Site: PEPPER STEEL
Break: 8.6
Other: V.1

Five-Year Review Report

Third Five-Year Review Report
for
Pepper Steel & Alloys, Inc. Site
11100 NW S. River Dr.
Medley, Florida
September 2007

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For:
United States Environmental Protection Agency
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Approved by: _____
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Date: 9/19/07

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List of Acronyms

amsl	above mean sea level
AOC	Administrative Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirement
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DERM	Dade County Department of Environmental Response and Management
EDD	Enforcement Decision Document
EPA	United States Environmental Protection Agency
FDEP	Florida Department of Environmental Protection
FP&L	Florida Power & Light
FYR	Five-Year Review
MCL	Maximum Contaminant Level
MEP	Multiple Extraction Procedure
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
ppm	parts per million
PSA	Pepper Steel & Alloys, Inc. Superfund Site
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SDWA	Safe Drinking Water Act
TCLP	Toxicity Characteristics Leaching Procedure

Executive Summary

Introduction

The remedy for the Pepper Steel & Alloys Site (PSA) in Medley, Florida, included collection and off-site disposal of all free oil on the shallow aquifer; excavation of soils exceeding 1,000 parts per million (ppm) lead, 1 ppm PCBs, and 5 ppm arsenic; solidification/stabilization of these soils with a cement-type mixture and placement in the excavated area as an on-site monolith; establishment of institutional controls (ICs) to ensure that future land use remained compatible with the remedy; and monitoring of ground water to verify the effectiveness of the solidification remedy. To date, all components of the selected remedy have been implemented. The property owners have been responsible for implementing and maintaining ICs to prohibit inappropriate uses of the Site, restrict ground water use, and to protect the remedy. ICs are in place on all three parcels of the Site, but two are only informational ICs and negotiations are underway to create a standardized restrictive covenant that will be enforceable, apply to subdivided parcels, and provide an additional layer of protectiveness. Ground water monitoring is currently scheduled to occur every two and a half years, and EPA has conducted sampling events for the Site twice in the last five years. The Site's Ground Water Monitoring Plan is scheduled for review and revision and both the frequency of sampling and which monitoring wells will be included in future sampling events will be determined based on historic ground water data and current Site use.

This Site has one operable unit (OU), involves approximately 25 acres, and hosts a variety of reuse activities including trucking/transportation, the storage of land-sea containers, and the manufacture of pre-cast cement products. This Site is Protective for People Under Current Conditions, according to the criteria for this cross program revitalization measure, and exposure to contamination is under control. Further sampling is necessary to determine if recent exceedances in ground water will be confirmed or disconfirmed and the planned restrictive covenant is necessary to have enforceable ICs in place; these actions are prerequisites for the Site meeting the new Ready for Anticipated Use measure. The triggering action for this Five-Year Review was the signature date of the previous Five-Year Review on September 30, 2002. The next review will be scheduled for 2012.

Remedial Action Objectives

The remedial action objectives (RAOs) established to address human health concerns and protect ground water resources at the PSA Site were:

- Removal and/or treatment of leachable heavy metals and metalloids to prevent contamination of wells and the Biscayne Aquifer, which is the sole source of potable water supply for about three million people in the southeastern Florida area; and
- Removal of all PCB contaminated soils to the lowest level below 50 ppm practicably attainable through the use of normal cleanup methods.

The first goal was achieved through the excavation and on-site solidification of soils exceeding 1,000 ppm lead and 5 ppm arsenic preventing contaminants from leaching into ground water.

The second goal was achieved by the excavation and on-site solidification of soils with PCBs exceeding 1 ppm.

Technical Assessment

The assessment carried out for this Five-Year Review (FYR) found that the remedy has been implemented and is functioning as intended by the requirements set forth in the Site's March 12, 1986 Enforcement Decision Document (EDD). Sampling data from 2005 indicated that the monolith is in good condition and continues to be an effective means of stabilizing the contaminants of concern (COCs). Ground water monitoring data from the 2003 sampling event showed that all five wells sampled were within current drinking water standards for all COCs. Ground water monitoring data from the 2007 sampling event showed that two of the ten wells sampled exceeded current drinking water standards for lead and/or arsenic. These exceedances should be followed-up with an evaluation of the wells involved (MO-1 and MW-5A) and additional sampling. Well MO-1 had very low yield and may not be representative of the ground water under the monolith and MW-5A lacks a secure cover, which may have compromised the contents of the well. Ground water at the Site and in the nearby industrial areas surrounding the Site is not used for potable purposes. All the remedy performance measures for ground water established in the Site's 1987 Consent Decree were based on Interim Drinking Water Standards. Current Primary Drinking Water Standards have different criteria for all three COCs at this Site, as summarized in the table below. Cleanup goals for the Site have not changed, only the indirect standards for monitoring remedy performance through ground water sampling.

Contaminants of Concern	ARARs	
	1987	2007
PCBs	7 µg/L	0.5 µg/L
Arsenic	50 µg/L	10 µg/L
Lead	50 µg/L	15 µg/L

Except for the two exceedances mentioned above, all sampling results from the last five years have met current criteria. The current land use for the Site and surrounding properties is light industrial and future use is expected to remain commercial/industrial. There is no other information that calls into question the protectiveness of the remedy. It is believed that the appropriate reuse of the Site has enhanced the protectiveness of the remedy by discouraging dumping and encroachment onto the Site and by providing current site owners the opportunity to assist with the maintenance of the remedy and the partial implementation of the Site's O&M Plan. Current owners and tenants are working to comply with Town of Medley and Dade County stormwater management ordinances and improve drainage at the Site. According to the data reviewed, the site inspection, and the interviews, remedial components currently in place are protective for human health and the environment and are functioning as intended by the EDD.

Conclusion

The assessment carried out for this FYR found that the remedy has been implemented in accordance with the requirements set forth in the Site's 1986 EDD. Exposure pathways have been eliminated by solidification of contaminants in the on-site monolith to prevent leaching of metals into the ground water. The remedy at the PSA Site is protective of human health and the

environment based on monolith sampling and ground water sampling results over the last five years. Additional well evaluations and ground water monitoring are necessary to confirm or disconfirm the recent exceedances and determine if they were due to physical problems with the two wells or indicative of contamination in the ground water beneath the Site. Since the last FYR, the Site has been put into reuse and the commercial and light industrial activity has improved the Site's security and maintenance.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name *(from WasteLAN)*: Pepper Steel & Alloys, Inc. Site		
EPA ID *(from WasteLAN)*: FLD032544587		
Region: 4	**State: FL**	**City/County: Medley/Dade**
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:** 01/16/1989	
Has site been put into reuse? ☒ YES ☐ NO		
REVIEW STATUS		
Lead agency: ☒ EPA ☐ State ☐ Tribe ☐ Other Federal Agency		
Author name: Jan Rogers		
Author title: JR: Remedial Project Manager	**Author affiliation: JR: USEPA Region 4**	
Review period:** 11/21/2006 to 09/19/2007		
Date(s) of site inspection: 01/24/2007		
Type of review: ☐ Post-SARA ☒ Pre-SARA ☐ NPL-Removal only ☐ Non-NPL Remedial Action Site ☐ NPL State/Tribe-lead ☐ Regional Discretion		
Review number: ☐ 1 (first) ☐ 2 (second) ☒ 3 (third) ☐ Other (specify)		
Triggering action: ☐ Actual RA Onsite Construction at OU# ☐ Actual RA Start at OU# ☐ Construction Completion ☒ Previous Five-Year Review Report ☐ Other (specify)		
Triggering action date *(from WasteLAN)*: 09/30/2002		
Due date *(five years after triggering action date)*: 09/30/2007		

* ["OU" refers to operable unit.]
** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Five-Year Review Summary Form, continued

Issues:

1) Results from two ground water monitoring wells exceed remedial goals.
2) Fill materials brought on site have not been tested for arsenic.
3) Each site parcel has a different type of IC in place, only one of which is enforceable.
4) Most recent on-site building did not receive review by DERM's Contaminated Properties Division prior to building design approval.
5) Town of Medley is not aware of how to help enforce use restrictions to protect the remedy.
6) Ground water Monitoring Plan is based on outdated ground water flow information.
7) O&M Plan does not plan for site reuse.
8) Dumping at the Site is ongoing.
9) Lack of coordination among regulators delays reuse and makes it more difficult and costly for site owners/users to comply with all necessary regulations.
10) Drainage collar is defunct and new drainage system is not yet fully in place.
11) Criteria for evaluating remedy performance are changing, leading to exceedances in some ground water monitoring results.

The first two issues may affect current protectiveness, issues 3 and 4 may affect future protectiveness, but the remaining issues do not affect current or future protectiveness.

Recommendations and Follow-up Actions:

1) Monitoring wells MO-1 and MW-5A should be evaluated for possible repair and/or replacement. Additional sampling of these and/or the replacement wells should be done to confirm or disconfirm the two recent exceedances.
2) Given that naturally occurring arsenic concentrations in lime rock can sometimes exceed residential regulatory standards, all fill materials brought on site should be tested to confirm they meet cleanup levels for commercial/industrial use.
3) Identical restrictive covenants are planned for all three parcels to ensure standardized and enforceable use restrictions for the Site. FP&L suggestions for site activity and use restrictions should be included in this planned IC.
4) Greater coordination among the Town of Medley, DERM, FDEP, and EPA should be pursued to ensure that buildings proposed for the Site are reviewed by the appropriate regulatory authorities prior to approval and that the designs are protective of the remedy.
5) EPA and FDEP should meet with Town of Medley officials to share information. Town should be encouraged to include Site in tracking database of contaminated properties.
6) The Ground water Monitoring Plan for the Site should be reviewed and revised based on new ground water flow data and recent sampling results.
7) EPA should revise the O&M Plan to account for reuse.
8) EPA should assist site owners in managing disposal of debris dumped at the Site.
9) EPA should also reach out to current and future site owners to provide them with contact information for the appropriate staff at each regulatory authority and inform them of proper building permitting procedures for the Site.
10) EPA should oversee the current property owners' installation of new drainage systems. The Town of Medley and Dade County should confirm that the planned drainage systems comply with local stormwater management ordinances.
11) Document changes to remedy performance measures through FYRs.

Protectiveness Statement(s):

The remedy at the PSA Site is protective of human health and the environment based on monolith sampling and ground water sampling results over the last five years. Ground water monitoring results have been under the remedial action levels and current ARARs except for the 2007 results from wells MO-1 and MW-5A. Monolith sampling demonstrates the continued protectiveness of the monolith. ICs are in place, however, two of these three ICs are unenforceable. To ensure long-term protectiveness, a standardized and enforceable restrictive covenant should be implemented on all three parcels of the Site.

Other Comments: None

Third Five-Year Review Report
for
Pepper Steel & Alloys Superfund Site

1.0 Introduction

The purpose of Five-Year Review (FYR) is to determine whether the remedy at a Site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports. In addition, FYR reports identify issues found during the review, if any, and recommendations to address them. The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to CERCLA §121(c) and the National Contingency Plan (NCP). CERCLA §121(c) 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. In addition, if upon such review it is the judgment of the President that action is appropriate at such Site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The EPA interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) states:

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

The U.S. Environmental Protection Agency Region 4 has conducted a FYR of the remedial actions implemented at the Pepper Steel & Alloys, Inc. (PSA) Site in Medley, Florida. The time period covered by this review was September 21, 2002 through September 19, 2007. The FYR for the Pepper Steel & Alloys Site was led by the Site's Remedial Project Manager, Mr. Jan Rogers of EPA Region 4, and supported by EPA contractors, E^2 Inc. The Florida Department of Environmental Protection also supported the review of this Site. This report documents the results of that review.

This is the third FYR for the PSA Site. The triggering action for this review was the signing of the Site's second FYR on September 30, 2002. There is one operable unit at the Site. The FYR is required because hazardous substances, pollutants, or contaminants remain at the Site, in the form of a solidified monolith, above levels that allow for unlimited use and unrestricted exposure. This review is considered a 'policy' FYR because the EDD for this site was signed before CERCLA was amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). The next Five-Year Review will be required in September 2012.

2.0 Site Chronology

The following is a chronology of the significant events associated with the PSA Site.

Table 1: Chronology of Site Events

Event	Date
DERM citation issued with subsequent sampling and evaluation of nearby wells	May 31, 1978
EPA Discovery	February 1, 1980
DERM test pit exploration documenting presence of oil-containing PCBs in shallow subsurface soil	June 4, 1982
EPA site investigation with PCB soil removal action	July 1983 – Sept. 1983
Proposal to National Priorities List (NPL)	September 8, 1983
EPA Site Inspection	June 1, 1984
EPA Preliminary Assessment	September 1, 1984
Final listing on NPL	September 21, 1984
EPA Combined Remedial Investigation/Feasibility Study	March 12, 1986
EPA Enforcement Decision Document	March 12, 1986
PRP Remedial Design	October 30, 1986
PRP monitoring well program design	January 1987
EPA Consent Decree	March 2, 1987
Remedial action begins with site cleaning activities	March to May 1987
Remedial action construction activities	May 1987 – January 1989
EPA Final inspection of remedial action construction activities	January 12, 1989
EPA Proposed Operations and Maintenance (O&M) Plan	July 1, 1989
EPA notification of adequate completion of Remedial Action Work Plan	August 1, 1989
Judgment passed that acts as an IC for the Curtis and Payne parcels	March 1, 1991
EPA Removal Assessment	September 30, 1991
EPA Preliminary Close-Out Report Prepared	September 28, 1993
EPA Integrated Assessment	November 10, 1993
First Policy Five-Year Review	September 23, 1994
Federal enforcement Consent Decree between EPA and property owners that provided limited funds for O&M	October 16, 1997
Cooperative Agreement signed between EPA and DERM for performance of O&M activities	September 23, 2002
Second Five-Year Review	September 30, 2002
Restrictive Covenant recorded on Curtis parcel to protect remedy	January 27, 2004
EPA Remedial Design initiated (evaluate drainage collar & monitoring wells)	June 30, 2004
Consent Decree recorded as a deed notice on Bloom parcel	August 25, 2004
Reuse begins on Bloom parcel	March 2005
Reuse begins on Payne parcel	June 2006
Reuse begins on Curtis parcel	February 2007

Event	Date
Close Out Report filed for DERM-EPA Cooperative Agreement	March 2007
Five-Year Review ground water sampling event	April 2007

3.0 Background

3.1 Physical Characteristics

The PSA Site is located in Medley, Dade County, Florida. The Site consists of a 25-acre area located near the eastern border of Medley on U.S. Highway 27, also known as Okeechobee Road, and just across NW S. River Drive from the Miami Canal, which runs parallel to Okeechobee Road. NW S. River Drive borders the Site on the east, the former Miami Battery/Millennium Battery facility lies to the north, NW 109th Street to the south, and railroad tracks and the future NW 97 Avenue to the west. A vicinity map showing the general location of the PSA Site is presented in Figure 1. The PSA Site includes an 11-acre cement/flyash monolith that has an elevation of approximately 13.5 feet above mean sea level (amsl) at its highest point, compared to surrounding elevations in the area of approximately 7 feet amsl. The monolith is composed of contaminated soils with concentrations greater than or equal to 1 ppm PCB, 1,000 ppm lead, and 5 ppm arsenic that were excavated from the Site. This contaminated soil was mixed with cement and flyash to stabilize the contaminants and was then placed back in the excavated area, allowing it to solidify in the form of a monolith. The monolith is the only remaining source on site.

When the monolith was created, a drainage collar surrounding the structure was installed to collect surface water runoff and prevent this stormwater from affecting neighboring properties. A 12-inch layer of crushed limestone rock was placed on top of the monolith as a cover and was also used in the construction of the drainage collar. Currently, the cement foundation of one building that is part of the Site's redevelopment covers portions of the monolith. There are three vertical monitoring wells located on top of the monolith and several wells, both vertical and flush mounted, located around the edges of the monolith and the Site. A detailed site map, including existing monitoring well locations, is shown in Figure 2. The shallow ground water aquifer at the Site is a Class G-II ground water resource, which designates it for potable water use. All of Dade County's drinking water is ground water obtained using municipal and private wells. Ground water in the vicinity of the Site is located within the Biscayne Aquifer, which serves as the sole source of drinking water for more than three million residents of southeast Florida. The second FYR for this Site deemed the Miami Canal an "environmentally sensitive area" that indirectly receives runoff from the Site that could impact the benthic organisms in the canal. The canal is located north of the Site and flows into the Atlantic Ocean.

Figure 1: Site Vicinity Map for PSA Site

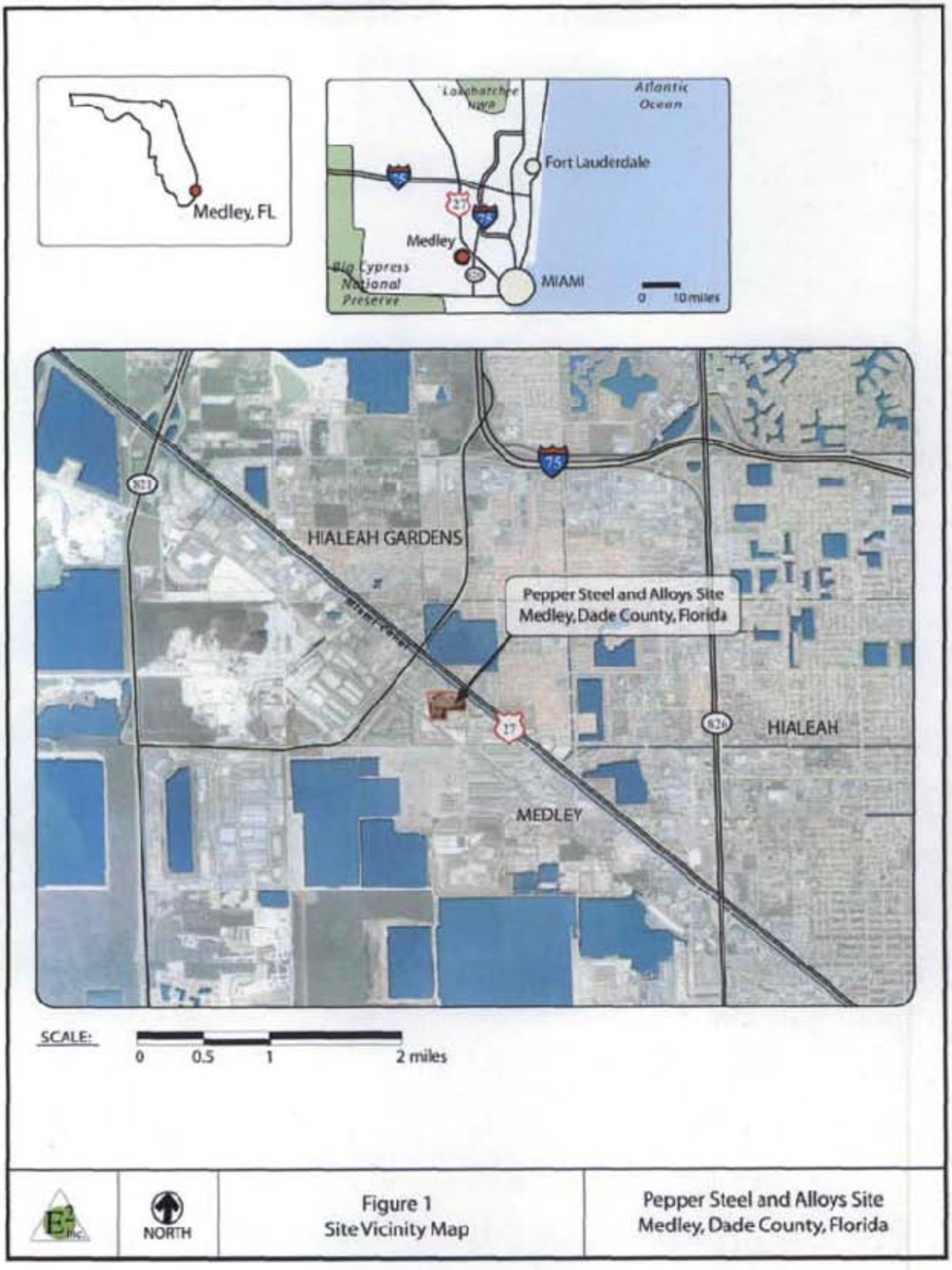
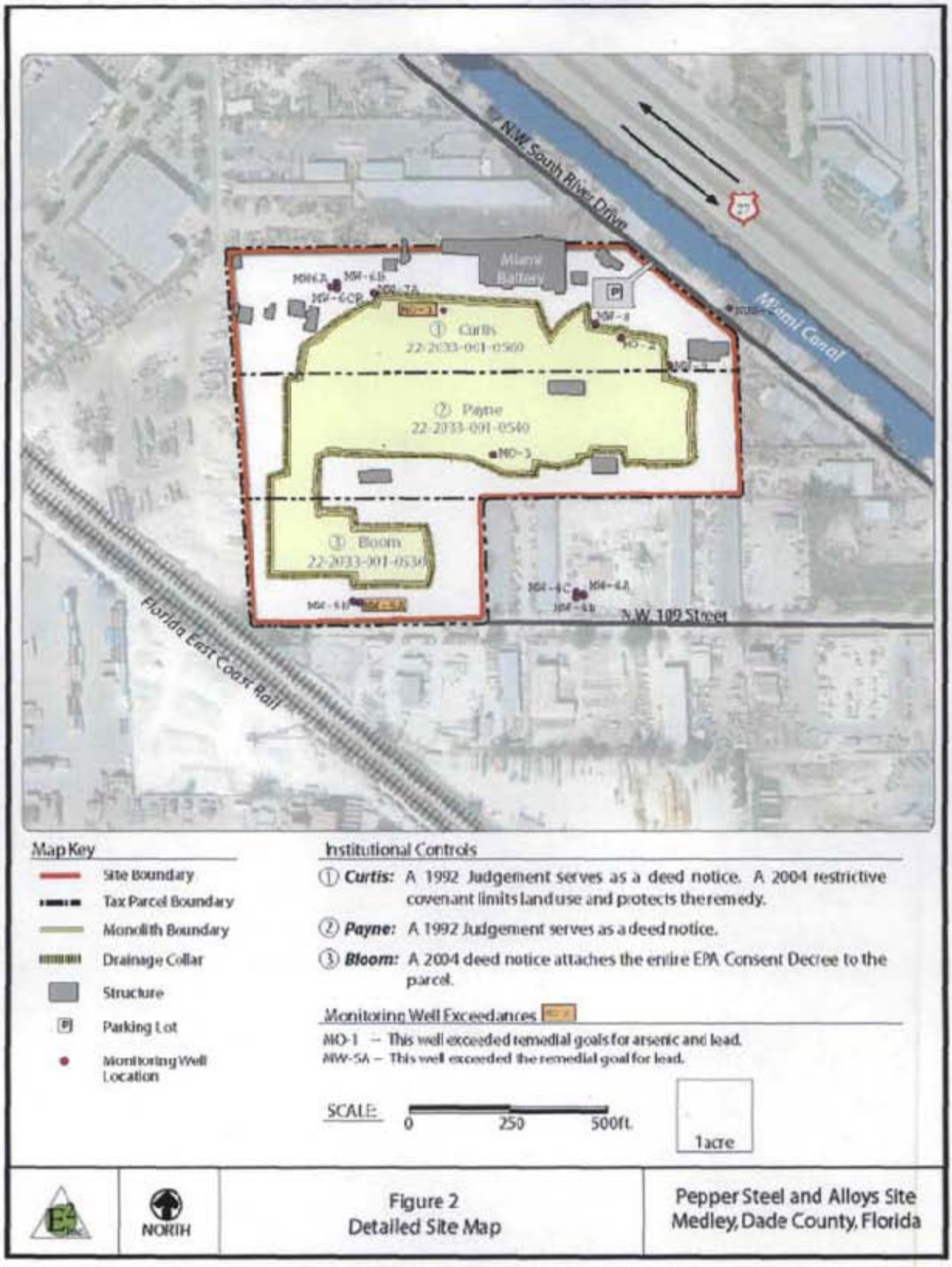


Figure 2: Detailed Site Map with Monitoring Well Locations



Map Key

- Site Boundary
- Tax Parcel Boundary
- Monolith Boundary
- Drainage Collar
- Structure
- P — Parking Lot
- Monitoring Well Location

Institutional Controls

① ***Curtis:*** A 1992 Judgement serves as a deed notice. A 2004 restrictive covenant limits land use and protects the remedy.

② ***Payne:*** A 1992 Judgement serves as a deed notice.

③ ***Bloom:*** A 2004 deed notice attaches the entire EPA Consent Decree to the parcel.

Monitoring Well Exceedances

MO-1 – This well exceeded remedial goals for arsenic and lead.
MW-5A – This well exceeded the remedial goal for lead.

SCALE: 0 250 500ft.

1acre

NORTH

Figure 2
Detailed Site Map

Pepper Steel and Alloys Site
Medley, Dade County, Florida

3.2 Land and Resource Use

The PSA Site was used by several industrial businesses from the mid-1960s to the mid-1980s. These businesses included the manufacture of batteries, pre-cast concrete products, and fiberglass boats, as well as a truck and heavy equipment repair business, a sandblasting and painting service, and an automobile scrap operation. After operations ceased in the mid 1980s and until the advent of reuse in 2005, the Site was vacant and subject to extensive dumping of trash, vehicles, and construction debris. The PSA Site is zoned industrial and land use in the area surrounding the PSA Site consists primarily of other industrial businesses, with some limited commercial activities. Businesses near the Site include dock-level warehouses, trucking and transport companies, shipping container storage areas, and a restaurant. The Site is currently in reuse, with additional redevelopment activities planned for the near future. Current operations include warehouse storage, a trucking company, and the beginnings of a pre-cast concrete products facility, while tenants include a trucking company and storage for land-sea containers. Areas at a distance of more than half a mile from the Site to the north and northeast contain relatively new high-density residential developments that are serviced by the municipal water supply. There is no indication that ground water near these developments has been impacted by the Site. The Site meets the requirements for the new "Protective for People Under Current Conditions" performance measure.[1] Further sampling is necessary to determine if recent exceedances in ground water will be confirmed or disconfirmed and the planned restrictive covenant is necessary to have enforceable ICs in place; these actions are prerequisites for the Site meeting the new Ready for Anticipated Use measure.

Natural resources in the area include ground water in the form of the Biscayne Aquifer and surface water in the form of the Miami Canal. Ground water in the vicinity of the Site is a very important source of drinking water accessed through private and municipal wells throughout the region, making it at least a Class IIA ground water resource. The Miami-Dade County NW well field is located some distance to the northwest of the Site and has not been impacted by site-related contamination. Ground water flow at and near the Site varies throughout the year based on rainfall. The predominant direction of flow is to the north and northeast, toward the Miami Canal, which is a fresh water resource recharged by flows from Lake Okeechobee. The Miami Canal is the closest discharge point for ground water from the Site and the dominant groundwater/surface water discharge point during the wet season. At the end of the dry season, the Miami Canal can be used as an infiltration point to maintain ground water levels by draining water from Lake Okeechobee into the canal to raise the water level and cause surcharging of the ground water. This is sometimes done to protect the canal from saltwater intrusion, but as this only occurs briefly, if at all, it has a limited effect on ground water flow in directions contrary to the norm. Water elevations in the canal are controlled by a floodgate downstream near the Miami international Airport, just below LeJune Road (also called NW 37th Avenue). The second FYR indicated that surface water from the

[1] OSRTI and FFRRO, *Guidance for Documenting and Reporting Performance in Achieving Land Revitalization*, OSWER 9200.1-74, released March 1, 2007.

Miami Canal provides a significant amount of recharge to municipal well fields downstream of the Site.

