First Five-Year Review Report

for the

# Central Wood Preserving Company Superfund Site

# East Feliciana Parish, Louisiana

## April 2009


**Performed by:**
**U.S. Environmental Protection Agency**
**Region 6**
**Dallas, Texas**

**Prepared by:**
**United States Army Corps of Engineers**
**Tulsa District**
**Tulsa, Oklahoma**

**Determinations**

It is determined that the remedy for the Central Wood Preserving Company Superfund Site is functioning as designed as a result of the Remedial Actions that have taken place and continues to be protective of human health and the environment because the wastes have been removed from the site, and those wastes remaining, greater than three feet in depth, are addressed with the implementation of institutional controls. One action item identified in the First Five-Year Review Report will require attention and be addressed as described above in order for the remedy to be confirmed effective in the long term.

Pamela Phillips, Acting
Samuel Coleman, P.E.
Director, Superfund Division

4/21/09
Date

# CONCURRENCES

FIVE-YEAR REVIEW
Central Wood Preserving Company Superfund Site
EPA ID# LA008187940

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Date

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# Table of Contents

**Section** **Page**

**List of Figures**



**List of Tables**



**Attachments**

## List of Acronyms

| | |
|---|---|
| µg/L | Micrograms per liter |
| ACM | Asbestos Containing Materials |
| ARARs | Applicable or Relevant and Appropriate Requirements |
| bgs | Below ground surface |
| BTU | British thermal unit |
| CCA | Copper chromated arsenate |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR | Code of Federal Regulations |
| COC | Contaminants of concern |
| CPT | Cone penetrometer |
| CWP | Central Wood Preserving Company |
| CY | Cubic yard |
| DNAPL | Dense nonaqueous phase liquid |
| ELCR | Excess lifetime cancer risk |
| EPA | Environmental Protection Agency |
| ERB | Emergency Response Branch |
| ESI | Expanded site investigation |
| FS | Feasibility Study |
| HI | Hazard index |
| HRS | Hazard Ranking System |
| LDEQ | Louisiana Department of Environmental Quality |
| LDR | Land disposal restrictions |
| LTTD | Low Temperature Thermal Desorption |
| MCL | Maximum contaminant level |
| MCLG | Maximum contaminant level goals |
| mg/kg | Milligrams per kilograms |
| MW | Monitoring well |
| NAPL | Nonaqueous phase liquid |
| NCP | National Oil and Hazardous Substances Pollution Contingency Plan |
| NPL | National Priorities List |
| O&M | Operation and maintenance |
| PAH | Polynuclear aromatic hydrocarbons |
| PCP | Pentachlorophenol |
| PRG | Preliminary remediation goals |
| POP | Proof of performance |
| ppm | Parts Per million |
| RA | Remedial Action |
| RAO | Remedial Action Objectives |
| RCRA | Resource Conservation and Recovery Act |
| RD | Remedial Design |
| RECAP | Risk Evaluation/Corrective Action Program |
| RG | Remediation goal |
| RI | Remedial Investigation |
| ROD | Record of Decision |
| ROST | Rapid Optical Screening Tool |
| SA | Site Assessment |
| SARA | Superfund Amendments and Reauthorization Act |
| SH | State Highway |
| SI | Site Inspection |
| SVOC | Semivolatile organic compound |
| TAT | Technical Assistance Team |
| TCLP | Toxicity Characteristic Leaching Procedure |
| USACE | U.S. Army Corps of Engineers |
| USGS | United States Geological Survey |
| VOC | Volatile organic compound |

## Executive Summary

The First Five-Year Review of the Central Wood Preserving Company Superfund Site located in East Feliciana Parish, Louisiana was completed in April 2009. The review was conducted from November 2008 through March 2009. The results of the First Five-Year Review indicate that the remedy is protective of human health and the environment because wastes have been removed from the site, and wastes remaining, greater than three feet in depth, are addressed with the implementation of institutional controls.

The facility operated from the 1950s to January 1, 1973, as Central Creosoting Company, Incorporated. During that time creosote was used exclusively as the wood preservative. On January 3, 1973, the facility was sold and began operating under the name Central Wood Preserving Company, Inc., and the use of creosote was discontinued. Wood preserving from that time onward was accomplished with Wolmanac, a solution of copper oxide, chromic acid, and arsenic acid (chromated copper arsenate, known as CCA). Throughout the facility's history, treated wood was distributed throughout the property for drying. The source of contamination is the result of spillage of creosote and Wolmanac on the site property over a period of 40 years. The site is currently owned by the East Feliciana Parish.

The Record of Decision (ROD), signed April 5, 2001, set forth the selected remedy for the site soils and sediments as removal and Low Temperature Thermal Desorption (LTTD) on-site, with off-site stabilization and disposal of removed soils, institutional controls and ground water monitoring.

The remedial Action (RA) began in November 2003 with excavation and LTTD completion in September 2004. Soil and sediment were excavated from arsenic-only and arsenic-PAH areas and stockpiled separately. Arsenic-only soil/sediment was excavated, staged in 300 cubic yard stockpiles, sampled to verify compliance with land-disposal regulations (LDRs), and transported off-site for disposal. Arsenic-Polynuclear aromatic hydrocarbons (PAH) soil/sediment was excavated, stockpiled for drying and/or mixed with lime, treated in LTTD unit, staged in approximately 300 CY stockpiles, sampled for PAHs and Toxicity Characteristic Leaching Procedure (TCLP) arsenic and chromium to verify compliance with applicable LDRs, and transported off-site for disposal. Arsenic concentrations from post excavation sampling ranged from 3.2 milligrams per kilogram (mg/kg) to 6.3 mg/kg, all well below the remediation goal (RG) of 20 mg/kg. Benzo(a)anthracene was selected in the Remedial Investigation (RI) to illustrate the extent of PAH contamination as it was the organic constituent most frequently detected above the state screening criteria in use that time. Benzo(a)anthracene sampling results ranged from 0.08 mg/kg to 210 mg/kg with an average of 29.0 mg/kg. While the comparison showed exceedances for contaminants of potential concern (as identified in the RI) at eight of the 19 locations sampled, these exceedencces were found in a limited area along a drainage pathway on the north property, north of State Highway 959.

A subsequent investigation in response to Hurricanes Katrina and Rita was performed in October 2005, to determine if the impact of the hurricanes affected the integrity of the remedy. This resulted in additional excavation and removal of approximately 980 cubic yards of soils that was performed in May 2006. The combined remedy was designed and implemented with the U.S. Environmental Protection Agency (EPA) conducting the final site inspection for the site and issuing the Final Close-Out Report in June 29, 2006.

As part of the selected remedy identified in the ROD, Institutional Controls were implemented in areas where contaminants were left in place in the subsurface at concentrations above the Remediation Goals. A Conveyance Notification was filed with the Clerk of Court on September 30, 2005, in accordance with Comprehensive Environmental Response, Compensation, and Liability Act guidelines, which allows for unrestricted access in the upper three feet of soils, but provides restrictions under State law on disturbing or moving deeper soils (greater than five feet).

Another component of the selected remedy was the implementation of a ground water monitoring system to monitor contaminant levels in the ground water. This component of the selected remedy has ceased. Ground water was to be monitored to ensure that wastes left in place do not affect the ground water because soils with organic contamination would be left in place in the subsurface (greater than 5 feet below ground surface [bgs]). The ROD required that ground water samples would be collected on an annual basis, but the sampling frequency may be modified if there are statistically significant changes in ground water sample concentrations.

Nine ground water monitoring wells were installed during the Remedial Investigation (RI). The only ground water encountered during the RI was that observed in shallow soil under the drainage pathway (-10 ft bgs), and that observed in the -65 ft bgs aquifer. Three wells were installed at 10 ft bgs along the drainage pathway to check for free-phase creosote migration; these wells accumulated some water (only two accumulated enough for sampling). The only exceedances of chemicals of potential concern were found in the monitoring wells installed in the shallow ground water 10 feet bgs beneath the drainage pathway where most of the surficial creosote-related contamination remained. Non-aqueous phase liquids were not found in the onsite wells during the RI. However, approximately 0.2 feet of a dense nonaqueous phase liquid (DNAPL) was detected in shallow site monitoring well, MW-S3E2, and a trace was detected in shallow monitoring well, MW-S2E2, during remedial design (RD) data collection activities in November 2001.

Ground water evaluation performed during the remedial investigation (RI ) and RA indicated the shallow 10 feet bgs ground water zone is not laterally continuous beyond the drainage pathway, and does not demonstrate significant volumes of water (one of three wells installed in this zone did not generate enough water to sample). The ground water encountered at 55 to 65 feet bgs demonstrates capacities that are borderline at best for meeting Louisiana Department of Environmental Quality's (LDEQ's) 2B classification for

potentially potable ground water, and ground water is not used from within this or any other zone in the vicinity of the site. Monitoring well abandonment began in late February 2004 and was completed in early March 2004, concurrent with the RA Site Preparation stage of the work. The deepest site excavations for LTTD treatment took place in the area where chemicals of potential concern were found in the monitoring wells installed in the shallow ground water 10 feet bgs beneath the drainage pathway. Excavation likely removed the small amounts of DNAPL found during RD data collection.

Existing monitoring well MW-S2E5 was left in place as originally planned, but the number of new monitoring wells was reduced from eight to one based on the expectation that two monitoring wells would be sufficient for evaluation of potential migration to ground water. A total of 8 (eight) monitoring wells were abandoned. After several rounds of ground water monitoring, these two remaining monitoring wells were removed (properly plugged and abandoned) at the request of LDEQ.

During this review, one issue was observed at the time of the site inspection. The site is being used by the parish for staging woody debris from Hurricane Katrina damage. Most of the debris consists of tree and brush debris. There are, however, several small piles of possible household waste/debris and a pile of large treated wood timbers. The parish indicated that while the site gates have been opened during hurricane tree and brush debris staging that illegal disposal has taken place on the site. This household waste and treated wood timbers may have come from illegal disposal; however, this household waste and treated wood timbers do not meet the conditions of the permit that the parish obtained from the LDEQ for staging of hurricane woody debris and depending on the nature of the waste may potentially re-contaminate the site. Between the time of inspection and when this review report was written a large portion has been removed from the site and properly disposed of off of the site property.

At this time, based on the information available during this first Five-Year Review, the selected remedy appears to be performing as intended. The selected remedy currently protects human health and the environment based on the results from treated waste and soil sampling and shallow ground water sampling and as wastes and contaminated soils have been removed from the site or treated through LTTD, and those wastes remaining, greater than five feet in depth, are addressed with the implementation of institutional controls. For the remedy to remain protective in the long-term the site should not be used for staging of household waste/debris or treated wood timbers, the security fencing around the site should be maintained to prevent illegal disposal, and the conveyance notice maintained.

# Five Year Review Summary Form

| SITE IDENTIFICATION | | |
|---|---|---|
| **Site name** ***(from WasteLAN)*****:** Central Wood Preserving Company | | |
| **EPA ID** ***(from WasteLAN)*****:** LA008187940 | | |
| **Region:** EPA Region 6 | **State:** Louisiana | **City/County:** East Feliciana Parish |

| SITE STATUS | |
|---|---|
| **NPL status:** ☒ Final ☐ Deleted ☐ Other (specify) | |
| **Remediation status** (choose all that apply): ☐ Under Construction ☒ Operating ☒ Complete | |
| **Multiple OUs?*** ☐ YES ☒ NO | **Construction completion date:** 29 June 2006** |
| **Has site been put into reuse?** ☐ YES ☒ NO | |

| REVIEW STATUS |
|---|
| **Lead agency:** ☒ EPA ☐ State ☐ Tribe ☐ Other Federal Agency _____ |
| **Author name:** EPA Region 6, with support from USACE Tulsa District |
| **Review period:**** November 2008 to March 2009 |
| **Date(s) of site inspection:** 1 December 2008 |
| **Type of review:** ☒ Statutory<br>☐ Policy<br>☐ Post-SARA ☐ Pre-SARA ☐ NPL-Removal only<br>☐ Non-NPL Remedial Action Site ☐ NPL State/Tribe-lead<br>☐ Regional Discretion |
| **Review number: :** ☒ 1 (first) 2 (second) ☐ 3 (third) ☐ Other (specify) _____ |
| **Triggering action:**<br>☒ Actual RA On-site Construction ☐ Actual RA Start<br>☐ Construction Completion ☐Previous Five-Year Review Report<br>☐ Other (specify) ROD submittal that sets MNA as remedial alternative |
| **Triggering action date** ***(from WasteLAN)*****:** April, 2004 |
| **Due date** ***(five years after triggering action date)*****:** April, 2009 (five years after RA initiation) |

*OU refers to operable unit

** based on the Final Close-Out Report date, (for additional remedial actions, triggered by post Hurricane Katrina sampling)

## Five-Year Review Summary Form, cont'd.

**Issues:**

During this review, one issue was observed at the time of the site inspection. The site is being used by East Feliciana Parish for staging woody debris from Hurricane Katrina damage. Most of the debris consists of tree and brush debris. There are, however, several small piles of possible household waste/debris and a pile of large treated wood timbers. The parish indicated that while the site gates have been opened during hurricane tree and brush debris staging that illegal disposal has taken place on the site. This household waste and treated wood timbers may have come from illegal disposal; however, this household waste and treated wood timbers do not meet the conditions of the permit that the parish obtained from the LDEQ for staging of hurricane woody debris and depending on the nature of the waste may potentially re-contaminate the site. Between the time of inspection and when this review report was written a large portion has been removed from the site and properly disposed of off of the site property.

**Recommendations and Follow-up Actions:**

Work with East Feliciana Parish to ensure removal of the household waste/debris and treated wood timbers and to ensure that illegal disposal is not allowed to continue.

**Protectiveness Statement(s):**

Based on the information available during this first Five-Year Review, the selected remedy is performing as intended. The selected remedy is currently protective of human health and the environment in the short term. This determination is based on the results from treated waste and soil sampling and shallow ground water sampling. It is also based on the fact that wastes and contaminated soils have been removed from the site or treated through LTTD, and those wastes remaining, greater than five feet in depth, are addressed with the implementation of institutional controls. For the remedy to remain protective in the long-term the site should not be used for staging of household waste/debris or treated wood timbers, the security fencing around the site should be maintained to prevent illegal disposal, the conveyance notice should be maintained, and contamination remaining below five feet must remain un-exposed.

# 1.0 Introduction

The purpose of a Five-Year Review is to determine whether the remedy at the site is protective of human health and the environment, and to identify any problems or concerns that are affecting or may in the future affect the protectiveness of the remedy. This is the First Five-Year Review for the Central Wood Preserving Company Superfund Site (CWP), located in East Feliciana Parish, Louisiana, and was conducted during the period of November 2008 through April 2009 by the U.S. Army Corps of Engineers (USACE), Tulsa District, on behalf of the U.S. Environmental Protection Agency (EPA) Region 6. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) call for Five-Year Reviews of certain remedial actions. The statutory requirement to conduct a Five-Year Review was added to CERCLA as part of the Superfund Amendments and reauthorization Act (SARA) of 1986. The EPA classifies each Five-Year Review as either statutory or policy depending on whether it is being required by statute or is being conducted as a matter of policy. The Five-Year Review for the CWP Site is required by statute.

As specified by CERCLA and the NCP, a statutory review for a First Five-Year Review is triggered by the initiation of the first remedial action that leaves hazardous substances, pollutants, or contaminants on site above levels that allow for unlimited use and unrestricted exposure. In cases where there are multiple remedial actions, the earliest remedial action that leaves hazardous substances, pollutants, or contaminants on site should trigger the initial review, even if it is an interim remedial action. The definition of the actual Remedial Action (RA) start dates may vary as outlined in the Superfund/Oil Program Implementation Manual. Statutory reviews are required for such sites if the ROD was signed on or after the effective date of SARA. CERCLA §121(c), as amended by SARA, states:

> If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

Under the NCP, the Code of Federal Regulations (CFR) states, in 40 CFR §300.430(f)(4)(ii):

> 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 the initiation of the selected remedial action.

The triggering action for this review is the initiation of remedial actions conducted at the site. Remedial construction activities began in November 2003 with the initial surveying of the site. Actual soil excavation and treatment commenced in mid-April 2004. Significant construction completion was achieved in August 2004. As stated above, the definition of the actual RA start dates may vary as outlined in the Superfund/Oil Program Implementation Manual. Because the CWP Site is a Superfund site, the EPA has regulatory authority. As such, and through interpretation of the RA start date, EPA has determined the First Five-Year Review as being due in April 2009. This is the First Five-Year Review for the CWP Site and was conducted during the period of November 2008 through April 2009 by the USACE, Tulsa District, on behalf of EPA Region 6.

# 2.0 Site Chronology

A chronology of events and dates is included in **Table 1**, provided at the end of the report.

# 3.0 Background

This section describes the physical setting of the site, a description of the land and resource use, and the environmental setting. This section also describes the history of contamination associated with the site, the initial response actions taken, and the basis for each action.

## 3.1 Physical Characteristics

The CWP Site is located in an unincorporated area in the southern portion of East Feliciana Parish, Louisiana, approximately 25 miles north of Baton Rouge. The site is situated north and south of State Highway (SH) 959, about one mile east of Highway 67. **Figure 1** shows the general location of the site. The municipal address of the site is 10145 Highway 959, Slaughter, Louisiana, 70777. The geographical coordinates of the site are 30°45'32.77" north latitude and 91°00'36.15" west longitude.

The site consists of two distinct properties. The property on the north side of SH 959 ("North Property") was used as the main wood treatment process area, and the property on the south side of SH 959 ("South Property") was operated as a raw lumber saw mill. The wood treatment process area on the North Property originally included 10 above-ground storage tanks/pressure vessels, 12 on-site buildings, and a concrete-lined containment basin, some of which were removed during the removal action. The combined acreage of the North Property (10.03 acres) and South Property (7.05 acres) is approximately 17.08 acres. A creek (historically and herein referred to, as “Unnamed Creek”) is located along the east-southeast side of both properties. This creek is intermittent near the site; when it has water, it flows south-southwest to intersect with Little Sandy Creek approximately 1.5 miles south of SH 959. **(E&E, 1995a**).

Currently, as a result of remedial activities, all above-ground structures have been removed. A few grade level concrete slabs are still present, with minimal CWP artifacts remaining. The site is currently being used as a staging area to hold hurricane Katrina related debris (tree and limb debris only). There is a six foot high chain link fence, with locked gates, along SH 959 for both the North and South Properties; this restricts access to vehicular traffic. Foot access is readily available to both site portions as fence lines for the remainder of the site (not adjacent to SH 959) are either non-existent or simple two- or three strand barb wire.

### 3.2 Operational History

The facility operated from the 1950s to January 1, 1973, as Central Creosoting Company, Incorporated, owned and operated by Mr. J. B. Herrod (now deceased). During that time, creosote was used exclusively as the wood preservative. On January 3, 1973, the facility was sold to Mr. John Bamett, Jr. (now deceased) and the facility began operating under the name Central Wood Preserving Company, Incorporated. At that time, the use of creosote was discontinued, and wood preserving from that time onward was accomplished with Wolmanac, (copper chromated arsenic or CCA). The North Property was used as the main wood treatment process area, and the South Property was operated as a raw lumber saw mill. During the facility's operation, treated wood was distributed throughout the property for drying.

The Central Wood Preserving Company filed for bankruptcy in 1991 and ceased operations the same year. Subsequent to the conclusion of the wood treating activities, the property was reportedly leased to Bobby Cotton of Legacy Wood Products for lumber storage purposes. There is no indication that pentachlorophenol (PCP), another common wood-treating substance, was ever used at the CWP Site; this was substantiated via personnel interviews conducted previously by the Louisiana Department of Environmental Quality (LDEQ), and by the lack of PCP detected in site samples. A site visit performed by LDEQ in March 1992 confirmed the wood preserving/processing portion of the site to be inactive (**E&E, 1995a**).

