SECOND FIVE-YEAR REVIEW REPORT FOR
STAUFFER CHEMICAL CO. (TARPON SPRINGS) SUPERFUND SITE
PINELLAS COUNTY, FLORIDA

JUNE 2020

Prepared by

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

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Carol J. Monell, Director
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Date

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LIST OF ABBREVIATIONS AND ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
COC	Contaminant of Concern
CPAHs	Carcinogenic Polycyclic Aromatic Hydrocarbons
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FS	Feasibility Study
FYR	Five-Year Review
HQ	Hazard Quotient
IC	Institutional Control
MCL	Maximum Contaminant Level
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
mrem/yr	Millirem per Year
MW	Monitoring Well
NCP	National Contingency Plan
ng/L	Nanograms per Liter
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PAH	Polycyclic Aromatic Hydrocarbons
pCi/g	Picocuries Per Gram
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
RSL	Regional Screening Level
SMC	Stauffer Management Company
SW	Surface Water
TAL	Target Analyte List
UMTRCA	Uranium Mill Tailings Radiation Control Act
UU/UE	Unlimited Use/Unrestricted Exposure

I. INTRODUCTION

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP) (40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii)) and considering EPA policy.

This is the second FYR for the Stauffer Chemical Co. (Tarpon Springs) Superfund site (the Site). The triggering action for this statutory review is the completion date of the previous FYR. The FYR has been prepared because hazardous substances, pollutants or contaminants remain at the Site, above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of two operable units (OUs). OU-1 addresses source areas. OU-2 addresses contaminated groundwater. This FYR addresses OU-1 only. The EPA has not finalized a remedy for OU-2.

EPA remedial project managers (RPM) Randy Bryant and Adam Acker led the FYR. Participants included EPA community involvement coordinator (CIC) Angela Miller, Florida Department of Environmental Protection (FDEP) site manager Theresa Pepe, and Melissa Oakley and Anthony Li with EPA support contractor Skeo. The potentially responsible party (PRP) was notified of the initiation of the FYR. The review began on 8/14/2019.

Site Background

The Site is in a residential, light industrial and commercial area of Tarpon Springs, Pinellas County, Florida (Figure 1). Anclote Road divides the 130-acre site into northern and southern sections. Current noteworthy site features include two capped areas, a seawall along the shore of Meyers Cove, groundwater monitoring wells, a subsurface groundwater cutoff wall, forested areas and a maintenance building (Figure 1). The Site is not in reuse; however, the property owner is actively marketing the Site for sale and development.

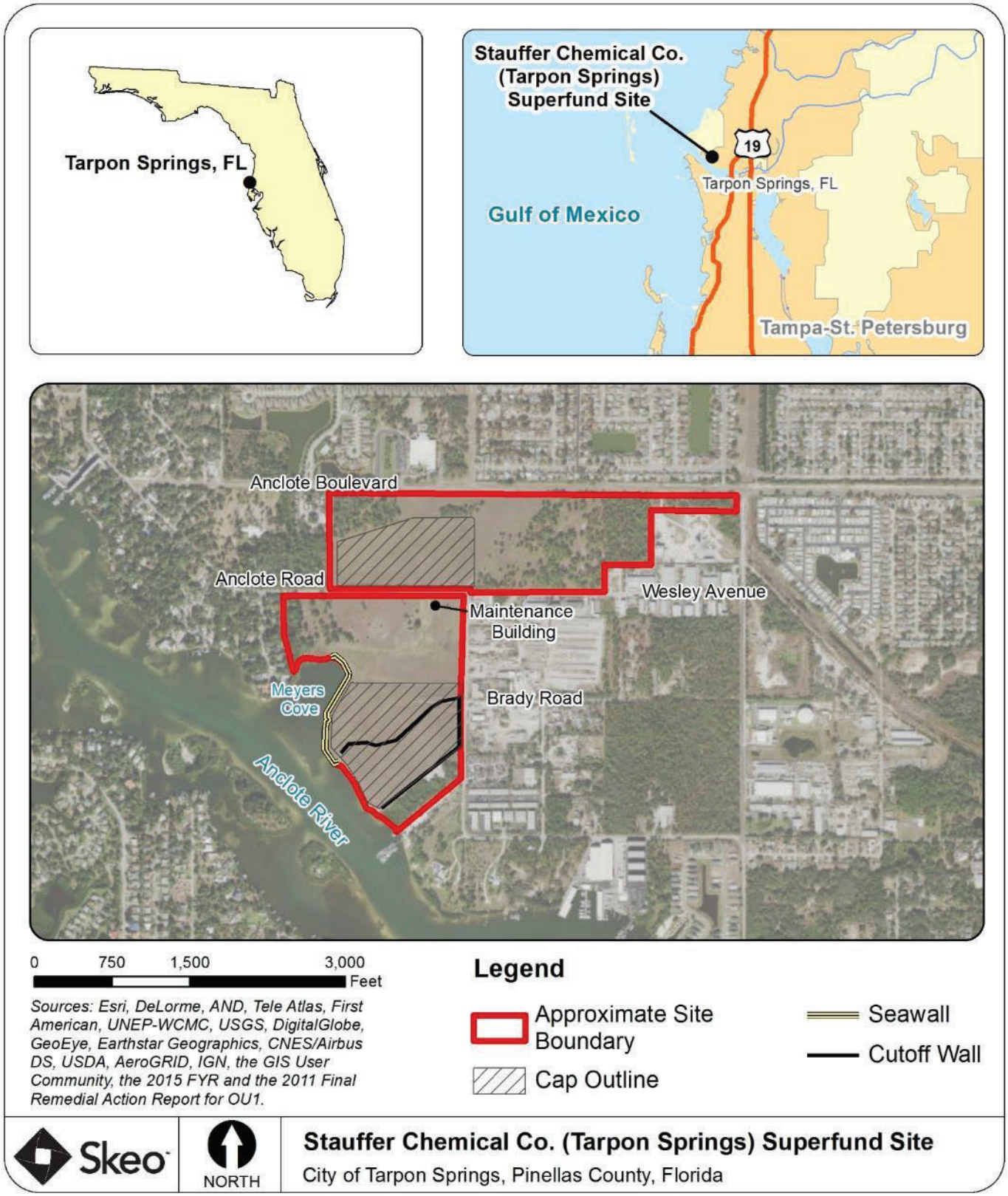
Victor Chemical Company began producing elemental phosphorus at the Site in 1947. Stauffer Chemical Company acquired the facilities from Victor Chemical Company in 1960 and continued manufacturing operations until 1981. Wastes generated by the phosphorus production process included phosphorus ore and fines, silica, raw coal, calcium fluoride and slag with elevated concentrations of metals and radium-226. Operators processed slag on the Site, north of Anclote Road. Wastes were also disposed of in a pond and an anomalous area of fill material referred to as the North Anomaly, on the northern part of the Site. Most site manufacturing operations occurred just south of Anclote Road, in an area referred to as the former main plant area. The former main pond area was at the southern end of the Site; it contained several unlined wastewater ponds and disposal areas used for water recovery during manufacturing operations (Figure 2). During facility operations, workers disposed of over 500,000 tons of phosphate ore process wastes on site. Those wastes contaminated soil and groundwater with radium-226, metals and polycyclic aromatic hydrocarbons (PAHs).

The Anclote River flows along the Site's southern and western boundaries. The Gulf of Mexico is about two (2) miles west of the Site. Pinellas County and the Site are underlain by two primary aquifers, the surficial aquifer and the upper Floridan aquifer. The surficial aquifer is separated from the upper Floridan aquifer by a semi-confining, relatively continuous bed of clay and sandy clay. Groundwater in both aquifers flows southwest and discharges to the Anclote River. Site-related groundwater contamination is present in both the surficial and upper Floridan aquifers (see the Data Review section for additional details). There are no active residential or commercial wells on site or downgradient of the Site (i.e., between the Site and the Anclote River). The municipal water supply provides water to the area around the Site. Appendix A provides a list of references used for this FYR. Appendix B provides a chronology of major site events. Appendix C includes a figure that shows historic site operations. Appendix D summarizes the current site status.

FIVE-YEAR REVIEW SUMMARY FORM

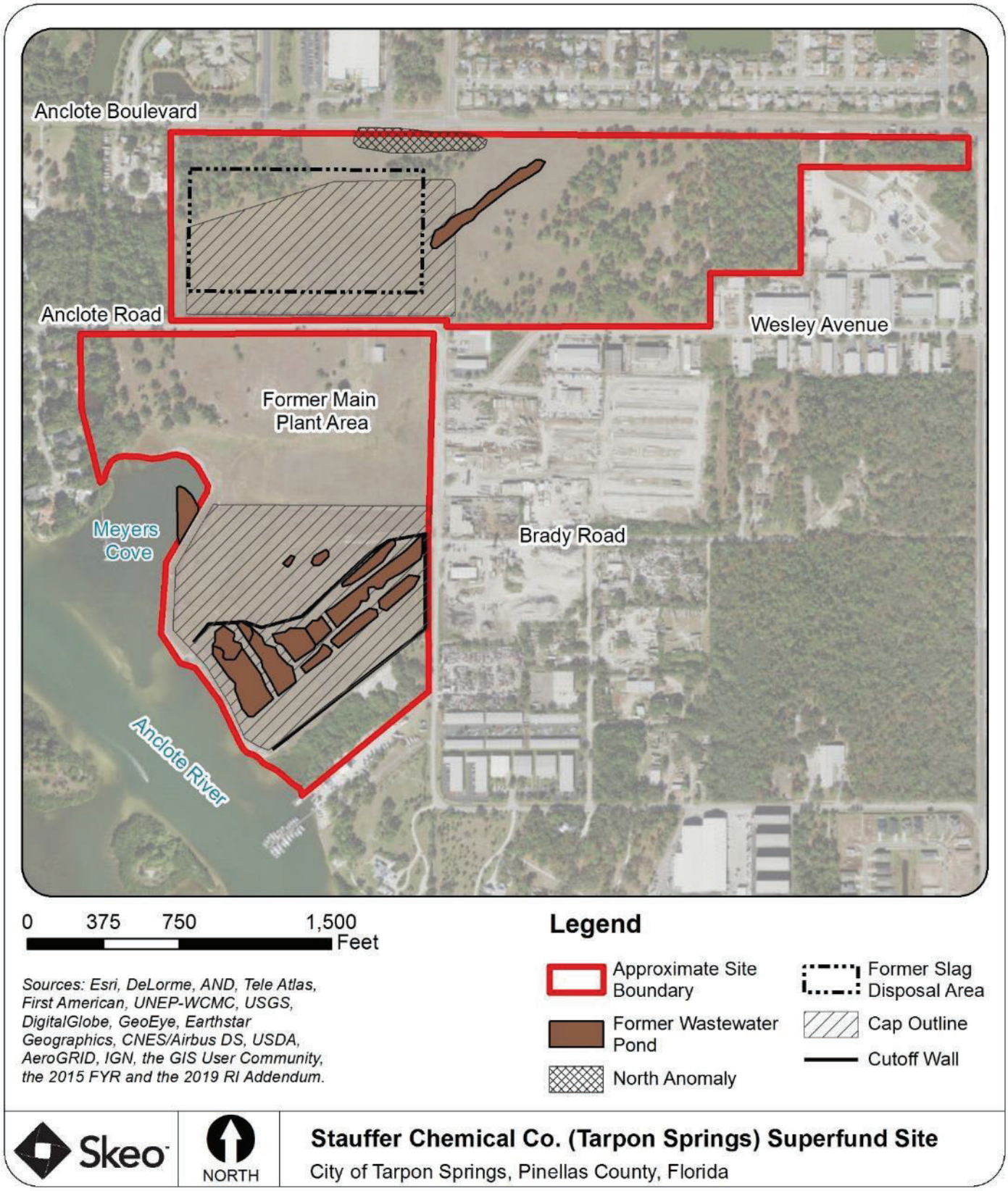
SITE IDENTIFICATION		
Site Name: Stauffer Chemical Co. (Tarpon Springs)		
EPA ID: FLD010596013		
Region: 4	**State:** FL	**City/County:** Tarpon Springs/Pinellas
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	**Has the Site achieved construction completion?** No	
REVIEW STATUS		
Lead agency: EPA		
Author name: Randy Bryant and Adam Acker		
Author affiliation: EPA with support provided by Skeo		
Review period: 8/14/2019 – 5/4/2020		
Date of site inspection: 10/23/2019		
Type of review: Statutory		
Review number: 2		
Triggering action date: 5/4/2015		
Due date *(five years after triggering action date)*: 5/4/2020		

Figure 1: Site Vicinity Map



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

Figure 2: Historic Source Area Map



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II. RESPONSE ACTION SUMMARY

Basis for Taking Action

In 1987, the Stauffer Management Company (SMC) formed due to the divestiture of the Stauffer Chemical Company. SMC is the PRP and owns the site property. In 1992, SMC voluntarily entered into an Administrative Order on Consent with the EPA to conduct a remedial investigation and feasibility study (RI/FS). SMC completed the RI in 1993 and the FS in 1996. The main contaminants of concern (COCs) for soils were radiological constituents, primarily radium-226, located in the former slag processing area, roads and parking lots. Under a residential scenario, the RI identified arsenic, antimony, beryllium, cadmium, chromium, thallium and carcinogenic polycyclic aromatic hydrocarbons (CPAHs) as COCs for soil. The 1995 Baseline Risk Assessment confirmed previously identified COCs but noted inadequate evidence for the carcinogenicity of cadmium and chromium by oral or dermal routes. Therefore, the EPA did not list them as final COCs. The RI did not identify unacceptable risks to ecological receptors, citing an overall low to moderate site-related risk, which would be moderated by the dilution effect of the Anclote River.

The RI confirmed site-related contaminants at levels above drinking water Maximum Contaminant Levels (MCLs) in some surficial aquifer monitoring wells. The RI noted that the discontinuous spatial distribution of constituents in site groundwater indicated small, localized sources. Site-related contaminant concentrations in the upper Floridan aquifer did not exceed drinking water standards. The RI did not detect site-related contamination in surface water above background levels.

The 1995 Baseline Risk Assessment concluded that the Site principally posed a threat to future residential receptors and maintenance workers through potential exposure to contaminated surface soil and groundwater. The EPA added the Site to the National Priorities List (NPL) in 1994.

Response Actions

FDEP requested that groundwater contamination be addressed separately from soil contamination, so the EPA established two site OUs. OU-1 addresses source material and OU-2 addresses contaminated groundwater in the surficial aquifer. While remedial action objectives (RAOs) were not clearly established by the Site's decision documents, OU-1 remedial goals include limiting contaminant mobility, preventing further groundwater contamination by addressing source materials, and preventing contact with contaminated materials.

OU-1

The EPA issued a Record of Decision (ROD) for OU-1 in July 1998. The EPA later issued four Explanations of Significant Differences (ESDs); two in 1999, one in 2000 and one in 2007. The major remedial components, as described in the 1998 ROD and amended by the ESDs, include:

- Limited excavation of radiological and chemically contaminated material/soil that exceeds residential cleanup standards.
- Consolidation of contaminated material/soil in the main pond area (the general area that encompasses most of the former wastewater ponds), former slag disposal area and/or other areas on site.
- Construction of a groundwater cutoff wall to reduce the potential for contaminant migration from the former wastewater ponds.

- Construction of caps over the consolidation areas; the caps must meet the Florida Administrative Code Section 62-701.600.5(g).
- Implementation of institutional controls for the Site, including deed restrictions, land use ordinances, physical barriers and surficial aquifer water supply well-permitting restrictions. The restrictions will limit access to the Site and prohibit disturbance of the remedy.
- Monitoring of surface water to assess the performance of the OU-1 remedy.[1]

Table 1 includes soil COCs and cleanup goals. Except for radium-226, the ROD established risk-based cleanup goals for soil COCs based on a future residential land use scenario. The ROD based the cleanup goal for radium-226 on Federal Standards for the Cleanup of Land and Buildings Contaminated with Residual Radioactive Material (40 CFR 192).

Table 1: OU-1 Soil Cleanup Goals

COC	Cleanup Goal[a]
Arsenic	3.7 mg/kg [b]
Antimony	28.1 mg/kg
Beryllium	120 mg/kg [c]
Phosphorus (white phosphorus)	1.4 mg/kg
Thallium[d]	1.4 mg/kg
Radium-226 (Lead-210)	5 pCi/g[e]
CPAHs[f]	0.089 mg/kg

Notes:
mg/kg = milligrams per kilogram
pCi/g = picocuries per gram
a. As listed in Table 6-8 of the 1998 ROD.
b. Current cleanup goal per the March 2000 ESD.
c. Current cleanup goal per the August 1999 ESD.
d. The Baseline Risk Assessment assumed toxicity values for thallium oxide obtained from the EPA's Health Effects Assessment Summary Table dated March 1993; however, toxicity values for this compound are no longer available in EPA databases.
e. Cleanup level established by the ROD is 5 picocuries per gram (pCi/g) above the background concentration. The background concentration is 0.206 pCi/g based on investigations during remedial design.
f. Includes Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, and Indeno(1,2,3-cd)pyrene converted to benzo(a)pyrene equivalents.

OU-2

While some of the OU-1 remedial components, such as groundwater use restrictions, the groundwater cutoff wall and capping of consolidated waste to prevent further groundwater contamination, help address site-related groundwater contamination, the EPA has not yet selected a long-term groundwater remedy (OU-2). The PRP performs annual surface water monitoring per the OU-1 ROD, and both surface water and groundwater monitoring in accordance with O&M requirements for OU-1.
In February 2019, the PRP completed an RI addendum for OU-2. The purpose of the RI addendum was to review groundwater and surface water quality data collected since the implementation of the OU-1 remedy; assess the reduction in contaminant concentrations following soil and source remediation activities; and determine whether additional remediation for groundwater is warranted. Overall, the RI addendum suggests that no further remedy is needed to address remaining site-related groundwater

[1] The ROD requires surface water monitoring because both groundwater aquifers discharge to surface water.

contamination. The data in the RI addendum are discussed in the Data Review section of this FYR. The EPA anticipates selecting an OU-2 remedy soon.

Status of Implementation

The PRP performed the remedial design between July 1999 and September 2008. SMC contractors initiated the Site's OU-1 remedial action in April 2010 and completed it in January 2011. Concurrent with remedial action construction, SMC demolished three of the four remaining structures on-site, including the former administration building, lunchroom building and guardhouse. The remedial action included the following key components:

- Excavation and on-site consolidation of 222,103 cubic yards of roadway and former railroad bed slag, waste fill, and contaminated soil and sediment from impacted areas on site.
- Construction of a groundwater cutoff wall using fiberglass composite sheeting. Contractors drove the sheeting down vertically until it was about two feet into the semi-confining layer, where present. If the semi-confining layer was not present, the sheeting was installed to a depth of about 10 feet below mean sea level. A total of 2,632 horizontal linear feet (55,218.33 vertical square feet) of sheet pile wall was constructed to encompass the hydraulically upgradient and side gradient sides of the main pond area.
- Restoration of Meyers Cove to its former horizontal limits and construction of a seawall using vinyl sheet pile. Contractors installed 1,327 horizontal linear feet (21,068 vertical square feet) of seawall along the Anclote River and Meyers Cove. Remediation also sloped the north portion of Meyers Cove and added riprap along some shoreline on the southern section of the Site.
- Construction of two low-permeability geomembrane caps designed to meet the requirements of Florida Administrative Code (FAC) 62-701.600(5)(g). One cap covers 26 acres over the former main pond area (see Figure 2) and the south portion of the former main plant area. The southern cap has five passive gas vents to allow monitoring for potential generation of phosphine. A similar low permeability cap covers 18 acres of the former slag disposal area in the northern section of the Site. Contractors installed fences with locking gates around both capped areas to restrict access.
- The institutional controls required by the ROD have been implemented through a 2015 Declaration of Restrictive Covenants. See the Institutional Control Review section below for additional information.
- Surface water monitoring is performed annually. See the Data Review Section for additional information.

The EPA and FDEP inspected the remedial work in December 2010. The PRP documented completion of OU-1 remedy construction in an August 2011 Remedial Action Report.

Institutional Control (IC) Review

On April 7, 2015, SMC filed a Declaration of Restrictive Covenants with Pinellas County. The Declaration of Restrictive Covenants established the following restrictions:

- Groundwater use, drilling for water and well installations are prohibited unless pre-approved by FDEP.
- Existing stormwater features (e.g., swales and ditches) shall not be altered without prior FDEP approval.

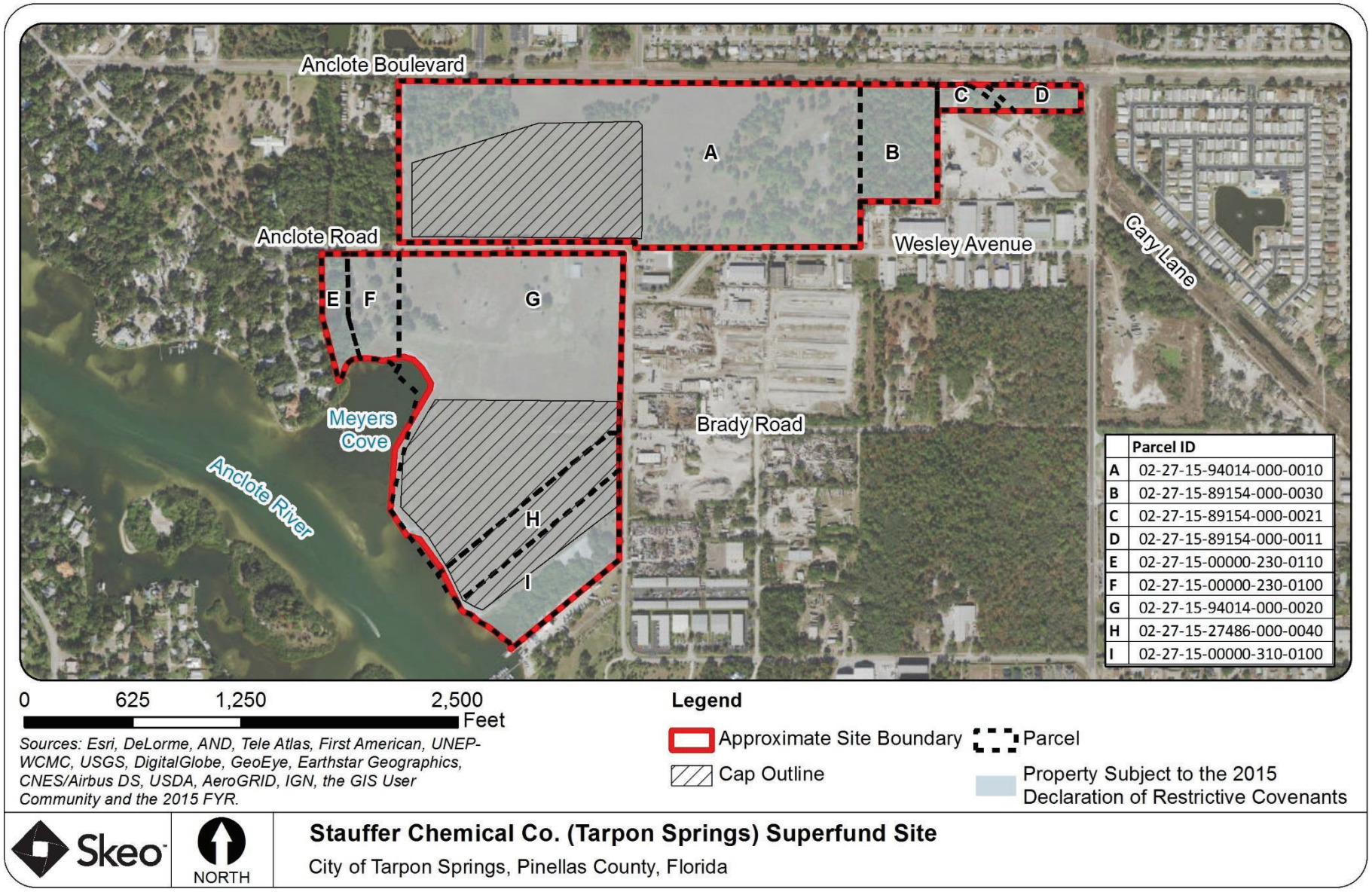
- The property shall only be used for industrial, manufacturing and non-residential commercial purposes.
- On-site engineering controls shall not be penetrated or physically altered.