3.3 History of Contamination

The first regulatory action noted by EPA at the PSA Site was a citation for improper handling of hazardous wastes issued in 1978 by the Dade County Department of Environmental Resources Management (DERM). DERM and Edward E. Clarke, Engineers and Scientists, Inc. subsequently performed sampling and evaluation of nearby wells to determine the extent of contamination. Trash and waste products deposited at the Site during past facility activities included rusted machinery, vehicles, oil tanks, transformers, underground storage tanks, and batteries. The PSA Site was discovered by EPA on February 1, 1980. In 1982, DERM performed test pit explorations, which documented the presence of oil containing PCBs in the shallow subsurface materials. The detection of PCBs prompted a site investigation by EPA, which was conducted through its contractor, NUS Corporation. The PSA Site was proposed for addition to the NPL on September 8, 1983 and officially listed on September 21, 1984.

3.4 Initial Response

The results of DERM's test pit explorations in 1982 indicated that significant threats were present at the Site and an immediate removal action was conducted from July 18 through September 2, 1983. The 1983 removal action involved the excavation and off-site disposal of lead and PCB-contaminated liquids, and 8,500 cubic yards of PCB-contaminated soil.

3.5 Basis for Taking Action

From February 22, 1984, through March 12, 1986, EPA conducted a Remedial Investigation/Feasibility Study (RI/FS). During the RI/FS, contaminants identified within the soil, sediment, and ground water in and around the Site included PCBs, several other organic compounds, and heavy metals including lead, arsenic, cadmium, chromium, copper, manganese, mercury, zinc, and antimony. PCB-contaminated oil was detected in the ground water. Additionally, the Endangerment Assessment portion of the final RI report identified PCBs, lead, and arsenic in on-site soils at concentrations high enough to pose a significant threat to public health, welfare, and the environment. The exposure pathways exhibiting the greatest potential endangerment were air particulate inhalation or ingestion through direct contact of lead and ground water transport of lead and PCBs through leaching. The principal environmental and public health concern regarding the contamination was pollutant migration into the Biscayne Aquifer and private wells.

Limits were developed in the Endangerment Assessment and were based on either EPA Ambient Water Quality Criteria or Primary Drinking Water Standards, as available. Acceptable leachate concentrations were derived by considering potential exposure via hypothetical wells located in the immediate vicinity of the Site. The infiltration of rainwater over a broad area of the Site was assumed to generate leachate that would

percolate vertically to the ground water and could create a contaminant plume that would be carried along with the ground water flow. It was also assumed that monitoring wells near the Site's boundary would intercept the plume and that sampling results from these wells would indicate the amount of contamination contributed to area ground water. Acceptable leachate concentrations for the PSA Site were chosen as equal to applicable drinking water standards, with consideration for dilution. Based on the acceptable leachate concentrations, modeling of ground water flow, regulatory requirements, and the extent of contamination found at the PSA Site, the Endangerment Assessment determined that three contaminants were present in sufficient concentrations to require action: PCBs, lead, and arsenic.

4.0 Remedial Actions

In accordance with CERCLA and the NCP, the overriding goals for any remedial action are protection of human health and the environment and compliance with applicable or relevant and appropriate requirements (ARARs). A number of remedial alternatives were considered for the PSA Site, and final selection was made based on implementability, remedial action objectives, protectiveness of human health and the environment, and cost.

4.1 Remedy Selection

On March 12, 1986, the EPA Regional Administrator approved an EDD, a precursor to EPA's current Record of Decision (ROD) documents, for the PSA Site. The EDD defined the entire Pepper Steel & Alloys, Inc. Site as the area in need of remedial action. It was not subdivided into separate operable units as is customary at some sites where different media or sub-areas require remediation. The selected alternative for addressing site contamination included implementation of the following:

1) Collection of all free oil and disposal off site according to the Toxic Substance Control Act (TSCA) regulations;
2) Excavation of soils exceeding 1 ppm PCBs, 1,000 ppm lead, and 5 ppm arsenic;
3) Solidification/stabilization of these soils with a cement-type mixture and placement on site;
4) Establishment of institutional controls to ensure that future land use remained compatible with the remedy; and
5) Monitoring of the effectiveness of the remedy.

The EDD indicated that the cleanup objectives at the PSA Site are based on public health and environmental concerns and are consistent with 40 CFR Section 300.68 (e)(2) of the National Oil and Hazardous Substances Contingency Plan (NCP), EPA guidance, and state and local regulations. The following cleanup objectives were selected based on the regulatory guidance and the level of contamination detected at the PSA Site:

- Removal and/or treatment of leachable heavy metals and metalloids to prevent contamination of wells and the Biscayne Aquifer, which is the sole source of potable water for more than three million people in southeastern Florida; and
- Removal of all PCB-contaminated soil to the lowest level below 50 ppm that is practicably attainable through the use of normal cleanup methods.

The EDD stated that the selected remedy must demonstrate, via leachability studies and long-term monitoring, that levels of contaminants released into drinking water sources are below the acceptable leachate concentration limits.

4.2 Cleanup Progress

Between February 15, 1985, and November 15, 1986, EPA conducted remedial design/remedial action (RD/RA) negotiations with the potentially responsible parties

(PRPs) at the PSA Site, which included Florida Power & Light (FP&L) as well as several private property owners. From March 1 through October 30, 1986, an environmental firm, QualTec, Inc., retained by the PRPs, supported the remedial design process for the Site. These activities overlapped with EPA's approval of the EDD.

The EDD indicated that a Consent Decree would address additional technical details of the remedy that had been agreed to in principle during development of the chosen remedy. The technical details to be covered in the Consent Decree included:

- Method to determine the area to be addressed;
- Design parameters and performance of fixative agent;
- Post-remedy monitoring; and
- Necessary institutional controls.

On March 26, 1987, the U.S. District Court for the SE District of Florida recorded a Consent Decree (CD) between EPA and the PRPs for remedy implementation at the PSA Site. Also in March, site-cleaning activities began to remove all surface debris prior to remedy construction. Construction activities began at the Site after the completion of site cleaning in May 1987. Construction activities included the following:

1) Excavating and stockpiling contaminated soils above the EDD's cleanup goals;
2) Screening contaminated soils to obtain processable soil that could be incorporated into the monolith and absorbent, decomposable organic material that was shipped to an approved landfill for proper disposal;
3) Processing the contaminated soils with cement/flyash binder material in the mixing area;
4) Backfilling the excavations with the processed material to obtain final grade for proper runoff;
5) Constructing the perimeter drainage collar containing 2-inch wash rock to receive, control, and infiltrate runoff from the monolith;
6) Constructing the monolith and perimeter wells for post-remediation monitoring; and
7) Capping the monolith with a 12-inch layer of crushed limestone rock to protect it from vehicular traffic and acid rain and to provide a base for future land use.

With the implementation of the remedy, approximately 48,000 cubic yards of soil contaminated with PCBs, approximately 21,500 cubic yards of soil contaminated with lead, and approximately 9,000 cubic yards of soil contaminated with arsenic were excavated and solidified. During remedy implementation, removal of non-soil items also occurred including the removal of vegetation, tires, debris, oil, transformers, and previously processed material. Seventy-seven loads of non-hazardous material were shipped to the Central Disposal Landfill in Pompano Beach, Florida. One hundred and thirteen loads of previously processed, non-hazardous material were shipped to a licensed hazardous waste disposal facility in Emelle, Alabama. Four hundred and thirty-seven shipments of hazardous waste were also shipped to the licensed hazardous waste disposal facility in Emelle, Alabama.

On January 12, 1989, EPA conducted the Final Inspection of the remedy, in conjunction with state, county, and PRP representatives, and determined that the remedial action requirements had been successfully executed by the PRPs. On June 26, 1989, the PRPs submitted an "as-built" construction drawing, which included survey information and a Final Remedial Action Report.

Section 6 of the Final Report on Remedial Action indicates that on November 10, 1988, EPA sent a letter to QualTec, Inc., the firm performing the construction of the remedy at the PSA Site, expressing concern that the increased height of the monolith had resulted in increased side slopes, which in turn would increase the velocity of water runoff such that runoff might bypass the drainage collar and erode the cover, causing siltation of the drain. Canonie Environmental visited the PSA Site on November 22, 1988 and on January 9, 1989, and submitted an evaluation of the drainage collar to a representative of FP&L, which was responsible for completion of the remedial action. During the site visit, it was noted that the crushed limestone cover over the monolith had formed a solidified mass that was not easily penetrated. It was also observed that a small berm, approximately two feet above the existing ground level, was present between the drainage structure and the adjacent property along the north side of the monolith. Based on these observations, Canonic Environmental conservatively assumed that approximately 90 percent of the precipitation from a rainfall event would be surface runoff from the solidified mass and that the berm would act as an impediment to surface flow moving beyond the drainage structure. The evaluation indicated that the drainage collar was adequate to handle a 100-year storm even with the increased slope of the monolith surface and that the factor of safety against overflowing the drain onto adjacent property for the 100-year storm was 3:1. The evaluation also indicated that the velocity of the precipitation runoff towards the drainage collar was less than the velocity required for sediment transport.

In August 1989, EPA notified the PRPs that they had adequately completed the construction of the remedy as described in the Remedial Action Work Plan. The ongoing ground water monitoring required for the Site due to the presence of the monolith was designed to assess the long-term effectiveness of the soil stabilization remedy. Ground water monitoring results were to be used to identify any residual leaching of contaminants from soils addressed through the remedial action.

E^2 Inc. staff conducted research at the Miami Public Records office on January 25, 2007 and identified the following information pertaining to the implementation of institutional controls at the PSA Site. Copies of the deed documents listed below that serve as ICs are available in Appendix F.

Table 2: Deed Documents for PSA Site on file at the Miami Public Records Office

Date	Type of Document	Description	Book #	Page #
1983	Covenant	Use of on-site septic system restricted to certain non-polluting, industrial uses. List of restricted industrial uses for the Bloom parcel is attached.	11723	1629

Date	Type of Document	Description	Book #	Page #
1985	Agreement	Wastewater creation/storage restricted to domestic wastewater in an on-site septic tank for the Curtis parcel.	12732	2651
1991	Lien	Covers EPA's response costs on the Bloom parcel.	14976	1782
1991	Judgment	Prohibits construction on the remediated area to prevent damage to cover and monitoring wells, guarantees EPA/FDEP access for monitoring activities, settles state costs, requires pre-approval by regulators of construction activities for Curtis, Payne and Bloom parcels. All affirmative covenants terminate 20 years from effective date of Judgment.	14932	1802
2004	Deed Notice	Attaches EPA's entire 1997 Consent Decree to the Bloom parcel.	22606	3935
2004	Restrictive Covenant	Provides notice of on-site lead contamination at rear of former Miami Battery building and EPA's 1997 Consent Decree, requires proper waste disposal procedures for excavations below two feet, requires maintenance of two feet of cover on the monolith, allows site access for monitoring, confirms that these restrictions run with the land for the Curtis parcel.	22005	2659

These records indicate that ICs have been implemented for each of the three site parcels, in accordance with the requirements set forth in the EDD. Currently, the 1991 Judgment serves as a Deed Notice for the Payne parcel, the 2004 Deed Notice related to the Bloom parcel contains the 1987 Consent Decree, and the 2004 Restrictive Covenant codifies enforceable restrictions on the Curtis parcel. FDEP Division of Waste Management has an Institutional Controls Registry that includes the PSA Site and lists the Judgment as the Site's IC. The Judgment restricts use of land as well as any "construction or development activity within the remediated area or in the vicinity of the monitoring wells which disturbs the performance or integrity of the limestone cover, the monolith, the drainage collar surrounding the monolith, or any ground water monitoring wells" (p.3). The Judgment goes on to require that property shall not be transferred "unless the document effecting such conveyance or transfer includes a covenant running with the land" that contains the restrictions specified in the Judgment and obligates future owners to do the same (p.5).

Representatives of DERM and FDEP feel strongly about the importance of a standardized IC for the whole PSA Site. As such, negotiations are currently underway between EPA, FDEP, DERM, and the site owners to create standardized language for an IC that will apply to all three site parcels. EPA has notified the current landowners and tenants of restrictions identified in the 1997 Consent Decree which include restrictions on ground water use, rezoning from industrial to residential use, and activities which adversely affect the performance of the remedy. These restrictions will be incorporated into the new IC language. The planned IC will likely be a restrictive covenant that will comply with FDEP's 2004 *Institutional Controls Procedures Guidance*. The specific controls required will be determined through these on-going negotiations, but the standardized IC will be applied to each parcel, will be enforceable, and will apply to any portions of parcels that may subsequently be subdivided from the three current parcels.

4.3 Operation and Maintenance (O&M)

EPA, FDEP, and DERM continue to work together to implement the O&M requirements for the Site, which continue to evolve because of changing site conditions and reuse. There are three important efforts to consider: the 1989 O&M Plan, the 2002 Cooperative Agreement between DERM and EPA, and the current considerations for developing a revised O&M plan that allows for and is enhanced by current and future reuse of the Site. Each of these will be discussed in more detail below. Ground water monitoring for the Site is discussed separately.

4.3.1 1989 O&M Plan

Although the PRPs committed to providing ground water monitoring as part of their agreement with EPA for performance of the remedial action, no provisions were made in the EDD for maintenance of the monolith's cover or drainage collar. EPA and FDEP determined that such a plan was necessary so that, in addition to periodic ground water monitoring, O&M activities would be undertaken to ensure the continued protectiveness of the remedy. Therefore, in July 1989, EPA prepared a Proposed O&M Plan for the PSA Site. The 1989 O&M Plan assumed that no commercial or residential use would occur on the Site during its 30-year post-closure period. The O&M activities outlined in the 1989 plan included:

- Maintenance of the crushed limestone cover to reduce erosion of the monolith's surface and eliminate infiltration of rainwater directly to the monolith, including removal of any vegetation growing on the cover or the drainage ditch and observation of the cover and surrounding areas for any evidence of leachate seepage;
- Maintenance of the perimeter drainage collar designed to control and direct the flow of surface water away from the fill cover;
- Periodic observation of the monitoring wells to ensure that they remain in good condition;
- Maintenance of the security fences around the Site to restrict access;
- Maintenance of the access roads that allow entry into the Site; and
- Regularly scheduled sampling and analysis of surface and ground water at the Site.

This Plan was never fully implemented because until 1998, there were no funds available to support the proposed work. The most visible result of this lack of maintenance was the growth of an Australian pine forest. By the time of the 2002 FYR, some trees had attained heights of over 30 feet. During this period between 1989 and 2002, vegetation also grew into the drainage collar. One of the Recommendations of the 2002 FYR was the implementation of the 1989 O&M Plan.

4.3.2 Cooperative Agreement Between DERM and EPA

On October 16, 1997, a Consent Decree agreement was finalized between EPA and the PRPs that provided limited funds for O&M activities at the PSA Site. These funds were placed in a Special Account to assist EPA with the maintenance of the PSA Site. In May 2001, EPA approached DERM to request its assistance in performing O&M activities at the Site under a Cooperative Agreement. In July 2002, DERM submitted its Cooperative Agreement Application to EPA for review and approval. The approved Cooperative Agreement allocated $372,885 for O&M activities, including clearing trees from the Site, repairing the cover after tree removal, and inspecting the drainage collar for any necessary repairs. A copy of the DERM O&M Work Plan is included in Appendix H.

The Cooperative Agreement outlined two phases of work. Phase I included:

- Preparation of a Site Health and Safety Plan;
- Site visits to prepare for O&M activities;
- Preparation of a Stormwater Pollution Prevention Plan;
- Removal of vegetation from the monolith cover;
- Repair of the cover after vegetation removal;
- A topographic survey of the Site; and
- Creation of a summary report.

DERM began its Phase I activities on December 9, 2002 with active maintenance of the cover and evaluation of the drainage collar. Phase I activities focused mainly on the removal of the Australian pine forest that had grown on the cover due to the lack of maintenance between 1989 and 2002. Phase I activities also included repair of the cover and evaluation of the drainage collar and were completed on April 4, 2003.

Phase II of the Cooperative Agreement was intended to include monitoring well sampling, vegetation removal, a topographic survey, and any necessary non-routine maintenance, but was in fact, more limited in scope. DERM was not asked to perform any ground water sampling. From November 19, 2003 until August 5, 2005, DERM was responsible for Phase II activities involving limited maintenance such as cutting grass on the monolith cover, removing debris abandoned at the Site, conducting a topographic survey of the cover and drainage collar, and installing and repairing fencing. DERM also marked 60 to 70 reference points around the Site to indicate the original location of the drainage collar, which was in poor condition. In 2003, DERM evicted a truck repair operation that had encroached on the Site and had tractor trailers parked on the monolith. After removing the trucking operation from the Site, DERM installed a gate and signs to enhance access controls and public awareness of the Site. The original Cooperative Agreement was scheduled to expire on October 1, 2004. On June 30, 2004, the agreement was extended for an additional period of two years. The new expiration date was October 1, 2006. DERM monitored, inspected, and

performed work on the Site until September 25, 2005. On September 18, 2006 Miami-Dade County was instructed by EPA to begin closing out the agreement. At the close of the agreement, DERM had performed O&M activities that resulted in the use of $184,595, or approximately half of the originally allocated funds. Use of the total amount was not necessary because EPA decided not to pursue the drainage collar repair, since reuse activities were likely to make such expenditures unnecessary. A copy of the DERM Final Closeout Report is included in Appendix H.

4.3.3 Recent O&M and Reuse Activities

Because the Site is being returned to use, EPA expects to update the maintenance plans to accommodate current and appropriate future uses, delegating responsibility for many maintenance activities to the current owners of the property including the funding, installation, and maintenance of drainage structures and maintenance of the cover for the monolith. In July 2004, an EPA team from the Office of Research and Development and the Environmental Response Team performed a technical assessment of the contamination, geo-technical features, and drainage issues at the Site to determine the potential and/or limitations for the redevelopment of the Site. This assessment concluded that no issues concerning contamination or geo-technical data would prevent the land from being redeveloped as long as reuse activities also maintained the integrity of the remedy. The assessment stated that any new use of the Site must have a drainage system that meets local storm water ordinances. ERT and ORD concluded that the Site could and should be redeveloped as long as EPA conducted a thorough evaluation of the design and operations prior to approval of the proposed reuse. Since the site inspection, DERM has included all three of the Site's parcels in its tracking database and flagged them as contaminated properties requiring additional review. Any plans submitted for construction, drainage, or dewatering on PSA Site parcels will prompt DERM to conduct additional review of these plans prior to approval for the proposed activities or structures.

Site redevelopment activities began in March 2005. Current property owners and tenants have indicated their willingness to implement some O&M activities for the Site, such as trash removal, maintenance of the monolith's cap, and installation of drainage structures. Infrastructure improvements to two of the streets bordering the Site will obligate the Site's owners to put in place drainage systems that meet Town of Medley and Dade County stormwater management ordinances. The Town of Medley plans to pave NW 109th Street and to improve NW 97th Avenue, both of which border the PSA Site to the south and west respectively. Both local government entities adopted the same stormwater management ordinance, which requires landowners to contain all of their stormwater within their property boundaries. Compliance with this ordinance and cooperation with EPA will result in the replacement of the original drainage collar with more permanent and effective drainage systems for the entire PSA Site properties.

The participation of site owners and tenants in the maintenance of the Site and its remedy should significantly increase the frequency of monitoring and significantly reduce or eliminate EPA maintenance expenditures (i.e., cover, vegetation control, security, drainage, and random dumping and encroachment).

4.3.4 Ground Water Monitoring

The ground water monitoring program for the PSA Site, as described in the 1987 GeoTrans report, was designed to include 3 phases: Phase I baseline monitoring, Phase II remediation monitoring, and Phase III post-remediation monitoring. This approach was presented at the EPA/FPL coordination meetings leading up to completion of the FPL conceptual remedy design (approximately 1985). This design involved monitoring at existing wells, where appropriate, and at the wells installed during the remedial action, where necessary. Ground water quality and elevations were to be monitored in the bedrock aquifer. In monolith wells analytes were limited to COCs, including lead, arsenic, and PCBs. On all wells, field measurements were made on characteristics such as water level, pH, and specific conductance. The remedial design included the installation of three wells to provide a better characterization of water quality along the perimeter of the monolith and down-gradient from remediation areas. Three additional wells were scheduled for post-construction installation down-gradient of the monolith to monitor PCBs at the monolith bedrock interface.

Before site remediation, Phase I baseline monitoring was conducted using existing wells to provide baseline water quality data. This design included weekly collection of water levels on all FP&L and NUS Corporation wells and continuous recorders on four EPA wells. Phase II remediation monitoring was limited to measuring water levels during remedy construction activities.

Phase III post-remediation monitoring was designed: 1) to detect any significant changes in ground water quality (lead and arsenic) after remediation; 2) to determine if the monolith is leaching or diffusing significant loadings of PCBs, with action limits for PCBs to be based on monolith well analyses; and 3) to measure water levels for evaluation of long-term changes in ground water flow. Ground water quality analyses were to be conducted (semi-annually the first year and annually thereafter) in MW-series wells on an alternate basis:

- Odd periods (MW-1A, MW-4B, MW-4C, MW-5A, MW-6B, MW-7A, MW-9A); and
- Even periods (MW-1B, MW-4A, MW-5B, MW-6A, MW-6C, MW-8A).

The three monolith wells (MO-1, MO-2, MO-3) were sampled quarterly during the first year and semi-annually thereafter. Water levels were collected monthly in FP&L, S&ME, and NUS Corporation wells. During the first year, continuous recorders were used to assess water levels in the four EPA wells. Thereafter,

continuous recorders were used in all wells on a quarterly basis. The Final Remedial Action Report describes the "Ground water Monitoring Well Contingency Planning" process in detail. This document describes the procedure to be followed if ground water action levels for PCBs (7 µg/L in monolith wells), lead (50 µg/L in MW-series wells), or arsenic (50 µg/L in MW-series wells) were exceeded during routine monitoring. A retest was to be conducted within 30 days after the receipt of the original analysis and if the retest analysis were above the action level, the well in which the action level was exceeded was to be monitored for the specific analyte on a monthly basis until either four consecutive analyses fell below the action level (unconfirmed) or four consecutive analyses were above the action level (confirmed). If the concentration above the action level was confirmed, then a review was to be conducted to determine which, if any, remedial measures were required to address the problem. If the concentration above the action level was not confirmed, then monitoring for water quality in the well with the potentially elevated concentration was to be conducted on a quarterly basis for one year. The monitoring program was scheduled for reassessment three years after completion of the remedial action and/or if long-term changes in ground water flow directions were identified. The 1986 EDD estimated annual project O&M costs for post-remedial ground water monitoring at $42,500.

The post-remediation ground water monitoring program conducted by FP&L began in 1988. The monitoring well program included sampling of the six wells that were scheduled for installation during the remedial action, in addition to other existing wells. Analytical results from post-remediation monitoring conducted in 1988, 1991, and 1992 indicated that the monolith was performing as designed and was not leaching contaminants into the ground water at levels exceeding the established remedial action levels. In 1993, after a reassessment of ground water monitoring at the PSA Site, FP&L requested termination of the ground water monitoring obligation based on the previous five years of monitoring results, which were consistently under remedial action levels and also did not indicate any noticeable change in ground water flow direction. EPA relaxed the ground water monitoring requirements for the Site to monitoring wells MO-1, MW-6A, and MW-6R to be sampled every two and one-half years for lead at a detection limit of 1 part per billion, but did not agree to the termination of monitoring obligations. All existing wells were to remain intact for future use by EPA in performing FYRs. This change was based on the lead concentrations documented during the monitoring period and changes in State Drinking Water Standards.

A change in State Drinking Water Standards from 50 µg/L to 15 µg/L for lead caused concern over previous sampling results that met the remedial action objectives established in the EDD, but exceeded the new standard. The second FYR recommended follow up sampling to determine the continued protectiveness of human health with regard to the exceedance of ground water samples for lead. All of the ground water samples taken during this 2003 follow-up sampling event were below the new standard of 15 µg/L for lead. Currently FP&L is required to

perform monitoring every two and a half years to verify that the concentration of site-related contaminants remains below action levels. In addition, the State Drinking Water Standard for arsenic was lowered in 2005 from 50 µg/L to 10 µg/L. The new arsenic ground water standard has been met at most sampling locations in recent sampling events. Plans are underway to create a new Ground Water Monitoring Plan for the PSA Site. This is necessary because of the predominant absence of exceedances in sampling data, a desire to minimize duplication among the existing monitoring wells, and the possible need for additional monitoring wells to fill directional gaps or bring the monitoring point closer to the boundaries of the monolith versus out in the surrounding industrialized neighborhood. Additional consideration will be given to reuse at the site and the effects it might have on monitoring well locations. The revised plan will consider exceedances at two wells during the 2007 sampling event, as well as the re-evaluation/re-sampling of these wells, and may allow for ground water sampling and analysis to occur on a three or five year cycle, instead of the currently required period of every two and a half years. Sampling will be performed at the same time of year as most of the historical events for purposes of comparing data results. EPA development of the new Ground Water Monitoring Plan will be coordinated with FDEP and DERM.

4.3.5 The Drainage Collar

In 2004, as part of the ground water and monolith sampling activities performed by Lockheed Martin, a review of the drainage collar was also conducted. The conclusion of the 2004 Lockheed Martin report was that the surficial features of the drainage collar are in poor condition. From the subsurface investigation, it was clear that the top one foot of the collar had been clogged by organic matter and silt. Anecdotal evidence suggests that this clogging is likely contributing to the flooding on adjacent properties. A counter argument to this assumption is that the surficial collar should have received very little surficial runoff due to the significant tree canopy, the pine needle matting and porosity of the limerock cover from tree root growth. After tree removal, the limerock cover was even further disturbed thus providing higher seepage rates for rainfall into the cover material to be transported across the surface of the monolith to the drainage collar. This transport mechanism should have handled most of the average rain events, resulting in subsurface discharge into the still intact, subsurface features of the collar. Heavy tropical storm events probably caused saturation of the limerock cover, thus causing a higher volume of surficial runoff, which may not have been entirely contained by the damaged surficial features of the collar (berm). But tropical storm events also saturated all existing drainage mechanisms in the area, which generally resulted in flooding in all low-lying areas. The report recommended that at a minimum, the first foot of the drainage collar should be refurbished to remove the large amount of organic matter covering the limestone gravel. The report concluded that further O&M was required to ensure the collar's effectiveness or that the collar should be replaced with a more effective drainage system.

However, Mr. Rogers decided that use of EPA funds to repair the drainage collar was not necessary because of reuse at the Site, which most likely would remove the surficial features of the collar, and the willingness of current site owners to implement measures to address each parcel's entire drainage requirements per local ordinance requirements, which will entail abandoning the current drainage system and installing a new one. The 2007 site inspection found that the surficial features of the drainage collar on the Curtis parcel were essentially gone. They were leveled during the removal of the Australian pine forest from the monolith and the subsequent repair of the monolith's cover. Thomas Curtis and his representative, Tony Guajardo, stated that they pulled four truckloads of silt and trash from the drains in the parking lot of the Curtis parcel in September 2006. These drains received stormwater from various unimproved areas of the property including some runoff from the monolith during severe rain events. A site visit in December 2006 indicated this activity improved stormwater management on the Site.

Officials from the Town of Medley confirmed that once the planned road improvements are completed on NW 109th Street and NW 97th Avenue, the Site's owners will have to comply with the Town's stormwater management ordinance. Thus, local officials, EPA staff, and current property owners will continue working together to address the Site's drainage problems and provide a permanent alternative to the drainage collar.