Currently the site is owned by the East Feliciana Parish Police Jury. Though the site is currently being used to stage hurricane related debris, future re-use of the site for recreation is being evaluated by the parish. The proposed re-development plan (presented in Appendix N of the RA report) consists of picnic areas and trails and a baseball field located on the site.

## 3.3 Regulatory History

In November 1983, the CWP facility was confirmed as a Resource, Conservation, and Recovery Act (RCRA) small quantity generator of hazardous waste consisting of CCA. Since that time, regulatory activities have included involvement by LDEQ and EPA. In 1992, following a request by LDEQ, the EPA Technical Assistance Team (TAT) conducted a Preliminary Site Assessment. This assessment and

subsequent more detailed site assessments and inspections conducted through 1995 indicated elevated levels of arsenic and chromium in soil and sediment, and asbestos fibers in insulation samples.

An EPA Action Memorandum was issued on April 3, 1995. This memorandum provided for a Time-Critical Removal Action to address source control at the site. The EPA TAT initiated the Time-Critical Removal Action on April 12, 1995. During the removal action, several site structures, tank contents, and an area of contaminated surface soil near the main facility operations area (about 1,250 cubic yards [CY]) were removed from the site. The containment basin contents were also removed and the basin sandblasted and backfilled with soil. From July to December 1995, the EPA TAT conducted an Expanded Site Inspection (ESI) to gather data for Hazard Ranking System (HRS) documentation.

In 1999, the site was proposed for inclusion on the National Priorities List (NPL) and a Remedial Investigation/Feasibility Study (RI/FS) was initiated. The site was added to the NPL in May 1999. The RI and FS were completed in September and November 2000, respectively. EPA issued the ROD for the RA on April 5, 2001.

A Remedial Design (RD) to define the implementation of the remedy for the CWP Site was completed in May 2002. The RD described in detail the components of the selected remedy identified in the ROD. Mobilization for the RA was initiated in December 2003 and significant construction completion was documented in a pre-final site inspection conducted by EPA and LDEQ on August 25, 2004. A Preliminary Closeout Report for the CWP Site was prepared and signed by EPA in September 2004. **(CH2M Hill, 2005).**

In response to Hurricanes Katrina and Rita, EPA performed sampling at the site to determine if the impact of the hurricanes affected the integrity of the remedy. The site was sampled on October 7-8, 2005, using a grid-based approach to collect surface soils samples from the 0-3 inch interval. The results found that several grids on the South Property of the site were above the remediation goal for arsenic. Additional sampling was conducted in February 2006 to provide better definition of the contamination. The results of the sampling were used to define additional excavation that was performed in May 2006. Approximately 980 cubic yards of soils were excavated from the area and sent off-site for disposal. A Final Close Out Report for the site was signed June 29, 2006.

## 3.4 Environmental Setting

The CWP Site is located north of Baton Rouge in the southern portion of East Feliciana Parish, Louisiana, in an area covered by the "Clinton" United States Geological Survey (USGS) 7.5 minute topographic quadrangle, and the "Amite" USGS 15 minute topographic quadrangle, in Section 77, Township 3 South,

Range 2 East. The "Fred" USGS 7.5 minute quadrangle, which adjoins the "Clinton" 7.5 minute quadrangle on the south side, covers the downstream extent of the Unnamed Creek that originates on the east side of the site. The site elevation is approximately 180 feet above mean sea level.

The Providence-Oliver soil association located on-site consists of gentle sloping upland soils comprised of silty loam to a silty clay loam conducive for pasture and southern pine forest. This soil type is characterized by a low permeability (**E&E, 1995c**). The topography in the area of the site is characterized by a generally flat, gently sloping ground surface with multiple drainage ways, creeks and wetland areas visible throughout the vicinity; these surface water features convey and accumulate runoff from the low permeability soils. The Unnamed Creek borders the site to the east-southeast, and flows south-southwest toward its confluence with Little Sandy Creek about 1.5 miles south-southwest of the site. The Unnamed Creek originates near the north side of the site, and is fed by runoff drainage ways in the vicinity of the site.

Two on-site drainage ways were documented during previous investigations on the eastern portion of the North Property side of the site. The drainage ways converge on-site and continue toward the east for approximately 200 feet from the former main wood treating process area to the Unnamed Creek. The Unnamed Creek is originally shallow and not well-defined on the east side of the North Property. On the South Property, the Unnamed Creek begins to demonstrate a more defined cut into the surficial soils, eventually averaging several feet wide from top of bank to top of bank, and an average of 3 feet in vertical extent from top of bank to base of the streambed. This profile continues downstream of the site approximately one mile to a wetland area, where the Unnamed Creek spreads above a small naturally-occurring dam and forms a swampy area. Downstream of the dam, the Unnamed Creek again assumes a more distinct profile.

In the area north and inclusive of Baton Rouge, upland deposits overlying three subsurface hydraulic zones (Zones 1, 2 and 3) are identified in available literature. The CWP Site is situated over an area demonstrating undifferentiated Quaternary Upland deposits. These upland deposits form a hydraulic unit which includes sediments that range from early Pleistocene to the most recent age (**E&E, 1995c**). The upland deposits in the immediate vicinity of the site correlate with the shallow Pleistocene; the “400-foot” sand, the “600-foot” sand, and possibly the “800-foot” sands of the Baton Rouge area. In the recharge area, toward the north, surface streams are hydraulically connected with the aquifer.

A direct push/cone penetrometer (CPT) investigation conducted during the RI provided detailed near-subsurface data. This investigation revealed the presence of interbedded clay and silty clay, some moist, mostly dry, from the surface to about 20 to 22 feet below ground surface (bgs), where the deposits become sandy and mostly dry, with some moisture. The sandier deposits appear to extend to about 45

feet bgs. Beyond that depth the deposits again become interbedded silty clay and clay, until about 60 feet bgs, where the first saturated ground water zone was encountered. Ground water was encountered in a shallow zone in soils under the drainage pathway at 10 feet bgs, and in an aquifer that occurs at approximately 55 to 65 feet bgs. Subsurface materials between 10 and 55 feet bgs, including a sand zone encountered from about 20 feet bgs to 45 feet bgs, were consistently dry throughout field investigations. In addition, the shallow 10 feet bgs ground water zone is not laterally continuous beyond the drainage pathway, and does not demonstrate significant volumes of water (one of three wells installed in this zone did not generate enough water to sample). The ground water encountered at 55 to 65 feet bgs demonstrates capacities that are borderline at best for meeting LDEQ's 2B classification for potentially potable ground water, and ground water is not used from within this or any other zone in the vicinity of the site. (**CH2M HILL, 2000a**).

During previous investigations, a review of registered wells within a 4-mile radius of the site was performed, and no public water supply wells were identified in the Upland deposits or Zone 1(approximately 340 feet bgs) within this 4-mile area. Water well information located within the 4-mile radius can be found in Attachment H of the Site Assessment Report. One registered well was reported as screened within the Zone 2 (approximately 1,180 feet bgs) deposits approximately 3.75 miles northwest of the site, and four public supply wells were identified in Zone 3 (approximately 1690 feet bgs) within the 4- mile radius **(E&E, 1995a).** The public supply wells are installed to depths greater than 1,500 feet bgs, and are generally protected from surface contamination within the area by the presence of the low permeable clay located throughout the southern tier of East Feliciana Parish.

## 3.5 Land and Resource Use

At the time of the ROD, it was estimated that approximately 140 people lived within one mile of the site. Although predominantly rural, residential land use in the area is increasing. New housing starts are up, and a number of families from Baton Rouge have relocated to new homes in the area. Two older residences, both occupied, are located within 350 feet of the west property boundary (north side of SH 959). These are the remaining two of nine original residences previously located on this small cul-de- sac; these residences were originally built to house facility employees. Approximately 15 residences are located on the east side of Mill Lane North, a street which runs along the east side of the property north of SH 959; some of these residences may be duplexes, and some appear to be unoccupied.

A property appraisal for the CWP Site (North and South Properties) was performed in April 1999 toward the end of the field investigation. The purpose of the appraisal was to provide documentation of the expected future land use of the property for use in selection of Preliminary Remediation Goals (PRGs) under the human health and ecological risk assessments being performed for the site. A copy of the

appraisal report is provided as an appendix to the Human Health Risk Assessment Technical Memorandum **(CH2MHILL, 2000b).**

The neighborhood description included in the report states that CWP is located in a primarily rural area with some residential development; the immediate subject area is considered to be 25 percent built up. The property is located within East Feliciana Parish, which does not participate in the National Flood Insurance program, nor is it zoned. There are no known servitudes, easements, or encroachments that affect the utility of the site. According to the appraisal, the most likely use of the property, if vacant, would be as a future residential home site(s). Unincorporated areas of East Feliciana Parish have no zoning ordinance and there are no known legal regulations or restrictions that would serve to limit the use of the site. The site's size is considered to be typical for the area and there are no known physical characteristics of the land that would impede or restrict possible uses of the site (exclusive of environmental contamination) **(Carlock and Associates, 1999).** While site access need not be restricted based on remaining contamination levels, the site is fenced and gates kept locked to prevent illegal or unauthorized disposal of materials on site.

In April 2000, the East Feliciana Parish Police Jury applied for a reuse grant. In June 2000, the EPA selected the CWP Superfund site as a Superfund Redevelopment Pilot. According to the Parish grant application, "323 people currently live within 1 mile of the site. The growth rate for the East Feliciana area has been 6.9% within the last 10 years. The growth rate appears to be increasing and the area being developed because of the rapid growth in suburban Baton Rouge. Since suburban communities are springing up around the site, community leaders are concerned about the lack of recreational space in this growing area." In 2000, the Parish was reported to have hired a contractor to: 1) create a comprehensive reuse plan, 2) create a reuse strategy, and 3) conduct community meetings. Public meetings for the reuse plan were conducted in March 2001. **(EPA, 2001a).**

The site is currently being used by the East Feliciana Parish as a staging area to hold hurricane related debris (tree and limb debris only). Future re-use of the site for recreation is being evaluated by the East Feliciana Parish. The proposed re-development plan consists of picnic areas and trails and a baseball field located on the site. A proposed site re-use plan is presented in Appendix N of the RA report.

## 3.6 History of Contamination

The CWP Site is an abandoned wood treating facility occupying approximately 17 acres that operated for approximately 40 years. The facility treated various wood products via two wood preserving processes, one that used creosote, and the other that used CCA. The wood preserving processes used pressure to force a solution of creosote dissolved in diesel, or a solution of CCA, into the pore spaces of the wood. The treated wood was then allowed to dry on a drip pad.

Subsequent to LDEQ's identification of the CWP facility as abandoned in March 1992, EPA conducted a series of phased investigations and a removal action. The initial investigation conducted by EPA's Emergency Response Branch (ERB) was what became Phase I of the Site Assessment (SA). The SA, with five phases, extended from 1992 through 1995. During Phase I, an extent-of-contamination survey was conducted to define the degree to which a potential removal action would take place. Six soil samples were collected for analysis of copper, chromium, arsenic; two soil samples for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs); and two insulation samples for asbestos. Samples indicated elevated levels of the metals, the presence of organic compounds commonly found in creosote, and presence of asbestos.

During Phase II of the SA, conducted in July 1993, a grid system for composite sampling of on-site surface soils and portions of the drainage that runs on the southeast side of the site was established and sampled at various depths to 24 inches bgs. Thirty-eight on-site grid blocks and five creek grid blocks were sampled. The grid was systematically expanded during the various phases of the SA for sampling of surface soil and sediment both on- and off-site, based on analytical results of each previous phase. Also sampled during the SA efforts were water samples from the containment basin and various on-site tanks, samples from waste piles, and sediment samples from the containment basin (**E&E**, **1995a).** Grab samples from various locations were also collected from the drainage, and at various points along the Unnamed Creek downstream of the site.

Analytical findings from the SA work indicated that elevated levels of arsenic and chromium were present at both on-site and off-site locations and within on-site tanks, waste piles, and the containment basin. Subsequent action levels of 50 milligrams per kilograms (mg/kg) for arsenic and 200 mg/kg for chromium were established during this investigation with concurrence from the Agency for Toxic Substances and Disease Registry. In addition, the presence of creosote was noted during sampling efforts.

Concurrent with performance of the SA, EPA initiated an evaluation of the site for potential inclusion on the NPL. This effort began with the Preliminary Assessment (PA), completed by the TAT in 1994**.** Based on the results of the PA, a Site Inspection (SI) was recommended for the site to further determine potential candidacy for inclusion on the NPL. The SI activities were designed to supplement the SA sampling activities, and to provide documentation for any remedial actions to be performed subsequent to the EPA ERB removal action conducted in 1995(**E&E**, **1995c)**.

Samples for the first SI sampling effort were collected in December 1994; a total of thirty-seven sediment/soil samples were collected. Analytical results from this effort exhibited the occurrence of metals and Polynuclear Aromatic Hydrocarbons (PAHs) at concentrations greater than three times background.

An ESI was conducted based on the results of the SI work, and included collection of thirty additional samples to address areas not previously sampled and to confirm data collected during the previous sampling activities.

## 3.7 Initial Response

Contamination at the site occurred as the result of approximately 40 years of wood preserving operations with a lack of effective containment practices, and routine spills of creosote and CCA (**E&E, 1995b**). Based on the findings of the EPA ERB SA sampling efforts, EPA determined that a Time-Critical Removal Action was warranted to address a portion of the site. An Action Memorandum was issued on April 3, 1995**,** and the removal action initiated on April 12, 1995 (**E&E**, **1995c).** The removal activities conducted at the site included the removal of:

- Buildings B-3, B-5, and B-6.
- Building B-10 smokestack.
- Portion of the concrete pad adjacent to the concrete containment basin.
- All storage tanks (ST-1 through ST-10) and contents and associated piping system.
- Approximately 1,520 cy of solids including surface soil from the processing area defined by grid blocks demonstrating arsenic greater than 50 mg/kg and chromium greater than 200 mg/kg, and contaminated sediment from the containment basin.

Additionally, the following was completed:

- The area along the creek one mile downstream from the site was determined to meet the criteria for being defined as a wetland**.** A small drum in Building B-2 labeled as methoxychlor, a derivative of DDT, was discovered on May 30, 1995 (no record of disposal is indicated).
- Three on-site water supply wells were closed by over drilling, removal of the upper 20 to 40 feet of well casing, and filling with Portland cement.
- The concrete containment basin was sandblasted.

The CWP Site was listed on the NPL in May, 1999. EPA authorized CH2M Hill to perform a RI/FS for the site, which was completed in November 2000.

Results of the analyses conducted during the course of the various investigations, including the RI, indicated that the most significant contamination was from arsenic, chromium, copper, and PAHs in soil and sediment. Analysis of the distribution and concentrations of chromium and copper indicated that the occurrence of these compounds corresponded well with the occurrence of arsenic.

Soil samples were collected during the RI and site assessment/site inspections from both the North and the South Properties. On the North Property, arsenic concentrations ranged from a background concentration of 20 mg/kg to 6,913 mg/kg. On the South Property, only limited areas of arsenic hot spots

were identified to depths of 1.5 feet bgs, at a maximum concentration of 429 mg/kg. The majority of the soil samples collected site-wide from below 1.5 feet bgs contained arsenic at concentrations at or near the arsenic background level. Creosote contamination (quantified as total PAHs) was encountered in soil at the North Property at depths ranging up to 23 feet bgs. Total PAH concentration ranged from 0.059 to 56,200 mg/kg, with the highest concentration observed in the vicinity of the former process area and drainage way leading to the Unnamed Creek. On the South Property, creosote was limited to the drainage along the eastern property border to a depth of 5 feet bgs. Total PAH concentration ranged from 0 to 33 mg/kg on the South Property.

In the Unnamed Creek, both sediment and surface water was sampled. Arsenic contamination was found in sediment up to a depth of 1.5 feet in various discrete hot spots. Concentrations ranged from background to 590 mg/kg. Some creosote-related constituents were also detected.

Arsenic and chromium were the most wide-spread constituents detected in site soils and sediment samples in both on-site and Unnamed Creek samples. Arsenic and other constituents were also detected in soil/sediment samples downstream in the Unnamed Creek as far as Little Sandy Creek. The ESI indicates that, beginning at about 1,000 feet upstream from the confluence of the Unnamed Creek with Little Sandy Creek, sediment samples showed detectable levels of constituents, but they were below HRS observed released criteria of three times background (**E&E, 1995c**).

Three, 10-foot bgs ground water monitoring wells were installed to verify whether or not nonaqueous phase liquid (NAPL) was present. The 10-foot wells were installed in a localized, 50-foot diameter area, where direct push/CPT sampling previously indicated potential NAPL present. Three, 45-foot bgs ground water monitoring wells were installed at three locations in the dry sand observed during the direct push/CPT activities to confirm the lack of ground water in this sand, and to allow collection of ground water samples if found at a later date. Three, 65-foot bgs ground water monitoring wells were installed in the first occurrence of ground water to allow sampling for site-related constituents. See **Figure 2** for locations of monitoring well installed during the RI.

Ground water samples were collected from two of the three wells in the shallow perched water zone, and three wells in the deeper ground water aquifer at depths of 60 to 65 feet (the three intermediate wells were set in a dry sand zone). NAPL was not found in any on-site wells during the RI. Ground water samples collected from both shallow wells, however, contained significant concentrations of arsenic and creosote related compounds. Ground water samples collected during the RI from the three deep wells did not contain arsenic, copper, or PAHs at concentrations above detection limits.

The asbestos survey performed during the RI confirmed the presence of asbestos in the insulation of a boiler tank previously identified in Building B-10 during the SA. The asbestos survey also evaluated the presence or absence of asbestos in the remaining structures on the North and South Properties. Insulation on the B-10 tank and the mastic coating on the insulation were found to contain asbestos above the regulatory limit of 1 percent by weight. The 12- and 9-inch resilient floor covering in Building B-1 and the associated tile mastic for the 12-inch tile also tested positive for asbestos content above 1 percent.

## 3.8 Summary of Basis for Taking Action

The purpose of the response actions conducted at the CWP Site was to protect public health and welfare and the environment from releases or threatened releases of hazardous substances from the site. Potential exposure to affected soil, ground water, surface water and sediment was determined to be associated with human health risks higher than the acceptable range. The primary threats that the CWP Site posed to public health and safety were direct contact with on-site waste material and/or the transport of these materials and/or potential hazardous constituents and/or air emissions to nearby populated areas by surface runoff, severe flooding, or disruption of waste areas. This threat was minimized with the Time-Critical Removal Action which only addressed source control (i.e., removal of on-site tanks/ vessels containing hazardous substances and the removal of the soil surrounding these tanks). Contaminated soil and sediment outside the main process area were not addressed during the removal action.

A baseline risk assessment, including an ecological assessment, was completed in September 2000, which estimated the probability and magnitude of potential adverse human health and environmental effects from exposure to contaminants associated with the site assuming no remedial action was taken. It provided the basis for taking action and identified the contaminants and exposure pathways that need to be addressed by the remedial action. The public health risk assessment followed a four step process: 1) hazard identification, which identified those hazardous substances which, given the specifics of the site were of significant concern; 2) exposure assessment, which identified actual or potential exposure pathways, characterized the potentially exposed populations, and determined the extent of possible exposure; 3) toxicity assessment, which considered the types and magnitude of adverse health effects associated with exposure to hazardous substances, and 4) risk characterization and uncertainty analysis, which integrated the three earlier steps to summarize the potential and actual risks posed by hazardous substances at the site, including carcinogenic and non-carcinogenic risks and a discussion of the uncertainty in the risk estimates.

