Five-Year Review Report

Third Five-Year Review Report
for
Coleman-Evans Wood Preserving Co. Superfund Site
FLD991279894

Whitehouse
Duval County, Florida

July 2014

United States Environmental Protection Agency
Region 4
Atlanta, Georgia

Approved by:

Randall Chaffins, Acting Director
Superfund Division

Date: 7/8/14

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for
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101 Celery Avenue South
Whitehouse
Duval County, Florida 32220

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Franklin E. Hill
Director, Superfund Division

Tables

Figures

List of Acronyms

ARAR	Applicable or Relevant and Appropriate Requirement
AROD	Amended Record of Decision
bgs	Below Ground Surface
BRA	Baseline Risk Assessment
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
COC	Contaminant of Concern
CSF	Cancer Slope Factor
DOJ	United States Department of Justice
DRO	Diesel Range Organic
EPA	United States Environmental Protection Agency
ERA	Emergency Response Action
ESD	Explanation of Significant Differences
FDEP	Florida Department of Environmental Protection
FDER	Florida Department of Environmental Regulation
FYR	Five-Year Review
IC	Institutional Control
IUR	Inhalation Unit Risk
MCL	Maximum Contaminant Level
µg/L	micrograms per liter
$\mu g/m^3$	microgram per cubic meter
mg/kg	milligram per kilogram
mg/m^3	milligram per cubic meter
MNA	Monitored Natural Attenuation
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PCP	Pentachlorophenol
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RfC	Reference Concentration
RfD	Reference Dose
ROD	Record of Decision
RSL	Regional Screening Level
SCTL	Soil Cleanup Target Level
TBC	To-Be-Considered
TEQ	Toxicity Equivalent Quotient
TPH	Total Petroleum Hydrocarbons
USACE	United States Army Corps of Engineers

Executive Summary

The Coleman-Evans Wood Preserving Co. Superfund site (the Site) consists of an 11-acre area in Whitehouse, Duval County, Florida. Coleman-Evans Wood Preserving Company (Coleman-Evans) conducted operations at the Site from 1954 until the mid-1980s and treated wood with a mixture of pentachlorophenol (PCP) and fuel oil. Wastewater disposal practices contaminated soil, sediment, debris, surface water and ground water on the facility property, a drainage ditch and portions of residential properties. Contamination at the Site is addressed in two operable units (OUs). OU1 addresses soil, sediment, debris, surface water and ground water contamination found at the former facility property and in the associated drainage features to the south of the facility. OU2 addresses residual site-related dioxin contamination in soils not addressed as part of OU1. The remedy for the Site required excavation and on-site thermal treatment of contaminated soil and sediments from the former facility property and the drainage ditch; ground water treatment; excavation of dioxin-contaminated soil on the former facility property, drainage ditch and nearby residential properties; disposal of dioxin-contaminated soil beneath a soil cover on the former facility property; restoration of the former facility property and residential properties; and establishment of restrictive covenants limiting land use on the former facility property.

The United States Environmental Protection Agency (EPA) completed the remedies for the two OUs. The Site achieved construction completion in September 2007. EPA deleted the Site from the National Priorities List (NPL) on May 27, 2014. The triggering action for this statutory site-wide Five-Year Review (FYR) was the signing of the previous FYR on June 16, 2009.

The remedies for both OU1 and OU2 are protective of human health and the environment and exposure pathways that could result in unacceptable risks are being controlled. Appropriate institutional controls are in place to ensure future land uses do not compromise the integrity of the remedies and cleanup activities have addressed all of the contamination in soil, sediment and ground water.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Coleman-Evans Wood Preserving Co.		
EPA ID: FLD991279894		
Region: 4	**State:** FL	**City/County:** Whitehouse/Duval County
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	**Has the site achieved construction completion?** Yes	
REVIEW STATUS		
Lead agency: EPA **If "Other Federal Agency" selected above, enter Agency name:** Click here to enter text.		
Author name: Claire Marcussen and Lynette Wysocki (Reviewed by EPA)		
Author affiliation: Skeo Solutions		
Review period: November 15, 2013 – June 16, 2014		
Date of site inspection: January 28, 2014		
Type of review: Policy		
Review number: 3		
Triggering action date: June 16, 2009		
Due date *(five years after triggering action date)*: June 16, 2014		

Five-Year

Review Summary Form (continued)

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
OU1; OU2 This five-year review did not identify any issues/recommendations at the Site.

Protectiveness Statement(s)

Operable Unit:	*Protectiveness Determination:*	*Addendum Due Date (if applicable):*
OU1	Protective	

Protectiveness Statement:
The remedy at OU1 is protective of human health and the environment and exposure pathways that could result in unacceptable risks are being controlled. The excavation and treatment of contaminated soil and sediment at the former facility property and southern drainage area has eliminated the potential for exposure to these contaminated media and has also removed any source material that might have been contributing to ground water contamination. MNA has addressed the remaining low-level contaminants in ground water. Appropriate institutional controls are in place to ensure future land uses do not compromise the integrity of the remedy.

Operable Unit:	*Protectiveness Determination:*	*Addendum Due Date (if applicable):*
OU2	Protective	Click here to enter date.

Protectiveness Statement:
The remedy at OU2 is protective of human health and the environment and exposure pathways that could result in unacceptable risks are being controlled. The excavation and disposal of soil contaminated with residual site-attributable dioxin has eliminated the potential for exposure to contaminated soil and has eliminated any source material that might have been contributing to ground water contamination. Appropriate institutional controls are in place to ensure future land uses do not compromise the integrity of the remedy.

Sitewide Protectiveness Statement

Protectiveness Determination:	*Addendum Due Date (if applicable):*
Protective	Click here to enter date.

Protectiveness Statement:
The remedy for the Site is protective of human health and the environment and exposure pathways that could result in unacceptable risks are being controlled. Cleanup activities have addressed contamination in soil, sediment and ground water. Appropriate institutional controls are in place to ensure future land uses do not compromise the integrity of the remedy.

Environmental Indicators

- *Current human exposures at the Site are under control.*
- *Contaminated ground water 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

Third Five-Year Review Report
for
Coleman-Evans Wood Preserving Co. Superfund Site

1.0 Introduction

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

The United States Environmental Protection Agency (EPA) prepares FYRs pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Section 121 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA Section 121 states:

> If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each 5 years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

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

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

Skeo Solutions, an EPA Region 4 contractor, conducted the FYR and prepared this report regarding the remedy implemented at the Coleman-Evans Wood Preserving Co. Superfund site (the Site) in Whitehouse, Duval County, Florida. EPA's contractor conducted this FYR from November 2013 to June 2014. EPA is the lead agency for developing and implementing the remedy for the Superfund-financed cleanup at the Site. The Florida Department of Environmental Protection (FDEP), as the support agency representing the State of Florida, has reviewed all supporting documentation and provided input to EPA during the FYR process.

This is the third FYR for the Site. The triggering action for this policy review is the signing of the previous FYR on June 16, 2009. The FYR is required due to the fact that hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure. The Site consists of two operable units (OUs). OU1 addresses soil, sediment, debris, surface water and ground water contamination found at the former facility property and in the associated drainage features to the south of the facility. OU2 addresses residual site-related dioxin contamination in soils not addressed as part of OU1. This FYR report addresses both OUs.

2.0 Site Chronology

Table 1 lists the dates of important events for the Site.

Table 1: Chronology of Site Events

Event	Date
Initial discovery of site contamination	September 1980
EPA finalized the Site on the National Priorities list (NPL)	September 8, 1983
EPA initiated the remedial investigation/feasibility study	September 24, 1984
EPA issued a Unilateral Administrative Order pursuant to Section 106 of CERCLA, requiring Coleman-Evans Wood Preserving Company (Coleman-Evans) to conduct sampling and perform immediate removal activities; Coleman-Evans refused to comply	October 15, 1984
EPA and the United States Department of Justice (DOJ) obtained an order granting site access	June 1985
EPA began an Emergency Response Action (ERA) to excavate and remove contents of two unlined pits on the Site	June 26, 1985
EPA completed ERA	July 12, 1985
EPA completed the remedial investigation/feasibility study and Baseline Risk Assessment (BRA), and signed the OU1 Record of Decision (ROD) for excavation and on-site incineration of an estimated 9,000 cubic yards of contaminated soil	September 25, 1986
EPA issued a General Notice Letter to Coleman-Evans regarding implementation of the remedial design/remedial action	October 1986
EPA began a one of several remedial designs for OU1	April 9, 1987
EPA issued Special Notice Letter to Coleman-Evans giving Coleman-Evans an opportunity to enter into negotiations with EPA to implement the remedial design/remedial action	December 1987
DOJ filed suit against Coleman-Evans (Mr. Jack Coleman)	July 1988
EPA began treatability study for OU1	April 28, 1989
EPA issued Consent Decree	April 20, 1990
EPA completed treatability study for OU1	June 30, 1990
EPA signed OU1 Amended ROD (AROD)	September 26, 1990
EPA discovered dioxin contamination at the Site	June 1992
EPA began a removal action for the Site	October 15, 1992
EPA completed a removal action for the Site	November 15, 1992
EPA performed a removal assessment for the Site	December 31, 1992
EPA performed an ERA to remove surface contamination at off-site residential properties	May 1993
EPA began a removal action for the Site	June 24, 1993
EPA prepared a Focused Feasibility Study due to presence of dioxin	April 30, 1995
EPA completed a removal action for the Site	December 31, 1995
EPA completed a supplemental BRA to address dioxin in soil	January 24, 1996
EPA began a treatability study for OU1	June 2, 1997
EPA signed OU1 AROD for Interim Response Action of thermal desorption of 45,000 cubic yards of PCP- and dioxin-contaminated source material	September 25, 1997
EPA completed a treatability study for OU1	June 30, 1998
EPA began remedial action for OU1	September 28, 1998
EPA completed all remedial design and began remedial action for OU1	June 6, 2000
EPA issued an Explanation of Significant Differences (ESD) for OU1 regarding thermal oxidizer	June 11, 2001

Event	Date
EPA began a re-evaluation of the OU1 remedial design	April 30, 2003
EPA issued ESD for OU1 regarding revised treatment quantities	August 14, 2003
EPA issued ESD for OU1 regarding revised treatment quantities	February 26, 2004
EPA signed the first FYR for the Site	June 20, 2004
EPA completed re-evaluation of OU1 remedial design	September 24, 2004
EPA issued ESD for OU1 selecting monitored natural attenuation (MNA) as the ground water remedy	September 20, 2005
EPA began the OU2 remedial design	September 27, 2006
EPA completed the OU2 remedial investigation EPA issued the OU2 ROD	September 28, 2006
EPA completed the OU2 remedial design	May 15, 2007
EPA began remedial action for OU2	May 18, 2007
EPA prepared Preliminary Close-out Report for OU1	September 18, 2007
EPA completed remedial action for OU1 EPA completed remedial action for OU2	August 22, 2008
EPA signed the second FYR for the Site	June 16, 2009
EPA conducted the final MNA sampling event	June 27, 2012
EPA completed MNA	November 5, 2012
EPA completed remedial action for OU1	May 31, 2013
EPA completed the Final Close-Out Report	July 2, 2013
EPA deleted the Site from the NPL	May 27, 2014

3.0 Background

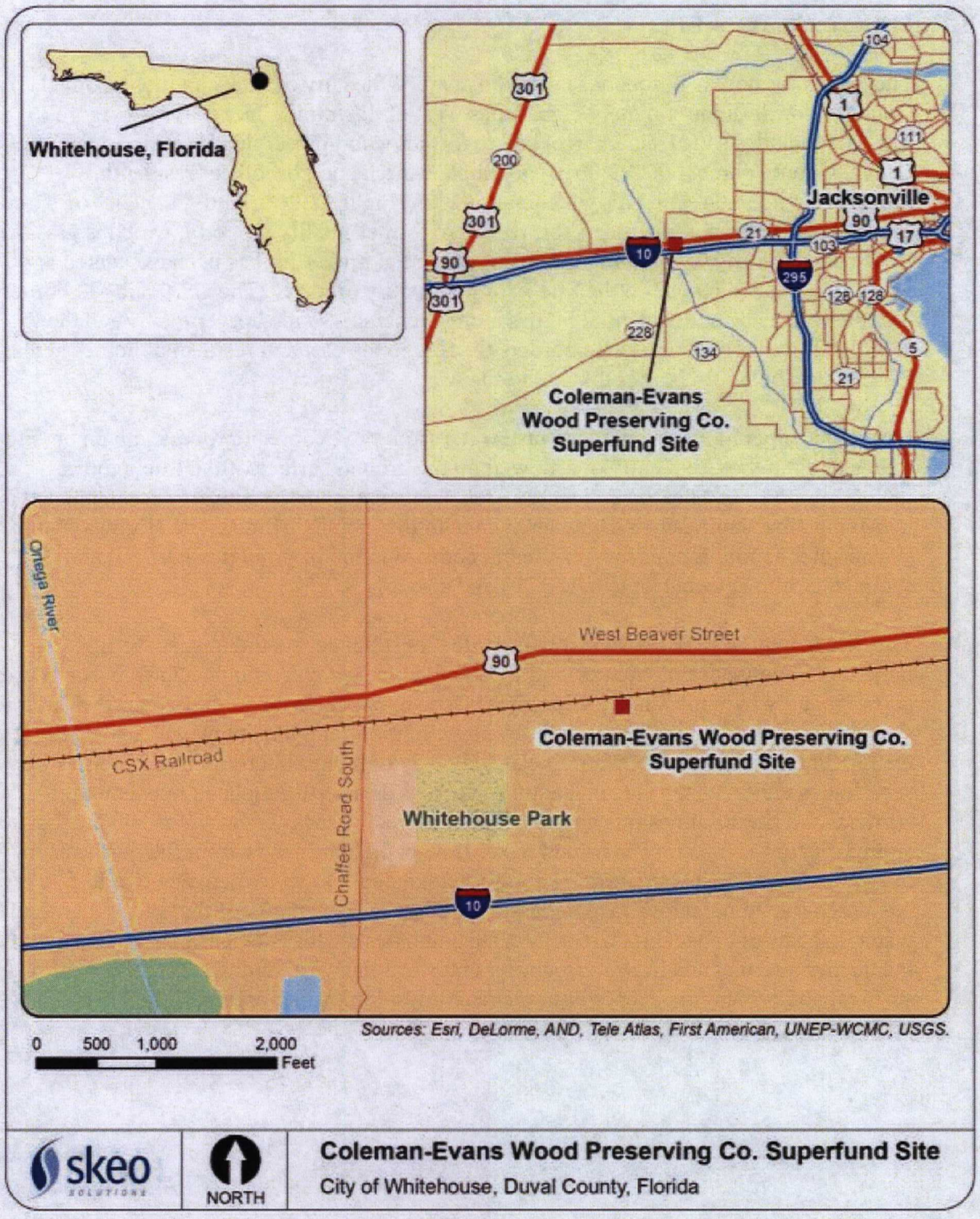
3.1 Physical Characteristics

The Site is located in Whitehouse, which is part of the City of Jacksonville, in Duval County, Florida, approximately eight miles west of downtown Jacksonville (Figure 1). The Site includes a 10.1-acre parcel where former wood preserving operations occurred (Duval County parcel 006699 0010), a drainage ditch and portions of residential properties with site-related dioxin contamination (Figure 2). Currently, the City of Jacksonville owns and maintains the 10.1-acre former facility property, which is grass-covered and fenced. Contamination from residential properties has been excavated and placed under a soil cover on the Site's former facility property. The CSX railroad borders the Site to the north. Residential homes along General Avenue border the Site to the south. A low-lying wooded area borders the Site to the east and residential homes across Celery Avenue South border the Site to the west.

Former site operations discharged wastewater from the treatment process into an on-site drainage ditch that frequently overflowed on the ground surface of the Site's former facility property and nearby residential area. Drainage from the Site also contaminated a low-lying area, south across General Avenue to the vicinity of Interstate Highway 10. Wastewater handling practices resulted in contamination of ground water, soil and sediment with pentachlorophenol (PCP) and dioxin.

