DN1 | TAL PEN |

## Client Sample ID: Method Blank
**Lab Sample ID: MB 400-510573/5**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510573 | 11/12/20 21:08 | DN1 | TAL PEN |

## Client Sample ID: Method Blank
**Lab Sample ID: MB 400-510645/1-A**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 50 mL | 50 mL | 510645 | 11/13/20 12:56 | KWN | TAL PEN |
| Total Recoverable | Analysis | 6010C | | 1 | | | 511284 | 11/18/20 16:00 | GESP | TAL PEN |

## Client Sample ID: Method Blank
**Lab Sample ID: MB 400-511410/2**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 511410 | 11/19/20 15:00 | RRC | TAL PEN |

## Client Sample ID: Method Blank
**Lab Sample ID: MB 400-511598/48**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 511598 | 11/20/20 17:06 | KJR | TAL PEN |

### Client Sample ID: Method Blank
### Lab Sample ID: MB 400-512594/14
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 512594 | 11/30/20 13:01 | KJR | TAL PEN |

### Client Sample ID: Method Blank
### Lab Sample ID: MB 400-513080/5
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:02 | RRC | TAL PEN |

### Client Sample ID: Method Blank
### Lab Sample ID: MB 680-647217/2
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/05/20 15:13 | UI | TAL SAV |

### Client Sample ID: Lab Control Sample
### Lab Sample ID: LCS 160-489750/1-A
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 1000 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 492601 | 12/21/20 07:16 | FLC | TAL SL |

### Client Sample ID: Lab Control Sample
### Lab Sample ID: LCS 160-489754/1-A
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep_0 | | | 1000 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:53 | CMM | TAL SL |

### Client Sample ID: Lab Control Sample
### Lab Sample ID: LCS 400-510367/7
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:37 | DN1 | TAL PEN |

### Client Sample ID: Lab Control Sample
### Lab Sample ID: LCS 400-510573/17
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510573 | 11/12/20 21:42 | DN1 | TAL PEN |

**Client Sample ID: Lab Control Sample** — **Lab Sample ID: LCS 400-510645/2-A**
**Date Collected: N/A** — **Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 50 mL | 50 mL | 510645 | 11/13/20 12:56 | KWN | TAL PEN |
| Total Recoverable | Analysis | 6010C | | 1 | | | 511284 | 11/18/20 16:04 | GESP | TAL PEN |

**Client Sample ID: Lab Control Sample** — **Lab Sample ID: LCS 400-511410/36**
**Date Collected: N/A** — **Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 511410 | 11/19/20 15:00 | RRC | TAL PEN |

**Client Sample ID: Lab Control Sample** — **Lab Sample ID: LCS 400-511598/49**
**Date Collected: N/A** — **Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 511598 | 11/20/20 17:07 | KJR | TAL PEN |

**Client Sample ID: Lab Control Sample** — **Lab Sample ID: LCS 400-512594/15**
**Date Collected: N/A** — **Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 512594 | 11/30/20 13:01 | KJR | TAL PEN |

**Client Sample ID: Lab Control Sample** — **Lab Sample ID: LCS 400-513080/9**
**Date Collected: N/A** — **Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:12 | RRC | TAL PEN |

**Client Sample ID: Lab Control Sample** — **Lab Sample ID: LCS 680-647217/3**
**Date Collected: N/A** — **Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/05/20 15:26 | UI | TAL SAV |

**Client Sample ID: Lab Control Sample Dup** — **Lab Sample ID: LCSD 160-489750/2-A**
**Date Collected: N/A** — **Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 1000 mL | 1.0 g | 489750 | 11/20/20 07:59 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 492601 | 12/21/20 07:16 | FLC | TAL SL |

### Client Sample ID: Lab Control Sample Dup
**Lab Sample ID: LCSD 160-489754/2-A**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep_0 | | | 1000 mL | 1.0 g | 489754 | 11/20/20 09:45 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 492106 | 12/16/20 12:54 | CMM | TAL SL |

### Client Sample ID: Lab Control Sample Dup
**Lab Sample ID: LCSD 680-647217/4**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/05/20 15:38 | UI | TAL SAV |

### Client Sample ID: Lab Control Sample
**Lab Sample ID: MRL 400-510367/3**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:37 | DN1 | TAL PEN |

### Client Sample ID: Lab Control Sample
**Lab Sample ID: MRL 400-510573/3**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510573 | 11/12/20 21:08 | DN1 | TAL PEN |

### Client Sample ID: Lab Control Sample
**Lab Sample ID: MRL 400-511598/6**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 511598 | 11/20/20 16:30 | KJR | TAL PEN |

### Client Sample ID: Lab Control Sample
**Lab Sample ID: MRL 400-512594/13**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 512594 | 11/30/20 13:00 | KJR | TAL PEN |

### Client Sample ID: ACB-31S
**Lab Sample ID: 400-195622-2 MS**
**Date Collected: 11/10/20 13:47**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 512594 | 11/30/20 13:15 | KJR | TAL PEN |

## Client Sample ID: ACB-31S
**Lab Sample ID: 400-195622-2 MSD**
**Date Collected: 11/10/20 13:47**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 353.2 | | 1 | 10 mL | 10 mL | 512594 | 11/30/20 13:16 | KJR | TAL PEN |

## Client Sample ID: AC-12D
**Lab Sample ID: 400-195687-3 MS**
**Date Collected: 11/11/20 11:40**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 00:34 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 10 | 10 mL | 10 mL | 511598 | 11/20/20 17:48 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 513558 | 11/11/20 18:43 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:20 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:43 | DN1 | TAL PEN |

## Client Sample ID: AC-12D
**Lab Sample ID: 400-195687-3 MSD**
**Date Collected: 11/11/20 11:40**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 00:47 | UI | TAL SAV |
| Total/NA | Analysis | 353.2 | | 10 | 10 mL | 10 mL | 511598 | 11/20/20 17:49 | KJR | TAL PEN |
| Total/NA | Analysis | Nitrate by calc | | 1 | | | 513558 | 11/11/20 18:43 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:24 | RRC | TAL PEN |
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510367 | 11/11/20 18:43 | DN1 | TAL PEN |