As outlined in the ROD, Risk Characterization results were as follows:

**For the North Property**, Excess Lifetime Cancer Risk (ELCR) estimates for current receptors (trespassers) and future receptors (adult residents) were above $1 \times 10^{-4}$. ELCR estimates for future construction workers were in the range of $1 \times 10^{-5}$. In all cases, risks were due primarily to arsenic and to

a lesser extent, to the presence of PAHs. Hazard Index (HI) estimates for trespassers, and residential adults and children were also above the threshold of concern (HI = 1) at values of 1.1 up to 160 and were a consequence of the high levels of arsenic. HI estimates for construction workers were below the threshold of concern. For the Hot Spot within the North Property, the calculated risk estimates were approximately one order of magnitude above the corresponding risk estimates for the entire North Property.

**For the South Property**, ELCR estimates for future construction workers and future adult residents were above $1 \times 10^{-4}$, due primarily to arsenic. HI estimates for construction workers and residential adults and children were also above the threshold of concern (HI = 1) at values of 2 up to 11 and were a consequence of the high levels of arsenic. For the South Property current trespasser scenario, estimated total ELCR and HI for potential exposures to surface soil were $4 \times 10^{-5}$ and less than 1, respectively.

**For sediment/soil in Segment 1 of the Unnamed Creek**, the ELCR estimate for the Recreational Youth was $3.4 \times 10^{-3}$ which is above the range of concern of $1 \times 10^{-4}$ to $1 \times 10^{-6}$ and was due primarily to the presence of arsenic, benzo(a)pyrene and benzo(b)fluoranthene. The associated HI estimate was above the level of concern of 1 at 7 and was due to the presence of arsenic and dibenzofuran.

**For Segments 2 and 3 of the Unnamed Creek,** ELCR estimates for sediment/soil were in the range of $7x\ 10^{-6}$ down to $6 \times 10^{-7}$ for the recreational youth scenario and $1x\ 10^{-5}$ down to $9 \times 10^{-7}$ for the adult hunter scenario. These risk levels are based on the reasonable maximum exposure; some actual detected concentrations in these segments are above the $1 \times 10^{-5}$ risk-based concentration. Noncancer (HI) estimates for sediment/soil in Segment 2 and 3 were well below the level of concern of 1.0. ELCR and HI estimates for potential exposures to surface water for both scenarios in all three segments of the Unnamed Creek were also well below levels of concern.

**Ecological Risk Assessment**. Contaminants of Concern (COCs) were arsenic, copper, and chromium. Although copper was not evaluated in the ecological risk assessment, it was one of the primary chemicals used in this facility's operations and was detected in previous EPA site assessment investigations at levels in excess of 1500 ppm. Copper is acutely toxic to plants and invertebrates. An evaluation of the relationship between arsenic and copper in site soils/sediments revealed an almost 1 to 1 ratio. The results of the baseline ecological risk assessment on the North and South properties and the Unnamed Creek indicated that: 1) there was minimal risk to the terrestrial and riparian wildlife target receptors, and 2) there was risk to the benthic receptors. A 14-day *Hyallela azteca* bioassay, benthic surveys and sediment chemistry, indicated that the observed mortality in the bioassays is not attributable to site-related contamination, and the low diversity of benthic organisms in the Unnamed Creek may be a result of limited physical habitat. Therefore, the final conclusion by the Agency is that by addressing the arsenic levels as per the human health risk assessment, the copper will be also addressed, thereby addressing the ecological risk.

Although the Creek contains a wetland (Segment 3) that has levels of arsenic above the human health risk assessment remediation goal, this 100 cubic yard wetland area was not be remediated as remediation would cause damage to the wetland and limited accessibility would prevent routine direct human exposure to the contaminated sediments **(EPA, 2001a).**

# 4.0 Remedial Actions

This section provides a description of the Remedial Action Objectives (RAOs), remedy selection, and implementation. It also addresses Operations and Maintenance (O&M), and the overall progress made at the CWP Site. At this site, the EPA Time-Critical Removal Action completed in September 1995 had addressed the principal threat posed by obvious wastes comprised of contaminated soil, sludge, and waste at the former process areas. The contaminated materials that exceeded health based levels at the

site were excavated and removed from the site. During 2000, the EPA contracted CH2M Hill, Inc. to perform a RI/FS to fully characterize and define all residual contamination at the site to include surface and subsurface soils, ground water, and surface water and sediment in the Unnamed Creek. The results of the RI/FS warranted further remedial activities at the site.

## 4.1 Remedy Objectives

The ROD for the CWP Site established RAOs and described the remedy selected to achieve these RAOs. The RAOs for the North and South Properties are to prevent human ingestion of, dermal contact with, or inhalation of soil and sediments and human contact with structure/debris containing/contaminated with COCs at concentrations which pose an ELCR greater than $1x10^{-6}$ or which have a HI of greater than 1 (based on a residential use scenario). The RAOs for the Unnamed Creek are to prevent human ingestion of, dermal contact with, or inhalation of sediment contaminated with chemicals of concern at concentration levels which pose an ELCR greater than $1 \times 10^{-6}$, or which have a HI of 1 or greater (based on a recreational use scenario). In addition, both the North and South properties and Unnamed Creek have RAOs for ground water to prevent human ingestion of water which contains COCs exceeding non-zero maximum contaminant level goals (MCLGs) or maximum contaminant levels (MCLs) where the corresponding MCL is zero in ground water at the 60 foot aquifer **(CH2M Hill, 2005a)**.

Based on these RAOs, the ROD established cleanup levels, or remediation goals (RGs), for each medium. The risk assessment conducted for the site as part of the RI/FS had concluded that risk to human health was primarily driven by the presence of arsenic; other contaminants that posed a risk were found to be located within the footprint of arsenic contamination. Therefore, the ROD specifically established RGs for arsenic in site soil and sediment.

As noted in the ROD, the RGs were calculated for surface soil/sediment on the North and South Properties based on $1 \times 10^{-6}$ carcinogenic risk using adult and child resident and construction worker exposure scenarios. To be protective of both residents and construction workers, the lowest of the risk-based concentrations was selected as the RG. The resulting arsenic RG for surface soil/sediment (0 to 3.0 feet bgs) was calculated as 0.03 parts per million (ppm). Since this concentration was lower than the background concentration, and could not be met, the arsenic RG was set at the background concentration of 20 ppm. This corresponds to a residential risk level of $1 \times 10^{-4}$.

The RGs calculated for the 3-5 feet bgs interval for the North Property were based on $1 \times 10^{-5}$ carcinogenic risk using a future utility worker scenario. The resulting arsenic RG for surface soil/sediment was calculated as 300 ppm. As noted in the ROD, the $1 \times 10^{-5}$ carcinogenic risk was chosen because: 1) the area that requires action is a hot spot (hot spot is defined as a small area) and 2) the probability that

utility lines will be located in this exact hot spot is unlikely since the hot spot is located near the Unnamed Creek.

The RGs calculated for the Unnamed Creek were based on 1 x $10^{-5}$ carcinogenic risk using a recreational youth and adult hunter scenario. As noted in the ROD, since the creek is located on several individual residents' property, recreational youth and adult hunter access to the creek is limited. Therefore, 1 x $10^{-5}$ was used. The resulting arsenic RG was calculated as 160 ppm. The table below summarizes the RGs established in the ROD **(CH2M Hill, 2005a)**.

| Chemicals of Concern | Cleanup Level ppm | Depth Feet bgs | Basis for Cleanup Level | Risk Level at Cleanup |
|---|---|---|---|---|
| NORTH PROPERTY SOIL | | | | |
| arsenic | 20 | 0-3 | Risk Assessment and Background Concentration | 1 x $10^{-4}$ |
| arsenic | 300 | 3-5 | Risk Assessment and Background Concentration | 1 x $10^{-4}$ |
| SOUTH PROPERTY SOIL AND SEDIMENT | | | | |
| arsenic | 20 | 0-1.5 | Risk Assessment and Background Concentration | 1 x $10^{-4}$ |
| UNNAMED CREEK SEDIMENT | | | | |
| arsenic | 160 | 0-1.5 | Risk Assessment | 1 x $10^{-5}$ |

It is noted that Table 1 through Table 4 provided in the ROD summarize various data used in risk based calculations, such as toxicity values, reference doses, etc. During document review for this First Five-Year Review, it was discovered that several values provided in these tables were incorrectly transferred from the actual Risk Assessment and its addendums, and/or these tables were simplified for incorporation within the ROD. The review of the actual values and calculations performed in the Risk Assessment were determined to be appropriate and correct.

## 4.2 Remedy Selection

Under its legal authorities, EPA's primary responsibility at Superfund sites is to undertake remedial actions that are protective of human health and the environment. In addition, Section 121 of CERCLA establishes several other statutory requirements and preferences, including: a requirement that EPA's remedial action, when complete, must comply with all federal and more stringent state environmental and facility standards, requirements, criteria or limitations, unless a waiver is invoked; a requirement that EPA select a remedial action that is cost-effective and that utilizes permanent solutions and alternative

treatment technologies or resource recovery technologies to the maximum extent practicable; and a preference for remedies in which treatment permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances is a principal element over remedies not involving such treatment. Response alternatives were developed to be consistent with these Congressional mandates. CERCLA and the NCP set forth the process by which remedial actions are evaluated and selected. In accordance with these requirements, remedial alternatives for the CWP Site were based on EPA's "Presumptive Remedies Guidance for Soils, Sediments, and Sludges at Wood Treater Sites." The presumptive remedies are preferred technologies for common categories of sites, based on EPA's experience and its scientific and engineering evaluation of alternative technologies. EPA evaluated two of the applicable presumptive remedies in addition to the no action alternative. The no action alternative has been retained as a baseline for comparison, as required by the NCP. The remedial action alternatives for the CWP Site for soils/sediments are as follows:

- Alternative 1: No Action
- Alternative 2: Removal and Thermal Desorption On-Site, Off-Site Stabilization and Disposal
- Alternative 3: Removal and Incineration On-Site, Off-Site Stabilization and Disposal
- Alternative 4: Excavation and On-Site Disposal

The process for the screening of alternatives and the analyses of the alternatives is explained in more detail in Sections 2 and 3 of the Feasibility Study Report ***(*CH2M Hill, 2000d*)***. The ROD identified Alternative 2 as the selected remedy. Thermal desorption with off-site disposal is a comprehensive remedy which utilizes source control and management of migration components to address the principal site risks. EPA selected this alternative because it would achieve the removal of creosote- and arsenic-contaminated soil/sediment that poses unacceptable risks. Thermal desorption would achieve reduction in the volume, toxicity, and mobility of creosote-contaminated wastes. Off-site stabilization and disposal of the arsenic contaminated wastes and residuals from the thermal desorption would permanently remove the wastes that pose a risk based exposure. Although wastes below 5 feet would remain, these wastes do not pose a risk to humans or the environment because there was no exposure to soils at this depth by humans or the environment. In addition, wastes below 5 feet had not migrated to the ground water at the 55-60 feet bgs. Although Alternative 2 was more costly than Alternative 4 (RCRA vault), the selected remedy would achieve permanent results and would restore the property for residential and recreational reuse. **(EPA, 2001a).**

Before initiation of the selected remedy, preparatory activities would first be necessary for the implementation of that remedy. These preparatory activities include:

• **Grubbing -** Portions of the on-site removal area would require grubbing prior to excavation.

• **Staging for contaminated soils/sediments -** The Unnamed Creek portion of the excavation would require clearing and staging areas down the length of the creek where excavation activities would occur.

• **Asbestos Abatement -** The asbestos survey conducted at the site confirmed the presence of asbestos above the regulatory limit of 1 percent by weight. A licensed asbestos removal contractor would remove these materials from the site prior to initiation of other removal actions.

• **Building Demolition and Disposal of Materials -** The North Property structures would require demolition and removal to facilitate the surface soil excavation. Buildings demolished would be tested and disposed of accordingly.

• **Removal and Disposal of Debris Piles -** Previous testing on the debris piles shows elevated levels of site-related metals in all debris piles on the North Property. These piles would be cleared from the excavation area along with the building debris and disposed of accordingly.

The four major components of the selected remedy for soils/sediments included:

• **Excavation of Surface/Near-Surface Soil/Sediment that Exceed RGs -** Soil/sediment that exceeds RGs would be excavated and staged pending treatment/disposal. Excavated soil/sediment that exceeds Land Disposal Restrictions (LDRs) would be staged separately from excavated soil/sediment that does not exceed LDRs.

• **Thermal Desorption of Excavated Soil/Sediment that Exceeds LDRs** - Excavated soil and sediment exceeding LDRs based on site characterization data would be staged separately from excavated soil/sediment that meets LDRs. The excavated soil/sediment exceeding LDRs would be prepared for treatment and treated with an on-site thermal desorption unit. Toxicity Characteristics Leaching Procedure (TCLP) sampling of the residuals would be required, and if the LDRs are exceeded, additional stabilization may be required prior to off-site disposal. During the excavation and thermal desorption processes, air monitoring and noise monitoring would be conducted to ensure compliance with Applicable or Relevant and Appropriate Requirements (ARARs).

• **Disposal of Excavated Soil/Sediment** - The excavated soils would be tested and disposed of accordingly.

• **Backfilling -** The North and South Property removal areas would be backfilled with clean backfill and re-vegetated following confirmation sampling. The excavated portions of the Unnamed Creek would be backfilled with clean backfill and an erosion control layer would be installed following confirmation sampling.

In addition to these components for soils remediation, the site would also require:

• **Inspection -** Prior to the completion of the remedial action and site deletion, EPA would also conduct a review of the site.
• **Ground water Monitoring -** To ensure that wastes left in place do not affect the ground water, ground water monitoring would be implemented. Soils with organic contamination would be left in place in the subsurface (greater than five feet bgs). To ensure protectiveness of ground water, a ground water monitoring system would be necessary to monitor contaminant levels in the ground water. The dry sand that exists from about 25 to 45 feet bgs would also be monitored to ensure no future migration pathway develops. Ground water samples would be collected on an annual basis, but the sampling frequency may be modified if there are statistically significant changes in ground water sample concentrations.
• **Institutional Controls/Deed Restrictions** - Easements, covenants running with the land, and/or deed notices as appropriate or as allowed by law would be implemented to prevent exposure to contaminants remaining on-site on the North Property below five feet bgs (this area includes the drainage pathway located outside the legal boundaries of the property that was originally owned by CWP [now East Feliciana Parish]) **(EPA, 2001a).**

The expected outcome of the selected remedy was that the site would no longer present an unacceptable risk to human health because the contaminated soil and sediment would be excavated, treated, and disposed of off-site and the property would be suitable for residential and recreational land use. In addition, institutional controls, such as the deed notice, would prevent future human exposure to soil contamination below 5 feet. By addressing the unacceptable human health risks in the sediment contamination in the Creek, EPA would address contamination that affects the wetlands and other habitat in the Creek, thereby providing environmental and ecological benefits such as wetlands restoration. Ground water monitoring would ensure that the remedy is protective. It was anticipated that the selected remedy would also provide socio-economic and community revitalization impacts such as increased tax revenues due to proposed redevelopment efforts and planning for the property by the local Parish authority **(EPA, 2001a).**

## 4.3 Remedy Implementation

A RD to define the implementation of the remedy for the CWP Site was completed in May 2002. The RD described in detail the components of the selected remedy identified in the ROD. Remedial construction activities began in November 2003 with the initial surveying of the site. Mobilization was initiated in December 2003, with construction activities beginning in January 2004, and actual soil excavation and treatment beginning in April. Significant construction completion was achieved in August 2004. Extensive documentation of these events is found in the RA Report and its appendices. A brief summary of these events follows.

### 4.3.1 Preparatory Activities

The Site Preparation stage of the project began in December 2003 and was completed in March 2004. Site Preparation was conducted to clear and grub the trees and vegetation in areas identified for soil and sediment excavation. Tree stumps and root balls were washed to remove soil and burned on-site. Logs were hauled off-site for recycling as pulpwood (approximately 130 tons). A portion of the wood debris was shredded and left on-site for use as mulch during site restoration. Approximately 17 acres of land were cleared, including 10 acres on the North Property and 7 acres on the South Property.

A total of eight ground water monitoring wells were abandoned; all of the monitoring wells installed during the RI, with the exception of one of the 65-foot deep wells, MW-S2E5, were abandoned. Two former water supply wells on the south side of the South Property found during Site Preparation and Demolition activities were also abandoned.

Building demolition and asbestos abatement began in January 2004 and were completed in mid-March 2004. Asbestos Containing Materials (ACM) found in two on-site buildings were removed and disposed off-site, approximately 60 square feet of tile with ACM. All 14 on-site buildings were subsequently demolished to allow for excavation of contaminated soil on the property and to provide for the safe operation of excavation equipment in the vicinity. The building debris and pre-existing debris piles were either recycled or disposed off-site. A total of approximately 108 tons of metal scrap from buildings and other miscellaneous sources were recycled and about 1,200 CY of building debris were transported off-site for disposal. Concrete slabs within areas to be excavated were removed, broken down, decontaminated, and provided to East Feliciana Parish for use off-site as rip-rap. Approximately 1,300 CY of concrete were recycled as rip-rap. Concrete slabs at or bgs in areas not requiring excavation were left in place for future use. A total of 6,475 gallons of water was shipped to the Clean Harbors facility in White Castle, Louisiana, for disposal (this included decontamination water for both the Site Preparation and Asbestos Abatement/Demolition work). **(CH2M Hill, 2005a).**

### 4.3.2 Soil and Sediment Excavation

Excavation began on April 19, 2004. Soil and sediment were excavated from arsenic-only and arsenic-PAH areas and stockpiled separately. Arsenic-only soil/sediment was excavated, staged in 300 CY stockpiles, sampled for PAHs and TCLP arsenic and chromium to verify compliance with LDRs, and transported off-site for disposal at Waste Management's Subtitle C landfill located in Carlyss, Louisiana. The total volume of arsenic-only soil/sediment excavated at the CWP Site was 12,302 CY. Refer to **Figure 3** for approximate arsenic excavated areas on-site. Arsenic concentrations from post excavation sampling ranged from 3.2 mg/kg to 6.3 mg/kg, all well below the RG of 20 mg/kg. The post excavation sampling results were also well below the LDEQ Risk Evaluation/Corrective Action Program (RECAP)

screening level soil concentration representing the soil concentration that does not result in the leaching of an unacceptable constituent concentration from soil to groundwater.

Arsenic-PAH soil/sediment was excavated, stockpiled for drying and/or mixed with lime, treated in the LTTD unit, staged in approximately 300 CY stockpiles, sampled for PAHs and TCLP arsenic and chromium to verify compliance with applicable LDRs, and transported off-site for disposal at the same Subtitle C landfill. The total volume of arsenic-PAH soil/sediment excavated at the CWP Site was 6,459 CY. Record samples were collected from the bottom of excavations in the arsenic-PAH area to provide an accurate characterization of PAH concentrations remaining in-place at the site. A total of 19 record samples were collected and analyzed for PAHs from the creosote containment area and drainage area. Benzo(a)anthracene was selected in the RI to illustrate the extent of PAH contamination as it was the organic constituent most frequently detected above the RECAP screening criteria in use that time. The record sample results were compared to the RECAP screening criteria. Benzo(a)anthracene sampling results ranged from 0.08 mg/kg to 210 mg/kg with an average of 29.0 mg/kg. While the comparison showed exceedances for contaminants of potential concern (as identified in the RI) at eight of the 19 locations sampled, these exceedencces were found in a limited area along a drainage pathway on the north property, north of State Highway 959 (Refer to **Figure 4**). No migration to ground water was documented during pre-remediation ground water monitoring; post-remediation ground water monitoring was specified by the ROD to ensure continued protectiveness of the ground water. Post-remediation sampling also documented no migration to ground water and is discussed further in Sections 4.3.6 and 4.4.