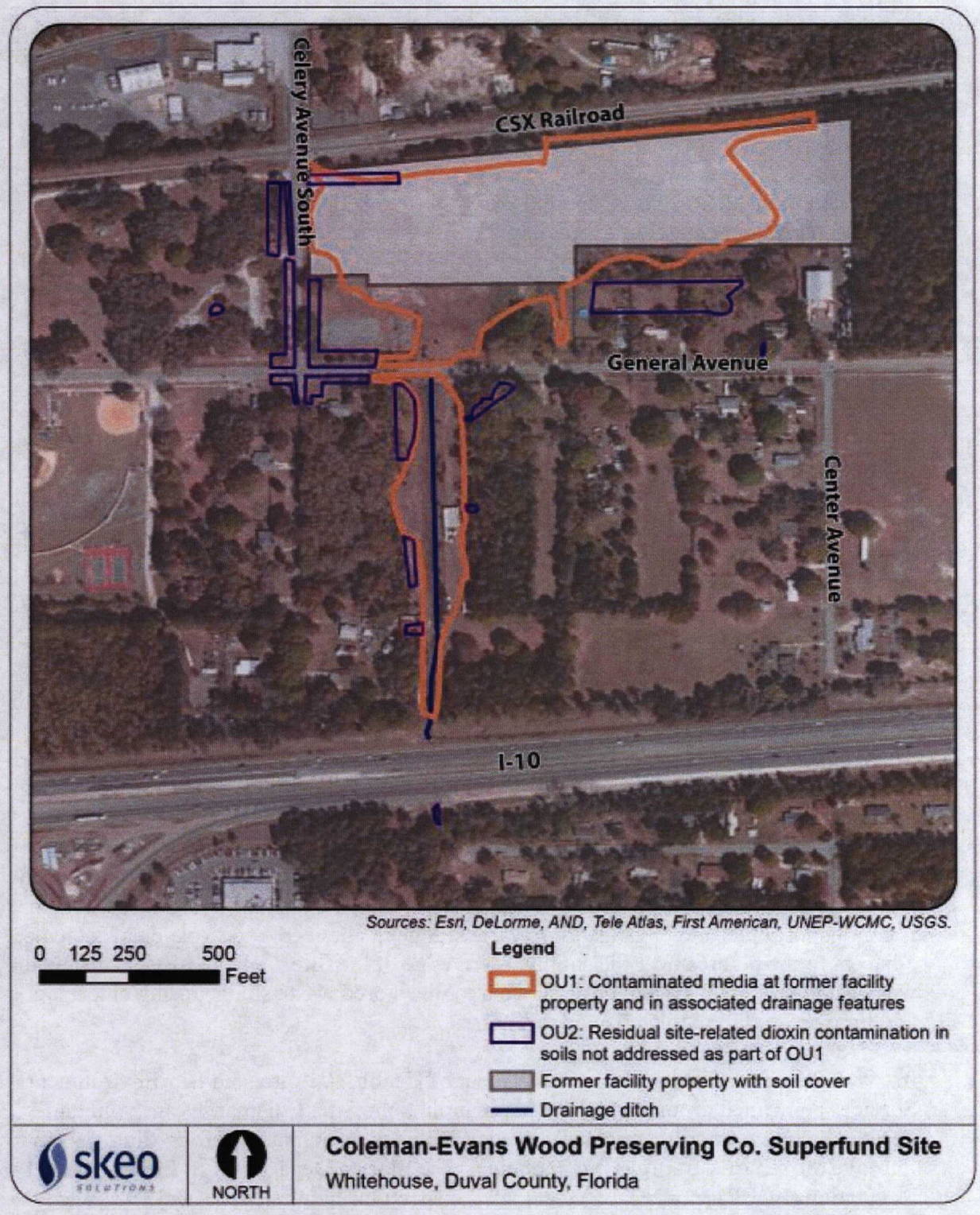
The Site is relatively flat with less than 10 feet of relief across the former facility property. The Site drains by way of drainage ditches, which combine and flow southward approximately two miles to McGirts Creek. The upper surficial aquifer consists of four to six feet below ground surface (bgs) of sand with minor amounts of clay and silt; followed by 35 feet bgs of sand. A 65-foot thick sandy clay unit with intermittent clay lenses and sand layers underlies the surficial aquifer and acts as a confining layer between the surficial and deeper limestone aquifer. The deeper aquifer is present from 100 feet bgs to approximately 130 feet bgs. Ground water flow is predominantly from the northeast to the southwest in the upper surficial aquifer with a depth to water between two to five feet bgs. Recharge to the upper surficial aquifer occurs in the vicinity of the Site and ground water discharges to McGirts Creek, located southwest of the Site. Ground water flow in the deeper intermediate limestone aquifer is toward the west-southwest. The upper surficial aquifer and the deeper intermediate limestone aquifer are not linked hydraulically.

Figure 1: Site Location Map



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

Figure 2: Detailed Site Map



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

3.2 Land and Resource Use

The Site's former facility property is currently zoned for light industrial use. The City of Jacksonville previously had plans to redevelop the property as a community park, but the plans have not moved forward due to lack of funding and community interest. Private parties have expressed interest in using the area for truck parking. The Site is not currently in reuse.

According to the 2010 census, approximately 11,000 people live within two miles of the Site. Land use immediately surrounding the Site is primarily residential, recreational, commercial and industrial. The area west of the Site is primarily undeveloped rural land and the City of Jacksonville is located to the east. Due to the continued development in Whitehouse as a suburban residential area for the City of Jacksonville, it is anticipated that the land use surrounding the Site will remain the same.

According to the April 2009 well survey, 180 domestic wells are located within a one-mile radius of the Site and 1,620 wells are located within a three-mile radius of the Site. All potable water wells for residential use are screened at depths of at least 100 feet bgs and have been found safe for human consumption for relevant contaminants. The area of the Site where waste is left in place is located within a Florida Ground Water Delineated Area, which restricts potable well placement. Surface waters in Duval County are used extensively for sports and recreation.

3.3 History of Contamination

From 1954 until the mid-1980s, the on-site facility treated wood products with a mixture of PCP and fuel oil. The process also drove wood extracts from the pores of the wood. The wood extracts settled on the bottom of the processing chamber, along with PCP and wastewater from the condensed steam. Prior to 1970, effluent wastewater from the treatment process was precipitated with caustic soda and aluminum sulfate, passed through a sand filter and discharged into a drainage ditch, which channeled the water south to McGirts Creek. Operations disposed of the precipitated sludge into two unlined pits along the southeastern boundary of the Site. In 1970, Coleman-Evans discontinued use of disposal pits and began storing waste sludge in aboveground storage tanks located adjacent to the pit area near the southwestern edge of the Site. Coleman-Evans installed a wastewater treatment system designed to treat the stored waste sludge, using chlorination and lime precipitation to clarify wastewater.

In 1980, the City of Jacksonville Department of Health, Welfare, and Bio-Environmental Services confirmed ground water contamination at the Site. Coleman-Evans voluntarily designed a wastewater treatment system that included an activated carbon filter system to improve the removal of organic compounds. The Florida Department of Environmental Regulation (FDER) (now FDEP) conducted inspections between 1981 and 1983 and found Coleman-Evans in violation of Resource Conservation and Recovery Act requirements. EPA proposed the Site to the National Priorities List (NPL) in December 1982. EPA finalized the Site on the NPL in September 1983. Wood-treating operations at

the Site ceased in the late 1980s. Sawing and kiln drying of untreated lumber continued at the Site until mid-1994 when commercial operations ceased.

3.4 Initial Response

EPA finalized the Site on the NPL on September 8, 1983. In October 1984, EPA issued a Unilateral Administrative Order to Coleman-Evans pursuant to Section 106 of CERCLA, requiring Coleman-Evans to conduct sampling and perform immediate removal actions; Coleman-Evans refused to comply. As a result, EPA and the United States Department of Justice (DOJ) filed a motion in federal court to obtain an order granting access to the Site. This order was subsequently granted in June 1985. During June and July 1985, EPA conducted an emergency response action (ERA) at the Site to control PCP contamination in the upper surficial aquifer. EPA excavated two unlined pits; transported contaminated soil and sludge off site to a hazardous waste management facility in Emelle, Alabama; backfilled the pits with clean material and installed french drains.

3.5 Basis for Taking Action

EPA conducted the initial remedial investigation, supplemental sampling investigations and removal actions at the Site between 1984 and 1997. In April 1986, EPA completed the first phase of the remedial investigation, which characterized the nature and extent of contamination and the health risks at the Site. The 1986 remedial investigation evaluated soil and ground water on and off the former facility property, including neighboring residential properties. The baseline risk assessment (BRA) identified PCP as the primary contaminant of concern (COC) at the Site. EPA identified PCP in soil at depths up to 20 feet bgs, as well as in surface water, sediment and ground water in the upper surficial aquifer. The results of the 1986 BRA concluded that potential future exposures to unacceptable levels of PCP in ground water existed based on noncancer hazard indices. It was also determined that contaminated soil had impacted ground water. Investigations did not identify dioxin contamination until 1992 during post-ROD investigations. The 1996 BRA, conducted following the completion of the 1995 focused feasibility study, indicated that cumulative cancer risks exceeded the upper-bound of EPA's risk management range of 1×10^{-4} due to unrestricted exposure to dioxin and PCP in soil. EPA also determined that residents living in the vicinity of the Site and those using private water supply wells located downgradient of the Site risked exposure to site contamination if the shallow aquifer were to be used for potable purposes.

4.0 Remedial Actions

4.1 Remedy Selection

OU1

EPA screened potential OU1 remedial alternatives on the basis of technical feasibility and the level of protection provided to public health. On September 25, 1986, EPA signed the OU1 Record of Decision (ROD), selecting a remedy for soil and ground water contamination at the former facility property. The 1986 OU1 remedy included the following components:

- Excavate all soil with PCP contamination in excess of 10 milligrams per kilogram (mg/kg).
- Remove contamination from excavated soil through on-site incineration.
- Backfill excavated areas with decontaminated soils.
- Perform de-watering during soil excavation and treat ground water recovered during the process that contains PCP concentrations above 1.0 micrograms per liter (µg/L) using active carbon adsorption.
- Discharge treated ground water into an on-site drainage ditch.
- Clean other incidental site-specific hazardous substance list compounds identified in ground water to levels that comply with federal drinking water standards.

The 1986 ROD did not include remedial action objectives (RAOs). The selected remedy used excavation and on-site incineration to treat approximately 9,000 cubic yards of PCP-contaminated material. Based on data collected during remedial design, EPA determined that the volume of PCP-contaminated soil needing treatment should be increased to approximately 27,000 cubic yards. EPA and FDER decided to evaluate other alternatives in a treatability study. EPA completed a treatability study in June 1990 to evaluate the applicability of soil washing, biological treatment and solidification/stabilization of waste material. Based on the results, EPA modified the selected remedy in the 1990 OU1 Amended ROD (AROD) to soil washing, biological treatment and solidification/stabilization of 27,000 cubic yards of PCP-contaminated material, as well as recovery and treatment of PCP-contaminated ground water during excavation. EPA anticipated this change to reduce the final volume of treated soil from 27,000 cubic yards to 2,700 cubic yards. The 1990 OU1 AROD included the following components:

- Backfill soil with PCP concentrations below 25 mg/kg into the excavated area following soil washing.
- Use bioremediation to treat wash water from soil washing.
- Treat recovered PCP-contaminated ground water found to exceed 1.0 µg/L with on-site granular activated carbon adsorption units and discharge treated water to an on-site drainage ditch leading to McGirt's Creek.
- Stabilize contaminated soil fines and woody fractions and place the stabilized materials back into the excavated areas.

- Take additional soil and sediment samples from locations off site, especially drainage ditches, and remediate any soil exceeding cleanup levels.
- Install and maintain a 6-inch vegetative cover over the solidified mass (monolith).
- Install a fence around the Site during remedial activities.
- Dispose of on-site structures in the processing area appropriately and close sand filter units.
- Remediate off-site contaminated soils in conjunction with the on-site remediation process.
- Implement institutional controls in the form of deed restrictions.

EPA conducted an additional soil sampling investigation in June 1992, confirming that dioxins were also COCs at the Site. EPA performed further sampling to determine the extent of the dioxin contamination. In May 1993, EPA conducted an ERA to remove surface contamination at residential properties and install fencing between the street and drainage ditch. EPA also re-evaluated the remedy in a Focused Feasibility Study, completed in April 1995, and amended the remedy in 1997 to address dioxin as a new COC. Treatability studies determined that the soil washing, bioremediation and solidification/stabilization process would not reduce concentrations of dioxin to acceptable levels, as represented by total dioxin toxicity equivalence (TEQ)[1]. Because EPA was conducting a human health risk assessment on dioxin, the 1997 AROD was considered an Interim Response Action pending a final EPA evaluation of the effects of dioxin. The 1997 OU1 AROD identified the following RAOs:

- Prevent ingestion and direct contact with contaminated soils and sediments in excess of the interim dioxin action level and final PCP cleanup levels.
- Protect ground water as a current or potential drinking water supply by reducing contaminants to maximum contaminant levels (MCLs) or other protection levels established by EPA and FDEP.
- Prevent future ground water contamination.
- Prevent incidental ingestion, dust inhalation or direct contact with surface soil that contain concentrations of dioxin TEQ attributable to the Site.
- Control future releases of contaminants to ensure long-term protection of human health and the environment.

[1] Total dioxin TEQ is total sum of the product of each individual dioxin-like compound and its corresponding toxicity equivalency factor (TEF) where TEF is a measure of the compound's toxicity relative to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD).

EPA signed the OU1 AROD in September 1997. The remedy selected thermal desorption of 45,000 cubic yards of PCP- and dioxin-contaminated material, including soil, sediment and wood debris. The remedy included the following components:

- Excavate approximately 45,000 cubic yards of soil, sediment and wood debris from the former facility property and in the associated drainage features areas contaminated with PCP and dioxin TEQ.
- Treat excavated soil, sediment and wood debris using an on-site thermal desorber to destroy dioxin.
- Treat off gases generated by the on-site thermal desorber.
- Backfill excavated areas with treated material or clean fill.
- Re-grade and re-vegetate all excavated areas.
- Recover and treat PCP-contaminated ground water and collect free product for recycling or off-site disposal.
- Relocate residents, as necessary, to facilitate construction.

EPA issued four Explanations of Significant Differences (ESDs) in 2001, 2003, 2004 and 2005 to clarify the selected remedy and note significant changes to soil volume and costs. The 2001 ESD explained that the removal of contaminants from the Site by thermal desorption was accomplished in a non-oxidative environment. The 2001 ESD further clarified that an oxidative device, used as a final or "polishing" step in the off-gas treatment system to address organic compounds that were not condensed out of the system, was acceptable. The 2003 and 2004 ESDs noted increases in the volume of soil to be treated, as well as increases in cost. The 2005 ESD stated that results from EPA testing determined that the installation and operation of a ground water recovery system was no longer needed because remaining contaminant concentrations in the upper surficial aquifer were low enough to be treated effectively through monitored natural attenuation (MNA). Residential properties adjacent to and near the former facility property use private water supply wells completed in the upper portion of the limestone aquifer for domestic supply. No site-related ground water contamination has been detected in this aquifer or in these domestic supply wells.

Table 2 presents a summary of the OU1 cleanup levels for soil, sediment and ground water listed in the 1997 AROD. The 1997 AROD indicated that total petroleum hydrocarbons (TPH) were associated with diesel fuel used in the wood treatment process and that appropriate performance standards would be identified during remedial design, since TPH was not listed as a COC. The 2004 remedial design document listed the ground water target cleanup level of 5,000 µg/L for TPH as defined in Chapter 62-777 of the Florida Administrative Code and included it in the ground water monitoring plan.

Table 2: Summary of OU1 Cleanup Levels for Soil, Sediment and Ground Water[a]

Contaminant of Concern	Soil and Sediment Cleanup Level (mg/kg)	Ground Water Cleanup Level (µg/L)
PCP	2	1
Dioxin[b]	0.001	0.001

a. Established in the 1997 AROD.
b. Cleanup levels for dioxin were considered Interim Cleanup Levels, pending EPA's release of the dioxin reassessment report; final cleanup levels for dioxin in soil are established in the 2006 OU2 ROD.

OU2

In accordance with CERCLA and the NCP, the overriding goals for any remedial action are protection of human health and the environment and compliance with applicable or relevant and appropriate requirements (ARARs). A number of remedial alternatives were considered, and final selection was made based on an evaluation of each alternative against nine evaluation criteria that are specified in Section 300.430(e)(9)(iii) of the NCP. The nine criteria are:

1. Overall Protection of Human Health and the Environment.
2. Compliance with ARARs.
3. Long-Term Effectiveness and Permanence.
4. Reduction of Toxicity, Mobility or Volume through Treatment.
5. Short-Term Effectiveness.
6. Implementability.
7. Cost.
8. State Acceptance.
9. Community Acceptance.

In 2004, EPA designated OU2 as the soil contaminated with residual dioxin at properties near the former facility property not previously treated as part of OU1. On September 28, 2006, EPA signed the OU2 ROD selecting a final remedy to excavate remaining soil contaminated with low levels of dioxin attributable to the former facility from nearby properties and dispose of the soil on the former facility property. The OU2 ROD included the following RAOs:

- Prevent incidental ingestion, dust inhalation or direct contact with surface soil that contains concentrations of dioxin attributable to the Site in excess of the soil cleanup goals.
- Control future releases of contaminants to ensure long-term protection of human health and the environment.

The major components of the remedy selected in the 2006 OU2 ROD include:

- Excavate soil at areas adjacent to the former facility property with site-related dioxin contamination above selected cleanup goals and dispose of this soil on the former facility property.
- Restore affected excavated properties using clean soil.
- Place excavated soil on the pre-graded former facility property and install two feet of vegetated soil cover.
- Implement institutional controls on the former facility property through use of restrictive covenants to limit future land use to compatible commercial and recreational purposes.
- Conduct FYRs of the remedy to ensure that protectiveness is maintained.

Table 3 presents a summary of the OU2 cleanup levels for soil. These soil cleanup levels were considered final cleanup levels for the Site.

