U.S. ENVIRONMENTAL PROTECTION AGENCY



PROPOSED PLAN

Fairfax Street Wood Treaters

Jacksonville, Duval County, Florida

This Proposed Plan is not to be considered a technical document. It has been prepared to provide the general public an understanding of the activities that have been occurring at the Fairfax Street Wood Treaters site. For technical information, please review the documents in the information repositories.

The U.S. Environmental Protection Agency (EPA)* is issuing this Proposed Plan for the environmental cleanup of the Fairfax Street Wood Treaters (FSWT) site located at 2610 Fairfax Street in Jacksonville, Duval County, Florida. This Proposed Plan summarizes the findings from studies and reports that form the basis for the Agency's preferred cleanup alternative. These reports include the Remedial Investigation and Feasibility Study (RI/FS) contained in the Administrative Record file for this site, which is available for review at the Information Repository (see text box below). EPA is issuing this Proposed Plan as part of its public participation responsibilities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) and the National Oil and Hazardous Substances Pollution

Contingency Plan (NCP) for selecting a Remedial Action (RA).

What is a Proposed Plan?

A Proposed Plan is a document to facilitate public involvement in a site's remedy selection process. The Proposed Plan is a document that the lead agency is required to issue to fulfill the requirements of **CERCLA** §117(a) and NCP §300.430(f)(2). A Proposed Plan presents EPA's preliminary recommendation on how to best address contamination at a site, describes the alternatives evaluated, and provides EPA's recommended Preferred Alternative.

EPA, in consultation with the Florida Department of Environmental Protection (FDEP), will select a final remedy for the FSWT site after all the information submitted during the 30-day public comment period is reviewed and considered (see the text box on the right side of this page). The proposed Preferred Alternative may be modified, or another RA presented in this plan may be selected based on new information or public comments. Therefore, the public is encouraged to review and comment on all the alternatives presented in this Proposed Plan. The EPA's final decision will be announced in the **Record of Decision (ROD)** with inclusion of a **Responsiveness Summary** that addresses the public comments received.

EPA's preferred cleanup alternative builds upon previously completed removal actions conducted by EPA at the FSWT site and surrounding properties. The preferred cleanup alternative also considers the reasonably anticipated future land use of the FSWT site (residential) and, therefore, would not interfere with any redevelopment plans for the site. The major components of the preferred cleanup alternative at **30-Day Public Comment Period** May 1, 2017 - May 31, 2017

Public Meeting Tuesday, May 16, 2017, 7:00 PM **Emmett Reed Community Center** 1093 W 6th Street, Jacksonville, FL

As part of public involvement during the 30-day public comment period, the community is invited to a public meeting. EPA will present its understanding of the site, provide its rationale for the Preferred Alternative presented in this Proposed Plan, and answer questions from the community.

Information Repository

The Fairfax Street Information Repository is located at Dallas Graham Branch Library, 2304 N. Myrtle Avenue, Jacksonville, FL 32209.

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the FSWT site are: excavation and off-site disposal of on-site contaminated retention pond sediments, on-site and off-site soils; demolition of on-site building slab; removal of piping and residual waste inside of the on-site underground drainage pipes; off-site treatment (when necessary) and disposal of soils, sediments, demolition debris, piping and residual waste at off-site permitted landfills, and site restoration.

Contents Page
What is a Proposed Plan?1
The CERCLA Process2
Site Background2
Site Characteristics5
Scope and Role of Response Action6
Summary of Site Risks6
Human Health Risk Assessment7
Ecological Risks8
Remedial Action Objectives8
Summary of Remedial Alternatives9
Alternative 1: No Action (No Cost)10
Alternative 2: Excavation and Off-Site Treatment and Disposal (\$7,860,000)10
Alternative 3: Excavation, Physical Separation, and Off-Site Disposal (\$8,753,000)10
Alternative 4: Excavation, Physical Separation, On- Site Solidification, and Off-Site Disposal (\$11,674,000)10
Alternative 5: Excavation, On-Site Solidification, and Off-Site Disposal (\$11,095,000)12
Evaluation of Alternatives12
EPA's Preferred Alternative14
Glossary of Terms and Acronyms16

The CERCLA Process

EPA is issuing this Proposed Plan as part of its public participation responsibilities under CERCLA and the NCP. Environmental investigations and cleanup at the FSWT site follow the steps shown in **Figure 1**. The project is currently in Step 3, the Proposed Plan and remedy selection. Remaining activities include EPA issuing the **ROD**, **Remedial Design (RD)**, RA, conducting long-term monitoring (if necessary), and site closure.

Site Background

History

The FSWT site encompasses 12.5 acres in a predominantly residential area of Jacksonville, Florida. The FSWT site is owned by Fairfax Land Management, Inc., and was formerly used as a wood treating facility operated by Wood Treaters, LLC, and its corporate