5.0 Progress Since the Last Five-Year Review

From January 31, 1992, through September 23, 1994, the first policy Five-Year Review of the PSA remedy was conducted. During the review, EPA sampled the limestone cap and the monolith, and EPA and the PRPs shared responsibility for the ground water monitoring activities. The limestone cap and monolith were sampled to determine the integrity of the monolith and were analyzed for PCBs, lead, arsenic, and percent solids. The analyses concluded that the monolith was stable, but recommended additional testing to determine the chemical and physical integrity of the monolith over time. The ground water was analyzed for PCBs, lead, and arsenic. The ground water results indicated that the contaminants of concern within the solidified matrix appeared to be stable and were not currently impacting the ground water beneath the Site. The statement of protectiveness from the first FYR indicated that based on the ground water sampling results, the remedial action appeared to be performing as intended. It further stated that none of the contaminants of concern appeared to be leaching from the monolith and parameter levels were below the action levels specified in the Consent Decree. The protectiveness statement included two items of concern, including the change in state drinking water standards for lead and the possibility of trespassers encountering abandoned drums in the Jim Woods building.

The second FYR for this Site was signed on September 30, 2002. During this policy review, EPA contractors sampled the monolith and ground water and FP&L sampled the ground water. The ground water was analyzed for PCBs, lead, and arsenic. The ground water results indicated that the contaminants of concern met the remedial action levels specified in the Consent Decree. However, this FYR noted that due to a change in the standard for lead, further sampling should be done to determine if ground water beneath the Site met current standards. The protectiveness statement for the 2002 FYR concluded that the remedy was protective of human health when comparing analytical results to remedial action levels specified in the CD, but noted that further sampling of MO-2 was necessary to determine protectiveness with regard to the change in standards for lead. The protectiveness statement further concluded that the remedy was protective of the environment due to the ground water monitoring results that were under remedial action levels and the chemical and physical integrity of the monolith over time. The protectiveness statement included a concern over the lack of O&M at the Site and its affect on the drainage collar's ability to contain surface water runoff, but noted that this did not affect the overall purpose of the remedy.

The following table provides a chronological summary by issue of the recommendations made in both the 1994 and 2002 FYRs and any follow up actions that have been taken to address those recommendations.

Table 3: Recommendations and Follow-up Actions Across FYRs for the PSA Site

	Recommendations	1994 Status	Actions	2002 Status/Recs	Actions	2007 Status
			1994 FYR			
5.1	Implementation of proposed O&M Plan	O&M has been neglected except for ground water monitoring.	No site maintenance occurred. 1997 Consent Decree secured funding for some site maintenance.	2002 FYR recommends immediate implementation of proposed O&M Plan.	Implementation of 2002 Cooperative Agreement between EPA and DERM for site maintenance.	Cooperative Agreement closed out; property owners reusing Site help with maintenance. Revision of O&M Plan is scheduled.
5.2	Evaluation of the monolith for settlement and erosion	Cannot occur because of vegetation on cover.	No actions taken.	2002 FYR recommends a topographic survey and sampling of the monolith.	Monolith evaluation, including sampling and a topographic survey, was completed in 2004.	Monolith is in good condition; no significant settlement or erosion is evident.
5.3	Fencing to provide access controls for the Site	Access is available to the abandoned Jim Woods building, which contains drums and compressed gas cylinders.	No actions taken.	Incomplete fencing persists, but the threat that prompted the recommendation of access controls is no longer present.	No actions taken.	Most of the Site is fenced. New site owners are adding security measures, such as motion sensitive lights and locked gates.
5.4	Continued annual ground water monitoring	Sampling showed no results above action levels.	EPA revised Ground Water Monitoring Plan to require sampling every 2.5 years and only for lead.	Sampling occurred in 1995, 1997, and 1998 and no results exceeded remedial limits. In 2002, two wells exceeded new ARARs for lead. The 2002 FYR recommends ground water monitoring every 2.5 years and prompt re-sampling of MO-2 for lead.	Sampling occurred in 2003 and 2007. MO-2 was non-detect for lead in 2003.	In 2007, two wells exceeded remedial goals for lead and one of these also exceeded the remedial goal for arsenic. New ARARs exist for all COCs at the Site. Revision of the Ground Water Monitoring Plan is scheduled.
5.5	Drum removal and/ or access controls to mitigate threat of contact with materials in the Jim Woods building	Threat exists of exposure by trespassers to potentially hazardous materials.	No actions taken.	No drums or cylinders were visible during the 2002 site inspection.	No actions taken.	Jim Woods building is empty and plans exist for its renovation and reuse.
			2002 FYR			
5.6	The 1994 FYR did not have a specific recommendation on the drainage collar.			2002 FYR recommends investigation of drainage collar and either its restoration or replacement.	Original drainage collar location mapped by DERM. Site owners begin reuse activities and installation of new drainage systems.	Site owners are planning a new drainage system for the Site to comply with local ordinances and control stormwater runoff.

5.1 Implementation of the Proposed O&M Plan

The 1994 FYR suggested the implementation of the Proposed O&M Plan, while the 2002 FYR called for its immediate implementation. The 1989 Proposed O&M Plan covered various aspects of site maintenance including:

- Checking the cover for settlement, erosion, leachate seepage, ponded water, and vegetation at the sides of the perimeter drainage collar;
- Checking the perimeter drainage system for sloughing, vegetation, and ponding;
- Checking the integrity of the monitoring wells;
- Checking the condition of the perimeter fence;
- Repairing major settlement noted in cover;
- Eliminating vegetation and settlement in the perimeter drainage collar;
- Addressing leachate seepage;
- Repairing or abandoning monitoring wells that cannot be repaired; and
- Repairing the perimeter fence.

The Proposed O&M Plan was partially implemented through the Cooperative Agreement with DERM, which is described in detail in Section 4.3.2. Follow up activities from the 2002 FYR resulted in the complete removal of vegetation from the monolith and repair of the lime rock cover. However, implementation of the Proposed O&M Plan was not fully completed for several reasons. The Plan assumed that the Site would not be put into reuse during its 30-year post-closure period and the Site is now in reuse. Reuse allows current site owners to carry out some of the maintenance activities listed above. Therefore, site managers intend to revise the 1989 O&M Plan and create an updated version that will better address current site conditions.

5.2 Evaluation of the Monolith

The 1994 FYR called for evaluation of the monolith for settlement and erosion, which was not possible due to heavy vegetation on the cover. Likewise, the 2002 FYR called for sampling of the monolith for total metals, toxicity characteristics leaching procedure (TCLP) for lead and arsenic, multiple extraction procedure (MEP) for lead and arsenic, unconfined compressive strength, permeability, Hardgrove grindability index, acid neutralization capacity, and wet/dry weathering. It was not possible to perform these tests at the time of the 2002 FYR because of the heavily vegetated cover. Sampling of the monolith for all specified characteristics was completed in 2004 and reconfirmed the monolith's integrity. Also a topographic survey of the Site and the monolith was carried out in 2004 (see last page of Appendix E for topographic image). Comparison of the 1989 as-built survey to the 2004 elevation resurvey indicated the surface slopes of the limestone cover remained similar to those of the constructed remedy. Direct comparison of elevations is difficult due to disruption from the tree stump removal actions. Some areas appeared slightly higher than the original as-built designs, while others appeared similar or slightly lower. Surface water runoff was expected to follow the same pathways from the surface of the monolith to the drainage collar as originally designed. Slower

runoff velocities were expected due to the loosening of the surface material. This was not felt to differ greatly from the surface water transport mechanisms that had been occurring while the Australian pine forest was present over the previous 10-year period. Growth of the tree root systems, while shallow, had loosened the limestone cover and had also resulted in a heavy surface mat of pine needles, which likely slowed surface runoff velocities. The result was more infiltration through the limestone cover to the monolith surface followed by horizontal transport along the monolith surface, through the limestone cover, to the drainage collar. Settling of the monolith was evaluated from a general comparison of the 1989 as-built survey to the 2004 elevation resurvey. No significant settling was identified through a comparison of elevations or through on-site visual observations.

5.3 Access Controls

The 1994 FYR called for removal of the hazardous substances in the Jim Woods building or the installation of fencing to provide access controls for the Site. By the time of the 2002 FYR, the hazardous materials were no longer present at the Site, but unauthorized access of the Site persisted resulting in the on-site dumping of significant quantities of debris. Large quantities of trash, tires, old vehicles, and other debris had been abandoned on the three properties containing the site. Progress has been made since the 2002 FYR in terms of site cleanup and maintenance due to reuse and the efforts of current property owners. Since the Site remained vacant for almost 20 years prior to returning to productive use, problems had developed with dumping, much of which was obscured and encouraged by the dense vegetation on site prior to its removal in 2003. Current owners are working to clear vegetation, install motion sensitive lights, repair fencing, and remove or recycle refuse in order to clean the Site and discourage future dumping. In addition, some owners/tenants are using land/sea shipping containers to form walls at the property boundary to discourage dumping.

5.4 Ground Water Monitoring

The 1994 FYR called for continued annual ground water monitoring. In 1994, EPA revised the Ground Water Monitoring Plan to require sampling every 2.5 years based on historic sampling results. The 2002 FYR made several recommendations regarding ground water monitoring including:

- Continued ground water monitoring every 2.5 years for the monitoring wells currently sampled;
- Prompt re-sampling of monitoring well MO-2 by EPA and FP&L to determine whether this well meets the current ARAR for lead; and
- Re-sampling of all monitoring wells sampled during the 2002 FYR during the next FYR.

To address these recommendations, the following actions were undertaken:

- Ground water monitoring was performed in 2003 and 2007;

- Re-sampling of monitoring well MO-2 for lead occurred in 2003 and was within state and EPA drinking water standards; and
- All monitoring wells sampled for the 2002 FYR were also sampled for the 2007 FYR with one exception. For the 2007 sampling event, MW-4A was substituted for MW-4B and MW-8A was added to the list of wells sampled.

5.5 Jim Woods Building

The 1994 FYR stressed the importance of addressing the potentially hazardous materials that had been abandoned in the Jim Woods building. By the time of the 2002 FYR, the Jim Woods building no longer contained any potentially hazardous materials. Currently the Jim Woods building, which is located on the parcel now owned by Mr. Lista, is empty. Mr. Lista has plans for the building's renovation and reuse.

5.6 Drainage Collar

The 1994 FYR did not specifically mention the drainage collar or the anecdotal evidence of flooding on properties adjacent to the Site. The 2002 FYR however, called for investigation of the drainage collar to explore the possibility of its restoration to its initial condition or the design of alternative drainage structures for the monolith. Investigations of the drainage collar were conducted by DERM in 2003 and by EPA contractor, Lockheed Martin, in 2005 (see Section 4.3.2 for details). The surface was found to have been disrupted with the tree clearing and clogged from vegetative growth. The clogging occurred within the first 8-12 inches of the surface. In places, the surficial drainage collar was full of silt and vegetation or had been covered over by new berms designed to control rainwater runoff. Subsurface investigation of the collar indicates it probably continues to function to intercept and infiltrate stormwater moving laterally through the limerock cover as intended. There was no evidence of fouling in the deeper portions of the collar. Site staff determined that it would not be cost-effective to repair the surficial features of the drainage collar since reuse would probably disrupt or replace the repairs with property-wide measures to address drainage issues. This decision was based in part on site reuse and in part on the upcoming infrastructure improvements planned by the Town of Medley, which will compel property owners to address runoff from their entire properties. Once road construction is complete, property owners at the Site must bring their properties into compliance with local stormwater management ordinances and compliance with those standards should address the Site's drainage problems.

Current site owners have already taken steps to improve the Site's drainage systems, since the original drainage collar may not be functioning entirely as intended. In September 2006, the owner and tenant of the northern portion of the Site (Tract 46) hauled away four truckloads of silt and debris from the storm sewer infiltration sumps in their parking lot, clearing the drains and restoring their function. Plans for a new 10 to 15 foot drainage gallery are underway for the northern portion of the monolith to handle all stormwater from Tract 46. A 2 to 3 foot tall berm has been partially constructed along the northern property line of the adjacent parcel (Tract 45), as required by the City of Medley for the new facility being built there, to prevent surface water runoff between

property parcels. The berm extends east-west along the property line and closely follows the ridge-line of the monolith, thus having minimal effect on historical surface drainage to the north and south. Due to the ridgeline's slope, any water accumulating along the berm on Tract 45 is expected to be redirected in an east-west direction toward the drainage collar. Drainage along Track 46 is not expected to be impacted by the presence of the berm. The owner of Tract 45 was also required to extend the berm around other portions of the Site, were it is either located at the drainage collar or just outside it, to control drainage over the whole property. This should not harm the drainage collar and actually enhances the collar's ability to capture and infiltrate stormwater runoff. Site owners continue to work with EPA and Town of Medley staff to comply with local, county, and state regulations concerning drainage and other permitting issues while protecting the remedy.

6.0 Five-Year Review Process

6.1 Administrative Components

EPA Region 4 conducted the third FYR for the PSA Site with support from its contractor E^2 Inc. The FYR team included Mr. Jan Rogers, the Remedial Project Manager (RPM), Lisa Ellis, the EPA site attorney, Kelsey Helton of FDEP, and Tom Kux of DERM. Mr. Rogers established a schedule for the Five-Year Review consisting of the following components:

- Community notification;
- Document review;
- Data collection and review;
- Site inspection;
- Local interviews; and
- Five-Year Review Report development and review.

6.2 Community Involvement

On January 19, 2007, an advertisement was published in English and Spanish in the classified sections of the *Miami Herald* and *El Nuevo Herald* respectively, announcing the FYR for the PSA Site, providing Mr. Rogers' contact information, and inviting the community's questions, comments, and concerns. No comments were received from any parties. A copy of the notices is provided in Appendix B. Notification of the PRPs was carried out in the form of a telephone call between Mr. Rogers and FP&L, inviting them to participate in the site visit as soon as the date for that activity had been scheduled.

E^2 Inc. staff also visited the Miami Dade County Public Library, 101 W. Flagler, Miami, FL 33128, the designated repository for PSA site documents, on January 25, 2007, to verify that information about the Site was publicly available. A copy of the Administrative Record for the Site is available in hardcopy at the library and library staff identified other site documents as available online. The site repository should be updated with copies of recent reports relevant to the Site, such as the ERT reports and the 2007 ground water monitoring data.

6.3 Document Review

This FYR included a review of relevant, site-related documents including previous FYRs, the EDD, sampling and close out reports, and recent monitoring data. There are no formal O&M reports for this Site, but DERM's summary documents at the beginning and end of the Cooperative Agreement describe implementation of the O&M Plan. A complete list of the site documents reviewed can be found in Appendix A.

ARAR Review

Section 121 (d)(2)(A) of CERCLA specifies that Superfund remedial actions must meet any federal standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate requirements (ARARs). It also requires that state ARARs be met if they are more stringent than federal requirements. ARARs identified and considered in the Feasibility Study and EDD for the solidification process included:

- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Sections 104, 121, 122;
- Hazardous Waste Regulations Resources Conservation and Recovery Act (RCRA) Subtitle C, 40 Code of Federal Regulations (CFR) Part 864;
- PCB Requirement for Disposal, 40 CFR Subpart D761.60;
- National Pollutant Discharge Elimination System (NPDES), 40 CFR Parts 122 and 125;
- National Pretreatment Standards, 40 CFR Part 403; and
- National Primary Drinking Water Standards, 40 CFR Part 141, Subparts B and G.

EPA's generally acceptable excess cancer risk for site-related exposures is between 10^{-4} and 10^{-6}. It should be noted, however, that as of June 2003, pursuant to Florida Statute 376.30701, that FDEP promulgated a 10^{-6} risk management level, which was subsequently incorporated into FDEP's contaminated sites' rule, Chapter 62-780 (with default soil and ground water criteria specified in Chapter 62-777) based on that cancer risk limit and a hazardous index of 1. As the secondary MCLs are not health based, EPA considers the SMCLs to be non-enforceable under Superfund. FDEP has acknowledged this interpretation with the understanding that these criteria may still be enforced under state law.

Changes and differing federal and state standards are presented in more detail in the following table. Table 4 indicates when different ARARs exist for a contaminant depending on the type of land use, and the standards for both residential and industrial use are presented. Also, when different standards exist for a contaminant at the federal and state levels, the more stringent ARAR is listed in the table with a note citing the less stringent ARAR below. The data source used for the original ARARs in the table below was the 1986 EDD or the 1987 Consent Decree for the PSA Site. Sources for the current ARARs information presented in Table 4 include: EPA National Primary Drinking Water Regulations (including Secondary Drinking Water Regulations), EPA's PCB Requirement for Disposal 40 CFR 761.61 (p. 644), Florida Administrative Code 62-550 on Drinking Water Standards Monitoring and Reporting, and Florida Soil Cleanup Target Levels (SCTLs). The State of Florida has implemented the SCTLs, which are found in Florida Administrative Code 62-777.

Table 4: Current ARARs

COCs	ARARs Changed?	Original Remedial Goal	Source for the Original ARARs	Current ARARs/ SCTLs	Source for the Current ARARs
Ground water					
PCBs (µg/L)	Yes	7	Value based on EPA ambient water quality criteria at the time the Site's Consent Decree was signed (3/26/1987).	0.5	National Primary Drinking Water Regulations Florida Administrative Code 62-550 Drinking Water Standards, Monitoring and Reporting (Table 5, p. 328)
Lead (µg/L)	Yes	50	Value based on EPA's interim primary drinking water standard and ambient water quality criteria at the time the Site's Consent Decree was signed (3/26/1987).	15	National Primary Drinking Water Regulations Florida Administrative Code 62-550 Drinking Water Standards, Monitoring and Reporting (Table 1, p. 325)
Arsenic (µg/L)[1]	Yes	50	Value based on EPA's interim primary drinking water standard at the time the Site's Consent Decree was signed (3/26/1987).	10	National Primary Drinking Water Regulations Florida Administrative Code 62-550 Drinking Water Standards, Monitoring and Reporting (Table 1, p. 325)
Soil					
PCBs (mg/Kg)	No	1	Value based on PCB Requirement for Disposal for high occupancy areas.	1	PCB Requirement for Disposal 40 CFR 761.61 (p. 644)
Lead (mg/Kg)[2]	Yes	1,000	Value based on leachability studies and EPA's interim primary drinking water standards.	400 for residential use; 1,400 for commercial/industrial use	Florida Soil Cleanup Target Levels (SCTLs) as of 4/17/2005 (p. 60)
Arsenic (mg/Kg)[2]	Yes	5	Value based on leachability studies and EPA's interim primary drinking water standards.	2.1 for residential use; 12 for commercial/industrial use	Florida Soil Cleanup Target Levels (SCTLs) as of 4/17/2005 (p. 46)

Notes on Table 4:

1. Florida State Primary Maximum Contaminant Level for drinking water for arsenic is 10 µg/L since January 1, 2005; it was 50 µg/L through December 31, 2004.
2. The cleanup levels for COCs in soil were determined based on a combination of acceptable leachate concentrations, modeling of ground water flow, and regulatory requirements for COCs in drinking water. This is because the major concern for COCs in soil was their ability to leach into the ground water that serves as a source of drinking water for over three million people.
3. State of Florida Soil Cleanup Target Levels did not exist when the EDD was signed, but are available now for PCBs, lead, and arsenic in soil. The SCTL for PCBs (2.6 mg/kg) was not included in Table 4 as it is not as stringent as the federal requirement.

1.

Table 5 summarizes changes in chemical-specific ARARs that have occurred between the remedial goals set forth in the 1987 Consent Decree and the current standards for drinking water as of the date of this Five-Year Review.

Table 5: Changes in Chemical Specific ARARs for Ground Water

Contaminants of Concern	ARARs	
	1987	2007
PCBs	7 µg/L	0.5 µg/L
Arsenic	50 µg/L	10 µg/L
Lead	50 µg/L	15 µg/L

The 1987 ARARs listed above were based on EPA Interim Primary Drinking Water Standards. Both EPA and FDEP Drinking Water Standards were used to determine current ARARs. The changes in standards are all to levels that are more stringent than those established in the original Consent Decree. The change in the PCB ARARs does not affect protective cleanup levels because no PCBs have been detected in the ground water since the monitoring required by the Consent Decree was initiated at the PSA Site. The 2002 FYR noted the change in the ARAR for lead and also that initial results from MO-2 did not comply with the new standard. The second FYR recommended additional sampling of MO-2 to determine if lead concentrations in that well could be confirmed as an exceedance. The exceedance of the new standard was unconfirmed on further sampling, as results for MO-2 from both 2003 and 2007 showed lead levels below 15 µg/L. The 2007 exceedances of the lead standard may be due to the physical conditions of the wells or may be an indication of contaminated ground water. Further sampling in accordance with the Ground Water Monitoring Plan will be needed to confirm or disconfirm these exceedances. The sampling results for arsenic from 2003 and 2007 indicate that for all wells sampled except MO-1 in 2007, the new cleanup standard for arsenic is met. More detailed information on current and historical ground water monitoring data is included in Section 6.4 below.

6.4 Data Review

Sampling data reviewed in preparation for this FYR include historic data as well as data generated since the second FYR. Recent data cover ground water sampling events in 2003 and 2007 and monolith sampling from 2005. Sampling data generated prior to the second FYR were reviewed for exceedances to confirm or disprove trends and the presence of elevated lead levels in specific wells. The 2007 sampling event conducted for this FYR covered ground water, monolith core samples, and drainage material samples.

6.4.1 Data Review for Monitoring Wells

In general, since most of the on-site wells have shown non-detect levels for the Site's COCs during most of the sampling events conducted during the last 15

years, it does not seem likely that significant ground water contamination exists onsite or that any significant onsite contamination would be affecting off-site ground water resources. Exceedances of groundwater cleanup goals noted in the EDD have been sporadic, occurring in different wells for different years. Appendix C summarizes the history of ground water monitoring for the PSA Site and notes sampling results and exceedances, which were due either to changes in the site's cleanup goals or were unconfirmed upon further sampling.

To clarify what is meant by changes in clean up standards, it is important to state that cleanup goals for the site have not changed, only the ground water standards, which are the indirect means of monitoring the performance of the soil stabilization remedy and its long-term impact on a second environmental media i.e. ground water. This does not suggest the scope of the remedy has changed nor that the remedy is inadequate to meet present standards. There was not a separate ground water remedy implemented at the Site because the ground water itself was not significantly impacted by site-related contamination. The ground water monitoring results have met the remedial action objectives and have largely met the more stringent criteria that have taken effect over time (with the few exceptions noted below). The remedy appears to be performing as designed, which suggests that the changes in ground water standards can be documented in this FYR. Only if changing standards or remedy failure were to cause a change in the implemented remedy, would it become necessary to document these changes through a modification of the ROD. This would only be necessary if the remedy were to become unprotective, which in CERCLA is defined as exceeding a lifetime excess cancer risk of 10^{-4} risk or HQ>1, and is not the case for this Site.

A review of historic ground water sampling shows that in 1992, 18 wells were sampled. During the subsequent sampling events between 1995 and 2007, 11 of these original 18 wells have been re-sampled. Of these 11 wells, only MW-6A has been sampled during each of these sampling events. Ten wells were sampled for the 2007 sampling event, covering all the areas where functioning monitoring wells remain at the Site. During the 2007 sampling event no PCBs were detected in any of the wells. For eight of the ten wells sampled, all results for arsenic and lead were below current drinking water standards. Only in two wells (MO-1 and MW-5A) were levels above remedial goals. MO-1 registered 66 µg/L for arsenic and 230 µg/L for lead, while MW-5A registered 57 µg/L for lead.

There may be issues with the physical integrity of both of these wells and this could affect their sampling results. For example, MO-1 was considered to be in excellent condition during the 2005 well survey, but the well has produced a very low yield both historically and during the 2007 sampling event. The 2007 sampling event occurred during the later part of the dry season, which was preceded by a drier than average wet season. Ground water may have fallen below the well screen, thus not giving a true representation of the ground water surrounding the monolith. Region 4's Standard Operating Procedure for well sampling was followed, but three well volumes of the ground water head space

within the well (visually estimated at equal to or less than 0.8 feet) amounted to very little water. MO-1 pumped dry with a peristaltic, low-flow pump and could not produce enough water to fill the duplicate SVOC sample containers. Therefore, the sample is not truly representative of the surrounding ground water. MW-5A was considered to be in unacceptable condition during the 2005 well survey. The 2005 Lockheed Martin Well Condition Survey found the well's lid severely corroded. This made it impossible to lock the well and the wellhead was temporarily protected with a sheet of polypropylene and duct tape. Since it was not possible to secure this well, the contents of the well may have been compromised. Both of these wells will need to be evaluated to determine whether they should be replaced or if they should be repaired and re-sampled to confirm or disconfirm the exceedances detected in the most recent sampling event.

Both Figure 2 and Figure 3 indicate the locations of all the monitoring wells that were sampled during the 2007 sampling event as well as which wells registered exceedances. MO-1 is located on the northern edge of the monolith, while MW-5A is located just south of the monolith on the southern edge of the Bloom parcel. Both of these wells are located on site. The majority of wells sampled for the PSA Site are on-site wells; the only off-site wells that remain are the cluster of MW-4 wells southeast of the Site and the one remaining NUS Corporation well that lies northeast of the Site, next to the Miami Canal. The NUS Corporation well is no longer part of the ground water monitoring program for the Site. MW-4A was sampled twice in the last five years and did not register any results above remedial goals on either occasion. This indicates that off-site migration of ground water to the southeast is not occurring. However, since no other off-site wells are sampled, statements about off-site migration cannot be made based on results from the current array of monitoring wells.

In April 2005, an evaluation of the Site's monitoring wells was performed, which assessed the physical condition, construction, water level, well elevation, and pumping results. During this evaluation, only 11 of the original 22 wells were located. Subsequent research revealed that the missing wells that were not located had likely been abandoned, removed, replaced, or covered by current industrial activities. This evaluation found that the wells were in good to excellent condition, with the exception of the outer casings of two wells (MW-5A and MW-5B), which were corroded and needed replacing. The two wells with corroded outer casings were still in excellent condition inside, but could not be secured at the time of the evaluation due to damaged locks or corroded covers. The well evaluation report concluded that all of the wells located were viable for use and could inform the long-term monitoring plan for the Site. This report recommended that monitoring of ground water for lead should continue on a regular basis. The report also recommended a monitoring interval of three years rather than the current interval of two and a half years, in part so that each monitoring event could be conducted at the same time of year, during the wet season. This is relevant because the wet season is when leaching potential is the highest and because sampling results gathered during the same season are more

consistent and comparable. This report proposed that wells MW-6A, MW-4A, and MO-2 be sampled every three years, with the shallow ground water wells (MW-5A, MW-7, MW-8, MW-9, MO-1, and MO-3) monitored every six years. Since historical sampling data indicate that lead has only impacted the shallow aquifer, this report recommended that the deeper wells be removed from the long-term monitoring plan. Arsenic and PCBs were recommended for monitoring every six years, as historical data have shown no indication of these contaminants leaching into the ground water. The recommendations of this report should be considered during the revision of the Site's Groundwater Monitoring Plan along with the results of the re-evaluation and re-sampling of the two problematic wells from the 2007 sampling event.