The Declaration of Restrictive Covenants runs with the land and with the title of the property. It also grants continued right of access to the Site, related to the remedy. Site parcels that are subject to the institutional controls are listed in Table 2 and shown in Figure 3. Currently, all site parcels are owned by SMC. An excerpt from the 2015 Declaration of Restrictive Covenants is included in Appendix E.

Table 2: Summary of Planned and/or Implemented Institutional Controls (ICs)

Media, Engineered Controls, and Areas That Do Not Support UU/UE Based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date
Groundwater	Yes	Yes	02-27-15-94014-000-0010, 02-27-15-89154-000-0030, 02-27-15-89154-000-0021, 02-27-15-89154-000-0011, 02-27-15-00000-230-0110, 02-27-15-00000-230-0100, 02-27-15-94014-000-0020, 02-27-15-27486-000-0040, 02-27-15-00000-310-0100	Prohibit groundwater use and installation of water wells	2015 Declaration of Restrictive Covenants
Soil	Yes	Yes	02-27-15-94014-000-0010, 02-27-15-89154-000-0030, 02-27-15-89154-000-0021, 02-27-15-89154-000-0011, 02-27-15-00000-230-0110, 02-27-15-00000-230-0100, 02-27-15-94014-000-0020, 02-27-15-27486-000-0040, 02-27-15-00000-310-0100	Prohibit residential land use and any activities that could adversely impact the integrity of the remedy	2015 Declaration of Restrictive Covenants

Figure 3: Institutional Control Map



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Systems Operations/Operation and Maintenance (O&M)

The PRP has contracted SCS Engineers to perform site O&M. O&M activities are conducted in accordance with the Site's 2008 O&M Plan. O&M activities include quarterly inspections of the seawall and shoreline, low-permeability caps and surface water runoff features; annual monitoring of groundwater and surface water; and mowing. Groundwater and surface water sampling results are submitted to the EPA in annual monitoring reports. Quarterly site inspections are documented in checklists. The checklists have not previously been submitted to the EPA; however, during this FYR process, the O&M contractor indicated that they would include O&M checklists in future annual monitoring reports. Mowing is performed on a monthly basis from April to October and as needed during the winter. The contractor inspects the Site following major storm events. O&M staff visits the Site at least once a month. Since the previous FYR, there have been no significant O&M issues.

The Site serves as a habitat for gopher tortoises, which are an endangered species in Florida. The tortoises dig burrows on-site, sometimes on the landfill caps. When O&M staff observe small burrows (i.e., less than one foot deep), they backfill them with soil. Due to the recent appearance of a larger burrow on the northern cap, the PRP is scheduling a gopher tortoise survey. The survey, which is required by state law, will confirm the type(s) of animals making the burrows and will include recommendations to address and prevent the issue. When found on-site, gopher tortoises are relocated to more appropriate habitats.

III. PROGRESS SINCE THE PREVIOUS REVIEW

This section includes the protectiveness determination and statement from the previous FYR. The previous FYR identified no issues that affected protectiveness.

Table 3: Protectiveness Determinations/Statements from the 2015 FYR

OU #	Protectiveness Determination	Protectiveness Statement
1	Protective	The remedy at OU-1 is protective of human health and the environment because remedial activities for contaminated soil and source materials have adequately addressed all exposure pathways that could result in unacceptable risks to human health and the environment.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Community Involvement and Site Interviews

A public notice was made available by newspaper posting in the *Tampa Bay Times*, on 11/16/2019 (Appendix F). It stated that the FYR was underway and invited the public to submit any comments to the EPA. The results of the review and the report will be made available at the Site's information repository, located at the Tarpon Springs Public Library at 138 East Lemon Street in Tarpon Springs.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. The interviews are summarized below. A completed interview form is included in Appendix G.

Community interviews were conducted via phone with Pinellas County Economic Development and the state project manager with the FDEP. Pinellas Economic Development stated that there were no concerns or complaints voiced by local citizens regarding the property, but there have been a couple of developers that have shown some interest in the site. FDEP's overall impression of the project, including the cleanup, is positive. The exposure risk is mitigated by the soil cap and the site is well-maintained and may have the potential for reuse. Their assessment of the current performance of the remedy is the soils are contained, remedy complete with restrictive covenants in place. The groundwater is being monitored and evaluated for a potential remedy, if necessary. They stated they have only received one inquiry and that was from a student at the University of South Florida with general questions regarding the site for a class about Water Quality Policy and Management. FDEP mentioned that a number of real estate developers have expressed interest in the property. Unsuccessful attempts were made to interview residents, living nearby, that were involved during the remedial cleanup activities at the site.

Data Review

PRP contractor, SCS Engineers, performs annual surface water monitoring, as required by the ROD, to evaluate if source control is preventing contaminant transport to surface water. The PRP contractor also performs annual groundwater monitoring, as required by the Site's 2008 O&M plan. This data review examines groundwater monitoring results for both the surficial and upper Floridan aquifers and surface water data, as groundwater in both aquifers discharges to surface water in Meyers Cove and the Anclote River. SCS Engineers submit results to the EPA in annual groundwater quality monitoring reports. All groundwater and surface water monitoring data collected since the 2015 FYR and since completion of OU-1 remedy construction in 2011 are included in the February 2019 RI Addendum; this data review includes an analysis and summary of that report as it relates to OU-1 COCs.

Annual sampling events measure groundwater elevations, collect groundwater samples from 11 monitoring wells (three surficial aquifer wells and eight upper Floridan aquifer wells) and collect surface water samples from four locations. Figure 4 shows monitoring well locations and surface water sampling points. Groundwater and surface water samples are analyzed for Target Analyte List (TAL) metals, cyanide, fluoride, chloride, sulfate, total phosphorus, elemental/white phosphorus, gross alpha, gross beta, radium-226, radium-222, radon-222 and polonium-210. This data review evaluates only OU-1 soil COCs in groundwater and surface water, except for CPAHs. Monitoring for CPAHs is not required for groundwater or surface water because the risk assessment demonstrated there was no unacceptable risk due to CPAHs in soil for current/future site workers or future residents (see Question B summary in Technical Assessment section for additional information). Appendix H includes all groundwater monitoring data collected between 2012 and 2018.

Groundwater - Surficial Aquifer

In accordance with the Site's 2008 O&M Plan, the PRP compares groundwater monitoring results to Florida primary drinking water standards. One exception is elemental phosphorus, for which results are compared to the Florida surface water criteria. Groundwater in the surficial aquifer typically flows west-southwest and discharges to the Anclote River. Figure H-1 in Appendix H shows 2018 groundwater elevations for the surficial aquifer.

The extent of contaminated groundwater in the surficial aquifer is localized to monitoring well (MW)-93-5 (Figure 4). Between 2012 and 2016, MW-93-5 has experienced sporadic exceedances of drinking water standards for antimony, arsenic and thallium (See Table H-1 in Appendix H). Based on surface water monitoring results (discussed on the following page), contaminants in surficial groundwater do not appear to be migrating or impacting the Anclote River. Overall, surficial aquifer impacts have shown

significant reduction since implementation of the OU-1 remedy in 2011. COC concentrations in wells on the southern part of the Site have decreased (within the former disposal areas and adjacent to the Anclote River) and dropped below applicable standards in the surficial aquifer on the northern part of the Site. These results suggest that the OU-1 remedy effectively addressed the source of contamination in the surficial aquifer.

Groundwater - Upper Floridan Aquifer
Groundwater in the upper Floridan aquifer typically flows southwest and discharges to the Anclote River. Figure H-2 in Appendix H shows 2018 groundwater elevations for the upper Floridan aquifer. Detections of OU-1 COCs above applicable standards have been isolated and limited both pre- and post-soil remediation. As of 2018, in the upper Floridan aquifer, site-related groundwater contamination above OU-1 COC MCLs is contained within a small area in the southern part of the Site (Figure 4). The limited extent of groundwater impacts in the Floridan aquifer suggests that while vertical downward migration may have occurred at isolated locations, it is not widespread in aerial extent or large in magnitude. As a result of the consolidation and capping of source material and installation of the groundwater cutoff wall, it is expected that groundwater conditions in the Floridan aquifer will continue to improve over time. Based on surface water monitoring results (discussed below), contaminants in the upper Floridan aquifer do not appear to be migrating or impacting the Anclote River.

Since 2012, arsenic has routinely exceeded the MCL of 0.01 milligrams per liter (mg/L) at MW-2F and MW-02-3F, with a maximum arsenic concentration of 0.03 mg/L at MW-02-3F in March 2012 (Figure 4). However, arsenic concentrations at those wells have decreased overall since 2012. Only MW-12-2 routinely exhibits exceedances of the radium-226 MCL of 5 pCi/L (see Figure 4 and Table H-1 in Appendix H). Concentrations of radium-226 at MW-12-2 have fluctuated since 2012, with the maximum concentration (13.6 pCi/L) detected in 2018. Continued monitoring will determine if the 2018 radium-226 result at MW-12-2 was atypical. Figure 4 shows approximate arsenic and radium-226 plume locations based on July 2018 monitoring data.

In July 2017, groundwater sampling results for antimony, arsenic, beryllium and thallium were reported at concentrations above their respective MCLs at two upper Floridan wells on the southern part of the Site (MW-2F and MW-12-1). However, the results were qualified as being not detected at concentrations above the method detection limit (See bold values in italics in Table H-1 in Appendix H). In those cases, the method detection limit used was higher than the respective MCLs; therefore, there is uncertainty regarding whether the actual results exceeded the MCLs. The use of inappropriate method detection limits seems to have been an isolated incident in 2017. However, moving forward, the laboratory method detection limits must be low enough to assess the achievement of MCLs for all OU-1 COCs.

Surface Water
Prior to 2018, surface water samples were collected from a single location - the natural, non-process pond located on the western edge of the Site (surface water [SW]-1). In August 2018, surface water was collected from four locations – SW-1, SW-2, SW-3 and SW-4. In 2018, the PRP contractor started collecting surface water samples from the additional locations in response to a recommendation made by the previous FYR. The additional sampling locations in Meyers Cove and the Anclote River were added to better evaluate the effectiveness of the OU-1 remedy to protect surface water quality. During a supplemental surface water sampling event in November 2018, performed in support of the 2019 RI Addendum, samples were collected from eight locations (SW-1 through SW-8). The additional sampling locations (SW-5 through SW-8) were added to more thoroughly assess the ability of the OU-1

remedy to protect surface water and to further inform the selection of the forthcoming OU-2 remedy. Figure 4 shows all surface water sampling locations.

This data review compared surface water monitoring results, collected between 2012 and 2018, to Florida surface water standards for the OU-1 soil COCs. The Florida surface water standards are the same as the federal surface water standards. Between 2012 and 2018, there were no exceedances of surface water standards for OU-1 COCs. This indicates that site-related contamination is not adversely impacting surface water quality in Meyers Cove or the Anclote River. Tables H-4 and H-5 in Appendix H include surface water sampling data collected between 2012 and 2018.

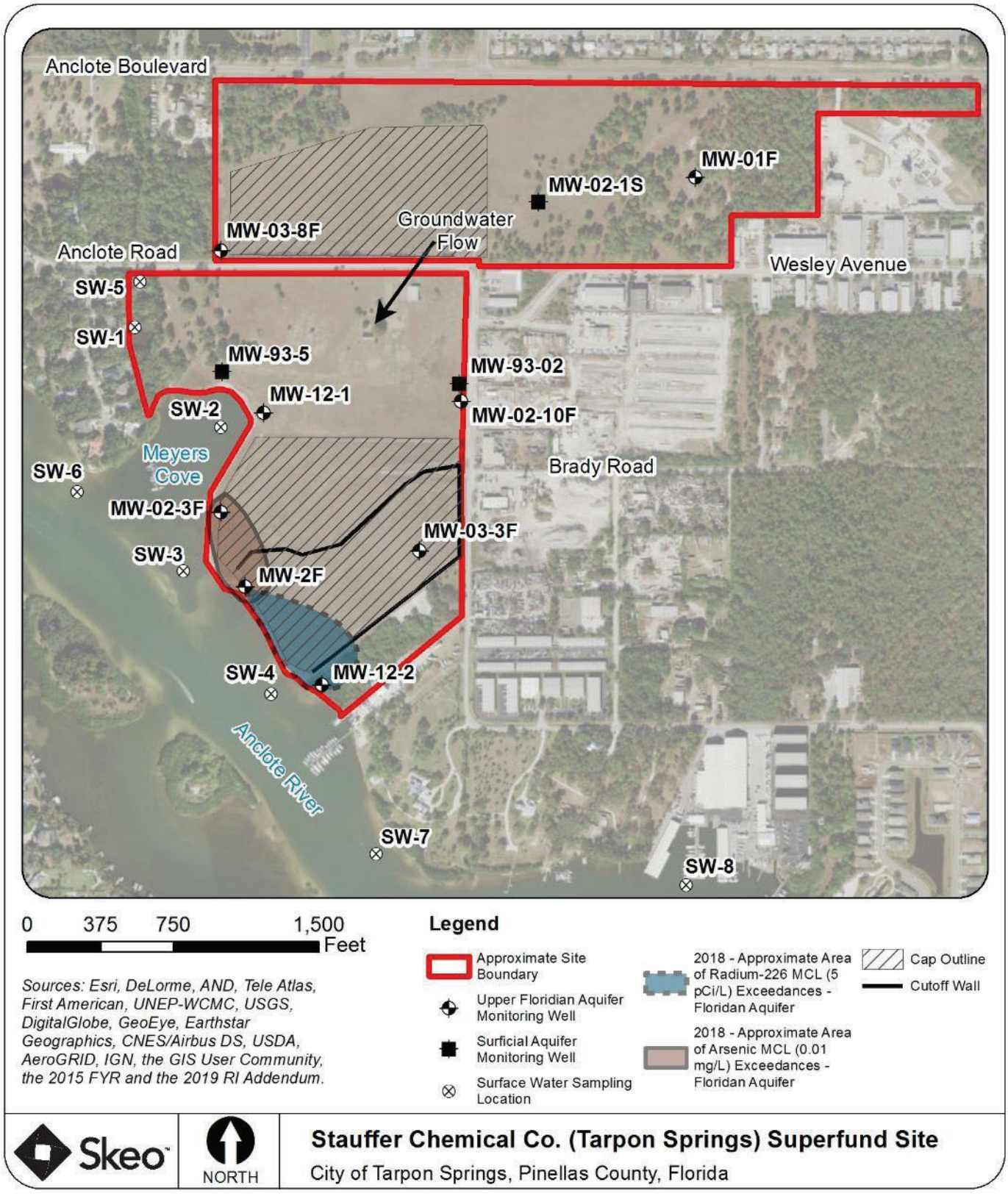
Site Inspection

On October 23, 2019, site stakeholders participated in a site inspection. Participants included: EPA RPMs Randy Bryant and Adam Acker; FDEP site manager Theresa Pepe; PRP representative Kurt Batsel; PRP contractors Carrie Aurit, Kayla Owellette and Daryl Paul; and Melissa Oakley and Anthony Li with EPA contractor Skeo. The purpose of the inspection was to assess the protectiveness of the remedy. The site inspection checklist is included in Appendix I. Site inspection photographs are included in Appendix J.

The site inspection began with a safety briefing and a walking inspection of the southern part of the Site, south of Anclote Road. Participants viewed the southern cap, seawall, Meyers Cove, riprap along the shore of Meyers Cove, fencing and monitoring wells. Participants then inspected the cap on the northern site property, north of Anclote Road. All fencing and monitoring wells on the Site appeared to be in good condition. Fencing is clearly marked with signage, and site access is restricted by locking gates. Vegetation on both caps is well-established and appeared to be healthy. Site inspection participants observed animal burrows on both caps. One burrow on the north cap was relatively large and has been marked for follow-up. It did not appear that the burrow reached the cap liner. The PRP contractor is scheduling a survey that will confirm the type(s) of animals making the burrows and will include recommendations to address and the prevent the issue. Site inspection participants also observed some of the uncapped site areas and discussed how the size and location of the Site make it ideal for redevelopment. The PRP noted that the Site is actively being marketed for sale and expressed interest in learning more about EPA tools and resources that may be available to help facilitate site reuse. Reuse planning information was provided to the PRP at the end of the site inspection.

Skeo staff visited the Site's local information repository, located at the Tarpon Springs Public Library at 138 East Lemon Street in Tarpon Springs. The repository contained a large collection of site-related documents dating from 1990 through 2010, but the most recent FYR was not available. The EPA will update site documents.

Figure 4: Detailed Site Map



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V. TECHNICAL ASSESSMENT

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

Question A Summary:
Yes. The OU-1 remedy is functioning as intended by the ROD and subsequent ESDs. Excavation, consolidation and capping of contaminated materials and soil prevents direct exposure to site-related soil contamination. The caps also prevent infiltration of precipitation, which prevents the capped materials from further contaminating groundwater. The subsurface groundwater cutoff wall diverts surficial groundwater around former pond materials and contaminated soil under the ponds. The 2015 Declaration of Restrictive Covenants meets the institutional control requirements established by the ROD.
The Declaration of Restrictive Covenants is in place for the entire Site and prohibits groundwater use, drilling for water and new well installation without pre-approval from the State. The institutional controls also restrict land use to industrial or commercial purposes and prohibit activities that could adversely impact the integrity of the caps. While a final OU-2 remedy has not yet been selected, the OU-1 remedy included groundwater components which are helping address site-related groundwater contamination.

The Site and remedial features are well-maintained, and O&M activities are adequate. Perimeter fencing and locking gates effectively prohibit trespassing. Gopher tortoises burrow into the caps. While there is no indication that the burrows have breached cap liners, continued close monitoring of burrows is needed to ensure continued integrity of the caps. Based on the findings of the upcoming gopher tortoise survey, the O&M contractor will develop a state-approved plan to address the issue, relocate the animals off site, and prevent future burrowing.

Groundwater and surface water monitoring assesses the effectiveness of the OU-1 remedy. Data collected since completion of OU-1 remedy construction in 2011 indicate that the consolidation and capping of contaminated materials and soil and the installation of the subsurface groundwater cutoff wall have improved groundwater quality in the surficial and upper Floridan aquifers. There have been no exceedances of drinking water standards in surficial wells since 2016. While a few upper Floridan wells continue to have MCL exceedances, the area of those exceedances is confined to a small area on the southern part of the Site. The Declaration of Restrictive Covenants prevents groundwater use on-site, and the area around the Site is connected to the municipal water supply. As stated in the Site's 2019 RI Addendum, it is expected that contaminant concentrations in both aquifers will continue decreasing. Between 2012 and 2018, there have been no exceedances of surface water standards for OU-1 COCs. Those results confirm that the OU-1 remedy is effectively preventing adverse impacts to surface water in Meyers Cove and the Anclote River.

In an isolated incident in July 2017, the laboratory method detection limits used to analyze certain OU-1 COCs in some Floridan aquifer groundwater samples were higher than the MCLs for those respective COCs. Moving forward, method detection limits must be low enough to assess the achievement of MCLs for all OU-1 COCs.

Information gathered for the 2019 RI Addendum will inform the selection of a final remedy to address site-related groundwater contamination (OU-2).

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

Question B Summary:

Some of the EPA default exposure assumptions and toxicity data have changed; however, the cleanup levels used at the time of remedy selection remain health protective. There are no complete exposure pathways at the Site. Consolidation and capping of contaminated soil and materials prevent direct contact with those wastes. While some OU-1 constituents are above MCLs in groundwater, no one is using the groundwater, and institutional controls prevent future exposure. As a remedy for groundwater contamination has not yet been selected, Applicable or Relevant and Appropriate Requirements (ARARs) for groundwater have not been established. The 1998 ROD identified a chemical-specific ARAR for the radionuclide radium-226 which includes its decay product lead-210 (see Table K-1 in Appendix K). The Uranium Mill Tailings Radiation Control Act (UMTRCA) established soil cleanup standards for radium-226; these standards have been codified in 40 CFR 192. The UMTRCA standards limit the concentration of radium-226 in surface soil to no more than 5 picocuries per gram (pCi/g) over background. The current standard is the same as the ROD-established standard.

To evaluate the effect of toxicity value changes on soil cleanup goals established in the ROD, this FYR compared cleanup goals to November 2019 EPA Regional Screening Levels (RSLs) for direct contact. As shown in Table K-2 in Appendix K, except for radium-226, cleanup goals do not exceed the EPA's cancer risk management range (1.0×10^{-6} to 1.0×10^{-4}) or noncancer hazard quotient (HQ) of one (1) for residential use.

The 1998 ROD established a cleanup goal of 1.4 milligrams per kilogram (mg/kg) assuming thallium is in the thallium oxide form and using toxicity information from the EPA's Health Effects Assessment Summary Tables of March 1993. However, the cleanup goal for thallium is expected to remain protective because thallium cleanup would be captured by the remediation of other soil COCs (e.g., arsenic, phosphorus and radionuclides) that were more widely dispersed than thallium, according to the 1993 RI report. The RfDs from the 1993 EPA HEAST document are now obsolete. The only current toxicity values for thallium compounds are Superfund screening Provisional Peer-Reviewed Toxicity Values (EPA-PPRTV 2020). Screening PPRTVs are based on extraordinarily high uncertainty factors because the EPA has determined that there are no adequate toxicology studies, and therefore, screening PPRTVs can be used as the basis for excluding chemicals from further evaluation, but are generally not used as the basis for site remedial levels. Even though the EPA still has drinking water MCL/MCLG values, the EPA Office of Water does not list a reference dose (RfD) in the current Drinking Water Table (EPA 2018).

An RSL was not available for radium-226; therefore, the EPA's preliminary remediation goal calculator was used to estimate the equivalent industrial and residential risk levels associated with the cleanup goal of 5 pCi/g. Table K-2 in Appendix K shows the cleanup goal is equivalent to risks that are slightly above the EPA's risk management range of 1.0×10^{-6} to 1.0×10^{-4}, under both residential and commercial/ industrial land-use scenarios. However, the cleanup goal remains valid as it is an ARAR that has not changed. In addition, following remedial action, a post-construction radiological survey was conducted. The survey indicated the Site does not have exposure rates that would be of a radiation exposure concern, as the on-site concentration is half of the EPA's recommended dose level. See Appendix K for additional details.