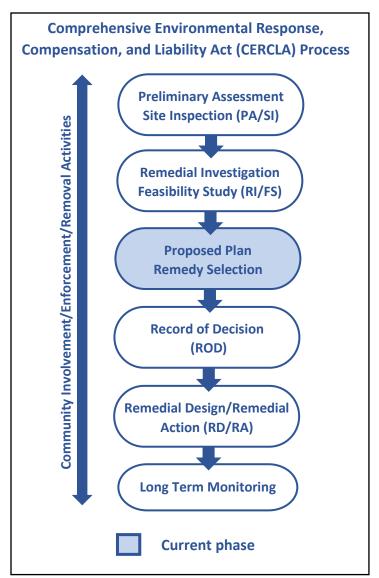
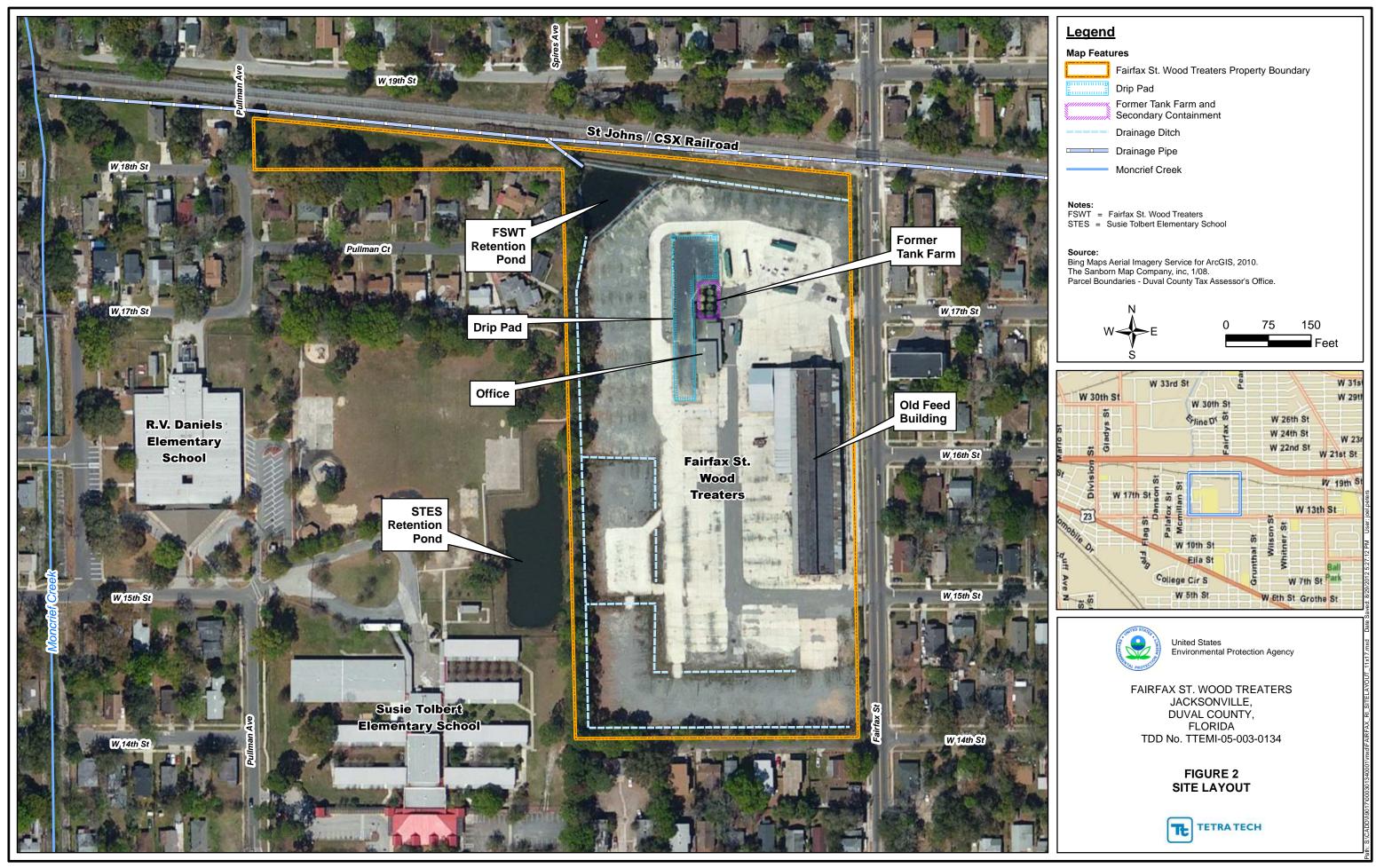


Figure 1: The CERCLA Process

predecessor, Wood Treaters, Inc. (Wood Treaters). Features of the facility include a building slab, a parking lot, process area including pipes and drains, a former tank farm and containment area, and a storm water retention pond. The FSWT site is bordered to the north by St. Johns/CSX railroad tracks, to the east by Fairfax Street and residential properties beyond, to the south by West 14th Street and residential properties beyond, and to the west by Susie E. Tolbert and R.V. Daniels Elementary Schools and by Pullman Court. Moncrief Creek is located about 1,000 feet west of the FSWT property. Overflow from the retention pond on the FSWT site flows into Moncrief Creek via a drainage pipe. A map of the FSWT site is shown below in **Figure 2** on page 3.



From 1980 to 2010, Wood Treaters operated a wood treating facility that pressure-treated utility poles, pilings, heavy timber, and plywood lumber products using the wood treating preservative **chromated copper arsenate (CCA)**. After drip drying in the process area, the treated wood was stored on the gravel areas along the northern, southern, and western portions of the property. Based on knowledge of the process and the contaminants at the site, some of the **CCA** preservative dripped onto the ground, which resulted in soil and sediment contamination.

The building at the FSWT site, which stored wood treating product, was destroyed in a fire in January 2017. There is still residual waste material in pipes and drains. These wastes are classified as a Resource Conservation and Recovery Act (RCRA) hazardous listed waste [F035]. Building and other man-made debris that is contaminated with this waste may be hazardous debris under RCRA regulations. It is also anticipated that contaminated soil and sediments around the process area may be classified as RCRA hazardous waste because they contain RCRA listed hazardous wastes or have elevated levels of arsenic and/or chromium that could leach above the toxicity characteristic leaching procedure levels. Under CERCLA Section 121(d)(2) remedial actions must comply with 'applicable or relevant and appropriate requirements' (ARARs), which includes **RCRA** regulations for generation, characterization, storage, treatment and disposal of hazardous waste. The RCRA Land Disposal Restrictions (LDR) regulations specify that treatment standards must be met before any hazardous waste is disposed of on land or in permitted landfills. For F035 wastes or soil containing F035, the RCRA regulated constituents that must meet LDR treatment standards include arsenic and chromium.

In 1990, FSWT installed a storm water collection and retention system, including site grading and paving for drainage, storm water collection swales, diversion berms, and a polyethylene-lined retention pond. Before 1990, storm water was either directed to a retention pond at the Susie E. Tolbert Elementary School or flowed overland across the property. This uncontrolled storm water, contaminated with the wood treating chemical CCA, is believed to have overflowed onto neighboring properties and into Moncrief Creek and migrated into the soils and sediment. It is believed that after the storm

water collection system was installed, contaminated storm water continued to be released from the site.

CERCLA Response Actions

In 2010 and 2011, EPA initiated emergency, short-term cleanup actions that included removing contaminated soil on the Susie E. Tolbert Elementary School playground located near the fence line with the site; removing contaminated water and sediment from the retention pond on the school property; removing contaminated soil from unpaved parts of the former wood-treating facility; treating and disposing of more than 150,000 gallons of contaminated water; cleaning and removing chemical storage tanks, containment areas and piping; removing contaminated soil from three residential properties; covering exposed soils with gravel to prevent the spread of contamination through dust and storm water runoff (the gravel was cleaned by EPA before use); transporting contaminated soil, sludge, and debris off site for proper disposal; and repairing and placing a lock on site fencing. The FSWT site was included on the Superfund National Priorities List (NPL) in 2013, and a RI to determine the nature and extent of the contamination at the property and nearby residential properties was subsequently conducted.

The neighborhood surrounding the FSWT site is considered a potential Environmental Justice (EJ) community. EJ is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Further, the Duval County Health Department has divided the city into six (6) health zones with FSWT located in the middle of Health Zone 1. Health Zone 1 has the highest rates of infant mortality, heart disease mortality, asthma-related emergency room visits, and emergency room visits related to uncontrolled diabetes in the city. Health Zone 1 also has the lowest average household income, highest unemployment rate, and lowest education level. See the Environmental Justice Memorandum included in Appendix E of the Final Feasiblity Study for more information.

Public Participation

Following two years of cleanup actions and site investigations, EPA sponsored a reuse planning process to gather community input and identify site stewardship

options. This information was memorialized in the Reuse Framework memo dated March 2013 and can be found at the Information Repository. EPA also participated in multiple public meetings conducted in January 2015 and September 2016.