## Client Sample ID: AC-29D
**Lab Sample ID: 400-195687-4 MS**
**Date Collected: 11/11/20 14:27**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 03:31 | UI | TAL SAV |

## Client Sample ID: AC-29D
**Lab Sample ID: 400-195687-4 MSD**
**Date Collected: 11/11/20 14:27**
**Matrix: Water**
**Date Received: 11/11/20 16:14**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 5 mL | 5 mL | 647217 | 12/06/20 03:44 | UI | TAL SAV |

## Client Sample ID: AC-35D
**Lab Sample ID: 400-195757-1 MS**
**Date Collected: 11/12/20 08:14**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510573 | 11/12/20 21:08 | DN1 | TAL PEN |

# Lab Chronicle

Client: AECOM
Job ID: 400-195622-1
Project/Site: Agrico Pensacola - Annual

**Client Sample ID: AC-35D**
**Lab Sample ID: 400-195757-1 MSD**
**Date Collected: 11/12/20 08:14**
**Matrix: Water**
**Date Received: 11/12/20 15:33**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 NO2 B | | 1 | 10 mL | 10 mL | 510573 | 11/12/20 21:08 | DN1 | TAL PEN |

**Laboratory References:**

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Method Summary

Client: AECOM
Job ID: 400-195622-1
Project/Site: Agrico Pensacola - Annual

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 300.0 | Anions, Ion Chromatography | MCAWW | TAL SAV |
| 6010C | Metals (ICP) | SW846 | TAL PEN |
| 353.2 | Nitrogen, Nitrate-Nitrite | MCAWW | TAL PEN |
| Nitrate by calc | Nitrogen, Nitrate | SM | TAL PEN |
| SM 4500 F C | Fluoride | SM | TAL PEN |
| SM 4500 NO2 B | Nitrogen, Nitrite | SM | TAL PEN |
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL PEN |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: AECOM
Job ID: 400-195622-1
Project/Site: Agrico Pensacola - Annual

## Laboratory: Eurofins TestAmerica, Pensacola

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Florida | NELAP | E81010 | 06-30-21 |

## Laboratory: Eurofins TestAmerica, Savannah

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Florida | NELAP | E87052 | 12-09-20 |

## Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alaska (UST) | State | 20-001 | 05-06-22 |
| ANAB | Dept. of Defense ELAP | L2305 | 04-06-22 |
| ANAB | Dept. of Energy | L2305.01 | 04-06-22 |
| ANAB | ISO/IEC 17025 | L2305 | 04-06-22 |
| Arizona | State | AZ0813 | 12-08-21 |
| California | Los Angeles County Sanitation Districts | 10259 | 06-30-21 |
| California | State | 2886 | 06-30-21 |
| Connecticut | State | PH-0241 | 03-31-21 |
| Florida | NELAP | E87689 | 06-30-21 |
| HI - RadChem Recognition | State | n/a | 06-30-21 |
| Illinois | NELAP | 004553 | 11-30-21 |
| Iowa | State | 373 | 12-01-22 |
| Kansas | NELAP | E-10236 | 10-31-21 |
| Kentucky (DW) | State | KY90125 | 12-31-20 |
| Louisiana | NELAP | 04080 | 06-30-21 |
| Louisiana (DW) | State | LA011 | 12-31-20 |
| Maryland | State | 310 | 09-30-21 |
| MI - RadChem Recognition | State | 9005 | 06-30-21 |
| Missouri | State | 780 | 06-30-22 |
| Nevada | State | MO000542020-1 | 07-31-21 |
| New Jersey | NELAP | MO002 | 06-30-21 |
| New York | NELAP | 11616 | 04-01-21 |
| North Dakota | State | R-207 | 06-30-21 |
| NRC | NRC | 24-24817-01 | 12-31-22 |
| Oklahoma | State | 9997 | 08-31-21 |
| Oregon | NELAP | 4157 | 09-01-21 |
| Pennsylvania | NELAP | 68-00540 | 02-28-21 |
| South Carolina | State | 85002001 | 06-30-21 |
| Texas | NELAP | T104704193-19-13 | 07-31-21 |
| US Fish & Wildlife | US Federal Programs | 058448 | 07-31-21 |
| USDA | US Federal Programs | P330-17-00028 | 03-11-23 |
| Utah | NELAP | MO000542019-11 | 07-31-21 |
| Virginia | NELAP | 10310 | 06-14-21 |
| Washington | State | C592 | 08-30-21 |
| West Virginia DEP | State | 381 | 10-31-21 |

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: J. Fletcher | Lab PM: Savoie, Noel | Carrier Tracking No(s): | COC No: 680-119664-32401.2 |
|---|---|---|---|---|
| Client Contact: Ms. Amy Mixon | Phone: 850-251-0584 | E-Mail: Noel.Savoie@Eurofinset.com | | Page: Page 2 of 2 |
| Company: AECOM | | | | Job #: |

| Address: 1625 Summit Lake Drive Suite 200 | Due Date Requested: |
|---|---|
| City: Tallahassee | TAT Requested (days): |
| State, Zip: FL, 32317 | |
| Phone: 850-465-3886(Tel) | PO #: Purchase Order Requested |
| Email: amy.mixon@aecom.com | WO #: 60618051.1 |
| Project Name: Agrico Pensacola | Project #: 68017183 |
| Site: | SSOW#: |

**Analysis Requested**

400-195622 COC

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_NO2_B - Nitrite as N | 300_ORGFM_28D - Chloride and Sulfate | SUBCONTRACT - Radium 228 by EPA Method 904.0 | SUBCONTRACT - Radium 226 by EPA Method 903.1 | 6010C - Arsenic | 353.2_Pres - Nitrate Nitrite as N | 4500_F_C - Fluoride | 353.2_Pres - Nitrogen, Nitrate-Nitrite | SM4500_NO2_B - Local Method | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | N | N | D | D | D | S | N | S | N | | |
| EQ-1 | 11/10/20 | 1230 | G | W | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 7 | |
| ACB-3S | " | 1347 | " | " | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | 6 | |
| AC-3D | " | 1530 | " | " | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | 6 | |
| AC-2S | " | 1630 | " | " | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 7 | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| | 11/11/20 0718 | Aecom | Kathy R Cuevas | 11-11-20 718 | EIA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.4 °C IR7