The ROD established CPAHs as soil COCs. However, the cancer potency value for cPAHs has been changed to a less stringent value. Available site soil data could be compared to the current less stringent RSL to determine if CPAHs need to continue to be retained as COCs. It is noted that the completed soil cleanup addressed the soil contaminants that were main risk drivers for the soil exposure pathways.

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

No other information has come to light that could call into question the protectiveness of the OU-1 remedy.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the FYR:
OU-1

Issues and Recommendations Identified in the FYR: None

OTHER FINDINGS

Additional recommendations were identified during the FYR. These recommendations do not affect current and/or future protectiveness.

- *Complete the gopher tortoise survey and any recommendations from the survey.*
- *Following review of the RI Addendum and any other pertinent site-related information, the EPA will select and document a final OU-2 remedy in a decision document.*
- *Moving forward, method detection limits must be low enough to assess the achievement of MCLs for all OU-1 COCs.*
- *The RI Addendum recommends several modifications to the current groundwater and surface water monitoring program, including removal of some groundwater wells and constituents from the program, and removal of the SW-1 surface water sampling location from the program. The EPA will review available information and determine if the suggested changes are appropriate.*
- *Review the basis used in the ROD for selecting CPAHs as a soil COC to determine if the constituent should be removed as a COC.*
- *Given the interest in site redevelopment, a review of the Site's institutional controls may be helpful to ensure that the current controls are not overly restrictive for certain parts of the Site.*
- *Provide the site records repository with recent site-related documents, including the previous FYR.*

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement	
Operable Unit: OU-1	*Protectiveness Determination:* Protective
Protectiveness Statement: The remedy at OU-1 is protective of human health and the environment because the remedial activities for contaminated soil and source materials have adequately addressed all exposure pathways that could potentially result in unacceptable risks to human health and the environment.	

VIII. NEXT REVIEW

The next FYR Report for the Stauffer Chemical Co. (Tarpon Springs) Superfund site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

2015 Groundwater Quality Monitoring, Stauffer Chemical Superfund Site, Tarpon Springs, Florida. Prepared by O'Brien & Gere for U.S. EPA. October 2015.

2016 Groundwater Quality Monitoring Report, Stauffer Chemical Superfund Site, Tarpon Springs, Florida. Prepared by SCS Engineers for U.S. EPA. February 2017.

2017 Groundwater Quality Monitoring Report, Stauffer Chemical Superfund Site, Tarpon Springs, Florida. Prepared by SCS Engineers for U.S. EPA. November 2017.

2018 Groundwater Quality Monitoring Report, Stauffer Chemical Superfund Site, Tarpon Springs, Florida. Prepared by SCS Engineers for U.S. EPA. November 2018.

Explanation of Significant Differences Superfund Fact Sheet for Stauffer Chemical Company Site, Tarpon Springs, Pinellas County, Florida. U.S. EPA. June 1999.

Explanation of Significant Differences Superfund Fact Sheet for Stauffer Chemical Company Site, Tarpon Springs, Pinellas County, Florida. U.S. EPA. August 16, 1999.

Explanation of Significant Differences Superfund Fact Sheet for Stauffer Chemical Company Site, Tarpon Springs, Pinellas County, Florida. U.S. EPA. March 27, 2000.

Explanation of Significant Differences Superfund Fact Sheet for Stauffer Chemical Company Site, Tarpon Springs, Pinellas County, Florida. U.S. EPA. June 2007.

Final Design for Operable Unit 1 (OU-I), Stauffer Chemical Superfund Site, Tarpon Springs, Florida. Prepared by O'Brien & Gere for Stauffer Management Company. November 2008.

Final Feasibility Study Report for Stauffer Management Company, Tarpon Springs, Florida Site. Prepared by Roy F. Weston, Inc. January 1996.

Final Site Remedial Investigation Report, Volume I, for Stauffer Management Company, Tarpon Springs, Florida. Prepared by Roy F. Weston, Inc. December 1993.

First Five-Year Review Report for Stauffer Chemical Co. (Tarpon Springs), Tarpon Springs, Pinellas County, Florida. U.S. EPA. April 2015.

Record of Decision, Operable Unit 1, Stauffer Chemical Tarpon Springs Site, Pinellas County, Florida. Prepared by U.S. EPA Region 4. July 2, 1998.

Remedial Action Work Plan for Operable Unit I (OU-1), Stauffer Chemical Superfund Site, Tarpon Springs, Florida. Prepared by O'Brien & Gere for Stauffer Management Company. March 2009.

Remedial Investigation Report Addendum Stauffer Chemical Superfund Site Tarpon Springs, Florida. Prepared by SCS Engineers for U.S. EPA. February 2019.

Revised Final Baseline Risk Assessment Parts A and B for Stauffer Chemical Company, Tarpon Springs, Florida. Prepared for U.S. EPA Region 4 by Black & Veatch Waste Science, Inc. July 21, 1995.

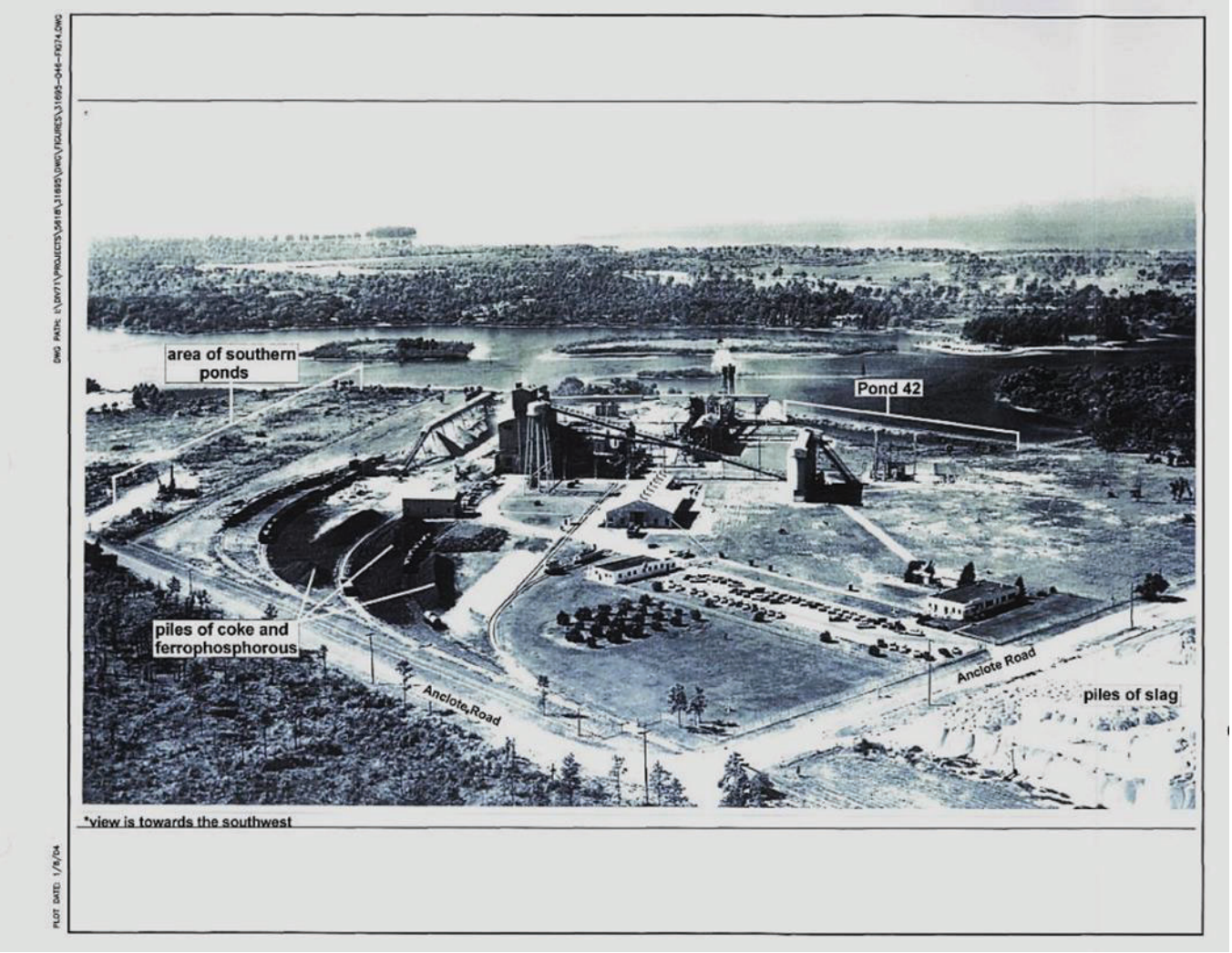
APPENDIX B – SITE CHRONOLOGY

Table B-1: Site Chronology

Event	Date
Victor Chemical Company began operating chemical manufacturing facilities on site	1947
Stauffer Chemical Company acquired the facilities from Victor Chemical Company	1960
Stauffer Chemical Company discontinued use of chemical manufacturing facilities on site	1981
The EPA discovered contamination on site	December 1, 1984
FDEP conducted a preliminary site assessment	June 30, 1987
The EPA began an expanded site inspection	March 30, 1989
The EPA completed an expanded site inspection	April 5, 1989
The EPA proposed the Site to the NPL	February 7, 1992
SMC (the PRP) voluntarily entered into an Administrative Order on Consent with EPA Region 4; PRP began RI/FS	July 28, 1992
The PRP completed the RI	December 1993
The EPA finalized the Site on the NPL	May 31, 1994
The EPA issued a Baseline Risk Assessment for the Site	July 21, 1995
The EPA completed the FS	March 1996
The EPA issued a ROD for OU-1	July 2, 1998
The EPA issued an ESD for OU-1	June 1999
The PRP began remedial design for OU-1	July 6, 1999
The EPA issued a second ESD for OU-1	August 16, 1999
The EPA and the PRP entered into a Consent Decree	September 2, 1999
The EPA issued a third ESD for OU-1	March 27, 2000
The EPA and the PRP entered into a second Consent Decree	October 19, 2005
The EPA issued a fourth ESD for OU-1	May 24, 2007
The PRP completed remedial design for OU-1	September 30, 2008
The site contractor began the soil remedial action	April 5, 2010
The site contractor completed the soil remedial action	January 14, 2011
The PRP completed the final Remedial Action Report for OU-1	August 2011
Declaration of Restrictive Covenants filed with Pinellas County	April 6, 2015
The EPA completed the First FYR	May 4, 2015
The PRP completed an RI Addendum	February 19, 2019

APPENDIX C –HISTORIC SITE FEATURES

Figure C-1: Historic Site View, Looking South to the Anclote River (1960s)



APPENDIX D – CURRENT SITE STATUS

Environmental Indicators
- Current human exposures at the Site are under control. *- Current groundwater migration is under control.*

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

Has EPA Designated the Site as Sitewide Ready for Anticipated Use?
☐ Yes ☒ No

Has the Site Been Put into Reuse?
☐ Yes ☒ No

APPENDIX E – INSTITUTIONAL CONTROLS

Figure E-1: Excerpt from the 2015 Declaration of Restrictive Covenants

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$375.50 KEN BURKE, CLERK OF COURT AND COMPTROLLER PINELLAS COUNTY, FL BY
DEPUTY CLERK: CLKDU18

This instrument prepared by:

STAUFFER MANAGEMENT COMPANY LLC
C/O Joe P. Yeager, Esq.
McCarter English, LLP
405 N. King Street, 8th Floor
Wilmington, DE 19801

DECLARATION OF RESTRICTIVE COVENANTS

This Declaration of Restrictive Covenants (hereinafter "Declaration") is given this 15th day of January, 2015, by STAUFFER MANAGEMENT COMPANY LLC, a Delaware limited liability company, authorized to do business in the State of Florida ("Grantor"), having an address of 1800 Concord Pike, Wilmington, DE 19850, to the State of Florida Department of Environmental Protection (hereinafter "FDEP" or "Grantee").

RECITALS

A. **WHEREAS**, Grantor is the fee simple owner of a parcel of land situated in the county of Pinellas County, State of Florida, more particularly described in Exhibit "A" **and shown on the Site Plan Survey in Exhibit "D"** attached hereto and made a part hereof (hereinafter the "Property");

B. **WHEREAS**, The Property subject to this restrictive covenant is a portion of the property known as the Stauffer Chemical Co. (Tarpon Springs) Superfund Site ("Site"), which the U.S. Environmental Protection Agency ("EPA"), pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, proposed for the National Priorities List ("NPL"), set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on February 7, 1992, at 57 Fed. Reg. 4824 and added to the NPL on May 31, 1994, at 59 Fed. Reg. 27989.

C. **WHEREAS**, in a Record of Decision dated July 2, 1998, (the "ROD") and four Explanations of Significant Difference ("ESD") signed in June 1999, August 1999, March 2000, and June 2007, the EPA Region 4 Regional Administrator selected a "remedial action" for the Site.

D. **WHEREAS**, a remedial action selected pursuant to the EPA ROD and ESDs will be performed on the Site.

E. **WHEREAS**, contaminants in excess of allowable concentrations for unrestricted use will remain at the Property after completion of the remedial action.

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F. **WHEREAS**, it is the intent of the restrictions in this declaration to reduce or eliminate to the extent practicable the risk of exposure of the contaminants to the environment and to users or occupants of the property and to reduce or eliminate the threat of migration of the contaminants.

G. **WHEREAS**, it is the intention of all parties that EPA is a third party beneficiary of said restrictions and said restrictions shall be enforceable by the EPA, FDEP, and their successor agencies.

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

I. **WHEREAS**, Grantor deems it desirable and in the best interest of all present and future owners of the Property that the Property be held subject to certain restrictions and changes, that will run with the land, for the purpose of protecting human health and the environment, all of which are more particularly hereinafter set forth.

NOW THEREFORE, Grantor, on behalf of itself, its successors, its heirs, and assigns, in consideration of the recitals above, the terms of the ROD and ESDs, and other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, does hereby covenant and declare that the Property shall be subject to the restrictions on use set forth below, which shall touch and concern and run with the title of the property, and does give, grant and convey to the Grantee, and its assigns, 1) an irrevocable use restriction and site access covenant of the nature and character, and for the purposes hereinafter set forth and 2), the perpetual right to enforce said covenants and use restrictions, with respect to the Property. Grantor further agrees as follows:

a. The foregoing recitals are true and correct and are incorporated herein by reference.

b. Grantor hereby imposes on the Property the following restrictions:

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

a. Use of the groundwater shall be prohibited unless this Declaration of Restrictive Covenant is amended to that effect, or is released by FDEP, and the amended Declaration or release is recorded in the Pinellas County, Florida, public records.

b. There shall be no drilling for water conducted on the Property nor shall any wells, including monitoring wells not already installed, be installed on the Property unless pre-approved by FDEP.

c. Existing monitoring wells may be proposed for abandonment, subject to approval of the FDEP. To receive approval of such a proposal, a sufficient network of monitoring wells must be retained, or new wells installed, to monitor the groundwater and the performance of engineering controls designed and constructed to control migration of groundwater.

d. Attached as Exhibit "B", and incorporated by reference herein, is a survey map identifying the size and location of existing stormwater swales, stormwater detention or retention facilities, and ditches on the Property. Such existing stormwater features shall not be altered, modified or expanded without prior approval from the FDEP. Additionally, there shall be no construction of new stormwater swales, stormwater detention or retention facilities or ditches on the Property without prior written approval from the FDEP. To receive approval of a proposal to alter existing or construct new stormwater swales, stormwater detention or retention facilities or ditches, the proposal must demonstrate that the change or addition will not compromise the performance of engineering controls, allow exposure to contaminated soil or allow contaminant migration.

e. For any dewatering activities, a plan must be submitted and approved by FDEP to address and ensure the appropriate handling, treatment, and disposal of any extracted groundwater that may be contaminated.

f. The Property shall only be used for industrial, manufacturing, and non-residential commercial purposes. There shall be no agricultural use of the land including forestry and mining; no hotels or lodging; no residential uses, and no educational facility uses such as elementary and secondary schools, or day care services. These restrictions may only be modified pursuant to Paragraph 3 of this Declaration. If the Property is to be used other than for industrial, manufacturing or non-residential commercial purposes, FDEP may require additional response actions.

g. On-site engineering controls, including the engineered caps over contaminated soil on the Property as identified in Exhibit B1, shall not be penetrated or physically altered or stressed to the extent that their functionality or designed period of service is compromised. To receive approval of a proposal to construct parking, traffic or storage areas or new buildings on an engineered cap, the proposal must demonstrate that the construction activity and the completed structure will not penetrate the cap or compromise the structural integrity or function of the cap, subsurface pond bridging layer, the utility corridor, or gas monitoring system(s). A proposal to construct on either side or over the groundwater cut-off wall, seawall and shoreline protection (rip rap) must demonstrate that the functionality and designed period of service of those structures will not be compromised. Existing buildings, concrete slabs, and pavement on the Property shall be maintained. This restriction may only be modified pursuant to

Paragraph 3 of this Declaration.

h. Should future development require the disturbance of on-site engineering controls, additional response actions may be necessary. For any construction activities within the areas of the groundwater cut-off wall, seawall and shoreline protection (rip rap), gas monitoring system locations, and cap consolidation areas of the Property, a plan must be submitted and approved by FDEP to address and ensure the appropriate management of any contaminated media that may be encountered and demonstrate that remedy effectiveness and structural integrity of engineering controls will be maintained.

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

a) Implementing the response actions in the ROD and ESDs;

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

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

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

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

3. **Duration and Modification:**

(a) It is the intention of Grantor that this Declaration shall touch and concern the Property, run with the land and with the title to the Property, and shall apply to and be binding upon and inure to the benefit of Grantor, EPA and FDEP, and to any and all parties hereafter having any right, title or interest in the Property or any part thereof. This Declaration shall continue in perpetuity, unless otherwise modified in writing by Grantor and the FDEP as provided in subsection (b) hereof.

(b) This Declaration is binding until a release of covenant is executed by FDEP and recorded in the Public Records of Pinellas County, Florida. Any subsequent amendment to this Declaration must be executed by both Grantor and FDEP, and must be recorded by Grantor in the Public Records of Pinellas County, Florida as an amendment hereto. This

Declaration shall not be modified, amended, or terminated without the written consent of FDEP or its successor agency. FDEP shall not consent to any such modification, amendment or termination without the written consent of EPA.

4. **(a) Reserved rights of Grantor:** Grantor hereby reserves unto itself, its successors, its heirs, and assigns, all rights and privileges as fee owner of the Property, in and to the use of the Property which are not incompatible with the restrictions, rights and covenants granted herein.

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

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

5. **Notice requirement:** In order to ensure the perpetual nature of this Declaration, Grantor agrees to include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO A DECLARATION OF RESTRICTIVE AND AFFIRMATIVE COVENANTS, DATED_____, 20__, RECORDED IN THE PUBLIC LAND RECORDS ON _____, 20__, IN BOOK _____, PAGE _____, IN FAVOR OF, AND ENFORCEABLE BY, THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

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

6. **Administrative Jurisdiction:** FDEP or any successor state agency having administrative jurisdiction over the interests acquired by the State of Florida by this instrument is the Grantee. EPA is a third party beneficiary to the interests acquired by the State of Florida.

7. **Enforcement:** This Restrictive Covenant is enforceable by specific performance or legal process by Grantor, Grantee or any local, state, federal government agency or any affected person substantially benefitted by the restrictions contained herein against the owner of the Property, any lessees, and any person using the land. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA. It

is expressly agreed that EPA is not the recipient of a real property interest but is a third party beneficiary of the Declaration of Restrictive Covenants, and as such, has the right of enforcement. Enforcement of the terms of this instrument shall be reserved to the entities listed above, and any forbearance, delay or omission to exercise its rights under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver by the Grantee of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Grantee under this instrument.

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

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

10. **Covenants:** Grantor hereby covenants to and with the Grantee, that the Grantor is lawfully seized in fee simple of the Property, that the Grantor has a good and lawful right and power to sell and convey it or any interest therein, that the Property is free and clear of encumbrances, except those noted on Exhibit "C" and, to the best of the Grantor's knowledge, Exhibit C accurately reflects the current state of title of the Property as of the date of this Declaration of Restrictive and Affirmative Covenants attached hereto.

11. **Notices:** Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, referencing the Site name (Stauffer Chemical Superfund Site) and Site ID number (04-6G) and addressed as follows:

To Grantor:

STAUFFER MANAGEMENT COMPANY LLC
1800 Concord Pike
Wilmington, DE 19850

To Grantee:

Program Administrator, Waste Cleanup Program
FDEP M.S. 4505
2600 Blair Stone Road
Tallahassee, FL 32399

To EPA:

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

12. **Recording in Land Records:** Grantor shall record this Declaration of Restrictive and Affirmative Covenants in timely fashion in the Official Records of Pinellas County, Florida, with no encumbrances other than those noted in Exhibit C, and shall rerecord it at any time Grantee may require to preserve its rights. Grantor shall pay all recording costs and taxes necessary to record this document in the public records.

13. **General provisions:**

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

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

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

d) Entire Agreement: This instrument sets forth the entire agreement of the parties with respect to rights and restrictions created hereby, and supersedes all prior discussions, negotiations, understandings, or agreements relating thereto, all of which are merged herein.

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

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

g) Successors: The term "Grantor", wherever used herein, and any pronouns used in place thereof, shall include the persons and/or entities named at the beginning of this document, identified as "Grantor" and their personal representatives, heirs, successors, and assigns. The term "Grantee", wherever used herein, and any pronouns used in place thereof, shall include the persons and/or entities named at the beginning of this document, identified as "Grantee" and their personal representatives, heirs, successors, and assigns. The rights of the Grantee and Grantor under this instrument are freely assignable, subject to the notice provisions hereof.

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

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

TO HAVE AND TO HOLD unto the State of Florida Department of Environmental Protection and its successors and assigns forever.

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

Executed this 1 day of January, 2015.

GRANTOR:

STAUFFER MANAGEMENT COMPANY LLC

Signed, sealed and delivered in the presence of:

Celeste B. Netta	Celeste B. Netta	1/13/15
Witness:	Print Name	Date
Darlene Allison	Darlene Allison	1/13/15
Witness:	Print Name	Date

STATE OF DELAWARE
COUNTY OF New Castle

On this 13th day of January, 2015, before me, the undersigned, a Notary Public in and for the State of Delaware, duly commissioned and sworn, personally appeared Charles Elmendorf, known to be an authorized representative of STAUFFER MANAGEMENT COMPANY LLC, a Delaware limited liability company that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said limited liability company, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute said instrument.

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

Sheila L. Vance
Notary Public in and for the
State of Delaware

My Commission Expires: 7-11-15

SHEILA LOTTIE VANCE
NOTARY PUBLIC
STATE OF DELAWARE
My Commission Expires July 11, 2015

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Approved as to form by the Florida Department of Environmental Protection, Office of General Counsel.