Site Characteristics

From 2012 to 2015, EPA conducted a RI/FS. The RI/FS identified the types, quantities, and locations of the contaminants and developed and evaluated ways to address the contamination. As part of the site assessment, RI, and removal action, EPA collected soil samples on the FSWT site, the Susie E. Tolbert Elementary School, and 96 neighboring residential properties. These soil samples were analyzed, and the results were compared with EPA's residential soil Regional Screening Levels (RSL), FDEP's 2005 Soil Cleanup Target Levels (SCTL), and site-specific background levels for each of the contaminants detected. Surface water and sediment samples were collected from the FSWT site retention pond and Moncrief Creek. The sediment and surface water samples were analyzed, and the results were compared with 2003 FDEP Sediment Quality Assessment Guidelines Florida Inland Waters, threshold concentrations, and Florida Ambient Water Quality Criteria.

Eight **groundwater** wells were sampled from the FSWT site. These samples were analyzed, and the results were compared with EPA Safe Drinking Water Act **Maximum Contaminant Levels (MCLs)**.

FSWT Property

The RI indicated that the primary contaminants of concern (COCs) at the FSWT site are arsenic, chromium, and copper. Arsenic was detected at concentrations as high as 1,300 parts per million (ppm), chromium was detected at concentrations as high as 2,000 ppm, and chromium was detected at concentrations as high as 1,400 ppm in on-site soil samples on the FSWT property. The levels of arsenic, chromium, and copper in soils on the FSWT property exceed both the screening values and site-specific background levels. The SCTL for arsenic in residential soil is 2.1 ppm and the background concentration is 2.36 ppm. The SCTL for chromium in residential soil is 210 ppm, and the background concentration is 7.03 ppm. The SCTL for copper in residential soil is 150 ppm and the background

concentration in surface soil is 10.6 ppm. Based on analytical results for soil samples, the extent of on-site **COCs** at the former wood treating facility appears to be primarily within the top 4 feet of soil.

Sludge-like residual waste (contamination source material) was collected from drains and pipes on the FSWT site during the RI and analyzed. Arsenic was detected at concentrations ranging from 150 ppm to 11,000 ppm, total chromium concentrations ranged from 270 ppm to 5,800 ppm, and copper concentrations ranged from 160 ppm to 8,900 ppm.

Subsurface soil (2 to 3 feet and 5 to 6 feet below ground surface [bgs]) samples were collected from five locations beneath the concrete floor (building foundation) of the Old Feed Building. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-c,d)pyrene are carcinogenic polycyclic aromatic hydrocarbons (cPAHs) that were detected in subsurface soil in a limited area. When combined with the risk from other COCs on the property, these contaminants contribute to the overall cumulative cancer risk on site; therefore, they are also considered COCs. The source of the cPAHs is not known; however, the source is likely a historical operation.

The on-site retention pond is lined with high-density polyethylene; however, the liner is breached in many areas. A soil sample was collected from beneath the pond liner. The sample contained arsenic and chromium exceeding their screening values at 94 ppm and 410 ppm, respectively.

The groundwater samples collected from the FSWT site did not contain site COCs above **MCLs**.

Neighboring Properties

The primary COC at the neighboring properties is arsenic. Arsenic was detected at concentrations as high as 110 ppm. Arsenic contamination in residential areas and schools around the FSWT property appears to be primarily within the top foot of soil. The concentrations of arsenic detected in the soil decrease with distance from the FSWT site. Chromium was detected at concentrations as high as 30 ppm, and copper was detected at concentrations as high as 170 ppm on residential properties surrounding the FSWT site.

Moncrief Creek

Sedim<u>ent</u>

Arsenic was detected at concentrations as high as 55 ppm, chromium was detected at concentrations as high as 190 ppm, and copper was detected at concentrations as high as 110 ppm in sediment samples collected from an area within Moncrief Creek located downstream of the retention pond on the FSWT site. These detections exceed the sediment ecological screening values for arsenic, chromium, and copper of 9.8 ppm, 43 ppm and 32 ppm, respectively.

Surface Water

COCs in Moncrief Creek were all below EPA surface water screening values and FDEP surface water cleanup target levels.

Scope and Role of Response Action

This Proposed Plan presents a site-wide remedy to address the risks due to contaminated media at the FSWT site. The contaminated media include: surface and subsurface soil on the FSWT property and on adjacent residential properties, sediment in the on-site retention pond, residual waste in on-site pipes and drains, and contaminated building debris. Further investigation of sediments in Moncrief Creek located off-site will be undertaken to determine if a response action is warranted to protect the environment.

EPA conducted removal activities at the FSWT property and the adjacent Susie E. Tolbert and R.V. Daniels Elementary Schools' shared playground in 2011. During these removal activities, EPA excavated these areas down to about 1.5 feet bgs and separated the contaminated "fines" material from the gravel. The fines were disposed of and the gravel was then power washed and spread back on top of the excavated surface to control dust and limit exposure to the soil below. The FSWT retention pond water was drained, treated, and disposed of, and the sediments were partially excavated and disposed of.

Water from the Susie E. Tolbert Elementary School retention pond was pumped out and sediments were excavated. The excavated sediments were replaced with clean fill material and the area surrounding the pond was re-sodded. A small area on the Susie E. Tolbert and R.V. Daniels Elementary Schools' shared

playground was excavated down to 24 inches bgs. The excavated area was then backfilled with clean fill material and re-sodded.

In 2011, EPA also conducted removal activities at three nearby residential properties where arsenic concentrations were identified near or above the EPA Removal Management Level (RML) of 39 ppm for residential soil, and where concerns were raised regarding the possibility that children could come into contact with the contaminated soil. Soil was excavated down to 1.5 feet in some areas. Excavated areas were then backfilled with clean fill material and re-sodded or covered with mulch.

The focus of this Proposed Plan is to address the source material remaining on the site (residual material in pipes and drains), building debris, retention pond sediments, and contaminated soils on the FSWT site and residential properties surrounding the FSWT site. The Preferred Alternative in this plan addresses these risks to human health and the environment.

Summary of Site Risks

As part of the RI/FS, EPA conducted risk assessments to evaluate the current and future effects of site-related contamination to human health and the environment. For detailed information regarding risk, see the text box on page 7, "What is Risk and How is it Calculated?"

EPA worked with the community through interviews, meetings, and a community reuse workshop to identify the reasonably anticipated future use of the site, which is residential, with possible commercial and recreational use components. Residential use or light commercial use of the site is anticipated, and the residential areas around the FSWT site are expected to remain residential.

Based on this information, certain receptors (people or animals that could be exposed to contamination) and future **exposure pathways** were identified. These receptors and pathways include the following:

- Future Industrial and Commercial Workers: accidental swallowing of, skin contact with, and inhalation of particles from surface soil.
- Current and Future Utility and Construction
 Workers: accidental swallowing of, skin contact
 with, and inhalation of particulates from surface
 and subsurface soil at the site; and incidental

What is Risk and how is it Calculated?