Table 3: Summary of Dioxin Cleanup Levels for Soil at OU2[a,b]

Contaminant of Concern	Off-facility Soil Cleanup Level (µg/kg)	On-facility Soil Cleanup Level (µg/kg)
Dioxin TEQ	0.007 (Residential use)	0.030 (Industrial use)
a.Established in the 2006 ROD for OU2 b.Basis for the cleanup levels is the Florida Administrative Code, Chapter 62-780		

4.2 Remedy Implementation

OU1

In 1997, EPA tasked the United States Army Corps of Engineers (USACE) as contractors to prepare the remedial design and contract the remedial action. USACE completed the remedial design in 1998. Remedial action began at the Site in 1999. A subcontractor for USACE prepared the Site by mobilizing temporary facilities, installing utilities, gaining site access grants, removing and disposing of equipment, and clearing and grubbing the Site. The subcontractor conducted the soil treatment and mobilized the thermal desorption unit to the Site in April 2000. However, when a proof-of-performance test showed that soil treatment standards were not being met by the thermal desorption unit, the original unit was replaced with a new design that passed a second proof-of-performance test in October 2001.

Many of the original excavation zones expanded beyond their original dimensions, and as a result, the original estimated soil volume of 52,265 cubic yards increased to 170,000 cubic yards of soil requiring treatment. EPA managed the ground water encountered during excavation through dewatering and treating it along with storm water. EPA

addressed decontamination water produced during the remedial action with an on-site wastewater treatment plant.

EPA completed treatment all of the contaminated soil from the former facility and from the drainage pathway to the south in May 2004. EPA placed this treated soil back on the former facility property. During the soil cleanup, EPA treated and discharged approximately 73.5 million gallons of ground water and storm water, resulting in a large reduction in ground water contaminant concentrations.

During the pre-final inspection, FDEP and EPA identified several outstanding items necessary for the completion of soil-phase activities. USACE addressed all of the outstanding items by decontaminating and demobilizing equipment, and re-vegetating the final surface of the Site using seed and some turf placement. USACE, FDEP and EPA conducted the final inspection on August 24, 2004. During the final inspection, FDEP and EPA identified additional outstanding items at the Site. These items included:

- Repair fence where water line passed through to thermal desorption unit break trailer.
- Install additional hay bales to drain area located at the northeast corner for the debris pile to prevent further erosion.
- Open concrete berm under former feed prep building to allow standing water to drain.
- Prepare ancillary water treatment plant supplies, including hoses, barrels, ladders and pumps, for proper storage and disposal.
- Re-seed areas on site where appropriate.
- Include potable water system as government-owned equipment for equipment disposition.

USACE completed these items on September 10, 2004. Ongoing activities included maintaining the vegetative cover and site security. EPA completed the physical construction of the OU1 remedy, the Phase 1 Interim Response Action for the Site, on September 24, 2004. EPA initiated ground water monitoring for MNA in 2004.

OU2

EPA contractors conducted OU2 remedial design between September 27, 2006 and May 15, 2007. Vertical delineation soil sampling performed as part of the remedial design determined that some of the proposed excavation areas needed deeper excavation. In early 2007, EPA, FDEP and USACE verified boundaries of the excavation areas based on site features and identified an additional four "hot spots." The 2006 ROD specified that the locations of these additional "hot spots" may be defined during remedial design.

EPA contractors began remedial action activities at the Site in 2007, including soil excavation and backfilling, grading and site surveying, tree inventory and removal,

property access agreements (executed by USACE), installation of protective vegetative cover, and upgrades to the Site erosion and sediment controls.

All excavation areas for OU2 were excavated and backfilled as specified in the remedial design. A total of 42,318 cubic yards of imported backfill was brought to the Site, 2,159 tons or 1,542 cubic yards of soil and construction debris were disposed of as non-hazardous waste, 3,056 cubic yards or 4,126 tons of soil were excavated and brought back on site, and 35 containers totaling 475.04 tons of soil classified as F032 hazardous waste were disposed of by off-site incineration. EPA completed these remedial action activities in August 2007.

EPA also completed other remedial action activities, including repair to the head wall on the northern end of the 36-inch elliptical pipe, repairs to a damaged section of the pipe, installation of the storm water conveyance structures, construction of the nominal 2-foot cover, and final site grading and surveying, in August 2007. Restoration activities included laying sod on the residential properties. EPA performed hydro-seeding of the on-site facility property in late August 2007.

EPA abandoned monitoring wells selected by EPA and FDEP, in accordance with State of Florida requirements, during remedial action activities in August 2007. EPA and FDEP conducted a joint final inspection on September 14, 2007, and determined that the contractors constructed the OU2 remedy in accordance with the remedial design plans and specifications, and the final RODs for the Site. The remaining items included disposal of the remaining hazardous materials and monitoring of the protective cover for adequate vegetative growth and sediment erosion. The remaining on-site monitoring wells were part of the ground water MNA program until 2012, when all ground water samples were below applicable Primary Drinking Water Standards. Based on these results, EPA submitted a formal letter to FDEP in November 2012 to begin the Site's deletion process from the NPL. EPA signed the Final Close-Out Report on July 2, 2013. On September 24, 2013, FDEP concurred with EPA that the Site could be deleted from the NPL. EPA subsequently placed a direct deletion notice in the Federal Register on March 27, 2014; no comments were received on the proposed deletion and the Site was deleted from the NPL on May 17, 2014.

4.3 Operation and Maintenance (O&M)

The 1997 OU1 AROD estimated that operation and maintenance (O&M) would cost $2.7 million for ground water treatment and O&M for nine years. However, since OU1 ground water did not require treatment after the completion of the OU1 soil remedy, the remaining ground water contamination was addressed through MNA. The 2005 ESD established a ground water monitoring plan that specified that samples be collected from 12 monitoring wells on a quarterly basis the first year, semi-annually the second year, and annually the following years until cleanup goals were met. Samples were analyzed for PCP, dioxins and TPH as represented by the diesel range organic (DRO) fraction analysis and selected natural attenuation parameters. The 2005 ESD estimated the cost for ground water monitoring at the Site as $250,000 for up to five years.

Modifications to the ground water monitoring plan, including a reduction in the number of wells sampled and analyses conducted, were recommended in the 2008 Final Site-wide Interim Remedial Action Report. In 2009, EPA requested sampling and analysis of six of the twelve wells for PCP, dioxins and DRO. EPA further reduced the monitoring network to two wells starting in 2010 for analysis of PCP and MNA parameters. EPA conducted the last sampling event on June 27, 2012, which included sampling and analysis of two wells for PCP only. PCP was below the cleanup goal (Primary Drinking Water Standard), which completed MNA for the Site.

The OU2 O&M included one year of erosion and sediment control monitoring and repair as necessary from September 2007 through September 2008, when the Site became operational and functional. The OU2 remedial action costs included these O&M costs. Additionally, the OU2 O&M costs include conducting FYRs for the Site. However, because FYRs were already included as part of the OU1 selected remedy, there has been no increase to the overall O&M cost for the Site. When EPA determined the Site to be operational and functional on September 18, 2007, the State of Florida assumed responsibility for the Site's O&M activities until the City of Jacksonville acquired ownership of the former facility property in 2009. The City of Jacksonville did not provide annual O&M costs as part of this FYR.

5.0 Progress Since the Last Five-Year Review

The protectiveness statement from the 2009 FYR for the Site stated the following:

The remedies at the Site overall currently protect human health and the environment in the short term because all contaminated soil and sediments have been treated; contaminated ground water is restricted to the former facility property; samples from private wells demonstrate that ground water contamination has not impacted the intermediate aquifer being used by residents in the immediate area, and the Site is located in a Florida Delineated Area which restricts the installation of ground water wells. For the OU1 selected remedy to be protective in the long term, contaminant concentrations in ground water need to continue to decrease, the restrictive covenant (which limits future land use on the former facility property to commercial and recreational use and limits disturbance of the soil cap) needs to be finalized to prevent the creation of exposure pathways at the site, and an O&M plan needs to be developed to ensure the vegetative cover over the treated soil on the former facility property is maintained. For the OU2 selected remedy to be protective in the long term, the restrictive covenant, which limits future land use to commercial and recreational uses and also restricts disturbing of the cover in the areas of the former facility property where impacted soils were placed, needs to be finalized to eliminate the potential for creation of exposure pathways at the Site.

The 2009 FYR included three issues and recommendations. Table 4 below summarizes each recommendation and its current status.

Table 4: Progress on Recommendations from the 2009 FYR

Recommendations	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
The City of Jacksonville needs to finalize the restrictive covenants for the Site to restrict future uses of the Site.	City of Jacksonville	12/31/2009	The City of Jacksonville recorded a Declaration of Restrictive Covenants with Duval County to restrict future site use.	9/29/2009
Complete ground water phase (MNA) of the remedial action by monitoring annually until MCLs are achieved.	EPA	12/31/2011	EPA completed ground water monitoring as part of the MNA remedy following the 2012 annual sampling event.	11/05/2012
Develop an O&M plan for the Site.	EPA	6/30/2009	EPA prepared the "Site-Wide Operations and Maintenance Manual for the Coleman-Evans Wood Preserving Company Superfund Site"	6/30/2009

6.0 Five-Year Review Process

6.1 Administrative Components

EPA Region 4 initiated the FYR in October 2013 and scheduled its completion for June 2014. The EPA Remedial Project Manager Rusty Kestle led the EPA site review team, which also included the EPA community involvement coordinator (CIC) Neema Atashi and contractor support provided to EPA by Skeo Solutions. On January 28, 2014, EPA held a scoping meeting on site with the review team to discuss the Site and items of interest as they related to the protectiveness of the remedy currently in place. The review schedule established consisted of the following activities:

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

6.2 Community Involvement

On February 8, 2014, EPA published a public notice in the *Florida Times Union* newspaper announcing the commencement of the FYR process for the Site, providing contact information for Rusty Kestle and inviting community participation. The press notice is available in Appendix B. No one contacted the EPA as a result of the advertisement.

EPA will make the final FYR Report available to the public. Upon completion of the FYR, EPA will place copies of the document in the designated site repository: West Regional Jacksonville Public Library at 1425 Chaffee Road S., Jacksonville, Florida 32221.

6.3 Document Review

This FYR included a review of relevant site-related documents, including the ROD, ARODs, ESDs, remedial action reports and recent monitoring data. Appendix A provides a complete list of the documents reviewed.

ARARs Review

CERCLA Section 121(d)(1) requires that Superfund remedial actions attain "a degree of cleanup of hazardous substances, 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.

- Applicable requirements are those cleanup standards, standards of control and other substantive requirements, criteria or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, remedial action, location or other circumstance found at a CERCLA site.

- Relevant and appropriate requirements are those standards that, while not "applicable," address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards more stringent than federal requirements may be applicable or relevant and appropriate.

- To-Be-Considered (TBC) criteria are non-promulgated advisories and guidance that are not legally binding, but should be considered in determining the necessary remedial action. For example, TBC criteria may be particularly useful in determining health-based levels where no ARARs exist or in developing the appropriate method for conducting a remedial action.

Chemical-specific ARARs are health- or risk-based numerical values or methodologies which, when applied to site-specific conditions, result in the establishment of numerical values. These values establish an acceptable amount or concentration of a chemical that may remain in, or be discharged to, the ambient environment. Examples of chemical-specific ARARs include MCLs under the federal Safe Drinking Water Act and ambient water quality criteria enumerated under the federal Clean Water Act.

Action-specific ARARs are technology- or activity-based requirements or limits on actions taken with respect to a particular hazardous substance. These requirements are triggered by a particular remedial activity, such as discharge of contaminated ground water or in-situ remediation.

Location-specific ARARs are restrictions on hazardous substances or the conduct of the response activities solely based on their location in a special geographic area. Examples include restrictions on activities in wetlands, sensitive habitats and historic places.

Remedial actions are required to comply with the chemical-specific ARARs identified in the ROD. In performing the FYR for compliance with ARARs, only those ARARs that address the protectiveness of the remedy are reviewed.

Ground Water ARARs

The 1997 AROD established cleanup goals for the two ground water COCs in OU1, PCP and dioxin. The ARARs listed in the 1997 AROD for PCP and dioxin are the federal MCLs (40 CFR 141), which are equivalent to the state MCLs (FAC 62-550) (Table 5).

No changes to the ground water ARARs occurred in the subsequent decisions documents (e.g., 2001, 2003, 2004, and 2005 ESDs and the 2006 ROD). According to the 1997 AROD, the MCL for dioxin was very stringent, thus, EPA and FDEP established a cleanup goal for dioxin (0.001 µg/L) based on a site-specific calculations protective of ground water. The 1997 AROD stated that there are also other contaminants in the ground water, such as free product and petroleum hydrocarbons associated with diesel fuel used in the wood treatment process. However, the AROD indicated that appropriate performance standards for these additional contaminants will be addressed during remedial design since they were not listed as contaminant of concern. The 2004 remedial design document listed the ground water target cleanup level of 5,000 µg/L for TPH as defined in Chapter 62-777 of the Florida Administrative Code and this value has not changed since the last FYR.

Table 5: Previous and Current ARARs for Ground Water COCs

Contaminant of Concern	1986 ROD ARARs (µg/L)	1997 AROD (µg/L)	Current ARARs (µg/L)[b]	ARARs Change
Dioxin	--[a]	0.00003	0.00003	None
PCP	1.0	1.0	1.0	None

a. ARARs were not provided for dioxin in the 1986 ROD.
b. Lower of the Federal and State Primary MCLs. Federal MCLs are available at http://water.epa.gov/drink/contaminants/index.cfm (last accessed 11/14/2013); FDEP MCLs are available at http://www.dep.state.fl.us/water/drinkingwater/syn_con.htm (accessed 11/14/2013).

Soil ARARs

The only ARARs used for soil COCs were the state ARAR for dioxin. The final cleanup goal for dioxin TEQ established in the 2006 ROD is a soil cleanup target level (SCTL), which is a state ARAR established under Florida Administrative Code 62-780 (Table 6). The residential SCTL applies to future residential land use for the properties surrounding the former facility property, while the commercial SCTL applies to commercial uses of the former facility property.

Table 6: Previous and Current ARARs for Soil COCs

Contaminant of Concern	1986 ROD, 1990 and 1997 AROD ARARs (mg/kg)	2006 ROD ARARs (mg/kg)	Current ARARs (mg/kg)	ARARs Change
Dioxin	--[a]	0.000030[b] 0.000007[c]	0.000030[b] 0.000007[c]	None
PCP	--[a]	--[a]	--[a]	None

a. Federal or state ARAR not established
b. Florida Administrative Code 62-780, commercial 1 x 10^{-6} risk-based level
c. Florida Administrative Code 62-780, residential 1 x 10^{-6} risk-based level

Institutional Control Review

On January 28, 2014, Skeo Solutions staff conducted research at the Duval County Public Records Office and found the deed information pertaining to the Site. The City of Jacksonville has recorded a Declaration of Restrictive Covenants with Duval County for the area of the Site associated with the former facility property, which serves as an institutional control as required by the 2006 OU2 ROD (Table 7). The Declaration of Restrictive Covenants requires maintenance of a soil cover over the former facility property; prohibits disturbance of the soil cover without prior approval from EPA and FDEP; restricts land use; requires maintenance of fencing and gates while the Site is not in use; requires activities as specified in the O&M plan; prohibits use of the shallow ground water for domestic or industrial uses prior to completion of the ground water remedy; requires approval from EPA, FDEP and the water management district prior to use of the deep ground water; prohibits disturbance of the ground water monitoring well network without approval from EPA and FDEP; and prohibits activities that are likely to create a risk for migration of hazardous substances or disturbance of the soil cover. Additionally, the Site's location in a Florida Ground Water Delineated Area also serves as an institutional control for the Site, restricting the installation of ground water wells. Appendix F includes a copy of the Declaration of Restrictive Covenants.