3/2/15
Assistant General Counsel

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: _____

Signed, sealed and delivered in the presence of:

Witness:	Print Name: Millie Gray	Date: 3/19/15
Witness:	Print Name: JUDITH PENNINGTON	Date: 03/19/2015

STATE OF FLORIDA
COUNTY OF Leon

On this 19th day of February 2015, before me, the undersigned, a Notary Public in and for the State of Florida, duly commissioned and sworn, personally appeared Jorge Caspary, known to be the ~~Secretary~~ Division Director, Waste Management of the Florida Department of Environmental Protection, the State Agency that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said Agency, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute said instrument.

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

Stephanie H. Thigpen
Notary Public in and for the State of Florida

My Commission Expires: 11/17/18

STEPHANIE H. THIGPEN
MY COMMISSION # FF 177082
EXPIRES: November 17, 2018
Bonded Thru Budget Notary Services

ME1 19635073v.1

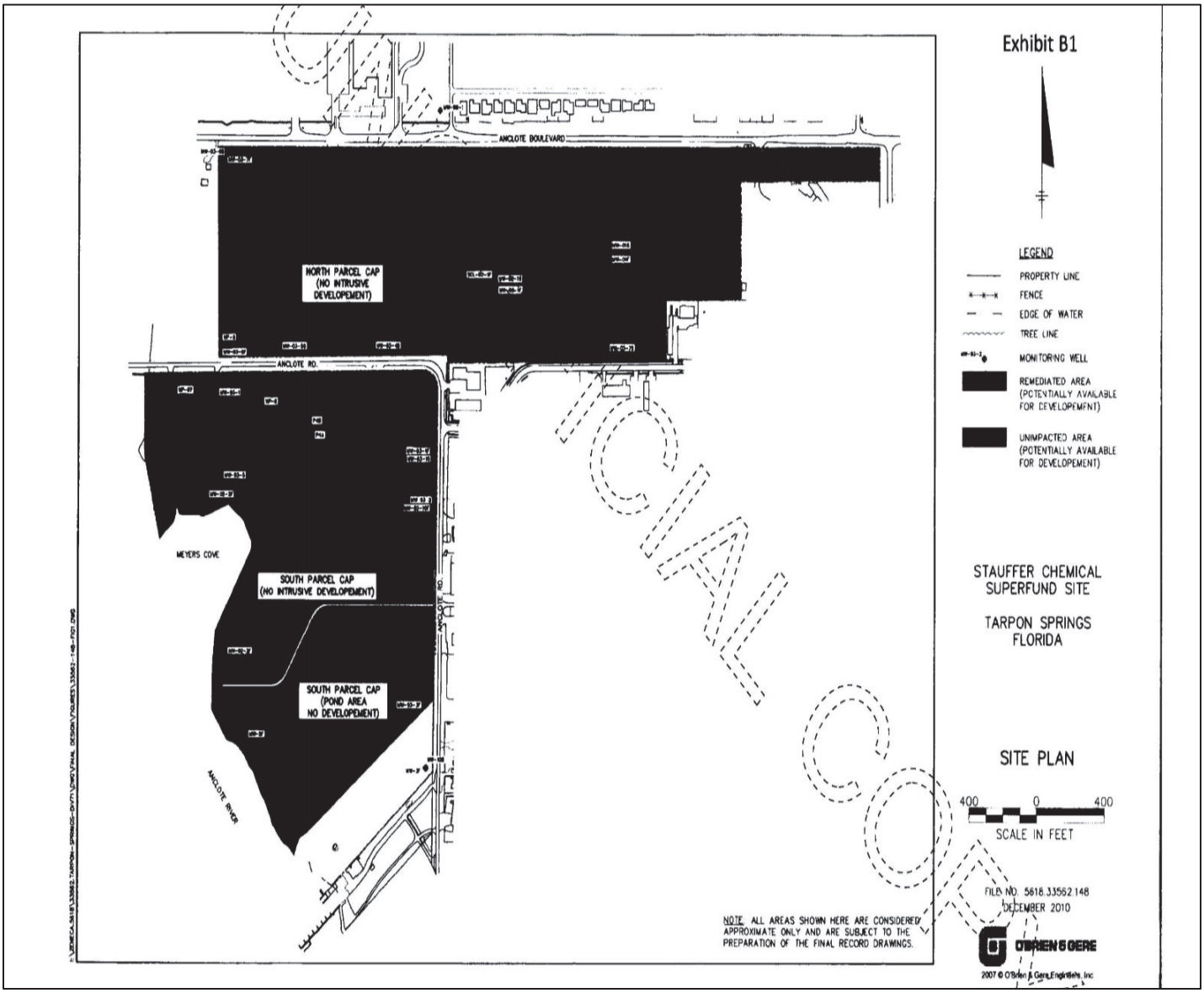
Exhibit B1
ANCLOTE BOULEVARD
NORTH PARCEL CAP
(NO INTRUSIVE
DEVELOPEMENT)
ANCLOTE RD.
MEYERS COVE
SOUTH PARCEL CAP
(NO INTRUSIVE DEVELOPEMENT)
SOUTH PARCEL CAP
(POND AREA
NO DEVELOPEMENT)
ANCLOTE RIVER
LEGEND
PROPERTY LINE
FENCE
EDGE OF WATER
TREE LINE
MONITORING WELL
REMEDIATED AREA
(POTENTIALLY AVAILABLE
FOR DEVELOPEMENT)
UNIMPACTED AREA
(POTENTIALLY AVAILABLE
FOR DEVELOPEMENT)
STAUFFER CHEMICAL
SUPERFUND SITE
TARPON SPRINGS
FLORIDA
SITE PLAN
400 0 400
SCALE IN FEET
FILE NO. 5618.33562.148
DECEMBER 2010
NOTE: ALL AREAS SHOWN HERE ARE CONSIDERED
APPROXIMATE ONLY AND ARE SUBJECT TO THE
PREPARATION OF THE FINAL RECORD DRAWINGS.
O'BRIEN & GERE
2007 © O'Brien & Gere Engineers, Inc

APPENDIX F – PRESS NOTICE

The U.S. Environmental Protection Agency, Region 4
Announces the Second Five-Year Review for
the Stauffer Chemical Co. Superfund Site,
Tarpon Springs, Pinellas County, Florida

Purpose/Objective: The EPA is conducting the second Five-Year Review of the remedy for the Stauffer Chemical Co. Superfund site (the Site) in Tarpon Springs, Florida. The purpose of the Five-Year Review is to make sure the selected cleanup actions effectively protect human health and the environment.

Site Background: The 130-acre Site is located on Anclote Road, about 2 miles southeast of Tarpon Springs. The Anclote River borders the Site to the south and west; the Site is located 2 miles upstream from the Gulf of Mexico. Victor Chemical Company began manufacturing chemicals on site in 1947. Stauffer Chemical Company acquired the facilities from Victor Chemical Company in 1960 and continued manufacturing operations until 1981. Operations included production of phosphorus using phosphate ore mined from deposits in Florida. Site investigations revealed that past operations had contaminated groundwater, sediment and soil with metals, polynuclear aromatic hydrocarbons (PAHs), radium-226 and thallium. As a result of these findings, the EPA placed the Site on the Superfund program's National Priorities List (NPL) in 1994.

Cleanup Actions : The EPA designated two operable units (OUs) to address the Site's soil, sediment and groundwater contamination. OU1 addresses the source of groundwater contamination. The final OU1 remedy, selected in the Site's 1998 Record of Decision (ROD) and updated in four Explanations of Significant Differences, included excavation of contaminated material and soil, on-site consolidation of contaminated materials and soil, capping of consolidation areas, institutional controls to limit land use and groundwater use at the Site, and installation of a groundwater cutoff wall to reduce the potential for contaminant migration from former waste ponds. Construction of the OU1 remedy took place from 2010 to 2011. OU2 will address contaminated groundwater. The EPA will continue to evaluate groundwater data and determine if any actions are necessary for groundwater.

Five-Year Review Schedule: The National Contingency Plan requires review of remedial actions that result in any hazardous substances, pollutants or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure every five years to ensure the protection of human health and the environment. The second of the Five-Year Reviews for the Site should be completed by June 2020.

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

Randy Bryant, EPA Remedial Project Manager
Phone: (404) 562-8794
Email: bryant.randy@epa.gov

Angela Miller,
EPA Community Involvement Coordinator
Phone: (404) 562-8561
Email: miller.angela@epa.gov

Mailing Address: U.S. EPA Region 4, 61 Forsyth Street, S.W., 11th Floor, Atlanta, GA 30303-8960

Additional information is available at the Site's local document repository, located at Tarpon Springs Parish Library, 138 East Lemon Street in Tarpon Springs, Florida 34689, and online at *https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0400578.*

0000035336 11/16/2019

APPENDIX G – INTERVIEW FORM

Five-Year Review – 2020
Community Interviews
Stauffer Chemical Superfund Site
Tarpon Springs, Pinellas County, FL

The U.S. Environmental Protection Agency is conducting the second Five-Year Review of the cleanup remedy implemented at the Stauffer Chemical Superfund Site in Tarpon Springs, Pinellas County, Florida. The National Contingency Plan requires that remedial actions that result in any hazardous substances, pollutants, or contaminants remaining at the Superfund Sites above levels that allow for unlimited use and unrestricted exposure be reviewed every five years to ensure the protection of human health and the environment.

Community interviews were conducted via phone with Pinellas County Economic Development and the state project manager with the Florida Department of Environmental Protection Division (FDEP). Pinellas Economic Development stated that there were no concerns or complaints voiced by local citizens regarding the property, but have had a couple of developers that have shown some interest in the site. FDEP's overall impression of the project, including the cleanup, is positive. The exposure risk is mitigated by the soil cap and the site is well-maintained and may have the potential for reuse. Their assessment of the current performance of the remedy is the soils are contained, remedy complete with restrictive covenants in place. The groundwater is being monitored and evaluated for a potential remedy, if necessary. They stated they have only received one inquiry and that was from a student at the University of South Florida with general questions regarding the site for a class about Water Quality Policy and Management. FDEP mentioned that a number of real estate developers have expressed interest in the property. Unsuccessful attempts were made to interview residents, living nearby, that were involved during the remedial cleanup activities at the site.

The local community was notified through a public notice in *The Tampa Bay Times* that EPA was conducting the second Five-Year Review and that a final report will be placed in the information repository located at the Tarpon Springs Parish Library, 138 East Lemon Street, Tarpon Springs, Florida, in June 2020.

APPENDIX H – SUPPORTING DATA REVIEW FIGURES

Figure H-1: Surficial Aquifer Groundwater Contours and Groundwater Flow (July 2018)

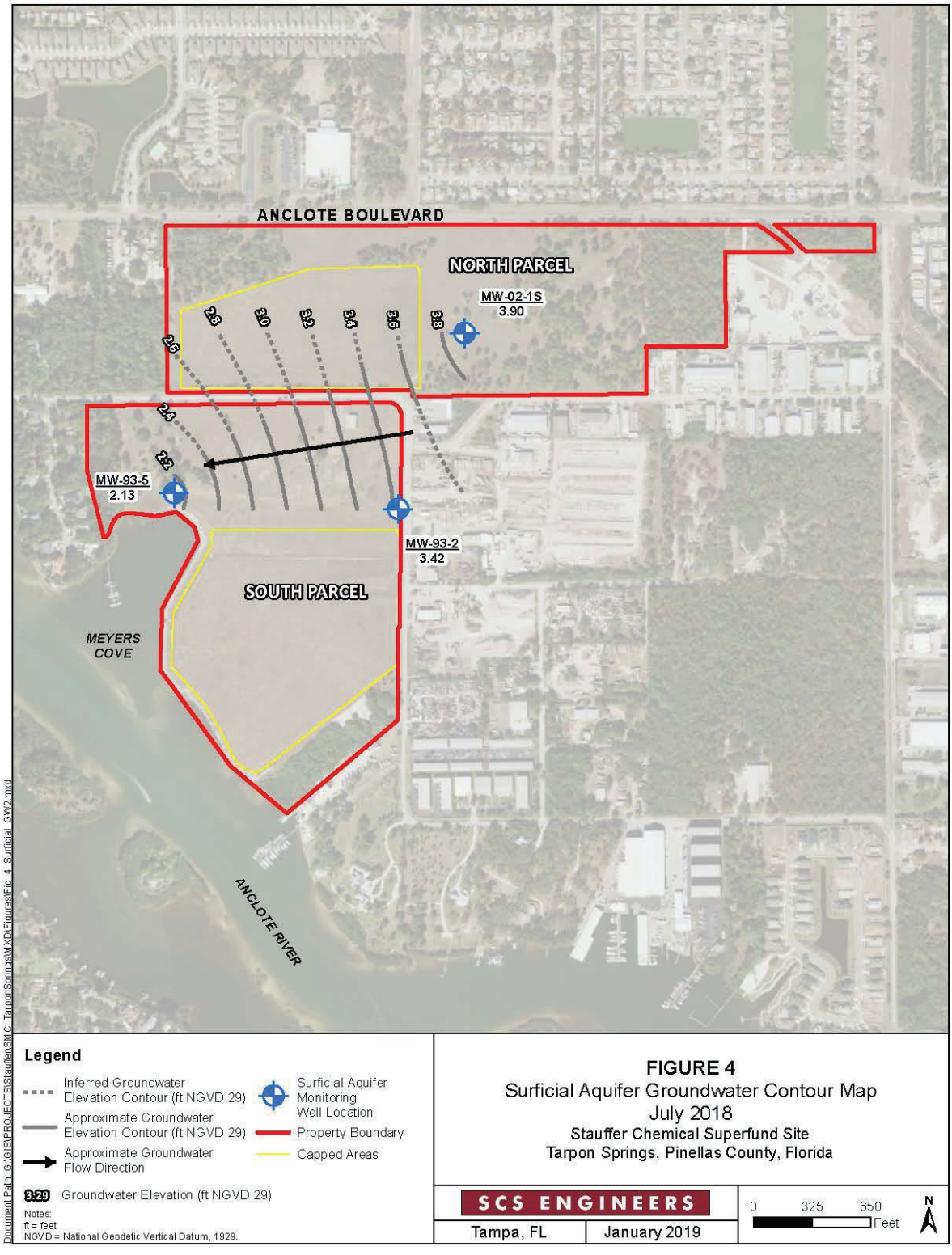

**Figure H-1 above is Figure 4 from the Site's 2019 RI Addendum.*

Figure H-2: Upper Floridan Aquifer Groundwater Contours and Groundwater Flow (July 2018)

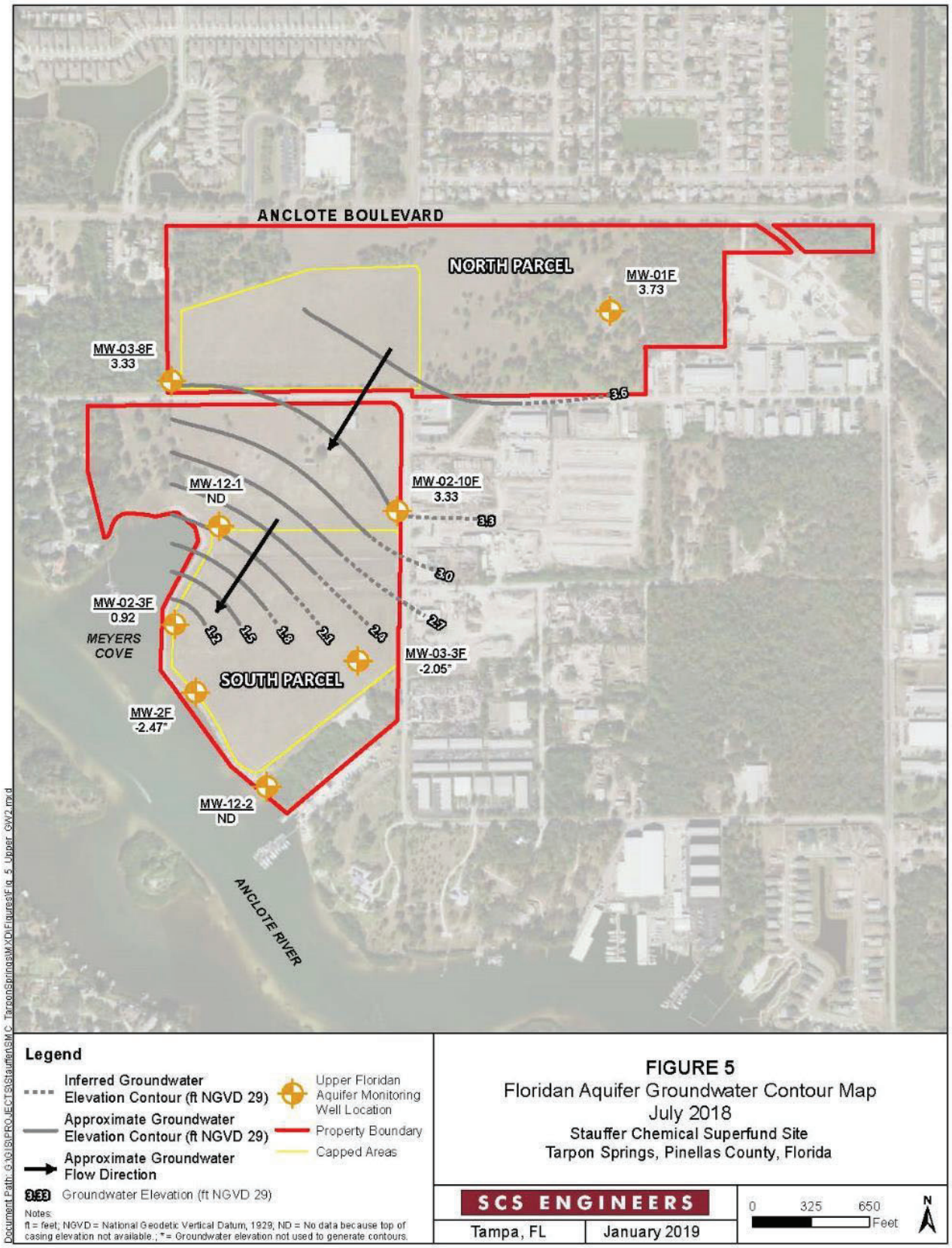

**Figure H-2 above is Figure 5 from the Site's 2019 RI Addendum.*

Table H-1: Groundwater Monitoring Wells with MCL Exceedances of OU-1 COCs: 2012-2018

Monitoring Well	Contaminant	Antimony (mg/L)	Arsenic (mg/L)	Beryllium (mg/L)	Thallium (mg/L)	Radium-226 (pCi/L)	Elemental Phosphorus (ng/L)
	Standard (MCL)	**0.006**	**0.01**	**0.004**	**0.002**	**5**	**100 (FL Surface Water Standard)**
	Sampling Date						
MW-93-5 (surficial)	3/8/2012	**0.057 J**	**0.016 J**	0.00025 J	**0.039 J**	0.374 U	50 U
	3/27/2013	0.0044 J	0.0065	0.0005 U	**0.0047**	1.08	21 UJ
	5/6/2014	0.005 U	0.0064	0.0005 U	**0.0044**	0.45 U	50 UJ
	5/20/2015	0.005 U	0.0046	0.0005 U	**0.0043**	0.661 B	50 UJ
	10/4/2016	**0.00982**	0.0061 U	0.00094 U	**0.0125**	0.3 +/- 0.2	0.016 U
	7/13/2017	0.0025 U	0.0061 U	0.00094 U	0.0019	0.2 U	0.016 U
	7/31/2018	0.0025 U	0.0061 U	0.00094 U	0.00199	0.5	0.016 U
MW-2F (upper Floridan)	3/8/2012	0.0023 J	**0.02 J**	0.00025 J	0.0005 J	**5.06 P**	50 U
	3/28/2013	0.005 U	**0.018**	0.0005 U	0.001 U	4.82	21 UJ
	5/6/2014	0.005 U	**0.018**	0.0005 U	0.001 U	4.65 B	50 U
	5/19/2015	0.005 U	**0.019**	0.0005 U	0.001 U	3.45 B	50 UJ
	10/4/2016	0.0025 U	**0.0119**	0.00094 U	0.00058 U	**5.3 +/- 0.4**	0.016 U
	7/12/2017	***0.05 U***	***0.0122 U***	***0.0188 U***	***0.0116 U***	4.3	0.016 U
	7/31/2018	0.0025 U	**0.0135**	0.00094 U	0.00058 U	4.6	0.016 U
MW-02-3F (upper Floridan)	3/8/2012	0.0023 J	**0.014 J**	0.00025 J	0.0005 J	2.1 P	50 U
	3/9/2012	0.005 U	**0.03**	0.00054 U	0.002 U	0.3	0.14 *J
	3/10/2012	0.005 U	**0.025**	0.00054 U	0.002 U	0.4	0.05 U
	3/11/2012	0.005 U	**0.027**	0.00054 U	0.002 U	0.5	0.05 U
	3/12/2012	0.005 U	**0.02**	0.00054 U	0.002 U	2.2	0.05 U
	3/28/2013	0.005 U	**0.013**	0.0005 U	0.001 U	2.76	21 UJ
	5/6/2014	0.005 U	**0.014**	0.0005 U	0.001 U	**9.45 B**	50 UJ
	5/19/2015	0.005 U	**0.013**	0.0005 U	0.001 U	2.83 B	50 UJ
	10/4/2016	0.0025 U	0.00706 I	0.00094 U	0.00058 U	0.3 +/- 0.2	0.016 U
	7/12/2017	0.0025 U	**0.0114**	0.00094 U	0.00058 U	2.5	0.016 U
	7/31/2018	0.0025 U	**0.0108**	0.00094 U	0.00058 U	1.1	0.016 U
MW-12-1 (upper Floridan)	3/8/2012	**0.0083 J**	0.0021 J	0.00025 J	0.0005 J	0.515 P	50 U
	3/28/2013	0.005 U	0.0022 J	0.0005 U	0.001 U	1.84	21 UJ
	5/6/2014	0.005 U	0.0045	0.0005 U	0.001 U	2.67 B	50 UJ
	5/20/2015	0.005 U	0.004	0.0005 U	0.001 U	2.49 B	50 UJ
	10/4/2016	0.0025 U	0.0061 U	0.00094 U	0.00058 U	1.3 +/- 0.2	0.016 U
	7/12/2017	0.0025 U	0.0061 U	0.00094 U	0.00058 U	1.6	0.016 U
	7/31/2018	0.0025 U	0.0061 U	0.00094 U	0.00058 U	3	0.016 U
MW-12-2 (upper Floridan)	3/8/2012	0.0023 J	0.0041 J	0.00025 J	0.0005 J	**10.6 P**	50 U
	3/26/2013	0.005 U	0.0015 J	0.0005 U	0.001 U	**11.8**	21 UJ
	5/5/2014	0.005 U	0.0014 J	0.0005 U	0.001 U	**9.8 B**	50 U
	5/19/2015	0.005 U	0.0013 J	0.0005 U	0.001 U	**8.32 B**	50 UJ
	10/3/2016	0.0025 U	0.0061 U	0.00094 U	0.00058 U	**7.1 +/- 0.4**	0.016 U
	7/13/2017	***0.25 U***	***0.0122 U***	0.00094 U	***0.058 U***	**8.3**	0.016 U
	7/31/2018	0.0025 U	0.0061 U	0.00094 U	0.00058 U	**13.6**	0.016 U