A Superfund human health risk assessment estimates the "baseline risk." This baseline is an estimate of the likelihood that health problems would occur if no cleanup action were taken at a site. To estimate the baseline risk at a Superfund site, EPA undertakes a four-step process:

- > **Step 1:** Analyze Contamination
- > Step 2: Estimate Exposure
- > Step 3: Assess Potential Health Dangers
- > Step 4: Characterize Site Risk

In **Step 1**, EPA looks at the concentrations of contaminants found at a site, as well as past scientific studies on the effects that contaminants had on people (or animals, when human studies are unavailable). Comparison between site-specific concentrations and concentrations reported in past studies helps EPA to determine which contaminants are most likely to pose the greatest threat to human health.

In **Step 2**, EPA considers the different ways that people might be exposed to the contaminants identified in Step 1, the concentrations that people might be exposed to, and the potential frequency and duration of exposure. Using this information, EPA calculates a "reasonable maximum exposure (RME)" scenario, which portrays the highest level of human exposure that could reasonably be expected to occur.

In **Step 3**, EPA uses the information from Step 2 combined with information on the toxicity of each chemical to assess potential health risks. EPA considers two types of risk: cancer risk, and non-cancer risk. The likelihood that any kind of cancer would result from a Superfund site is generally expressed as a probability. For non-cancer health effects, EPA calculates a "hazard index." The key concept here is that a "threshold level" (measured usually as a hazard index (HI) of less than 1) exists below which non-cancer health effects are no longer predicted.

In **Step 4**, EPA determines whether the site risks are great enough to cause health problems for people at or near the Superfund site. The results of the three previous steps are combined, evaluated and summarized. EPA adds up the potential risks from the individual contaminants and exposure pathways and calculates a total site risk.

- ingestion of and dermal contact with groundwater (if present) at less than 10 feet bgs.
- Current and Future Trespassers: accidental swallowing of, skin contact with, and inhalation of particulates from surface soil; incidental ingestion of and dermal contact with sediment and surface water in the on-site retention pond.
- Future On-Site Recreationalists: accidental swallowing of, skin contact with, and inhalation of particulates from surface soil.
- Current and Future Off-Site Recreationalists: accidental swallowing of and skin contact with sediment and surface water in Moncrief Creek.
- Future On-Site Residents: accidental swallowing of, skin contact with, and inhalation of particulates from surface and subsurface soil and ingestion of and dermal contact with groundwater.
- Current and Future Off-Site Residents: accidental swallowing of, skin contact with, and inhalation of particulates and produce grown in surface and subsurface soils at the off-site residential areas.
- Current and Future School Staff and Students: accidental swallowing of, skin contact with, and inhalation of particulates from surface soil.

Human Health Risk Assessment

EPA completed a Human Health Risk Assessment (HHRA) for the FSWT site that evaluated the exposure pathways and receptors listed above. The main objective of a **HHRA** is to determine if there are unacceptable risks associated with a site, whether action under CERCLA is warranted, and to help set cleanup levels that are protective. Cancer risks are considered unacceptable if the total cancer risk exceeds 1E-04 (1 in 10,000), and non-cancer hazards are considered unacceptable if the total hazard index (HI) exceeds 1 (see "What is Risk and how is it Calculated" to the left). The results of the HHRA for soil indicate that excess lifetime cancer risk levels on the FSWT property exceed 1.0E-04, the upper end of EPA's acceptable risk range, for future residents (7.0E-04), future industrial and commercial workers (1.0E-04), future child recreationalists (2.0E-04), and future utility workers (2.0E-04). The non-cancer risks on the FSWT property exceeded a HI of 1 (HI of 8) for future residents (see Table 1 on page 8).

For off-site residential soils, EPA believes that soils immediately adjacent to the FSWT property and nearby

residential yards have been contaminated by former wood treating operations conducted at the site. The HHRA determined that several residential yards exceed a HI of 1. It was determined that the site-related contamination migrated due to storm water runoff and spray from the tires of the trucks leaving the site from the south, east, and west. EPA and FDEP decided to address all residential parcels that were impacted by site-related contamination and where concentrations are above the background concentration of 2.36 ppm. EPA has made the risk management decision to include these additional residential properties in the RA for the site based on the fact that the Mid-Westside Neighborhood community surrounding the site is considered an overburdened community with EJ concerns and suffers from cumulative negative environmental impacts and health-based stressors explained in more detail in Appendix E of the final FS.

Table 1: Summary of Reasonable Maximum Exposure Risks and Hazards (bold = unacceptable risk)

Location	Receptor	Maximum Hazard Index	Maximum Cancer Risk	
On-Site	Future Industrial and Commercial Workers	0.62	8.0E-05	
	Future Utility Workers	0.78	2.0E-04	
	Future Construction Workers	0.61	2.0E-05	
	Current and Future Trespassers	0.28	2.0E-05	
	Future Recreationalists	4.2	2.0E-04	
	Future Residents	8.2	7.0E-04	
Off-Site	Current and Future Residents	1.11	3.0E-05	
	Current and Future Utility Workers	0.0066	1.0E-06	
	Current and Future School Students and Staff	0.0093	1.0E-06	
	Current and Future Moncrief Creek Recreationalists	0.085		

For Moncrief Creek, the HHRA assumed that limited exposure to surface water and sediment will occur to adolescents and adult recreationalists. It was determined there was no unacceptable risk.

Ecological Risks

A Screening Level Ecological Risk Assessment (SLERA) was conducted by EPA to evaluate the potential effects to the environment from the contamination at the FSWT site and within Moncrief Creek. The SLERA was developed as part of the RI. The EPA evaluated potential risks to aquatic organisms in Moncrief Creek and the onsite retention pond, and to sensitive terrestrial organisms (mammals and birds), in and around the FSWT site. The SLERA indicated that concentrations of several constituents, primarily metals, in sediments in the onsite retention pond and Moncrief Creek exceed ecological screening values for certain wildlife receptors. Within the creek, the major area of sediment contamination is located about 1,800 feet downstream of the discharge point of storm water from the FSWT site to the creek. However, further investigation of stream sediments in Moncrief Creek located off site will be undertaken to determine if a response action is warranted to protect the environment. Surface water samples in the creek were all below chronic water quality criteria for the protection of aquatic life.

The SLERA also identified a risk for an avian receptor that may use the on-site retention pond as a primary food source. The concentrations of arsenic and copper associated with the surface water in the on-site retention pond were above chronic water quality criteria for the protection of aquatic life.

It is the EPA's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

Remedial Action Objectives

Remedial Action Objectives (RAOs) describe what the proposed site cleanup is expected to accomplish. The **RAOs** for the FSWT site and neighboring properties are as follows:

- Prevent human exposure (direct contact and ingestion) to on-site soil with concentrations of COCs above levels protective of residential use.
- Prevent unacceptable risk to ecological receptors (avian) from contaminated sediments and surface water in the on-site retention pond.
- Prevent direct contact with residual waste and contaminated building structures located on the site, including the drip pad and process containment areas.
- Prevent migration of contaminated storm water runoff from the FSWT site to adjacent properties and Moncrief Creek.
- Prevent off-site residential human exposure (direct contact and ingestion) to soil with concentrations of arsenic above levels protective of residential use.