The downstream portions of the Unnamed Creek that were remediated consisted of two sections, one 800 feet and one 100 feet in length, approximately 1100 feet downstream (south) of the South Property. Remediation of this area was originally planned to consist of excavating the creek bed and creek banks along these two sections to a depth of 1.5-feet bgs. Implementation of the “area average” cleanup strategy (See Section 4.0 and Appendix F of the RI Report) at the CWP Site indicated that the arsenic RGs for the remote portions of Unnamed Creek south of the site were already achieved and no further excavation was technically required. However, in keeping with the intent of the ROD (that other site contaminants were to be addressed as part of the footprint of the arsenic contamination), the remedial activity was still performed but reduced to include excavation of only 6-inches of sediment from the creek bed and 1.5 feet of soil from two areas of the creek bank (instead of 1.5 feet in all locations), and confirmation sampling was performed to confirm that the arsenic RGs were also met at the bottom of the excavations.

A total of 218 CY of arsenic contaminated soils were excavated from the downstream portions of Unnamed Creek located south of the South Property. The confirmation sampling was performed following

excavation and prior to backfilling; samples were collected from the creek bed and banks. As noted above, these samples were collected to confirm that the arsenic RG was met at the bottom/sides of the excavations. Additional excavation would have been performed if the concentrations remaining in place exceeded the RG. A total of 13 confirmation samples were collected and sent to an EPA Contract Laboratory Program laboratory for arsenic analysis. All analyses showed that arsenic levels were below the targeted RG of 160 mg/kg, and that no additional excavation would be required **(CH2M Hill, 2005a).**

### 4.3.3 Thermal Desorption

LTTD soil treatment technology was utilized at the CWP Site to reduce the PAH concentrations in the soil to levels below LDRs. The LTTD operations area was divided into three subareas: the Feed Storage and Preparation area, the Unit Operations area, and the Treated Materials Handling area. Prior to placing soil in the LTTD unit, a soil feedstock amenable to LTTD operations had to be generated. Stockpiles of excavated soils were first processed through a 2-inch screen to remove any debris and deleterious material then through a 1-inch screen prior to treatment. In some instances, lime had to be added to the feed soil prior to screening to reduce soil moisture. Approximately 191 tons of lime was mixed with the feed soil prior to screening. After screening, composite soil samples were collected to verify the British Thermal Unit (BTU) and moisture contents of the material. Although soil blending was anticipated to be required to achieve lower soil BTU contents more amenable to treatment in the LTTD system, the BTU samples indicated that overall BTU content was sufficiently low as not to require blending.

During the startup stage, completed on May 24, 2004, approximately 552 tons of materials were treated. Following the startup period, the unit was down for eight days until June 2, 2004, for repairs due to hot embers forming in the unit and burning the exhaust filter bags in the baghouse. During the shakedown stage that followed the startup stage and continued through June 8, 2004, approximately 1,188 tons of material were successfully treated. The Proof of Performance (POP) test phase followed and continued for 10 days through June 18, 2004. The POP test was conducted to verify that the soil treated and stack gasses emitted did not contain contaminants above regulatory levels. The POP test exceeded all performance standards on the effluent soil, but failed stack gas emission standards for mercury and arsenic. (Appendix G of the RI Report contains a full POP report; Appendix Q contains a Tier II and Tier III analysis regarding these exceedances). LTTD operations were completed on August 6, 2004, with the completion of treatment of 9,142 tons of material (not including the 190 tons of lime added to reduce moisture, and 20 tons of re-burned material) **(CH2M Hill, 2005a).**

### 4.3.4 Waste Management and Disposal

Each 300 CY pile of soil was sampled for TCLP Arsenic, TCLP Chromium, and PAHs prior to being approved for shipment and disposal off-site. A total of 19,764 tons of arsenic-only material and 7,983 tons

of arsenic-PAH LTTD treated material (total of 27,746 tons) was shipped off-site to Waste Management's Subtitle C landfill located in Carlyss, Louisiana. In addition, a pile of sawdust originally located on the east side of the South Property (associated with the raw lumber mill), which was originally planned for use as mulch during the site restoration, was sampled during the RA to confirm its suitability for use. The results of this sampling indicated elevated levels of lead. A total of 321 tons of sawdust was shipped off-site as nonhazardous waste to Waste Management's Woodside Landfill in Walker, Louisiana. Decontamination water from the cleaning of equipment and other activities was containerized and sampled for site-related contaminants for characterization. Based on the analytical results, a total of 34,985 gallons of water was shipped to the Clean Harbors facility in Deer Park, TX for final disposal) **(CH2M Hill, 2005a).**

### 4.3.5 Site Restoration

A clean, contaminant-free backfill meeting the specified geotechnical requirements was identified and sampled to confirm the fill material was suitable fill for site excavations. Each excavation was backfilled with clean clay to a depth of six inches bgs to allow for placement of topsoil. The backfill was placed in lifts and compacted to meet the required compaction specifications. In-place density tests were performed. The volume of backfill placed on-site totaled 15,846 CY.

Site restoration included the placement of a 9-inch layer of organic-rich topsoil uniformly distributed in the excavation areas that had not been backfilled to grade (refer to **Figure 5**). A three-inch layer of topsoil was placed and uniformly distributed on areas that were either not excavated, or were backfilled to grade. Topsoil was not placed within the excavated bed of the Unnamed Creek. A total of 4,425 CY of topsoil was imported for use at the site. Prior to being imported to the site, the topsoil was tested for contamination and geotechnical parameters. Following topsoil placement, approximately 14 acres were seeded to establish a vegetative cover. Rye grass was planted at the site in late October 2004, and Bermuda was seeded and planted in late March of 2005. In early March 2005, approximately 250 Superior Loblolly pine seedlings were planted at approximately 125 locations throughout the North and South Properties. Along the Unnamed Creek on the North and South Properties, where the soil tends to contain more moisture, approximately 50 Cherrybark Oak trees were planted at 25 locations. Seedlings were planted over an area of about 12 acres, in a somewhat random pattern approximately 50 to 80 feet apart.

One area in the southeast corner of the South Property was left free of trees for a baseball field proposed in future reuse plans. Temporary erosion control measures were installed and maintained during site restoration construction activities **(CH2M Hill, 2005a).**

### 4.3.6 Monitoring Well Installation

Nine ground water monitoring wells were installed during the RI in 1999: three 10-foot bgs wells at three locations to verify whether or not nonaqueous phase liquid noted in core samples in this area were present; three, 45-foot bgs wells in the dry sand observed during the direct push/CPT activities to confirm the lack of ground water in this sand and to allow collection of ground water samples if found at a later date; and three, 65- foot bgs wells in the first occurrence of ground water to allow sampling for site-related constituents. The only ground water encountered during the RI was that observed in shallow soil under the drainage pathway (-10 ft bgs), and that observed in the -65 ft bgs aquifer. Three wells were installed at 10 ft bgs along the drainage pathway to check for free-phase creosote migration; these wells accumulated some water (only two accumulated enough for sampling). The only exceedances of chemicals of potential concern were found in the monitoring wells installed in the shallow ground water 10 feet bgs beneath the drainage pathway where most of the surficial creosote-related contamination remained. Non-aqueous phase liquids were not found in the onsite wells during the RI. However, approximately 0.2 feet of a dense nonaqueous phase liquid (DNAPL) was detected in shallow site monitoring well, MW-S3E2, and a trace was detected in shallow monitoring well, MW-S2E2, during remedial design (RD) data collection activities in November 2001.

Five of the nine ground water monitoring wells were sampled after their installation in 1999 (four were dry). The three 65 foot deep wells were sampled in November 2001 to gather additional data to support the RD. In January, June, and October of 2005, the existing two wells (one each from the RI and RA) were sampled. Ground water evaluation performed during the remedial investigation (RI ) and RA indicated the shallow 10 feet bgs ground water zone is not laterally continuous beyond the drainage pathway, and does not demonstrate significant volumes of water (one of three wells installed in this zone did not generate enough water to sample). The ground water encountered at 55 to 65 feet bgs demonstrates capacities that are borderline at best for meeting Louisiana Department of Environmental Quality's (LDEQ's) 2B classification for potentially potable ground water, and ground water is not used from within this or any other zone in the vicinity of the site. Monitoring well abandonment began in late February 2004 and was completed in early March 2004, concurrent with the RA Site Preparation stage of the work. Eight of these nine ground water monitoring wells were abandoned during the RA in 2004 because they were located in areas targeted for soil excavation/remediation. The deepest site excavations for LTTD treatment took place in the area where chemicals of potential concern were found in the monitoring wells installed in the shallow ground water 10 feet bgs beneath the drainage pathway. Excavation likely removed the small amounts of DNAPL found during RD data collection.

Monitoring well, MW-1 was installed on January 21, 2005 by a licensed Louisiana drilling contractor. The location of the 2005 monitoring well is shown in **Figure 6.** The well was constructed of 2-inch Schedule 40 PVC to a depth of 65 feet bgs. A 10-foot section of 0.01-inch slotted screen was installed from 55 to 65

feet bgs. The annulus around the well screen was filled with silica sand to a height of approximately two feet above the top of the well screen. A bentonite seal was installed and the borehole annulus was grouted to the surface. The well construction was completed with the installation of a 4-inch steel protective casing, a 4- by 4-foot concrete pad, and four concrete-filled steel bollards.

## 4.4 Operations and Maintenance

The ROD stated that:

> Soils with organic contamination would be left in place in the subsurface (greater than 5 feet bgs). To ensure protectiveness of ground water, a ground water monitoring system would be necessary to monitor contaminant levels in the ground water. The dry sand that exists from about 25 to 45 feet bgs would also be monitored to ensure no future migration pathway develops. Ground water samples would be collected on an annual basis, but the sampling frequency may be modified if there are statistically significant changes in ground water sample concentrations.

Ground water was to be monitored to ensure that wastes left in place do not affect the ground water because soils with organic contamination would be left in place in the subsurface (greater than 5 feet below ground surface [bgs]). The ROD required that ground water samples would be collected on an annual basis, but the sampling frequency may be modified if there are statistically significant changes in ground water sample concentrations.

Nine wells were originally proposed to be installed during the RA. Existing monitoring well MW-S2E5 was left in place as originally planned, but the number of new monitoring wells was reduced from eight to one based on the expectation that two monitoring wells would be sufficient for evaluation of potential migration to ground water from the limited site area with residual PAH contamination. A total of 8 (eight) monitoring wells were abandoned. After several rounds of ground water monitoring, these two remaining monitoring wells were removed (properly plugged and abandoned) at the request of LDEQ. Use of creosote compounds ceased in 1973, with no evidence of migration occurring from the containment basin area. No migration of contamination to ground water was found to have occurred during post-RA sampling.

Because ground water monitoring wells are no longer present on-site, O&M of a ground water monitoring network is no longer required. The O&M operations now required are maintaining the site such that soils greater than three feet bgs are not exposed.

# 5.0 Five-Year Review Process

This Five-Year Review has been conducted in accordance with the EPA's *Comprehensive Five-Year Review Guidance*, dated June 2001 (**EPA, 2001b**). The Five-Year Review for this site was initiated by the EPA which tasked the USACE to perform the technical components of the multidisciplinary review. The ROD, signed on April 5, 2001, set forth the selected remedy for soils/sediments for the site, which includes Removal and Thermal Desorption On-Site, Off-Site Stabilization and Disposal. Initiation of this First Five-Year Review was based on initiation of remedial actions at the site, thus this First Five-Year Review is dated April, 2009. Members of the review team include Mr. David Jones, Ms. Jeanne Carroll, and Mr. John Lambert, all of the Tulsa District USACE.

Interviews were conducted with relevant parties; a site inspection was conducted; and applicable data and documentation covering the period of the review were evaluated. The findings of the review are described in the following sections.

## 5.1 Community Involvement

A public notice announcing commencement of the Five-Year Review was published in the Baton Rouge Advocate on February 12, 2009. Upon signature, the Five-Year Review will be placed in the information repositories for the site, including the Audubon Library in Clinton, Louisiana and the EPA Region 6 office in Dallas, Texas. A second notice will be published in the Baton Rouge Advocate to summarize the findings of the review and announce the availability of the report at the information repositories. A copy of the first public notice is provided as **Attachment 7** to this report.

## 5.2 Document Review

This Five-Year Review included a review of relevant site documents, including the ROD, RA Report, RI Report, FS Report, construction and implementation reports, ground water sampling reports, and related monitoring data. Documents that were reviewed are listed in **Attachment 1**.

## 5.3 Data Review

One purpose of a Five-Year Review is to review data collected since the triggering action of that Five-Year Review. The trigger action is usually a previous Five-Year Review, or in this case, the initiation of the RA. Because the site soils/sediment were remediated during the RA, review of soils data is not compulsory for this Five-Year Review, but review of the site's ground water data is mandatory by definition. A general overview of the site's soil/sediment remediation follows.

Prior to the Time-Critical Removal Action, numerous site assessments were performed at the CWP Site in order to characterize the nature and extent of any COCs present. The Time-Critical Removal Action then

focused on particular on-site structures and soils, removing several site structures and approximately 1,520 CY of solids. The RD for the selected remedy set forth in the ROD was completed in May 2002. The RD provided the basis of design and included specifications for implementation of the remedy.

During the RA, additional remaining on-site structures were removed and over 20,000 CY of solids were removed from the site and the Unnamed Creek. EPA closely monitored this project to ensure that all construction activities met the RD specifications in accordance with the Construction Quality Assurance Plan, Field Sampling Plan, and Quality Assurance Project Plan. EPA analytical methods were utilized for all confirmation and record samples collected by CH2M HILL during the RA; sampling was conducted in accordance with approved sampling plans and analyses were conducted by certified laboratories. EPA and LDEQ representatives visited the site monthly to review construction progress and evaluate and review the results of QA/QC activities. Based on CH2M HILL's design and oversight of the RA, EPA concluded that the construction activities and results were consistent with the ROD and the RD plans and specifications.

In response to Hurricanes Katrina and Rita, EPA performed sampling at the site to determine if the impact of the hurricanes affected the integrity of the remedy. The site was sampled on October 7-8, 2005, using a grid-based approach to collect surface soils samples from the 0-3 inch interval. The results found that several grids on the south-side of the site were above the remediation goal for arsenic. Additional sampling was conducted in February 2006 to provide better definition of the contamination. The results of the sampling were used to define additional excavation that was performed in May 2006. Approximately 980 cubic yards of soils were excavated from the area and sent off-site for disposal. A Final Close Out Report for the site was signed June 29, 2006.

In regard to site soils, the site meets all the site completion requirements as specified in Close-Out Procedures for NPL Sites, OSWER Directive 9320.2 - 09A-P. Specifically, the completion of construction of all the elements of the ROD and the implementation of the institutional controls has addressed the threats to human health and the environment. A Conveyance Notification was filed with the Clerk of Court that allows for unrestricted access in the upper three feet of soils, but provides restrictions under State law on disturbing or moving deeper soils.

O&M for the site, was based on monitoring site ground water: As discussed in Section 4.4, the CWP Site ground water monitoring wells have been sampled from 1999 through 2006. **Table 2** lists all detected analytes for these sampling rounds.

Nine ground water monitoring wells were installed during the RI in 1999: three 10-foot bgs wells at three locations to verify whether or not nonaqueous phase liquid noted in core samples in this area were

present; three, 45-foot bgs wells in the dry sand observed during the direct push/CPT activities to confirm the lack of ground water in this sand and to allow collection of ground water samples if found at a later date; and three, 65- foot bgs wells in the first occurrence of ground water to allow sampling for site-related constituents. The only ground water encountered during the RI was that observed in shallow soil under the drainage pathway (-10 ft bgs), and that observed in the -65 ft bgs aquifer. Three wells were installed at 10 ft bgs along the drainage pathway to check for free-phase creosote migration; these wells accumulated some water (only two accumulated enough for sampling). The only exceedances of chemicals of potential concern were found in the monitoring wells installed in the shallow ground water 10 feet bgs beneath the drainage pathway where most of the surficial creosote-related contamination remained. Non-aqueous phase liquids were not found in the onsite wells during the RI. However, approximately 0.2 feet of a dense nonaqueous phase liquid (DNAPL) was detected in shallow site monitoring well, MW-S3E2, and a trace was detected in shallow monitoring well, MW-S2E2, during remedial design (RD) data collection activities in November 2001.

Five of the nine ground water monitoring wells were sampled after their installation in 1999 (four were dry). The three 65 foot deep wells were sampled in November 2001 to gather additional data to support the RD. In January, June, and October of 2005, the existing two wells (one each from the RI and RA) were sampled. Ground water evaluation performed during the remedial investigation (RI ) and RA indicated the shallow 10 feet bgs ground water zone is not laterally continuous beyond the drainage pathway, and does not demonstrate significant volumes of water (one of three wells installed in this zone did not generate enough water to sample). The ground water encountered at 55 to 65 feet bgs demonstrates capacities that are borderline at best for meeting Louisiana Department of Environmental Quality's (LDEQ's) 2B classification for potentially potable ground water, and ground water is not used from within this or any other zone in the vicinity of the site. Monitoring well abandonment began in late February 2004 and was completed in early March 2004, concurrent with the RA Site Preparation stage of the work. Eight of these nine ground water monitoring wells were abandoned during the RA in 2004 because they were located in areas targeted for soil excavation/remediation. The deepest site excavations for LTTD treatment took place in the area where chemicals of potential concern were found in the monitoring wells installed in the shallow ground water 10 feet bgs beneath the drainage pathway. Excavation likely removed the small amounts of DNAPL found during RD data collection.

The three monitoring wells set in the first water producing aquifer at approximately 65 feet bgs were sampled during the November 2001 sampling event. All detected analytes were below available MCL and/or RECAP values. Two of these three wells were removed during RA activities; MWS2E5, which is located on the extreme southeastern portion of the North Property was left in place. An additional well, MW-1 was installed, to an approximate depth of 65' (See Figure 6).

The two existing site wells, MWS2E5 and MW-1, were sampled in January, June, and October of 2005. For the January 2005 event, MW-S2E5 showed no detections above the reporting limit for all constituents analyzed. The detection of several SVOCs in ground water at a depth of approximately 65-feet, in MW-1, was a first-time occurrence at the site. The detected constituents did not exceed the RECAP screening standards for ground water. Samples collected during the two previous sampling events from three wells screened in this interval showed no detections of these constituents, however, these SVOC constituents are similar to those detected in ground water samples collected at a depth of approximate 10 feet bgs during the RI. During the installation of monitoring well MW-1, hydrocarbon staining was observed to a depth of 23 feet bgs. It is possible that the detection of SVOCs was a result of cross-contamination due to a drag-down of contaminants during well installation, through the shallow zone, and not the detection of a contaminant occurrence in this ground water zone. **(CH2M Hill, 2005b)**.

Prior to the next sampling event in June 2005, MW-1 was re-developed in an effort to remove what is believed to be residual SVOC contamination resulting from well installation activities detected during the first semiannual sampling event conducted in January 2005. Re-development of monitor well MW-1 commenced on June 29, 2005 after water levels were collected. No SVOCs , or arsenic, were detected in samples from either monitor well during this sampling event. It is speculated that the SVOCs detected during the first sampling event at MW-1 were a result of cross-contamination during well installation, and not the detection of a contaminant in this ground water zone.

In response to Hurricanes Katrina and Rita, EPA performed sampling at the site to determine if the impact of the hurricanes affected the integrity of the remedy. The two monitoring wells were sampled in October of 2005. No COCs, with the exception of one SVOC, were detected in samples from either monitoring well during this sampling event. The one detection, bis(2-ethylhexyl)phthalate, was above the RECAP value, but is considered a common lab contaminant.

Correspondence from LDEQ to EPA **(LDEQ, 2006)**, citing previous ground water data, requested concurrence to abandon the two remaining wells. Because no ground water monitoring wells are now present on-site, O&M of a ground water monitoring network is no longer required. The O&M operations now required are maintaining the site such that soils greater than three feet bgs are not exposed. The institutional controls described in Section 5.4 outline that unrestricted exposure is permitted in the0-3 foot interval, but that disturbing soil at depths greater than 5 feet may pose a threat to human health and the environment. The parish regulates use of the site by maintaining engineering controls such as the fence with locked gates. Through the parish's regulation of the site contaminated soil exposure is restricted.