6.4.2 Data Review for Ground Water Flow

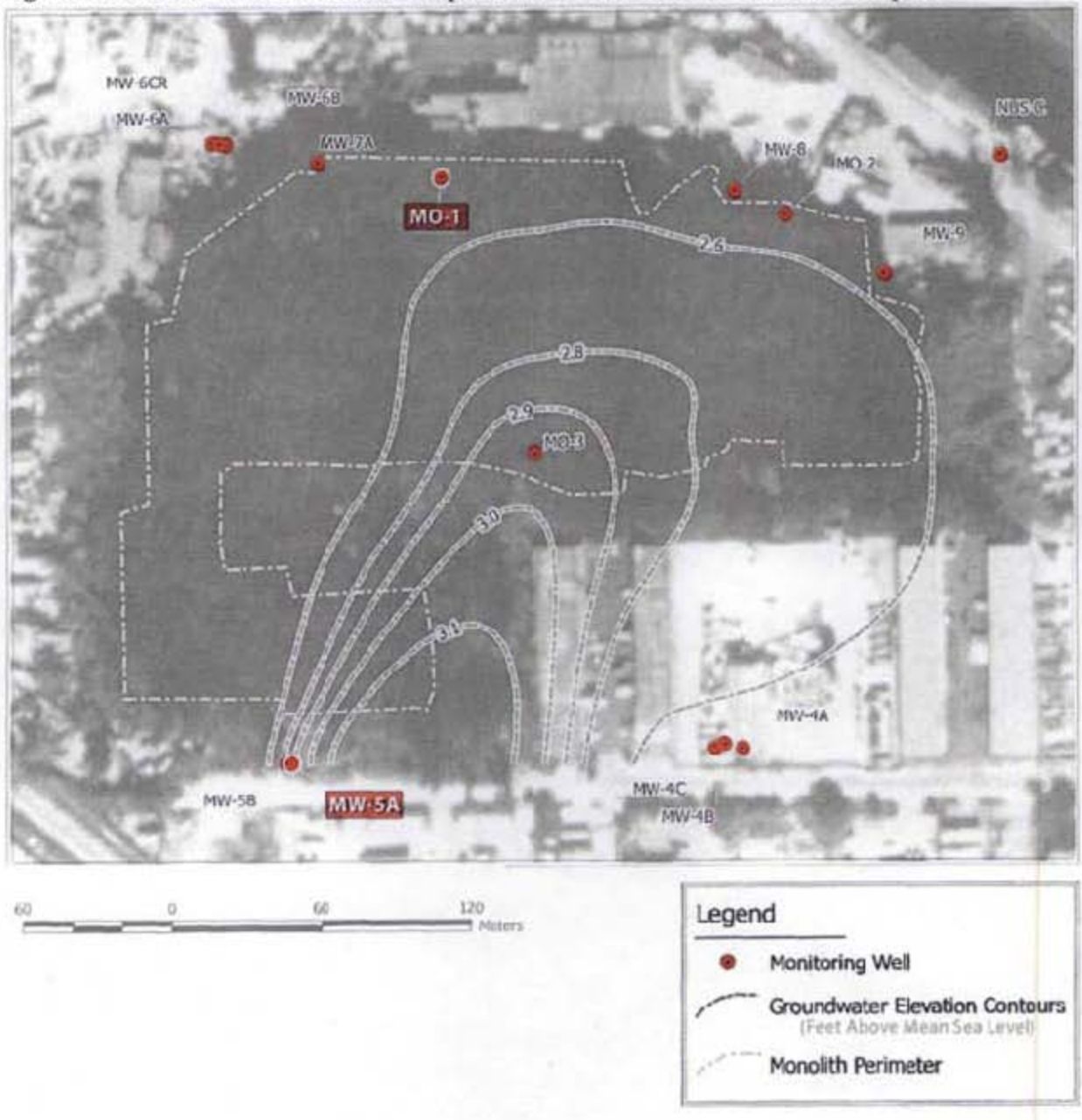
The second FYR did not detect any changes in the predominantly north/ northeasterly flow of ground water at the PSA Site. However, the 2005 ground water monitoring well evaluation activities stated that the monolith may have some effect on the flow of ground water at the Site. The ground water contour map developed during the 2005 evaluation shows mounding of the ground water table directly below the monolith. This would indicate that it is possible that some ground water might move in these additional directions (west and east). This sampling event indicates that ground water can flow from the center of the monolith to the west, northwest, north, northeast, and east (see Figure 3 below for ground water elevation contours). This is consistent with initial FP&L monitoring that indicated smaller forces that sometimes drive ground water in multiple directions, but the total evidence indicates the dominant direction of ground water flow is as before, to the northeast and the Miami Canal. Based on the 2003 ground water level data, which was taken at the end of the dry season, there are two areas potentially impacted by the Site, which are not being monitored. If the results from the shallow monitoring wells indicate the presence of lead above MCLs, it might become necessary to install additional wells directly to the west and east of the monolith. At this time these areas are not being monitored, but all other areas of the monolith are being adequately monitored. There were no exceedances during the 2003 sampling event and the exceedances reported in the 2007 sampling were in wells north and south of the monolith. These exceedances do not necessarily indicate the need for additional wells to the east and west of the monolith. Re-sampling of the wells with exceedances is recommended for the near future. During revision of the Site's Ground Water Monitoring Plan, re-evaluation of the need for new wells, the possible replacement of old wells, the most logical frequency of sampling, and the need to fill data gaps on ground water flow should be discussed and conclusions included in the revised Plan.

The 2005 report's description of ground water mounding under the monolith is unconfirmed at this time. Additional investigation would be needed to conclude that the monolith has significantly altered ground water flow at the Site. Other prevailing physical and seasonal conditions must also be considered. Definitive

conclusions based on this one monitoring event are technically unsupportable at this time. The 2007 sampling event cannot be used to accurately predict the direction of ground water flow at the Site, because due to depth meter failure during the sampling event, all the values for the ground water levels were estimated.

Below, the ground water contour map from the 2005 Lockheed Martin report has been modified to highlight the locations of the monitoring wells and in particular, those wells showing exceedances during the 2007 sampling event.

Figure 3: Ground Water Contour Map from the 2005 Lockheed Martin Report



6.4.3 Data Review for the Monolith

An international collaborative effort, called the Performance Assessment of Solidified/Stabilized Waste Forms, is underway to verify the long-term effectiveness of cement based solidification/stabilization (S/S) treatment of contaminated soils. The PSA Site is one example of a Superfund Site sampled for inclusion in this project and its evaluation of S/S technology. The following paragraphs summarize the results of the 2004 Lockheed Martin Monolith Sampling and Drainage Trench Investigation report. In consultation with members of EPA's Office of Research and Development and the entities representing the international consortium involved in the study of S/S technology, it was determined that a diamond bit coring drill would be used to obtain samples from the monolith. A total of 11 samples of the monolith matrix were taken from four locations and analyzed at the University of New Hampshire for the following parameters:

- Toxicity characteristics leaching procedure (TCLP);
- Synthetic precipitation leaching procedure;
- Multiple extraction procedure (MEP);
- Unconfined compressive strength;
- Permeability;
- Porosity;
- Acid neutralization capacity;
- Wet/dry weathering; and
- Minimum/maximum density.

In addition to the core samples, six surface scrapes were also performed. Each scrape was approximately 3 feet wide and deep enough to remove the surface covering from the monolith. Once the monolith was reached, several scrapes were made with the backhoe bucket to determine the relative friability of each scrape location. Each location was then tested for in-situ compressive strength.

The conclusion of this sampling event was that the monolith is in good condition with all in-situ measures of compressive strength exhibiting readings above 600 pounds per square inch. All monitoring well sampling tests indicated that stabilization of the contaminants of concern has continued to be effective. Physical testing of the monolith itself yielded results that meet or exceed all criteria. It was clear that the monolith is not a uniform structure, as shown by the variation in color, friability, and compressive strength values across the monolith. However, as most of the compressive strength values greatly exceed those of the surrounding area, the monolith was deemed to be performing to specification.

6.5 Site Inspection

A site inspection of the PSA Site was conducted on January 24, 2007. The purpose of the site inspection was to observe site conditions and interview, where appropriate, PRPs,

previous and current property owners, state and local government personnel, and other people associated with the Site. Parties in attendance at the site inspection included: Jan Rogers (EPA, RPM), Bill Denman (EPA, Region 4 Reuse Coordinator), Lisa Ellis (EPA, site attorney), Kelsey Helton (FDEP), Norton Bloom (previous site owner and PRP), Walter Lista (current site owner and BFPP), Jorge Zacarias (current tenant), Thomas Curtis (current owner and PRP), Tony Guajardo (representative for Mr. Curtis), Roger Messer (FP&L), Diana Davis (FP&L), Arley Nieto (Town of Medley Code Enforcer), Salvatore "Sal" Amesse (Town of Medley Chief Building Official), Kristin Sprinkle (E^2 Inc.), Amanda Knoff (E^2 Inc.), and Cara Forster (E^2 Inc.).

Mr. Rogers met representatives of FP&L, the Town of Medley, and E^2 Inc. at the PSA Site. The other attendees arrived during the course of the morning with various participants arriving, staying to speak with Mr. Rogers as long as necessary, and then departing. Ms. Ellis arrived later and remained to meet with Mr. Rogers after all other attendees had departed. Site inspection participants gathered in front of the former Miami Battery building on top of the monolith, which had been completely cleared of vegetation. There, Mr. Rogers discussed the purpose of the FYR and attendees presented their questions and concerns to Mr. Rogers. Much of the participants' discussion centered on the Site's drainage problems. The Town of Medley officials were concerned about runoff from the Site into surrounding streets. Mr. Guajardo stated that he had cleaned the drains on Mr. Curtis' property in September 2006, greatly improving drainage on that portion of the Site and eliminating the standing water, which used to accumulate in the parking lot. Mr. Rogers confirmed that he had visited the Site during a rainstorm in December 2006, and that the parking lot was free of standing water.

Mr. Lista and Mr. Rogers led a walking tour of the Site for EPA, FDEP, and E^2 Inc. staff. Locations and conditions were noted for the monitoring wells that could be located. The vertical wells on the monolith were locked and in good condition. The flush mounted monitoring wells south of the monolith had rusted covers and were not locked. Photographs were taken of the limestone cover, monitoring wells, debris remaining on site, drainage structures, and buildings in reuse. The drainage collar appeared to be largely silted in or covered over by newer drainage structures. On the Payne parcel the drainage collar is covered by the two-foot high berms that Mr. Lista installed around most of his property. On the Curtis parcel, new drainage structures are planned but have not been installed. The monolith's cover was devoid of vegetation and appeared to completely cover the monolith without significant signs of erosion or bare spots. All areas of the Site were observed and the different types of current and planned use were discussed along with the steps taken to protect the remedy during reuse. A FYR site inspection checklist was completed during the site visit and is included as Appendix C. Representative photographs of the Site taken during the site inspection are included in Appendix D.

One issue discussed during the site inspection addressed the fact that off-site limestone fill material can sometimes exceed default soil standards for arsenic and therefore should be screened prior to bringing material on site. DERM has undertaken soil sampling and analysis to establish the natural background concentrations of various metals in local

soils. This 2002 DERM study found an average natural background concentration for arsenic in Miami-Dade County soils of 1.2 mg/Kg. This average is below the residential standard of 2.1 mg/Kg. For more information on the natural variation in arsenic concentrations that can occur in local soils, see the DERM Memo included in Appendix I.

6.6 Interviews

The FYR process requires that key individuals involved with the Site be contacted for interviews. The interview process is intended to gather any new information regarding the selected remedy, site history, and other current site-specific issues. Individuals interviewed were chosen based on their involvement with the Site and the diversity of perspectives they offered. E^2 Inc. staff conducted and documented the interviews. All the interviewees listed below were interviewed during the site visit with the exception of Mr. Kux who was not present at the site visit, but was contacted later for an interview. Appendix F includes additional documentation developed for each interview noted below.

Table 6: Interview Subjects

Name	Position	Affiliation
Kelsey Helton	Staff geologist	FDEP
Tom Kux	Contaminated Properties Representative	DERM
Salvatore "Sal" Amesse	Chief Building Official	Town of Medley
Roger Messer	Director of Environmental Support	FP&L
Diana Davis	Principal Environmental Specialist and Attorney	FP&L
Norton Bloom	Past site owner and PRP (Tract 44)	Self-employed
Walter Lista	Site owner and BFPP (Tract 45)	Self-employed
Tony Guajardo	Representative for current site owner and tenant (Tract 46)	Mr. Thomas Curtis (owner)

The FP&L representatives expressed strong support for the reuse of the Site. However, FP&L expressed concern over some types of potential reuse-related activities and urged limiting reuse to activities that would not introduce any contaminants that could be misconstrued as site related. In particular, they proposed sampling any crushed limerock brought to the Site as fill, since naturally occurring limerock can have arsenic present above regulatory levels. They also suggested that arsenic-based herbicides be prohibited and that no activities involving acids or chemicals be allowed since these could impact the integrity of the monolith.

The Town of Medley officials did not feel well informed about the PSA Site and were very concerned about the Site's drainage problems and somewhat concerned about issues of liability and enforcement. The Town confirmed that the site owners must get approval for their building designs with both the state and county prior to beginning construction. Mr. Amesse stated that the county and city ordinances for stormwater management are the same and that the county and the city need to coordinate on the Site. He also confirmed that the pending road construction will require the property owners to address the Site's drainage issues.

In general, the site owners and tenants felt that Mr. Rogers had done an excellent job facilitating the reuse of the Site, assisting them in taking all the necessary actions, and abiding by the necessary restrictions. Site owners and tenants acknowledged that drainage was a significant issue, but that they had taken and would continue to take steps to address this problem. Mr. Guajardo expressed a desire for a greater level of coordination among EPA, FDEP, and DERM, so that regulators would present a unified set of expectations and it would be easier for property owners to respond appropriately.

Site owners and regulatory officials had different perspectives on the status of the Site's ICs. All three of the current property owners stated that they had put use restrictions in place on their properties, while both FDEP and DERM representatives said that the Site lacked ICs. FDEP and DERM representatives agreed that implementing ICs was the most pressing and important issue at the Site. Both regulatory agencies support the implementation of a standardized restrictive covenant that will impose identical restrictions on all the properties that compose the PSA Site. They believe that this is important to facilitate enforcement of these use restrictions and because of the likelihood of future subdivision of the Curtis property.

Ms. Helton stated that she thought it was important for there to be greater coordination among regulatory agencies and site owners/tenants, and that the site inspection meeting was a step towards achieving this. She stated that the top priority issues for FDEP included O&M requirements as they relate to reuse, updating the current ground water monitoring program, and implementing ICs for the Site.

7.0 Technical Assessment

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

After a reassessment of the monitoring program in June 1993, EPA reduced the frequency and the number of parameters analyzed during ground water monitoring from the levels established in the EDD to current levels. The reassessment recommended discontinuing all parameter and ground water level monitoring because ground water flow direction had not changed since monitoring began and parameters consistently met remedial action levels. EPA decided to continue monitoring, but approved a modification of the program such that lead monitoring would occur every 2.5 years for monitoring wells MO-1, MW-6A, and MW-6CR. This schedule will likely be revised so that future sampling can be performed consistently during the wet season. Wells MW-6A, MW-4A, and MO-2 were specifically targeted because of historic exceedances due to revised ground water standards. In the second FYR, the fact that FP&L was conducting ground water monitoring and that ground water samples largely met remedial action levels indicated that the scheduled ground water monitoring was being properly implemented. The necessity of conducted ground water monitoring to inform FYRs ensures that the Site's ground water will be sampled at least once every five years. Follow up sampling of exceedances will also be required to determine if they are false positives or early indicators of remedy failure. False positives are likely due to the industrial nature of all the activities surrounding the Site and to the commonness of lead and arsenic in industrial processes.

Since the Site's last FYR, EPA has performed ground water monitoring twice to verify the effectiveness of the remedy. Both FP&L and EPA staff stated that the monolith is performing as intended, as evidenced by the monolith sampling data and the majority of the ground water sampling results. No PCBs have been detected in the ground water since monitoring began. All sampling from 2003 produced results meeting current drinking water standards. Sampling results from eight of ten wells sampled in 2007 met current drinking water standards. Two wells exceeded standards for lead and one of these also exceeded the standard for arsenic. The integrity of both of these wells needs to be confirmed through follow-up evaluation and sampling to determine if these exceedances are due to compromised wells or actual contamination. No new sources or pathways have been observed at the PSA Site since the last FYR. The 2005 ground water measurements suggest a change in ground water flow patterns may have occurred due to the presence of the monolith. Many previous ground water measurements conducted after the monolith had been put in place, do not support this conclusion. Revision of the Site's Ground Water Monitoring Plan will address this issue further.

The EDD indicates that after the completion of the remedy, the Site's only continuing need will be ground water monitoring to verify that the remedy is performing as designed. Access controls in the form of fences and signs for the Site were required only during the remedial action for safety purposes. The Site remains fenced now to discourage dumping, which has been an on-going problem. At least one sign indicating that PSA is a Superfund Site was still visible from NW 109th Street. The O&M currently

in place is limited to ground water monitoring every 2.5 years. EPA O&M costs have been funded from the Special Account established for the Site through the 1997 Consent Decree. These funds supported implementation of the tasks outlined in the Cooperative Agreement between DERM and EPA. ICs were required by the ROD, and a combination of deed notices, judgments, and covenants currently function as ICs for the three site parcels. All of the regulatory agencies agree that ICs are necessary for the Site due to the presence of the monolith, which is waste that will remain on site indefinitely. The presence of the monolith means that the Site will not be free for unrestricted use and unlimited exposure. Therefore, ICs will remain necessary because hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure. The standardized covenant currently being designed for the Site will add an additional layer of IC protection to the Site. Mr. Lista (owner of the former Payne parcel) and the 10997 Project Inc. (owner of the former Bloom parcel) are responsible for maintaining their Bona fide Prospective Purchaser (BFPP) status to avoid inheriting Superfund liability for the Site. One of the criteria for maintaining BFPP status requires cooperation with EPA staff. Mr. Rogers stated that all of the Site's current property owners have been very amenable to the idea of a standardized covenant and are willing to work with EPA on the exact language and then to record the final covenant to their properties. Therefore, having site owners interested in putting the Site back into productive use has facilitated EPA's ability to ensure that ICs are in place for the Site.

The drainage collar component of the remedy is not operating as designed. The drainage collar around the monolith reportedly was not effectively containing runoff water from the monolith, as indicated in the second FYR, and confirmed by the 2007 interviews with key site personnel. Organic matter, roots, and sediment remain within the surficial features of the drainage collar and the absence of O&M to keep the collar clear was likely the major cause of any past ineffectiveness. There continues to be a concern with runoff from the PSA Site onto the neighboring roads and properties. However, several things are coming together at the Site to address this problem, as well as entire parcel drainage, in a more permanent way. The advent of reuse at the Site combined with the Town of Medley's planned road improvements have created an opportunity for current property owners to fund installation of the new drainage structures that will be necessary for their properties to comply with local stormwater management ordinances. These new drainage systems are not yet complete, but are underway and should provide a more effective and permanent alternative to the drainage collar, with the added benefit that maintenance of these new drainage structures will be the responsibility of the Site's owners rather than EPA and it will not be necessary to pay for the repair of the existing drainage collar. Site owners visit the Site multiple times each week and can monitor these drainage structures and maintain them as necessary. This on-site presence provides more frequent oversight than EPA could provide.

7.2 Question B: Are the exposure assumptions, Toxicity Data, Cleanup Levels, and Remedial Action Objectives (RAOs) Used at the Time of Remedy Selection Still Valid?

Since the selection of the Site's remedy, the EPA Primary Drinking Water Standard for lead changed from 50 µg/L to 15 µg/L, the MCL for PCBs changed from 7 µg/L to 0.5 µg/L, and the standard for arsenic changed from 50 µg/L to 10 µg/L. While the analytical results of the monitoring wells sampled at the PSA Site have consistently met remedial action levels, the results have shown a few exceedances of more recent standards for lead and arsenic. Sampling results from the most recent sampling event meet current clean drinking water standards for eight wells; the two problematic wells exceeded both current and Consent Decree standards and will require follow-up investigation.

Cleanup goals for the site have not changed, only the ground water standards, which are the indirect means of monitoring the performance of the soil stabilization remedy. This does not suggest the scope of the remedy has changed nor that the remedy is inadequate to meet present standards. Solidification should accomplish the new monitoring criteria because soil excavation standards were conservative at the time of remedy construction and are consistent with current cleanup standards. The ground water monitoring results have met the remedial action objectives and have largely met the more stringent criteria that have taken effect over time. Since the changing criteria affect an indirect measure of remedy performance as opposed to the actual remedy, the changes in ground water standards can be documented in this FYR. Modification of the ROD would only be necessary if the remedy were to become unprotective, which in CERCLA is defined as exceeding a lifetime excess cancer risk of 10^{-4} risk or HQ>1, and is not the case for this Site.

The exposure pathways of most concern, as discussed in the EDD, were on-site contact with lead through inhalation or ingestion and ground water transport of lead and PCBs to drinking water wells. The monolith sampling indicates that the lead in the monolith is stable, and thus the monolith prevents exposure to this contaminant. Most historical ground water sampling indicates that COCs are not migrating from the monolith into ground water at a rate sufficient to cause ground water criteria exceedances. The 2007 exceedances in monitoring wells MO-1 and MW-5A, if confirmed, will require further investigation to determine the cause and need for any additional actions. The reuse of the Site is consistent with its remedy, as site reuse does not expose on-site workers to any completed pathways of concern.

7.3 Question C: Has Any Other Information Come to Light That Could Call Into Question the Protectiveness of the Remedy?

No information identified during this FYR calls the protectiveness of the remedy into question. By contrast, information was discovered that enhances the protectiveness of the remedy. The last FYR indicated that the Site did not have and did not need any ICs. However, the Site does need ICs because waste remains on site that does not allow for

unrestricted use. This review discovered that ICs were in place on all site parcels (see Table 2 for details). Also, the Site will benefit from the planned implementation of the standardized restrictive covenant on all site parcels.

7.4 Technical Assessment Summary

According to the data reviewed, the site inspection, and the interviews, the remedy is functioning as intended by the EDD with the exception of the drainage collar. Plans and construction are underway on improved drainage systems for the Site. While the Site's properties are now being redeveloped, reuse has not produced any changes in the physical conditions of the Site that would affect the protectiveness of the remedy. By contrast, reuse has created the opportunity for site owners to enhance the monolith's cover and improve the Site's drainage system. Further evaluation and additional sampling should be conducted on the two ground water monitoring wells with exceedances, MO-1 and MW-5A. MO-1 had a very low yield and therefore may not be representative of the ground water under the monolith and MW-5A lacks a secure cap and may have been compromised by outside material. There is no other information that calls into question the protectiveness of the remedy.

8.0 Issues

Table 7: Current Issues for the PSA Site

Issue	Affects Current Protectiveness	Affects Future Protectiveness
Results from two ground water monitoring wells exceed remedial goals.	Possible	Possible
Each site parcel has a different type of IC in place, only one of which is enforceable.	No	Possible
Most recent on-site building did not receive review by DERM's Contaminated Properties Division prior to building design approval.	No	Possible
Town of Medley is not aware of how to help enforce use restrictions to protect the remedy.	No	Possible
Fill materials brought on site have not been tested for arsenic.	No	No
Ground Water Monitoring Plan is outdated.	No	Possible
O&M Plan does not plan for site reuse.	No	No
Dumping at the Site is ongoing.	No	No
Lack of coordination among regulators delays reuse and makes it more difficult and costly for site owners/users to comply with all necessary regulations.	No	No
Drainage collar is partially superceded by the new drainage system, but the new system is not yet fully in place.	No	No
Criteria for remedy performance have been changing, leading to exceedances in some ground water sampling results.	No	No

9.0 Recommendations and Follow-up Actions

Table 8: Recommendations to Address Current Issues at the PSA Site

Issue	Recommendations	Party Responsible for Implementation	Oversight Agency	Due Date	Affects Protectiveness?	
					Current	Future
Results from two ground water monitoring wells exceed remedial goals.	Conduct follow-up investigation of well conditions and additional sampling to determine if wells should be repaired and re-sampled or replaced. If exceedances are confirmed, conduct an evaluation of drinking water intakes to determine if any exposure could occur due to site-related contaminants or off-site migration of ground water contamination. Off-site ground water contamination would require notice to effected off-site property owners, per Florida Chapter 62-780.	EPA	EPA	9/30/08	Yes	Yes
Each site parcel has a different type of IC in place.	Create a standardized IC, which will take the form of a restrictive covenant, and ensure all site owners record it. Consider incorporation of FP&L ideas on restricted uses.	EPA, FDEP, DERM, Property Owners	EPA	9/30/08	No	Yes
Most recent on-site building did not receive review by DERM's Contaminated Properties Division prior to building design approval.	Educate site owners on which staff at each agency they should contact for review and approval of building designs. Enhance communication among agencies.	EPA, FDEP, DERM	EPA	3/31/08	No	Yes
Town of Medley is not aware of how to help enforce use restrictions to protect the remedy.	Meet with Town of Medley officials to discuss remedy and Town's role. Encourage Town to record PSA Site in tracking database of contaminated properties.	EPA, FDEP	EPA	12/31/07	No	Yes
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Issue	Recommendation	Party Responsible for Implementation	Oversight Agency	Due Date	Affects Protectiveness?	
					Current	Future
Fill materials brought on site have not been tested for arsenic and other chemical contaminants.	Advise site owners to test fill material for contamination prior to use of the material on site.	EPA, site owners	EPA	9/30/2007	No	Yes
Ground water Monitoring Plan is outdated.	Revise Ground water Monitoring Plan based on FP&L input, new ground water flow data, review of the 2005 well evaluation report, and recent sampling data. Consider the possible need for new monitoring wells and ground water use restrictions.	EPA, FP&L	EPA	12/31/07	No	Yes
O&M Plan does not plan for site reuse.	Revise O&M Plan to accommodate reuse.	EPA	EPA	3/30/08	No	No
Dumping at the Site is ongoing.	Encourage site owners in current efforts to ensure safe and clean Site.	Site owners, EPA	EPA	12/31/07	No	No
Lack of coordination among regulators delays reuse and makes it more difficult and costly for site owners/users to comply with all necessary regulations.	Hold more regular meetings of EPA, FDEP, and DERM staff to coordinate on site; produce Fact Sheet for site owners with names and contact information of relevant staff and facts on each agency's role and responsibilities.	EPA, FDEP, DERM	EPA	9/30/07	No	No
Drainage collar is partially disrupted and new property-wide drainage system is not yet fully in place.	Encourage and support site owners' plans to install new drainage systems.	Site owners	Town of Medley and DERM	Upon completion of road improvements (estimate 9/30/09)	No	No
Criteria for remedy performance have been changing, leading to exceedances in some ground water sampling results.	Documentation of changes in remedy performance measures will be accomplished through FYRs.	EPA	EPA	9/30/07	No	No

10.0 Protectiveness Statements

The remedy at the PSA Site currently protects human health and the environment based on monolith sampling and the majority of ground water sampling results over the last five years. The ground water monitoring results have been less than remedial action levels and current ARARs for the last five years, except for the 2007 results from wells MO-1 and MW-5A. There is a strong possibility that the results from these wells were compromised by physical problems with the wells. However, follow-up evaluation and sampling will be necessary to confirm or disconfirm these exceedances. Monolith sampling results demonstrate the continued protectiveness of the monolith. The lack of historic O&M on the drainage collar surrounding the monolith has reportedly caused water runoff problems in the past and continues to be an issue. This portion of the remedy will be greatly improved by reuse at the Site and the continuing efforts of site owners to address stormwater management. The drainage problems do not affect the overall purpose of the remedy, which is to contain PCBs, lead, and arsenic contamination within the monolith and prevent the migration of these contaminants to drinking water supplies. Currently, institutional controls are in place in the form of a judgment, a deed notice, and a restrictive covenant to ensure that any prospective purchaser would discover the remedial history and current status of the Site. However, two of these three ICs are unenforceable and to gain state concurrence on this remedy, a standardized and enforceable restrictive covenant will need to be implemented on all three parcels of the Site.

11.0 Next Review

The next FYR for the PSA Site is required within five years of the signature/approval of this review. Ground water sampling must take place prior to the next FYR. Particular emphasis should be placed on the two wells that exceeded cleanup standards during the most recent sampling event. Periodic investigation of the drainage issue at the Site should be undertaken to ensure that stormwater management plans are implemented effectively or that another solution is installed. Future investigations should ensure reuse activities are compatible with the remedy at the Site. The next review should confirm that the standardized restrictive covenant has been put in place for all three parcels, and that if the parcels have been subdivided, that the restrictive covenant also applies to the subdivided parcels.