The proposed cleanup levels or **Preliminary Remediation Goals (PRGs)** for contaminated media at the FSWT site were developed specifically to protect human health and the environment and to address the unacceptable risks. This will be achieved by reducing the concentrations to the following **PRGs**:

Medium	Preliminary Remediation Goals
Soil/Source Material	Arsenic: 2.36 ppm
	Chromium: 210 ppm
	Copper: 150 ppm
	cPAH: 0.1 ppm *
Sediment	Arsenic: 9.8 ppm
	Chromium: 43 ppm
	Copper: 32 ppm

^{*}Benzo(a)pyrene equivalents

With the exception of arsenic, the PRGs (i.e., cleanup levels) for the on-site and off-site contaminated surface soils are based on FDEP's SCTLs for direct exposure and residential use [F.A.C. 62 -777 Table II]. These SCTLs are identified as chemical-specific **ARARs**. However, neither EPA (as a policy matter) nor Florida set PRGs for an individual contaminant that is more stringent than the site-specific background concentration for that contaminant, provided that the background level is protective of human health and the environment. Therefore, EPA will use the site-specific background level

of 2.36 ppm for arsenic instead of the SCTL as provided in F.A.C 62-780.650(1)(d).

The PRGs for sediments are based on Florida's sediment quality assessment guidelines for protection of sediment-dwelling organisms.

Summary of Remedial Alternatives

CERCLA § 121(b)(1), 42 U.S.C. § 9621 (b)(1), mandates that RAs be protective of human health and the environment, be cost effective, and use permanent solutions, alternative treatment technologies, and resource recovery alternatives to the maximum extent practicable. Section 121(b)(1) also establishes a preference for RAs which use, as a principal element, treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants at a site. CERCLA § 121(d), 42 U.S.C. § 9621(d), further specifies that a RA must require a level or standard of control of the hazardous substances, pollutants, and contaminants that at least attains ARARs under federal and state environmental laws unless a waiver can be justified pursuant to CERCLA § 121(d)(4), 42 U.S.C. § 9621(d)(4). RA alternatives for the FSWT site and neighboring properties are presented in the table below. Capital costs are those expenditures that are required to construct a remedial alternative.

Remedial Alternatives – FSWT Soil				
Alternative	Description			
1	No Action			
2	Excavation and Off-site Treatment and Disposal			
3	Excavation, Physical Separation, and Off-site Disposal			
4	Excavation, Physical Separation, Solidification, and Off-site Disposal			
5	Excavation, Solidification, and Off-site Disposal			

Alternative 1: No Action (No Cost)

The No Action alternative is required by the NCP as a baseline with which to compare other RA alternatives. Alternative 1 is not protective of human health and the environment because it does not meet any of the RAOs. This alternative would leave the FSWT site "as is," with no actions taken beyond what is already in place. In addition, this alternative assumes that existing controls and monitoring will not be maintained.

Alternative 2: Excavation and Off-Site Treatment and Disposal (\$7,860,000)

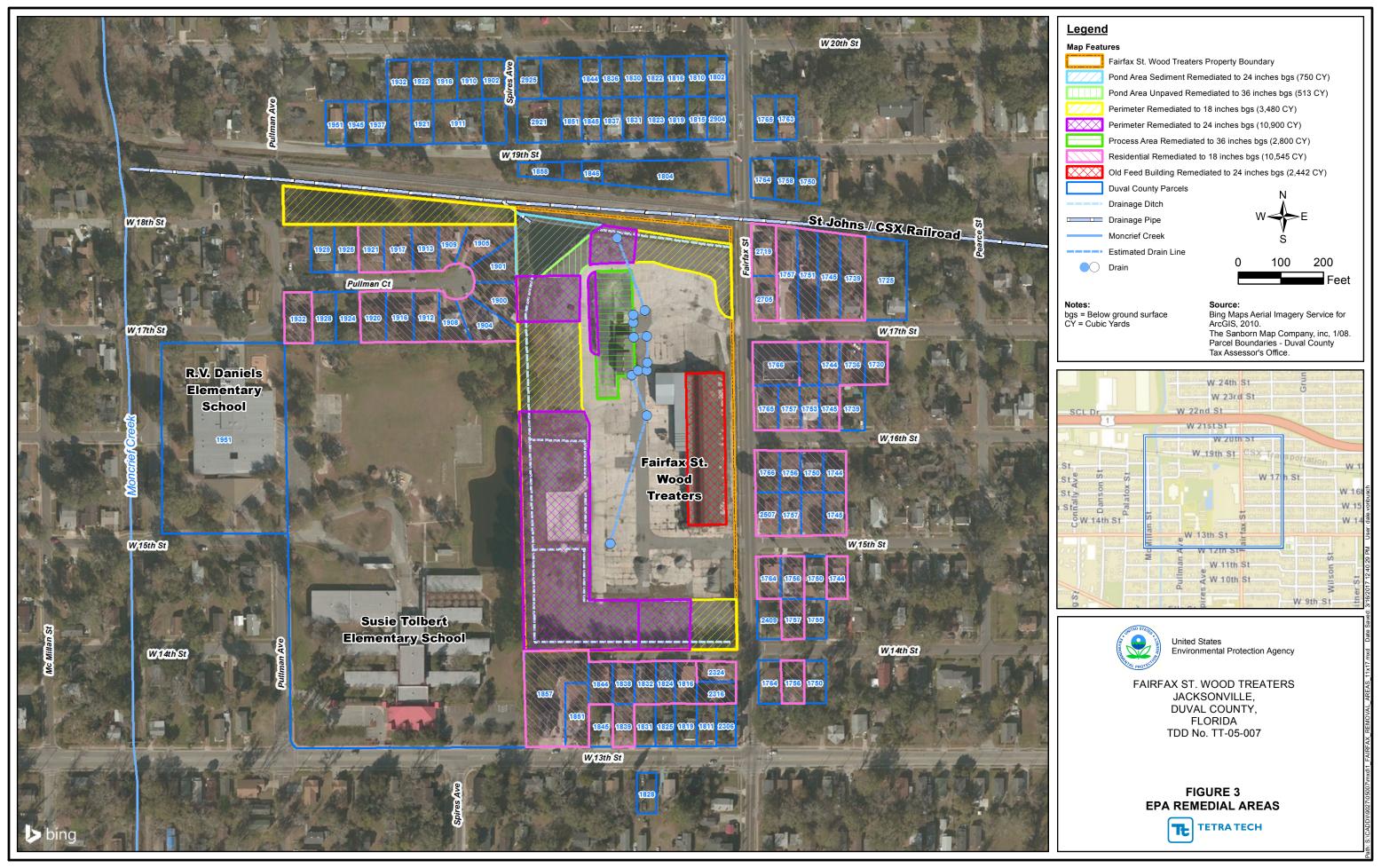
This alternative would apply to all surface soils contaminated with constituents above their respective PRGs, including on the FSWT site, residential properties around the FSWT site, sediments from the on-site retention pond, contaminated demolition debris, and residual waste material in pipes and drains. This alternative would involve physically removing the contaminated soil and waste material, temporary staging, characterization and staging prior to trucking it to an off-site landfill for treatment and disposal. Disposal would occur at an EPA-approved RCRA Subtitle C or D (hazardous or solid waste) facility (e.g., permitted landfill), depending on the waste classification, and hazardous wastes (soil and hazardous debris) would be treated off-site to meet RCRA LDR treatment standards prior to disposal. The proposed excavation areas and depths are shown on Figure 3 on page 11. A RD and RA Work Plan would be developed to outline details about site preparation; the extent of excavation; demolishing on the **FSWT** structures site: excavation; decontamination; transportation; and off-site disposal of the removed material. The plan would also include developing safety measures for workers, on-site employees, and the public during remedial activities. As part of the RD, additional sampling to delineate potential site-related contamination on the eastern edge of residential neighborhood east of the site and on the eastern boundary of the school will be completed. If the investigation demonstrates contaminant concentrations are above cleanup levels, then the area will be excavated. The RA would follow the procedures and requirements established in the RA Work Plan. After excavation, samples will be collected to confirm whether the COCs have been removed to below PRGs.