Table 7: Deed Documents from Duval County Public Records Office

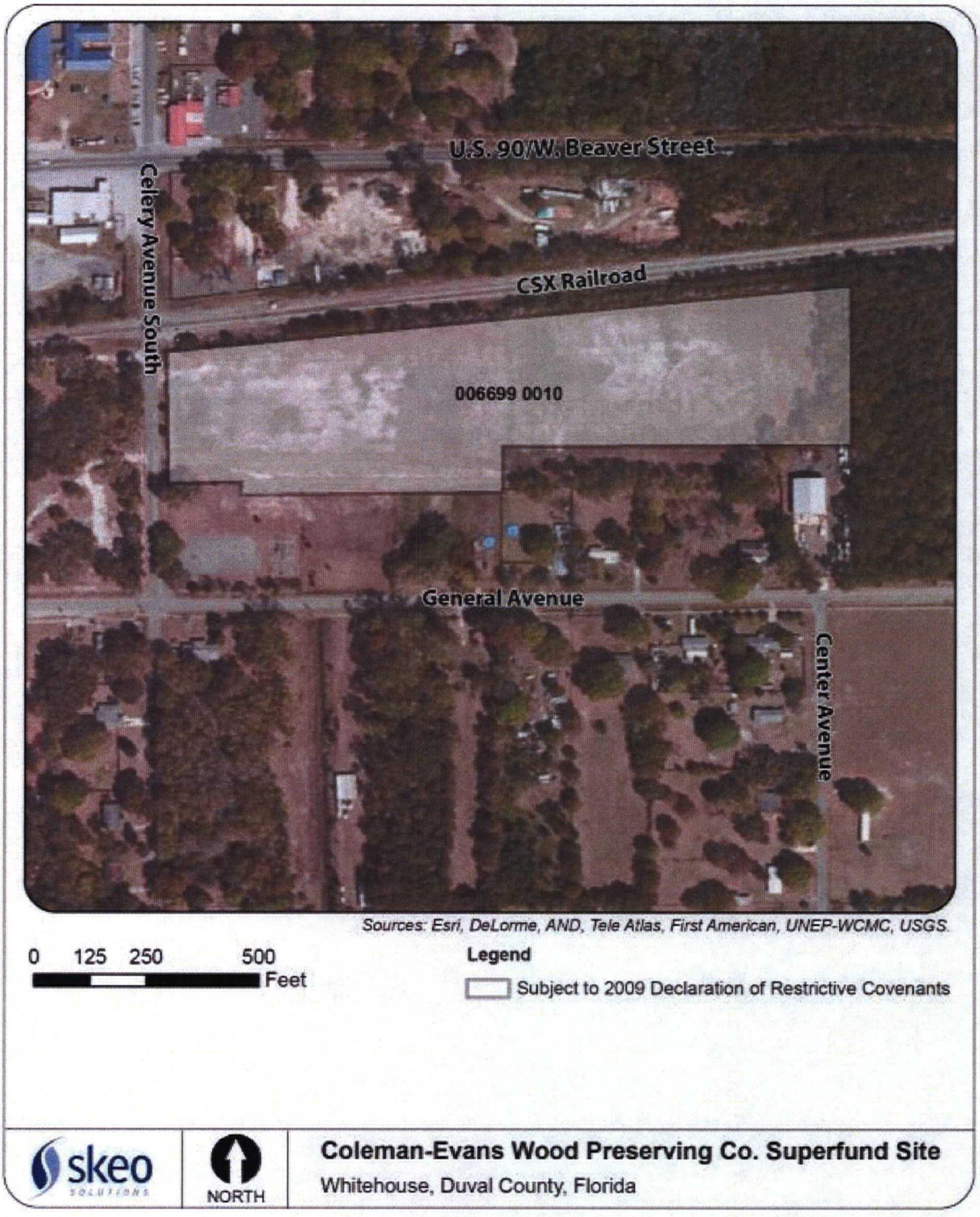
Date	Type of Document	Description	Book #	Page #
09/29/2009	Declaration of Restrictive Covenants	Restricts use of the property and ground water without prior approval by EPA and state agencies, requires operation and maintenance activities, and provides access rights to the property.	15057	557-576

Tables 8 lists the institutional controls associated with the Site.

Table 8: Institutional Control (IC) Summary Table

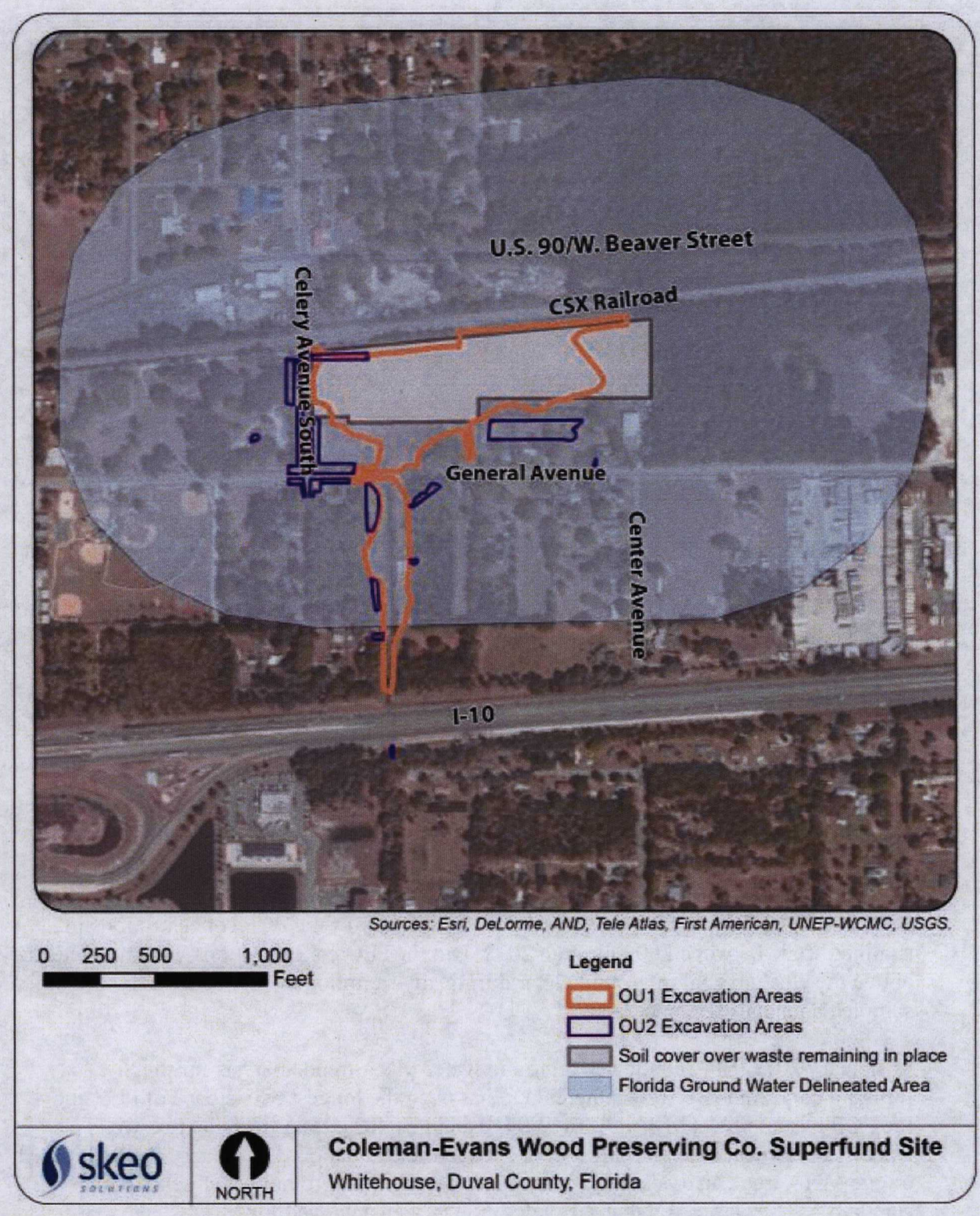
Media	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Instrument in Place
Soil	Yes	Yes	006699 0010	Restricts land and ground water use without prior approval by EPA and state agencies and requires operation and maintenance activities.	2009 Declaration of Restrictive Covenants
Ground Water	Yes	Yes	All parcels within the delineated area.	Restricts installation of ground water wells.	2009 Declaration of Restrictive Covenants; the Site lies within a Florida Ground Water Delineated Area, which restricts well placement.[1]
1. Florida's ground water delineation information is available online at: http://www.dep.state.fl.us/water/groundwater/delineate.htm.					

Figure 3: Institutional Control Base Map



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

Figure 4: Florida Ground Water Delineated Area Map



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

6.4 Data Review

OU1

Soil

No new soil data for OU1 have been collected within the past five years because the sampling conducted from 2001 through 2004 confirmed that cleanup levels for PCP and dioxins were met.

Ground Water

As specified in the 2005 ESD, ground water samples are collected annually from select wells for PCP, dioxins and DRO. Ground water samples were collected annually between 2009 and 2012. EPA completed MNA at the Site following the June 2012 sampling event.

In December 2009, six wells (MW0410, MW0411, MW0412, MW0415, MW0416 and PZ0403) were sampled and analyzed for PCP. Three of the wells (MW0410, MW0412 and PZ0403) were also sampled and analyzed for DRO. Two wells were sampled and analyzed for dioxins. Four of the six wells showed detectable concentrations of PCP, but only one well had a concentration above the 1997 AROD-established cleanup level of 1 µg/L. PCP was detected at a concentration of 2.4 µg/L in piezometer PZ0403. DRO were detected in three samples; however, the concentrations were below the ground water target cleanup level established in the 2004 remedial design document of 5,000 µg/L as defined in Chapter 62-777 of the Florida Administrative Code. Dioxins were detected in both ground water samples at concentrations well below the 1997 ROD-established dioxin TEQ interim cleanup goal of 0.001 µg/L.

Monitoring data from 2009 through 2012 show that PCP was detected in ground water above the cleanup level in only one well (PZ0403) in two sampling events (2009 and 2010). Since 2010, PCP concentrations in PZ0403 have declined to below the cleanup goal of 1 µg/L and have been below the goal for the two most recent sampling events in 2011 and 2012 (Figure 5). Table 9 provides a summary of the PCP concentrations in sampled wells between 2009 through 2012. Dioxin TEQ concentrations were not detected above the cleanup goal in ground water during any sampling event in which dioxins were sampled and analyzed since 2009.

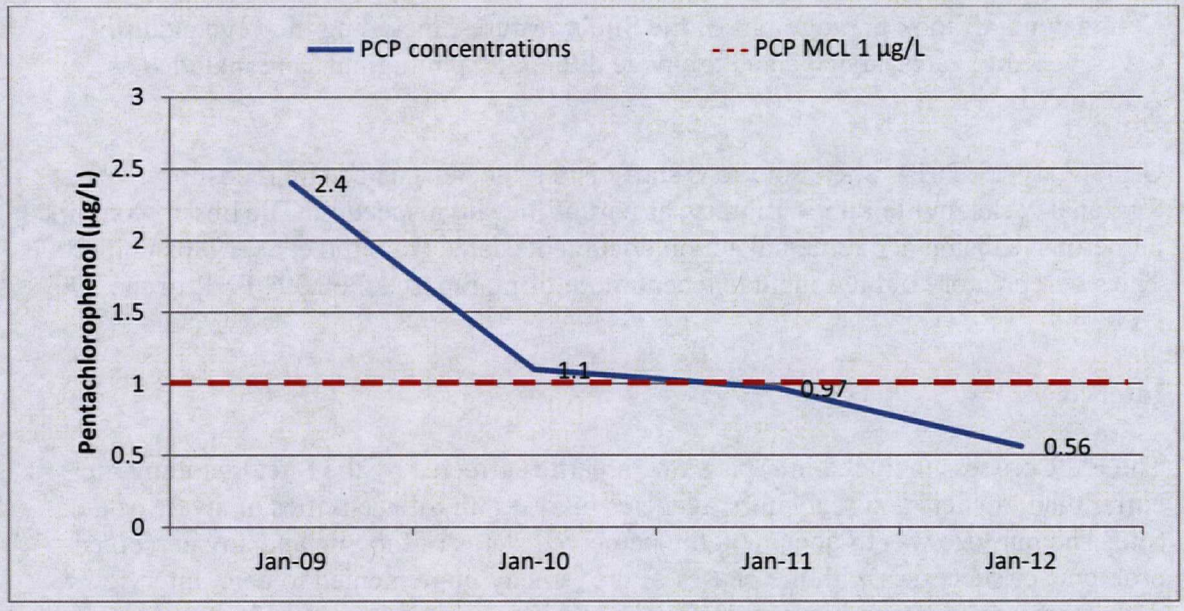
In January 2013, EPA conducted a ground water MNA trend analysis for the Site, utilizing data from two wells where there has been the longest persistence of PCP above the PCP cleanup level of 1 µg/L (MW0410 and PZ0403). Data from the two wells collected between 2005 and 2012 were used in the evaluation. On January 7, 2013, based on the MNA trend analysis, EPA concluded that the PCP ground water performance standard has been met and that the endpoint has been achieved for MNA.

Table 9: 2009-2012 Ground Water PCP Concentrations

Well	2009	2010	2011	2012
Source Wells				
MW0410	0.85/0.9 N	0.17 J/0.16 J	0.44	0.33
MW0411	0.027 J	NS	NS	NS
MW0412	0.022 NJ	NS	NS	NS
PZ0403	**2.4 NJ**	**1.1 J**	0.97	0.56
Sentinel Wells				
MW0415	<0.2	NS	NS	NS
MW0416	<0.2	NS	NS	NS

All units in µg/L
Cleanup goal for PCP = 1 µg/L
Bold result indicates detected concentration exceeds cleanup goal
NS = Not Sampled
J = Estimated value
N = There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification.
Primary and duplicate results are presented where applicable in "xx/xx" format.

Figure 5: Ground Water PCP Concentration Trend in Well PZ0403



OU2

EPA has not collected new data for OU2 within the past five years because the sampling conducted from 2001 through 2004 confirmed that cleanup levels for PCP and dioxin were met.

6.5 Site Inspection

On January 28, 2014, Rusty Kestle (EPA), Neema Atashi (EPA), Claire Marcussen (Skeo Solutions) and Lynette Wysocki (Skeo Solutions) met at the Site, located at 101 Celery Avenue South, Whitehouse/Jacksonville, Florida 32220, to participate in the site inspection. Perimeter fencing surrounds the former facility property of the Site and locked gates off of Celery Avenue South control access to the area. All gates were secured and locked, perimeter fencing was in good condition, and signs were in place indicating that the area is a Superfund site and digging within the fenced area is prohibited. Site inspection participants toured the Site while discussing completed cleanup activities, recent site activities and the process of deleting the Site from the NPL. EPA explained that ground water monitoring has been completed and the remaining ground water monitoring wells are will be abandoned as soon as possible. EPA has placed a deletion notice for the Site on the Federal Register. The group observed the conditions of the soil cover across the former facility property. Vegetation has been established across the area and small shrubs have begun to grow. EPA explained that the City of Jacksonville, under FDEP oversight, conducts maintenance activities at the Site, which include maintaining drainage culverts to prevent ponding on the soil cover, maintaining perimeter ditches and mowing. A small area of land adjacent to the former facility property's southwest corner is for sale. Land use surrounding the Site remains unchanged. Appendix D includes the completed Site Inspection Checklist.

Contractor staff took photographs of the Site's features, including the vegetated soil cover, fencing, gates, signage and drainage ditch. Site photographs are included as Appendix E.

On January 28, 2014, Skeo Solutions staff visited the designated site repository, West Regional Jacksonville Public Library, as part of the site inspection. The library contained numerous decision and remedial action documents dated from the early 1980s until 2006. The site repository did not include recent monitoring reports, the 2004 FYR or the 2009 FYR.

6.6 Interviews

The FYR process included interviews with parties affected by the Site, including the current landowners and regulatory agencies involved in Site activities or aware of the Site. The purpose was to document the perceived status of the Site and any perceived problems or successes with the phases of the remedy implemented to date. Interviews with nearby residents took place during the site inspection on January 28, 2014. Additional interviews were conducted via email. The interviews are summarized below. Appendix C provides the complete interviews.

John Sykes III: John Sykes III is the representative for the Site from FDEP. Mr. Sykes stated that the Site's cleanup, current remedy performance and maintenance are satisfactory but the Site is not in reuse at the moment. Mr. Sykes is not aware of any site-related complaints or inquiries from residents in the past five years or any changes to

state laws that might affect the protectiveness of the remedy. Mr. Sykes stated that there are no outstanding issues with institutional controls at the Site. FDEP conducts site visits at the Site once or twice per year, especially after major storms. Mr. Sykes stated that he is aware that some of the peripheral parcels may be sold but he is not aware of any changes in projected land use at the Site because the City is in control of the property.

Residents: Residents who have lived in the community for a number of years are aware of the former environmental issues and cleanup activities at the Site. A few residents stated that cancer affected nearby residents during former site operations. Residents also mentioned that they have seen some trespassing at the Site. Residents feel that they are well-informed about the Site and that publishing in the Westside Community Reader would be the best way for EPA to provide site-related information in the future. All residents, except one, stated that they have private well water.

7.0 Technical Assessment

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

Yes. The review of documents, ARARs, risk assumptions, and the site inspection indicate that the selected remedies are functioning as intended by the RODs and subsequent ARODs and ESDs for OU1 and OU2. Contaminated soil and sediment have been excavated and treated, and these treated media are contained on the former facility property under a vegetative cover. Ground water monitoring data collected since the last FYR show that PCP was detected in ground water above its cleanup level in only one well (PZ0403) in two sampling events (2009 and 2010). Since 2010, PCP concentrations in PZ0403 have declined to below the cleanup goal and have been below the goal for the two most recent sampling events in 2011 and 2012. Based on the 2013 MNA trend analysis, EPA concluded that the PCP ground water performance standard has been met and that the endpoint has been achieved for MNA.

The former facility property at the Site, where treated contaminated media are contained under a vegetative cover, is located within a Florida Ground Water Delineated Area, which restricts potable well placement. Additionally, a Declaration of Restrictive Covenants was implemented in September 2009 for the former facility property to limit future land use and restrict the use of the shallow aquifer. An O&M plan is in place to ensure that the vegetative cover over the treated media is properly maintained.

7.2 Question B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of remedy selection still valid?

Yes. The ARARs and RAOs used at the time of the remedy selection are still valid. The ground water and soil ARARs have not changed for any of the COCs since the 2006 ROD. Although new noncancer toxicity values have become available for dioxin since the 2006 ROD, the ROD cleanup goals for soil were based on a 1×10^{-6} target cancer risk, which is more stringent than cleanup goals based on a noncancer hazard, as summarized in Table G1 of Appendix G. The 1997 AROD stated that the federal MCL for dioxin in drinking water is too stringent and selected a less stringent 10-day adult health advisory level of 0.001 µg/L as the final cleanup goal. The monitoring data have demonstrated dioxin TEQ were below the more stringent MCL, thus, the remedy remains protective.