Appendix A:
List of Documents Reviewed

"Consent Decree Agreement," Consolidated Case Nos. 83-1717-CIV-Spellman and 85-0571-CIV-Spellman. United States of America, Plaintiff v. Pepper's (sic) Steel and Alloys, Inc.; et al., Defendants, March 26, 1987.

"Consent Decree Agreement," Civil Action No. 85-0571 -C V-EI-B- Davis T. United States of America, Plaintiff v. Pepper's (sic) Steel and Alloys, Inc.; et al., Defendants, October 16, 1997.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Information System (CERCLIS) Site Information accessed from website www.epa.gov/superfMd/sites/cursites/c3fiyaQ400S99.htm on January 8, 2007.

Enforcement Decision Document Remedial Alternative Selection, Pepper's (sic) Steel and Alloys Site, Medley, Florida, Jack E. Ravan, EPA Regional Administrator, March 12, 1986. http://www.epa.gov/superfund/sites/rods/fulltext/r0486008.pdf

"Evaluation of Drainage Structure for Pepper's (sic) Steel and Alloys Site, Medley, Florida," Canonie Environmental Services Corp., January 1989.

"Final Closeout Report for Cooperative Agreement #V97460802-0," prepared by Miami-Dade County Department of Environmental Resources Management. January 24, 2007.

"Final Report on Remedial Action for Pepper's (sic) Steel and Alloys Superfund Site, Medley, Florida," Florida Power & Light Company. June 1989.

"Five-Year Review Final Report Pepper's (sic) Steel and Alloys Superfund Site, Medley, Dade County, Florida," prepared by Roy F. Weston, Inc. April 1994.

"Five-Year Review Final Report Pepper's (sic) Steel and Alloys Superfund Site, Medley, Dade County, Florida," prepared by QRORE Inc. September 2002.

"Ground Water Monitoring, Pepper's (sic) Steel and Alloy Site, Medley, Florida" (Appendix B). GeoTrans, Inc. January 1987.

"Memo: Redevelopment of the Pepper Steel and Alloys, Inc. Superfund Site Located in Medley, FL," by Edward Bates (ORD) and Jeff Catanzarita (ERT). July 26, 2004.

"Memo: Revision of Ground Water Monitoring Plan for the Pepper Steel and Alloys, Inc. Superfund Site Located in Medley, FL," by Pat Tobin. 1994.

"Monolith Sampling and Drainage Trench Investigation Pepper Steel and Alloy, Inc. Site, Medley, Florida," prepared by Lockheed Martin Technology Services for EPA's Environmental Response Team. July 26, 2004.

"Pepper Steel Alloy Site, Well Conditions and Long Term Monitoring," prepared by Lockheed Martin Technology Services for EPA's Environmental Response Team. June 15, 2005.

"Pepper Steel Alloy Site, Medley, Dade County, Florida. Field Investigation Work Plan," This report includes 2007 analytical results for ground water sampling and field notes prepared by EPA Region 4 Science and Ecosystem Support Division. April 16, 2007.

"Proposed Operations and Maintenance Plan, Pepper's (sic) Steel and Alloys Site, Medley, Florida," Superfund Branch, Waste Management Division, U.S. Environmental Protection Agency, Region 4. July 1989.

"Superfund Preliminary Site Closeout Report, Pepper's (sic) Steel and Alloys Superfund Site, Medley, Dade County, Florida," Joseph R. Franzmathes, Director, Waste Management Division, U.S. Environmental Protection Agency. September 28, 1993.

"Work Plan for the Pepper Steel and Alloys Site Located in Medley, Florida," a.k.a. Cooperative Agreement. Prepared by Miami-Dade County Environmental Resources Management and Pollution Control Division. July 3, 2002.

U. S. Environmental Protection Agency, Region 4
Announces a Five-Year Review
for the Pepper's Steel Alloys Site,
Medley, Dade County, Florida

The U.S. Environmental Protection Agency (EPA) is conducting a Five-Year Review of the remedy for soil and ground water contamination associated with the Pepper's Steel Alloys Site (the Site) in Medley, Dade County, Florida. The Site, which covers about 25 acres, lies in a commercial/industrial area of Medley at 11100 NW South River Dr. The purpose of the Five-Year Review is to ensure that the selected cleanup actions continue to effectively protect human health and the environment.

The Pepper's Steel Alloys Site has been the location of battery manufacture, fiberglass boat manufacture, and casting of concrete products as well as truck repair and automobile scrap operations. From the early 1970s until 1983 Pepper Steel & Alloys, Inc. processed scrap metals and recycled transformers and other electrical equipment. The company disposed of transformer oil containing polychlorinated biphenyls (PCBs) on site.

In 1983, the Site was added to the Superfund National Priorities List of contaminated properties. EPA conducted a site investigation that revealed PCBs, organic compounds, and heavy metals in the soil, sediments, and ground water. An immediate removal action was conducted the same year to address the most dangerous contamination. In 1986, after further study, a final remedy was selected for the Site, which included collection of all free oil from the ground water and disposal of it off site as well as excavation of soils exceeding acceptable levels for PCBs, lead, and arsenic. Excavated soils were stabilized in a cement-type mixture and solidified into an on-site monolith. Institutional controls restricting land and ground water uses to those compatible with the remedy are necessary, and periodic ground water monitoring is ongoing to verify the effectiveness of the soil solidification remedy.

The National Contingency Plan requires that remedial actions which result in any hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure be reviewed every five years to ensure protection of human health and the environment. Previously, two Five-Year Reviews were conducted in 1994 and 2002. The third Five-Year Review for this Site will be completed in 2007.

EPA invites community participation in the Five-Year Review process.

The EPA is conducting a Five-Year Review to confirm the continued effectiveness of the soil solidification remedy. As part of the Five-Year Review process, EPA is available to answer any questions about the Site. Community members who have questions about the Site, the Five-Year Review process, or who would like to participate in a community interview about the Site, are asked to contact the Remedial Project Manager:

Mr. Jan Rogers
U.S. EPA, Region 4 – South Florida Office
400 N. Congress Ave., Suite 120
West Palm Beach, FL 33401-2933
Phone: 561-616-8868
Rogers.Jan@epa.gov

EPA plans to complete the Five-Year Review process in about six months; comments are welcome during this time. More information about the Site may be found at the Miami Dade County Public Library, 101 W. Flagler, Miami, FL 33128 or online at: http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0400599.

La Agencia de Protección Ambiental de los EE.UU, Región 4
anuncia la Revisión de Cinco Años
del sitio Pepper's Steel Alloys
en Medley, Condado de Dade, Florida

La Agencia de Protección Ambiental de los EE.UU (EPA) ejecuta una Revisión de Cinco Años (la Revisión) sobre las medidas tomadas para limpiar la contaminación del suelo y agua subterránea asociada con el sitio de Pepper's Steel Alloys (el sitio) en la cuidad de Medley, Condado de Dade, Florida. El sitio, que cubre un área de aproximadamente 25 acres, está ubicado en un lugar de comercio y industria en Medley y queda en 11100 NW South River Dr. El propósito de la Revisión es asegurar que las medidas seleccionadas siguen protegiendo la salud humana y el medio ambiente.

El sitio de Pepper's Steel Alloys ha sido usado para fabricar baterías, barcos de fibra de vidrio, y productos de cemento y también para la reparación de camionetas y el reciclaje de autos. Desde los años 1970 hasta 1983, la empresa Pepper Steel & Alloys Inc. procesaba chatarra y reciclaba transformadores e otros equipos eléctricos. La empresa desechaba el aceite de los transformadores, que contenía bifenilos policlorados (BCPs), en el sitio.

En 1983, el sitio fue agregado a la Lista Nacional de Prioridades Superfund, que es una lista de las propiedades más contaminadas del los EE.UU. EPA investigó el sitio y halló BCPs, compuestos orgánicos, y metales en el suelo, sedimentos, y en el agua subterránea. En el mismo año, condujeron un retiro inmediato para enfrentar la contaminación más peligrosa. En 1986, después de más investigaciones, una medida final fue seleccionada para el sitio que incluyó la recolección de aceite del agua subterránea y su disposición fuera del sitio junto con la excavación de los suelos que tenían niveles más elevados que lo acceptable de BCPs, plomo, y arsénico. Los suelos excavados fueron estabilizados con una mezcla parecida al cemento y solidificados en un bloque enterrado en el sitio. Controles legales, restringiendo el uso del suelo y el agua subterránea son necesarios y las pruebas del monitoreo del agua subterránea continúan para evaluar la efectividad de la medida de solidificar el suelo.

El Plan Nacional de Contingencia requiere que las medidas implementadas que resultan en la presencia de substancias peligrosas o contaminantes en el sitio sobre los niveles que permiten el uso y la exposición sin limite tienen que ser revisados cada cinco años para asegurar que las medidas siguen protegiendo la salud humana y el medio ambiente. Anteriormente, dos Revisiones ocurrieron en 1994 y 2002. La tercera Revisión para éste sitio va a ser concluido en el 2007.

EPA invita a la comunidad a participar en el proceso de la Revisión de Cinco Años.

EPA gestiona la Revisión para verificar que la medida de solidificación de suelos mantenga su efectividad. Como parte de la Revisión, EPA está disponible para contestar cualquier pregunta sobre el sitio. Miembros de la comunidad que tengan preguntas sobre el sitio y el proceso de la Revisión y además otras personas que quisiera participar en una consulta comunitaria sobre el sitio deberían contactar al Encargado del Proyecto:

Sr. Jan Rogers
U.S. EPA, Region 4 – South Florida Office
400 N. Congress Ave., Suite 120
West Palm Beach, FL 33401-2933
Teléfono: 561-616-8868

Rogers.Jan@epa.gov

EPA espera terminar el proceso de la Revisión dentro de seis meses; cualquier comentario está bienvenido durante éste periodo. Se puede encontrar más inf

ormación sobre éste sitio en la Biblioteca Pública de Miami Condado de Dade, en la dirección 101 W. Flagler, Miami, FL 33128 o por Internet en la página:
http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0400599.

Appendix C:

History of Ground Water Monitoring for PSA Site

Comparison of Historical Ground water Results from 1992-2007

	1992			1995			1998			2000			2003			2007		
	Lead	Arsenic	PCBs	Lead	Arsenic	PCBs	Lead	Arsenic	PCBs	Lead	Arsenic	PCBs	Lead	Arsenic	PCBs	Lead	Arsenic	PCBs
MO-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	5U	30U	1.2U	NS	NS	NS	NS	NS	NS	NS	NS	NS	11	8.8	ND	**230**	**66**	ND
FP&L	2.8	1.2	<1	4.6	NS	NS	10.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MO-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	7.5	30U	1.2U	NS	NS	NS	NS	NS	NS	**20/22D**	5U/5U	ND/ND	2.6	0.98J	ND	4.5J	10U	ND
FP&L	4.8	<1	<1	NS	NS	NS	NS	NS	NS	12U	12U	ND	NS	NS	NS	NS	NS	NS
MO-3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	5U	30U	1.2U	NS	NS	NS	NS	NS	NS	2.9	5U	ND	0.38J	3.8	ND	10U	6.5J	ND
FP&L	1.2	2.9	<1	NS	NS	NS	NS	NS	NS	12U	12U	ND	NS	NS	NS	NS	NS	NS
MW-4A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.6	0.57J	ND	10U	10U	ND
FP&L	2.9	<1	<1	NS	NS	NS	NS	NS	NS	**30**	12U	ND	NS	NS	NS	NS	NS	NS
MW-4B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FP&L	<1	<1	<1	NS	NS	NS	NS	NS	NS	12U	12U	ND	NS	NS	NS	NS	NS	NS
MW-5A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**57**	10U	ND
FP&L	2.1	<1	<1	NS	NS	NS	NS	NS	NS	12U	12U	ND	NS	NS	NS	NS	NS	NS
DERM	NS	NS	NS	NS	NS	NS	NS	NS	NS	2U	2U	NS	NS	NS	NS	NS	NS	NS
MW-5B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.7J	10U	ND
FP&L	1.6	<1	<1	NS	NS	NS	NS	NS	NS	12U	12U	ND	NS	NS	NS	NS	NS	NS
DERM	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.3	NS	NS	NS	NS	NS	NS	NS	NS
MW-6A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	**15**	30U	1.2U	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.2	0.31J	ND	10U/ 10UD	10U/ 10UD	ND
FP&L	**16**	<1	<1	**38.5**	NS	NS	**15.4**	NS	NS	12U	12U	ND	NS	NS	NS	NS	NS	NS
MW-6B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	5.4	30U	1.2U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.8J	10U	ND
FP&L	2.7	<1	<1	0.48U	NS	NS	NS	NS	NS	12U	12U	ND	NS	NS	NS	NS	NS	NS
MW-6CR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	5U	30U	1.2U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
FP&L	<1	1.6	<1	NS	NS	NS	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10U	10U	ND
FP&L	<1	<1	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EPA	5U	30U	1.2U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10U	10U	ND
FP&L	<1	<1	<1	NS	NS	NS	NS	NS	NS	12U	12U	ND	NS	NS	NS	NS	NS	NS

U - The material was not detected during analysis. The number shown is the Minimum Quantitation Limit.
J - Identification of analyte is acceptable. Reported value is an estimate.
D - Duplicate sample from same well
NS - Not sampled
ND - Not detected above Sample Quantitation Limit (SQL)
PCB - The number shown for PCBs was the same for all 7 PCB types analyzed (1016, 1221, 1232, 1242, 1248, 1254, 1260).
Wells not included in table: Wells MW-1A, MW-1B, MW-4C, MW-7A, MW-10A, and MW-11A were all sampled only once in 1992. None of the results of the 1992 sampling exceeded Remedial Goals for the wells not shown in the table above
and none of those wells have been sampled since that time. 1997 - In 1997, three wells were sampled for lead only. These wells included MO-1, MW-6A, and MW-6CR. None of the 1997 sampling results exceeded Remedial Goals for lead at that time and these results are not included in the above table.

Appendix D:
Site Inspection Checklist

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

I. SITE INFORMATION

Site name: Pepper Steel & Alloy	**Date of inspection: 01/24/2007**
Location and Region: Medley, Florida, Region 4	**EPA ID: FLD032544587**
Agency, office, or company leading the Five-Year Review: EPA	**Weather/temperature: 73 degrees, partly cloudy**

Remedy Includes: (Check all that apply)

- ☒ Landfill cover/containment
- ☒ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls
- ☐ Other Ground water monitoring to ensure that contaminants are not leaching from the monolith

Attachments: ☐ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager** N/A (Name) _____ (Title) mm/dd/yyyy (Date)
   Interviewed ☐ at Site ☐ at office ☐ by phone Phone no. _____
   Problems, suggestions; ☐ Report attached _____

2. **O&M staff** N/A (Name) _____ (Title) mm/dd/yyyy (Date)
   Interviewed ☐ at Site ☐ at office ☐ by phone Phone no. _____
   Problems, suggestions; ☐ Report attached _____

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

Agency Town of Medley

Contact	Name	Title	Date	Phone No.
	Salvatore Ammese	Chief Building Official	01/24/2007	305-887-6913

Problems; suggestions; ☒ Report attached see interview form

Agency FDEP

Contact	Name	Title	Date	Phone No.
	Kelsey Helton	staff geologist	01/24/2007	N/A

Problems; suggestions; ☒ Report attached see interview form

Agency DERM

Contact	Name	Title	Date	Phone No.
	Tom Kux	contaminated properties representative	02/02/2007	305-372-6700

Problems; suggestions; ☒ Report attached see interview form

Agency _____

Contact	Name	Title	Date	Phone No.
	_____	_____	mm/dd/yyyy	_____

Problems; suggestions; ☐ Report attached _____

Agency _____

Contact	Name	Title	Date	Phone No.
	_____	_____	mm/dd/yyyy	_____

Problems; suggestions; ☐ Report attached _____

4. **Other interviews** (optional) ☒ Report attached see interview form

Roger Messer and Diana Davis - Florida Power & Light

Walter Lista - owner of former Payne parcel

Norton Bloom - former site owner

Tony Guajardo - representative for Thomas Curtis and Jorge Zacarias

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
	☐ Maintenance logs	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: As-built information is included in the Remedial Investigation report, confirmed in 2004 by a resurvey.			
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 _____			
	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: 2004 resurvey did not show settlement, none visible on the Curtis parcel during site inspection.			
7.	**Ground water Monitoring Records**	☒ Readily available	☐ Up to date	☐ N/A
	Remarks: FP&L historically sampled ground water every 2.5 years, EPA sampled in 2003, EPA sampled April 2007.			
8.	**Leachate Extraction Records**	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: _____			
9.	**Discharge Compliance Records**			
	☐ Air	☐ Readily available	☐ Up to date	☒ N/A
	☐ Water (effluent)	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: _____			
10.	**Daily Access/Security Logs**	☐ Readily available	☐ Up to date	☒ N/A
	Remarks: _____			

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for State

☐ PRP in-house ☐ Contractor for PRP

☐ Federal facility in-house ☐ Contractor for Federal facility

☒ Other ERT support, EPA had a cooperative agreement worth $300,000 with the county's DERM for site maintenance, half of that was used and half will not be used, as it was decided that fixing the drainage collar was not worth the investment, since current properties' owners will need to install drainage when nearby road construction is complete.

2. **O&M Cost Records**

☐ Readily available ☐ Up to date

☒ Funding mechanism/agreement in place: Special Account established by 1997 Consent Decree

Original O&M cost estimate _____ ☐ Breakdown attached

Total annual cost by year for review period if available

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

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

Describe costs and reasons: _____

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

A. Fencing

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

Remarks: some fencing was missing around the remnant Australian pines on the Curtis parcel; barriers are being constructed utilizing land/sea containers as a more secure alternative to fencing.

B. Other Access Restrictions

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

Remarks: Walter Lista, owner of Payne parcel, plans to install motion sensitive lights on his property to deter midnight dumping and improve the security of his property.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

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

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

Type of monitoring (e.g., self-reporting, drive by) drive by, ground water sampling, monolith sampling

Frequency ground water sampling is done every 2.5 years

Responsible party/agency the PRP, Florida Power & Light

Contact	Roger Messer	Director of Environmental Support	mm/dd/yyyy	561-691-7043
	Name	Title	Date	Phone no.

Reporting is up-to-date ☐ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☐ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☒ No ☐ N/A

Violations have been reported ☐ Yes ☒ No ☐ N/A

Other problems or suggestions: ☐ Report attached

The Curtis, Bloom and Payne parcels have a 1991 Judgment with FDEP recorded with the deed. The Curtis parcel also has a restrictive covenant on it recorded in 2004. The Bloom parcel had the entire text of the Consent Decree recorded with the deed in 2004. These deed notations are all available at the Miami Public Records Office and online. However, FDEP and DERM both strongly support the use of a Restrictive Easement with standardized language for all the parcels. This is seen as a way to ensure that all future property purchasers will be aware of the Site's use restrictions and that all future property owners will have to abide by the same restrictions, regardless of whether the parcels are subdivided in the future, which seems likely at this time.

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

Remarks: Deed notations are in place on all the parcels, which can inform anyone who performs a deed search as to the nature of the Site's remedy and the Site's use restrictions. Nevertheless, the state and county wish to put a restrictive easement in place and therefore ICs will not be complete until this standardized IC has been recorded on all parcels. The agencies are currently working with property owners to put the standardized IC in place.

D. General

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

Remarks: There have been many past and present problems with midnight dumping on the Site.

2. **Land use changes on site** ☒ N/A

Remarks: The land use changes consist in the advent of reuse on the property after many years of vacancy, but the land use continues to be commercial/light industrial.

3. **Land use changes off site** ☒ N/A

Remarks: The surrounding land uses are all still commercial/industrial.

VI. GENERAL SITE CONDITIONS

A. Roads ☐ Applicable ☒ N/A

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

Remarks: The old O&M plan mentions a road on site, but that document is outdated and there are no roads on the property.

B. Other Site Conditions

Remarks: Drainage problems have been prevalent and are a concern to the Town of Medley. In August or September of 2006, property owners cleaned the drains on the Curtis parcel and drainage on that parcel improved. The current owner of the Payne parcel is installing a drainage system for his property consisting, in part, of a 2-foot earthen berm. Reuse and compliance with county/town stormwater management ordinances after completion of nearby road improvements on 97th and 109th Streets will improve onsite drainage. Since the Site was vacant for 18 years, there are still serious quantities of debris and trash left on the land parcels, but not on the monolith, from previous and ongoing midnight dumping.

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

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

Arial extent _____ Depth _____

Remarks: The monolith was constructed above the grade of the surrounding land and remains so.

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

Lengths _____ Widths _____ Depths _____

Remarks: _____

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

Arial extent _____ Depth _____

Remarks: The owner of the Payne parcel commented that he had seen limited erosion of the limestone cover at the edges of the monolith.

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

Arial extent _____ Depth _____

Remarks: _____

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

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

Remarks: The Australian pine forest has been removed.

6. **Alternative Cover** (armored rock, concrete, etc.) ☐ N/A

Remarks: Now that the trees have been removed, the cover is once again only gravel/dirt or the foundation of a building.

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

Arial extent _____ Height _____

Remarks: _____

8.	**Wet Areas/Water Damage**	☒ Wet areas/water damage not evident	
	☐ Wet areas	☐ Location shown on site map	Arial extent _____
	☐ Ponding	☐ Location shown on site map	Arial extent _____
	☐ Seeps	☐ Location shown on site map	Arial extent _____
	☐ Soft subgrade	☐ Location shown on site map	Arial extent _____
	Remarks: _____		
9.	**Slope Instability**	☐ Slides	☐ Location shown on site map
	☒ No evidence of slope instability		
	Arial extent _____		
	Remarks: _____		
B. Benches		☐ Applicable ☒ N/A	
	(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	**Flows Bypass Bench**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
2.	**Bench Breached**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
3.	**Bench Overtopped**	☐ Location shown on site map	☐ N/A or okay
	Remarks: _____		
C. Letdown Channels		☐ Applicable ☒ N/A	
	(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1.	**Settlement** (Low spots)	☐ Location shown on site map	☐ No evidence of settlement
	Arial extent _____		Depth _____
	Remarks: _____		
2.	**Material Degradation**	☐ Location shown on site map	☐ No evidence of degradation
	Material type_____		Arial extent _____
	Remarks: _____		
3.	**Erosion**	☐ Location shown on site map	☐ No evidence of erosion
	Arial extent _____		Depth _____
	Remarks: _____		
4.	**Undercutting**	☐ Location shown on site map	☐ No evidence of undercutting
	Arial extent _____		Depth _____
	Remarks: _____		

5. **Obstructions** Type _____ ☐ No obstructions

☐ Location shown on site map Arial extent _____

Size _____

Remarks: _____

6. **Excessive Vegetative Growth** Type _____

☐ No evidence of excessive growth

☐ Vegetation in channels does not obstruct flow

☐ Location shown on site map Arial extent _____

Remarks: _____

D. Cover Penetrations ☒ Applicable ☐ N/A

1. **Gas Vents** ☐ Active ☐ Passive

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

☐ Evidence of leakage at penetration ☐ Needs Maintenance ☒ N/A

Remarks: _____

2. **Gas Monitoring Probes**

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

☐ Evidence of leakage at penetration ☐ Needs Maintenance ☒ N/A

Remarks: _____

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

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

☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A

Remarks: The condition of the monitoring wells varied. The above ground wells on the monolith were locked and in good condition while some of the flush mounted wells around the perimeter of the monolith were rusted and the locks damaged.

4. **Extraction Wells Leachate**

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

☐ Evidence of leakage at penetration ☐ Needs Maintenance ☒ N/A

Remarks: _____

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

Remarks: Settlement was surveyed in 2003 as part of the work through the EPA's cooperative agreement with the county. There was no settlement visible at that time or during the site inspection.

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

1. **Gas Treatment Facilities**

   ☐ Flaring ☐ Thermal destruction ☐ Collection for reuse

   ☐ Good condition ☐ Needs Maintenance

   Remarks: _____

2. **Gas Collection Wells, Manifolds and Piping**

   ☐ Good condition ☐ Needs Maintenance

   Remarks: _____

3. **Gas Monitoring Facilities** (e.g., gas monitoring of adjacent homes or buildings)

   ☐ Good condition ☐ Needs Maintenance ☐ N/A

   Remarks: _____

F. Cover Drainage Layer ☐ Applicable ☒ N/A

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

   Remarks: _____

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

   Remarks: _____

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

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

   ☐ Siltation not evident

   Remarks: _____

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

   ☐ Erosion not evident

   Remarks: _____

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

   Remarks: _____

4. **Dam** ☐ Functioning ☐ N/A

   Remarks: _____

H. Retaining Walls ☐ Applicable ☒ N/A

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

   Horizontal displacement _____ Vertical displacement _____

   Rotational displacement _____

   Remarks: _____

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

   Remarks: _____

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

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

   Area extent _____ Depth _____

   Remarks: Siltation of drains in the parking lot of the Curtis parcel had been a serious problem, but the drains were cleaned in August/September of 2006 and seem to be functioning properly again.

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

   ☐ Vegetation does not impede flow

   Area extent _____ Type _____

   Remarks: Vegetation had sunk its roots into the first 12 inches of drainage collar diminishing its effectiveness. Some of this vegetation has been removed, some remains, and in some places the former drainage collar has been overtopped by the property owners' new drainage systems.

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

   Area extent _____ Depth _____

   Remarks: _____

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

   Remarks: The drainage collar has been disrupted by vegetation, new construction, and siltation over the last five years. It is not functioning as planned and the choice was made to opt for alternative drainage systems installed by the current property owners. When completed, these new drainage structures will improve upon the drainage collar structure part of the remedy.

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A

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

   Area extent _____ Depth _____

   Remarks: _____

2. **Performance Monitoring** Type of monitoring _____

   ☐ Performance not monitored

   Frequency _____ ☐ Evidence of breaching

   Head differential _____

   Remarks: _____

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

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

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

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

   Remarks: The monitoring wells on the monolith seemed in good condition. Some of the flush mounted wells on adjacent properties were not in good conditions, specifically the two monitoring wells on NW 109th Street in front of the InterFlorida Container Transport office at 9601 NW 109th were rusted and locks were damaged or missing. However, not all the wells are being used during monitoring events at this time and not all monitoring wells were inspected during the site visit.

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

☐ Good condition ☐ Needs Maintenance

Remarks: _____

3. **Spare Parts and Equipment**

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

Remarks: _____

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

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

☐ Good condition ☐ Needs Maintenance

Remarks: _____

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

☐ Good condition ☐ Needs Maintenance

Remarks: _____

3. **Spare Parts and Equipment**

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

Remarks: _____

C. Treatment System ☐ Applicable ☐ N/A

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

☐ Metals removal ☐ Oil/water separation ☐ Bioremediation

☐ Air stripping ☐ Carbon adsorbers

☐ Filters _____

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

☐ Others _____

☐ Good condition ☐ Needs Maintenance

☐ Sampling ports properly marked and functional

☐ Sampling/maintenance log displayed and up to date

☐ Equipment properly identified

☐ Quantity of ground water treated annually _____

☐ Quantity of surface water treated annually _____

Remarks: _____

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

☐ N/A ☐ Good condition ☐ Needs Maintenance

Remarks: _____

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

☒ N/A ☐ Good condition ☐ Proper secondary containment ☐ Needs Maintenance

Remarks: _____

4. **Discharge Structure and Appurtenances**

☒ N/A ☐ Good condition ☐ Needs Maintenance

Remarks: _____

5. **Treatment Building(s)**

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

☐ Chemicals and equipment properly stored

Remarks: _____

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

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

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

Remarks: _____

D. Monitoring Data

1. **Monitoring Data**

☐ Is routinely submitted on time ☐ Is of acceptable quality

2. **Monitoring data suggests:**

☐ Ground water plume is effectively contained ☐ Contaminant concentrations are declining

E. Monitored Natural Attenuation

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

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

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

Remarks: _____

X. OTHER REMEDIES

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

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

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

The remedy was designed to solidify and stabilize the soil contaminants in an on-site monolith and to ensure that these contaminants were not leaching out of the monolith and into the ground water. The drainage collar was constructed to handle stormwater runoff from the monolith. The remedy was implemented as designed and the monolith seems to be functioning as intended by stabilizing the metals and PCBs and keeping them from the surrounding soils and ground water. The only piece of the remedy not functioning as intended is the drainage collar, the maintenance of which has been abandoned in favor of a new system of drainage control to be implemented by the property owners.