Alternative 3: Excavation, Physical Separation, and Off-Site Disposal (\$8,753,000)

This alternative would apply to contaminated on-site soils and off-site surface residential soils. This alternative requires excavating the soil and applying physical separation "ex situ" (literally "out of place," in this case meaning above ground) at the FSWT site. Physical separation uses physical methods to separate the large soil particles (that are more likely to be free of contaminants) from the smaller particles (that are contaminated). The separated soil will then be analyzed at an EPA-approved laboratory to make sure the larger particles are below PRGs (meet cleanup levels) and also no longer contain RCRA hazardous waste or are not considered RCRA characteristic hazardous waste. The advantage of this alternative is that the non-hazardous contaminated soil may be disposed at a RCRA Subtitle D. solid waste disposal facility (e.g., permitted landfill). Physical separation would use either gravity separation or sieving. Gravity separation uses the specific weight of particles to separate them. Sieving is the process of using different-sized sieves and screens to separate smaller particles from larger particles. The RD, additional delineation sampling, and RA Work Plan development, FSWT site facilities demolition, and excavation would be the same as described in Alternative 2. Physical separation cannot be applied to sediments from the onsite retention pond, demolition debris, or residual waste material in pipes and drains. This alternative would be combined with a different alternative to address the remaining contaminated material.

Alternative 4: Excavation, Physical Separation, On-Site Solidification, and Off-Site Disposal (\$11,674,000)

Like Alternative 3, this alternative would apply only to on-site soils and off-site residential surface soils. Excavated off-site residential soils would be transported to the FSWT site and staged separately with on-site soils before characterization and treatment, when necessary due to being considered RCRA hazardous waste. This process involves excavating the soil and using ex situ physical separation, as discussed in Alternative 3, to separate hazardous waste soil particles from non-hazardous waste particles. Before the contaminated soil that is considered RCRA hazardous waste is sent off site for disposal, it will be treated on site using solidification/stabilization.



This method physically or chemically reduces or stops the leaching of the contaminants in the treated soil, thus achieving the RCRA LDR treatment standards that are ARARs. Physical solidification involves the addition of cement or a cement-based mixture. The cement physically traps the contaminants, thus reducing their mobility. Chemical solidification involves the addition of chemicals that react with the contaminants. The chemical reaction results in compounds that are much less mobile. A different alternative would be combined with this one to remediate the sediments in the on-site retention pond, demolition debris, and residual waste material in pipes and drains as physical separation cannot be applied to these media.

Alternative 5: Excavation, On-Site Solidification, and Off-Site Disposal (\$11,095,000)

This alternative would apply to all contaminated material, including on-site soils, off-site residential surface soils, on-site retention pond sediments, demolition debris, and residual waste material in pipes and drains. This process involves excavating, segregating and characterizing wastes, and staging and treating the contaminated soils and waste material on site that is considered RCRA hazardous waste with ex situ solidification/stabilization, followed by off-site disposal of the treated waste at an EPA-approved RCRA Subtitle C or D landfill. This alternative is the same as Alternative 4 without the physical separation step. Not including physical separation will decrease the complexity of the remediation and increase the implementability of the alternative. The RD, additional delineation sampling, RA Work Plan, demolition of the FSWT site facilities, site preparation, and excavation process would be the same as described in Alternative 2. Treatment would achieve the RCRA hazardous waste disposal requirements.

Evaluation of Alternatives

EPA uses nine criteria to assess remedial alternatives individually and compare them in order to select a remedy. The criteria are described in the box on the right. This section of the Proposed Plan profiles the relative performance of each alternative against the nine criteria, noting how it compares to the other options under consideration. A detailed analysis of each of the alternatives is in the FS report. A summary of those analyses follows:

EPA's Nine Criteria for Evaluating Remedial Alternatives

Threshold Criteria

- Overall Protection of Human Health and the Environment: Risks are eliminated, reduced or controlled through treatment, engineering, or institutional controls.
- 2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs): Federal and state environmental statutes met or grounds for waiver provided.

Primary Balancing Criteria

- 3. Long-term Effectiveness and Permanence:

 Maintain reliable protection of human health
 and the environment over time, once cleanup
 goals are met.
- 4. Reduction of Toxicity, Mobility or Volume through Treatment: Ability of a remedy to reduce the toxicity, mobility, and volume of the hazardous contaminants present at the site.
- **5. Short-term Effectiveness:** Protection of human health and the environment during the construction and implementation period.
- 6. Implementability: Technical and administrative feasibility of a remedy, including the availability of materials and services needed to carry it out.
- **7. Cost:** Estimated capital, operation, and maintenance costs of each alternative.

Modifying Criteria

- **8. State Acceptance:** State concurs with, opposes, or has no comment on the preferred alternative.
- **9. Community Acceptance:** Community concerns addressed; community preferences considered.

Overall Protection of Human Health and the Environment

Alternative 1, the no action alternative, would not be protective of human health and the environment beyond what already exists at the FSWT site or neighboring properties and would not achieve RAOs. Alternatives 2, 3, 4, and 5 would provide protection of human health by eliminating or reducing risk through removal of contaminated soil and debris and treated where needed. Prior to disposal, COCs are reduced to cleanup levels by Alternatives 2, 3, 4 and 5. There would be no land use restrictions needed for Alternatives 2, 3, 4, and 5.