The cancer and noncancer toxicity values for PCP have become more stringent since the ROD (See Appendix G, Table G2). However, the cleanup goal in soil for PCP was based on site-specific leachability tests to ground water, which was more stringent than the direct contact value in the 1997 AROD. To evaluate the impact of the toxicity value changes on the cleanup goals established in the ROD, the cleanup goals were compared to EPA Regional Screening Levels (RSLs) (Appendix G, Table G3). The risk-based residential soil RSL is more stringent than the cleanup goal based on protection of ground water, while the industrial soil RSL is less stringent. However, the cleanup goal for PCP remains valid since it is equivalent to a residential cancer risk of 2.2×10^{-6}, which still

falls within EPA's risk management range of 1 x 10^{-6} to 4 x 10^{-4} and is also below a noncancer hazard index of 1.0 for both residential and industrial exposure. A summary of the comparison of the contaminants' current toxicity values is presented in Table G2 of Appendix G.

The vapor intrusion pathway is not a currently completed exposure pathway, because building structures do not exist on site and a restriction is in place that prohibits any activities that might compromise the soil cover. The Declaration of Restrictive Covenants also prohibits all unrestricted uses of the Site (e.g., residential, schools, lodging, day care), thereby eliminating vapor intrusion as a potential exposure pathway. Further, volatile organic compounds (VOCs) were not prevalent at the Site due to the use of diesel fuel, which has a low benzene, toluene, ethylbenzene and xylene content. The only fuel-related VOCs detected were naphthalene and toluene in the 1986 remedial investigation at concentrations of 14 µg/L and 300 µg/L. Entering these concentrations in EPA's Vapor Intrusion Screening Level calculator results in risks within EPA's risk management range of 1 x 10^{-6} to 4 x 10^{-4} and is also below a noncancer hazard index of 1.0.

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

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

7.4 Technical Assessment Summary

The assessment of the Site for this FYR, based on the review of documents, ARARs, risk assumptions and the site inspection, indicate that the selected remedy is functioning as intended by all RODs, ARODs and subsequent ESDs. The excavation and treatment of contaminated soil and sediment at the former facility property and southern drainage area has eliminated the potential for exposure to these contaminated media and has also removed any source material that might have been contributing to ground water contamination. The surficial aquifer is not used by local residents as a potable source of water, and the intermediate aquifer used for residential drinking water wells has not been impacted with contaminant levels above MCLs. Ground water treatment was not required and MNA addressed the remaining low-level contaminants in ground water. Excavation and disposal of soil contaminated with residual site-attributable dioxin TEQ concentrations above cleanup levels has eliminated the potential for exposure to contaminated soil and has eliminated any source material that might have been contributing to ground water contamination. The residential areas of OU2 were cleaned up to the Florida residential SCTL of 0.000007 mg/kg for dioxin and the other areas within OU2 were cleaned up to the industrial/commercial SCTL of 0.00030 mg/kg. Institutional controls have been implemented through the Florida Ground Water Delineated Area and a Declaration of Restrictive Covenants to ensure future land uses do not compromise the integrity of the remedy. There are no complete exposure pathways that could result in unacceptable risk and no new information has come to light that could call into question the protectiveness of the remedy.

8.0 Issues

This FYR did not identify any issues at the Site.

9.0 Recommendations and Follow-up Actions

Because this FYR did not identify any issues at the Site, no recommendations are required under CERCLA.

10.0 Protectiveness Statement

The remedies for both OU1 and OU2 are protective of human health and the environment and exposure pathways that could result in unacceptable risks are being controlled. Appropriate institutional controls are in place to ensure future land uses do not compromise the integrity of the remedies and cleanup activities have addressed all of the contamination in soil, sediment and ground water.

11.0 Next Review

The next FYR will be due within five years of the signature/approval date of this FYR.

Appendix A: List of Documents Reviewed

Black & Veatch. 2008. Sitewide Interim Remedial Action Report. Coleman-Evans Wood Preserving Co. Superfund Site. Operable Units 1 and 2. July 2008.

Black & Veatch. 2008. Post Remedial Action Erosion and Sediment Control Monitoring Summary, Coleman-Evans Wood Preserving Site, Operable Unit 2 Remedial Action. October 2008.

Camp, Dresser, and McKee, Inc. Remedial Investigation Report for the Coleman-Evans Wood Preserving Site. February 1986.

Camp, Dresser, and McKee, Inc. Feasibility Study Report, Coleman-Evans Wood Preserving Site. October 1986.

CERCLA Information System (CERCLIS) Site Information accessed from Web site http://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0401202. November 2013-June 2014.

E2 Inc. 2009. Second Five-Year Review Report for Coleman-Evans Wood Preserving Co. Superfund Site. June 2009.

Ebasco Services Inc. 1990. Treatability Study Final Report for Coleman-Evans Wood Preserving Co. Site. Volumes 1 and 2. April 1990.

EPA. 1986. Record of Decision. OU1. Issued by EPA to Coleman-Evans Wood Preserving Co. September 1986

EPA. 1990. Record of Decision Amendment. OU1. Issued by EPA to Coleman-Evans Wood Preserving Co. September 1990.

EPA. 1995. Focused Feasibility Study, Coleman Evans Wood Preserving Site. April 1995.

EPA. 1997. Record of Decision Amendment. OU1. Issued by EPA to Coleman-Evans Wood Preserving Co. September 1997.

EPA. 2001. Explanation of Significant Differences. OU1. Coleman-Evans Wood Preserving Co. June 2001.

EPA. 2003. Explanation of Significant Differences. OU1. Coleman-Evans Wood Preserving Co. August 2003.

EPA. 2004. Explanation of Significant Differences. OU1. Coleman-Evans Wood Preserving Co. February 2004.

EPA. 2004. First Five-Year Review Report for Coleman-Evans Wood Preserving. May 2004.

EPA. 2005. Explanation of Significant Differences. OU1. Coleman-Evans Wood Preserving Co. September 2005.

EPA. 2006. Record of Decision. OU2. Issued by EPA to Coleman-Evans Wood Preserving Co. September 2006.

EPA. 2007. Preliminary Close Out Report: Coleman-Evans Wood Preserving Superfund Site. September 2007.

EPA. 2010. Coleman-Evans Wood Preserving Co. Ground Water Natural Attenuation Monitoring Report. March 2010.

EPA. 2012. Coleman-Evans Wood Preserving Co. Ground Water Natural Attenuation Monitoring Report. January 2012.

EPA. 2012. Coleman-Evans Wood Preserving Co. Ground Water Natural Attenuation Monitoring Report. November 2012.

EPA. 2013. Memorandum for Ground Water Monitored Natural Attenuation Trend Analysis for the Coleman-Evans Superfund Site. January 2013.

EPA. 2013. Letter to FDEP. NPL Deletion, Coleman-Evans Wood Preserving Superfund Site. May 2013.

EPA. 2013. Sitewide Final Remedial Action Report. Coleman-Evans Wood Preserving Co. Superfund Site. Operable Units 1 and 2. May 2013.

EPA. 2013. Final Close Out Report: Coleman-Evans Wood Preserving Superfund Site. June 2013.

FDEP. 2009. Coleman-Evans Alternate Dispute Resolution Briefing. April 2009.

FDEP. 2012. Coleman-Evans Site Update. 2012.

FDEP. 2013. Letter to EPA. NPL Deletion, Coleman-Evans Wood Preserving Co. Superfund Site. September 2013.

Science Applications International Corporation 2004. Remedial Design Addendum. Coleman-Evans Wood Preserving Superfund Site. September 2004.

Unilateral Administrative Order: Coleman-Evans Wood Preserving Co. Docket No. 85-01-C. October 15, 1984.

Appendix B: Press Notices

THE FLORIDA TIMES-UNION
Jacksonville, FL
Affidavit of Publication

Florida Times-Union

US EPA REGION 4
61 FORSYTH ST SW
ATLANTA GA 30303

Reference: 1000248069
Ad Number: C15348726

State of Florida
County of Duval

Before the undersigned authority personally appeared Sharon Walker who on oath says he/she is a Legal Advertising Representative of The Florida Times-Union, a daily newspaper published in Duval County, Florida; that the attached copy of advertisement is a legal ad published in The Florida Times-Union. Affiant further says that The Florida Times-Union is a newspaper published in Duval County, Florida, and that the newspaper has heretofore been continuously published in Duval County, Florida each day, has been entered as second class mail matter at the post office in Jacksonville, in Duval County, Florida for a period of one year preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission, or refund for the purpose of securing this advertisement for publication in said newspaper.

PUBLISHED ON: 02/08/2014

FILED ON: 02/08/2014

The U.S. Environmental Protection Agency
Announces a Five-Year Review for
the Coleman-Evans Wood Preserving Co. Supe
Whitehouse, Duval County, Florida

Purpose/Objective : EPA is conducting a Five-Year Review of the remedy for the site (the Site) in Whitehouse, Florida. The purpose of the Five-Year Review is to mak fect human health and the environment.

Site Background: The 11-acre area is located about eight miles west of downtown dences, wooded areas and a CSX rail line. From 1954 to the mid-1960s, the Coleman-E ucts with a mixture of pentachlorophenol (PCP) and fuel oil. Operations spanned; dr containing PCP and wood treatment products collected at the bottom of the pressurize dumping wastewater into unlined drainage ditches, which led to a creek on the south overflowed. Wastewater spread over the ground surface and to the neighboring resi aboveground storage tanks. In 1980, the City of Jacksonville's Health Department ide ther investigations by EPA and the Florida Department of Environmental Protection sediment and soil. EPA placed the Site on the Superfund program's National Priorities

Cleanup Actions : EPA designated two operable units (OUs) to address the contami face water and ground water contamination on site at the former facility property. OU tion in soil. In September 1984, EPA signed the Record of Decision (ROD) for OU1, water and soil on site. The remedy included excavation and incineration of contamin ing the selected soil remedy to thermal desorption. EPA updated the Site's ground w water pump-and-treat system was no longer necessary; contaminant concentrations w time. EPA selected the remedy for OU2 in the Site's September 2004 ROD. It called fo dential yards near the Site, disposal of contaminated soil on the former facility proper EPA disposed of soils with high contaminant concentrations at an approved off-site August 2007.

Five-Year Review Schedule : The National Contingency Plan requires review substances, pollutants or contaminants remaining at the Site above levels that allow five years to ensure the protection of human health and the environment. The third June 2014.

EPA Invites Community Participation in the Five-Year Review Process : EPA is co effectiveness of the Site's remedy and to make sure the remedy remains protective o Five-Year Review process. EPA staff is available to answer any questions about the S the Site or the Five-Year Review process, or who would like to participate in a commu

Rusty Keatle, EPA Remedial Project Manager
Phone: (404) 562-8819
Email: keatle.rusty@epa.gov

Neema Afashi, EP
Phone: (404) 562-8
Email: Afashi.nee

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

Additional information is available at the Site's local document repository, locate Chaffee Road South in Jacksonville, Florida, 32221, and online at: http://www.epa.gov/

Name: Sharon Walker Title: Legal Advertising Representative
In testimony whereof, I have hereunto set my hand and affixed my official Seal, the day and year aforesaid.

NOTARY: Sally W. Willis

SALLY W. WILLIS
Commission # FF 070166
Expires January 30, 2018
Bonded Thru Troy Fain Insurance 800-385-7019

Appendix C: Interview Forms

Coleman-Evans Wood Preserving Co. Superfund Site — **Five-Year Review Interview Form**

Site Name:	Coleman-Evans Wood Preserving Co.	**EPA ID No.:**	FLD991279894
Interviewer Name:		**Affiliation:**	
Subject Name:	John Sykes III	**Affiliation:**	FDEP
Subject Contact Information:	John.Sykes@dep.state.fl.us		
Time:	1:55 p.m.	**Date:**	6/2/14
Interview Location:	e-mail		

Interview Format (circle one): **In Person** **Phone** **Mail** **Other:** e-mail

Interview Category: State Agency

1. **What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?** Satisfactory. No reuse at the moment.

2. **What is your assessment of the current performance of the remedy in place at the Site?** Again, satisfactory.

3. **Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?** None that I am aware of.

4. **Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities.** Site visits/walk-throughs once or twice a year (especially after major storms).

5. **Are you aware of any changes to state laws that might affect the protectiveness of the Site's remedy?** None to my knowledge.

6. **Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?** Yes, no outstanding issues.

7. **Are you aware of any changes in projected land use(s) at the Site?** No, that is up to the city (they took title to the property). Some of the clean peripheral parcels may be sold, but not the main site.

8. **Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?** No, there are no issues that I am aware of.

Coleman-Evans Wood Preserving Co. Superfund Site **Five-Year Review Interview Form**

Site Name:	Coleman-Evans Wood Preserving Co.	**EPA ID No.:**	FLD991279894
Interviewer Name:	Neema Atashi (CIC) and Rusty Kestle (RPM)	**Affiliation:**	EPA
Subject Name:	Resident 1	**Affiliation:**	
Subject Contact Information:			
Time:	1:30 p.m.	**Date:**	1/28/14
Interview Location:			

Interview Format (circle one): (In Person) **Phone** **Mail** **Other:**

Interview Category: Residents

1. **Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?** Yes.

2. **What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?** I am not satisfied with the type of grass used in the remedy. Before the remedy was implemented, I had "centipede grass".

3. **What have been the effects of this Site on the surrounding community, if any?** Cancer affected nearby residents during the operation.

4. **Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?** I have seen some trespassing.

5. **Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?** Yes, EPA has kept us informed.

6. **Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?** Yes, I have well water.

7. **Do you have any comments, suggestions or recommendations regarding any aspects of the project?** During the operational period, I was concerned about the steam caused from the wood treating process. I have no real complaints about cleanup.

Coleman-Evans Wood Preserving Co. Superfund Site **Five-Year Review Interview Form**

Site Name:	Coleman-Evans Wood Preserving Co.	**EPA ID No.:**	FLD991279894
Interviewer Name:	Neema Atashi (CIC) and Rusty Kestle (RPM)	**Affiliation:**	EPA
Subject Name:	Resident 2	**Affiliation:**	
Subject Contact Information:			
Time:	1:40 p.m.	**Date:**	1/28/14
Interview Location:			
Interview Format (circle one):	~~In Person~~	**Phone** **Mail**	**Other:**
Interview Category:	Residents		

1. **Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?** No.

2. **What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?** No comment.

3. **What have been the effects of this Site on the surrounding community, if any?** I am not aware of any effects of the Site.

4. **Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?** I have not seen any trespassing; I have only seen cops around the site.

5. **Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?** No comment.

6. **Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?** Yes, I have well water.

7. **Do you have any comments, suggestions or recommendations regarding any aspects of the project?** I have no comments.

Coleman-Evans Wood Preserving Co. Superfund Site **Five-Year Review Interview Form**

Site Name:	Coleman-Evans Wood Preserving Co.	**EPA ID No.:**	FLD991279894
Interviewer Name:	Neema Atashi (CIC) and Rusty Kestle (RPM)	**Affiliation:**	EPA
Subject Name:	Resident 3	**Affiliation:**	
Subject Contact Information:			
Time: 2:00 p.m.		**Date:** 1/28/14	
Interview Location:			
Interview Format (circle one):	~~In Person~~	**Phone**	**Mail** **Other:**

Interview Category: Residents

1. **Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?** No, I have only lived in the community for 2 months.

2. **What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?** No comment.

3. **What have been the effects of this Site on the surrounding community, if any?** No comment.

4. **Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?** No trespassing or vandalism.

5. **Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?** I have not lived in the community long enough to answer.

6. **Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?** No, I do not have a private well.

7. **Do you have any comments, suggestions or recommendations regarding any aspects of the project?** No comments.

Coleman-Evans Wood Preserving Co. Superfund Site **Five-Year Review Interview Form**

Site Name:	Coleman-Evans Wood Preserving Co.	**EPA ID No.:**	FLD991279894
Interviewer Name:	Neema Atashi (CIC) and Rusty Kestle (RPM)	**Affiliation:**	EPA
Subject Name:	Resident 4	**Affiliation:**	
Subject Contact Information:			
Time: 2:15 p.m.		**Date:** 1/28/14	
Interview Location:			

Interview Format (circle one): (**In Person**) **Phone** **Mail** **Other:**

Interview Category: Residents

1. **Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?** Yes, I have lived here 11 years.

2. **What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?** I am concerned about the well water; I believe access to city water would have made more sense. I do not believe they cleaned his yard from his understanding.

3. **What have been the effects of this Site on the surrounding community, if any?** Cancer affected nearby residents during the operation.

4. **Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?** I have seen some trespassing.

5. **Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?** Yes, EPA has kept us informed. Publishing in the Westside Community Reader would be the best way for EPA to provide site-related information in the future.

6. **Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?** Yes, I have well water.

7. **Do you have any comments, suggestions or recommendations regarding any aspects of the project?** No comments.