Notes:
mg/L = milligrams per Liter
pCi/L = picocuries per Liter

ng/L = nanograms per Liter
Bold value = Exceeds standard
Bold value in italics = Laboratory method detection limit exceeds MCL
MCL= maximum contaminant level
J = Estimated value
U = Parameter not detected above the method detection limit
P = Replicate analysis is outside the control limit
I = Reported value is between the laboratory method detection limit and the practical quantitation limit
*J = Estimate well below lowest calibrator – suspect result
B = Analyte detected in the associated method blank

Table H-2: Surficial Aquifer Monitoring Wells – Groundwater Analytical Results*

Parameter		Metals																						
		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Screening Criteria	Standard	Secondary MCL	Primary MCL	Primary MCL	Primary MCL	Primary MCL	Primary MCL	NS	Primary MCL	GCTL	Secondary MCL	Secondary MCL	Primary MCL	NS	Secondary MCL	Primary MCL	Primary MCL	NS	Primary MCL	Secondary MCL	Primary MCL	Primary MCL	GCTL	Secondary MCL
	Level	0.2	0.006	0.01	2	0.004	0.005	NS	0.1	0.14	1	0.3	0.015	NS	0.05	0.002	0.1	NS	0.05	0.1	160	0.002	0.049	5
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-02-1S	8/1/2002	0.084 **J**	0.005 **U**	0.01 **U**	0.01 **U**	0.00054 **U**	0.00071 **U**	27	0.01 **U**	0.01 **U**	0.0009 **U**	0.05 **U**	0.005 **U**	0.54	0.01 **U**	0.000072 **U**	0.04 **U**	1 **U**	0.0042 **U**	0.0019 **U**	3.1	0.002 **U**	0.01 **U**	0.02 **U**
	3/8/2012	27 **J**	0.0023 **J**	0.0047 **J**	0.033 **J**	0.0011 **J**	0.00027 **J**	43 **J**	0.052 **J**	0.0029 **J**	0.0049 **J**	12 **J**	0.012 **J**	3.8 **J**	0.094 **J**	0.00013 **J**	0.015 **J**	2.2 **J**	0.0011 **J**	0.00025 **J**	3.1 **J**	0.0005 **J**	0.068 **J**	0.052 **J**
	3/27/2013	7.7	0.005 **U**	0.0021 **J**	0.017	0.00048 **J**	0.00034 **J**	42	0.012	0.00098	0.0027 **J**	2.8	0.0037	2	0.039	0.0002	0.0041 **J**	1.6	0.0025 **U**	0.001 **UJ**	3.1	0.001 **U**	0.021	0.063
	5/6/2014	1.8	0.005 **U**	0.0025 **U**	0.011 **J+**	0.0005 **U**	0.00017 **J**	43	0.0034 **J**	0.00035 **J**	0.005 **U**	0.7	0.00079 **J**	1.8	0.0083	0.0002 **U**	0.005 **U**	3.2	0.0025 **U**	0.001 **U**	3.8	0.001 **U**	0.013	0.02 **U**
	5/19/2015	0.91	0.005 **U**	0.0025 **U**	0.0096	0.0005 **U**	0.0005 **U**	31	0.005 **U**	0.0005 **U**	0.0015 **J**	0.14	0.0015 **U**	1.3	0.0072	0.0002 **U**	0.005 **U**	2.5 **J**	0.0025 **U**	0.001 **U**	2.3	0.001 **U**	0.013	0.02 **U**
	10/4/2016	0.068 **U**	0.0025 **U**	0.0061 **U**	0.020 **U**	0.00094 **U**	0.0009 **U**	24.8	0.0045 **U**	0.0021 **U**	0.00242 **I**	0.038 **U**	0.0016 **U**	1.64	0.0032 **U**	0.000023 **U**	0.0032 **U**	1.84	0.0065 **U**	0.00029 **U**	1.91	0.00058 **U**	0.0147	0.016 **U**
	7/13/2017	0.174	0.0025 **U**	0.0061 **U**	0.020 **U**	0.00094 **U**	0.0009 **U**	36	0.0045 **U**	0.0021 **U**	0.0022 **U**	0.103	0.0016 **U**	1.78	0.0032 **U**	0.000023 **U**	0.0032 **U**	1.64	0.0065 **U**	0.00029 **U**	2.66	0.00058 **U**	0.0144	0.016 **U**
	7/31/2018	0.185	0.0025 **U**	0.0061 **U**	0.020 **U**	0.00094 **U**	0.0009 **U**	29.4	0.0045 **U**	0.0021 **U**	0.0022 **U**	0.0935	0.0016 **U**	1.65	0.0032 **U**	0.000023 **U**	0.0032 **U**	2.24	0.0065 **U**	0.00029 **U**	4.3	0.00058 **U**	0.0111	0.016 **U**
MW-93-2	1/1/1993	77.1	---	0.0038 **X**	0.19 **X**	0.0019	0.001	62.7	0.15	0.0052 **X**	0.02	29.8	0.057	8.5	0.13	0.0004 **X**	0.066	3.3 **X**	0.006 **U**	0.0009 **U**	2.6 **X**	---	0.11	0.098
	7/29/2002	0.0995 **B**	0.0039 **U**	0.005 **U**	0.0021 **B**	0.0001 **U**	0.0005 **U**	32.2	0.0009 **U**	0.0007 **U**	0.00087 **B**	0.0329 **B**	0.0021 **U**	0.511 **B**	0.0002 **U**	0.0001 **UN**	0.0015 **U**	1.65 **B**	0.0031 **U**	0.0014 **U**	2.71 **B**	0.0020 **U**	0.0027 **B**	0.0013 **B**
	3/7/2012	0.057	0.0023 **U**	0.0013 **U**	0.0018 **J**	0.00025 **U**	0.000095 **U**	33	0.0025 **U**	0.00015 **U**	0.0011 **U**	0.033 **U**	0.0002 **U**	2.5	0.001 **U**	0.00091 **U**	0.002 **U**	1.2	0.0013 **J**	0.00025 **U**	2	0.0005 **U**	0.0038 **U**	0.0083 **U**
	3/26/2013	1.8	0.005 **U**	0.0025 **U**	0.0041 **J**	0.0005 **U**	0.0005 **U**	28	0.0038 **J**	0.00021 **J**	0.005 **U**	0.61	0.00093 **J**	2.8	0.0021 **J**	0.0002 **U**	0.0026 **J**	0.97	0.0011 **J**	0.001 **UJ**	1.8 **J**	0.001 **U**	0.0047 **J**	0.02 **U**
	5/6/2014	0.15	0.005 **U**	0.0025 **U**	0.0014 **J+**	0.0005 **U**	0.0005 **U**	34	0.005 **U**	0.0005 **U**	0.005 **U**	0.055 **J**	0.0015 **U**	3.3	0.005 **U**	0.0002 **U**	0.005 **U**	0.88	0.002 **J**	0.001 **U**	1.9	0.001 **U**	0.01 **U**	0.02 **U**
	5/20/2015	0.13	0.005 **U**	0.0025 **U**	0.0026 **J**	0.0005 **U**	0.0005 **U**	57	0.005 **U**	0.0005 **U**	0.005 **U**	0.036 **J**	0.0015 **U**	7.4	0.005 **U**	0.0002 **U**	0.005 **U**	1.4 **J**	0.0051	0.001 **U**	3.4	0.001 **U**	0.01 **U**	0.02 **U**
	10/3/2016	0.263	0.0025 **U**	0.0061 **U**	0.020 **U**	0.00094 **U**	0.0009 **U**	55.3	0.0045 **U**	0.0021 **U**	0.0022 **U**	0.0507	0.0016 **U**	8.52	0.0032 **U**	0.000023 **U**	0.0032 **U**	2.78	0.0065 **U**	0.00029 **U**	3.08	0.00058 **U**	0.00268 **I**	0.016 **U**
	7/13/2017	0.068 **U**	0.0025 **U**	0.0061 **U**	0.020 **U**	0.00094 **U**	0.0009 **U**	45.8	0.0045 **U**	0.0021 **U**	0.0022 **U**	0.038 **U**	0.0016 **U**	5.66	0.0032 **U**	0.000023 **U**	0.0032 **U**	1.42	0.0065 **U**	0.00029 **U**	4.23	0.00058 **U**	0.00217 **I**	0.016 **U**
	7/31/2018	0.068 **U**	0.0025 **U**	0.0061 **U**	0.020 **U**	0.00094 **U**	0.0009 **U**	59.2	0.0045 **U**	0.0021 **U**	0.0022 **U**	0.038 **U**	0.0016 **U**	6.02	0.0032 **U**	0.000023 **U**	0.0032 **U**	1.3	0.0065 **U**	0.00029 **U**	4.4	0.00058 **U**	0.002 **U**	0.016 **U**
MW-93-5	1/1/1993	15.3	0.044	0.044	0.04	0.0007 **U**	0.0003	107	0.023	0.0026 **U**	0.0095	8	0.0099	14.1	0.041	0.0002 **U**	0.012 **U**	4.6	0.036	0.0008 **U**	8.8	0.02	0.23	0.018
	9/1/1998	0.261	0.0052 **B**	0.061	0.0017 **B**	0.0001 **U**	0.0005 **U**	68.7	0.0006 **U**	0.0007 **U**	0.001 **U**	0.649	0.002 **U**	9.62	0.0083 **B**	---	0.003 **B**	2.56 **B**	0.0045 **U**	---	8.28	0.0092 **B**	0.0303 **B**	0.0097 **B**
	12/1/1998	0.2 **U**	0.02 **U**	0.069	0.01 **U**	0.004 **U**	0.0001 **U**	130	0.01 **U**	0.0007 **U**	0.001 **U**	0.48	0.005 **U**	11	0.011	---	0.04 **U**	37	0.01 **U**	---	12	0.01 **U**	0.01 **U**	0.02 **U**
	3/1/1999	13	0.022	0.01 **U**	0.041	0.004 **U**	0.0001 **U**	170	0.018	0.01 **U**	0.001 **U**	4.9	0.0081	12	0.028	---	0.04 **U**	4.4	0.017	---	11	0.058	0.29	0.066
	6/1/1999	0.2 **U**	0.02 **U**	0.099	0.01 **U**	0.004 **U**	0.001 **U**	160	0.01 **U**	0.01 **U**	0.001 **U**	0.61	0.005 **U**	14	0.014	---	0.04 **U**	4.2	0.01 **U**	---	11	0.01 **U**	0.017	0.02 **U**
	7/29/2002	0.21	0.005 **U**	0.16	0.01 **U**	0.00054 **U**	0.0011 **J**	280	0.01 **U**	0.01 **U**	0.0032 **J**	2	0.005 **U**	18	0.023	0.000072 **U**	0.04 **U**	3.9	0.0042 **U**	0.0019 **U**	9.3	0.002 **U**	0.01 **U**	0.02 **U**
	3/8/2012	0.15 **J**	0.057 **J**	0.016 **J**	0.0031 **J**	0.00025 **J**	0.0001 **J**	160 J	0.0025 **J**	0.00032 **J**	0.0016 **J**	0.2 **J**	0.00058 **J**	36 **J**	0.021 **J**	0.000091 **J**	0.0035 **J**	4.7 **J**	0.061 **J**	0.00025 **U**	19 **J**	0.039 **J**	0.63 **J**	0.014 **J**
	3/27/2013	0.07	0.0044 **J**	0.0065	0.005 **U**	0.0005 **U**	0.0005 **U**	88	0.005 **U**	0.00021 **J**	0.005 **U**	0.26	0.00028 **J**	18	0.025	0.0002 **U**	0.003 **J**	3.8	0.0013 **J**	0.001 **UJ**	30	0.0047	0.023	0.02 **U**
	5/6/2014	0.096	0.005 **U**	0.0064	0.0015 **J+**	0.0005 **U**	0.0005 **U**	63	0.005 **U**	0.00026 **J**	0.0068	0.27	0.0015 **U**	11	0.08	0.0002 **U**	0.0048 **J**	3.8	0.0025 **U**	0.001 **U**	13	0.0044	0.017	0.02 **U**
	5/20/2015	0.093	0.005 **U**	0.0046	0.003 **J**	0.0005 **U**	0.0005 **U**	72	0.005 **U**	0.0005 **U**	0.005 **U**	0.5	0.0015 **U**	13	0.12	0.0002 **U**	0.0025 **J**	3.9 **J**	0.0025 **U**	0.001 **U**	22	0.0043	0.013	0.02 **U**
	10/4/2016	0.0958 **I**	0.00982	0.0061 **U**	0.020 **U**	0.00094 **U**	0.0009 **U**	54	0.0045 **U**	0.0021 **U**	0.0022 **U**	0.206	0.0016 **U**	11.9	0.0386	0.000023 **U**	0.0032 **U**	3.39	0.0065 **U**	0.00029 **U**	8.73	0.0125	0.286	0.016 **U**
	7/13/2017	0.0955 **I**	0.0025 **U**	0.0061 **U**	0.020 **U**	0.00094 **U**	0.0009 **U**	75.1	0.0045 **U**	0.0021 **U**	0.0022 **U**	0.572	0.0016 **U**	14.9	0.142	0.000023 **U**	0.0032 **U**	10.5	0.0065 **U**	0.00029 **U**	23.2	0.0019	0.024	0.016 **U**
	7/31/2018	0.068 **U**	0.0025 **U**	0.0061 **U**	0.020 **U**	0.00094 **U**	0.0009 **U**	55.4	0.0045 **U**	0.0021 **U**	0.0022 **U**	0.387	0.0016 **U**	8.86	0.061	0.000023 **U**	0.0032 **U**	4.05	0.0065 **U**	0.00029 **U**	15.5	0.00199	0.0156	0.016 **U**

Notes:
1. mg/L = milligrams per liter.
2. pCi/L = picocuries per liter.
3. Yellow shaded value indicates parameter concentration that exceeded screening criteria.
4. U = Parameter not detected above the method detection limit.
5. I = Reported value is between the laboratory method detection limit and the practical quantitation limit.
6. J = Estimated value.
7. X = Consult Case Narrative.
8. B = Analyte detected in the associated method blank.
9. S = Spike result outside the percent recovery control limit.
10. GCTL = Groundwater Cleanup Target Level.
11. MCL = Maximum Contaminant Level.
12. SWC = Chapter 62-302 Surface Water Criteria.
13. NS = No screening criteria.
14. --- = No data.

**Table H-2 is Table 4 from the Site's 2019 RI Addendum.*

Parameter		General Chemistry						Radiological					
		Alkalinity, bicarbonate	Chloride	Cyanide (total)	Fluoride	Phosphorus	Sulfate	Polonium-210	Gross Alpha	Gross Beta	Radium-226	Radon-222	Elemental Phosphorus
Screening Criteria	Standard	NS	Secondary MCL	Primary MCL	Secondary MCL	NS	Secondary MCL	NS	Primary MCL	NS	Primary MCL	NS	SWC
	Level	NS	250	0.2	2	NS	250	NS	15	NS	5	NS	100
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	mg/L
MW-02-1S	8/1/2002	55	8.7	0.01 **U**	1.5	0.1 **U**	8.1	0.0621 **U**	0.5	0.9	0.1	104	0.05 **U**
	3/8/2012	---	5.9 **J**	0.0039 **J**	1.4 **J**	0.56 **J**	13 **J**	0.963	1.76	4.05	0.196 **U**	875	50 **U**
	3/27/2013	---	5.3	0.01 **U**	1.3	0.47	10	2.07 **J**	2.77 **U**	2.43 **U**	1.85	280	21 **UJ**
	5/6/2014	---	5.7	0.01 **U**	1.7	0.071 **J**	7.5	0.434 **U**	3.79	6.9	3.48 **B**	479 **P**	50 **UJ**
	5/19/2015	---	5.3	0.01 **U**	1.5	0.16	9.4	0.483 **UJ**	1.72 **US**	3.18	0.541 **B**	413	50 **UJ**
	10/4/2016	---	1.8 **I**	0.0067 **U**	3.6	0.088	2.1 **I**	0.222 +/-0.286 **U**	0.9 +/-0.6 **U**	3.3 +/-1.1	0.2 +/-0.1	0.180+/-0.0406	0.016 **U**
	7/13/2017	---	6.6	0.0067 **U**	1.9	0.13	5	-0.0521 U	1.1 **U**	4.6	0.1 **U**	0.194	0.016 **U**
	7/31/2018	---	14	0.0067 **U**	1.6	0.096	4.7 **I**	0.202 **U**	1.0 **U**	4.9	0.4	0.284	0.016 **U**
MW-93-2	1/1/1993	---	---	0.02 **U**	6.8	0.91	---	0.81	13.3	15	0.78	167.5	---
	7/29/2002	52	4.1	0.0024 **B**	5.9	0.042 **B**	5 **U**	-0.0057 U	0.7	3	0.2	101	0.05 **U**
	3/7/2012	---	2.7	0.0039 **J**	2.2	0.1 **U**	17	0.258 **J**	0.557 **U**	3.28	-0.0409 U	65.6 **U**	50 **UJ**
	3/26/2013	---	4.2 **J**	0.01 **U**	1.9	0.18	4 **J**	0.665 **U**	2.06 **U**	2.92 **U**	0.499 **B**	129	21 **UJ**
	5/6/2014	---	3.2	0.01 **U**	1.6	0.087 **J**	12	0.804 **U**	1.29 **U**	1.64	0.431 **B**	90.6 **P**	50 **UJ**
	5/20/2015	---	4.1	0.01 **U**	1.4	0.089 **J**	50	0.69 **U**	1.6 **UJS**	1.53 **UJ**	0.483 **UJB**	99.2	50 **UJ**
	10/3/2016	---	5.3	0.0067 **U**	1.9	0.061	59	5.8 +/-1.7	0.331 +/-0.546 **U**	2.8+/-1.5	0.3 +/-0.1	0.0737+/-0.0344	0.016 **U**
	7/13/2017	---	5	0.0067 **U**	3.6	0.1	14	0.282 **U**	1.5 **U**	3	0.6	0.00318 **U**	0.016 **U**
	7/31/2018	---	11	0.0067 **U**	1.6	0.13	25	-0.00293 **U**	2.2	2.7	0.7	0.129	0.016 **U**
MW-93-5	1/1/1993	---	---	0.005 **U**	8.5	21.1	---	0.71 **U**	1.2	10.6	0.58 **U**	137.1	---
	9/1/1998	---	---	0.0034 **B**	8.7	21	---	0.792	3 **U**	4.6	0.6 **U**	31.9 **U**	0.00003 **U**
	12/1/1998	---	---	0.01 **U**	6	4.8	---	0.111	5.3	4 **U**	0.6 **U**	26.1 **U**	0.00003 **U**
	3/1/1999	---	---	0.0033 **B**	6.7	3.5	---	0.426	10	4 **U**	0.6 **U**	31.9	0.0000044 **U**
	6/1/1999	---	---	0.01 **U**	5.8	18	---	0.614 **U**	4.27	5.73	0.413 **J**	68.3	0.000013 **U**
	7/29/2002	150	8.8	0.01 **U**	6.5	8.1	420	0.0643 **U**	0.8	4	0.2	32.7 **U**	0.05 **U**
	3/8/2012	---	39 **J**	0.0055 **J**	5 **J**	3.6 **J**	360 **J**	0.383 **U**	1.76 **U**	5.68	0.374 **U**	94.3	50 **U**
	3/27/2013	---	41	0.0039 **J**	7.5	4.7	150	0.716 **U**	2.91 **U**	3.71	1.08	84.4	21 **UJ**
	5/6/2014	---	17	0.01 **U**	6.5	4.3	80	0.891 **U**	1.43 **U**	4.47	0.45 **U**	74.3 **P**	50 **UJ**
	5/20/2015	---	49	0.01 **U**	5	4	67	0.452 **U**	2.67 **US**	3.31	0.661 **B**	70.4 **UJ**	50 **UJ**
	10/4/2016	---	7	0.0067 **U**	6.1	4	67	0.0678 +/-0.201 **U**	1.6 +/-1.3	4.5 +/-1.4	0.3 +/-0.2	0.0571+/-0.0358 **U**	0.016 **U**
	7/13/2017	---	23	0.0067 **U**	6.6	3.2	91	0.555 **U**	12.5	15.7	0.2 **U**	0.0805	0.016 **U**
	7/31/2018	---	30	0.0067 **U**	6.3	3.3	37	0.229 **U**	2.9	6.6	0.5	0.0598 **U**	0.016 **U**

Table H-3: Upper Floridan Aquifer Monitoring Wells – Groundwater Analytical Results*