Compliance with ARARs

Because no action would be taken under Alternative 1, the presence of unaddressed contaminated media would not meet ARARs. Alternatives 2, 3, 4, and 5 would comply with ARARs because all contaminated soil, sediment, and debris that contains COCs above the cleanup levels would be disposed of off site and hazardous wastes would be treated to meet RCRA LDRs prior to disposal.

Long-Term Effectiveness and Permanence

Alternative 1 would provide no long-term effectiveness or permanence because no action would be taken. Risks from the site contaminants would remain the same. Alternatives 2 through 5 are anticipated to provide both long-term effectiveness and permanence as these alternatives include excavation of contaminated soils and sediments and off-site disposal of contaminated soil, sediments, and demolition debris. These alternatives would result in preventing direct contact exposure and contaminant migration off site.

Reduction of Toxicity, Mobility, or Volume through Treatment

Alternative 1 would provide no reduction of toxicity, mobility, or volume because no action would be taken. Because Alternative 2 will use off-site treatment to meet disposal requirements, it would reduce the toxicity, mobility, or volume of the contaminants through treatment. Alternatives 3, 4, and 5 would effectively reduce the toxicity, mobility, and volume of the contaminants on the FSWT site through on- and off-site treatment.

Short-Term Effectiveness

Alternative 1 would not have any impacts to the community and workers during implementation because no action would be taken. Alternatives 2 and 3 will

involve some risk in the short term for exposure, as untreated material would be transported through the community. Alternatives 2 through 5 would result in a temporary increase in nuisance noise and dust. Engineering controls for dust and storm water runoff during excavation would minimize exposure during cleanup.

Implementability

Alternative 1 can be easily implemented as no action would be taken. Alternatives 2 and 5 are expected to be easily implemented. Materials and equipment necessary for these alternatives are readily available, and excavation can be completed using common construction techniques, as well as transportation of material to a disposal facility. Alternatives 3 and 4 are expected to be moderately implementable. Materials and equipment necessary for these alternatives are readily available, but the physical separation process is limited and works best on relatively simple contaminant mixtures.

Cost

Costs associated with Alternative 1, the no action alternative, are minimal. Total estimated capital costs for Alternatives 2 through 5 range from approximately \$7.9 million to \$11.7 million. Treating the material at an off-site disposal facility is more cost effective than treating the material using on-site solidification.

State Acceptance

FDEP has been involved actively in the process of determining and evaluating the alternatives presented in the Proposed Plan. State acceptance will be described in the ROD.

Community Acceptance

This Proposed Plan provides the opportunity for the public to make comments to EPA on the Preferred Alternative, as well as the other alternatives presented and evaluated in this plan for the FSWT site. Community acceptance of the Preferred Alternative will be evaluated after the public comment period ends and will be described in the ROD, the document in which EPA formally selects the remedy for the site.

EPA's Preferred Alternative

EPA, in consultation with FDEP, selected Alternative 2 (excavation and off-site treatment and disposal) as the Preferred Alternative because it will achieve a substantial risk reduction by excavating the contaminated media and disposing of it off site along with off-site treatment to meet RCRA hazardous waste disposal requirements. Alternative 2 provides protection of human health and the environment, reduction of toxicity/mobility/volume through off-site treatment and short-term effectiveness. Costs associated with this alternative are moderate. All of the alternatives require excavation, with some degree of off-site disposal also involved for each. Appropriately permitted off-site disposal facilities are available for disposal of the contaminated soil, and pretreatment of hazardous waste at the disposal facility, when required to meet the RCRA LDRs, is also available. Alternative 2 is easy to implement, is commonly used at contaminated sites, will meet the RAOs and regulatory requirements, and will likely be the most cost-effective remedy.

Alternative 2, excavation and off-site disposal, involves physically removing the contaminated soil via excavation and transporting it to a hazardous waste disposal facility, where it would be treated and disposed. Disposal would be done at appropriately permitted RCRA solid or hazardous waste facilities, depending on the waste classification, and hazardous wastes would be treated to meet the LDR treatment standards prior to disposal. This alternative would be applicable to all contaminated material, including soils on the FSWT site, residential properties around the FSWT site, sediments in the on-site retention pond, demolition debris, and residual waste material in pipes and drains. The RD and RA Work Plan would be developed to outline details about site preparation; the extent of excavation; demolishing structures on the FSWT site; storage requirements, transportation of contaminated soil; and off-site disposal. Engineering controls for dust and storm water runoff during excavation will minimize exposure during site activities. The plan would also include developing safety measures for workers, on-site employees, and the public during remedial activities. The RA would be performed according to the procedures and requirements of the Work Plan. After excavation, samples would be collected at the FSWT site and surrounding residential properties to confirm that the COCs have been removed or reduced to achieve cleanup levels.

Based on information currently available, EPA believes the Preferred Alternative meets the threshold criteria and provides the best balance of tradeoffs among the other alternatives with respect to the balancing and modifying criteria. EPA expects the Preferred Alternative to satisfy the following statutory requirements of CERCLA 121(b): (1) be protective of human health and the environment; (2) comply with ARARs (or justify a waiver); (3) be cost effective; (4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and (5) satisfy the preference for treatment as a principal element. The FDEP has been actively involved in the evaluation of the remedy and state support of the EPA Preferred Alternative is anticipated. The Preferred Alternative is based on current information; therefore, the selected alternative can change in response to public comment or new information. EPA's final decision will be described in the ROD.

How the Public Can Comment

EPA and FDEP provide information regarding the cleanup of the FSWT site to the public through Fact Sheets, public meetings, announcements in The Florida Times-Union, and the Administrative Record file for the site. EPA and the FDEP encourage the public to gain a more comprehensive understanding of the FSWT site and Superfund activities that have been conducted at the FSWT site. Information regarding the public comment period, public meeting and the locations of the Administrative Record files, are provided on the front page of this Proposed Plan.

Submit Comments:

There are two ways to provide comments during this period:

- Offer oral or written comments during the public meeting
- Provide written comments by mail or e-mail

For further information on the FSWT site, please contact:

Leigh Lattimore Remedial Project Manager (404) 562-8768

e-mail: Lattimore.leigh@epa.gov

or

Ronald Tolliver Community Involvement Coordinator (404) 562-8545

e-mail: Tolliver.Ronald@epa.gov

U.S. EPA, Region 4 61 Forsyth Street, SW Atlanta, GA 30303-8960

Mailing List Additions:

Anyone wishing to be placed on the mailing list for this site should send his or her request to Leigh Lattimore, EPA Remedial Project Manager or Ronald Tolliver, EPA Community Involvement Coordinator.

Glossary of Terms and Acronyms

Applicable or Relevant and Appropriate Requirements.

Federal and state environmental laws or regulations that apply to a specific Superfund site or the contaminants at that site. The RA must meet all of the ARARs.

ARARs. See Applicable or Relevant and Appropriate Requirements

bgs. Below ground surface

CCA. See Chromated Copper Arsenate

CERCLA. See Comprehensive Environmental Response, Compensation, and Liability Act

Chromated Copper Arsenate. The wood treating chemical formerly used by Wood Treaters, LLC at the FSWT site. The chemical contains chromium, copper, and arsenic and is a bright green color.