## 5.4 Institutional Controls

As part of the site remedy identified in the ROD, Institutional controls were to be implemented in areas where contaminants were left in place in the subsurface at concentrations above the RGs. Institutional controls in the form of deed notices were to be put in place to inform the public of site conditions. Specifically, EPA would request LDEQ, in accordance with La. Rev. Stat. Ann. § 30:2039 (2000) and La. Admin. Code title. 33 § 3525 (1999), to require affected property owners to record a notice in the mortgage and conveyance records of East Feliciana Parish. The East Feliciana Parish Police Jury submitted a Conveyance Notification which was filed for registry and recorded in the Clerk of Courts on September 30, 2005 **(EFPPJ, 2005).** This notice provided the following information:

- That the property has been the subject of CERCLA response;
- That hazardous substances remain in surface soils outside the excavation areas on the property but are below levels that allow for unrestricted exposure in the 0-3 foot interval. (Shown in Attachment 2 of the conveyance);
- That hazardous substances remain in subsurface soils (> 5 feet) on the property (Shown in Attachment 3 of the conveyance) and may exceed risk-based levels. Disturbing or moving soil in these subsurface locations may pose a threat to human health or the environment, and may subject the property owner and the party causing the disturbance to liability under CERCLA or other laws;
- That structures including monitoring wells, and any other feature necessary for protectiveness of the remedy or for its successful operation and maintenance, remain on the property at specified locations;
- That disturbing or moving these features of the remedy may pose a threat to human health or the environment, and may subject the property owner and the party causing the disturbance to liability under CERCLA or other laws; and,
- That the property may be subject to restrictions under LAC 33.V. Chapter 35.

## 5.5 Interviews

A partial interview was conducted with the LDEQ Project Manager, Ms. Wanda Ballou during the site visit conducted on December 1, 2008. A follow-up interview was conducted via email on January 30, 2009. An in-person interview was conducted with Mr. Greg Beauchamp, Director of Public Works, on December 1, 2008. The completed interview record forms are presented in **Attachment 2**.

## 5.6 Site Inspection

An inspection was conducted at the site on December 1, 2008. The completed site inspection checklist is provided in **Attachment 3**. Site inspection tasks included a visual inspection of site features including existing concrete slabs, fences and gates, in addition to inspecting the numerous woody debris piles staged on-site. No site logs, documents, or records were available on-site. Photographs taken during the CWP Site inspection are provided in **Attachment 4**. The site inspection indicated that the chosen remedy appeared appropriate, relating to being protective of human health and the environment, but because the site is currently being used to stage Hurricane Katrina woody debris, the original end use for

the site is not being attained. There was no indication that any disturbance of site soils, such as excavation or grading, had taken place in the recent past. The inspection team consisted of Mr. David Jones and Ms. Jeanne Carroll of the USACE. They were accompanied by Ms. Laura Stankosky of EPA Region 6 and Ms Wanda Ballou, of LDEQ.

# 6.0 Technical Assessment

The Five-Year Review must determine whether the remedy at a site is protective of human health and the environment. The EPA guidance describes three questions used to provide a framework for organizing and evaluating data and information, and to ensure all relevant issues are considered when determining the protectiveness of a remedy.

## 6.1 Question A: Is the Remedy Functioning as Intended by the Decision Documents?

The document that details the remedial decisions for the site is the April 2001 ROD. The ROD set forth the selected remedy for the site as Removal and Thermal Desorption On-Site, with Off-Site Stabilization and Disposal. The selected remedy is a comprehensive approach for this site that addresses all current and potential future risks caused by wastes left in place at depth and implements institutional controls to ensure future site use is consistent with the acceptable risk levels in the on-site soils. The selected remedy, pertaining to on- and off- site soils/sediments as described in the ROD, has been fully implemented; as a result, the remedy is functioning as intended in the ROD. The major components of this remedy are:

- **Excavation of Surface/Near-Surface Soil/Sediment that Exceeds RGs -** Soil/sediment that exceeded RGs were excavated and staged pending treatment/disposal. Excavated soil/sediment that exceeded Land LDRs were be staged separately from excavated soil/sediment that did not exceed LDRs.
- **Thermal Desorption of Excavated Soil/Sediment that Exceeds LDRs** - Excavated soil and sediment exceeding LDRs were prepared for treatment and treated with an on-site thermal desorption unit. TCLP sampling of the residuals was performed prior to off-site disposal.
- **Disposal of Excavated Soil/Sediment** - The excavated soils were tested and disposed of accordingly.
- **Backfilling -** The North and South Property removal areas were backfilled with clean backfill and re-vegetated following confirmation sampling. The excavated portions of the Unnamed Creek were backfilled with clean backfill and an erosion control layer was installed to aid in revegetation.

In addition to these components for soils remediation, the site would also require, as specified in the ROD:

• **Ground water Monitoring -** To ensure that wastes left in place do not affect the ground water, ground water monitoring would be implemented. Soils with organic contamination would be left in place in the subsurface (greater than 5 feet bgs). To ensure protectiveness of ground water, a ground water monitoring system would be necessary to monitor contaminant levels in the ground water. The dry sand that exists from about 25 to 45 feet bgs would also be monitored to ensure no future migration pathway develops. Ground water samples would be collected on an annual basis, but the sampling frequency may be modified if there are statistically significant changes in ground water sample concentrations.
• **Institutional Controls/Deed Restrictions** - Institutional controls were implemented in areas where contaminants were left in place in the subsurface at concentrations above the RGs. Specifically, in accordance with La. Rev. Stat. Ann. § 30:2039 (2000) and La. Admin. Cod tit. 33 § 3525 (1999), the East Feliciana Parish Jury submitted conveyance records as appropriate or as allowed by law to prevent exposure to contaminants remaining on-site on the North Property below three feet bgs .
• **Inspection -** Prior to the completion of the remedial action, EPA conducted a review of the site.

The expected outcome of the selected remedy is that the site would no longer present an unacceptable risk to human health because the contaminated soil and sediment was excavated, treated, and disposed of off-site and the property would be suitable for residential and recreational land use. In addition, institutional controls, such as the deed notice, would prevent future human exposure to soil contamination below three feet. By addressing the unacceptable human health risks in the sediment contamination in the Creek, EPA addressed contamination that affects the wetlands and other habitat in the Creek, thereby providing environmental and ecological benefits such as wetlands restoration.

Ground water monitoring was initially implemented to ensure that the remedy is protective. There is no evidence that historic site activities affected the first true water-bearing zone. Correspondence from LDEQ to EPA **(LDEQ, 2006)**, citing previous ground water data, requested concurrence to abandon the two remaining post-RA wells.

## 6.2 Question B: Are the Exposure Assumptions, Toxicity Data, Cleanup Levels, and Remedial Action Objectives Used at the Time of the Remedy Selection Still Valid?

The purpose of this question is to evaluate the effects of any significant changes in standards or assumptions used at the time of remedy selection. Changes in promulgated standards or "to be considered" and assumptions used in the original definition of the remedial action may indicate that an adjustment in the remedy is necessary to ensure the protectiveness of the remedy.

Changes in ARARs

ARARs for this site were identified in the ROD dated April 2001. The five-year review for this site included identification of and evaluation of changes in the ROD-specified ARARs to determine whether such changes may affect the protectiveness of the selected remedy. The ARARs identified by the ROD for the CWP Site include chemical, action and location specific ARARs, and are described below.

***Chemical-Specific Requirements***

Chemical specific ARARs are usually health or risk based numerical values or methodologies that, when applied to site-specific conditions, result in the establishment of numerical values. These values establish the acceptable amount or concentration of a chemical that may be found in, or discharged to, the environment. Potential exposure pathways for contamination include air and soil. The State of Louisiana has not identified MCL values for PAHs. Also, no Federal or State of Louisiana regulatory cleanup standards had been promulgated for soil; therefore, risk based criteria were identified for this media.

The human health risk based RGs for contaminants of concern were calculated for the North and South Properties based on $1 \times 10^{-6}$ carcinogenic risk using adult and child resident and construction worker exposure scenarios. The resulting arsenic RG for surface soil/sediment was calculated as 0.03 ppm. Since this concentration was lower than the background concentration, and could not be met, the arsenic RG was set at the background concentration of 20 ppm. This corresponds to a residential risk of $1 \times 10^{-4}$.

The human health risk based RGs for contaminants of concern were calculated for the 3-5 foot interval for the North property based on $1 \times 10^{-5}$ carcinogenic risk using a future utility worker scenario. The resulting arsenic RG for surface soil/sediment was calculated as 300 ppm.

The human health risk based RG was calculated for the Unnamed Creek based on $1 \times 10^{-5}$ carcinogenic risk using a recreational youth and adult hunter scenario. The resulting arsenic RG calculated was 160 ppm.

***Action-Specific Requirements***

Action-specific ARARs are typically technology or activity-based requirements applicable to actions involving special categories of wastes. Action-specific requirements are usually triggered by certain remedial activities that may be a component of the overall cleanup alternative. The following action-specific requirements were applicable during remedial actions, but are not still applicable unless further remediation is performed:

- Asbestos Abatement:
  - Toxic Substances Control Act, 40 CFR §763.121
  - Clean Air Act § 112, 42 U.S.C. § 7412.40 CFR Part 61
  - Asbestos Standards for Demolition and Renovation, 40 CFR Part 61.145

- Soil Treatment:
  - Prevention of Significant Deterioration of Air Quality, 42 USC § 7475, 40 CFR § 52.21
  - Hazardous Waste Burned in Boilers and Industrial Furnaces, 40 CPR 266 Subpart H
  - Control Facilities to be Installed when Feasible, 33 LAC:III.905
  - Control of Fugitive Emissions, 33 LAC:III.1305

- Waste Disposal:
  - Land Ban, 40 CFR Part 268, Subpart C - Prohibitions on Land Disposal, Subpart D - Treatment Standards
  - Manifest Requirements, 33 LAC:V.903 (Note: Moved to 33 LAC:V.1516 – Manifests for TSD Facilities)
  - Manifest Document Flow, 33 LAC:V.913 (Note: Moved to 33 LAC:V.1516 – Manifests for TSD Facilities)
  - The Manifest System, 33 LAC:V.1107
  - Manifest System Emergency Response Information, 33 LAC:V.1108
  - Pre-Transport Requirements, 33 LAC:V.1109
  - Preparedness and Prevention, 33 LAC:V.1511

- Permits and Enforcement, CERCLA § 121(e), 42 U.S.C. § 9612(e)
- Monitoring Well Abandonment and Sealing of Bore Holes, 33 LAC:V.3323

***Location-Specific Requirements***

Location-specific ARARs are restrictions placed on remedial activities solely on the basis of the location of the remedial activity. Some examples of locations that might prompt a location-specific ARAR include wetlands, sensitive ecosystems or habitats, floodplains, areas of historical significance. The following location-specific ARARs are applicable:

- Floodplain Management, Executive Order No. 11988
- Fish and Wildlife Coordination Act, 16 USC § 661 et seq., 16 USC § 742a, 16 USC § 2901

The LDEQ and the Federal regulations have not been revised to the extent that the effectiveness of the remedy at the site would be called into question. The Louisiana RECAP standards were updated in 2003; however, no significant changes have been made that would question the site remedy effectiveness. The 2003 RECAP values were used during ground water sampling evaluation and comparisons performed in 2005 for the site. Changes were made to 33 LAC:V where Chapter 9 was repealed on May 20, 2006, but the two ARARs related to that chapter were moved to Chapter 15 (see notes above).

Changes in Exposure Pathways, Toxicity, and Other Contaminant Characteristics.

There have been no changes in exposure pathways, toxicity characteristics, or other contaminant characteristics for the CWP Site. There has been no change to the standardized risk assessment methodology that would affect the protectiveness determination of the remedy.

### 6.3 Question C: Has Any Other Information Come to Light That Could Call into Question the Protectiveness of the Remedy?

No other information, such as a potential future land use change in the vicinity of the site, change in site conditions, or exposure pathways, etc., that might call into question the protectiveness of the selected remedy has been identified with this five-year review that would impact the protectiveness of the remedy.

## 7.0 Issues

During this review, issues were observed at the time of the site inspection, as described in the following table.

| No. | Issues | Affects Protectiveness (Y/N) | |
|---|---|---|---|
| | | Current | Future |
| 1 | The site is being used by East Feliciana Parish for staging woody debris from Hurricane Katrina damage. Most of the debris consists of tree and brush debris. There are, however, several small piles of possible household waste/debris and a pile of large treated wood timbers. The parish indicated that while the site gates have been opened during hurricane tree and brush debris staging that illegal disposal has taken place on the site. This household waste and treated wood timbers may have come from illegal disposal; however, this household waste and treated wood timbers do not meet the conditions of the permit that the parish obtained from the LDEQ for staging of hurricane woody debris and depending on the nature of the waste may potentially re-contaminate the site. Between the time of inspection and when this review report was written a large portion has been removed from the site and properly disposed of off of the site property. | N | Potential Impact |

# 8.0 Recommendations and Follow-Up Actions

Recommended further actions are listed in the table below.

| No. | Recommendations/Follow-up Actions | Party Responsible | Oversight Agency | Milestone Date | Follow-up Actions: Affects Protectiveness (Y/N) | |
|---|---|---|---|---|---|---|
| | | | | | Current | Future |
| 1a | Work with East Feliciana Parish to ensure removal of the household waste/debris and treated wood timbers. | LDEQ | EPA | October 2009 | N | Y |
| 1b | Work with East Feliciana Parish to ensure that illegal disposal is not allowed to continue. | LDEQ | EPA | October 2009 | N | Y |

# 9.0 Protectiveness Statement

Based on the information available during this first Five-Year Review, the selected remedy is performing as intended. The selected remedy is currently protective of human health and the environment in the short term. This determination is based on the results from treated waste and soil sampling and shallow ground water sampling. It is also based on the fact that wastes and contaminated soils have been removed from the site or treated through LTTD, and those wastes remaining, greater than five feet in depth, are addressed with the implementation of institutional controls. For the remedy to remain protective in the long-term the site should not be used for staging of household waste/debris or treated wood timbers, the security fencing around the site should be maintained to prevent illegal disposal, the conveyance notice should be maintained, and contamination remaining below five feet must remain un-exposed.

# 10.0 Next Review

The next Five-Year Review, the second for this site, should be completed by April, 2014. The review should focus primarily on an update to the status of the site and that implemented institutional controls are being maintained.

# Figures and Tables

NORTH PROPERTY

SOUTH PROPERTY

APPROXIMATE LOCATION OF ADJACENT RESIDENCES

EPA FENCE LINE

ORIGINAL FACILITY FENCE LINE

UNNAMED CREEK

REMNANT OF ORIGINAL CONTAINMENT BASIN WALL

REVISED PROPERTY BOUNDARY IN ACCORDANCE WITH BOUNDARY AGREEMENT BETWEEN EAST FELICIANA PARISH AND SUCCESSION OF BOB R. JONES, DATED JULY 12, 2002 (REPLACES PORTION OF ORIGINAL PROPERTY BOUNDARY BETWEEN ARROWS.)

ORIGINAL PROPERTY BOUNDARY

BLDG 1

BLDG 2

BLDG 4

BLDG 5 (SLAB ONLY)

BLDG 7

BLDG 8

BLDG 9

BLDG 10

BLDG 13

BLDG 14

BLDG 15

BLDG 16

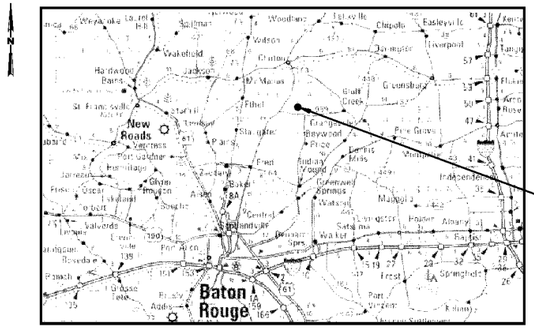
BLDG 17

BLDG 18

BLDG 19 (SLAB ONLY)