Parameter		Metals																						
		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Screening Criteria	Standard	Secondary MCL	Primary MCL	Primary MCL	Primary MCL	Primary MCL	Primary MCL	NS	Primary MCL	GCTL	Secondary MCL	Secondary MCL	Primary MCL	NS	Secondary MCL	Primary MCL	Primary MCL	NS	Primary MCL	Secondary MCL	Primary MCL	Primary MCL	GCTL	Secondary MCL
	Level	0.2	0.006	0.01	2	0.004	0.005	NS	0.1	0.14	1	0.3	0.015	NS	0.05	0.002	0.1	NS	0.05	0.1	160	0.002	0.049	5
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-01F	1/1/1988	0.081	---	U	0.024 J	---	U	73	---	---	U	0.039	U	---	0.012	U	U	2.3	U	U	65	U	0.005	U
	1/1/1993	0.38	---	0.0012 U	0.015 X	---	0.0002	52.2	---	---	0.0027	0.54	0.0011 U	5	0.013 X	0.0002 U	0.02	1 U	0.0012 U	0.0009 U	28.3	0.0017 U	0.005 U	0.0065 X
	8/1/2002	0.038 J	0.0050 U	0.01 U	0.012	0.00054 U	0.00071 U	39	0.010 U	0.010 U	0.0009 U	0.05 U	0.005 U	3.9	0.01 U	0.000072 U	0.04 U	1 U	0.0042 U	0.0019 U	22	0.002 U	0.01 U	0.02 U
	3/18/2010	0.023 U	0.0023 U	0.0017 J	0.011	0.00025 U	0.000095 U	40 J	0.0025 U	0.00015 U	0.0011 U	0.033 U	0.0002 U	3.8 J	0.0017 J	0.000091 U	0.002 U	0.68	0.001 U	0.00025 U	17	0.0005 U	0.0048 J	0.0083 U
	3/6/2012	0.023 J	0.0023 U	0.0017 J	0.012	0.00025 U	0.000095 U	42	0.0025 U	0.00015 U	0.0011 U	0.033 U	0.00029 J	5.2	0.0045 J	0.000091 U	0.002 U	0.73	0.001 U	0.00025 U	23	0.0005 U	0.0057 J	0.0083 U
	3/27/2013	0.05 U	0.005 U	0.0017 J	0.013	0.0005 U	0.0005 U	46	0.005 U	0.0005 U	0.005 U	0.1 U	0.0015 U	5.8	0.003 J	0.0002 U	0.005 U	0.79	0.0025 U	0.001 UJ	23	0.001 U	0.0071 J	0.02 U
	5/6/2014	0.05 U	0.005 U	0.0017 J	0.014 J+	0.0005 U	0.0005 U	51	0.005 U	0.0005 U	0.005 U	0.1 U	0.0015 U	5.8	0.002 J	0.0002 U	0.005 U	0.81	0.0025 U	0.001 U	24	0.001 U	0.0087 J	0.02 U
	5/20/2015	0.05 U	0.005 U	0.0019 J	0.015	0.0005 U	0.0005 U	51	0.005 U	0.0005 U	0.005 U	0.1 U	0.0015 U	6.3	0.005 U	0.0002 U	0.005 U	0.87 J	0.0025 U	0.001 U	23	0.001 U	0.01	0.02 U
	10/4/2016	0.068 U	0.0025 U	0.0061 U	0.020 U	0.00094 U	0.0009 U	39.2	0.0045 U	0.0021 U	0.0022 U	0.038 U	0.0016 U	3.34	0.0032 U	0.000023 U	0.0032 U	0.563 I	0.0065 U	0.00029 U	12.8	0.00058 U	0.00553 I	0.016 U
	7/13/2017	0.068 U	0.0025 U	0.0061 U	0.020 U	0.00094 U	0.0009 U	48.7	0.0045 U	0.0021 U	0.0022 U	0.038 U	0.0016 U	6.48	0.00456 I	0.000023 U	0.0032 U	0.5 I	0.0065 U	0.00029 U	21.9	0.00058 U	0.00975 I	0.016 U
	7/31/2018	0.068 U	0.0025 U	0.0061 U	0.020 U	0.00094 U	0.0009 U	47.3	0.0045 U	0.0021 U	0.0022 U	0.038 U	0.0016 U	5.52	0.00467 I	0.000023 U	0.0032 U	0.524 I	0.0065 U	0.00029 U	21.3	0.00058 U	0.00779 I	0.016 U
MW-2F	1/1/1988	---	U	0.019	0.023 J	U	U	130	U	U	U	0.23	U	110	0.057	U	U	56	U	U	690	U	U	U
	1/1/1993	0.31	0.034 U	0.018	0.014 X	0.0008 U	0.0014	96.4	0.0046 U	0.0049 U	0.0049	1.9	0.0011 U	65.7	0.054	0.0002 U	0.015 U	56.9	0.0012 U	0.0009 U	500	0.0017 U	0.005 U	0.012 X
	8/1/2002	0.047 J	0.005 U	0.018	0.01	0.00054 U	0.00071 U	83	0.01 U	0.01 U	0.0009 U	0.99	0.005 U	57	0.053	0.000072 U	0.04 U	82	0.0042 U	0.0019 U	400	0.002 U	0.01 U	0.02 U
	3/8/2012	0.031 J	0.0023 J	0.02 J	0.016 J	0.00025 J	0.000095 J	140 J	0.0025 J	0.00069 J	0.0011 J	2.5 J	0.0002 J	97 J	0.075 J	0.000091 J	0.0021 J	67 J	0.0016 J	0.00025 J	700 J	0.0005 J	0.0038 J	0.0083 J
	3/28/2013	0.05 U	0.005 U	0.018	0.019	0.0005 U	0.0001 J	180	0.005 U	0.00088	0.005 U	2.7	0.0015 U	130	0.086	0.0002 U	0.0038 J	74	0.0025 U	0.001 UJ	840	0.001 U	0.01 U	0.02 U
	5/6/2014	0.05 U	0.005 U	0.018	0.021 J+	0.0005 U	0.0005 U	180	0.005 U	0.0014	0.005 U	2.6	0.0015 U	140	0.097	0.0002 U	0.003 J	81	0.0025 U	0.001 U	840	0.001 U	0.01 U	0.02 U
	5/19/2015	0.05 U	0.005 U	0.019	0.025	0.0005 U	0.0005 U	200	0.005 U	0.0017	0.005 U	2.8	1.5 U	150	0.11	0.0002 U	0.0034 J	100 J	0.0025 U	0.001 U	930	0.001 U	0.01 U	0.02 U
	10/4/2016	0.068 U	0.0025 U	0.0119	0.020 U	0.00094 U	0.0009 U	203	0.0045 U	0.0021 U	0.0426	3.01	0.0016 U	155	0.101	0.000023 U	0.0032 U	82.9	0.0065 U	0.00029 U	1100	0.00058 U	0.002 U	0.0278 I
	7/12/2017	0.136 U	0.05 U	0.0122 U	0.4 U	0.0188 U	0.0018 U	190	0.09 U	0.042 U	0.044 U	3.13	0.032 U	132	0.0922 I	0.000023 U	0.064 U	86.3	0.013 U	0.0058 U	973	0.0116 U	0.04 U	0.32 U
	7/31/2018	0.068 U	0.0025 U	0.0135	0.020 U	0.00094 U	0.0009 U	198	0.0045 U	0.0021 U	0.0022 U	3.44	0.0016 U	158	0.105	0.000023 U	0.00544 I	86	0.0065 U	0.00029 U	1000	0.00058 U	0.002 U	0.016 U
MW-02-3F	7/30/2002	0.0565 U	0.0039 U	0.013	0.0221 B	0.0001 U	0.0005 U	62.2	0.0009 U	0.0007 U	0.0007 U	0.307	0.0021 U	33.9	0.0422	0.0001 UN	0.0015 U	34.5	0.0031 U	0.0014 U	258	0.002 U	0.0023 B	0.0028 B
	3/8/2012	0.023 J	0.0023 J	0.014 J	0.015 J	0.00025 J	0.000095 J	99 J	0.0025 J	0.00015 J	0.0011 J	0.78 J	0.0002 J	54 J	0.034 J	0.000091 J	0.002 J	37 J	0.001 J	0.00025 J	330 J	0.0005 J	0.0038 J	0.0083 J
	3/9/2012	0.12 J	0.005 U	0.03	0.01 U	0.00054 U	0.00071 U	36	0.01 U	0.01 U	0.0009 U	0.15	0.005 U	9.1	0.017	0.000072 U	0.04 U	19	0.0042 U	0.0019 U	66	0.002 U	0.01 U	0.02 U
	3/10/2012	0.065 J	0.005 U	0.025	0.01 U	0.00054 U	0.00071 U	24	0.01 U	0.01 U	0.0009 U	0.2	0.005 U	5.7	0.03	0.000072 U	0.04 U	23	0.0042 U	0.0019 U	130	0.002 U	0.01 U	0.02 U
	3/11/2012	0.21	0.005 U	0.027	0.01 U	0.00054 U	0.00071 U	26	0.01 U	0.01 U	0.0009 U	0.32	0.005 U	5.7	0.024	0.000072 U	0.04 U	23	0.0042 U	0.0019 U	130	0.002 U	0.01 U	0.02 U
	3/12/2012	0.17 J	0.005 U	0.02	0.027	0.00054 U	0.005 U	110	0.01 U	0.01 U	0.0027 J	15	0.005 U	9	0.082	0.0002 U	0.04 U	79	0.0042 U	0.0019 U	620	0.002 U	0.01 U	0.02 U
	3/28/2013	0.05 U	0.005 U	0.013	0.015	0.0005 U	0.0005 U	100	0.005 U	0.00015 J	0.005 U	0.84	0.0015 U	55	0.03	0.0002 U	0.005 U	36	0.0025 U	0.001 UJ	350	0.001 U	0.01 U	0.02 U
	5/6/2014	0.05 U	0.005 U	0.014	0.025 J+	0.0005 U	0.0005 U	150	0.005 U	0.00048 J	0.005 U	1.4	0.0015 U	110	0.056	0.0002 U	0.005 U	52	0.0025 U	0.001 U	680	0.001 U	0.01 U	0.02 U
	5/19/2015	0.05 U	0.005 U	0.013	0.018	0.0005 U	0.0005 U	100	0.005 U	0.005 U	0.005 U	1	0.0015 U	68	0.039	0.0002 U	0.005 U	40 J	0.0025 U	0.001 U	570	0.001 U	0.01 U	0.02 U
	10/4/2016	0.068 U	0.0025 U	0.00706 I	0.02 U	0.00094 U	0.0009 U	93.5	0.0045 U	0.0021 U	0.0022 U	0.82	0.0016 U	68	0.03	0.000023 U	0.0032 U	35	0.0065 U	0.00029 U	524	0.00058 U	0.002 U	0.016 U
	7/12/2017	0.068 U	0.0025 U	0.0114	0.02 U	0.00094 U	0.0009 U	103	0.0045 U	0.0045 U	0.0022 U	1.28	0.0016 U	59.2	0.0414	0.000023 U	0.0032 U	37.5	0.0065 U	0.00029 U	400	0.00058 U	0.002 U	0.016 U
	7/31/2018	0.068 U	0.0025 U	0.0108	0.020 U	0.00094 U	0.0009 U	139	0.0045 U	0.0045 U	0.0022 U	1.91	0.0016 U	89.2	0.0571	0.000023 U	0.0032 U	44.1	0.0065 U	0.00029 U	567	0.00058 U	0.002 U	0.016 U
MW-02-10F	7/29/2002	0.058 J	0.0050 U	0.010 U	0.031	0.00054 U	0.0015 J	54	0.010 U	0.01 U	0.0032 J	0.05 U	0.0050 U	7.9	0.01 U	0.000072 U	0.040 U	3.8	0.0042 U	0.0019 U	50	0.0020 U	0.01 U	0.020 U
	2/5/2003	0.48	---	---	0.01 U	---	0.00071 U	35	---	0.01 U	0.0011 J	0.17	---	3.8	0.016	0.000072 U	---	48	0.0042 U	0.0019 U	21	---	0.01	---
	3/19/2010	0.023 U	0.0023 U	0.0013 U	0.02	0.00025 U	0.000095 U	45 J	0.0025 U	0.00015 U	0.0011 U	0.033 U	0.0002 U	9.4 J	0.001 U	0.000091 U	0.002 U	4	0.001 U	0.00025 U	60	0.0005 U	0.0042 J	0.0083 U
	3/7/2012	0.023 U	0.0023 U	0.0013 U	0.03	0.00025 U	0.000095 U	70	0.0025 U	0.00015 U	0.0011 U	0.058 J	0.0002 U	15	0.001 U	0.000091 U	0.002 U	4.9	0.0025	0.00025 U	83	0.0005 U	0.0038 U	0.0083 U
	3/26/2013	0.05 U	0.005 U	0.0025 U	0.037	0.0005 U	0.0005 U	93	0.005 U	0.0005 U	0.005 U	0.1 U	0.0015 U	19	0.005 U	0.0002 U	0.005 U	5.6	0.0019 J	0.001 UJ	110 J	0.001 U	0.01 U	0.02 U
	5/6/2014	0.061	0.005 U	0.0025 U	0.032 J+	0.0005 U	0.0005 U	76	0.005 U	0.00016 J	0.005 U	0.1 U	0.0015 U	15	0.005 U	0.0002 U	0.005 U	4.7	0.0021 J	0.001 U	94	0.001 U	0.0039 J	0.02 U
	5/20/2015	0.033 J	0.005 U	0.0025 U	0.026	0.0005 U	0.0005 U	66	0.005 U	0.0005 U	0.005 U	0.1 U	0.0015 U	14	0.005 U	0.0002 U	0.005 U	4 J	0.0024 J	0.001 U	67	0.001 U	0.01 U	0.02 U
	10/3/2016	0.068 U	0.0025 U	0.0061 U	0.020 U	0.00094 U	0.0009 U	55.8	0.0045 U	0.0021 U	0.0022 U	0.038 U	0.0016 U	9.71	0.0032 U	0.000023 U	0.0032 U	3.02	0.0065 U	0.00029 U	46	0.00058 U	0.00285 I	0.016 U
	7/13/2017	0.068 U	0.0025 U	0.0061 U	0.020 U	0.00094 U	0.0009 U	84.5	0.0045 U	0.0021 U	0.0022 U	0.038 U	0.0016 U	16.9	0.0032 U	0.000023 U	0.0032 U	5.24	0.0065 U	0.00029 U	97.6	0.00058 U	0.00253 I	0.016 U
	7/31/2018	0.068 U	0.0025 U	0.0061 U	0.0221 I	0.00094 U	0.900 U	71.9	0.0045 U	0.0022 U	0.0022 U	0.038 U	0.0016 U	14.6	0.0032 U	0.000023 U	0.0032 U	4.36	0.0065 U	0.00029 U	82.4	0.00058 U	0.00219 I	0.016 U

**Table H-3 is Table 5 from the Site's 2019 RI Addendum.*

Parameter		Metals																						
		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Screening Criteria	Standard	Secondary MCL	Primary MCL	Primary MCL	Primary MCL	Primary MCL	Primary MCL	NS	Primary MCL	GCTL	Secondary MCL	Secondary MCL	Primary MCL	NS	Secondary MCL	Primary MCL	Primary MCL	NS	Primary MCL	Secondary MCL	Primary MCL	Primary MCL	GCTL	Secondary MCL
	Level	0.2	0.006	0.01	2	0.004	0.005	NS	0.1	0.14	1	0.3	0.015	NS	0.05	0.002	0.1	NS	0.05	0.1	160	0.002	0.049	5
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-03-3F	2/5/2003	0.62	0.0050 U	0.01 U	0.01 U	0.00054 U	0.00071 U	21	0.010 U	0.01 U	0.00090 U	0.50	0.0050 U	8.7	0.076	0.000072 U	0.04 U	38	0.0042 U	0.0019 U	11	0.002 U	0.01 U	0.02 U
	3/19/2010	0.23 J	0.0023 U	0.0013 U	0.0015 J	0.00025 U	0.000095 U	26 J	0.0025 U	0.00015 U	0.0011 U	2.2	0.0002 U	10 J	0.048	0.000091 U	0.002 U	26	0.001 U	0.00025 U	6.5	0.0005 U	0.0038 U	0.0083 U
	3/7/2012	0.23	0.0023 U	0.0013 U	0.0027 J	0.00025 U	0.000095 U	37	0.0025 U	0.00015 U	0.0011 U	3.2	0.0002 U	14	0.048	0.000091 U	0.002 U	34	0.0012 J	0.00025 U	18	0.0005 U	0.0038 U	0.0083 U
	3/27/2013	0.17	0.005 U	0.0025 U	0.0032 J	0.0005 U	0.0005 U	41	0.005 U	0.00016 J	0.005 U	4.4	0.0015 U	17	0.063	0.0002 U	0.0059	38	0.0025 U	0.001 UJ	28	0.001 U	0.01 U	0.021
	5/6/2014	0.11	0.005 U	0.0013 J	0.0043 J+	0.0005 U	0.0005 U	57	0.005 U	0.00021 J	0.005 U	5.7	0.0015 U	23	0.075	0.0002 U	0.005 U	47	0.0025 U	0.001 U	43	0.001 U	0.01 U	0.04
	5/20/2015	0.12	0.005 U	0.0014 J	0.0041 J	0.0005 U	0.0005 U	59	0.005 U	0.0005 U	0.005 U	5.8	0.0015 U	25	0.081	0.0002 U	0.005 U	49 J	0.0025 U	0.001 U	46	0.001 U	0.01 U	0.011 J
	10/3/2016	0.108	0.0025 U	0.0061 U	0.020 U	0.00094 U	0.0009 U	65.3	0.0045 U	0.0021 U	0.0022 U	7.37	0.0016 U	27.6	0.106	0.000023 U	0.0032 U	51.7	0.0065 U	0.00029 U	80.1	0.00058 U	0.002 U	0.016 U
	7/12/2017	0.096 I	0.0025 U	0.0061 U	0.020 U	0.00094 U	0.0009 U	64.8	0.0045 U	0.0021 U	0.0022 U	6.59	0.0016 U	26.3	0.088	0.000023 U	0.0032 U	56.9	0.0065 U	0.00029 U	68.8	0.00058 U	0.002 U	0.016 U
	7/31/2018	0.068 U	0.0025 U	0.0061 U	0.020 U	0.00094 U	0.0009 U	87.5	0.0045 U	0.0021 U	0.0022 U	9.46	0.0016 U	37.2	0.117	0.000023 U	0.0032 U	64.7	0.0065 U	0.00029 U	119	0.00058 U	0.002 U	0.016 U
MW-03-8F	3/6/2012	0.046 J	0.0023 U	0.0083	0.022	0.00025 U	0.000095 U	93	0.0025 U	0.00015 U	0.0011 U	0.35	0.0002 U	4.9	0.022	0.000091 U	0.002 U	3.4	0.001 U	0.00025 U	43	0.0005 U	0.0038 U	0.0083 U
	3/27/2013	0.039 J	0.005 U	0.0093	0.023	0.0005 U	0.0005 U	98	0.005 U	0.0005 U	0.005 U	0.32	0.00021 J	5.6	0.023	0.0002 U	0.005 U	3.6	0.0025 U	0.001 UJ	47	0.001 U	0.01 U	0.02 U
	5/6/2014	0.069	0.005 U	0.0084	0.027 J+	0.0005 U	0.0005 U	110	0.005 U	0.00031 J	0.005 U	0.34	0.0002 J	6	0.032	0.0002 U	0.005 U	4.1	0.0025 U	0.001 U	23	0.001 U	0.01 U	0.02 U
	5/20/2015	0.057	0.005 U	0.0084	0.024	0.0005 U	0.0005 U	91	0.005 U	0.0005 U	0.005 U	0.48	0.0015 U	5.9	0.028	0.0002 U	0.005 U	3.6 J	0.0025 U	0.001 U	40	0.001 U	0.01 U	0.02 U
	10/4/2016	0.068 U	0.0025 U	0.0061 U	0.020 U	0.00094 U	0.0009 U	82.4	0.0045 U	0.0021 U	0.0022 U	0.444	0.0016 U	5.68	0.0215	0.000023 U	0.0032 U	3.5	0.0065 U	0.00029 U	49.9	0.00058 U	0.002 U	0.016 U
	7/13/2017	0.068 U	0.0025 U	0.00707 I	0.0259 I	0.00094 U	0.0009 U	78.1	0.0045 U	0.0021 U	0.0022 U	0.195	0.0016 U	6.72	0.0285	0.000023 U	0.0032 U	3.53	0.0065 U	0.00029 U	55.7	0.00058 U	0.002 U	0.016 U
	7/31/2018	0.068 U	0.0025 U	0.0066 I	0.020 U	0.00094 U	0.0009 U	95	0.0045 U	0.0021 U	0.0022 U	0.424	0.0016 U	7.08	0.0305	0.000023 U	0.0032 U	3.12	0.0065 U	0.00029 U	38.8	0.00058 U	0.002 U	0.016 U
MW-12-1	3/8/2012	0.059 J	0.0083 J	0.0021 J	0.034 J	0.00025 J	0.000095 J	89 J	0.0025 J	0.00026 J	0.0011 J	0.07 J	0.027 J	15 J	0.062 J	0.000091 J	0.002 J	7.6 J	0.001 J	0.00025 J	75 J	0.0005 J	0.0049 J	0.0083 J
	3/28/2013	0.037 J	0.005 U	0.0022 J	0.035	0.0005 U	0.0005 U	110	0.005 U	0.00035 J	0.0011 J	0.38	0.0015 U	16	0.18	0.0002 U	0.005 U	6.8	0.0025 U	0.001 UJ	46	0.001 U	0.01 U	0.02 U
	5/6/2014	0.05 U	0.005 U	0.0045	0.041 J+	0.0005 U	0.0001 J	130	0.005 U	0.00081	0.005 U	1.2	0.0015 U	21	0.26	0.0002 U	0.005 U	7.8	0.0025 U	0.001 U	41	0.001 U	0.01 U	0.02 U
	5/20/2015	0.05 U	0.005 U	0.004	0.034	0.0005 U	0.0005 U	100	0.005 U	0.00059	0.005 U	0.23	0.0015 U	16	0.27	0.0002 U	0.005 U	6.5 J	0.0025 U	0.001 U	38	0.001 U	0.01 U	0.02 U
	10/4/2016	0.068 U	0.0025 U	0.0061 U	0.0244 I	0.00094 U	0.0009 U	88.3	0.0045 U	0.0021 U	0.0022 U	0.0721	0.0016 U	14	0.155	0.000023 U	0.0032 U	5.96	0.0065 U	0.00029 U	37.1	0.00058 U	0.002 U	0.016 U
	7/12/2017	0.068 U	0.0025 U	0.0061 U	0.0318 I	0.00094 U	0.0009 U	92.4	0.0045 U	0.0021 U	0.0022 U	0.055	0.0016 U	13.8	0.219	0.000023 U	0.0032 U	6.8	0.0065 U	0.00029 U	29.3	0.00058 U	0.002 U	0.016 U
	7/31/2018	0.068 U	0.0025 U	0.0061 U	0.0235 I	0.00094 U	0.0009 U	94.9	0.0045 U	0.0021 U	0.0022 U	0.0573	0.0016 U	15.5	0.235	0.000023 U	0.0032 U	6.73	0.0065 U	0.00029 U	31.5	0.00058 U	0.002 U	0.016 U
MW-12-2	3/8/2012	2.8 J	0.0023 J	0.0041 J	0.075 J	0.00025 J	0.0001 J	220 J	0.007 J	0.00071 J	0.0015 J	2.7 J	0.0019 J	290 J	0.085 J	0.000091 J	0.0049 J	140 J	0.0019 J	0.00025 J	3100 J	0.0005 J	0.011 J	0.0083 J
	3/26/2013	0.2	0.005 U	0.0015 J	0.043	0.0005 U	0.0005 U	180	0.005 U	0.00063	0.005 U	1.4	0.00021 J	260	0.053	0.0002 U	0.005 U	130	0.0025 U	0.001 UJ	2500 J	0.001 U	0.0063 J	0.02 U
	5/5/2014	0.31	0.005 U	0.0014 J	0.035 J+	0.0005 U	0.0005 U	200	0.005 U	0.00088	0.0019 J	0.8	0.00027 J	350	0.055	0.0002 U	0.005 U	150	0.0025 U	0.001 U	3300	0.001 U	0.0091 J	0.02 U
	5/19/2015	0.025 J	0.005 U	0.0013 J	0.031	0.0005 U	0.0005 U	190	0.005 U	0.00091	0.005 U	0.5	0.0015 U	330	0.044	0.0002 U	0.005 U	140 J	0.0025 U	0.001 U	3000	0.001 U	0.009 J	0.02 U
	10/3/2016	3.06	0.0025 U	0.0061 U	0.0465 I	0.00094 U	0.0009 U	269	0.0152	0.0021 U	0.00349 I	2.03	0.00278 I	55.9	0.0743	0.000023 U	0.0076 I	166	0.0065 U	0.00029 U	4590	0.00058 U	0.0114	0.016 U
	7/13/2017	6.8 U	0.25 U	0.0122 U	2 U	0.00094 U	0.0009 U	255	0.45 U	0.21 U	0.22 U	0.615	0.16	579	0.32 U	0.000023 U	0.32 U	160	0.013 U	0.029 U	4550	0.058 U	0.2 U	1.6 U
	7/31/2018	0.104	0.0025 U	0.0061 U	0.0305 I	0.00094 U	0.0009 U	300	0.0045 U	0.0021 U	0.0022 U	0.589	0.0016 U	597	0.0694	0.000023 U	0.00607 I	177	0.0065 U	0.00029 U	4750	0.00058 U	0.002 U	0.016 U