Appendix D: Site Inspection Checklist

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

I. SITE INFORMATION

Site Name: Coleman-Evans Wood Preserving Co.	**Date of Inspection:** 1/28/2014
Location and Region: Jacksonville, FL, Region 4	**EPA ID:** FLD991279894
Agency, Office or Company Leading the Five-Year Review: EPA	**Weather/Temperature:** Cloudy, light rain, 50°F

Remedy Includes: (Check all that apply)

- ☐ Landfill cover/containment
- ☒ Access controls
- ☒ Institutional controls
- ☐ Ground water pump and treatment
- ☐ Surface water collection and treatment
- ☐ Other: _____
- ☒ Monitored natural attenuation
- ☐ Ground water containment
- ☐ Vertical barrier walls

Attachments: ☐ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (check all that apply)

1. **O&M Site Manager** _____ Name _____ Title mm/dd/yyyy Date
   Interviewed ☐ at site ☐ at office ☐ by phone : _____
   Problems, suggestions ☐ Report attached: _____
2. **O&M Staff** _____ Name _____ Title mm/dd/yyyy Date
   Interviewed ☐ at site ☐ at office ☐ by 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 USEPA

Contact	Name	Title	Date	Phone No.
	Rusty Kestle	Remedial Project Manager	1/28/14	404-562-8819

Problems/suggestions ☐ Report attached: yes

Agency FDEP

Contact	Name	Title	Date	Phone No.
	John Sykes	Project Manager	1/28/14	850-245-8960

Problems/suggestions ☐ Report attached: yes

Agency _____

Contact	Name	Title	Date	Phone No.
	_____	_____	_____	_____

Problems/suggestions ☐ Report attached: _____

Agency _____

Contact	Name	Title	Date	Phone No.
	_____	_____	_____	_____

Problems/suggestions ☐ Report attached: _____

Agency _____

Contact	Name	Title	Date	Phone No.
	_____	_____	_____	_____

Problems/suggestions ☐ Report attached: _____

4. **Other Interviews** (optional) ☒ Report attached: yes

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: EPA developed the "Site-Wide Operations and Maintenance Manual for the Coleman-Evans Wood Preserving Company Superfund Site" in June 2009.

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: _____

3.	**O&M and OSHA Training Records**	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: _____			
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: _____			
6.	**Settlement Monument Records**	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: _____			
7.	**Ground Water Monitoring Records**	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: _____			
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
	☒ City of Jacksonville, FL	

2. **O&M Cost Records**

☐ Readily available ☐ Up to date

☐ Funding mechanism/agreement in place ☒ Unavailable

Original O&M cost estimate: _____ ☐ Breakdown attached

Total annual cost by year for review period if available

From: mm/dd/yyyy	To: mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	
From: mm/dd/yyyy	To: mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	
From: mm/dd/yyyy	To: mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	
From: mm/dd/yyyy	To: mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	
From: mm/dd/yyyy	To: mm/dd/yyyy	_____	☐ Breakdown attached
Date	Date	Total cost	

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

Describe costs and reasons: _____

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

A. Fencing

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

Remarks: The fencing surrounding the former facility property at the Site was in good condition. All access gates were locked and secured.

B. Other Access Restrictions

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

Remarks: Signs are located on the perimeter fencing surrounding the former facility property at the Site. Signs indicate that the area is a Superfund site and that digging is prohibited within the fenced area.

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): drive by

Frequency: quarterly

Responsible party/agency: FDEP

Contact	John Sykes	Project Manager	01/28/2014	850-245-8960
	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: Institutional controls have been implemented through the Florida Ground Water Delineated Area and a Declaration of Restrictive Covenants to ensure future land uses do not compromise the integrity of the remedy.

D. General

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

Remarks: _____

2. **Land Use Changes On Site** ☐ N/A

Remarks: None; funding has not been available for the City to construct the community park. There is little community interest in a park at the Site. EPA indicated that private parties have expressed interest in using the former facility property at the Site for truck parking. However, currently the Site remains vacant.

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

Remarks: None; the area immediately surrounding the Site remains in residential, recreational, commercial and industrial use.

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: The soil cover over the former facility property has established vegetation and well-maintained.

VII. LANDFILL COVERS ☐ Applicable ☒ N/A

A. Landfill Surface

1.	**Settlement** (low spots)	☐ Location shown on site map	☐ Settlement not evident
	Arial 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
	Arial extent: _____		Depth: _____
	Remarks: _____		
4.	**Holes**	☐ Location shown on site map	☐ Holes not evident
	Arial extent: _____		Depth: _____
	Remarks: _____		
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
	Arial extent: _____		Height: _____
	Remarks: _____		
8.	**Wet Areas/Water Damage**	☐ Wet areas/water damage not evident	
	☐ Wet areas	☐ Location shown on site map	Arial extent: _____
	☐ Ponding	☐ Location shown on site map	Arial extent: _____
	☐ Seeps	☐ Location shown on site map	Arial extent: _____
	☐ Soft subgrade	☐ Location shown on site map	Arial extent: _____
	Remarks: _____		
9.	**Slope Instability**	☐ Slides	☐ Location shown on site map
	☐ No evidence of slope instability		
	Arial 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.)

1.	**Flows Bypass Bench**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
2.	**Bench Breached**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
3.	**Bench Overtopped**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
C. 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.)		
1.	**Settlement** (Low spots)	☐ Location shown on site map	☐ No evidence of settlement
	Arial extent: _____		Depth: _____
	Remarks: _____		
2.	**Material Degradation**	☐ Location shown on site map	☐ No evidence of degradation
	Material type:_____		Arial extent: _____
	Remarks: _____		
3.	**Erosion**	☐ Location shown on site map	☐ No evidence of erosion
	Arial extent: _____		Depth: _____
	Remarks: _____		
4.	**Undercutting**	☐ Location shown on site map	☐ No evidence of undercutting
	Arial extent: _____		Depth: _____
	Remarks: _____		
5.	**Obstructions**	Type: _____	☐ No obstructions
	☐ Location shown on site map	Arial extent: _____	
	Size: _____		
	Remarks: _____		
6.	**Excessive Vegetative Growth**	Type: _____	
	☐ No evidence of excessive growth		
	☐ Vegetation in channels does not obstruct flow		
	☐ Location shown on site map	Arial extent: _____	
	Remarks: _____		
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: _____

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

1. **Gas Treatment Facilities**
☐ Flaring ☐ Thermal destruction ☐ Collection for reuse
☐ Good condition ☐ Needs maintenance
Remarks: _____

2. **Gas Collection Wells, Manifolds and Piping**
☐ Good condition ☐ Needs maintenance
Remarks: _____

3. **Gas Monitoring Facilities** (e.g., gas monitoring of adjacent homes or buildings)
☐ Good condition ☐ Needs maintenance ☐ N/A
Remarks: _____

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

1. **Siltation** Area extent: _____ Depth: _____ ☐ N/A

☐ Siltation not evident

Remarks: _____

2. **Erosion** Area extent: _____ Depth: _____

☐ Erosion not evident

Remarks: _____

3. **Outlet Works** ☐ Functioning ☐ N/A

Remarks: _____

4. **Dam** ☐ Functioning ☐ N/A

Remarks: _____

H. Retaining Walls ☐ Applicable ☐ N/A

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

Horizontal displacement: _____ Vertical displacement: _____

Rotational displacement: _____

Remarks: _____

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

Remarks: _____

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

1. **Siltation** ☐ Location shown on site map ☐ Siltation not evident

Area extent: _____ Depth: _____

Remarks: _____

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A

☐ Vegetation does not impede flow

Area extent: _____ Type: _____

Remarks: _____

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

Area extent: _____ Depth: _____

Remarks: _____

4. **Discharge Structure** ☐ Functioning ☐ N/A

Remarks: _____

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: _____

☐ Performance not monitored

Frequency: _____ ☐ Evidence of breaching

Head differential: _____

Remarks: _____

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

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

1. **Pumps, Wellhead Plumbing and Electrical**

☐ Good condition ☐ All required wells properly operating ☐ Needs maintenance ☐ N/A

Remarks: _____

2. **Extraction System Pipelines, Valves, Valve Boxes and Other Appurtenances**

☐ Good condition ☐ Needs maintenance

Remarks: _____

3. **Spare Parts and Equipment**

☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

Remarks: _____

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

1. **Collection Structures, Pumps and Electrical**

☐ Good condition ☐ Needs maintenance

Remarks: _____

2. **Surface Water Collection System Pipelines, Valves, Valve Boxes and Other Appurtenances**

☐ Good condition ☐ Needs maintenance

Remarks: _____

3. **Spare Parts and Equipment**

☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

Remarks: _____

C. Treatment System ☐ Applicable ☒ N/A

1. **Treatment Train** (check components that apply)

☐ Metals removal ☐ Oil/water separation ☐ Bioremediation

☐ Air stripping ☐ Carbon adsorbers

☐ Filters: _____

☐ Additive (e.g., chelation agent, flocculent): _____

☐ Others: _____

☐ Good condition ☐ Needs maintenance

☐ Sampling ports properly marked and functional

☐ Sampling/maintenance log displayed and up to date

☐ Equipment properly identified

☐ Quantity of ground water treated annually: _____

☐ Quantity of surface water treated annually: _____

Remarks: _____

2. **Electrical Enclosures and Panels** (properly rated and functional)

☐ N/A ☐ Good condition ☐ Needs maintenance

Remarks: _____

3. **Tanks, Vaults, Storage Vessels**

☐ N/A ☐ Good condition ☐ Proper secondary containment ☐ Needs maintenance

Remarks: _____

4. **Discharge Structure and Appurtenances**

☐ N/A ☐ Good condition ☐ Needs maintenance

Remarks: _____

5. **Treatment Building(s)**

☐ N/A ☐ Good condition (esp. roof and doorways) ☐ Needs repair

☐ Chemicals and equipment properly stored

Remarks: _____

6. **Monitoring Wells** (pump and treatment remedy)

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

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

Remarks: _____

D. Monitoring Data

1. **Monitoring Data**

☒ Is routinely submitted on time ☒ Is of acceptable quality

2. **Monitoring Data Suggests:**

☐ Ground water 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: Ground water samples were collected annually between 2009 and 2012. During the June 2011 and 2012 ground water sampling events, only two wells were sampled for PCP only. During both sampling events, ground water concentrations were below Primary Drinking Water Standards in both wells. EPA completed MNA at the Site following the June 2012 sampling event. EPA plans to abandon these all remaining monitoring wells.

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 has cleaned up soil, sediment, and ground water. Excavation and treatment of contaminated soil and sediment has eliminated the potential for exposure to these contaminated media and has also removed any source material that might have been contributing to ground water contamination. Any contamination remaining on the former facility property of the Site is covered by a two-foot vegetated soil cover. MNA has addressed the remaining low-level contaminants in ground water.

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.

The Site is currently operational and functional. EPA developed the O&M plan for the Site in 2009. The City of Jacksonville is responsible for ditch maintenance, preventing ponding on the soil cover and mowing.

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.

No indicators of potential remedy problems were observed.

D. Opportunities for Optimization

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

No opportunities for optimization were observed.

Appendix E: Photographs from Site Inspection Visit

View facing southeast of the vegetated soil cover at the Site's former facility property.

View facing northwest of the vegetated soil cover at the Site's former facility property.

Drainage ditch south of the Site's former facility property across General Avenue.

Locked access gate to the former facility property of the Site.

Signage on fencing indicating that the area is a Superfund site and digging activities are restricted within the fenced area.

Two remaining monitoring wells at the Site (MW0410 and PZ0403).

Property for sale located immediately adjacent to the southwest corner of the Site's former facility property.

Appendix F: Declaration of Restrictive Covenants

Doc # 2009266439, OR BK 15057 Page 557, Number Pages: 20, Recorded 11/04/2009 at 11:03 AM, JIM FULLER CLERK CIRCUIT COURT DUVAL COUNTY

This instrument prepared by:
Kristina G. Nelson
Assistant General Counsel
Office of General Counsel
117 West Duval Street
Suite 480
Jacksonville, FL 32202

DECLARATION OF RESTRICTIVE COVENANTS

THIS DECLARATION OF RESTRICTIVE COVENANT (hereinafter "Declaration") is made this 29 day of Sept, 2009, by the CITY OF JACKSONVILLE, a body politic and corporate of the State of Florida, (hereinafter "Grantor"), having an address of 117 West Duval Street, Suite 480, Jacksonville, FL 32202 and the FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, a political subdivision of the State of Florida (hereinafter "FDEP" or "Grantee").

RECITALS

A. **WHEREAS**, Grantor is the fee simple owner of a parcel of land situated in Duval County, State of Florida, more particularly described in **Exhibit A1 and A2** attached hereto and made a part hereof (hereinafter the "Property");

B. **WHEREAS**, the Property subject to this restrictive covenant is the property known as the Coleman-Evans Wood Preserving 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, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on September 8, 1983, at 48 Fed. Reg. 40658;

C. **WHEREAS**, in December 1982, the Florida Department of Environmental Regulation (FDER, now FDEP) and Coleman-Evans signed a Consent Order for a two-phase remedial action study of the site. Compliance with the Consent Order was unsatisfactory. To address these deficiencies, a new Consent Order was drafted by FDER in May 1984, which required immediate removal and disposal of contaminated soils, wastewater and groundwater at Coleman-Evans the site, and sampling of private wells immediately adjacent to the site. Coleman-Evans did not sign this Consent Order.

D. **WHEREAS**, in September 1984, FDER requested that the EPA take the lead management role on the site and conduct an immediate removal of the waste sludges in the disposal pits. EPA issued an administrative order to Coleman-Evans in October 1984, requiring Coleman-Evans to take immediate action. Coleman-Evans did not comply and refused site access. EPA was granted site access in federal court in May 1985. An

immediate removal of the waste sludges in the disposal pits was conducted in June 1985.

E. **WHEREAS**, field investigations were completed in October 1985, and the Superfund Remedial Investigation (RI) report was completed in April 1986. The RI confirmed PCP contamination in on-site soils as well as in sediments in the drainage ditch off-site. PCP contamination in the surficial aquifer appears to be limited to groundwater in contact with adjacent soils. On-site incineration of contaminated soils and treatment of ground water associated with soil excavation was selected as the most cost-effective and environmentally sound alternative for site remediation. A Record of Decision (ROD) was signed in September 1986.

F. **WHEREAS**, EPA initiated remedial design in April 1987 and completed design for soil incineration and groundwater recovery and treatment in July 1988. Design data indicated that four times the originally estimated volume of soil would require remediation. EPA completed initial treatability testing in April 1990 to evaluate the feasibility of using either bioremediation or chemical fixation as the soil remedy rather than the more costly incineration remedy. EPA developed an alternative site cleanup program for contaminated soils, which was documented in an amended ROD, signed in September 1990. The selected alternative included soil washing to separate clean sands, chemical fixation of contaminated sludges, and bioremediation of wash water followed by polishing with a filter system.

G. **WHEREAS**, additional site sampling was performed in March and July 1991, which confirmed the presence of dioxin contamination in the groundwater and on-site soils, as well as the existence of free product (diesel) floating on the water table. Treatability studies were completed in January 1992 to determine if the revised remedy would effectively treat dioxin. The results of the treatability Coleman-Evans studies and technical memorandum data indicated that additional site characterization for dioxin was needed to define the volume and extent of dioxin contaminated soils and refine the proposed treatment scenario. Additional soil sampling, performed in June and October 1992 and June 1993, confirmed that dioxin contaminated soils existed both on-site and offsite in the drainage ditch area and adjacent residences. EPA-Emergency Response conducted removal actions in July and August 1993; excavating contaminated offsite soils and stockpiling the soils on-site along with dismantling and removal of tanks and equipment used in the former wood treating operations. Additional soil and well sampling was performed in the spring of 1994. Sampling results indicated that groundwater contamination is limited in extent and has not migrated into the deeper private wells.

H. **WHEREAS**, EPA developed a draft Focused Feasibility Study in May 1994 to re-evaluate the soil remedy in light of the new data. A public meeting was held in June 1995 to present the revised soil remedy identified in the draft Record of Decision (ROD). EPA's proposed remedy consisted of excavation and treatment of approximately 52,000 cubic yards of soils contaminated with pentachlorophenol and dioxin. Contaminated soils would be treated by thermal desorption to destroy the contaminants and disposed of

onsite. A treatability study was proposed as part of the remedial design to confirm the effectiveness of the remedy. If cleanup goals could not be met by thermal desorption, the site would be capped and groundwater remediation, including free product recovery, implemented.

I. **WHEREAS,** in response to comments from the DEP regarding the draft ROD, EPA conducted soil leaching tests to determine a site specific remedial goal for PCP in soils protective of groundwater as well as direct exposure to soils. The February 1996 EPA Site Specific Soil Screening Levels Report documented a site specific soil leaching criteria of 2 mg/kg for PCP. EPA also conducted additional offsite soil sampling in July and December 1996 to further delineate the extent of dioxin contamination both onsite and in surrounding residential areas.

J. **WHEREAS,** EPA Region IV issued an Interim Record of Decision (ROD) in September 1997, which identifies thermal desorption as the selected soil remedy and groundwater recovery and treatment to address contaminated groundwater. A soil dioxin cleanup level of 1.0 µg/kg has been identified as an interim cleanup level for the site. The Soils Remedial Design was completed in January 1999 followed by a public meeting in March 1999 to discuss the upcoming construction activities. The Groundwater Remedial Design was completed in December 1999 and included site dewatering by groundwater recovery and treatment prior to discharge to enable the excavation of contaminated soils located below the groundwater table.