Ver: 01/16/2019

**Eurofins TestAmerica, Pensacola**
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: | Lab PM: Savoie, Noel | Carrier Tracking No(s): | COC No: 680-119664-32401.1 |
|---|---|---|---|---|
| Client Contact: Ms. Amy Mixon | Phone: | E-Mail: Noel.Savoie@Eurofinset.com | | Page: Page 1 of 2 |
| Company: AECOM | | | | Job #: |
| Address: 1625 Summit Lake Drive Suite 200 | Due Date Requested: | | | |
| City: Tallahassee | TAT Requested (days): | | | |
| State, Zip: FL, 32317 | | | | |
| Phone: 850-465-3886(Tel) | PO #: Purchase Order Requested | | | |
| Email: amy.mixon@aecom.com | WO #: 60618051.1 | | | |
| Project Name: Agrico Pensacola | Project #: 68017183 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_NO2_B - Nitrite as N | 300_ORGFM_28D - Chloride and Sulfate | SUBCONTRACT - Radium 228 by EPA Method 904.0 | SUBCONTRACT - Radium 226 by EPA Method 903.1 | 6010C - Arsenic | 353.2_Pres - Nitrate Nitrite as N | 4500_F_C - Fluoride | 353.2_Pres - Nitrogen, Nitrate-Nitrite | SM4500_NO2_B - Local Method | | | | | | | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | N | N | D | D | D | S | N | S | N | | | | | | | | |
| AC-2D | 11/11/20 | 1005 | G | W | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | | | | | | 6 | |
| Dup-1 | " | — | " | " | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | | | | | | 6 | |
| AC-12D | " | 1140 | " | " | | | 1 | 3 | 1 | 1 | | 1 | 3 | 2 | 2 | | | | | | | | 8 | MS/MSD |
| AC-29D | " | 1427 | " | " | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | | | | | | 6 | |

400-195687 COC

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| | 11/11/20 1614 | Aecom | | 11-11-20 1614 | ETA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.1°C IR9

Ver: 01/16/2019

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

# Chain of Custody Record

eurofins | Environment Testing America

400-195757 COC

| Client Information | Sampler: J. Fletcher | Lab PM: Savoie, Noel | Carrier Tracking No(s): | COC No: 680-119664-32401.2 |
|---|---|---|---|---|
| Client Contact: Ms. Amy Mixon | Phone: 850-251-0584 | E-Mail: Noel.Savoie@Eurofinset.com | | Page: Page 2 of 2 |
| Company: AECOM | | | | Job #: |
| Address: 1625 Summit Lake Drive Suite 200 | Due Date Requested: | | | |
| City: Tallahassee | TAT Requested (days): | | | |
| State, Zip: FL, 32317 | | | | |
| Phone: 850-465-3886(Tel) | PO #: Purchase Order Requested | | | |
| Email: amy.mixon@aecom.com | WO #: 60618051.1 | | | |
| Project Name: Agrico Pensacola | Project #: 68017183 | | | |
| Site: | SSOW#: | | | |

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_NO2_B - Nitrite as N | 300_ORGFM_28D - Chloride and Sulfate | SUBCONTRACT - Radium 228 by EPA Method 904.0 | SUBCONTRACT - Radium 226 by EPA Method 903.1 | 6010C - Arsenic | 353.2_Pres - Nitrate Nitrite as N | 4500_F_C - Fluoride | 353.2_Pres - Nitrogen, Nitrate-Nitrite | SM4500_NO2_B - Local Method | | | | | | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | N | N | D | D | D | S | N | S | N | | | | | | | |
| AC-35D | 11/12/20 | 0814 | G | W | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | | | | | 6 | |
| AC-25D | " | 0948 | " | " | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | | | | | 6 | |
| AC-13D | " | 1141 | " | " | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | | | | | 6 | |
| AC-24D | " | 1421 | " | " | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | | | | | 6 | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: MH 1533

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| | 11/12/20 1533 | Aecom | Megan Hall | 11-12-20 1633 | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 19.9°C IR9

Ver: 01/16/2019

eurofins | Environment Testing America

# ANALYTICAL REPORT

Eurofins TestAmerica, Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

Laboratory Job ID: 400-195623-1
Client Project/Site: Agrico Pensacola - Annual SW

For:
AECOM
1625 Summit Lake Drive
Suite 200
Tallahassee, Florida 32317

Attn: Ms. Amy Mixon

Noël Savoie

*Authorized for release by:*
*12/4/2020 5:24:52 PM*

Noel Savoie, Project Manager I
(850)254-0107
Noel.Savoie@Eurofinset.com

# Table of Contents

# Case Narrative

Client: AECOM
Project/Site: Agrico Pensacola - Annual SW

Job ID: 400-195623-1

## Job ID: 400-195623-1

### Laboratory: Eurofins TestAmerica, Pensacola

**Narrative**

**Job Narrative**
**400-195623-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/11/2020 7:18 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.4º C.

**General Chemistry**
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: AECOM
Job ID: 400-195623-1
Project/Site: Agrico Pensacola - Annual SW

## Client Sample ID: BT-02 — Lab Sample ID: 400-195623-1

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.72 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

## Client Sample ID: BT-127 — Lab Sample ID: 400-195623-2

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.90 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

## Client Sample ID: BT-107 — Lab Sample ID: 400-195623-3

| Analyte | Result | Qualifier | PQL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.3 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Sample Summary

Client: AECOM
Job ID: 400-195623-1
Project/Site: Agrico Pensacola - Annual SW

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 400-195623-1 | BT-02 | Water | 11/10/20 07:25 | 11/11/20 07:18 | |
| 400-195623-2 | BT-127 | Water | 11/10/20 08:00 | 11/11/20 07:18 | |
| 400-195623-3 | BT-107 | Water | 11/10/20 08:30 | 11/11/20 07:18 | |