B.	Adequacy of O&M
	Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. O&M was called for as part of the Site's final remedy, but it was not specified who should pay for it. An O&M plan was created in 1989 when the remedy was completed, but is no longer appropriate for today's situation at the Site. In 2002, a proposed O&M Plan was created to update and revise the previous document. EPA entered into a cooperative agreement with the county's DERM to fund them to handle some O&M at the Site. That contract has been suspended and EPA is currently funding O&M out of a Special Account, since no one else is responsible for funding the Site's O&M. This however is a short-term solution. O&M is definitely an ongoing issue for the Site, since the waste-left-in-place remedy will necessitate perpetual maintenance of the remedy. The current expectation for the Site's O&M is that reuse will provide a long-term solution by making the property owners responsible for addressing drainage issues and providing an on-site presence to discourage vandalism, trespassing, and dumping, all of which continue to be a problem.
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. There do not appear to be any early signs of remedy problems or failures. Some wellheads are not well maintained and locked, but many of the initial wells are not being sampled on a regular basis and the ground water monitoring plan is currently under review, which will likely change the number, location and frequency of the wells that will be sampled in the future. When this new plan is finalized, unused wells can be properly abandoned. Similarly the drainage collar is no longer functioning, but new drainage systems implemented by the site owners are either planned or under construction and should address the Site's historic drainage problems in the near future.
D.	**Opportunities for Optimization**
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. No additional recommendations except those discussed above.

Site Visit Notes

Participants:

Jan Rogers – EPA, RPM for Pepper Steel
Bill Denman – EPA, R4 Reuse Coordinator
Lisa Ellis – EPA, site attorney
Kelsey Helton – FDEP representative
Norton Bloom – site owner
Walter Lista – site owner
Jorge Zacarias – has a lease/purchase agreement on the Curtis parcel
Thomas Curtis – site owner
Tony Guajardo – represents Thomas Curtis and Jorge Zacarias
Roger Messer – Florida Power and Light
Diana Davis – Florida Power and Light
Arley Nieto – Town of Medley Code Enforcer
Salvatore (Sal) Amesse – Town of Medley Chief Building Official
Kristin Sprinkle – E^2 Inc.

Amanda Knoff – E² Inc.
Cara Forster – E² Inc.

Major Themes

Drainage

Remedy

The original French drain (drainage collar) was two feet wide and ran all around the monolith. It was filled with clean lime rock to catch water draining off the monolith and keep that water off the surrounding parcels. The collar's rise above the surrounding area was two feet. The French drain was dug nine feet down. Currently, since the removal of the Australian pines, rainwater sinks through the crushed rock cap, runs across the monolith, and flows into the drainage collar. Vegetation in the drainage collar overwhelmed the crushed rock and keeps water from sinking into the collar. As the drainage collar gets worn down it becomes less effective. The original goal was to make the monolith 100 times less permeable than the surrounding soils. The monolith is essentially impermeable and was designed to be a load bearing structure to facilitate reuse. There are no leachate wells and no stream recovery system in place as there is no visible stream coming out from the monolith. FDEP suggested the need for a ground water well in the infiltration area to monitor water coming off the monolith.

Town of Medley

Water is a grave concern for the Town, because stormwater must be contained and that is not happening now. Arley Nieto said that the problem with the Curtis parcel is that water runs into and sometimes floods county roads. Arley recommends that Jorge see about the property's drainage issues and meet the city's code for drainage. Arley is doubtful about the ability to fix the Site's drainage problems easily. He believes that reuse may lead to a better plan for drainage than the collar, but currently water is flooding the streets. The collar needs to be reasonably intact until planned reuse can be developed that will address these drainage problems. The Town says that the site owners must clear their building designs with both the state and county. Sal says that the county and the city ordinances for stormwater management are the same and that the county and the city need to coordinate on the Site.

Medley officials confirmed Jan Rogers thought that the pending road construction will require the property owners to deal with the drainage issues. The new road is going to be an extension of NW 109th Street, but the Town is still working on obtaining rights-of-way. Owners will have to stop rainwater at their property lines. Especially if reuse does not involve something simple, like a parking lot, the owners will really need to address their drainage problems. Runoff from the properties all along NW 109th Street, which is not paved, is currently problematic. Sal says the engineering studies for the road construction are complete, but the work has not been contracted yet. County ordinances also require planting trees to make property edges more attractive. Jan says this is fine as long as the trees have shallow roots. Reuse will force property owners to obtain a stormwater permit and then the Town can make them address the drainage issue for their entire parcel, not just for the monolith portion. Jan sees this is as a positive thing that will force activities on adjacent properties as well since the Site is surrounded by industrial properties and they also contribute to runoff.

Curtis Parcel

The drainage collar around the Curtis parcel is basically gone, and all the vegetation has been cleared from the top of the monolith on the Curtis parcel. Thomas Curtis and Tony G., his representative, said they pulled four truckloads of silt and trash from the drains in their parking lot in August or September of 2006. These drains received stormwater from various unimproved areas of the property including some runoff from the monolith during severe rain events. Jan said that he drove by in December of 2006 during a rainstorm and the parking lot did not seem flooded. Tony and Jorge asked if there was any reason they should not put the drain in once and for all and make it 10 to 15 feet deep to accommodate all the runoff. Jan said that nothing is engineered to handle hurricanes. Jorge was concerned about draining water to the middle of the monolith because the southern portion of his property line cuts across the monolith. Normally the state would not want drainage systems to route water over the monolith. The tenant of the Curtis parcel is proposing to resolve the drainage problems for the whole property by installing a new drainage system to the outside of the damaged drainage collar. They are thinking of creating an infiltration gallery in the soils surrounding the monolith and are assuming that these soils are not going to be a source of contamination. Jan recommended they work with the state and county to ensure this was the case. They need "as built" survey information for the property showing the location of the old French drain and the perimeter of the monolith. Their proposed drainage system is four feet across and fifteen feet deep. It was agreed that Tony G. should go ahead and contact the surveyor about its construction. The Remedial Investigation report has "as built" information and elevation information for the monolith. "As built" information should show the excavation line and where there is and is not contamination present as evidenced by core sample data.

Ground water at the Site currently flows under the Millennium Battery property toward the street. NW 109th Street can be full of water after rains. Drainage is slow in the back near NW 97th Avenue, but there's a good catch basin for runoff. The Curtis property will be giving up land for the road construction. Water pooling on the property has been a problem - if the area is greater than five feet by three inches, then the area should be filled in, if less than that size, more assessment is needed. Tony G. says DEP and DERM must be involved in addressing the drainage issues. He wants to know what the problems might be for constructing the infiltration gallery. Curtis will likely cover his parcel with a building and the building footprint and the parking facilities will increase the amount of stormwater runoff, which will only increase the drainage problems until the infiltration gallery is constructed.

Payne Parcel

The Payne parcel is now owned by Walter Lista, who said that he just completed percolation tests and is in the process of installing a drainage system. He has already installed 2,000 linear feet of drainpipes and 15 to 18 drain boxes, which are items he manufactures. If Jorge does not buy the Curtis property, Walter will do so and address the drainage of the Site holistically. The Town requires a two-foot berm and shallow rooted trees to prevent migration of stormwater. Walter is addressing drainage on his property by building a 2-3 foot high berm around the edge of his property to contain runoff. The drainage cover on the Payne parcel is now underneath the berms that Walter has constructed to contain the runoff from his property to his neighbors' properties. Walter is planning on creating a sophisticated drainage system for his pieces of the Site. The site owners plan to work together to design a comprehensive drainage system for the

whole property. Walter is leveling the area on his property with fill material to provide a greater depth cap for the monolith and create an even grade across his property. On the Payne parcel, the monolith extends all the way to NW 97th Street, where there is barely enough room between the monolith and the street to install a drainage system. Currently corn grass has grown up at the edges of the Site, in place of the Australian pines.

Remedy

EPA

The remedy was selected in 1986, built between 1987 and 1989, and finished in 1989. Florida Power and Light (FP&L) has liability for the Site that is limited to implementing the remedy and monitoring the ground water to make sure no lead, arsenic, or PCB is leaching into the ground water. FP&L has completed the implementation of the remedy and is paying for ground water sampling. Twelve inches of crushed lime rock were installed over the monolith as a cover. The limestone cover is important for preventing exposure of the monolith and its primary purpose is to prevent weathering. The monolith comprises 120,000 cubic yards of soil that needed to be stabilized. The cement that binds the metals into the monolith has a hardness of 9 or 10. A water column test determined that the monolith's permeability is 10^{-5} or 10^{-6} and the surrounding sandy soils are porous. The monolith prevents water from soaking through to the soils beneath. PCBs are organically combined with the monolith and have little porosity so they are not moving. EPA consultants tried to test the monolith itself, but only got splinters because of its high compressive strength. Tests were done on the load bearing nature of the monolith in 2003 or 2004. EPA tests indicate the monolith can support 600 psi, but EPA has advised that all potential users need to perform their own geotechnical work to show what force their building will put on the monolith and that this will not impact protectiveness. EPA performed scrape tests on the monolith at various depths ranging from 12 to 18 inches. In 2004 there was an average of about 12 inches of cover on the monolith, which was all that was called for in the remedial design. The monolith looks like brown sandstone towards the Bloom parcel because of higher oil content. People should not be digging into the monolith because anyone who disturbed the monolith or the soil around it may have to dispose of it as a hazardous waste. The Site is currently fenced.

There are two Consent Decrees (CDs) for this Site: one Consent Decree was with FP&L to implement the remedy and FP&L has satisfied all remediation requirements but remains responsible for sampling groundwater to assure the remedy continues to perform as expected. The other CD was with the landowners to cover past costs through a Special Account, which also set aside money to fund O&M, which removed FP&L from the picture. The costs from this CD are settled, but the IC issues remain. There are no windfall liens for the current or subsequent owners of the property. The monolith will always be present onsite and therefore the Consent Decree will always be in effect and someone will always have to monitor the Site and conduct Five-Year Reviews. Jan said that some of the current monitoring wells may be able to be eliminated, but that he may need to add a couple of wells from the Curtis parcel towards the Bloom parcel.

Where there are contaminated soils under concrete, an IC may be necessary because water flowing under the building could move contamination and that would be problematic. There was some concern over settlement of the monolith so a survey took place in 2004. This survey

looked for drastic settlement of the monolith, but did not find anything significant. Sampling of the current ground water wells will occur in mid- February and the data will inform the Site's current Five-Year Review. O&M was called for in the Record of Decision, but it was not specified who should pay for it. The O&M plan needs to be revised; it was created in 1989 and is not appropriate for today's situation. EPA is currently funding O&M because of the Special Account provisions, but reuse should change that. On-site operations and maintenance logs are not applicable to this Site, since the Site is in transition from EPA to property owners performing O&M. Adequate monitoring will still be the necessary check on whether the monolith is leaching contaminants into the ground water.

Jan says that it is not necessary to address all the recommendations in the previous Five-Year Review, for example the last Five-Year Review mentioned the trees on the monolith and they are gone now. The previous Five-Year Review also mentioned fixing the drainage collar, but he deemed it not worth the money to fix because it will soon be improved, since the Town will require that the users of the property comply with storm water requirements upon completion of nearby road improvements. Remedies are usually designed with a 30-year time horizon due to the fact that the government mandated discount rate of 7% causes the net present value of all costs to go to zero after 30 years. EPA anticipates that the Site will still need review and maintenance after thirty years, and the reuse of the property will support the long-term stewardship of the Site.

Town of Medley

The Town of Medley is worried about deterioration of the monolith. They are concerned about settling, crumbling, and areas that are weathering out from under the cover. No erosion was visible along the buildings, but in some small areas along the edges, monolith was visible that had weathered out from under the cover. This has since been covered because of reuse taking place on the former Payne parcel. The Town also expressed concern about the current state of the drainage collar. However, they were supportive of future use because the future users will maintain the remedy and pay taxes.

Site Owners/Occupants

Tony says they are maintaining the Site better than EPA by cutting trees and disposing of trash, etc. The runoff has been contained from the monolith and monitoring wells have not been disturbed. Jorge says he will keep EPA informed about the property maintenance he conducts. Tony says that when the O&M plan was written, no one was on the property because it was vacant. He agrees that 30 years is an arbitrary end point for the remedy, because the monolith will still be here. After 10 years there was an Australian pine forest on the Site and the trees' roots went deep into the drainage collar, disrupting its function. When trees grew on the monolith there was a matted pine needle base covering the monolith that aided with water absorption, now there is just dirt.

The restrictive covenant language should be consistent with protecting the monolith (e.g., footers must be distributed such that they do not exceed 20psi). Spreading footers out so they are no more than two feet deep, such as 12 by 10 foot footers, should make buildings able to withstand hurricane force winds. The footers on Walter's property added an additional two feet of concrete cover above the monolith.

Reuse

Town of Medley

There are currently three parcels, two have been sold, and one has been subdivided. The Town is worried about its ability to enforce institutional controls on these parcels. The Town's representatives are concerned about the Site because they have no specific knowledge about it. The Town officials feel that anything involving oils or acids would not be acceptable for the reuse of the Site: acids because they could eat away at the monolith and oils because they could register as contamination in the monitoring wells. The Town officials feel the Town needs clean industry. The Town of Medley is concerned about reuse on the Payne parcel. Medley citizens feel they may not have been kept well enough informed. They suggest periodic fact sheets sent to the Town's attorney, since attorneys will make a lot of important decisions on the Site. On-site training to inform employees of what they should and should not do would also make sense from a reuse perspective. The Town is concerned about any prohibited usages such as heavy trucks. Jan said anything involving acids or chemicals would be bad, but that heavy trucks are not a problem. EPA and the Town seemed to agree that commercial and clean industrial uses would be appropriate for the property. The Town wants something on record saying what can and cannot be done on the property. Arley is concerned that if a school could not be built on-site then perhaps the property is not really safe. Jan says the monolith is clean enough for industrial use and that the surrounding properties are not as clean as this one. Arley wants to invite the regulators to Town Hall for a meeting with the city attorneys, EPA, the state, and the county. The Town's attorney is Mel Wolf and his phone number is 887-9541 ext. 163. Arley asked if there was a problem with fumes and Jan said no. Arley asked for a status letter, some kind of documentation that the Site is safe for certain uses. He wants it in writing. The Town's biggest concerns are lack of knowledge, issues of liability, and enforcement.

Curtis Parcel

Before reuse, there were encroachment issues near the properties. Users will reduce trespassers and vandals, but it's still a problem. Jorge says EPA should help him with cleaning up the dumping on his property because it gets very expensive to dispose of tires and trash, and they should support him in this maintenance to encourage a better outcome for the Site. Whatever the final design for the Curtis parcel, they want to subdivide it with the monolith as its own parcel. They need to generate revenue to construct the drainage remedy so they are thinking of selling off property with full disclosure about the monolith. Jan says that any future property owners will need to maintain the cover. Tony says that Jan told him two years ago that reuse was OK as long as it was a clean type of use. The Curtis parcel may be subdivided into as many as five or six parcels. Drainage problems are expected to be worse once the Site is paved. Part of the Curtis parcel is leased to a trailer storage operation in order to generate income to help fund future redevelopment of the property.

The Millennium Battery Site was formerly the Miami Battery Site, both of which were on the Curtis parcel. The Curtis parcel had a boat operation on-site before, but now has a truck maintenance facility. There is also some storage/warehousing since the intermediate users are gone. The new tenants have redeveloped the building next to South River Road and the new business is U.S.A. Truck Parts. Parcel 46 of the Curtis parcel is being used as a parking lot. Some excavation has occurred around the parking lot area. The loading dock is covered with a

concrete pad. The building is new and has proper drainage systems in place including curbs in the parking lot and berms around it. Jorge says that this is the cleanest property around.

Payne Parcel

The Payne parcel is lot 45 and is currently owned by Walter Lista who will use it to manufacture pre-cast cement drainage vaults. The property taxes for the Payne parcel went from $500 to $50,000 when Walter put the property into reuse. Walter employs 35 people and his business is five years old. He has five acres for his manufacturing facility on top of the monolith. For the past several years there has been a lot of dumping on the property, so he is sorting through the trash and keeping some debris as fill to raise the level of his property to the height of the monolith. He has spent $200,000 cleaning up the Site so far - he had to spend $150,000 on a front-end loader because there was so much debris and trash to sort through. EPA could not have spent that much money on cleaning up the Site for reuse. When Walter bought the Payne property it was very overgrown and he had to haul away many truckloads of debris including tree stumps, wood refuse, tires, trash, cement refuse, and old trucks. Walter says he is sorting the debris: recycling some, using some as fill, and hauling some to the dump, where they pay $50 per ton for scrap metal. The Site was so overgrown he found a huge cotton gin hidden in the brush and debris. The property was cheaper to purchase because it was a Superfund Site, but the costs of evening out the grade, disposing of the debris, and putting up fences has made the property a good deal but not a great deal.

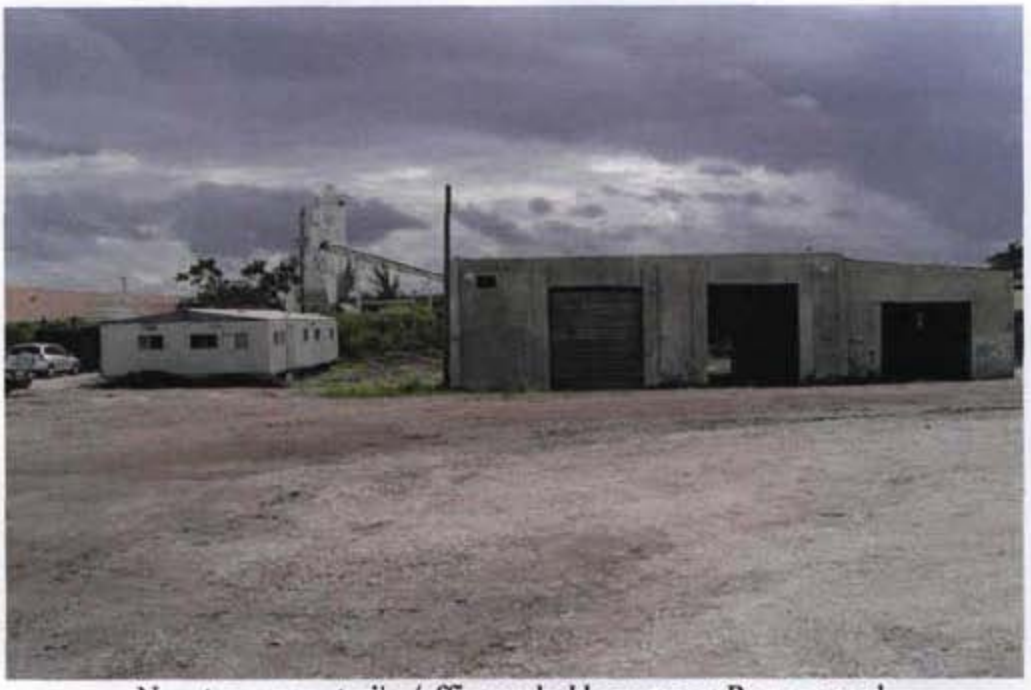
Walter is concentrating his reuse activities on the cleanest part of the property to start with, and that is the monolith. He put clean fill on top of the monolith and added a concrete cover. He has brought in 80 truckloads of lime rock so far. He has been getting this fill from PNC Inc., but has not been testing this fill for arsenic levels. Jan recommended testing for arsenic content in both the imported fill as well as the on-site debris that Walter is using as fill. Walter said he will start testing the fill now that Jan has made him aware of the need to do so. Walter's building has 22 floating footers that are 14 feet by 14 feet by 18 inches. This took 785 cubic yards of concrete, which cost $70,000 just for the materials. This provides an additional three feet of concrete cap on top of the monolith. The monolith still has six inches of lime rock on top of it and then six to 18 inches of concrete on top of that. Walter plans to reuse an existing concrete building by filling it in and raising the floor three feet.

Walter has a tenant who leases part of his property for the storage of land-sea containers. He put "abiding by the Consent Decree" into his lease agreement with the tenant. The containers are only stored on site, they are not cleaned or restored on his property. He can terminate their lease at any time if they do not comply with the terms of the lease or the Consent Decree. This tenant is on a month-to-month lease to give him more control over the property. Walter has improved the cover, improved the drainage, and leveled the Site to prepare for reuse. He had to level the Site in order to be able to stack containers on that part of the property. He also needed to bring up the height of his property in order to run some utilities underground around the monolith. In order to proceed with reuse Walter needed three types of permits: building permits, water/sewer permits, and FP&L permits. Some are pending, while some came through in November of 2006. He had to apply for the permits in stages to keep things moving and he needs the money from his tenant to proceed with reuse, which is why he is leasing part of the parcel. Walter currently has a temporary office in a trailer on the Payne parcel.

The Consent Decree requires FDEP and DERM to review development plans. Walter said he went through DERM and has a DERM stamp of approval on his building plans. Tom Kux of DERM, who was not present for the site visit, said in a previous call that the Site was not flagged as a contaminated property requiring additional review when Walter submitted his building plans for approval by the county. This miscommunication may need to be addressed at the county level. Tom Kux of DERM needs to be involved in approving building plans for the Site because he is the contaminated properties representative for the county and was not aware of this building plan.

Institutional Controls

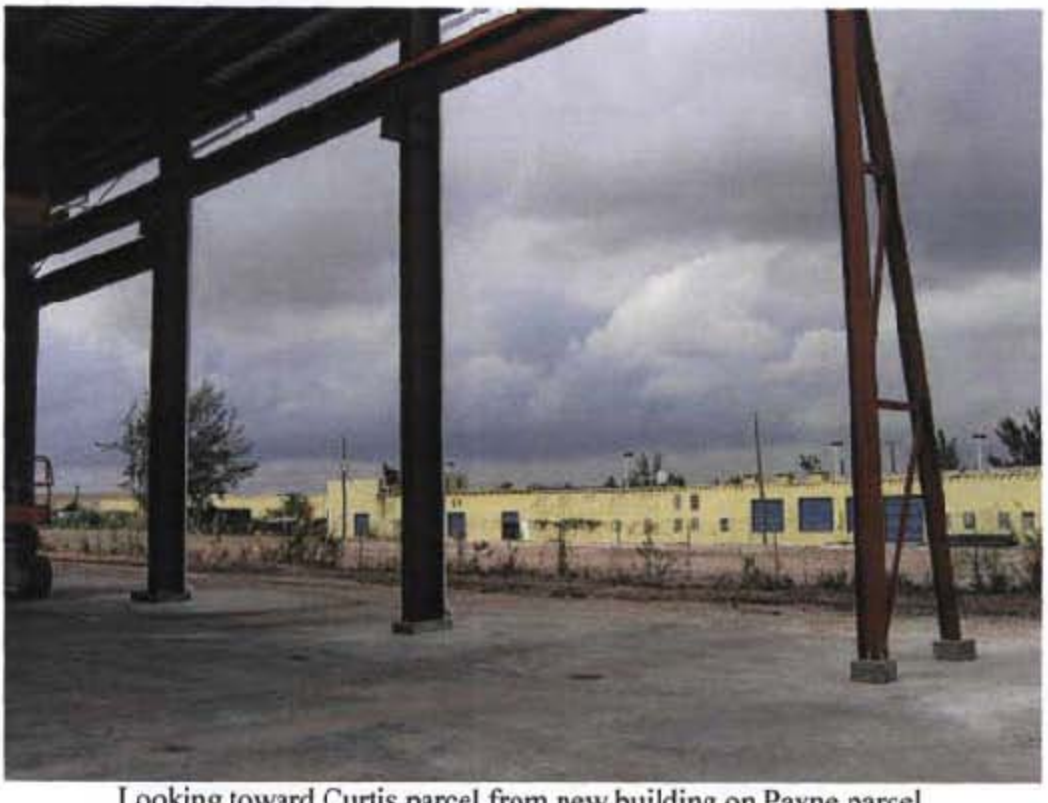
- The remedy intended the use of institutional controls, which were referred to as deed restrictions or notations. The state can implement a restrictive covenant that identifies restrictions. EPA has submitted a draft version and FDEP is reviewing it.
- A draft IC exists for lot 45, the Payne parcel, which can be made more generic so that it will apply to the other parcels as well. EPA wants a draft it can take to all three property owners at the same time.
- The agencies agree that ICs should be put in place before these properties are subdivided so that all future users will be obligated to follow the same restrictions.



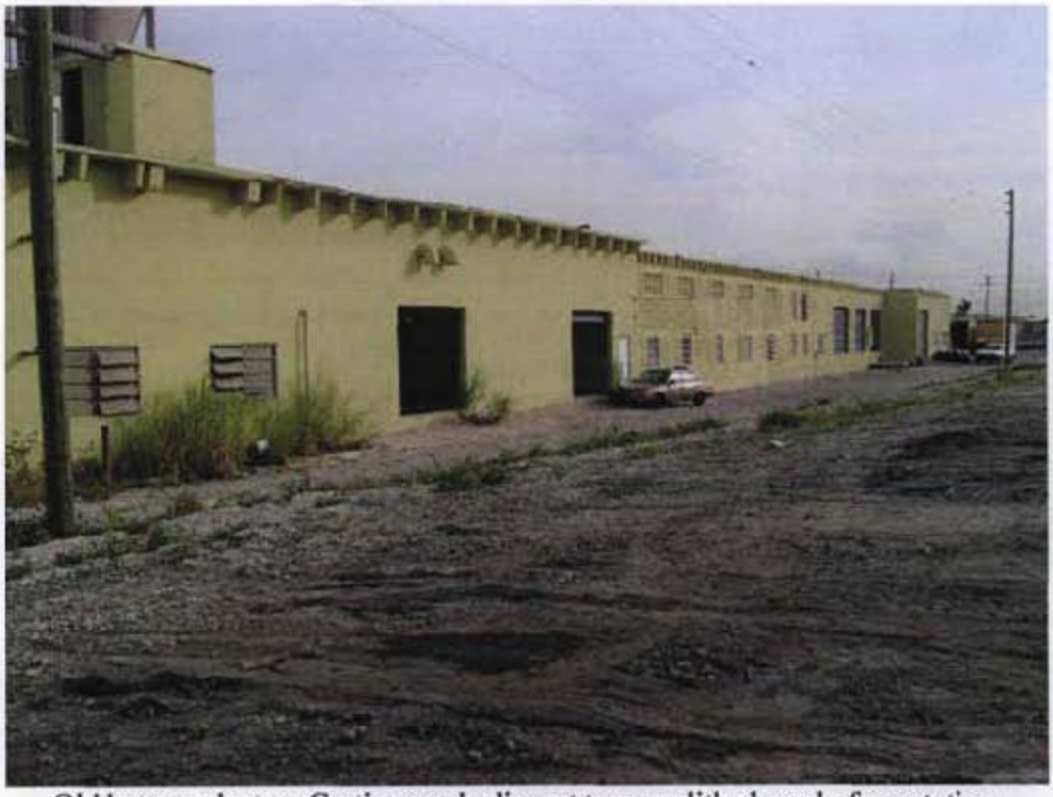
New temporary trailer/office and old garage on Payne parcel.