WATER WELL

STATE HIGHWAY 959




CENTRAL WOOD PRESERVING SITE


LOUISIANA

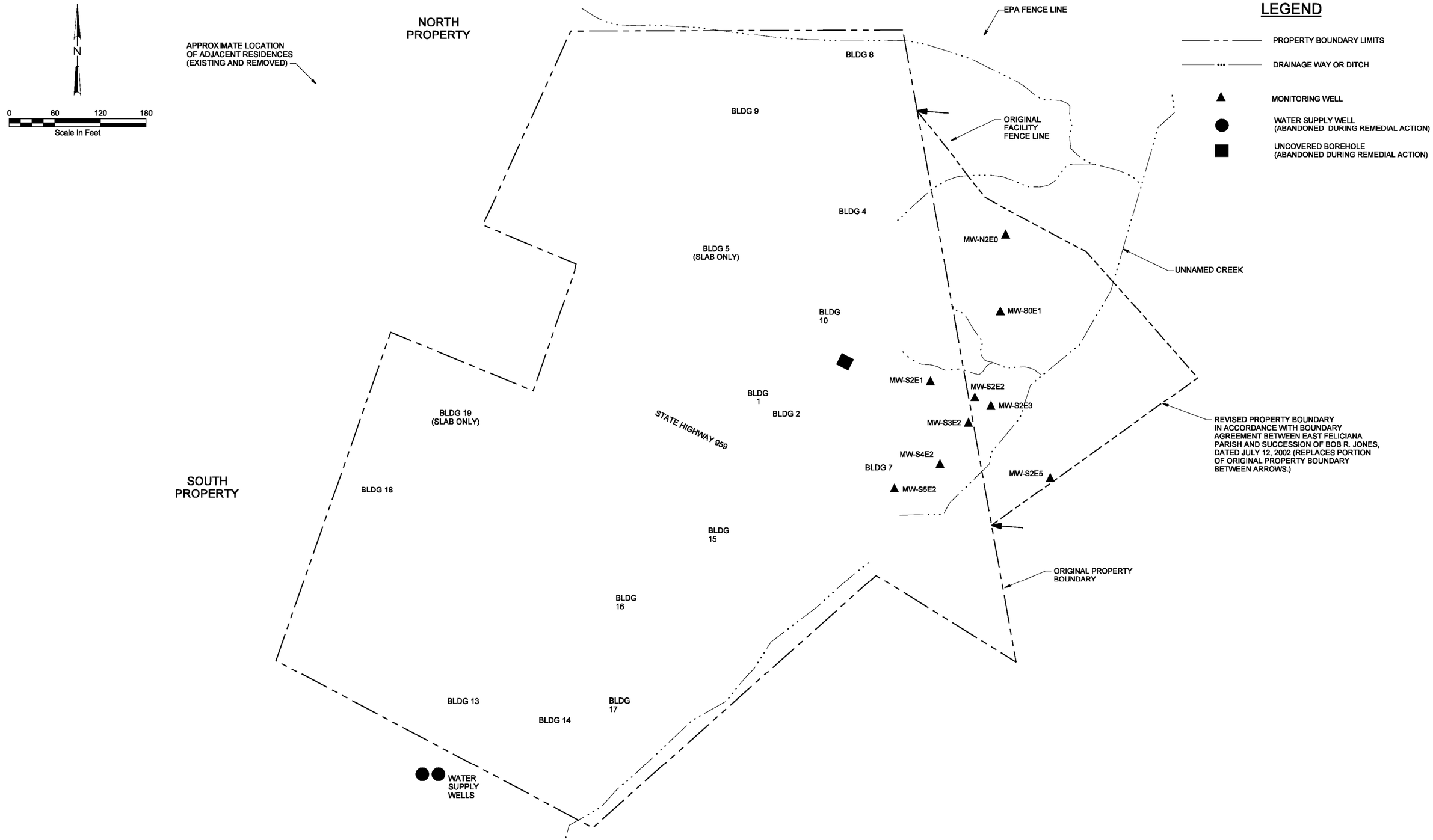
LEGEND

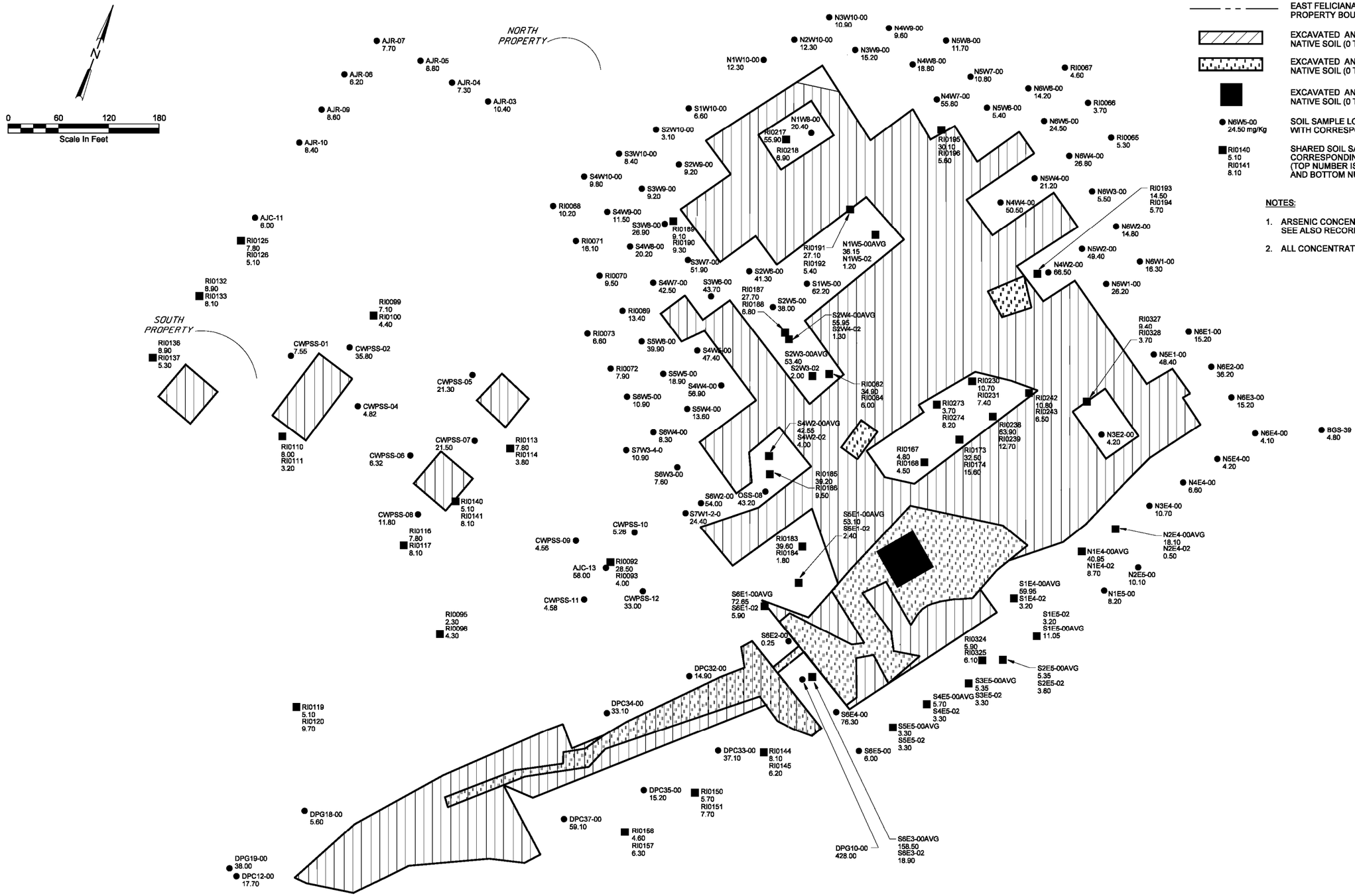
EXISTING STRUCTURES

APPROXIMATE LOCATION OF REMOVED STRUCTURES

APPROXIMATE 1995 REMOVAL AREA

CWP PROPERTY BOUNDARY


N
0
60
120
180
Scale In Feet
APPROXIMATE LOCATION
OF ADJACENT RESIDENCES
(EXISTING AND REMOVED)
NORTH
PROPERTY
EPA FENCE LINE
BLDG 8
BLDG 9
ORIGINAL
FACILITY
FENCE LINE
BLDG 4
MW-N2E0
BLDG 5
(SLAB ONLY)
UNNAMED CREEK
BLDG
10
MW-S0E1
MW-S2E1
MW-S2E2
MW-S2E3
BLDG
1
BLDG 2
MW-S3E2
BLDG 19
(SLAB ONLY)
STATE HIGHWAY 959
MW-S4E2
BLDG 7
MW-S2E5
MW-S5E2
SOUTH
PROPERTY
BLDG 18
BLDG
15
BLDG
16
ORIGINAL PROPERTY
BOUNDARY
BLDG 13
BLDG
17
BLDG 14
WATER
SUPPLY
WELLS
LEGEND
PROPERTY BOUNDARY LIMITS
DRAINAGE WAY OR DITCH
MONITORING WELL
WATER SUPPLY WELL
(ABANDONED DURING REMEDIAL ACTION)
UNCOVERED BOREHOLE
(ABANDONED DURING REMEDIAL ACTION)
REVISED PROPERTY BOUNDARY
IN ACCORDANCE WITH BOUNDARY
AGREEMENT BETWEEN EAST FELICIANA
PARISH AND SUCCESSION OF BOB R. JONES,
DATED JULY 12, 2002 (REPLACES PORTION
OF ORIGINAL PROPERTY BOUNDARY
BETWEEN ARROWS.)

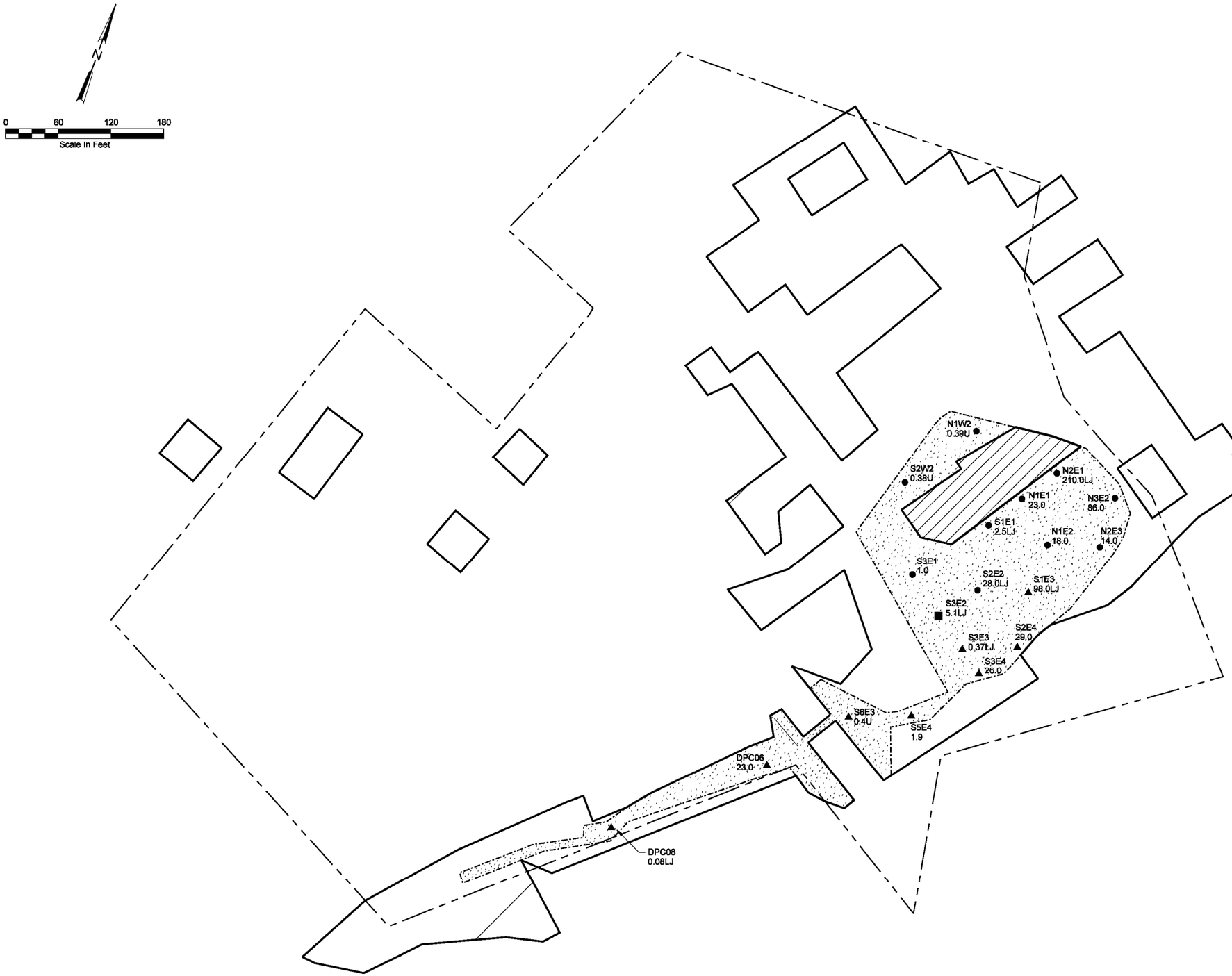



## LEGEND

- EAST FELICIANA PARISH PROPERTY BOUNDARY LIMITS
- EXCAVATED AND BACKFILLED WITH NATIVE SOIL (0 TO 1.5 FT BGS)
- EXCAVATED AND BACKFILLED WITH NATIVE SOIL (0 TO 3 FT BGS)
- EXCAVATED AND BACKFILLED WITH NATIVE SOIL (0 TO 5 FT BGS)
- N6W5-00 24.50 mg/Kg — SOIL SAMPLE LOCATION (0 TO 1.5 FT BGS) WITH CORRESPONDING ARSENIC CONCENTRATION
- RI0140 5.10 RI0141 8.10 — SHARED SOIL SAMPLE LOCATIONS AND CORRESPONDING ARSENIC CONCENTRATION (TOP NUMBER IS 0 TO 1.5 FT BGS AND BOTTOM NUMBER IS 1.5 TO 3 FT BGS)

NOTES:

1. ARSENIC CONCENTRATIONS IN THE BACKFILL SOIL AVERAGED 4.85 mg/Kg. SEE ALSO RECORD DRAWING M-3.
2. ALL CONCENTRATIONS ARE IN mg/Kg.

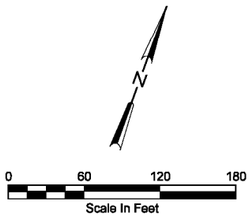


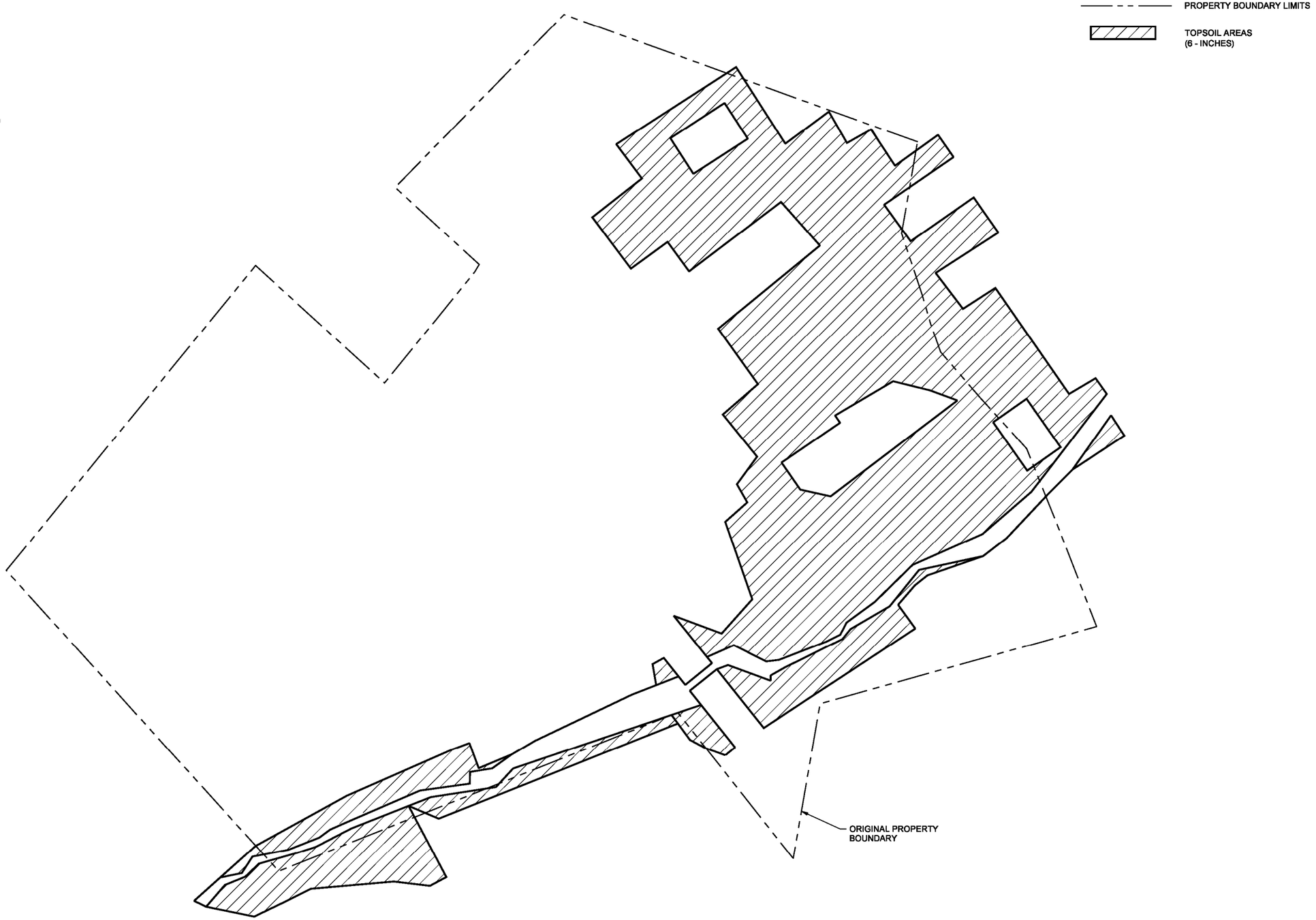

## LEGEND

- PROPERTY BOUNDARY LIMITS,
- AREA EXCAVATED
- AREA EXCAVATED AND THERMALLY TREATED TO BELOW PAH LDR's
- AREA NOT EXCAVATED
- ● N2E1 1.0 — RECORD SAMPLE FROM 1.5 FT BGS AND CORRESPONDING CONCENTRATION IN mg/Kg
- ▲ S1E3 1.0 — RECORD SAMPLE FROM 3.0 FT BGS AND CORRESPONDING CONCENTRATION IN mg/Kg
- ■ S3E2 1.0 — RECORD SAMPLE FROM 5.0 FT BGS AND CORRESPONDING CONCENTRATION IN mg/Kg

NOTES:

1. BENZO (a) ANTHRACENE WAS SELECTED AND MAPPED AS AN INDICATION OF THE EXTENT OF PAH CONTAMINATION IN SOIL AND SEDIMENT BECAUSE IT WAS THE MOST FREQUENTLY DETECTED ABOVE THE RECAP SCREENING CRITERIA DURING THE REMEDIAL INVESTIGATION.
2. SEE APPENDIX H FOR DEFINITION OF DATA QUALIFIERS.




RACR_FIG3-3.dgn

N

0 60 120 180

Scale In Feet

## LEGEND

- DEEP MONITORING WELL (~ 65 FEET)
- PROPERTY BOUNDARY LIMITS

ROBERT L. ANDERSON
(NOW OR FORMERLY)

NORTH PROPERTY

THE J.B. HERROD TRUST

FINAL PROPERTY BOUNDARY AS ACCORDING TO THE BOUNDARY SURVEY PERFORMED BY SJB GROUP, INC.

4' HOG-WIRE W/ BARBED-WIRE FENCE

OLD BARB WIRE FENCE ON LINE

4' HOG-WIRE W/ BARBED-WIRE FENCE

EXTRA PARKING LOT GRAVEL PILE

APPROXIMATE LOCATIONS OF CLEARED VEGETATION BURN PIT (BACKFILLED WITH NATIVE SOIL)

EXISTING STRUCTURE

EXISTING STRUCTURE

6' CHAIN-LINK FENCE

SUCCESSION OF BOB R. JONES, et al

CONCRETE SLAB (COVERED WITH TOPSOIL AND SEEDED)

GATE

GRAVEL DRIVEWAY

6' CHAIN-LINK FENCE

UTILITY POLE

WATER VALVE

GRAVEL PARKING LOT (NORTH)

4' BARBED-WIRE FENCE ON-LINE

SOUTH PROPERTY

4' BARBED-WIRE FENCE ON-LINE

GATE

6' CHAIN-LINK FENCE

GRAVEL PARKING LOT (SOUTH)

GATE

GATE

LA HWY 959 (ASPHALT)

UNNAMED CREEK

CONCRETE SLAB (COVERED WITH TOPSOIL AND SEEDED)

6' CHAIN-LINK FENCE

MW-1

4' HOG-WIRE W/ BARBED-WIRE FENCE

MW-S2E5

APPROXIMATE LOCATIONS OF CLEARED VEGETATION BURN PITS (BACKFILLED WITH NATIVE SOIL)

HISTORIC SAWMILL EQUIPMENT STAGING

6' CHAIN-LINK FENCE

CLEARED VEGETATION MULCH PILE

CONCRETE SLAB

MILL LANE (GRAVEL)

TRACT "X"