# Client Sample Results

Client: AECOM
Job ID: 400-195623-1
Project/Site: Agrico Pensacola - Annual SW

## Client Sample ID: BT-02
**Lab Sample ID: 400-195623-1**
**Date Collected: 11/10/20 07:25**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.72 | | 0.10 | | mg/L | | | 11/19/20 15:00 | 1 |

## Client Sample ID: BT-127
**Lab Sample ID: 400-195623-2**
**Date Collected: 11/10/20 08:00**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.90 | | 0.10 | | mg/L | | | 11/19/20 15:00 | 1 |

## Client Sample ID: BT-107
**Lab Sample ID: 400-195623-3**
**Date Collected: 11/10/20 08:30**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

### General Chemistry

| Analyte | Result | Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.3 | | 0.10 | | mg/L | | | 12/03/20 14:27 | 1 |

# Definitions/Glossary

Client: AECOM
Job ID: 400-195623-1
Project/Site: Agrico Pensacola - Annual SW

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

# QC Association Summary

Client: AECOM
Job ID: 400-195623-1
Project/Site: Agrico Pensacola - Annual SW

## General Chemistry

### Analysis Batch: 511410

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195623-1 | BT-02 | Total/NA | Water | SM 4500 F C | |
| 400-195623-2 | BT-127 | Total/NA | Water | SM 4500 F C | |
| MB 400-511410/2 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 400-511410/36 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 513080

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 400-195623-3 | BT-107 | Total/NA | Water | SM 4500 F C | |
| MB 400-513080/5 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 400-513080/9 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

Client: AECOM
Project/Site: Agrico Pensacola - Annual SW

Job ID: 400-195623-1

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 400-511410/2**
**Matrix: Water**
**Analysis Batch: 511410**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/19/20 15:00 | 1 |

**Lab Sample ID: LCS 400-511410/36**
**Matrix: Water**
**Analysis Batch: 511410**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 4.00 | 4.33 | | mg/L | | 108 | 90 - 110 |

**Lab Sample ID: MB 400-513080/5**
**Matrix: Water**
**Analysis Batch: 513080**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | PQL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 12/03/20 14:02 | 1 |

**Lab Sample ID: LCS 400-513080/9**
**Matrix: Water**
**Analysis Batch: 513080**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 4.00 | 3.67 | | mg/L | | 92 | 90 - 110 |

# Lab Chronicle

Client: AECOM
Job ID: 400-195623-1
Project/Site: Agrico Pensacola - Annual SW

## Client Sample ID: BT-02
**Lab Sample ID: 400-195623-1**
**Date Collected: 11/10/20 07:25**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 511410 | 11/19/20 15:00 | RRC | TAL PEN |

## Client Sample ID: BT-127
**Lab Sample ID: 400-195623-2**
**Date Collected: 11/10/20 08:00**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 511410 | 11/19/20 15:00 | RRC | TAL PEN |

## Client Sample ID: BT-107
**Lab Sample ID: 400-195623-3**
**Date Collected: 11/10/20 08:30**
**Matrix: Water**
**Date Received: 11/11/20 07:18**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:27 | RRC | TAL PEN |

## Client Sample ID: Method Blank
**Lab Sample ID: MB 400-511410/2**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 511410 | 11/19/20 15:00 | RRC | TAL PEN |

## Client Sample ID: Method Blank
**Lab Sample ID: MB 400-513080/5**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:02 | RRC | TAL PEN |

## Client Sample ID: Lab Control Sample
**Lab Sample ID: LCS 400-511410/36**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 511410 | 11/19/20 15:00 | RRC | TAL PEN |

## Client Sample ID: Lab Control Sample
**Lab Sample ID: LCS 400-513080/9**
**Date Collected: N/A**
**Matrix: Water**
**Date Received: N/A**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 10 mL | 10 mL | 513080 | 12/03/20 14:12 | RRC | TAL PEN |

**Laboratory References:**

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Method Summary

Client: AECOM
Job ID: 400-195623-1
Project/Site: Agrico Pensacola - Annual SW

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| SM 4500 F C | Fluoride | SM | TAL PEN |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

**Laboratory References:**

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: AECOM
Job ID: 400-195623-1
Project/Site: Agrico Pensacola - Annual SW

## Laboratory: Eurofins TestAmerica, Pensacola

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Florida | NELAP | E81010 | 06-30-21 |

**Eurofins TestAmerica, Pensacola**
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001 Fax: 850-478-2671

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: J. Fletcher | Lab PM: Savoie, Noel | Carrier Tracking No(s): | COC No: 680-119665-32403.1 |
|---|---|---|---|---|
| Client Contact: Ms. Amy Mixon | Phone: 850-251-0584 | E-Mail: Noel.Savoie@Eurofinset.com | | Page: Page 1 of 1 |
| Company: AECOM | | | | Job #: |
| Address: 1625 Summit Lake Drive Suite 200 | Due Date Requested: | | | |
| City: Tallahassee | TAT Requested (days): | | | |
| State, Zip: FL, 32317 | | | | |
| Phone: 850-465-3886(Tel) | PO #: Purchase Order Requested | | | |
| Email: amy.mixon@aecom.com | WO #: 60618051.1 | | | |
| Project Name: Agrico Brackish Surface Water | Project #: 68017183 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

400-195623 COC

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 4500_F_C - Fluoride | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | N | | |
| BT-02 | 11/10/20 | 0725 | G | W | | | 1 | 1 | |
| BT-127 | | 0800 | G | W | | | 1 | 1 | |
| BT-107 | | 0830 | G | W | | | 1 | 1 | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | 11/11/20 0718 | Aecom | Kathy R Owen | 11-11-20 718 | ETA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