Land-sea containers stored by a tenant on the Payne parcel, with new building in background.

Building under construction on Payne parcel monolith will be a concrete products facility.



Looking toward Curtis parcel from new building on Payne parcel.



Old battery plant on Curtis parcel adjacent to monolith cleared of vegetation.

New cafeteria on Curtis parcel, next to trucking operation.

New asphalt parking lot and truck storage operations run by a tenant of Mr. Curtis.

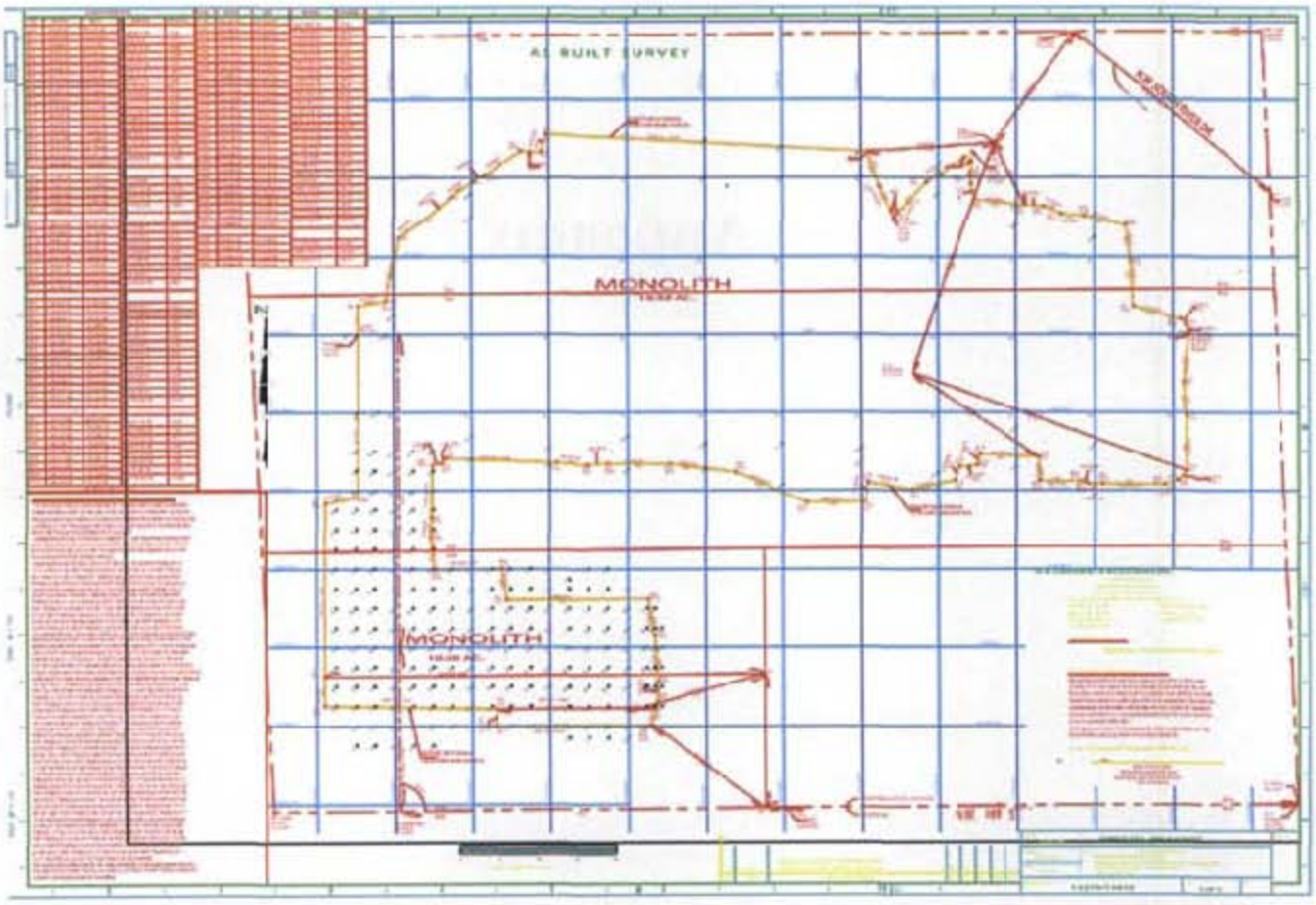
New parking lot berms on Curtis parcel.

Monitoring well on top of the monolith in the Curtis parcel.

Vegetation growing in original drainage collar around monolith.

Debris on Payne parcel and view of buildings on NW 109th Street.

Site sign installed by DERM on NW 109th Street.



2004 Topographic Survey of the Monolith

Appendix F:

Interview Forms

Interview Form for Pepper Steel & Alloys Five-Year Review

Site Name: Pepper Steel & Alloys **EPA ID No.:** FLD032544587
Interviewer Name: Cara Forster **Affiliation:** E^2 Inc.
Subject's Name: Norton Bloom
Affiliation: previous site owner
Subject's Contact Information: 305-573-2941
Time: 1:10pm **Date:** 1/24/07
Type of Interview (Circle one): In Person Phone Mail Other_____
Location of Interview: Pepper Steel Superfund Site

1. **How well do you believe the remedy currently in place is performing?**

Extremely well for areas that are currently occupied. The unoccupied areas have just been cleared.

2. **Are you aware of any complaints or inquiries regarding environmental issues or the remedial action since implementation of No cleanup?**

No, everything seems to be proceeding as planned.

3. **Have you complied with intended Institutional Controls (ICs), such as not disturbing the monolith or installing groundwater wells?**

Yes, every property I have participated in has covenants recorded to the deed.

4. **What is the frequency of Operation & Maintenance (O&M) activities and inspections at the Site? To your knowledge has the maintenance been implemented as intended?**

The maintenance is ongoing and yes.

5. **What effect has this Site had on the surrounding community, if any?**

Now that it is being rebuilt, it's contributing to the tax base. For 18 years it did not, since 1983. It will enhance the entire area because it was left fallow and things have happened when no one was here, like the dumping of trash and tires.

6. **What effect will/has the reuse of the Site had on the community? Are you aware of any changes in projected land use?**

It can only contribute to the tax base and improve the property values of the areas surrounding it. It will enhance the whole area. When it was fallow, all sorts of dumping occurred. No.

7. **Should EPA do more to keep involved parties and surrounding neighbors informed of activities at the Site? By what methods?**

It's over now, the Site has settled in because now it's being developed. Now it's in the hands of the locals. It's better for the Site to be under local control.

8. **Do you have any comments, suggestions, or recommendations regarding the Site's management or operations?**

No, Jan did a super job. It dragged on a bit in getting into reuse because bureaucracy moves slowly. Preparing the Site for sale was agonizing.

Interview Form for Pepper Steel & Alloys Five-Year Review

Site Name: Pepper Steel & Alloys **EPA ID No.:** FLD032544587
Interviewer Name: Cara Forster **Affiliation:** E^2 Inc.
Subject's Name: Walter Lista
Affiliation: site owner (Lot 45)
Subject's Contact Information: 305-665-7765
Time: 1:15pm **Date:** 1/24/07
Type of Interview (Circle one): In Person Phone Mail Other_____
Location of Interview: Pepper Steel Superfund Site

1. **How well do you believe the remedy currently in place is performing?**

   Good.

2. **Are you aware of any complaints or inquiries regarding environmental issues or the remedial action since implementation of the cleanup?**

   Not currently.

3. **Have you complied with intended Institutional Controls (ICs), such as not disturbing the monolith or installing groundwater wells?**

   Yes. I recorded one covenant, but changes are underway. The new one that will be recorded has yet to be finalized.

4. **What is the frequency of Operation & Maintenance (O&M) activities and inspections at the site? To your knowledge has the maintenance been implemented as intended?**

   I am here four days a week. I am the owner and operator of a pre-cast cement facility. I'm constantly informing my employees about the Site. I just got my permits in November, so maintenance is evolving and the drainage controls are not in place yet.

5. **What effect has this Site had on the surrounding community, if any?**

   Feedback from the neighbors says it's been a dumping ground for 20 years. Reuse is the way to go. Reuse is positive and helping to improve the property.

6. **What effect will/has the reuse of the Site had on the community? Are you aware of any changes in projected land use?**

   Reuse will change it to a positive outlook on the property. No.

7. **Should EPA do more to keep involved parties and surrounding neighbors informed of activities at the Site? By what methods?**

Jan has done a great job. He's been instrumental in instilling in me what needs to be done. He's been a great contact.

8. Do you have any comments, suggestions, or recommendations regarding the Site's management or operations?

Things have gone pretty well. Having a contact person to walk you through it all is very important. If it hadn't been for Jan walking me through what to do, it would not have been as successful. I got denied by the bank twice before I got approved - the comfort letter helped. The one question I have is: Why was the monolith built up so high? It makes it hard to put in a tall building because the monolith is 16 feet over the grade of the surrounding area and that has been a challenge for reuse because the Town of Medley has building height limitations and I had to get a variance.

Interview Form for Pepper Steel & Alloys Five-Year Review

Site Name: Pepper Steel & Alloys **EPA ID No.:** FLD032544587
Interviewer Name: Cara Forster **Affiliation:** E^2 Inc.
Subject's Name: Tony Guajardo
Affiliation: Representative to Thomas Curtis, the site owner, and Jorge Zacarias, who has the Curtis parcel under a lease/purchase agreement with Mr. Curits
Subject's Contact Information: 954-709-6647
Time: 1:30pm **Date:** 1/24/07
Type of Interview (Circle one): In Person Phone Mail Other_____
Location of Interview: Pepper Steel Superfund Site

1. **How well do you believe the remedy currently in place is performing?**

Based on EPA's reports, the remedy is functioning better than expected. The only issue is maintenance and drainage. We took it upon ourselves to remedy that. We cleaned out the drains in the parking lot in August or September of 2006.

2. **Are you aware of any complaints or inquiries regarding environmental issues or the remedial action since implementation of No cleanup?**

Not that I am aware of. The only issue is that the Town of Medley lacks a deep understanding of the remedy and the effectiveness of containment for industrial usage.

3. **Have you complied with intended Institutional Controls (ICs), such as not disturbing the monolith or installing groundwater wells?**

Absolutely. No ICs have been recorded that I'm aware of.

4. **What is the frequency of Operation & Maintenance (O&M) activities and inspections at the Site? To your knowledge has the maintenance been implemented as intended?**

I have seen EPA monitoring the Site every few years. No, maintenance has not been implemented as intended. We have issues with runoff because the drainage collar was not maintained as intended.

5. **What effect has this Site had on the surrounding community, if any?**

Arley Nieto of the Town of Medley says runoff from the Site into the drainage system is silting up the Town's roads and it's a concern to them because it's clogging their system. That's why we did maintenance, to fix the flooding in the parking lot. The flooding was 4-5 feet deep and prevented the parking lot's use. Midnight dumping was a big problem due to overgrowth of vegetation and low visibility, so we cleared off all the vegetation. Dumping, runoff, and drainage are all problems.

6. **What effect will/has the reuse of the Site had on the community? Are you aware of any changes in projected land use?**

Reuse will have a positive effect. Reuse will increase tax revenue for the Town of Medley. It will create jobs, put land to use, and make it safe. If development is done properly it shouldn't be an issue. It should be done in conjunction with regulators who have knowledge of these things so it can be the best it can be.

7. **Should EPA do more to keep involved parties and surrounding neighbors informed of activities at the Site? By what methods?**

It's EPA's decision. If people are willing to comply with the remedies, then it's fine, but if they inform others that's not a bad idea, because environmental issues affect everyone.

8. **Do you have any comments, suggestions, or recommendations regarding the Site's management or operations?**

   If not all the entities make the meetings at the same time it's hard to get the knowledge to make the right decisions. Owners need regulators to agree on a common procedure. They need to have a common denominator to use as a guide for whether to take action or not. The differences between entities make it hard to promote reuse and make it more costly. All the different entities have different perspectives. It takes too much time to develop and costs too much money that way.

Interview Form for Pepper Steel & Alloys Five-Year Review

Site Name: Pepper Steel & Alloys **EPA ID No.:** FLD032544587
Interviewer Name: Cara Forster **Affiliation:** E^2 Inc.
Subject's Name: Roger Messer
Affiliation: Florida Power & Light – Director of Environmental Support
Subject's Contact Information: Roger_Messer@FPL.com
Time: 12pm **Date:** 1/24/07
Type of Interview (Circle one): In Person Phone Mail Other_____
Location of Interview: Pepper Steel Superfund Site

1. **How well do you believe the remedy currently in place is performing?**

The remedy is performing very well, as designed. I have no reason to suspect that it would not continue working.

2. **What are your views on reuse of this Site?**

I strongly support reuse of this Site. It is preferable to have an on-site presence. FPL supports beneficial reuse.

3. **Should EPA do more to keep involved parties and surrounding neighbors informed of activities at the Site? By what methods?**

I do not know the extent to which EPA does this, so I can't comment. Based on the involvement of DERM and the state, I think EPA is doing well.

4. **Do you have any comments, suggestions, or recommendations regarding the Site's management or operations?**

Certain types of reuse opportunities would be preferable to not have on-site. Especially anything involving acids or chemicals that could weaken the remedy. The Site should be properly managed to ensure that no additional lead, arsenic, or PCBs are added to the Site from new sources of contamination. On-site opportunities need to be managed with sensitivity to existing site contamination. We want to make sure that we do not liberate lead from the monolith due to on-site activities. We need to be very mindful of on-site activities that could impact levels of site related COCs. A daily on-site presence is preferable.

Interview Form for Pepper Steel & Alloys Five-Year Review

Site Name: Pepper Steel & Alloys **EPA ID No.:** FLD032544587
Interviewer Name: Cara Forster **Affiliation:** E^2 Inc.
Subject's Name: Diana Davis – Principal Environmental Specialist
Affiliation: Florida Power & Light
Subject's Contact Information: Diana_Davis@fpl.com
Time: 12pm **Date:** 1/24/07
Type of Interview (Circle one): In Person Phone Mail Other_____
Location of Interview: Pepper Steel Superfund Site

1. **How well do you believe the remedy currently in place is performing?**

The monolith is functioning as designed, according to coring samples and ground water monitoring. The concrete binding is effective.

2. **What are your views on reuse of this Site?**

I strongly support reuse of this Site.

3. **Should EPA do more to keep involved parties and surrounding neighbors informed of activities at the Site? By what methods?**

EPA is doing a good job of keeping people informed.

4. **Do you have any comments, suggestions, or recommendations regarding the Site's management or operations?**

I am concerned about stormwater management and replacement of engineered fill (DOT rock), which is stable but porous. Before it is brought on-site it should be analyzed for arsenic, because natural lime rock can have arsenic above regulatory levels. I recommend restricting the use of arsenic based herbicides for weed control on-site as well. We do not want to bring anything on site that could give the impression of contamination from new sources. We do not want acidified water draining onto the monolith either from natural or manmade sources. For example, some agricultural processes involve solids that become acidic when mixed with water. There should also be restrictions on building and construction to protect the monolith.

Interview Form for Pepper Steel & Alloys Five-Year Review

Site Name: Pepper Steel & Alloys **EPA ID No.:** FLD032544587
Interviewer Name: Cara Forster **Affiliation:** E^2 Inc.
Subject's Name: Tom Kux
Affiliation: DERM
Subject's Contact Information: KuxT@miamidade.gov or 305-372-6700
Time: 2pm **Date:** 2/2/07
Type of Interview (Circle one): In Person **Phone** Mail Other_____
Location of Interview: N/A

1. **How well do you believe the remedy currently in place is performing?**

   I imagine the remedy is performing as it was designed. It is performing adequately.

2. **Are you aware of any complaints or inquiries regarding environmental issues or the remedial action since implementation of the cleanup?**

   No.

3. **Has your office conducted any site-related activities or communications in the last five years? If so, what was the purpose and result of these activities?**

   Yes. This office is responsible for some contracting requirements with EPA. I would refer your questions to Paul Voight for exact details on the contractual agreement. EPA and DERM had a contract to take care of some O&M activities. Paul Voight's phone number is 305-372-6562. He would have more information.

4. **Are you comfortable with the Institutional Controls (ICs) required for the Site and their current status of implementation?**

   There are no ICs on the Site yet. This question is not applicable because we don't know of any ICs in place at this time.

5. **Should EPA do more to keep involved parties and surrounding neighbors informed of activities at the Site? By what methods?**

   I'm not sure what they are doing and therefore cannot answer that question. No recommendations for additional activities.

6. **Do you have any comments, suggestions, or recommendations regarding the Site's management or operations?**

   ICs need to be put in place as soon as feasibly possible.

Interview Form for Pepper Steel & Alloys Five-Year Review

Site Name: Pepper Steel & Alloys **EPA ID No.:** FLD032544587
Interviewer Name: Cara Forster **Affiliation:** E^2 Inc.
Subject's Name: Kelsey Helton
Affiliation: FDEP, representative for the State of Florida and professional geologist
Subject's Contact Information: Kelsey.Helton@dep.state.fl.us
Time: 12:15pm **Date:** 1/24/07
Type of Interview (Circle one): In Person Phone Mail Other_____
Location of Interview: Pepper's Steel Superfund Site

1. **How well do you believe the remedy currently in place is performing?**

   Ground water monitoring seems to support that the monolith is effective at mitigating the leaching of contaminants to ground water. There have only been spotty hits above cleanup levels, and they have met criteria on re-sampling.

2. **Are you aware of any complaints or inquiries regarding environmental issues or the remedial action since implementation of the cleanup?**

   No.

3. **Has your office conducted any site-related activities or communications in the last five years? If so, what was the purpose and result of these activities?**

   We met with EPA on reuse. We had a couple of site visits in 2003 or 2004. The southeast district office issued a site rehabilitation completion (SRCO) report, which is like a de-listing order, so there is a SRCO with conditions for a portion of the former Miami Battery property.

4. **Are you comfortable with the Institutional Controls (ICs) required for the Site and their current status of implementation?**

   No, because they have not been implemented yet. FDEP recommended a generic restrictive covenant that would apply to the parcels affected by the monolith. We're getting close to an agreement on language for the restrictive covenants so they can be filed within the next six months.

5. **Should EPA do more to keep involved parties and surrounding neighbors informed of activities at the Site? By what methods?**

   All regulators, owners, and local developers need to get in one room and hash out the details of redevelopment, permitting, drainage, and ICs. I think it will happen once we get proposals for development and ICs language in place.

6. **Do you have any comments, suggestions, or recommendations regarding the Site's management or operations?**

The biggest issue is drainage, to keep stormwater from affecting off-site properties. We also need a review of proposed development plans by all the regulators prior to implementation. These conversations and meetings today will make that more possible for the future. It's become clearer the direction we'll go. It's clearer now for the developers too – now that they understand this need. The three main issues EPA, FDEP, and DERM will focus on are: O&M requirements as they relate to redevelopment, any changes that need to be made to the current ground water monitoring program, and the implementation/finalization of ICs.

Interview Form for Pepper Steel & Alloys Five-Year Review

Site Name: Pepper Steel & Alloys **EPA ID No.:** FLD032544587
Interviewer Name: Cara Forster **Affiliation:** E^2 Inc.
Subject's Name: Salvatore Ammese
Affiliation: Town of Medley, Chief Building Official
Subject's Contact Information: sammese@townofmedley.com
Time: 11am **Date:** 1/24/07
Type of Interview (Circle one): In Person Phone Mail Other_____
Location of Interview: Pepper Steel Superfund Site

1. **Are you aware of the former environmental issues at the Pepper Steel & Alloys Site and what cleanup activities have occurred?**

Yes.

2. **What are your views about current site conditions, problems, or related concerns?**

The proposed uses of the Site are not going to be an impact as long as the cover is preserved.

3. **Have you received any complaints or inquiries regarding environmental issues at the Site?**

No complaints.

4. **Are you comfortable with the Institutional Controls (ICs) required for the Site and their current status of implementation?**

Yes.

5. **What effect has this Site had on the surrounding community, if any?**

The Site wasn't able to be developed for a long time and I assume that impacted the community's taxes.

6. **What effect will/has the reuse of the Site had on the community? Are you aware of any changes in projected land use?**

The effect will be good. I'm not aware of any changes in projected land use.

7. **Should EPA do more to keep involved parties and surrounding neighbors informed of activities at the Site? By what methods?**

Once it's developed, EPA can do whatever is standard follow-up for the Site and that would be fine. Maybe just the monitoring wells.

8. Do you have any comments, suggestions, or recommendations regarding the Site's management or operations?

My concern is the drainage of the Site, because the drainage situation is very bad. The new owners of the property will have to get their drainage plans approved by DERM.

Appendix G:

Deed Documents Serving as ICs

1) 1991 Judgment covering Payne and Curtis parcels,
2) 2004 Deed Notice attaching 1997 Consent Decree to Bloom parcel, and
3) 2004 Restrictive Covenant on Curtis parcel.

ADOC

IN THE CIRCUIT COURT OF THE ELEVENTH JUDICAL CIRCUIT IN AND FOR DADE COUNTY, FLORIDA

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION,

Plaintiff,

vs.

PEPPERS STEEL, ALLOYS, INC., FLORIDA POWER AND LIGHT, NORTON BLOOM, THOMAS CURTIS LEON CASWELL, WILLIAM PAYNE et al.,

Defendants.

General Jurisdiction Division
Case No: 83-24667 CA (08)
Division No.: CA 08

STIPULATION FOR ENTRY OF JUDGMENT

State of Florida Department of Environmental Regulation, and Defendants, Peppers Steel and Alloys, Inc., Norton Bloom, Thomas Curtis, William Payne, Flora Payne, and Lowell Payne hereby stipulate to entry of judgement in accordance with the terms set forth in the proposed stipulated judgment a copy of which is attached hereto as Exhibit A.

Dated this February 28, 1991 ~~day of December, 1990~~.

JACK CHISOLM
Assistant General Counsel
2600 Blair Stone Road
Tallahassee, FL 32399-2400
(904) 488-9730
Attorney for Plaintiff
State of Florida Department
of Environmental Regulation

HUGH ZUMKIN, ESQUIRE
Keith, Mack, Lewis, Allison
& Cohen
111 N.E. First Street, Suite 500
Miami, FL 33132-2596
Attorney for Defendants
Peppers Steel and Alloys, Inc.
& Norton Bloom

OFF. REC. 15349 PG 1973

JOHN W. WILCOX, ESQUIRE
Rudnick & Wolfe
101 East Kennedy Boulevard
Suite 2000
Tampa, Florida 33602-5133
Counsel for Defendants
Thomas Curtis, William Payne
Flora Payne and Lowell Payne

STATE OF FLORIDA)
COUNTY OF DADE)

I HEREBY CERTIFY that the foregoin is a true and correct copy of the original on file in this office. WITNESS my hand and official Seal this ___ day of JAN 07 1992

CLERK, Circuit and County Courts
By _____ Deputy Clerk

14932 PG 1803

OFF. REC. 15349PG1974

39 517

IN THE CIRCUIT COURT OF THE
11TH JUDICIAL CIRCUIT IN AND
FOR DADE COUNTY, FLORIDA

GENERAL JURISDICTION DIVISION

CASE NO: 83-24667 CA (08)

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION,

Plaintiff,

vs.

PEPPER'S STEEL AND ALLOYS, INC., FLORIDA POWER AND LIGHT COMPANY, NORTON BLOOM, THOMAS CURTIS, LEON CASWELL, WILLIAM PAYNE, FLORA PAYNE and LOWELL PAYNE,

Defendants.

STIPULATED JUDGMENT

This matter came before the Court upon stipulation of the parties for the purpose of resolving the disputes among the parties described in the pleadings filed in this case. This Court finds the Stipulation for the Entry of Judgment executed by the parties to be fair and reasonable, and, based thereon, it is accordingly, ORDERED AND ADJUDGED as follows:

Payment Obligation

1. Defendants PEPPER'S STEEL AND ALLOYS, INC., NORTON BLOOM, THOMAS CURTIS, WILLIAM PAYNE, FLORA PAYNE and LOWELL PAYNE, jointly and severally, shall pay to the plaintiff, STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (DER), the sum of $50,000.00 as full and final settlement of all monetary claims asserted by DER's Complaint in this action within thirty (30) days of the date of this Judgment.

Restrictions on the Use of the Remediated Property

2. The parties acknowledge that the defendants, with the exception of PEPPER'S, own the following properties which have been collectively called the Pepper's Steel site:

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EXHIBIT "A"

OFF. REC. 15349PG1975

39-5

FILED FOR RECORD

91 MAR -1 PM 3:11

CLERK, CIRCUIT & COUNTY CTS.
DADE COUNTY, FLA.

IN THE CIRCUIT COURT OF THE
11TH JUDICIAL CIRCUIT IN AND
FOR DADE COUNTY, FLORIDA

GENERAL JURISDICTION DIVISION

CASE NO: 83-24667 CA (08)

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION,

Plaintiff,

vs.

PEPPER'S STEEL AND ALLOYS, INC., FLORIDA POWER AND LIGHT COMPANY, NORTON BLOOM, THOMAS CURTIS, LEON CASWELL, WILLIAM PAYNE, FLORA PAYNE and LOWELL PAYNE,

Defendants.

STIPULATED JUDGMENT

1.2.4.5.7.9

RECORDED
MAR 05 1991
Clerk of Circuit & County Courts

This matter came before the Court upon stipulation of the parties for the purpose of resolving the disputes among the parties described in the pleadings filed in this case. This Court finds the Stipulation for the Entry of Judgment executed by the parties to be fair and reasonable, and, based thereon, it is accordingly, ORDERED AND ADJUDGED as follows:

Payment Obligation

1. Defendants PEPPER'S STEEL AND ALLOYS, INC., NORTON BLOOM, THOMAS CURTIS, WILLIAM PAYNE, FLORA PAYNE and LOWELL PAYNE, jointly and severally, shall pay to the plaintiff, STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (DER), the sum of $50,000.00 as full and final settlement of all monetary claims asserted by DER's Complaint in this action within thirty (30) days of the date of this Judgment.

Restrictions on the Use of the Remediated Property

2. The parties acknowledge that the defendants, with the exception of PEPPER'S, own the following properties which have been collectively called the Pepper's Steel site:

A. NORTON BLOOM: NORTON BLOOM owns certain property with a legal description of:

> The West 1/2 of Tract 44 lying northeasterly of the railway, less the S 25 feet, of FLORIDA FRUIT LAND COMPANY'S SUBDIVISION, according to the Plat thereof, as recorded in Plat Book 2, Page 17, of the Public Records of Dade County, Florida, consisting of 4.62 acres, more or less. (Folio No: 22-2033-001-053.)

B. THOMAS CURTIS: THOMAS CURTIS owns certain property with a legal description of:

> Tract 46 of FLORIDA FRUIT LAND COMPANY'S SUBDIVISION, according to the Plat thereof, as recorded in Plat Book 2, Page 17, of the Public Records of Dade County, Florida, less the northeast corner for right-of-way, consisting of 9.22 acres, more or less. (Folio No: 22-2033-001-0560.)

C. THE PAYNES: The PAYNES jointly and severally own certain property with a legal description of:

> Tract 45 of FLORIDA FRUIT LAND COMPANY'S SUBDIVISION, according to the Plat thereof, as recorded in Plat Book 2, Page 17, of the Public Records of Dade County, Florida, consisting of 9.98 acres, more or less. (Folio No: 22-2033-001-054.)

3. Within the properties that comprise the Pepper's Steel site is an area which has been the subject of remedial activity by the UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA), and the FLORIDA POWER AND LIGHT COMPANY (FPL) pursuant to a Consent Decree entered into between FPL and the EPA, approved by the United States District Court, Southern District of Florida on March 27, 1987. That remedial activity has been concluded. This portion of the Pepper's Steel site contains a monolithic pour surrounded by a drainage collar, and covered by a limestone cover. This shall be called the remediated area for purposes of this

agreement. The outer perimeter of the remediated area is twenty-five (25) feet extending outward beyond the outside boundary of the drainage collar surrounding the monolith.