K. **WHEREAS,** Construction of the soil remedy began in June 1999 and included debris removal, soil excavation and stockpiling, construction of the thermal desorption unit and construction of the water treatment unit based on the Groundwater Remedial Design. Operation of the Groundwater Coleman-Evans Treatment System commenced during October 2000.

L. **WHEREAS,** a Remedial Design Addendum report, dated September 2004, evaluated what steps may be necessary for remediation of the groundwater at the site. Active groundwater cleanup was originally projected to take ten (10) years with a site cleanup date of 2013 in the 1997 ROD. However, evaluation of the groundwater contamination levels in the 2004 report, indicate that the groundwater contamination has been significantly reduced as a result of the soil removal, which also included the treatment of some 74.5 million gallons of contaminated water. The report indicates that groundwater contamination levels are now significantly lower than the DEP's natural attenuation default concentrations (NADCs), but still exceed the Primary Drinking Water Standards (onsite only). This has led the EPA to propose Monitored Natural Attenuation (MNA) as the selected remedy for the groundwater cleanup. The report concluded that the drinking water standards would be met within a 4 to 5 year time frame (2008 – 2009). DEP has concurred with this revised approach to the groundwater cleanup. In 2005 the remedial activities at the site were reorganized into two Operable Units (OU 1 & 2). OU 1 was further divided into Phase I (onsite Soils), and Phase II (surficial groundwater and miscellaneous site activities). OU 2 was created to address the remaining dioxin-

contaminated offsite soils. The EPA signed the Final ROD on September 28, 2006. The ROD identified several offsite areas with dioxin contamination believed to be site related exceeding the DEP's soil cleanup target level (SCTL) of 7 ng/kg dioxin TEQ. This contaminated soil was excavated and placed onsite under 2 ft of clean soil and the offsite excavation areas were backfilled with clean soil. Since contaminated soil exceeding the DEP's SCTLs will remain onsite, Institutional Controls for the former Coleman – Evans property will be necessary to ensure the protectiveness of this remedy.

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

N. **WHEREAS**, it is the intent of the restrictions in this declaration to reduce or eliminate 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.

O. **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.

P. **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

Q. **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 Record of Decision and Amendments, 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, with general warranties of title: 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) The Property has been permanently covered with two feet of uncontaminated soil. Grantor shall permanently maintain this cover by periodically verifying the soil depth using the installed elevation markers, repairing eroding areas, properly maintaining existing stormwater features, and maintaining the vegetative cover over the soils.

   b) The upper two feet of soil shall not be disturbed in any manner without the Grantor obtaining prior written approval of the Director of EPA Region 4 Superfund Division and FDEP.

   c) Excavation and construction below two feet surface elevations is not prohibited provided that such activity is reviewed and approved by EPA and FDEP.

   d) Generally, there shall be no agricultural use of the land including forestry, fishing and mining; no hotels or lodging; no residential uses; and no educational uses such as elementary and secondary schools, or day care services. These prohibited uses are specifically defined by using the North American Industry Classification System, United States, 2002 (NAICS), Executive Office of the President, Office of Management and Budget. The prohibited uses by code are: Sector 11 Agriculture, Forestry, Fishing and Hunting; Subsection 212 Mining (except Oil and Gas); Code 512132 Drive-In Motion Picture Theaters; Code 51412 Libraries and Archives; Code 53111 Lessors of Residential Buildings and Dwellings; Subsector 611 Elementary and Secondary Schools; Subsector 623 Nursing and Residential Care Facilities; Subsector 721 Accommodation (hotels, motels, RV parks, etc.); and Subsection 814 Private Households.

   e) The existing chain-link fence and gates shall be maintained and kept closed and locked as long as the Site is vacant or not in use. Any changes to the fence and gating will be submitted to, reviewed and approved by EPA and FDEP prior to making any such changes.

   f) Grantor shall perform such "Site Activities" as set forth in Section V.1 in the EPA/FDEP approved "Site-Wide Operations and Maintenance Manual for the Coleman-Evans Wood Preserving Company Superfund Site."

   g) The shallow groundwater aquifer shall not be used for drinking or other domestic or industrial uses unless and until notified by EPA that the groundwater remedy is complete. The use of the deeper aquifers shall remain unrestricted so long as construction of such wells are reviewed and approved by FDEP, EPA & SJRWMD.

h) The groundwater monitoring wells and network shall not be disturbed in any manner without the Grantor obtaining prior written approval of the Director of EPA Region 4 Superfund Division and FDEP.

i) Except as necessary to protect human health, safety or the environment, no action shall be taken, allowed, suffered or omitted on the Property if such action or omission is reasonably likely to:

i. Create a risk of migration of hazardous substances, pollutants or contaminants or a potential hazard to human health or the environment; or

ii. Result in a compromise of the two-feet of soil cover utilized at the Property to control exposure to hazardous substances, pollutants, or contaminants.

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;

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;

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

f) Implementing additional or new response actions if EPA determines i) that such actions are necessary to protect the environment because either the original remedial action has proven to be ineffective or because new technology has been developed that will accomplish the purposes of the remedial action in a significantly more efficient or cost effective manner; and, ii) that the additional or new response actions will not impose any significantly greater burden on the Property or unduly interfere with the then existing uses of the Property.

3. **Modification:** 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 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 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:** 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_____, 200_, 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. **Enforcement:** The Grantee shall be entitled to enforce the terms of this instrument by resort to specific performance or legal process. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA. Enforcement of the terms of this instrument shall be at the discretion of the Grantee, 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. 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.

7. **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.

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

9. **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 B** attached hereto, and that the Grantor will forever warrant and defend the title thereto and the quiet possession thereof.

10. **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 and Site ID number and addressed as follows:

To Grantor:
Assistant General Counsel
Environmental Department
Office of General Counsel
117 West Duval Street
Suite 480
Jacksonville, FL 32202

To Grantee:
Florida Department of Environmental Protection
2600 Blairstone Rd.
Tallahassee, FL32399

To EPA:
Director, Superfund Division
The United States Environmental Protection Agency
Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

11. **Recording in Land Records:** Grantor shall record this Declaration of Restrictive and Affirmative Covenants in timely fashion in the Official Records of Duval County, Florida, 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.

12. **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 where the Property is located.

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 any successor state agency having administrative jurisdiction. The rights of the Grantee and Grantor under this instrument are freely assignable, subject to the notice provisions hereof.

h) Termination of Rights and Obligations: A party's rights and obligations under this instrument terminate upon transfer of the party's interest in the Property, except that liability for acts or omissions occurring prior to transfer shall

survive transfer.

i) 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.

j) 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.

Remainder of this page intentionally left blank.

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

Executed this 29 day of Sept, 2009.

WITNESSES:

By: Ivy L Dwyer-Frazee
Name: IVY L Dwyer-Frazee

By: Kimberly B. Beaton
Name: Kimberly B. Beaton

CITY OF JACKSONVILLE

By: Kerri Stewart
Name: John Peyton, Mayor, City of Jacksonville
117 West Duval Street
Jacksonville, FL 32202

Kerri Stewart
Deputy Chief Administrative Officer
For: Mayor John Peyton
Under Authority of:
Executive Order No. 07-12

Form approved:

Kristin B Nelson
Assistant General Counsel

Attest:

Neil W. McArthur, Jr.,
Sr. Ass't Gen. Counsel & Corporation Secretary

STATE OF FLORIDA
COUNTY OF DUVAL

The foregoing instrument was acknowledged before me this 29 day of Sept, 2009, by Kerri Stewart, the Dep. Chief Admin Officer of the City of Jacksonville, a body politic and corporate, on behalf of the City. Such person: *(notary must check applicable box)*

- ☑ is personally known to me; or
- ☐ produced a current _____ driver's license as identification; or
- ☐ produced _____ as identification.

Ivy L Dwyer-Frazee
Print Name: IVY L Dwyer-Frazee
Notary Public, State of Florida
My Commission Expires:

IVY L. DWYER-FRAZEE
Commission DD 809402
Expires July 28, 2012

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

IN WITNESS WHEREOF, the Florida Department of Environmental Protection has executed this instrument, this 3rd day of November, 2009.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: _____
Mary Jean Yon
Director of the Division of Waste Management
Division of Waste Management
2600 Blair Stone Road
Tallahassee, Florida 32399

Witness: _____
Print Name: Judy Diggs

Witness: _____
Print Name: Steve Shores

STATE OF FLORIDA
COUNTY OF LEON

On this 3rd day of NOV., 2009, before me, the undersigned, a Notary Public in and for the State of Florida, duly commissioned and sworn, personally appeared MARY JEAN YON, known to be the Director of the Division of Waste Management, the State Agency that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, 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.

_____
Notary Public in and for the
State of Florida

My Commission Expires: 09/10/10.

Attachments: Exhibit A - Legal Description of the Property
Exhibit B - Existing Liens and Encumbrances on the Property

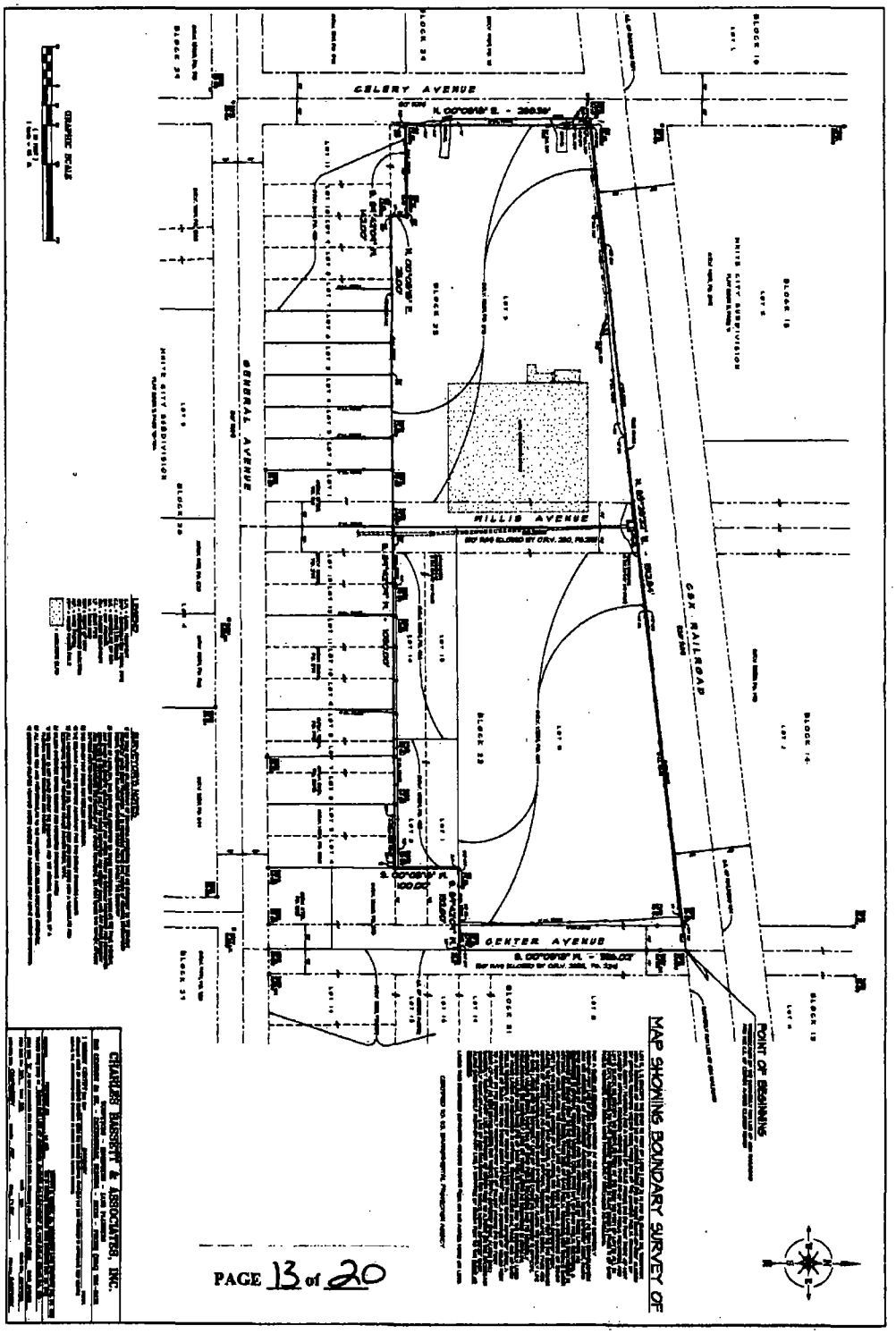

CELERY AVENUE
WILLIS AVENUE
CENTER AVENUE
GENERAL AVENUE
SAN RAILROAD
MAP SHOWING BOUNDARY SURVEY OF
POINT OF BEGINNING
CHARLES TASSERIT & ASSOCIATES, INC.
PAGE 13 of 20

EXHIBIT A-1

LOT R, 1, 2, (EXCEPT THE EAST 42 FEET OF LOTS 1 AND 2) 14 AND 15 BLOCK 22, TOGETHER WITH A PORTION OF THE WEST 1/2 OF CENTER AVENUE (AN 80 FOOT RIGHT-OF-WAY CLOSED BY OFFICIAL RECORDS VOLUME 2652, PAGE 224 OF THE CURRENT PUBLIC RECORDS OF DUVAL COUNTY, FLORIDA) AND A PORTION OF WILLIS AVENUE (AN 80 FOOT RIGHT OF WAY CLOSED BY OFFICIAL RECORDS VOLUME 280, PAGE 215 OF SAID PUBLIC RECORDS), AND LOT 5, BLOCK 23 (EXCEPT THE SOUTH 25 FEET OF THE WEST 142 FEET OF LOT 5) ALL IN ARLINGTON, ACCORDING TO PLAT THEREOF RECORDED IN PLAT BOOK 5, PAGE 71 OF SAID PUBLIC RECORDS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FOR A POINT OF BEGINNING, COMMENCE AT THE INTERSECTION OF THE SOUTHERLY RIGHT-OF-WAY LINE OF CSX RAILROAD (A 120 FOOT RIGHT-OF-WAY AS NOW ESTABLISHED) AND THE CENTERLINE OF SAID CENTER AVENUE; RUN THENCE SOUTH 00°08'18" WEST, ALONG SAID CENTERLINE OF CENTER AVENUE AND THE WESTERLY LINE OF THOSE LANDS AS DESCRIBED IN OFFICIAL RECORDS VOLUME 12501, PAGE 1811 OF SAID PUBLIC RECORDS, A DISTANCE OF 356.02 FEET TO THE NORTHEAST CORNER OF THOSE LANDS AS DESCRIBED IN OFFICIAL RECORDS VOLUME 3085, PAGE 335, OF SAID PUBLIC RECORDS; RUN THENCE SOUTH 89°42'09" WEST, ALONG THE NORTHERLY LINE OF LAST SAID LANDS, A DISTANCE OF 132.00 FEET TO THE NORTHWEST CORNER OF SAID LANDS; RUN THENCE SOUTH 00°08'18" WEST, ALONG THE WESTERLY LINE OF SAID LANDS, A DISTANCE OF 100.00 FEET TO THE SOUTHEAST CORNER OF THOSE LANDS AS DESCRIBED IN OFFICIAL RECORDS VOLUME 0334, PAGE 465 OF SAID PUBLIC RECORDS; RUN THENCE SOUTH 89°42'09" WEST, ALONG THE SOUTHERLY LINE OF SAID LANDS AND THE SOUTHERLY LINE OF THOSE LANDS AS DESCRIBED IN OFFICIAL RECORDS VOLUME 10334, PAGE 466 OF SAID PUBLIC RECORDS AND ITS WESTERLY PROLONGATION, THE SOUTHERLY LINES OF THOSE LANDS AS DESCRIBED IN OFFICIAL RECORDS VOLUME 1629, PAGE 378 OF SAID PUBLIC RECORDS, AND THE NORTHERLY LINES OF THOSE LANDS AS DESCRIBED IN OFFICIAL RECORDS VOLUME 6441, PAGE 438 OF SAID PUBLIC RECORDS, A DISTANCE OF 1030.00 FEET; RUN THENCE NORTH 00°08'18" EAST, A DISTANCE OF 25.00 FEET; RUN THENCE SOUTH 89°42'09" WEST, A DISTANCE OF 142.00 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF CHESTNUT AVENUE (AN 80 FOOT RIGHT-OF-WAY AS NOW ESTABLISHED); RUN THENCE NORTH 00°08'18" EAST, ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 288.56 FEET TO A POINT ON THE AFORESAID SOUTHERLY RIGHT-OF-WAY LINE OF CSX RAILROAD; RUN THENCE NORTH 83°28'22" EAST, ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1312.84 FEET TO THE POINT OF BEGINNING.

CONTAINS THUS DESCRIBED CONTAINING 485,002 SQUARE FEET, OR 11.13 ACRES, MORE OR LESS.