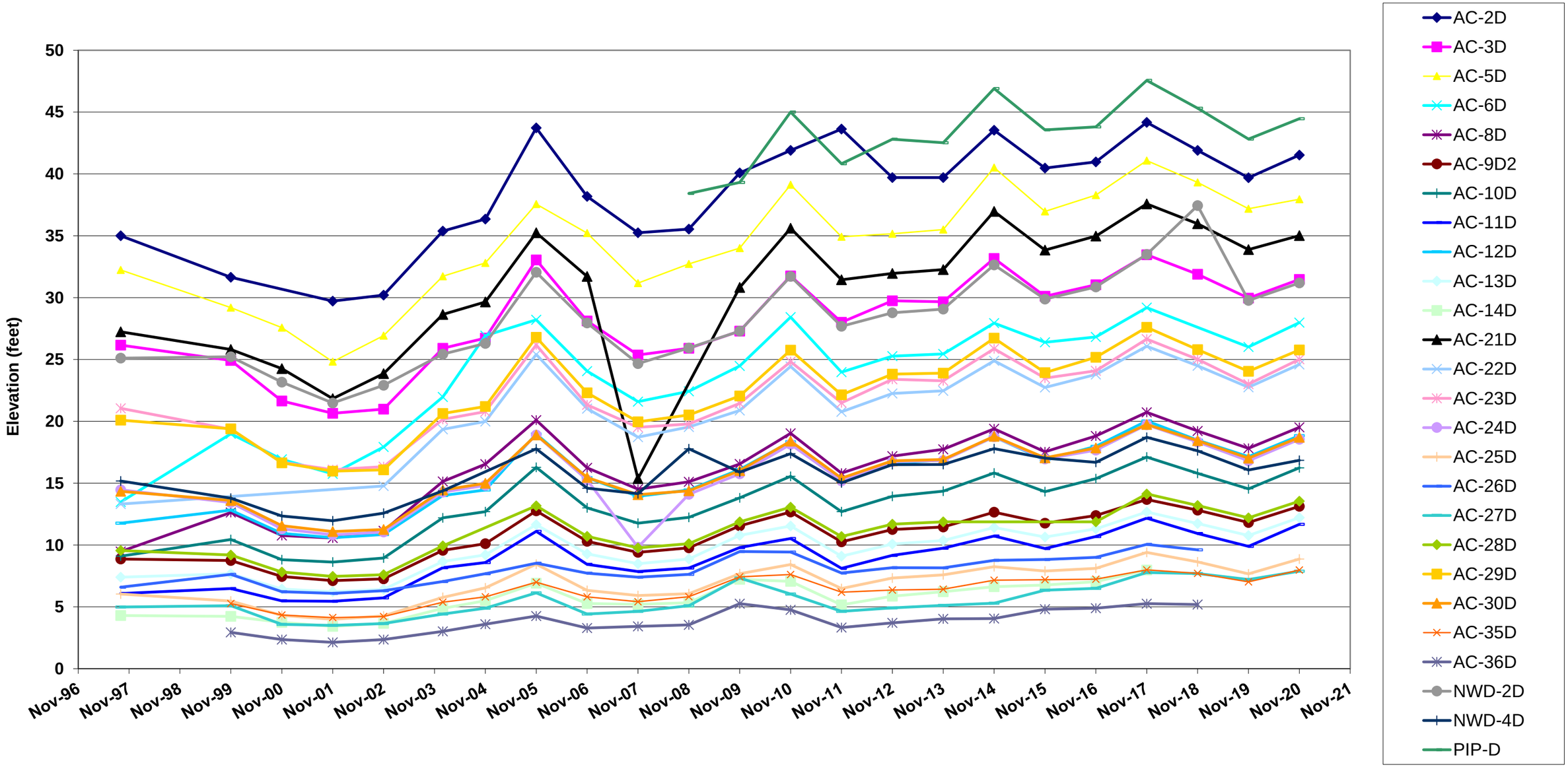
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.4°C IR7 |
|---|---|---|

Ver: 01/16/2019

# APPENDIX B

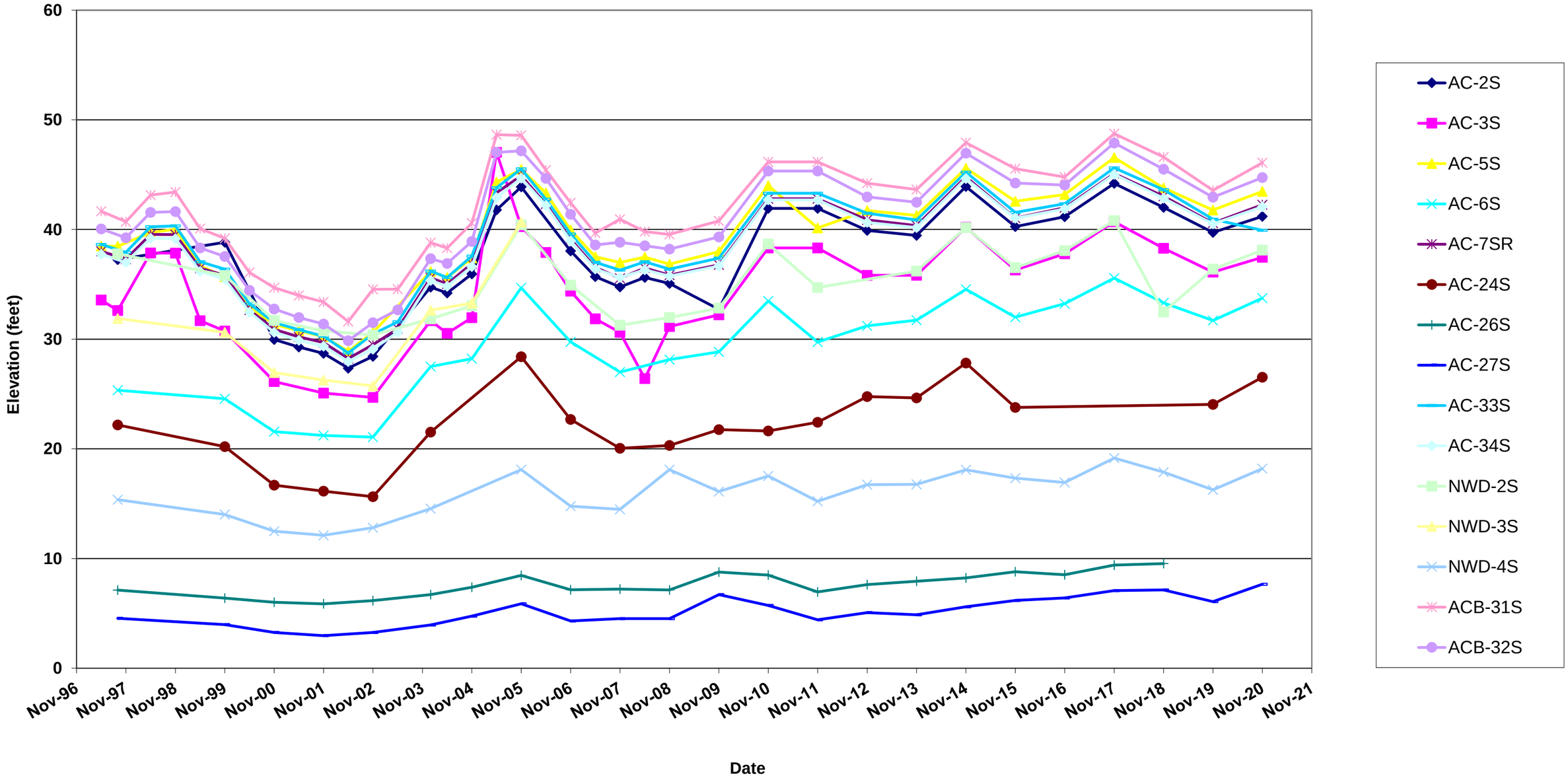
**Groundwater Elevation Trend in Main Producing Zone**