GRAVEL ROAD

OPEN DITCH

ALINE M. HERROD ESTATE

LOT C-2
ALINE M. HERROD ESTATE

**Table 1**
**Chronology of Site Events**
*Central Wood Preserving Company*
*East Feliciana parish, Louisiana*

| Date | Event |
|---|---|
| 1950s | Wood preserving facility begins operations under the name of Central Creosoting Company, Incorporated. Creosote was used exclusively as the wood preservative. |
| January 3,1973 | Facility was sold and began operating under the name of Central Wood Preserving Company, Inc. During this year the use of creosote was discontinued, and the facility began using Wolmanac |
| November 1983 | The CWP facility was confirmed as a RCRA small quantity generator of hazardous waste composed of copper oxide, chromic acid, and arsenic acid (CCA, or Wolmanac). |
| January 1, 1991 | CWP, Inc., declared bankruptcy and ceased operations. |
| March 4, 1992 | LDEQ confirmed the wood preserving/processing portion of the site to be inactive. |
| March 17, 1992 | LDEQ conducts a site visit to document location of structures, spilss, and drainage pathways. |
| April 3, 1992 | LDEQ informs EPA that the facility is a potential hazardous waste site and formally requests EPA assistance. |
| June 1992 | Technical Assistance Team (TAT) is directed by ERB to conduct an (initial) Site Assessment (SA) |
| July – October 1992 | TAT conducts initial SA: Phase I SA conducted during this activity |
| January 1993 | Initial SA Report submitted |
| June 1, 1993 | Following review of initial SA Report, ERB directs TAT to conduct additional SA |
| July 1993 | Phase II SA sampling performed; a grid system is established and surface soil samples collected |
| September 1993 | Phase III SA sampling performed; grid system is expanded and surface, subsurface, and creek bed samples collected |
| November 9, 1993 | ATSDR approves established action levels for arsenic and chromium (50 mg/kg and 200 mg/kg respectively) |
| November 1993 | Phase IV SA sampling performed; surface, subsurface, storage tank, and creek bed samples collected. Findings indicate contamination is present beyond CWP boundaries. A deed and title search for adjacent properties commences. |
| August 1994 | TAT is directed by EPA to conduct a Preliminary Assessment (PA) based on a concern for surface water pathway and soil exposure |
| January 3, 1994 | TAT, OSC, and LDEQ meet on-site to discuss disposal options for contaminated soils. LDEQ provides OSC with requested water well information. Trans-River CO, on-site dismantling the sawmill, is informed of the OSHA regulations governing an uncontrolled hazardous waste site. |
| April – June 1994 | Phase V SA sampling performed on adjacent site properties south of site and along creek bed. TAT collects data for PA of the site for HRS ranking. |
| October 31, 1994 | PA report submitted in order to determine CERCLA eligibility and whether further investigations warranted. The SA had been completed at the time of submittal of the PA. Based on the PA, a Site Inspection (SI) is recommended to determine candidacy to NPL and to address data gaps. |
| November – December 1994 | SI initiated. Samples collected including 37 sediment/soil samples and background samples. Results of SI prompt an Expanded SI |
| March 27, 1995 | SA Report submitted |
| March 30, 1995 | SI Rep[ort Submitted |
| April 3, 1995 | Action Memorandum was issued for the time-critical removal action completed by EPA to provide source control. |
| April 5, 1995 | TAT is tasked to provide technical assistance during removal activities |
| April 12, 1995 | Time-critical removal action initiated. |
| April – July 1995 | Removal activities occur |
| June 15, 1995 | ESI work plan is submitted |
| June – July 1995 | ESI activities occur including collection of 30 soil/sediment samples targeting adjacent properties |
| November 6, 1995 | Removal Funded Report submitted |
| December 27, 1995 | ESI Report submitted |
| August 4, 1998 | EPA issued CH2M HILL a work assignment to perform a Remedial Investigation/ Feasibility Study for the site. |
| January 19,1999 | EPA proposed the site for inclusion on the NPL. |
| April 29, 1999 | Summary Appraisal Report for site submitted |
| April 1999 | Community Involvement Plan submitted |

**Table 1**
**Chronology of Site Events**
*Central Wood Preserving Company*
*East Feliciana parish, Louisiana*

| | |
|---|---|
| May 10,1999 | The CWP Superfund Site was listed on the NPL. |
| September 2000 | Remedial Investigation completed and report submitted |
| September 2000 | Human Health Risk Assessment completed |
| September 2000 | Ecological Risk Assessment completed |
| November 2000 | Feasibility Study completed. |
| April 5, 2001 | EPA signed the Record of Decision for the site. |
| September 4, 2001 | US Department of Health and Human Services submits Public Health Assessment for site |
| November 2001 | Ground water sampling of three of the nine on-site wells |
| May 2002 | Remedial Design completed. |
| November 13, 2003 | Remedial Action Work Plan approved by EPA. |
| December 8, 2003 | RA Site Preparation Activities commenced. |
| August 25, 2004 | RA Construction Activities and Pre-Final Inspection completed. |
| September 2004 | Preliminary Closeout Report (PCOR) signed by EPA. |
| October 2004 | Site Restoration activities commenced. |
| January 2005 | Ground water sampling of two on-site wells |
| March 2005 | Remedial Action Report submitted |
| June 23 2005 | First Quarterly Ground water Report submitted (for January 2005 sampling) |
| June 2005 | Ground water sampling of two on-site wells |
| September 30, 2005 | East Feliciana Police Jury submits Conveyance Notification to Clerk of Court |
| October 2005 | Ground water sampling of two on-site wells |
| October 7-8, 2005 | Surface soil sampling from 0-3 inches to determine any impact from hurricane Katrina |
| February 2006 | Additional surface soil sampling conducted to better delineate post-Katrina sampling grids |
| May 2006 | 980 cubic yards soils sent off-site for disposal based on post-Katrina sampling |
| June 7 2006 | June 5 2005 Ground water Report submitted |
| June 26, 2006 | Final Closeout Report signed by EPA |
| September 15, 2006 | LDEQ submits request to EPA to plug and abandon two on-site ground water monitoring wells |
| December 1, 2008 | Site Inspection of the CWP site conducted by EPA, LDEQ, and USACE |
| February 18 2009 | Public notice announcing commencement of the First Five-Year Review place in *Baton Rouge Advocate* |
| April 2009 | First Five-Year Review submitted |

# Table 2 Groundwater Analytical Results

| Sample ID | MCL | RECAP | EF10[5] | N2E0-GW | S2E5-GW | S5E2-GW | S2E2-GW | S3E2-GW | N2E0-GW | S2E5-GW | S5E2-GW | S2E5-GW | MW-1 | MW-1 FD | S2E5-GW | MW-1 | MW-1 FD | S2E5-GW | S2E5-GW-FD | MW-1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 137' | 65' | 65' | 65' | 10' | 10' | 65' | 65' | 65' | 65' | 65' | 65' | 65' | 65' | 65' | 65' | 65' | 65' |
| | | | June 1999 | | | | | | November 2001 | | | January 2005 | | | June 2005 | | | October 2005 | | |
| ***VOCs (ug/L)*** | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroeth | 5 | 5 | <1 | **2** | <0.5 | **2** | <1 | <10 | <5 | <5 | <5 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| 2-Hexanone | NA | | <2 | <2 | <2 | <2 | **11** | <20 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Acetone | | 100 | <32 | <2 | <2 | <2 | **1,800 J** | **84 J** | <20 | <20 | <20 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Benzene | 5 | 5 | <1 | <1 | <1 | <1 | <1 | **3 J** | <5 | <5 | <5 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Carbon Tetrach | 5 | 5 | **0.5 J** | <1 | <1 | <1 | <1 | <10 | <5 | <5 | <5 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Chloroform | 100 | 100 | **1 J** | **3** | **2** | **1** | <1 | <10 | <5 | <5 | <5 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Ethylbenzene | 700 | 700 | NT | <1 | <1 | <1 | **8** | <10 | <5 | <5 | <5 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Methyl Ethyl Ketone (2-Butanor | | 190 | **13 J** | <2 | <2 | <2 | <2 | <20 | <20 | <20 | <20 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Styrene | 100 | 100 | NA | <1 | <1 | <1 | **1** | <10 | <5 | <5 | <5 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Toluene | 1000 | 1000 | **2 J** | <1 | <1 | <1 | **34** | <10 | <5 | <5 | <5 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Xylenes, total | 10000 | 10000 | NT | <1 | <1 | <1 | **28** | **3 J** | <5 | <5 | <5 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| ***Metals (ug/L)*** | | | | | | | | | | | | | | | | | | | | |
| Arsenic | 10 | 10 | **35.4** | <1.7 | <1.8 | <1.7 | **68.7** | **7,530** | **0.54** | **1.37** | **0.64** | <1 | <1 | <1 | <2 | <2 | <2 | <40 | <40 | <40 |
| Barium | 2000 | 2000 | NT | **35.1 J** | **38.7 J** | **46.8 J** | **162 J** | **1,160 J** | **39.9** | **29.1** | **42** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Boron | | | NT | NT | NT | NT | NT | NT | <10 | **17** | <10 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Calcium | | | NT | NT | NT | NT | NT | NT | **4.58** | **4.46** | **7.11** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Chromium, Tot | 100 | 100 | **10.8** | **32.4** | **0.73** | <0.5 | **1.8 J** | **6.8 J** | **2.1** | **2.41** | **2.46** | <1 | <1 | <1 | **7.8** | **6** | **5.4** | <1.7 | <2 | <1.3 |
| Copper | 1,300 | 1,300 | NT | <0.5 | <0.5 | <0.5 | **8.5** | **10.5** | **4.6** | **4.66** | **3.43** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Lead | 15 | 15 | NT | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <.5 | **0.7** | **1.56** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Iron | | | NT | NT | NT | NT | NT | NT | <10 | **16** | **1090** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Magnesium | | | NT | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | **1.45** | **1.57** | **2.48** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Manganese | | | NT | **79.5 J** | **50.5 J** | **100 J** | **3,270 J** | **18,000 J** | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Potassium | | | NT | NT | NT | NT | NT | NT | **2.76** | <2 | <2 | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Selenium | 50 | 50 | NT | <6.3 | <4.6 | <4 | <4.8 | <3.1 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Silicon | | | NT | NT | NT | NT | NT | NT | **4.84** | **5.16** | **8.15** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Sodium | | | NT | NT | NT | NT | NT | NT | **44.3** | **35.5** | **41.5** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Strontium | | | NT | NT | NT | NT | NT | NT | **80** | **12** | **25** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| Zinc | | 1100 | NT | **96.8 J** | **19.2 J** | **86.6 J** | **99.9 J** | **137 J** | **58.6** | **15.4** | **30.8** | NT | NT | NT | NT | NT | NT | NT | NT | NT |
| ***SVOCs (ug/L)*** | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | 73 | NT | <10 | <10 | <10 | **350** | **420** | <10 | <10 | <10 | <2 | <2 | <2.2 | <2 | <2 | <2 | <10 | <10 | <10 |
| 2-Methylnapthalene | | 0.62 | <10 | <10 | <10 | <10 | **280** | **54 J** | NT | NT | NT | <0.5 | **0.6** | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <10 | <10 |
| 2-Methylphenol (o-Cresol) | | | NT | <10 | <10 | <10 | **220** | **640** | NT | NT | NT | <2 | <2 | <2.2 | <2 | <2 | <2 | <10 | <10 | <10 |
| 4-Methylphenol (p-Cresol) | | | NT | <10 | <10 | <10 | **810** | **550** | NT | NT | NT | <2 | <2 | <2.2 | <2 | <2 | <2 | <10 | <10 | <10 |
| Acenapthene | 37 | 37 | <10 | <10 | <10 | <10 | **440** | **230** | <10 | <10 | <10 | <0.5 | **5.2** | **4.9** | <0.5 | <0.5 | <0.5 | <10 | <10 | <10 |
| Anthracene | 43 | 43 | <10 | <10 | <10 | <10 | **22 J** | <10 | <10 | <10 | <10 | <0.5 | **0.8** | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <10 | <10 |
| bis(2-ethylhexy | 6 | 6 | NT | <10 | <26 | <10 | <200 | **110 J** | <10 | <10 | <10 | <2 | <2 | <2.2 | <2 | <2 | <2 | <10 | <10 | **12.9** |
| Carbazole | | | NT | <10 | <10 | <10 | **310** | **66 J** | NT | NT | NT | <2 | <2 | <2.2 | <2 | <2 | <2 | <10 | <10 | <10 |
| Dibenzofuran | 2.4 | 10 | NT | <10 | <10 | <10 | **270** | **130 J** | NT | NT | NT | <2 | **2.3** | <2.2 | <2 | <2 | <2 | <10 | <10 | <10 |
| Flouranthene | 150 | 150 | NT | <10 | <10 | <10 | <20 | <20 | <10 | <10 | <10 | <0.5 | **4.7** | **2.1** | <0.5 | <0.5 | <0.5 | <10 | <10 | <10 |
| Flourene | 24 | 24 | <10 | <10 | <10 | <10 | **250** | **110 J** | <10 | <10 | <10 | <0.5 | **3.6** | **1.2** | <0.5 | <0.5 | <0.5 | <10 | <10 | <10 |
| Napthalene | 10 | 10 | <10 | <10 | <10 | <10 | **1,500** | <200 | <10 | <10 | <10 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <10 | <10 |
| Phenanthrene | | 180 | <10 | <10 | <10 | <10 | **190 J** | **40 J** | <10 | <10 | <10 | <0.5 | **4.1** | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <10 | <10 |
| Phenol | | 180 | NT | <10 | <10 | <10 | **100 J** | **220** | <10 | <10 | <10 | <2 | <2 | <2.2 | <2 | <2 | <2 | <10 | <10 | <10 |
| Pyrene | 18 | 18 | <10 | <10 | <10 | <10 | <20 | <20 | <10 | <10 | <10 | <0.5 | **2.9** | **1.2** | <0.5 | <0.5 | <0.5 | <10 | <10 | <10 |

1.) NT = Not Tested for

2.) Blank data blocks = no MCL or RECAP values listed

3.) Bolded numbers indicate a concentration above detection limits

4.) Shaded blocks represent values greater than one or more screening levels

5.) Well EF10 is an old supply well found on-site abandoned during the RI

**TABLE 3 SUMMARY OF GROUND WATER WELL WATER LEVEL MEASUREMENTS – NOVEMBER 2001**

| Well ID | Top of Casing Elevation | Ground Water Elevation | Depth to Free Product | Depth to Water | Depth to Well Bottom |
|---|---|---|---|---|---|
| Deep Wells | | | | | |
| MWN2E0 | 179.66 | 127.75 | ND | 51.91 | 67.3 |
| MWS2E5 | 176.58 | 127.53 | ND | 49.05 | 68.85 |
| MWS5E2 | 177.26 | 127.65 | ND | 49.61 | 67.89 |
| Intermediate Wells | | | | | |
| MWS0E1 | 178.24 | 132.25 | ND | 45.99 | 46.05 |
| MWS2E1 | 178.65 | 132.48 | ND | 46.17 | 47.52 |
| MWS4E2 | 179.94 | 138.26 | ND | 41.68 | 41.7 |
| Shallow Wells | | | | | |
| MWS2E2 | 178.97 | 172.03 | @12.95 | 6.94 | 13.02 |
| MWS2E3 | 179.66 | 171.81 | ND | 7.85 | 13.02 |
| MWS3E2 | 179.98 | 172.63 | 13.01 | 7.35 | 13.33 |

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# and
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U. S. Department of Health and Human Services 2001. *Final Close Out Report Central Wood Preserving Company, East Feliciana Parish, Louisiana.* June 26, 2006.

# Attachment 2

# Interview Record Forms

| Site Name: Central Wood Superfund Site | | EPA ID No.: LAD008187940 | |
|---|---|---|---|
| Subject: Five-Year Review – 1st | | Time: 3:45 pm | Date: 1-30-09 |
| Type: □ Telephone □ Visit X Other<br>Location of Visit: electronic mail | | □ Incoming □ Outgoing | |
| **Contact Made By:** | | | |
| Name: Laura Stankosky | Title: RPM | Organization: U.S. EPA | |
| **Individual Contacted:** | | | |
| Name: Wanda Ballou | Title: LDEQ Project Manager | Organization: LDEQ | |
| Telephone No: 225-219-3223<br>Fax No: 225-219-3239<br>E-Mail Address: wanda.ballou@la.gov | | Street Address: 602 N. Fifth Street<br>City, State, Zip: Baton Rouge, LA 70884 | |

## Summary Of Conversation

1. What is your overall impression of the project? (general sentiment)

The site is currently being used as a staging area for hurricane debris as well as a wood waste debris storage site. As I understand it, the site has been granted approval to operate as a temporary storm debris management unit.

2. What effects have post-construction site activities in the last five years had on the surrounding community?

The site was remediated to standards for residential reuse.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

About 3 years ago, we received several complaints from the citizens of loud noises due to trucks dumping wood waste debris and open burning. Our investigation of the site revealed several piles of wood waste along with a couple of piles of creosote treated lumber as well as painted lumber from construction demolition of wood-type structures. We also found a few small piles of trash. There were no signs of open burning.

However, an inspection dated January 27, 2009, revealed that about a third of wood waste debris had been removed.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

No.

5. Do you feel well informed about the site's activities and progress?

Yes.

6. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

Yes. The site has been inspected on a semi-annual basis for the purpose meeting our internal requirement of inspecting the site semi-annually.

7. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

See number 3.

8. Is the remedy functioning as expected? How well is the remedy performing?

The remedy appears to be functioning as expected. The cover remains intact. There is no evidence of erosion.

9. What does the monitoring data show? Are there any trends that show contaminant levels are decreasing?

N/A

10. Is there a continuous on-site O&M presence? If so, please describe staff and activities. If there is not a continuous on-site presence, describe staff and frequency of site inspections and activities.

No.

11. Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines since start-up or in the last five years? If so, do they affect the protectiveness or effectiveness of the remedy? Please describe changes and impacts.

The remediation activity for this has been completed.

12. Have there been unexpected O&M difficulties or costs at the site since start-up or in the last five years? If so, please give details.

N/A

13. Have there been opportunities to optimize O&M, or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.

N/A

14. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

No, not at this time.

# INTERVIEW RECORD

| | | |
|---|---|---|
| **Site Name: Central Wood Superfund Site** | | **EPA ID No.: LAD008187940** |
| **Subject: Five-Year Review – 1st** | | **Time: 1:15 pm** **Date: 12-1-08** |
| **Type:** □ Telephone X Visit □ Other<br>**Location of Visit:** | | □ Incoming □ Outgoing |
| **Contact Made By:** | | |
| **Name: Laura Stankosky** | **Title: RPM** | **Organization: U.S. EPA** |
| **Individual Contacted:** | | |
| **Name: Greg Beauchamp** | **Title: Director of Public Works** | **Organization: East Feliciana Parish** |
| **Telephone No: (225) 683-3104**<br>**Fax No:**<br>**E-Mail Address:** | **Street Address: 11046 Parish Banks Rd**<br>**City, State, Zip: Clinton, LA 70722** | |

## Summary Of Conversation

1. What is your overall impression of the project? (general sentiment)

Site is currently owned and used by East Feliciana Parish.

2. What effects have site operations had on the surrounding community?

Site was cleaned up and is currently used to hold tree debris from Hurricane Katrina damage.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

No concerns. The community wants to use the Site as a park.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

There have been minor instances of illegal dumping when the gate was left open during brush and tree removal after the hurricane.

5. Do you feel well informed about the site's activities and progress?

As one of the parish managers I do feel well informed of site activity.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

The parish manages the Site. We are currently trying to determine what to do with the tree debris to get it off of the Site. The Site is mowed twice during the Spring.

# Attachment 3

# Site Inspection Checklist

# Five-Year Review Site Inspection Checklist

| I. SITE INFORMATION | |
|---|---|
| **Site name: Central Wood Preserving Superfund Site** | **Date of inspection: December 1, 2008** |
| **Location and Region: East Feliciana Parish** | **EPA ID: LAD008187940** |
| **Agency, office, or company leading the Five-Year Review: USACE** | **Weather/temperature: clear, mostly sunny, 65 ° F** |

**Remedy Includes**: (Check all that apply)

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

**Attachments:** • Inspection team roster attached • Site map attached

*Inspection Team: David Jones and Jeanne Carroll of USACE; Laura Stankosky of EPA; Wanda Ballou of LDEQ*

**II. INTERVIEWS** (Check all that apply)

1. **O&M site manager**
   Name: *Wanda Ballou* Title: LDEQ Project Manager Manager Date: 1/30/09
   Interviewed • at site • at office ✓ by email
   Problems, suggestions: *see interview form*

2. **DIRECTOR OF PUBLIC WORKS**
   Name: *Gary Beauchamp* Title: Director of Public Works Date: 12/1/08
   Interviewed ✓ at site • at office • by phone
   Problems, suggestions: *see interview form*

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency Louisiana Department of Environmental Quality
Contact
Name: *Wanda Ballou* Title: *LDEQ Project Manager* Date Phone no. **:** *225-219-3223*

Problems; suggestions:
_____

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.

Interview record forms are provided in Attachment 2 to the Five-Year Review.

## III. ON-SITE DOCUMENTS & 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
   - • O&M logs • Readily available • Up to date ✓ N/A

   *Post-RA data reviewed. Ground water monitoring has been discontinued at the request of LDEQ and because no site constituents found in ground water for several rounds of monitoring.*

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: *Records/reports available.*

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: There is a six foot high chain link fence, with locked gates, along highway 959 for both the North and South properties; this restricts access to vehicular traffic. Foot access is readily available to both site portions as fence lines for the remainder of the site (not adjacent to highway 959) is either non-existent or simple two- or three strand barb wire.