Parameter		General Chemistry						Radiological					
		Alkalinity, bicarbonate	Chloride	Cyanide (total)	Fluoride	Phosphorus	Sulfate	Polonium-210	Gross Alpha	Gross Beta	Radium-226	Radon-222	Elemental Phosphorus
Screening Criteria	Standard	NS	Secondary MCL	Primary MCL	Secondary MCL	NS	Secondary MCL	NS	Primary MCL	NS	Primary MCL	NS	SWC
	Level	NS	250	0.2	2	NS	250	NS	15	NS	5	NS	100
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	mg/L
MW-01F	1/1/1988	---	---	**R**	**U**	**U**	---	---	2	4	---	2536	---
	1/1/1993	---	---	0.01 **U**	0.19	0.31	---	0.57	4	6.6	0.34 **U**	1530.1	---
	8/1/2002	100	24	0.01 **U**	0.2 **U**	0.1 **U**	27	0.172 **U**	1.4	1.1	0.4	94.2	0.05 **U**
	3/18/2010	---	18 **J**	0.0025 **U**	0.22 **J**	0.1 **U**	19 **J**	0.219 **U**	0.9 **U**	1.4 **U**	0.2 **U**	1298 **J**	23 **U**
	3/6/2012	---	27	0.0025 **U**	0.16	0.1 **U**	30	0.615 **J**	5.9	1.93 **U**	0.991 **P**	2330	50 **UJ**
	3/27/2013	---	27	0.01 **U**	1 **U**	0.1 **U**	30	0.904 **U**	2.97 **U**	3.97	4.8	1870	21 **UJ**
	5/6/2014	---	23	0.01 **U**	0.14	0.1 **U**	28	1.1 **U**	1.52	1.91	1.37 **B**	1700 **P**	50 **UJ**
	5/20/2015	---	24	0.01 **U**	0.14	0.058 **J**	29	0.651	1.64 **UJS**	1.68	2.21 **B**	2020	50 **UJ**
	10/4/2016	---	8.8	0.0067 **U**	0.1 **I**	0.02 **I**	19	0.328 +/-0.314 **U**	1.4 +/-1.0 **U**	2.1 +/-1.3	0.4 +/-0.1	1.88 +/-0.0807	0.016 **U**
	7/13/2017	---	24	0.0067 **U**	0.15 **I**	0.02 **U**	32	0.619 **U**	1.6	2.4	0.8	1.6	0.016 **U**
	7/31/2018	---	22	0.0067 **U**	0.25	0.020 **U**	31	0.547	1.9 **U**	2.6 **U**	0.8	2.02	0.016 **U**
MW-2F	1/1/1988	---	---	**R**	**U**	**U**	---	---	20	63	---	1029	---
	1/1/1993	---	---	0.01 **U**	0.3	0.79	---	1.7	8.8	79	1.7	967.7	---
	8/1/2002	270	780	0.01 **U**	0.2 **U**	1.1	250	1.52	11.3	121	2.6	697	0.05 **U**
	3/8/2012	---	1500 **J**	0.0061 **J**	0.1 **J**	1.4 **J**	340 **J**	3.39	13.2	32.8	5.06 **P**	808	50 **U**
	3/28/2013	---	1400	0.0049 **J**	1 **U**	1.5	370	5.01 **B**	9.96 **U**	59.5	4.82	642	21 **UJ**
	5/6/2014	---	1600	0.0057 **J**	0.12	1.3	410	2.44	3.75 **UJ**	61.6	4.65 **B**	652 **P**	50 **U**
	5/19/2015	---	1800	0.01 **U**	0.21 **J**	1.1	410	2.27	11.4	69.7	3.45 **B**	606 **J**	50 **UJ**
	10/4/2016	---	2300	0.0067 **U**	0.44 **I**	1.2	440	3.54 +/-0.745	10.1 +/-3.2	78.6 +/-3.6	5.3 +/-0.4	0.630 +/-0.057	0.016 **U**
	7/12/2017	---	2200	0.0067 **U**	0.03 **U**	1.2	390	2.85	9.5	52.8	4.3	0.545	0.016 **U**
	7/31/2018	---	2300	0.0067 **U**	0.03 **U**	1.0	420	2.78	13.8	100	4.6	0.684	0.016 **U**
MW-02-3F	7/30/2002	250	33	0.0022 **B**	0.43	1.2	86	0.228 **U**	6.7	32	1.5	92.1	0.05 **U**
	3/8/2012	---	0.036 **UJ**	0.0069 **J**	0.29 **J**	0.77 **J**	140 **J**	0.275 **U**	7.24	27.9	2.1 **P**	706	50 **U**
	3/9/2012	---	23	0.01 **U**	3.3	3.2	33	0.00937 **U**	1.3	16.7	0.3	737	0.14 ***J**
	3/10/2012	---	35	0.01 **U**	0.31	2.3	46	0.301	5.4	21	0.4	486	0.05 **U**
	3/11/2012	---	35	0.01 **U**	0.3	2.4	46	0.168 **U**	2.2	25	0.5	593	0.05 **U**
	3/12/2012	---	910	0.01 **U**	0.62	1.4	320	0.772	5.3	52	2.2	586	0.05 **U**
	3/28/2013	---	640	0.0028 **J**	0.32 **J**	0.85	150	1.1 **UJ**	5.04 **UJ**	37.4	2.76	542	21 **UJ**
	5/6/2014	---	1300	0.01 **U**	0.32 **J**	1.1	210	0.728 **U**	12.9 **UJ**	41.8	9.45 **B**	348 **P**	50 **UJ**
	5/19/2015	---	900	0.01 **U**	0.36 **J**	0.65	160	0.526 **U**	8.13 **UJS**	25.1	2.83 **B**	557 **J**	50 **UJ**
	10/4/2016	---	980	0.0067 **U**	0.72	0.64	170	0.00453 +/-0.298 **U**	3.8+/-2.1	39.3+/-3.2	0.3+/-0.2	0.432+/-0.0483	0.016 **U**
	7/12/2017	---	770	0.0067 **U**	0.36	0.82	140	0.334 **U**	5.1 **U**	42.2	2.5	0.389	0.016 **U**
	7/31/2018	---	1200	0.0067 **U**	0.23	0.76	200	0.0476 **U**	9	57.5	1.1	0.55	0.016 **U**
MW-02-10F	7/29/2002	100	880	0.010 **U**	1.4	0.1 **U**	21	0.00203 **U**	2	3.8	0.3	469	0.05 **U**
	2/5/2003	---	6.7	---	12	6.8	14	0.262	1.9	48	0.3	104	0.5 **U**
	3/19/2010	---	110 **J**	0.0025 **U**	1.5 **J**	0.1 **U**	28 **J**	0.363 **U**	0.3 **U**	3.9 **J**	0.5 **J**	824 **J**	23 **U**
	3/7/2012	---	190	0.0025 **U**	1.3	0.1 **U**	48	0.216 **J**	1.49 **U**	15.6	1.27 **P**	1070	50 **UJ**
	3/26/2013	---	220	0.01 **U**	1.3	0.1 **U**	65	1.02 **U**	2.95 **U**	4.16	0.889 **B**	907	21 **UJ**
	5/6/2014	---	150	0.01 **U**	1.5	0.1 **U**	62	1.04 **UJ**	3.72 **UJ**	19.3	2.31 **B**	575 **P**	50 **UJ**
	5/20/2015	---	120	0.01 **U**	1.5	0.055 **J**	59	0.699 **UJ**	2.61 **US**	3.26	0.455 **B**	824	50 **UJ**
	10/3/2016	---	50	0.0067 **U**	1.4	0.02 **U**	54	4.1 +/-1.5	0.125 +/-0.529 **U**	2.3+/-1.7	0.5 +/-0.2	0.784 +/-0.0626	0.016 **U**
	7/13/2017	---	180	0.0067 **U**	1.5	0.081	64	-0.0653 U	3.1 **U**	11.9	0.4	0.813	0.016 **U**
	7/31/2018	---	160	0.0067 **U**	2.1	0.020 **U**	53	0.0923 **U**	2.6	8.4	0.9	0.693	0.016 **U**

Parameter		General Chemistry						Radiological					
		Alkalinity, bicarbonate	Chloride	Cyanide (total)	Fluoride	Phosphorus	Sulfate	Polonium-210	Gross Alpha	Gross Beta	Radium-226	Radon-222	Elemental Phosphorus
Screening Criteria	Standard	NS	Secondary MCL	Primary MCL	Secondary MCL	NS	Secondary MCL	NS	Primary MCL	NS	Primary MCL	NS	SWC
	Level	NS	250	0.2	2	NS	250	NS	15	NS	5	NS	100
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	mg/L
MW-03-3F	2/5/2003	94	5.7	0.01 **U**	12	14	5 **U**	0.298	0.5	38	0.1	106	0.5 **U**
	3/19/2010	---	6.4 **J**	0.0025 **U**	9.7 **J**	10	1.6 **J**	0.0806 **U**	0.4 **U**	26 **J**	0.1 **U**	182 **J**	23 **U**
	3/7/2012	---	25	0.0025 **U**	10	9.8	14	-0.172 J	0.547 **U**	31.7	0.32 **P**	700	50 **UJ**
	3/27/2013	---	51	0.01 **U**	9.9	18	36	0.596 **U**	2.91 **U**	36.6	1.05	637	21 **UJ**
	5/6/2014	---	92	0.01 **U**	9	13	28	0.717 **U**	1.83 **U**	48.2	1.62 **B**	833 **P**	50 **UJ**
	5/20/2015	---	110	0.01 **U**	8.9	13	42	0.437 **UJ**	2.16 **US**	52.3	0.427 **UJB**	1010	50 **UJ**
	10/3/2016	---	170	0.0067 **U**	10	18	71	66.9 +/-2.5	0.304 +/-0.188	3.3 +/-1.5	0.2 +/-0.1	0.370+/-0.0477	0.016 **U**
	7/12/2017	---	150	0.0067 **U**	14	14	53	0.241 **U**	3.7 **U**	64.5	0.5	0.512	0.016 **U**
	7/31/2018	---	280	0.0067 **U**	9.1	16	72	0.063 **U**	3.0 **U**	90.8	0.6	0.737	0.016 **U**
MW-03-8F	3/6/2012	---	24	0.0025 **U**	5.6	0.1 **U**	130	0.459 **U**	4.95	3.39	0.701 **P**	2450	50 **UJ**
	3/27/2013	---	26	0.01 **U**	5.1	0.092 **J**	120	1.13 **UJ**	2.95 **U**	5.68	2.46	1780	21 **UJ**
	5/6/2014	---	18	0.01 **U**	6.4	0.062 **J**	62	0.597 **U**	3.03 **UJ**	5.85	2.93 **B**	683 **P**	50 **UJ**
	5/20/2015	---	18	0.01 **U**	4.9	0.099 **J**	89	0.399	1.47 **UJS**	3.81	0.989	2320	50 **UJ**
	10/4/2016	---	21	0.0067 **U**	4.9	0.12	89	0.550 +/-0.327	1.7 +/-0.7	5.1 +/-0.9	0.6 +/-0.1	0.935+/-0.0616	0.016 **U**
	7/13/2017	---	29	0.0067 **U**	3.7	0.1	100	0.97	3.1	4.7	0.6	1.05	0.016 **U**
	7/31/2018	---	28	---	5.6	0.22	98	0.519	6	6.3	1.5	0.0058 **U**	0.016 **U**
MW-12-1	3/8/2012	---	85 **J**	0.0025 **J**	0.88 **J**	0.1 **J**	110 **J**	0.159 **U**	2.25	12.3	0.515 **P**	713	50 **U**
	3/28/2013	---	53	0.01 **U**	1.1	0.062 **J**	170	1.11 **B**	4.88	5.69	1.84	792	21 **UJ**
	5/6/2014	---	50	0.01 **U**	0.93	0.1 **U**	220	0.9 **U**	3.03 **UJ**	6.26	2.67 **B**	659 **P**	50 **UJ**
	5/20/2015	---	38	0.01 **U**	1.4	0.1 **U**	170	0.96	3.05 **S**	8.18	2.49 **B**	644	50 **UJ**
	10/4/2016	---	29	0.0067 **U**	1.5	0.021 **I**	170	1.68 +/-0.668	4.1 +/-1.3	15.6 +/-2.0	1.3 +/-0.2	0.548+/-0.0547	0.016 **U**
	7/12/2017	---	28	0.0067 **U**	3.6	0.029 **I**	160	1.12	3.1	10.4	1.6	0.47	0.016 **U**
	7/31/2018	---	31	0.0067 **U**	3.2	0.020 **U**	140	2.88	9.2	11.6	3	0.447	0.016 **U**
MW-12-2	3/8/2012	---	0.036 **J**	0.0025 **J**	0.24 **J**	0.76 **J**	830 **J**	0.703 **U**	48.7	94.7	10.6 **P**	832	50 **U**
	3/26/2013	---	4600	0.01 **U**	0.81 **J**	0.76	630	1.23	26.1 **UJ**	86	11.8	1110	21 **UJ**
	5/5/2014	---	4900	0.01 **U**	1.4 **J**	0.89	720	0.542 **U**	47.3 **UJ**	110	9.8 **B**	878 **P**	50 **U**
	5/19/2015	---	5000	0.01 **U**	1.6 **J**	0.73	690	0.468	37.3	116	8.32 **B**	790 **J**	50 **UJ**
	10/3/2016	---	8300	0.0067 **U**	0.16 **U**	0.93	1200	5.41 +/-0.935	17.5 +/-10.7 **U**	202 +/-13.8	7.1 +/-0.4	0.714+/-0.0598	0.016 **U**
	7/13/2017	---	17000	0.0067 **U**	0.03 **U**	0.73	1100	0.377 **U**	57.4	279	8.3	0.464	0.016 **U**
	7/31/2018	---	9500	0.0067 **U**	0.10 **U**	0.61	1300	0.682	51.5	237	13.6	0.533	0.016 **U**

Table H-4: Surface Water Sampling Data, 2016-2018*

Parameter		Metals																					
		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Screening Criteria		1.5	4.3	0.05	NS	0.00013	0.0093	NS	0.05	NS	0.0029	0.3	0.0056	NS	NS	0.000025	0.0083	NS	0.005	0.00007	NS	0.0063	NS	0.086
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW-1	10/4/2016	0.307	0.00250 U	0.00610 U	0.0200 U	0.000940 U	0.000900 U	66.5	0.00450 U	0.00210 U	0.00220 U	0.179	0.00160 U	116	0.0218	0.0000230 U	0.00320 U	39.0	0.00650 U	0.000290 U	1070	0.000580 U	0.00208 I	0.0160 U
	7/12/2017	0.680 U	0.0250 U	0.0610 U	0.200 U	0.00940 U	0.00900 U	369	0.0450 U	0.0210 U	0.0220 U	0.380 U	0.0160 U	964	0.0320 U	0.0000230 U	0.0320 U	340	0.0650 U	0.00290 U	8570	0.00580 U	0.0200 U	0.160 U
	8/1/2018	0.850 U	0.0312 U	0.0762 U	0.250 U	0.0118 U	0.0112 U	283	0.0562 U	0.0262 U	0.00550 U	0.0950 U	0.00160 U	853	0.0400 U	0.0000230 U	0.0400 U	253	0.0162 U	0.00362 U	7580	0.00725 U	0.0250 U	0.0400 U
	11/29/2018	---	---	0.0152 U	---	---	---	324	---	---	0.00550 U	0.00380 U	---	897	0.00800 U	---	---	283	---	---	7760	---	---	---
SW-2	8/1/2018	0.850 U	0.0312 U	0.0762 U	0.250 U	0.0118 U	0.0112 U	176	0.0562 U	0.0262 U	0.00381 I	0.272	0.00160 U	542	0.0400 U	0.0000230 U	0.0400 U	163	0.0162 U	0.00362 U	4560	0.00725 U	0.0250 U	0.0160 U
	8/1/2018 (duplicate)	0.850 U	0.0312 U	0.0762 U	0.250 U	0.0118 U	0.0112 U	173	0.0562 U	0.0262 U	0.00550 U	0.280	0.00160 U	511	0.0400 U	0.0000230 U	0.0400 U	154	0.0162 U	0.00362 U	4530	0.00725 U	0.0250 U	0.0400 U
	11/29/2018	---	---	0.0152 U	---	---	---	326	---	---	0.00550 U	0.00380 U	---	911	0.00800 U	---	---	280	---	---	7890	---	---	---
SW-3	8/1/2018	0.850 U	0.0312 U	0.0762 U	0.250 U	0.0118 U	0.0112 U	166	0.0562 U	0.0262 U	0.00378 I	0.310	0.00160 U	504	0.0400 U	0.0000230 U	0.0400 U	152	0.0162 U	0.00362 U	4220	0.00725 U	0.0250 U	0.0160 U
	11/29/2018	---	---	0.0152 U	---	---	---	323	---	---	0.00622 I	0.00380 U	---	905	0.00800 U	---	---	282	---	---	7610	---	---	---
SW-4	8/1/2018	0.850 U	0.0312 U	0.0762 U	0.250 U	0.0118 U	0.0112 U	150	0.0562 U	0.0262 U	0.00550 U	0.362	0.00160 U	466	0.0400 U	0.0000230 U	0.0400 U	135	0.0162 U	0.00362 U	4070	0.00725 U	0.0250 U	0.0400 U
	11/29/2018	---	---	0.0152 U	---	---	---	310	---	---	0.00696 I	0.00380 U	---	879	0.00800 U	---	---	272	---	---	7270	---	---	---
	11/29/2018 (duplicate)	---	---	0.0152 U	---	---	---	290	---	---	0.00550 U	0.0950 U	---	821	0.00800 U	---	---	243	---	---	6610	---	---	---
SW-5	11/29/2018	---	---	0.0152 U	---	---	---	349	---	---	0.00550 U	0.0237	---	828	0.0561	---	---	260	---	---	6890	---	---	---
SW-6	11/29/2018	---	---	0.0152 U	---	---	---	314	---	---	0.00550 U	0.00380 U	---	872	0.00800 U	---	---	266	---	---	7050	---	---	---
SW-7	11/29/2018	---	---	0.0152 U	---	---	---	298	---	---	0.00550 U	0.0950 U	---	826	0.00800 U	---	---	255	---	---	6500	---	---	---
SW-8	11/29/2018	---	---	0.0152 U	---	---	---	290	---	---	0.00550 U	0.0950 U	---	817	0.00800 U	---	---	244	---	---	6700	---	---	---

Notes:
1. mg/L = milligrams per liter.
2. pCi/L = picocuries per liter.
3. Yellow shaded value indicates parameter concentration that exceeded screening criteria.
4. U = Parameter not detected above the method detection limit.
5. I = Reported value is between the laboratory method detection limit and the practical quantitation limit.
6. Parameter screening criteria is Surface Water Criteria Chapter 62-302.
7. NS = No screening criteria.
8. --- = No data.
9. Hardness was calculated based on calcium and magnesium concentrations.

**Table H-4 is Table 6 from the Site's 2019 RI Addendum.*

Parameter		General Chemistry						Radiological					
		Chloride	Cyanide (total)	Fluoride	Phosphorus	Sulfate	Total Hardness	Polonium-210	Gross Alpha	Gross Beta	Radium-226	Radon-222	Elemental Phosphorus
Screening Criteria		NS	0.0052	5	NS	NS	NS	NS	15	NS	5	NS	NS
Units		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	mg/L
SW-1	10/4/2016	2100	0.0067 **U**	1.2	0.62	280	---	0.972 +/-0.448	4.0 +/-2.6 **U**	49.7 +/-4.5	0.5 +/-0.2	-0.0427 +/-0.0317 **U**	0.016 **U**
	7/12/2017	16000	0.0067 **U**	0.26 **U**	0.40	2200	---	-0.174 **U**	34.8 **U**	405	0.9	-0.0155 **U**	---
	8/1/2018	14000	---	4.0	7.4	2000	4220	0.454 **U**	59.5	347	0.8	-0.00485 **U**	0.016 **U**
	11/29/2018	16000	---	0.16 **U**	0.14	2300	---	---	35.2 **U**	414	1.0	---	---
SW-2	8/1/2018	8000	---	2.7	0.071	1100	2670	0.106 **U**	22.1 **U**	199	0.6	-0.0119 **U**	0.016 **U**
	8/1/2018 (duplicate)	8100	---	2.7	0.092	1200	2530	-0.00191 **U**	27.3 **U**	186	0.6	-0.0266 **U**	0.016 **U**
	11/29/2018	15000	---	0.16 **U**	0.044	2200	---	---	34.9 **U**	449	0.5	---	---
SW-3	8/1/2018	7900	---	2.6	0.076	1100	2490	0.136 **U**	24.9	206	0.5	-0.00993 **U**	0.016 **U**
	11/29/2018	16000	---	0.16 **U**	0.024	2100	---	---	38.9	395	1.0	---	---
SW-4	8/1/2018	7300	---	2.5	0.069	1100	2300	-0.0384 **U**	21.0 **U**	211	0.4	-0.0148 **U**	0.016 **U**
	11/29/2018	16000	---	0.16 **U**	0.019	2100	---	---	31.9 **U**	375	1.3	---	---
	11/29/2018 (duplicate)	16000	---	0.16 **U**	0.028	2100	---	---	45.6 **U**	381	1.8	---	---
SW-5	11/29/2018	15000	---	1.6	0.48	2000	---	---	41.7 **U**	472	1.0	---	---
SW-6	11/29/2018	16000	---	0.16 **U**	0.046	2200	---	---	46.7 **U**	484	1.3	---	---
SW-7	11/29/2018	16000	---	0.16 **U**	0.026	2000	---	---	50.5	376	1.4	---	---
SW-8	11/29/2018	16000	---	0.16 **U**	0.034	1900	---	---	32.5 **U**	392	1.5	---	---

Notes:

1. mg/L = milligrams per liter.
2. pCi/L = picocuries per liter.
3. Yellow shaded value indicates parameter concentration that exceeded screening criteria.
4. U = Parameter not detected above the method detection limit.
5. I = Reported value is between the laboratory method detection limit and the practical quantitation limit.
6. Parameter screening criteria is Surface Water Criteria Chapter 62-302.
7. NS = No screening criteria.
8. --- = No data.
9. Hardness was calculated based on calcium and magnesium concentrations.