**Agrico Site**
**Pensacola, FL**



**Groundwater Elevation Trend in Surficial Zone**

**Agrico Site**
**Pensacola, FL**



# APPENDIX C

AECOM

# MEMORANDUM

| | | | |
|---|---|---|---|
| To: | Alex Webster (FDEP NW District)<br>Billy Hessman (FDEP, Tallahassee)<br>Tim Haag (ECUA)<br>Tom Brown (NWFWMD)<br>L. Derrik Owens (City of Pensacola)<br>Mark Spitznagel (ECHD)<br>Glenn Griffith (Escambia County)<br>Alan Hagans (FDOT Chipley) | From:<br><br><br><br>CC:<br><br><br><br>Date: | Amy Mixon, P.E.<br>AECOM Tallahassee<br><br><br><br>Jasmin Jefferies (EPA Region 4)<br><br><br><br>March 10, 2020 |

**Subject: Institutional Controls Coordination**
**Agrico Site, Pensacola, Florida**

As part of the U.S. Environmental Protection Agency (EPA) approved Remedial Action Work Plan for Operating Unit Two (OU-2) (November 1998), periodic communications are planned with the agencies to verify that existing institutional controls remain in place. The purpose of this Memorandum is to solicit, in writing, information on any changes in existing or any proposed new regulatory requirements that may affect the existing institutional controls pertaining to the Agrico Site.

## SITE SUMMARY

### *Monitored Natural Attenuation Results*

Statistical monitored natural attenuation (MNA) evaluations were prepared in 2009 and 2013. Additionally, annual trend plots are prepared for all constituents analyzed for each sampling location. The reports and trend plots in each annual report that are submitted to EPA and the Florida Department of Environmental Protection (FDEP) continue to 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. It is estimated from statistical evaluation following EPA MNA guidance 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. Radium concentrations are 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. Twenty-two years has passed since the source controls were implemented. The approximately 50 years remaining is still reasonable and well within the targets estimated with the statistical evaluation.

### *Groundwater Sampling Results*

Groundwater sampling at the site has been conducted since 1999. The groundwater sampling network has been modified beginning in November 2015 to a select set of sampling locations for the Agrico site per discussions with the FDEP and approval by EPA on March 10, 2015.

Annual groundwater (the 21st year of sampling) and EPA 5-year review groundwater monitoring was conducted in November 2019.

Groundwater results for November 2019 continue to compare favorably to past results. Overall concentration trends within the surficial zone are downward and the impact extent is shrinking. Impacts are limited for this zone. This is a direct result of effective source remediation and the local hydrogeologic conditions.

For the deeper main producing zone, the trend in concentrations is generally downward and stable, also indicating continued plume stability.

Slight upward or downward ticks in the trends for the constituents of concern (COCs) are to be expected over time. It is the long-term trend for each of the COCs that is important.

### *Groundwater Levels*

Results of water level measurements collected in November 2019 indicate that groundwater flow remains toward Bayou Texar for both the surficial zone and main producing zone. In 2019, groundwater flow patterns closely followed historical patterns.

### *Bayou Texar Sampling Results*

An assessment of potential impacts downgradient of the Agrico groundwater plume was presented to the EPA and the FDEP on September 4, 2009 in the report, "*Conceptual Site Model, Ecological Impact Evaluation of Bayou Texar Downgradient of Agrico's Groundwater Fluoride Plume, September 14, 2009.*" The report concluded that there is no completed exposure pathway between populations of demersal fish and benthic receptors in the Bayou downgradient of the Site and concentrations of fluoride in pore water and near-bottom surface water that potentially would cause adverse effects to the populations of dermersal fish and benthic receptors. The report also concluded that the fluoride solubility in the surface sediments and in pore waters within the groundwater plume discharge area is controlled by mineral precipitation reactions that are responsible for buffering dissolved concentrations of fluoride. This report was approved by EPA on September 20, 2010. The approval modified the report recommendations to include three surface water sampling locations as part of the annual sampling for the site.

Surface water sampling was conducted in November 2019. Sampling continues to show concentrations in the bayou at levels well below the surface water standard (5 mg/L) for fluoride.

**INSTITUTIONAL CONTROLS**

Several rules, regulations and policies already exist which control the use of groundwater within the OU-2 area. These serve as institutional controls, and include:

1. Approval of well construction and consumptive use is a function of the Northwest Florida Water Management District (NWFWMD). On February 22, 2001 the NWFWMD Governing Board passed a well construction moratorium for the area bounded to the north by Hyatt Street, Wynnehurst Street, Kenneth Street, Boxwood Drive and Brookside Place; to the west by the CSX Railroad; to the south by East Cross Street; and to the east by Bayou Texar. This moratorium applies to all new well construction within the designated area except monitoring wells and encompasses both the Agrico and Escambia Treating Company areas. The moratorium remains in effect during 2019 and 2020. Checking of NWFWMD drilling permits indicates that no well construction permits were issued within the Agrico OU-2 area during 2019.