## 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

Remarks: *Ground water monitoring wells have been plugged and abandoned. Mowing and grubbing not occurring as wood debris piles cover a large portion of the site.*

2. **O&M Cost Records**

• Readily available • Up to date
• Funding mechanism/agreement in place (entirely funded by PRP)
✓ NA

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

Describe costs and reasons: *N/A*

## V. ACCESS AND INSTITUTIONAL CONTROLS • Applicable • N/A

### A. Fencing

1. **Fencing damaged** • Location shown on site map ✓ Gates secured • N/A

Remarks. *There is a six foot high chain link fence, with locked gates, along SH 959 for both the North and South properties; this restricts access to vehicular traffic. Foot access is readily available to both site portions as fence lines for the remainder of the site (not adjacent to highway 959) is either non-existent or simple two- or three strand barb wire.*

### B. Other Access Restrictions

1. **Signs and other security measures** • Location shown on site map • N/A

Remarks: *There are no signs of any type either identifying the site as a Superfund site or restriction access.*

**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: *Conveyance Notice*
Frequency:
Responsible party/agency: *East Feliciana Parish owns site property*

Contact:
Name: *East Feliciana Parish Police Jury* Title: *N/A* Date *9/30/2005* Phone no. *(225) 683-5145*

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

Remarks: *The ROD proposed that easements, covenants running with the land, and/or deed notices as appropriate or as allowed by law will be implemented to prevent exposure to contaminants remaining on-site on the North Property below 5 feet bgs (this area includes the drainage pathway located outside the legal boundaries of the property that was originally owned by CWP [now East Feliciana Parish]). ICs are in place.*

2. **Adequacy** ✓ ICs are adequate • ICs are inadequate • N/A
Remarks_____

**D. General**

1. **Vandalism/trespassing** • Location shown on site map ✓ No vandalism evident

2. **Land use changes on site** • N/A
Remarks: *The site was originally intended to be used as a park, but is currently being used to stage woody debris from Hurricane Katrina forest damage.*

3. **Land use changes off site** ✓ N/A
Remarks_____

## VI. GENERAL SITE CONDITIONS

**A. Roads** ✓ Applicable • N/A

1. **Roads damaged** • Location shown on site map ✓ Roads adequate • N/A
Remarks_____

**B. Other Site Conditions**

Remarks _____

_____

_____

_____

_____

_____

**VII. ENGINEERED COVERS** • Applicable ✓ N/A

**A. Surface**

1. **Settlement** (Low spots) • Location shown on site map • Settlement not evident
   Areal 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
   Areal extent_____ Depth_____
   Remarks_____
   _____:

4. **Holes** • Location shown on site map • Holes not evident
   Areal 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 (armored rock, concrete, etc.)** • N/A
   Remarks_____
   _____

7. **Bulges** • Location shown on site map ✓ Bulges not evident
   Areal extent_____ Height_____
   Remarks_____
   _____

8. **Wet Areas/Water Damage** • Wet areas/water damage not evident
   • Wet areas • Location shown on site map Areal extent_____
   • Ponding • Location shown on site map Areal extent_____
   • Seeps • Location shown on site map Areal extent_____
   • Soft subgrade • Location shown on site map Areal extent_____
   Remarks_____
   _____

9. **Slope Instability** • Slides • Location shown on site map • No evidence of slope instability
Areal extent_____
Remarks_____

**B. Benches** • Applicable ✓ N/A
Remarks_____

1. **Flows Bypass Bench** • Location shown on site map • okay
Remarks_____

2. **Bench Breached** • Location shown on site map • okay
Remarks_____

3. **Bench Overtopped** • Location shown on site map • okay
Remarks_____

**C. Letdown Channels** • Applicable ✓ N/A
Remarks_____

1. **Settlement** • Location shown on site map • No evidence of settlement
Areal extent_____ Depth_____
Remarks_____

2. **Material Degradation** • Location shown on site map • No evidence of degradation
Material type_____ Areal extent_____
Remarks_____

3. **Erosion** • Evidence of Erosion • No evidence of erosion
Areal extent_____ Depth_____
Remarks_____

4. **Undercutting** • Evidence of undercutting • No evidence of undercutting
Remarks_____

5. **Obstructions** Type_____ • No obstructions
• Location shown on site map Areal 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 Areal extent_____
Remarks_____

**D. Cover Penetrations** • Applicable ✓ N/A

| | |
|---|---|
| 1. | **Gas Vents** • Active • Passive<br>• Properly secured/locked • Functioning • Routinely sampled • Good condition<br>• Evidence of leakage at penetration • Needs Maintenance<br>• N/A<br>Remarks_____<br>_____ |
| 2. | **Gas Monitoring Probes**<br>• Properly secured/locked • Functioning • Routinely sampled • Good condition<br>• Evidence of leakage at penetration • Needs Maintenance • N/A<br>Remarks_____<br>_____ |
| 3. | **Monitoring Wells** (within surface area of landfill)<br>• Properly secured/locked • Functioning • Routinely sampled • Good condition<br>• Evidence of leakage at penetration • Needs Maintenance • N/A<br>Remarks_____<br>_____ |
| 4. | **Leachate Extraction Wells (dual purpose: same as gas vent wells)**<br>• Properly secured/locked • Functioning • Routinely sampled • Good condition<br>• Evidence of leakage at penetration • Needs Maintenance • N/A<br>Remarks_____<br>_____ |
| 5. | **Settlement Monuments** • Located • Routinely surveyed • N/A<br>Remarks_____<br>_____ |

**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** Areal extent_____ Depth_____ • N/A
   • Siltation not evident
   Remarks_____
   _____

2. **Erosion** Areal 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
   Areal extent_____ Depth_____
   Remarks_____
   _____

2. **Vegetative Growth** • Location shown on site map • N/A
   ✓ Vegetation does not impede flow
   Areal extent_____ Type_____
   Remarks:
   _____

3. **Erosion** • Location shown on site map ✓ Erosion not evident
   Areal 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
   Areal extent_____ Depth_____
   Remarks_____
   _____

2. **Performance Monitoring** Type of monitoring *DNAPL compliance*
   • Performance not monitored
   Frequency *Annual* • 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

   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** • Applicable ✓ N/A – ground water monitoring wells plugged and abandoned

1. Monitoring Data
   - • Is routinely submitted on time • Is of acceptable quality

**F. Monitored Natural Attenuation**

1. **Monitoring Wells** (natural attenuation remedy)
   - • Properly secured/locked • Functioning • Routinely sampled • Good condition
   - • All required wells located • Needs Maintenance • N/A

   Remarks_____

   _____

## X. OTHER REMEDIES

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

## XI. OVERALL OBSERVATIONS

**A. Implementation of the Remedy**

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

*The initial part of the remedy, for site soils/sediments, has been completed and involved excavation, treatment, and disposal of the soils off-site. Site excavations that were backfilled and revegetated are in good shape. No "dead zones" were evident in those areas that could be inspected, however, a significant portion of the site is covered with hurricane Katrina debris and could not be confirmed as adequate regarding vegetative cover. Per the ROD, the ongoing remedy was to perform ground water monitoring and to maintain ICs, however, ground water monitoring was ceased with the abandonment of the on-site wells as requested by LDEQ. ICs (easements and//or land use agreements within the deed) appear to be current.*

**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.

*Much of the site was covered with woody debris at the time of the Five-Year Review Site Inspection.*

**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.

*None*

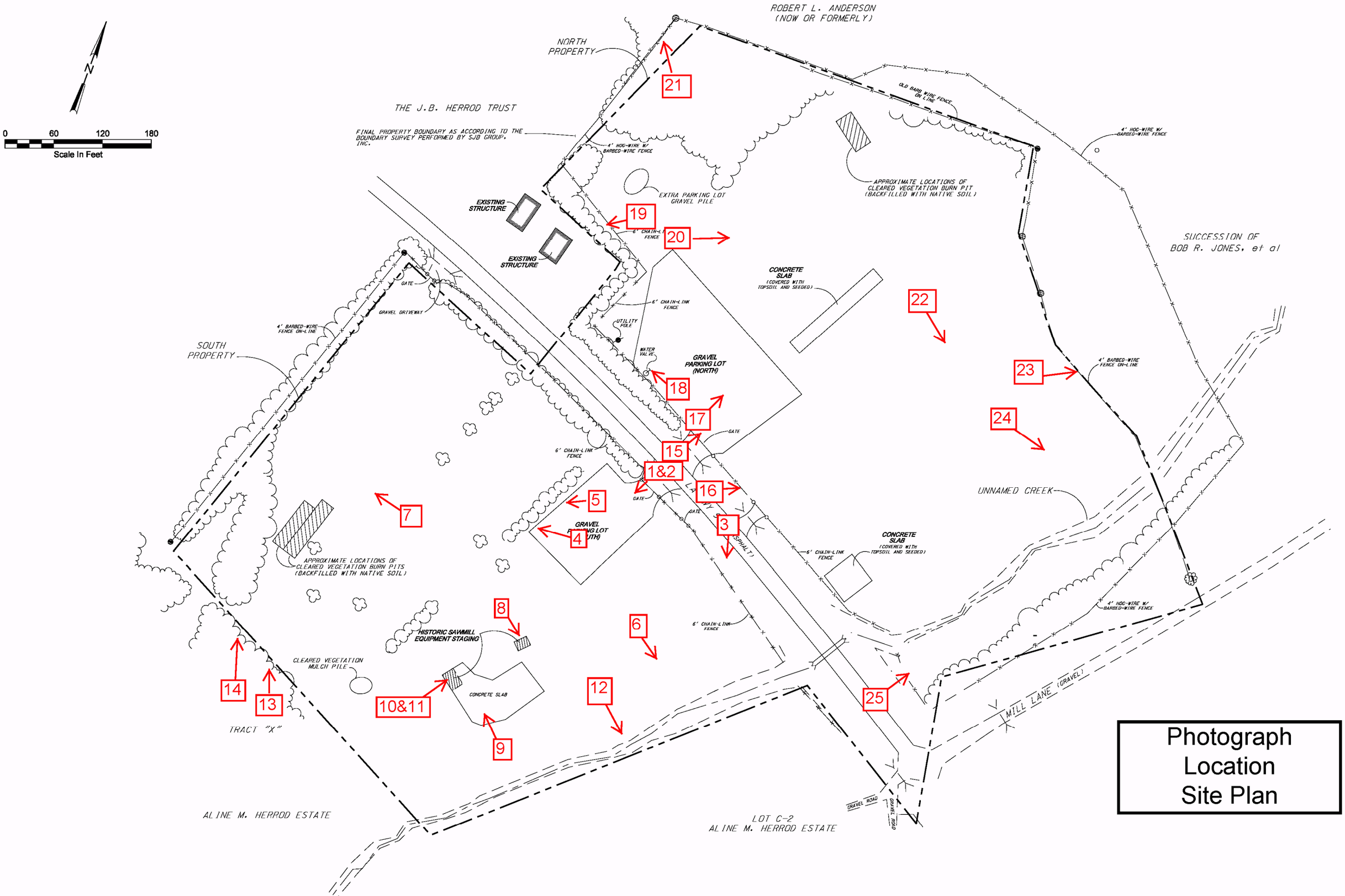
### 3.1.1. D. Opportunities for Optimization

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

*None*

# Attachment 4

# Site Inspection Photographs


N
0
60
120
180
Scale In Feet
ROBERT L. ANDERSON
(NOW OR FORMERLY)
NORTH
PROPERTY
THE J.B. HERROD TRUST
FINAL PROPERTY BOUNDARY AS ACCORDING TO THE BOUNDARY SURVEY PERFORMED BY SJB GROUP, INC.
4' HOG-WIRE W/ BARBED-WIRE FENCE
OLD BARB. WIRE FENCE ON LINE
APPROXIMATE LOCATIONS OF CLEARED VEGETATION BURN PIT (BACKFILLED WITH NATIVE SOIL)
EXTRA PARKING LOT GRAVEL PILE
EXISTING STRUCTURE
EXISTING STRUCTURE
6' CHAIN-LINK FENCE
CONCRETE SLAB
(COVERED WITH TOPSOIL AND SEEDED)
SUCCESSION OF
BOB R. JONES, et al
GATE
GRAVEL DRIVEWAY
6' CHAIN-LINK FENCE
UTILITY POLE
WATER VALVE
GRAVEL PARKING LOT (NORTH)
4' BARBED-WIRE FENCE ON-LINE
SOUTH
PROPERTY
4' BARBED-WIRE FENCE ON-LINE
GATE
6' CHAIN-LINK FENCE
GATE
GATE
6' CHAIN-LINK FENCE
UNNAMED CREEK
GRAVEL PARKING LOT (SOUTH)
CONCRETE SLAB
(COVERED WITH TOPSOIL AND SEEDED)
6' CHAIN-LINK FENCE
4' HOG-WIRE W/ BARBED-WIRE FENCE
APPROXIMATE LOCATIONS OF CLEARED VEGETATION BURN PITS (BACKFILLED WITH NATIVE SOIL)
HISTORIC SAWMILL EQUIPMENT STAGING
CLEARED VEGETATION MULCH PILE
CONCRETE SLAB
MILL LANE (GRAVEL)
TRACT "X"
ALINE M. HERROD ESTATE
LOT C-2
ALINE M. HERROD ESTATE
GRAVEL ROAD
GRAVEL ROAD
21
19
20
22
23
24
18
17
15
1&2
16
5
4
3
7
8
6
14
13
10&11
12
9
25
Photograph Location Site Plan

## Central Wood Preserving Company Superfund Site


**Photo 1: South Property – gate entrance access off of SH 959**


**Photo 2: South Property – gate/entrance access off of SH 959**


**Photo 3: South Property – chain link fence along SH959**


**Photo 4: South Property – looking west from gravel lot**


**Photo 5: South Property – looking west from gravel lot**


**Photo 6: South Property – silt fencing left southeast portion**

## Central Wood Preserving Company Superfund Site

**Photo 7: South Property – woody debris on northern portion**

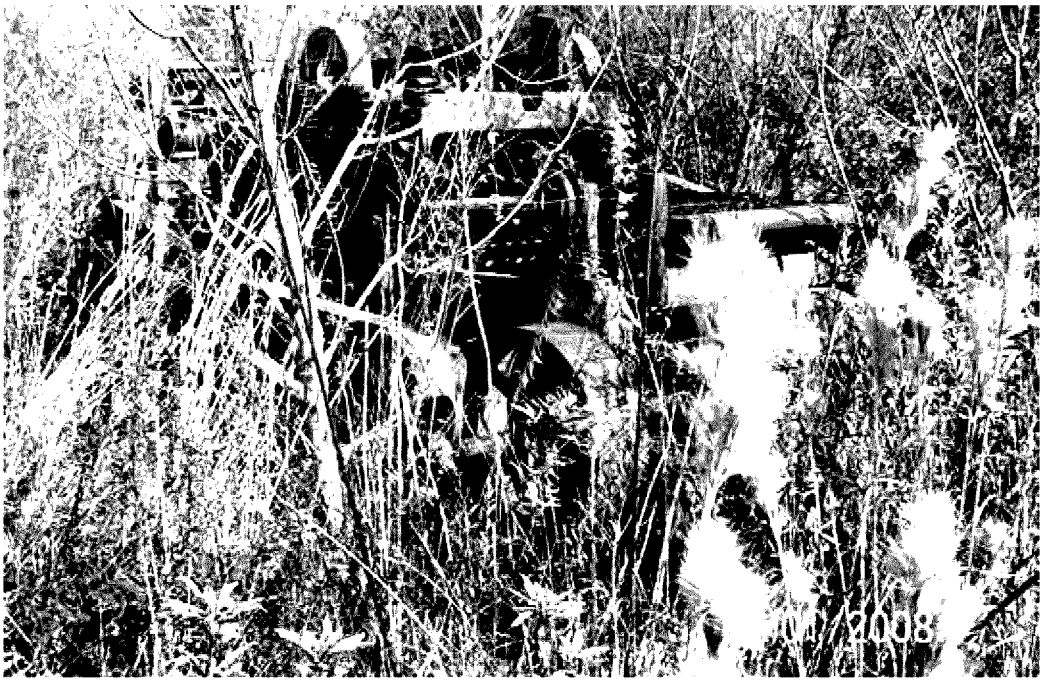


**Photo 8: South Property – sawmill machinery on small cement pad**

## Central Wood Preserving Company Superfund Site


**Photo 9: South Property – sawmill machinery on southernmost cement pad**


**Photo 10: South Property – sawmill machinery on southernmost cement pad**


**Photo 11: South Property – sawmill machinery on southernmost cement pad**


**Photo 12: South Property – southeast area**

**Photo 13: South Property – fence line along southwest edge**

**Photo 14: South Property – trailer/debris along southwest edge of fence line**


**Photo 15: North Property – gate/entrance access off of SH 959**


**Photo 16: North Property – chain link fence along SH 959**


**Photo 17: North Property – looking north at woody debris piles from gravel lot**


**Photo 18: North Property – debris pile of treated wood (not originating from site)**


**Photo 19: North Property – woody debris pile on northwest portion. Evidence of debris burning was seen in area of this photo**


**Photo 20: North Property – building debris on northwest portion. Possible asbestos containing material (floor tiles) in this debris pile.**

**Photo 21: North Property – fence line along north property line**


**Photo 22: North Property – woody debris in central portion of property Showing some household debris mixed in**


**Photo 23: North Property – open field and fence line of northeast property edge**


**Photo 24: North Property – open field and site planted trees of northeast portion**

## Central Wood Preserving Company Superfund Site

**Photo 25: North Property – opening in chain link fence**
**Adjacent to drainage ditch by SH959**

# Attachment 5

# Notice to the Public Regarding the Five-Year Review

# Central Wood Preserving Company, Superfund Site
# PUBLIC NOTICE
# U.S. EPA Region 6 Begins First Five-Year Review of Site Remedy
# February 2009

The U.S. Environmental Protection Agency Region 6 (EPA) has begun the First Five-Year Review of the remedy for the Central Wood Preserving Company, Superfund Site located in East Feliciana Parish, Louisiana. The site was a wood treating facility whose operations resulted in contamination of soil by creosote and other wood preserving compounds. The remedy, which EPA selected in 2004, consisted of four major components: thermal desorption, off-site destabilization and disposal, demolition of buildings/debris on-site, and institutional controls/ground water monitoring. The Review will determine whether the remedy at the site remains protective of public health and the environment

Once completed, the results of the Five-Year Review will be made available to the public at the following Information Repository:

**Audubon Library**
**P.O. Box 8389**
**Clinton, Louisiana 70722**

Information about the Central Wood Preserving Company, Superfund Site is also available on the Internet at http://www.epa.gov/region6/6sf/6sf.htm

For more information about the Site, contact:


Ms. Laura Stankosky
Remedial Project Manager (Mail Code 6SF-RL)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
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Phone: (214) 665-752 or toll free (800) 533-3508
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Ms. Wanda Ballou
Louisiana Department of Environmental Quality
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# CAPITAL CITY PRESS

Publisher of
THE ADVOCATE

## PROOF OF PUBLICATION

The hereto attached notice was
published in THE ADVOCATE,
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published in Baton Rouge, Louisiana,
and the official Journal
of the State of Louisiana,
the City of Baton Rouge,
and the Parish of East Baton Rouge,
in the following issues:

**02/12/09**

Susan A. Bush, Public Notices Clerk

Sworn and subscribed before me by the
person whose signature appears above:

**February 12, 2009**

Pegeen Singley, Notary Public, #66565
My Commission Expires: Indefinite
Baton Rouge, Louisiana

US ARMY COE - TULSA 4039937
DAVID JONES SWT
1645 S 101ST EAST AVE
TULSA OK 74128

## Central Wood Preserving Company, Superfund Site
## PUBLIC NOTICE
## U.S. EPA Region 6 Begins First Five-Year Review of Site Remedy
## January 2000

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