CERTIFIED TO: U.S. ENVIRONMENTAL PROTECTION AGENCY

Exhibit A 2

Page 14 of 20

[redacted]

8435 1584

OFFICIAL RECORDS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NOTICE OF FEDERAL LIEN
UNDER THE SUPERFUND AMENDMENTS
AND REAUTHORIZATION ACT OF 1986

As provided by Section 107(l) of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Public Law Number 99-499, amending the Comprehensive Environmental Response Comprehensive and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601 et seq., notice is hereby given that costs of $1,536,390.60 (one million, five-hundred and thirty-four thousand, three hundred and ninety dollars and sixty cents) plus interest and administrative expenses constitute a lien in favor of the United States upon the real property described below and all rights to such property which belong to Coleman Evans Wood Preserving Company or to Jack Coleman and which have been or will be subject to or affected by removal or remedial action.

Lot "E", 1, 2, (Except the East 92 feet of Lots 1 and 2,) 14 and 15 in Block 32, and Lot "B" in Block 33, (Except the South 25 feet of West 142 feet or Lot "B"), all in White City, Being a part of the Southeast 1/4 of Northeast 1/4 of Section 19, Township 2 South, range 25 East, according to Plat thereof recorded in Plat Book 3, page 71 of the current public records of Duval County, Florida.

This statutory lien secures the payment to the United States of all costs and damages covered by Section 107(a) of SARA for which Coleman Evans Wood Preserving Company or Jack Coleman is liable. This statutory lien shall continue until the liability for such costs

EXHIBIT B

[redacted]

or damages is satisfied or becomes unenforceable through the operation of the statute of limitations as provided by Section 113 of SARA.

BY: [signature]
Lee A. DeHihns, III
Acting Regional Administrator
Region IV

Subscribed to and sworn before
me this 19th day of November 1987.

[signature]
Notary Public

Notary Public, Georgia, State at Large
My Commission Expires June 8, 1990

87- 140574
87 DEC 7 P2:24

[illegible] CIRCUIT COURT

Page 16 of 20

TD194-066   084689-0000

TAX DEED

(Chapter 197 Florida Statutes) **Book 10334 Page 463**

CITY OF JACKSONVILLE
(CONSOLIDATED GOVERNMENT)
COUNTY OF DUVAL, STATE OF FLORIDA

KNOW ALL MEN BY THESE PRESENTS: That whereas, the following Tax Certificates, to-wit:

Certificate Number	Date Issued
00811	1990

was, were duly filed in the office of the Clerk of the Circuit Court of this County and application made for the issuance of a tax deed thereon, and due notice of sale having been published as required by law, and no person entitled so to do having appeared to redeem said lands, such lands were on the 30th day of JANUARY 1995 offered for sale at the Courthouse door for cash to the highest bidder, and there being no bidders at the public sale the Clerk entered the lands on a list entitled "Lands Available for Taxes", and seven years having elapsed from the date said land was offered for public sale, said land is hereby given, granted and conveyed to City of Jacksonville (Consolidated Government)

NOW, THEREFORE, the County of Duval, State of Florida, in consideration of the premises, and in consideration of the premises, and in pursuance of the statutes in such cases made and provided, has given, granted, and does hereby give, grant, and convey to the said City of Jacksonville (Consolidated Government), C/O Real Estate Division, Room 1200, City Hall Annex, Jacksonville, Florida 32202, and to its successors and assigns forever, to their own proper use, benefit and behoof the following lands situated in the County and State aforesaid and described as follows:

05-071 19-2S 25E GA
WHITE CITY S/D PT NO 2
LOTS 1,2(EX E 92 FT) BLK 22

containing acres, more or less, provided, however that said lands shall continue subject and liable for any unpaid general taxes of equal dignity with county taxes represented by the certificate or certificates above described.

IN TESTIMONY WHEREOF, by virtue of authority in me vested by law, and for and on behalf of the City of Jacksonville (Consolidated Government) County of Duval, State of Florida, I, the undersigned, as Clerk of the Circuit Court for the County and State aforesaid, have executed this deed and have hereunto set my official signature and seal, at Jacksonville, in the County of Duval, and State of Florida this the 4th day of JANUARY A.D. 2002

Clerk of the Circuit Court, Duval County, Florida.

Signed, sealed and delivered in the presence of:

(As Deputy Clerk)
Margaret Mehan (As Deputy Clerk)

STATE OF FLORIDA
COUNTY OF DUVAL

On this 30th day of JANUARY 2002, before me a notary public, personally appeared Jim Fuller, Clerk of the Circuit Court in and for City of Jacksonville (Consolidated Government) the State and County aforesaid, to me known to be the person described in, and who executed the foregoing instrument, and acknowledged the execution thereof to be his own free act and deed for the use and purposes therein mentioned.

Witness my hand and official seal aforesaid

No Documentary Stamp
No Recording Fee

RETURN TO CITY OF JACKSONVILLE (CONSOLIDATED GOVERNMENT), C/O REAL ESTATE DIVISION, ROOM 1200, CITY HALL ANNEX, JACKSONVILLE FL 32202

Page 17 of 20

TD0100067 RE66698-0000

TAX DEED

(Chapter 197 Florida Statutes)

CITY OF JACKSONVILLE
(CONSOLIDATED GOVERNMENT)
COUNTY OF DUVAL, STATE OF FLORIDA

Book 10334 Page 466

KNOW ALL MEN BY THESE PRESENTS: That whereas, the following Tax Certificates, to-wit:

Certificate Number	Date Issued
00813	1998

were duly sold in the office of the Clerk of the Circuit Court of the County and application made for the issuance of a tax deed thereon, and that notice of sale having been published as required by law, and no person entitled so to do having appeared to redeem said lands, such lands were on the 30th day of JANUARY 1995 offered for sale at the Courthouse door for cash to the highest bidder, and there being no bidders at the public sale the Clerk entered the lands on a list entitled "Lands Available on Taxes" and seven years having elapsed from the date said land was offered for public sale, said land is hereby given, granted and conveyed to City of Jacksonville (Consolidated Government).

NOW, THEREFORE, the County of Duval, State of Florida, in consideration of the premises, and in consideration of the premises and in pursuance of the statutes in such cases made and provided, has given, granted, and does hereby give, grant, and convey to the said City of Jacksonville (Consolidated Government), C/O Real Estate Division, Room 1210, City Hall Annex, Jacksonville, Florida 32202 and to its successors and assigns forever, to their own proper use, benefit and behoof the following lands situated in the County and State aforesaid and described as follows:

05-0"1 19-2S 25E 65
WHITE CITY S D PT SEC 2
LOTS 14,15 BLK 22

containing acres, more or less, provided, however, that said lands shall continue subject and liable for any unpaid general taxes of equal dignity with county taxes represented by the certificate or certificates above described.

IN TESTIMONY WHEREOF, by virtue of authority in me vested by law, and for and on behalf of the City of Jacksonville (Consolidated Government) County of Duval, State of Florida, I, the undersigned, as Clerk of the Circuit Court for the County and State aforesaid, have executed this deed and have hereunto set my official signature and seal, at Jacksonville, in the County of Duval, and State of Florida, this the 30th day of JANUARY A.D. 2002

Clerk of the Circuit Court, Duval County, Florida.

Signed, sealed and delivered in the presence of:

(As Deputy Clerk)

(As Deputy Clerk)

STATE OF FLORIDA
COUNTY OF DUVAL

On this 30th day of JANUARY 2002 before me, a notary public, personally appeared Jim Fuller, Clerk of the Circuit Court in and for City of Jacksonville (Consolidated Government) the State and County aforesaid, to me known to be the person described in, and who executed the foregoing instrument, and acknowledged the execution thereof to be his own free act and deed for the use and purposes therein mentioned.

Witness my hand and official seal aforesaid.

No Documentary Stamps
No Recording Fee

RETURN TO: CITY OF JACKSONVILLE/CONSOLIDATED GOVERNMENT/REAL ESTATE DIVISION, ROOM 1210, CITY HALL ANNEX, JACKSONVILLE, FL 32202

TD194-068 RE16099-0000

TAX DEED

(Chapter 197 Florida Statutes)

CITY OF JACKSONVILLE
(CONSOLIDATED GOVERNMENT)
COUNTY OF DUVAL, STATE OF FLORIDA

Book 10334 Page 467

KNOW ALL MEN BY THESE PRESENTS: That whereas, the following Tax Certificates, to-wit:

Certificate Number	Date Issued
00814	1990

was, were duly filed in the office of the Clerk of the Circuit Court of this County and application made for the issuance of a tax deed thereon, and due notice of sale having been published as required by law, and no person entitled so to do having appeared to redeem said lands; such lands were on the 9th day of JANUARY 1995, offered for sale at the Courthouse door for cash to the highest bidder and there being no bidders at the public sale the Clerk entered the lands on a list entitled "Lands Available for Taxes", and seven years having elapsed from the date said land was offered for public sale, said land is hereby given, granted and conveyed to City of Jacksonville (Consolidated Government)

NOW, THEREFORE, the County of Duval, State of Florida, in consideration of the premises, and in consideration of the premises, and in pursuance of the statutes in such cases made and provided, has given, granted, and does hereby give, grant, and convey to the said City of Jacksonville (Consolidated Government), C/O Real Estate Division, Room 1200, City Hall Annex, Jacksonville, Florida 32202 and to its successors and assigns forever, to their own proper use, benefit and behoof the following lands situated in the County and State aforesaid and described as follows:

05-071 19-2s-25E .08
WHITE CITY S/D PT NO 2
LOT 8 BLK 2

containing acres, more or less, provided, however, that said Lands shall continue subject and liable for any unpaid general taxes of equal dignity with county taxes represented by the certificate or certificates above described.

IN TESTIMONY WHEREOF by virtue of authority in me vested by law, and for and on behalf of the City of Jacksonville (Consolidated Government) County of Duval, State of Florida, I, the undersigned, as Clerk of the Circuit Court for the County and State aforesaid, have executed this deed and have hereunto set my official signature and seal, at Jacksonville, in the County of Duval, and State of Florida, this the 9th day of JANUARY A.D. 2002

[signature]
Clerk of the Circuit Court, Duval County, Florida

Signed, sealed and delivered in the presence of:

[signature] (As Deputy Clerk)
Margaret Martin (As Deputy Clerk)

[illegible recording stamp] 0617

STATE OF FLORIDA
COUNTY OF DUVAL

On this 30th day of JANUARY 2002, before me, a notary public, personally appeared Jim Fuller, Clerk of the Circuit Court in and for City of Jacksonville (Consolidated Government) the State and County aforesaid, to me known to be the person described in, and who executed the foregoing instrument, and acknowledged the execution thereof to be his own free act and deed for the use and purposes therein mentioned.

Witness my hand and official seal aforesaid.

[signature]

No Documentary Stamp
No Recording Fee

[notary stamp, illegible]

RETURN TO CITY OF JACKSONVILLE (CONSOLIDATED GOVERNMENT) C/O REAL ESTATE DIVISION, ROOM 1200, CITY HALL ANNEX, JACKSONVILLE FL 32202

Page 9 of 20

TD894-069 RE#096701-0000

TAX DEED

(Chapter 197 Florida Statutes)

5 MIN. RETURN
PHONE # 3039

CITY OF JACKSONVILLE
(CONSOLIDATED GOVERNMENT)
COUNTY OF DUVAL, STATE OF FLORIDA

KNOW ALL MEN BY THESE PRESENTS, That whereas, the following Tax Certificate was

Certificate Number	Date Issued
00815	1990

was duly filed in the office of the Clerk of the Circuit Court of this County and application made for the issuance of a tax deed thereon, and due notice of sale having been published as required by law, and no person entitled so to do having appeared to redeem said lands, such lands were on the 18TH day of FEBRUARY 1997 offered for sale at the Courthouse door for cash to the highest bidder, and there being no bidders at the public sale the Clerk entered the lands on a list entitled "Lands Available for Taxes", and seven years having elapsed from the date said land was offered for public sale, said land is hereby given, granted and conveyed to City of Jacksonville (Consolidated Government).

NOW, THEREFORE, the County of Duval, State of Florida, in consideration of the premises, and in consideration of the premises, and in pursuance of the statutes in such cases made and provided, has given, granted, and does hereby give, grant, and convey to the said City of Jacksonville (Consolidated Government), C/O Real Estate Division, Room 1208, City Hall Annex, Jacksonville, Florida 32202, and to its successors and assigns forever, to their own proper use, benefit and behoof the following lands situated in the County and State aforesaid and described as follows:

S 71 19-2S-25E 0N
WHITE CITY S/D PT N1/2
PT LOT S RECD D BK 1683-444
BLK 23
containing acres, more or less, provided, however, that said lands shall continue subject and liable for any unpaid general taxes of equal degree with county taxes represented by the certificate or certificates above described.

IN TESTIMONY WHEREOF, by virtue of authority in me vested by law, and for and on behalf of the City of Jacksonville (Consolidated Government) County of Duval, State of Florida, I, the undersigned, as Clerk of the Circuit Court for the County and State aforesaid, have executed this deed and have hereunto set my official signature and seal, at Jacksonville, in the County of Duval, and State of Florida, this the 18TH day of FEBRUARY A.D. 2004

Clerk of the Circuit Court, Duval County, Florida.

Signed, sealed and delivered in the presence of

(As Deputy Clerk)
(As Deputy Clerk)

STATE OF FLORIDA
COUNTY OF DUVAL

On this 18TH day of FEBRUARY 2004, before me, a notary public, personally appeared Jim Fuller, Clerk of the Circuit Court in and for City of Jacksonville (Consolidated Government) the State and County aforesaid, to me known to be the person described in, and who executed the foregoing instrument, and acknowledged the execution thereof to be his own free act and deed for the use and purposes therein mentioned.

Witness my hand and official seal aforesaid

No Documentary Stamp
No Recording Fee

RETURN TO: CITY OF JACKSONVILLE FLORIDA (CONSOLIDATED GOVERNMENT) C/O REAL ESTATE DIVISION, ROOM 1208, CITY HALL ANNEX, JACKSONVILLE, FL 32202

Appendix G: Toxicity Value Evaluation

Table G1: Evaluation of Dioxin Soil Cleanup Levels Based on New Noncancer Toxicity Values

Contaminant of Concern	2006 ROD Cleanup Goal (mg/kg)[a]		EPA November 2013 Regional Screening Level Noncancer Hazard = 1 (mg/kg)[a]		Change
	Residential	Industrial	Residential	Industrial	
Dioxin	0.000007	0.000030	0.00005	0.0006	Less Stringent

a. Florida Administrative Code 62-780, residential and commercial 1 x 10^{-6} risk-based level

Table G2: Cancer and Noncancer Toxicity Values

	Carcinogenic Toxicity Changes						Non-Carcinogenic Toxicity Changes					
	Oral Cancer Slope Factor (CSF)			Inhalation Unit Risk (IUR)			Oral Reference Dose (RfD)			Inhalation Reference Concentration (RfC)		
Contaminants	2006 ROD Oral CSF $(mg/kg\text{-}day)^{-1}$	2013 Oral CSF[a] $(mg/kg\text{-}day)^{-1}$	Change in CSF	2006 ROD IUR $(\mu g/m^3)^{-1}$	2013 IUR[a] $(\mu g/m^3)^{-1}$	Change in IUR	2006 ROD Oral RfD Value (mg/kg-day)	2013 Oral RfD Value[a] (mg/kg-day)	Change in RfD	2006 ROD RfC Value (mg/m^3)	2013 RfC Value[a] (mg/m^3)	Change in RfC
Dioxin	1.5×10^{5}	1.3×10^{5} [b]	Less stringent	ND	3.8×10^{1} [b]	New	ND	7.0×10^{-10}	New	ND	4.0×10^{-8} [b]	New
Pentachlorophenol	1.2×10^{-1}	4.0×10^{-1}	More stringent	ND	5.1×10^{-6} [b]	None	3.0×10^{-2}	5.0×10^{-3}	More stringent	ND	ND	None

a. EPA's Integrated Risk Information System (IRIS), available at http://www.epa.gov/IRIS (accessed 11/11/2013).

b. EPA has not developed toxicity values for these compounds; the values listed were developed by California Environmental Protection Agency and used by EPA only for developing EPA RSLs to conduct preliminary evaluations of site data under CERCLA and the Resource Conservation and Recovery Act. However, due to the uncertainties associated with the toxicity values, the RSLs do not represent cleanup levels.

ND = not determined

Table G3: Evaluation of PCP Cleanup Levels Based on New Cancer and Noncancer Toxicity Values

Contaminant of Concern	EPA November 2013 Regional Screening Level (mg/kg)[a]		2006 ROD Cleanup Goal (mg/kg)[b]	Risk Associated with 2006 ROD Soil Cleanup Level[c]	
	Residential	Industrial		Residential	Industrial
PCP					
cancer	0.89	2.7	2.0	Risk = 2.2×10^{-6}	Risk = 7.0×10^{-7}
noncancer	230	1,900	2.0	Hazard index = 0.01	Hazard index = 0.001

a. EPA's RSLs are generic values; they are not based on site-specific conditions. The current RSLs, dated May 2013, are available at http://www.epa.gov/reg3hscd/risk/human/rb-concentration_table/Generic_Tables/index.htm (accessed 11/30/2013).

b. Site-specific leachability-based value as cited in the 2006 ROD.

c. 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 = (2006 ROD Cleanup Level ÷ Soil Cancer RSL) × 10^{-6}
The non-cancer hazard index was calculated using the following equation:
Hazard index = (2006 ROD Cleanup Level ÷ Soil Non-cancer RSL)