2. Access is restricted on the Agrico site. The property is secured by a perimeter chain link security fence and locked gates. Restrictive and site information signs are posted advising the public of the on-site conditions, and a contact phone number is also posted for inquiries. The site is routinely inspected by authorized personnel and inspection reports on the site conditions are completed twice a year. Additionally, the site is inspected after each major storm event. Any damages found are repaired. Construction or related activities which 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 covenants filed for the property.

3. The location of the Agrico plume is well characterized and documented. Because this information is submitted to the Emerald Coast Utilities Authority (ECUA) and other agencies in an annual report, and because of the NWFWMD well moratorium, it is highly improbable that future municipal wells will be located in the vicinity of the site. It should also be noted that non-Agrico groundwater impacts are present outside of the Agrico plume. To the north of the Agrico site, groundwater impacts have been caused by the Escambia Treating Company (ETC) site. This plume intrudes into the Agrico area to the south. Also, south of the Agrico plume, the FDEP is assessing a site referred to as Site 348. This site has reportedly contributed to groundwater

impacts to the south of the Agrico plume. The Site 348 plume has the potential to intrude into the Agrico area, and Site 348 has similar COCs to those of Agrico. This site is being assessed for possible impacts to ECUA wells, including F& Scott Streets well, No. 9 well, and East Plant well. Groundwater from Site 348 moves easterly and may discharge into Bayou Texar, if not affected by pumping from F & Scott Streets Well. Additionally, other sources of groundwater impacts exist within and in the near proximity of the Agrico plume and include releases from petroleum and dry-cleaning related sites as documented by the FDEP.

4. The ECUA regularly samples and analyzes water being pumped from public supply wells. ECUA controls the pumpage from these wells. The cause of current impacts to ECUA wells, as noted above, is the subject of an ongoing assessment by the FDEP. Pumping of both East Plant and well No.9 has been discontinued. The F& Scott Street well is still active and within a distance from Site 348 impacts that pumping influences could potentially draw the Site 348 plume toward this active well.

5. In 1997, the NWFWMD established 7-year and 20-year capture zones around each ECUA water supply well. These captures zones constitute the wellhead protection area for each well (Richards, Pratt, and Milla, December 1997, Wellhead Protection Area Delineation in Southern Escambia County, Florida; Water Resources Special Report 97-4, NWFWMD). The Agrico plume remains outside of the 20-year capture zone for all supply wells. Site 348 lies within the 20- year capture zone for inactive ECUA Well No. 9, and Site 348 lies near the designated capture zone for active ECUA Well F & Scott.

6. The Designated Area has been established by the FDEP and regulated by Florida Administrative Code, Chapter 62-524, FDEP rules. New potable well permitting requirements must be met to install a new potable water well. This designated area is the same as the area defined in item number 1. At this time, the NWFWMD moratorium is a more stringent restriction than that related to the Chapter 62-524 designation.

The 2019 Annual Report is currently in preparation and will be distributed to you following approval by EPA. It is anticipated this will occur in the June 2020 timeframe.

Four Five-Year Reviews of the Agrico Site have been completed by EPA, and the fifth is currently underway. Each Review has concluded that the remedy at the Agrico Site is functioning as intended by the Records of Decision for OU-1 and OU-2 and remains protective of human health and the environment.

Site information is available at the local EPA repository located at:

University Archives and West Florida History Center
University of West Florida Libraries
Building 32
11000 University Pkwy
Pensacola, Florida 32514
850-474-2213

Information stored at the repository includes various project documents. Additionally, a site-specific internet web site has been established at: http://www.agricopensacola.com. The web site contains general information and includes all Fact Sheets for the site as well as pertinent documents for the site.

Please respond in writing concerning any contemplated changes in existing or any proposed new regulatory requirements that may affect the existing institutional controls pertaining to the Agrico Site to Amy Mixon, AECOM, 1625 Summit Lake Drive, Suite 300, Tallahassee, Florida 32317, or send an e-mail to amy.mixon@aecom.com. Your assistance in this cooperative effort is greatly appreciated.

If you have any questions, please contact me at (850) 465-3886.

Sincerely,

Amy R. Mixon, P.E.
Project Manager

ARM:lc

AECOM
1625 Summit Lake Drive
Suite 200
Tallahassee, FL 32317
www.aecom.com

850 574 3197 tel
850 402 6490 fax

March 10, 2020 **alan.hagans@dot.state.fl.us**

Mr. Alan Hagans
Florida Department of Transportation District 3
1074 Highway 90
Chipley, Florida 32428

**Subject:** **Annual Inquiry Regarding Construction Activities**
**Fairfield Drive (SR 727) at I-110 (SR 8-A) Roadway ID 48004000**
**Mile Marker 9.009 at Palafox to Mile Marker 9.490 at I-110 West Ramp**
**Pensacola, Florida**

Dear Mr. Hagans:

Per U.S. Environmental Protection Agency requirements set forth in the Agrico Chemical Site Operation and Maintenance Plans, this annual inquiry is submitted to determine if intrusive work into the subsurface soils in the above-referred location is planned by the Florida Department of Transportation (FDOT) for the year 2020. Additionally, this inquiry seeks to determine if there are work activities included in FDOT's five-year plan that will involve intrusive work at Fairfield Drive from Palafox to the I-110 ramp.

If there is additional information that we or the U.S. Environmental Protection Agency (USEPA) should be aware of, please let me know.

Please respond in writing regarding receipt of this correspondence. If you have any questions concerning this request, please e-mail me at amy.mixon@aecom.com.

Sincerely,

Amy R. Mixon, P.E.
Project Manager

ARM:lc

cc: Jasmin Jefferies (USEPA)

**From:** Hagans, Alan
**To:** Mixon, Amy
**Subject:** [EXTERNAL] Fairfield Drive (SR 727) @ I-110 (SR 8-A)
**Date:** Monday, June 15, 2020 9:38:47 AM

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Hi Amy,

I apologize for just now responding but have reviewed the 5 year work program schedule and do not see any Construction Work planned by the Department for this area.