Table H-5: Surface Water Monitoring Results, 2012-2015*

Surface Water		Pond	Pond	Pond	Pond
		SW-12-1-030812	Pond-032813	Pond-050614	Pond-052015
	Sample Date	3/8/2012	3/28/2013	5/6/2014	5/20/2015
Parameters	**Screening Criteria**				
Metals ug/L					
Aluminum	NC	240 J	180	400	250
Antimony	≤ 4,300	<2.3 J	<2.3	<50	<2.3
Arsenic	≤ 50	2.0 J	1.8 J	2.6	3.2
Barium	NC	25 J	15	14 J	21
Beryllium	≤ 0.13*	<0.25 J	<0.25	<0.50	<0.25
Cadmium	$Cd \leq e^{(0.7409[lnH]-4.719)}$ **	<0.095 J	0.22 J	<0.50	<0.50
Calcium	NC	360000 J	430000	220000	350000
Chromium	NC	<2.5 J	<2.5 U	<5	<2.5
Cobalt	NC	<0.15 J	0.66	0.79	1.7
Copper	$Cu \leq e^{(0.8545[lnH]-1.702)}$ **	<1.1 J	<1.1	<5	2.1 J
Iron	≤ 1000	170 J	47 J	190	44 J
Lead	$Pb \leq e^{(1.273[lnH]-4.705)}$ **	0.53 J	0.51 J	0.6 J	<1.5
Magnesium	NC	1100000 J	1200000	530000	1100000
Manganese	NC	24 J	27	23	14
Mercury	0.012	<0.091 J	<0.091	<0.20	<0.080
Nickel	$Ni \leq e^{(0.846[lnH]+0.0584)}$ **	<2.0 J	<2.0	<5	<2.0
Potassium	NC	340000 J	370000	190000	390000 J
Selenium	≤ 5	<1.0 J	1.4 J	<2.5	<1.0
Silver	≤ 0.07	<0.25 J	<0.25	<1	<0.25
Sodium	NC	9100000 J	10000000	4300000	8700000
Thallium	≤ 6.3	<0.50 J	<0.50	<1	<0.50
Vanadium	NC	8.9 J	5.5 J	6.2 J	11
Zinc	$Zn \leq e^{(0.8473[lnH]+0.884)}$ **	<8.3 J	11 J	<20	12 J
Inorganic Parameters mg/L					
Cyanide	≤ 0.0052	<0.0025 J	<0.0025	<0.01	<0.0050
Chloride	NC	<0.036 J	19000	7800	14000
Fluoride	≤ 10	0.32 J	0.64 J	<10	<2.0
Total Phosphorus	NC	0.22 J	0.3	0.46	0.32
Sulfate	NC	27 J	2500	1300	2000
Radiological pCI/L					
Gross Alpha	≤ 15 ***	<-23.9+/-34.1 J	<121+/-61.0	67+/-35.9	91.9+/-49.9 UJ,S
Gross Beta	NC	262+/-32.4	333+/-66.7	80.3+/-23.3	208+/-45.5
Radium-226	≤ 5 ****	1.41+/-0.433 P	1.29+/-0.368	1.21+/-0.437 B	1.35+/-0.44 B,J
Radon-222	NC	<10.5+/-32.5	<65.8+/-36.2	73.9+/-40.1	70.1+/-35.6 UJ
Polonium-210	NC	<0.284+/-0.436	0.314+/-0.534 B	0.858+/-0.309	0.907+/-0.361 U
Elemental Phosphorus mg/L	NC	<50	NS	<50 J	50 UJ

Notes:

Surface Water Quality Standards (Class III) - Ch.62-302, FAC

J = Estimated value.

< = Actual result is less than amount reported.

NS=Analyte not sampled

U = Compound was analyzed for but not detected.

B=Target analyte was detected in the associate blank

S = Spike result outside the percent recovery control limit.

* = Annual average

** - H = hardness; samples were not analyzed for hardness

*** = Combined radioactive substances (gross alpha including radium 226, but excluding radon and uranium)

****= Combined radium 226 and 228)

NC = No Criteria

Bold = Exceeds screening criteria

**Table H-5 is Table 2 from the Site's 2015 Groundwater Quality Monitoring Report.*

APPENDIX I – SITE INSPECTION CHECKLIST

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

I. SITE INFORMATION

Site Name: Stauffer Chemical Co. (Tarpon Springs)	**Date of Inspection: 10/23/2019**
Location and Region: Tarpon Springs, FL 4	**EPA ID: FLD010596013**
Agency, Office or Company Leading the Five-Year Review: EPA	**Weather/Temperature: Warm and Sunny**

Remedy Includes: (Check all that apply)

- ☒ Landfill cover/containment
- ☐ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☒ Vertical barrier walls
- ☒ Other: The PRP contractor monitors groundwater and surface water to assess the effectiveness of the OU-1 remedy. A groundwater remedy (OU-2) has not yet been selected; however, the OU-1 remedy includes components that help address site-related groundwater contamination.

Attachments: ☐ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (check all that apply)

1. **O&M Site Manager** _____ Name _____ Title _____ Date
   Interviewed ☐ at site ☐ at office ☐ by phone Phone: _____
   Problems, suggestions ☐ Report attached: _____

2. **O&M Staff** _____ Name _____ Title _____ Date
   Interviewed ☐ at site ☐ at office ☐ by phone Phone: _____
   Problems/suggestions ☐ Report attached: _____

3. **Local Regulatory Authorities and Response Agencies** (i.e., state and tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices). Fill in all that apply.

   Agency Pinellas County Economic Development
   Contact _____ Name _____ Title _____ Date _____ Phone No.
   Problems/suggestions ☐ Notes: EPA CIC, Angela Miller, conducted this interview via phone.

   Agency FDEP
   Contact Theresa Pepe Name Site Manager Title _____ Date _____ Phone No.
   Problems/suggestions ☐ Notes: EPA CIC, Angela Miller, conducted this interview via phone.

4. **Other Interviews** (optional) ☐ Report attached: _____

III. ON-SITE DOCUMENTS AND RECORDS VERIFIED (check all that apply)

1. **O&M Documents**

☒ O&M manual	☒ Readily available	☐ Up to date	☐ N/A
☒ As-built drawings	☒ Readily available	☐ Up to date	☐ N/A
☒ Maintenance logs	☒ Readily available	☒ Up to date	☐ N/A

Remarks: The PRP contractor maintains electronic copies of the O&M manual and as-built drawings. The PRP contractor documents O&M inspections in checklists. The checklist binder was available for review during the site inspection. Inspection records were up to date. The PRP contractor will start providing the O&M checklists to the EPA as part of the annual O&M reports.

2. **Site-Specific Health and Safety Plan** ☒ Readily available ☒ Up to date ☐ N/A

☒ Contingency plan/emergency response plan ☒ Readily available ☒ Up to date ☐ N/A

Remarks: The PRP contractor maintains electronic copies of these documents.

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

Remarks: The PRP contractor maintains electronic copies of these documents.

4. **Permits and Service Agreements**

☐ Air discharge permit ☐ Readily available ☐ Up to date ☒ N/A

☐ Effluent discharge ☐ Readily available ☐ Up to date ☒ N/A

☐ Waste disposal, POTW ☐ Readily available ☐ Up to date ☒ N/A

☐ Other permits: _____ ☐ Readily available ☐ Up to date ☒ N/A

Remarks: _____

5. **Gas Generation Records** ☐ Readily available ☐ Up to date ☒ N/A

Remarks: The remedy required phosphine gas monitoring on a monthly basis for a period of six months and on an annual basis for four years thereafter (ending in 2015). The purpose of the gas monitoring was to detect a potentially unsafe accumulation of phosphine gas below the southern geomembrane cap. This monitoring ended in 2015.

6. **Settlement Monument Records** ☐ Readily available ☐ Up to date ☒ N/A

Remarks: _____

7. **Groundwater Monitoring Records** ☒ Readily available ☒ Up to date ☐ N/A

Remarks: The PRP contractor, SCS Engineers, submits groundwater and surface water sampling data to the EPA in annual monitoring reports.

8. **Leachate Extraction Records** ☐ Readily available ☐ Up to date ☒ N/A

Remarks: _____

9. **Discharge Compliance Records**

☐ Air ☐ Readily available ☐ Up to date ☒ N/A

☐ Water (effluent) ☐ Readily available ☐ Up to date ☒ N/A

Remarks: _____

10. **Daily Access/Security Logs** ☒ Readily available ☒ Up to date ☐ N/A

Remarks: _____

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for state

☐ PRP in-house ☒ Contractor for PRP

☐ Federal facility in-house ☐ Contractor for Federal facility

☐ _____

2. **O&M Cost Records**

☐ Readily available ☐ Up to date

☐ Funding mechanism/agreement in place ☒ Unavailable

Original O&M cost estimate: _____ ☐ Breakdown attached

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

Describe costs and reasons: _____

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

A. Fencing

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

Remarks: Since the previous FYR, a portion of the fence on the southern part of the Site was damaged by a drunk driver. The PRP contractor replaced the damaged fence section with new fencing.

B. Other Access Restrictions

1. **Signs and Other Security Measures** ☐ Location shown on site map ☐ N/A

Remarks: Site gates and fencing are marked with appropriate signage. Both the northern and southern parts of the Site are completely enclosed by tall fencing and secured with locking gates.

C. Institutional Controls (ICs)

1. **Implementation and Enforcement**

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

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

Type of monitoring (e.g., self-reporting, drive by): Not applicable.

Frequency: Not applicable.

Responsible party/agency: PRP

Contact _____ _____ _____ _____

Name Title Date Phone no.

Reporting is up to date	☐ Yes	☐ No	☒ N/A
Reports are verified by the lead agency	☐ Yes	☐ No	☒ N/A
Specific requirements in deed or decision documents have been met	☒ Yes	☐ No	☐ N/A
Violations have been reported	☐ Yes	☐ No	☒ N/A

Other problems or suggestions: ☐ Report attached

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

Remarks: In April 2015, SMC filed a Declaration of Restrictive Covenants with Pinellas County. The Declaration of Restrictive Covenants applies to the entire Site and prohibits groundwater use, the installation of surficial groundwater wells, certain land uses and any activities that affect the integrity of the caps.

D. General

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

Remarks: _____

2. **Land Use Changes On Site** ☒ N/A

Remarks: The Site remains vacant and unused. There have been no land use changes on site since the previous FYR. The PRP is currently marketing the Site for sale.

3. **Land Use Changes Off Site** ☒ N/A

Remarks: There have been no significant land use changes off site since the previous FYR.

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

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

Remarks: _____

B. Other Site Conditions

Remarks: _____

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

1. **Settlement** (low spots) ☐ Location shown on site map ☒ Settlement not evident

Area extent: _____ Depth: _____

Remarks: _____

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident

Lengths: _____ Widths: _____ Depths: _____

Remarks: _____

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

Area extent: _____ Depth: _____

Remarks: _____

4. **Holes** ☐ Location shown on site map ☐ Holes not evident

Area extent: _____ Depth: _____

Remarks: Site inspection participants observed animal burrows on both the north and south caps. One of the burrows on the south cap was relatively large and has been marked for follow-up. It did not appear that the burrow reached the cap liner. PRP contractors noted that some of the burrows may be caused by gopher tortoises, which are considered endangered in Florida. As required by state law, the PRP is in the process of scheduling a gopher tortoise survey. The survey will confirm the type(s) of animals making the burrows and will include recommendations to address and prevent the issue moving forward. In general, when the PRP contractor observes small burrows (less than one foot deep), they will fill the holes with topsoil.

5. **Vegetative Cover** ☒ Grass ☒ Cover properly established

☒ No signs of stress ☐ Trees/shrubs (indicate size and locations on a diagram)

Remarks: _____

6. **Alternative Cover** (e.g., armored rock, concrete) ☒ N/A

Remarks: _____

7. **Bulges** ☐ Location shown on site map ☒ Bulges not evident

Area extent: _____ Height: _____

Remarks: _____

8. **Wet Areas/Water Damage** ☒ Wet areas/water damage not evident

☐ Wet areas	☐ Location shown on site map	Area extent: _____
☐ Ponding	☐ Location shown on site map	Area extent: _____
☐ Seeps	☐ Location shown on site map	Area extent: _____
☐ Soft subgrade	☐ Location shown on site map	Area extent: _____

Remarks: _____

9. **Slope Instability** ☐ Slides ☐ Location shown on site map

☒ No evidence of slope instability

Area extent: _____

Remarks: _____

B. Benches ☐ Applicable ☒ N/A

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

C. Letdown Channels ☐ Applicable ☒ N/A

(Channel lined with erosion control mats, riprap, grout bags or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

D. Cover Penetrations ☒ Applicable ☐ N/A

1. **Gas Vents** ☐ Active ☒ Passive

☐ Properly secured/locked	☒ Functioning	☐ Routinely sampled	☒ Good condition
☐ Evidence of leakage at penetration		☐ Needs maintenance	☐ N/A

Remarks: The passive gas vents on the southern cap were observed from a distance during the site inspection and appeared to be in good condition. Phosphine gas sampling stopped in 2015.

2. **Gas Monitoring Probes**

☐ Properly secured/locked	☐ Functioning	☐ Routinely sampled	☐ Good condition
☐ Evidence of leakage at penetration		☐ Needs maintenance	☒ N/A

Remarks: _____

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

☒ Properly secured/locked	☒ Functioning	☒ Routinely sampled	☒ Good condition
☐ Evidence of leakage at penetration		☐ Needs maintenance	☐ N/A

Remarks: _____

4. **Extraction Wells Leachate**

☐ Properly secured/locked	☐ Functioning	☐ Routinely sampled	☐ Good condition
☐ Evidence of leakage at penetration		☐ Needs maintenance	☒ N/A

Remarks: _____

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

Remarks: _____

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

F. Cover Drainage Layer ☒ Applicable ☐ N/A

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

   Remarks: _____

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

   Remarks: _____

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

H. Retaining Walls ☒ Applicable ☐ N/A

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

   Horizontal displacement: _____ Vertical displacement: _____

   Rotational displacement: _____

   Remarks: While not specifically required by the remedy, remedial efforts included the restoration of Meyers Cove to its former size and construction of a seawall using vinyl sheet pile. The seawall was installed along the shore of the Anclote River and Meyers Cove. The seawall and riprap along the shore appeared to be in good condition during the FYR site inspection.

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

   Remarks: _____

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

VIII. VERTICAL BARRIER WALLS ☒ Applicable ☐ N/A

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

   Area extent: _____ Depth: _____

   Remarks: _____

2. **Performance Monitoring** Type of monitoring: Surface water monitoring is performed downgradient of the vertical barrier wall to assess the effectiveness of the remedial feature.

   ☐ Performance not monitored

   Frequency: Surface water is sampled annually. ☐ Evidence of breaching

   Head differential: _____

   Remarks: _____

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

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

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

C. Treatment System ☐ Applicable ☒ N/A

D. Monitoring Data

1. **Monitoring Data**

   ☒ Is routinely submitted on time (groundwater ☒ Is of acceptable quality

and surface water are monitored to assess the effectiveness of the OU-1 remedy, not as part of a groundwater remedy (OU-2).

2. **Monitoring Data Suggests:**

☒ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

E. Monitored Natural Attenuation

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

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

☐ All required wells located ☐ Needs maintenance ☒ N/A

Remarks: _____

X. OTHER REMEDIES

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

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is designed to accomplish (e.g., to contain contaminant plume, minimize infiltration and gas emissions).

The remedy was designed to limit contaminant mobility, prevent further groundwater contamination by addressing source materials and prevent contact with contaminated materials. Remedial efforts included the excavation, consolidation and capping of contaminated materials and soil. Based on the site inspection observations, the caps are effectively preventing direct exposure to site-related source area contaminants. The groundwater cutoff wall diverts groundwater in the surficial aquifer around the pond materials and impacted soil beneath the ponds. Institutional controls are in place to prevent groundwater use and well installation and to prohibit certain land uses and any activities that could impact the integrity of the caps.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

O&M is adequate. The PRP is in the process of addressing the recurring issue of animals burrowing in the caps.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

Site inspection participants did not identify any early indicators of potential remedy problems.

D. Opportunities for Optimization

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

No opportunities for remedy optimization were identified during the site inspection.

APPENDIX J – SITE INSPECTION PHOTOS

On-site maintenance building (used for current site maintenance)

Seawall and riprap along Meyers Cove (southwest side of the Site)

View of Meyers Cove

Cap on the southern part of the Site

View of the northern, uncapped portion of the southern part of the Site, looking north

Fence and monitoring wells along Anclote Road on the southern part of the Site

MW-02-10F on the southern part of the Site

Small animal burrow in the southern cap

Stormwater drain on the southern part of the Site

Lock and signage at the Anclote Road entrance to the northern part of the Site

View of the northern cap, looking east

Location of suspected gopher tortoise burrow on the northern cap

Close-up view of the suspected gopher tortoise burrow in the northern cap

Small animal burrow in the northern cap

Northern edge of the northern cap

APPENDIX K – ARARS REVIEW AND SCREENING-LEVEL RISK REVIEW

ARARs Review

CERCLA Section 121(d)(1) requires that Superfund remedial actions attain "a degree of cleanup of hazardous substance, pollutants, and contaminants released into the environment and of control of further release at a minimum which assures protection of human health and the environment." The remedial action must achieve a level of cleanup that at least attains those requirements that are legally applicable or relevant and appropriate. In performing the FYR for compliance with ARARs, only those ARARs that address the protectiveness of the remedy are reviewed.

Soil ARARs Review for Radium-226

The 1998 ROD identified a chemical-specific ARAR for the radionuclide radium-226 which includes its decay product lead-210 (see Table K-1). The UMTRCA established soil cleanup standards for radium-226; these standards have been codified in 40 CFR 192. The UMTRCA standards limit the concentration of radium-226 within surface soil to no more than 5pCi/g over background. The current standard is the same as the ROD-established standard.

Table K-1: Summary of Soil ARARs Review

COC	1998 ROD ARARs (pCi/g)	Current[a] ARARs (pCi/g)	ARARs Change
Radium-226 (Lead-210)	5[b]	5	No change

Notes:

a. Federal Standards for the Cleanup of Land and Buildings Contaminated with Residual Radioactive Material 40 CFR 192: http://www.ecfr.gov/cgi-bin/text-idx?node=40:25.0.1.1.3&rgn=div (accessed 11/22/19).

b. Cleanup level established by the ROD is 5 pCi/g above the background concentration. The background concentration is 0.206 pCi/g based on the results of investigations conducted during design as discussed in the Pre-Design Field Investigations Report (O'Brien & Gere, 2006a).

Screening-Level Risk Assessment of Soil Cleanup Goals

With the exception of radium-226, the Site's soil cleanup goals were based on human health risk rather than chemical-specific ARARs. To evaluate whether the risk-based soil cleanup goals remain valid, they were compared to the EPA's current RSLs for soil for both commercial/industrial and residential land use. As shown in Table K-2, with the exception of thallium, the soil cleanup goals remain valid because they correspond to risks below or within the EPA's carcinogenic risk range of 1×10^{-6} to 1×10^{-4} and below the target noncancer HQ of 1. As discussed in the body of this report, thallium does not currently have an EPA toxicity value that can be used to set remedial levels, but the cleanup done for other COCs is expected to have captured most of the elevated thallium concentrations."

An RSL was not available for radium-226; therefore, the EPA's preliminary remediation goal calculator was used to estimate the equivalent industrial and residential risk levels associated with the cleanup goal of 5 pCi/g. Table K-2 shows the cleanup goal is equivalent to risks that are slightly above the EPA's risk management range of 1×10^{-6} to 1×10^{-4}, under both a residential and commercial/industrial land use scenario. However, the cleanup goal remains valid as the value is an ARAR that has not changed. In addition, following remedial action, a post-construction radiological survey was conducted.

Adjusting for background, the survey estimated a dose above background of 6.0 millirem per year (mrem/yr). This value is below the EPA guidance of 12 mrem/yr for any scenario, in this case: residential exposure. According to EPA guidance on radionuclides, the 12 mrem/yr dose is equivalent to a cancer risk of 3×10^{-4} and is consistent with levels generally considered protective under regulations and guidance developed by the EPA in other radiation control programs.[2] The survey indicated the Site does not have exposure rates that would be of a radiation exposure concern as the concentration is half of the EPA recommended dose level of 12 mrem/yr.

[2] Radiation Risk Assessment at CERCLA Sites: Q&A. Office of Solid Waste and Emergency Response (OSWER) No. 9285.6-20. June 2014.

Table K-2: Screening-Level Risk Assessment for Soil Cleanup Goals

Soil COC	ROD Cleanup Goal (mg/kg)	Residential RSL[a,i]		Commercial RSL[a]		Residential		Commercial	
		Cancer-Based	Noncancer HQ=1.0	Cancer-Based	Noncancer HQ=1.0	Cancer Risk[b]	Noncancer HQ[c]	Cancer Risk[b]	Noncancer HQ[c]
Arsenic	3.7[d]	0.68	35	3.0	480	5.4×10^{-6}	0.1	1.2×10^{-6}	0.01
Antimony	28.1	ND	31	ND	470	-	0.9	-	0.06
Beryllium	120[e]	1,600	160	6900	2300	7.5×10^{-8}	0.75	1.7×10^{-8}	0.05
Phosphorus (white phosphorus)	1.4	ND	1.6	ND	23	-	0.88	-	0.06
Thallium[d] Thallium (Soluble Salts)	1.4	-	0.78-1.6	-	12-23	-	NA	-	NA
Radium-226 (Lead-210)	5 pCi/g[f]	0.0148[g]	-	0.0203[g]	-	**3×10^{-4}**	-	**3×10^{-4}**	-
CPAHs[h]	0.089	0.11	18	2.1	220	8.1×10^{-7}	0.005	4.2×10^{-8}	0.0004

Notes:

a. November 2019 EPA RSLs were used for this screening and are available at https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables (accessed 11/22/2019).

b. The cancer risks were calculated using the following equation, based on the fact that RSLs are derived based on 1×10^{-6} risk: cancer risk = (cleanup goal ÷ cancer-based RSL) × 10^{-6}.

c. The noncancer HQs were calculated using the following equation: HQ = cleanup goal ÷ noncancer-based RSL.

d. Current cleanup goal per the March 2000 ESD.

e. Current cleanup goal per the August 1999 ESD.

f. Cleanup level established by the ROD is 5 picocuries per gram (pCi/g) above the background concentration. The background concentration is 0.206 pCi/g based on the results of investigations conducted during remedial design.

g. RSL calculated for default residential exposure to include ingestion, inhalation, external exposure to soil based on secular equilibrium (recommended EPA default) and selecting calculator climate data for Miami, Florida; the site area for the area correction factor used the default residential lot of 0.5 acres or 2000 square meters and cover layer thickness of 0 centimeters. The RSL calculated for the worker was based on a default composite worker exposure assumptions and climate data for Miami, Florida (http://epa-prgs.ornl.gov/cgi-bin/radionuclides/rprg_search).

h. Used RSLs for benzo(a)pyrene to review the cleanup goal for CPAHs.

i. These RSLs are conservatively based on a child- only (subchronic) exposure that is used in conjunction with chronic duration toxicity values. Thus, these values are overly conservative relative to the child + adult chronic exposure that comprises residential scenarios in most human health risk assessments.

mg/kg = milligrams per kilogram

NA = Not applicable. While the ROD soil cleanup goal for Thallium is within the range of current residential soil RSLs, these RSLs are based on a toxicity value that, due to lack of a valid toxicology study, is not recommended to be used to determine a remedial level. Similarly, while the ROD soil cleanup goal for Thallium is below the range of current industrial soil RSLs, these RSLs are based on a toxicity value that, due to lack of a valid toxicology study, is not recommended to be used to determine a remedial level.

ND = RSL not determined

- = not calculated because toxicity data are not available for calculating a cancer-based or noncancer-based RSL

HQ = Hazard Quotient

Bold value exceeds EPA's acceptable risk range and/or HQ of 1