Cleanup. Actions taken to deal with a release or threatened release of hazardous substances that could affect public health or the environment. The term "cleanup" is sometimes used interchangeably with the terms RA, removal action, response action, or corrective action. The term is often used broadly to describe various response actions or phases of remedial responses, such as the Remedial Investigation/Feasibility Study.

COC. See Contaminant of Concern

Compensation, and Liability Act. A federal law enacted in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act to investigate and clean up abandoned or uncontrolled hazardous waste sites. The law is commonly known as Superfund because it created a special tax that goes into a trust fund. EPA either pays for the site cleanup when the responsible parties cannot be located or are unwilling or unable to perform the RAs, or takes legal action to force responsible parties to clean up the site or reimburse EPA for the cost of the cleanup.

Contaminant of Concern. A chemical contaminant at a Superfund site that has the potential to harm human health or the environment. The contaminants of concern at the FSWT site are arsenic, chromium, copper, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs).

EJ. See Environmental Justice

Environmental Justice. The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. These laws often require the Agency to consider a variety of factors that generally include one or more of following: public health, cumulative impacts, social costs, and welfare impacts.

Environmental Protection Agency. An agency of the federal government of the United States which was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress.

EPA. See Environmental Protection Agency

Exposure Pathway. The means by which a person can be exposed to the contaminants at the FSWT site.

Fairfax Street Wood Treaters. The name of the Superfund site located at 2610 Fairfax Street in Jacksonville, Florida. The FSWT site was formerly a wood treating facility operated by Wood Treaters, LLC.

FDEP. See Florida Department of Environmental Protection

Florida Department of Environmental Protection. An agency of the state government of Florida created to protect the environment.

FSWT. See Fairfax Street Wood Treaters

Groundwater. Water found underground that fills pores between materials, such as sand, soil, or gravel. In aquifers, groundwater often occurs in quantities where it can be used for drinking water, irrigation, and other purposes.

Hazard Index. A measurement of probability that noncancer health effects will be caused by contaminated media. A hazard index less than 1 indicates non-cancer health effects are not predicted.

HHRA. See Human Health Risk Assessment

HI. See Hazard Index

Human Health Risk Assessment. The process of estimating the nature and probability of adverse health effects in humans who may be exposed to chemicals in contaminated environmental media, now or in the future.

Land Disposal Restrictions. A program under RCRA which mandates that certain protective measures be taken before any hazardous waste is disposed of on land.

LDRs. See Land Disposal Restrictions

Maximum Contaminant Levels. The legal threshold limit on the amount of a substance that is allowed in public water systems under the EPA Safe Drinking Water Act.

MCLs. See Maximum Contaminant Levels

National Oil and Hazardous Substances Pollution Contingency Plan. The federal regulation that guides the Superfund program.

National Priorities List. A list generated by EPA for the uncontrolled or abandoned hazardous waste sites that are priorities for long-term remedial investigation and response. The list is based primarily on the score a site receives using the Hazard Ranking System. A non-federal site must be on the NPL to receive money from the Trust Fund (Superfund) for RA. Federal properties listed on the NPL do not receive money from the EPA Trust Fund, but EPA takes a more formal role in the cleanup process. EPA is required to update the NPL at least once a year. The FSWT site was included on the NPL in 2013.

NCP. See National Oil and Hazardous Substances Pollution Contingency Plan

NPL. See National Priorities List

ppm. Parts per million

Preferred Alternative. The cleanup alternative most likely to be used at a Superfund site before public and state comments are considered. This alternative should meet the RAOs and be effective, implementable, and cost effective.

Preliminary Remediation Goals. Initial cleanup goals that are protective of human health and the environment, and comply with ARARs. PRGs are developed as a result of risk assessments and are used during the analysis of remedial alternatives in the RI/FS.

PRGs. See Preliminary Remediation Goals

Proposed Plan. A public document that presents the cleanup alternatives and Preferred Alternative to the community surrounding a Superfund NPL site. This document summarizes the RI/FS and solicits comments from the public.

RA. See Remedial Action

RAO. See Remedial Action Objectives

RCRA. See Resource Conservation and Recovery Act

RD. See Remedial Design

Record of Decision. A legal, technical, and public document that explains which cleanup alternative will be used at a Superfund NPL site. The ROD is based on information and technical analysis generated during the remedial investigation and feasibility study and consideration of public comments and community concerns.

Resource Conservation and Recovery Act. A federal law enacted in 1976 that is the principal federal law in the United States governing the disposal of solid waste and hazardous waste.

Regional Screening Level. The concentration of a specific contaminant used to determine if a site may need further investigation or cleanup. If a contaminant is below its screening level, it is not necessarily safe and may still require cleanup.

Remedial Action. During the remedial action phase, the remedy is implemented generally by a contractor, with oversight and inspection conducted by EPA, the state, or both.

Remedial Action Objectives. Specific objectives the final RA must meet to attain a degree of cleanup that ensures the protection of human health and the environment, is cost effective, and uses permanent solutions and alternative treatment technologies to the maximum extent practicable.

Remedial Design. Remedial Design is a phase in the CERCLA response process when technical drawings are developed for the remedy chosen, costs for implementing the remedy are estimated, and roles and

responsibilities of EPA, the state, and contractors are identified.

Remedial Investigation/Feasibility Study. The remedial investigation is a study designed to collect the data necessary to delineate the nature and extent of contamination at a site. The feasibility study is an analysis of the practicality of a proposed remedial solution and evaluates alternatives for their effectiveness in protecting human health and the environment.

Removal Management Level. A chemical-specific concentration for individual contaminants in soil that was used to support the decision for EPA to undertake a removal action.

Responsiveness Summary. A summary of oral and written comments received by EPA during a comment period on key EPA documents and EPA's responses to those comments. The Responsiveness Summary is a key part of the ROD, highlighting community concerns for EPA decision-makers.

RI/FS. See Remedial Investigation/Feasibility Study

RML. See Removal Management Level

ROD. See Record of Decision

RSL. See Regional Screening Level

Screening Level Ecological Risk Assessment. The process of evaluating the likelihood that adverse ecological effects may occur as a result of exposure to chemicals in contaminated environmental media.

SLERA. See Screening Level Ecological Risk Assessment

Solidification/Stabilization. A remediation technology that physically or chemically reduces or stops the mobility of contaminants in soil.

Superfund. The Trust Fund established under CERCLA to pay for cleanup of abandoned hazardous waste sites if potentially responsible parties cannot be identified. Superfund is the common name for CERCLA and is often used as an adjective for hazardous waste sites and the investigation and cleanup process directed by EPA.

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Leigh Lattimore, Remedial Project Manager U.S. EPA, Region 4 Superfund Remedial and Site Evaluation Branch Superfund Division 61 Forsyth St., SW Atlanta, GA 30303

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