Thanks,

*Alan Hagans*
*District Contamination Impacts Coordinator*
*Department Of Environmental Management (FDOT)*
*Ph: (850) 330-1511*
*alan.hagans@dot.state.fl.us*

# APPENDIX D

**OU-1 Bi-Annual Inspection Report**

**Agrico Chemical Site**
**Pensacola, Florida**

| ROUTINE FACILITY INSPECTION CHECKLIST AGRICO CHEMICAL SITE, PENSACOLA FLORIDA | SATISFACTORY | UNSATISFACTORY | DATE CORRECTED | INITIALED | REMARKS |
|---|---|---|---|---|---|
| **GENERAL FACILITY AREA** | | | | | |
| Gates and Locks Secured | ✓ | | | | |
| Perimeter Fencing | ✓ | | | | |
| Signage | ✓ | | | | |
| Roadway Conditions | ✓ | | | | |
| **COVER SYSTEM** | | | | | |
| Surface Water Runoff Controlled | ✓ | | | | |
| No Ponding Water On Cover | ✓ | | | | |
| No Sideslope or Top Erosion or Gullying | ✓ | | | | |
| Topsoil and Vegetation Intact | ✓ | | | | |
| Settlement/Cracking Inspection | ✓ | | | | |
| **SURFACE WATER COLLECTION SYSTEM** | | | | | |
| No Obstructions of Culverts or Inlets | ✓ | | | | |
| Inlet Sediment Controls Intact | ✓ | | | | |
| No Erosion of Drainage Ditches or Berms | ✓ | | | | |
| Detention Ponds Draining Adequately | ✓ | | | | |
| Side Slope Erosion of Detention Ponds | ✓ | | | | |
| Leaks, Structural Damage to Inlets, Culverts, or Pipes | ✓* | | | | |

* Did note two storm drains that have settled and appear to need correction - talked to First Choice ✓ they will address during April event.

**INSPECTION PERIOD:** 1st - 2020

**INSPECTED BY:** Amy Mixon

**NAME:**
**SIGNATURE:** Amy R Mixon
**DATE:** 3/24/2020

**OU-1 Bi-Annual Inspection Report**

**Agrico Chemical Site**
**Pensacola, Florida**

| ROUTINE FACILITY INSPECTION CHECKLIST AGRICO CHEMICAL SITE, PENSACOLA FLORIDA | SATISFACTORY | UNSATISFACTORY | DATE CORRECTED | INITIALED | REMARKS |
|---|---|---|---|---|---|
| **GENERAL FACILITY AREA** | | | | | |
| Gates and Locks Secured | ✓ | | | | |
| Perimeter Fencing | ✓* | | | | *tree limbs on fence at entrance; minor repairs may be needed once tree limbs are removed |
| Signage | ✓ | | | | |
| Roadway Conditions | ✓ | | | | |
| **COVER SYSTEM** | | | | | |
| Surface Water Runoff Controlled | ✓ | | | | Drive-by on 9/18/2020 indicated no ponded water or flooding onsite |
| No Ponding Water On Cover | ✓ | | | | |
| No Sideslope or Top Erosion or Gullying | ✓ | | | | |
| Topsoil and Vegetation Intact | ✓ | | | | |
| Settlement/Cracking Inspection | ✓ | | | | |
| **SURFACE WATER COLLECTION SYSTEM** | | | | | |
| No Obstructions of Culverts or Inlets | ✓ | | | | |
| Inlet Sediment Controls Intact | ✓ | | | | |
| No Erosion of Drainage Ditches or Berms | ✓ | | | | |
| Detention Ponds Draining Adequately | ✓ | | | | |
| Side Slope Erosion of Detention Ponds | ✓ | | | | |
| Leaks, Structural Damage to Inlets, Culverts, or Pipes | ✓ | | | | |

**INSPECTION PERIOD:** Following Hurricane Sally

**INSPECTED BY:**

**NAME:** Amy Mixon
**SIGNATURE:** Amy K Mixon
**DATE:** 9/21/2020

OU-1 Bi-Annual Inspection Report

Agrico Chemical Site
Pensacola, Florida

| ROUTINE FACILITY INSPECTION CHECKLIST AGRICO CHEMICAL SITE, PENSACOLA FLORIDA | SATISFACTORY | UNSATISFACTORY | DATE CORRECTED | INITIALED | REMARKS |
|---|---|---|---|---|---|
| **GENERAL FACILITY AREA** | | | | | |
| Gates and Locks Secured | ✓ | | | | |
| Perimeter Fencing | ✓ | | 12/22/20 | ARM | Large tree limb laying on top of fence near main gate, fence pushed down ≈ 2'. |
| Signage | ✓ | | | | |
| Roadway Conditions | ✓ | | | | |
| **COVER SYSTEM** | | | | | |
| Surface Water Runoff Controlled | ✓ | | | | |
| No Ponding Water On Cover | ✓ | | | | |
| No Sideslope or Top Erosion or Gullying | ✓ | | | | |
| Topsoil and Vegetation Intact | ✓ | | | | |
| Settlement/Cracking Inspection | ✓ | | | | |
| **SURFACE WATER COLLECTION SYSTEM** | | | | | |
| No Obstructions of Culverts or Inlets | ✓ | | | | |
| Inlet Sediment Controls Intact | ✓ | | | | |
| No Erosion of Drainage Ditches or Berms | ✓ | | | | |
| Detention Ponds Draining Adequately | ✓ | | | | |
| Side Slope Erosion of Detention Ponds | ✓ | | | | |
| Leaks, Structural Damage to Inlets Culverts, or Pipes | ✓ | | | | |

INSPECTION PERIOD: 2nd - 2020

INSPECTED BY: J. Fletcher

NAME: Jason Fletcher
SIGNATURE:
DATE: 11/9/20

Follow-up-
limb removed
Fence repaired on
12/21 and 12/22/2020
by First Choice