4. The remediated area is accurately and fully described in a survey prepared by Howard C. Gamble, Registered Land Surveyor No. 1683, State of Florida, Vice-President of A.R. Toussaint & Associates, Inc., which is appended as an exhibit to the Final Report prepared by FPL in June, 1989.

5. Within and outside of the remediated area are certain groundwater monitoring wells which are being utilized by FPL under agreement with EPA to confirm the efficacy of the remedy. This groundwater monitoring will conclude within two years.

6. Defendants agree, with the exception noted below, that they will undertake no construction or development activity within the remediated area, or in the vicinity of the monitoring wells which disturbs the performance or integrity of the limestone cover, the monolith, the drainage collar surrounding the monolith, or any groundwater monitoring wells, except as permitted pursuant to this Stipulated Judgment.[1]

Relief From Restrictions

7. In the event any defendant proposes to undertake any construction or development activity which may disturb the remediated area, or any portion of the groundwater monitoring system within or outside the remediated area, that

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[1] Any restriction on construction or development activity with respect to the groundwater monitoring wells shall terminate on the expiration of groundwater monitoring required of FPL pursuant to the Consent Decree, or as may be agreed to by all parties to this agreement, or as may be extended by Court Order.

defendant shall provide thirty (30) days prior written notice of any such activity to the Secretary, State of Florida Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and to the Waste Program Manager, State of Florida Department of Environmental Regulation, 1600 S. Congress Avenue, West Palm Beach, Florida 33406, or such other place or places DER may hereafter designate in writing. In the event DER does not object in writing to the proposed development or construction activity within thirty (30) days after the mailing of such notification, the construction or development activity will be deemed acceptable by DER. In the event DER does object in writing, within the time set forth above, and the defendant or defendants proposing construction or development activity do not agree with the written objections of DER, and/or the parties are unable to amicably resolve their differences, then in such event, the parties hereto agree to submit their dispute to arbitration or mediation in Dade County, Florida, with the defendant proposing development to bear the cost of initiating such proceeding, each party thereafter bearing their own fees and costs.[2]

Exception to Restrictions

8. The parties hereto agree that no work performed by the defendants at the direction of the EPA, including operation and maintenance, shall be considered construction or development activity which may disturb the remediated area, or any portion of the groundwater monitoring system within or outside the remediated area. Before commencing any work requested to be performed by the EPA, other than

---

[2] This provision shall not dispense with the need to comply with any applicable statutes, rules, regulations or ordinances pertaining to the proposed development, nor shall it dispense with the need to secure any necessary permits or zoning approvals.

operation and maintenance activities, the defendant requested to do such work shall give reasonable prior notice to DER of the request by the EPA.

Access by DER

9. The defendants, other than PEPPER'S shall allow authorized representatives of DER to enter upon the Pepper's Steel site for the purpose of inspecting the remediated area and/or the groundwater monitoring system on ten (10) days prior written notice to the defendants. Prior to the expiration of the groundwater monitoring program required of FPL pursuant to the Consent Decree, representatives of DER may further enter upon the Pepper's Steel site for the purpose of collecting samples of groundwater from the site, subject to the same notice as set forth above. In addition, within the term of this Stipulated Judgment, representatives of DER may enter upon the Pepper's Steel site so as to take soil samples from the remediated area subject to the same prior notice set forth above. In the event DER takes samples of soil or groundwater pursuant to this Stipulated Judgment, DER agrees to split the samples with the defendants without cost to the defendants. In no event shall the defendants be responsible for the DER's cost incurred in conducting any inspections or in taking any samples.

Restrictions on Conveyance

10. Defendants, other than PEPPER'S, shall not hereafter voluntarily convey or transfer any title, ownership interest, leasehold, easement or other interest in the remediated area, or any portion thereof, or any appurtenance thereto, unless the document effecting such conveyance or transfer includes a covenant running with the land and binding on the grantees and their successors or assigns which:

A. Contains the restrictions, covenants and agreements described in paragraphs 6, 7, 8 and 9 of this Stipulated Judgment; and,

B. Obligates each successive grantee, successor or assign to include the foregoing restrictions in each document executed by such grantee, successor or assign which affects the transfer of any interest in the property hereafter.

Non-Waiver by DER

11. Nothing herein contained shall be construed to limit the authority of DER to respond to conditions at or from the remediated area which may represent an imminent and substantial hazard to the public health, welfare or the environment. If such condition was unknown to DER prior to the date of this Stipulated Judgment, and could not have been discovered by DER by the exercise of reasonable diligence, DER shall be entitled to seek recovery of the costs of such response.

Termination of This Stipulated Judgment

12. All affirmative covenants and obligations pertaining to this Stipulated Judgment including those restrictions and agreements set forth in paragraphs 6 through 10 of this Stipulated Judgment shall terminate and be null and void twenty (20) years after the effective date of this Stipulated Judgment.

Recordation of Stipulated Judgment

13. This Stipulated Judgment may be recorded in the Public Records of Dade County, Florida should DER so desire.

Notice

14. All notices required pursuant to the terms of this Stipulated Judgment shall be by certified mail, return receipt requested as follows:

OFF. REC. 15349PG1981

CASE NO: 83-24667 CA (08)

A. To DER: As provided in paragraph 7 above;

B. To PEPPER'S and BLOOM: c/o R. Hugh Lumpkin, Esq., Keith, Mack, Lewis, Allison & Cohen, 111 N.E. 1st Street, Suite 500, Miami, Florida 33132-2596;

C. To the PAYNES and CURTIS: c/o John W. Wilcox, Esq., Rudnick & Wolfe, Suite 2000, 101 E. Kennedy Boulevard, Tampa, Florida 33602-5133;

or such other person(s) as the foregoing may designate from time to time in writing.

Satisfaction of Claims

15. Except as set forth herein, all claims of the parties which have been, or could have been asserted in this action are hereby dismissed with prejudice, with each party bearing their own costs and fees.

16. This Judgment may be modified only by a written agreement signed by all parties hereto or their legal successors or assigns.

17. This Stipulated Judgment reflects a negotiated settlement of the parties' rights and obligations in this litigation. By entry of this Judgment, none of the defendants are admitting liability to DER, nor do they admit any of the allegations set forth in DER's Complaint, or any of the other documents, papers or pleadings filed in this action.

DONE AND ORDERED in Chambers at Miami, Dade County, Florida this 1 day of MARCH, 1991.

Henry H. Lewis
CIRCUIT COURT JUDGE

Copies Furnished
R. HUGH LUMPKIN, ESQ.
JOHN WILCOX, ESQ.
JACK CHISOLM, ESQ.

STATE OF FLORIDA)
COUNTY OF DADE)
I HEREBY CERTIFY that the foregoing is a true and correct copy of the original on file in this office. WITNESS my hand and official Seal this ___ day of JAN 17 1992

C. E. K. Circuit and County Courts
By _____ Deputy Clerk

RECORDED IN OFFICIAL RECORDS BOOK OF DADE COUNTY, FLORIDA. RECORD VERIFIED
Clerk of Circuit & County Courts

OFF. REC. BK.
14923PG0043

This instrument prepared by:
Douglas M. Halsey
White & Case LLP
Wachovia Financial Center, Suite 4900
200 South Biscayne Boulevard
Miami, Florida 33131-2352
(305) 371-2700

CFN 20040080754
OR Bk 22005 Pgs 2659 - 2667; (9pgs)
RECORDED 01/27/2004 15:35:25
HARVEY RUVIN, CLERK OF COURT
MIAMI-DADE COUNTY, FLORIDA

DECLARATION OF RESTRICTIVE COVENANT

This DECLARATION OF RESTRICTIVE COVENANT (hereinafter "Declaration") is made this 6 day of January, 2004 by Thomas A. Curtis and the Florida Department of Environmental Protection (hereinafter "DEP").

RECITALS

A. Thomas A. Curtis is the fee simple owner of that certain real property situated in the County of Miami-Dade, State of Florida, more particularly described in Exhibit "A" attached hereto and made a part of hereof (hereinafter the "Property").

B. The DEP Facility Identification Number for the Property is FLD 004119426. The facility name at the time of this Declaration is Millennium Battery Company (hereinafter the "Facility").

C. Lead contamination in soils behind the Facility has been documented in the following reports which are incorporated by reference, including: (1) the Pepper's Steel & Alloys Feasibility Study Draft Report dated September 20, 1985, Document Control No. 189-FS1-RT-BJRQ-2, prepared by Camp, Dresser & McKee, Inc. for the U.S. Environmental Protection Agency (hereinafter "EPA") in accordance with Contract No. 68-01-6939; (2) Preliminary Contamination Assessment Report ("PCAR") in 1996, the PCAR Addenda submitted on February 8 and May 8, 2001 by Joe Alvarez and Associates, Inc.; (3) Soil Remediation Plan submitted on August 13, 2001 and addenda submitted on May 16, 2001 by Joe Alvarez & Associates, Inc.; (4) Soil Remediation Report submitted on February 26, 2002 by Joe Alvarez and Associate, Inc. and Soil Sampling Collection and Analysis Report by T. Cozzie Consulting, Inc. submitted on April 7, 2003.

D. Thomas A. Curtis entered into a Consent Decree with EPA on October 16, 1997 in case number 85-0571-CV-EDB-DAVIS, requiring Curtis to record a deed restriction ensuring the integrity of the approximately 16 acre monolith covering at the Property and disallowing rezoning of the Property or the use of groundwater at the Property. The reports listed in Recital C confirm that lead contaminated soil (> 400 mg/kg total lead) exists in the unexcavated portions of the Property behind the Facility. Portions of the Property behind the Facility have been excavated and the portion of the Property with lead contaminated soil not covered by monolith (hereinafter the "Restricted Portion", see Exhibits B1-B4) has been capped with two feet of clean fill. (Restricted Portion is also known as Area 2/3 and Area 4 in the OGC Case #97-0324).

E. DEP has agreed to issue a Site Rehabilitation Completion Order with Conditions (hereinafter "Order") upon recordation of this Declaration, and the DEP can unilaterally revoke the Order if the conditions of this Declaration or of the Order are not met. Additionally, in the event concentrations of lead increase above the levels approved in the Order or if a subsequent discharge occurs at the site, the DEP may require site rehabilitation to reduce concentrations of contamination below the appropriate standards. The Order relating to Thomas A. Curtis, DEP Facility Identification No. FLD 004119426 is on file with the Waste Management Section, Southeast District Office, 400 North Congress Avenue, Suite 200, West Palm Beach, Florida 33401.

EXHIBIT 1

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of United States v. Pepper's Steel & Alloys, Inc., Civil No. 85-0571-CV-EDB-DAVIS, relating to the Pepper's Steel Superfund Site.

FOR DEFENDANTS WILLIAM, LOWELL AND FLORA PAYNE

William A. Payne
WILLIAM PAYNE

For - Flora Payne By W.A.P
FLORA PAYNE

for Lowell Payne By W.A.P
LOWELL PAYNE

DEREK B. SPILLMAN, ESQ.
Akerman Senterfitt & Eidson
100 South Ashley Drive
Suite 1500
Tampa, Florida 33602

F. Thomas A. Curtis deems it desirable and in the best interest of all present and future owners of the Property that an Order be obtained and that the Restricted Portion described in Exhibits B1-B4, attached hereto and made a part hereof, be held subject to certain restrictions and limitations, all of which are more particularly hereinafter set forth.

NOW THEREFORE, to induce the DEP to issue the Order and for other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged by each of the undersigned parties, Thomas A. Curtis agrees as follows:

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

2. Thomas A. Curtis hereby imposes on the Restricted Portion of the Property the following restrictions:

a. Excavation and construction below two feet surface elevations is not prohibited within the Restricted Portion described in Exhibits B1-B4 provided any contaminated soils that are excavated are removed and properly disposed of in accordance with applicable DEP rules. Reasonable construction methods and techniques shall be employed to minimize risk of exposure. Nothing in this Declaration shall prevent, limit, or restrict any excavation or construction at or below the surface outside the boundary of the Restricted Portion described in Exhibits B1-B4.

b. The area of soil contamination of the Property identified as the Restricted Portion of the Property on Exhibit B1-B4 shall remain permanently covered with two feet of clean fill or with other suitable cover material that prevents human exposure and water infiltration, such as concrete pavement.

3. For the purpose of monitoring the restrictions contained herein, DEP or its successors and assigns may have site access to the Property at reasonable times and with reasonable notice to the Thomas A. Curtis.

4. It is the intention of the Thomas A. Curtis that the restriction contained in this Declaration shall touch and concern the Property, run with the land and with the title to the Property, and shall apply to and be binding upon and inure to the benefit of the successors and assigns of Thomas A. Curtis, and to DEP, its successors and assigns, and to any and all parties hereinafter having any right, title or interest in the Property or any part thereof. This Declaration shall continue in perpetuity, unless otherwise modified in writing by the Thomas A. Curtis and the DEP as provided in paragraph 6 hereof. These restrictions may be enforced in a court of competent jurisdiction by the DEP or its successor agency, or by other person, firm, corporation, or governmental agency that is substantially benefited by this restriction.

5. In order to ensure the perpetual nature of these restrictions, the Thomas A. Curtis, its successors, and assigns, shall reference these restrictions in any subsequent deed of conveyance, including the recording book and page of record of this Declaration.

6. This Declaration is binding until a release of covenant is executed by the DEP Secretary (or designee) and is recorded in the county land records. To receive prior approval from DEP to remove any requirement herein, active cleanup of the Property must resume or cleanup target levels established pursuant to Florida Statutes and DEP rules must have been achieved. This Declaration may be modified in writing only. Any subsequent amendment must be executed by both Thomas A. Curtis and the DEP or their respective successors and assigns and be recorded by the Owner as an amendment thereto.

7. If any provision of this Declaration is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provisions thereof. All such other provisions shall continue unimpaired and in full force and effect.

In WITNESS WHEREOF, Thomas A. Curtis has executed this instrument this 6th day of JANUARY, 2004.

Signed, sealed and delivered in the presence of:

OWNER

Thomas A. Curtis

Witness

TERESITA MORALES

Print Name

Witness

Print Name

State of Florida
County of Miami-Dade

The foregoing instrument was acknowledged before me this 6th day of JANUARY 2004 by

(Signature of Notary Public
State of Florida)

FEBRUARY 12, 2005

My Commission Expires:

Pamela M. Roig
MY COMMISSION # DD000913 EXPIRES
February 12, 2005

(Print, Type or Stamp Commissioned Name of Notary Public)

DD000913

Commission No.

Personally Known [ ] OR Produced Identification [ ]
Type of Identification Produced: FLORIDA DRIVERS LICENSE

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

A. DEMPSEY

IN WITNESS WHEREOF, the Florida Department of Environmental Protection has executed this instrument, this 22 day of January, 2004.

Signed, sealed and derived in the presence of:

FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

By: _____

John F. Moulton, III Date
Assistant Director of District Management
Florida Department of Environmental Protection
Southeast District
400 North Congress Avenue, Suite 200
West Palm Beach, Florida 33401

PAW/mjb

_____ Date: 1/22/04
Witness
Gloria Aldama
Print Name

State of Florida
County of Palm Beach

The foregoing instrument was acknowledged before me this 22 day of Jan., 2004, by John Moulton as representative for the Florida Department of Environmental Protection.

Personally Known [X] OR Produced Identification [ ]
Type of Identification Produced: _____

_____ _____
(Signature of Notary Public My Commission Expires:
State of Florida)

Gloria M. Lindsey _____
(Print, Type or Stamp Commission No.
Commissioned Name of Notary Public)

Gloria M. Lindsey
MY COMMISSION # DD016181 EXPIRES
April 27, 2005
BONDED THRU TROY FAIN INSURANCE, INC.

Exhibit "A"

A portion of Tract 46 and the South 1/2 of Tract 47 of the Southwest 1/4 of Section 33, Township 52 South, Range 40 East, FLORIDA FRUIT LAND COMPANY'S SUBDIVISION, according to the plat thereof as recorded in Plat Book 2 at Page 17 of the Public Records of Miami-Dade County, Florida, lying and being In Miami-Dade County, Florida, being more particularly described as follows.

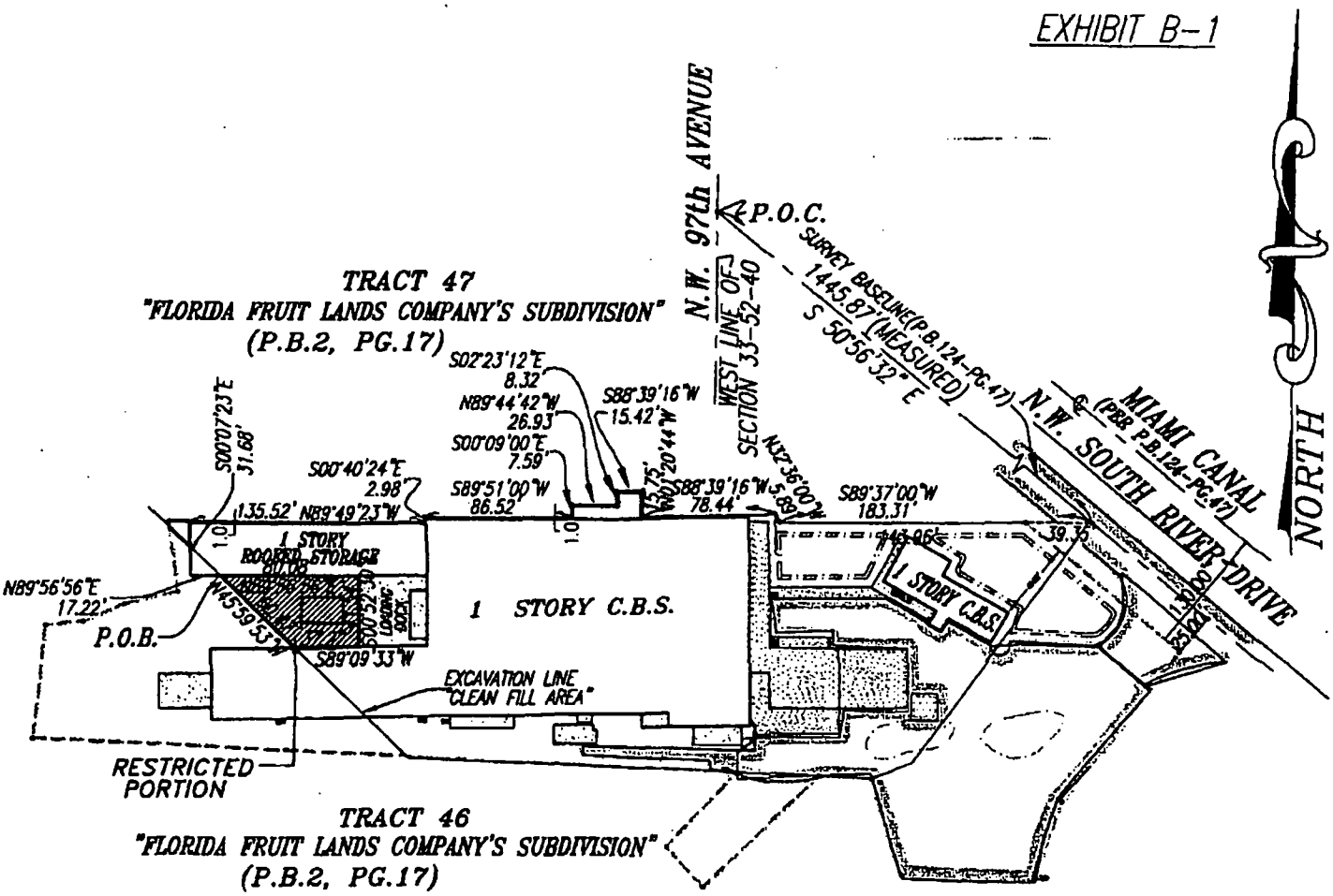
Commence at the intersection of the West line of said Section 33 and the Survey Baseline of Northwest South River Drive as shown on Plat Book 124 at Page 47 of the Public Records of Miami-Dade County, Florida; thence South 50 degrees 56 minutes 32 seconds East along said Baseline for 1445.87 feet; thence South 89 degrees 37 minutes 00 seconds West for 39.35 feet to a point lying 130.00 feet Southwesterly of the center line of the Miami Canal as shown on the said Plat Book 124 at Page 47 and the Point of Beginning; thence continue South 89 degrees 37 minutes 00 seconds West for 143.96 feet; thence North 32 degrees 36 minutes 00 seconds West for 5.89 feet; thence South 88 degrees 39 minutes 16 seconds West for 78.44 feet; thence North 01 degrees 20 minutes 44 seconds West for 15.75 feet; thence South 88 degrees 39 minutes 16 seconds West for 15.42 feet; thence South 02 degrees 23 minutes 12 seconds East for 8.32 feet; thence North 89 degrees 44 minutes 42 seconds West for 26.93 feet; thence South 00 degrees 09 minutes 00 seconds East for 7.59 feet; thence South 89 degrees 51 minutes 00 seconds West for 86.52 feet; thence South 00 degrees 40 minutes 24 seconds East for 2.98 feet; thence North 89 degrees 49 minutes 23 seconds West for 148.10 feet, said last eight courses running parallel with and approximately 1.0 foot off of the face of a one story CBS building; thence South 07 degrees 44 minutes 10 seconds East for 41.65 feet; thence South 77 degrees 19 minutes 45 seconds West for 31.64 feet; thence South 66 degrees 16 minutes 57 seconds West for 25.96 feet; thence South 84 degrees 48 minutes 46 seconds West for 22.62 feet; thence South 06 degrees 01 minute 37 seconds West for 66.08 feet; thence South 87 degrees 14 minutes 16 seconds East for 412.96 feet; thence South 43 degrees 05 minutes 47 seconds West for 59.98 feet; thence South 42 degrees 29 minutes 48 seconds East for 32.02 feet; thence North 45 degrees 59 minutes 34 seconds East for 94.45 feet; thence South 88 degrees 11 minutes 13 seconds East for 31.74 feet; thence South 17 degrees 01 minutes 35 seconds East for 59.23 feet; thence South 87 degrees 19 minute 23 seconds East for 77.45 feet; thence North 18 degrees 52 minutes 17 seconds East for 49.94 feet; thence North 38 degrees 00 minutes 29 seconds East for 112.34 feet; thence North 50 degrees 56 minutes 32 seconds West along a line 130.00 feet Southwesterly of the centerline of the Miami Canal for 118.27 feet to the Point of Beginning.

LESS:

South 1/2 of Tract 47, In Section 33, Township 52 South, Range 40 East, lying South and West of the center line of Miami Canal and per Plat of THE FLORIDA FRUIT LANDS COMPANY, filed In Plat Book 2, Page 17, of the Public Records of Miami-Dade County, Florida.

SKETCH TO ACCOMPANY LEGAL DESCRIPTION

EXHIBIT B-1



SCALE: 1"= 100'

LEGEND:

P.O.C.	DENOTES POINT OF COMMENCEMENT
P.O.B.	DENOTES POINT OF BEGINNING
P.B.	DENOTES PLAT BOOK
PG.	DENOTES PAGE
℄	DENOTES CENTERLINE

SHEET 1 OF 2 SHEETS

K:\335240\BATTERY.DWG

SCHWEBKE-SHISKIN & ASSOCIATES, INC.

LAND PLANNERS • ENGINEERS • LAND SURVEYORS (LB#87)

3240 CORPORATE WAY • MIRAMAR, FLORIDA 33025

TEL. NO.(954)435-7010 FAX NO.(954)438-3288

ORDER NO. 188355-B

DATE: 07-18-03

(LB#87) THIS IS NOT A "BOUNDARY SURVEY"

PREPARED UNDER MY SUPERVISION

Robert F. Janke PRESIDENT

LEGAL DESCRIPTION TO ACCOMPANY SKETCH

(RESTRICTED PORTION)

EXHIBIT B-2

A PORTION OF TRACT 46 AND PORTION OF THE SOUTH 1/2 OF TRACT 47, OF THE SOUTHWEST 1/4 OF SECTION 33, TOWNSHIP 52 SOUTH, RANGE 40 EAST, "FLORIDA FRUIT LANDS COMPANY'S SUBDIVISION", ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 2, AT PAGE 17, OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA, LYING AND BEING IN MIAMI-DADE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF THE WEST LINE OF SAID SECTION 33 WITH THE "SURVEY BASELINE OF N.W. SOUTH RIVER DRIVE", AS SHOWN ON PLAT BOOK 124, AT PAGE 47, OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA; THENCE RUN SOUTH 50 DEGREES 56 MINUTES 32 SECONDS EAST, ALONG SAID BASELINE, FOR 1445.87 FEET; THENCE SOUTH 89 DEGREES 37 MINUTES 00 SECONDS WEST, FOR 39.35 FEET, TO A POINT LYING 130.00 FEET SOUTHWESTERLY OF, THE CENTER LINE OF THE MIAMI CANAL, AS SHOWN ON THE SAID PLAT BOOK 124, AT PAGE 47; THENCE CONTINUE SOUTH 89 DEGREES 37 MINUTES 00 SECONDS WEST, FOR 143.96 FEET; THENCE NORTH 32 DEGREES 36 MINUTES 00 SECONDS WEST, FOR 5.89 FEET; THENCE SOUTH 88 DEGREES 39 MINUTES 16 SECONDS WEST, FOR 78.44 FEET; THENCE NORTH 01 DEGREES 20 MINUTES 44 SECONDS WEST, FOR 15.75 FEET; THENCE SOUTH 88 DEGREES 39 MINUTES 16 SECONDS WEST, FOR 15.42 FEET; THENCE SOUTH 02 DEGREES 23 MINUTES 12 SECONDS EAST, FOR 8.32 FEET; THENCE NORTH 89 DEGREES 4 MINUTES 42 SECONDS WEST, FOR 26.93 FEET; THENCE SOUTH 00 DEGREES 09 MINUTES 00 SECONDS EAST, FOR 7.59 FEET; THENCE SOUTH 89 DEGREES 51 MINUTES 00 SECONDS WEST, FOR 86.52 FEET; THENCE SOUTH 00 DEGREES 40 MINUTES 24 SECONDS EAST, FOR 2.98 FEET; THENCE NORTH 89 DEGREES 49 MINUTES 23 SECONDS WEST, FOR 135.52 FEET, SAID LAST MENTIONED NINE COURSES BEING PARALLEL WITH AND APPROXIMATELY 1.0 FOOT OFF OF THE FACE OF A ONE STORY C.B.S. BUILDING; THENCE SOUTH 00 DEGREES 07 MINUTES 23 SECONDS EAST, ALONG THE FACE OF SAID ONE STORY C.B.S. BUILDING AND ITS NORTHERLY PROLONGATION, FOR 31.68 FEET; THENCE NORTH 89 DEGREES 56 MINUTES 56 SECONDS EAST, ALONG THE FACE OF SAID ONE STORY C.B.S. BUILDING, FOR 17.22 FEET, TO THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREINAFTER DESCRIBED; THENCE CONTINUE NORTH 89 DEGREES 56 MINUTES 56 SECONDS EAST, ALONG THE LAST DESCRIBED COURSE, FOR 80.08 FEET; THENCE SOUTH 00 DEGREES 52 MINUTES 30 SECONDS EAST, ALONG THE FACE OF AN EXISTING LOADING DOCK, FOR 41.54 FEET; THENCE SOUTH 89 DEGREES 09 MINUTES 33 SECONDS WEST, ALONG THE FACE OF SAID ONE STORY C.B.S. BUILDING, FOR 37.22 FEET; THENCE NORTH 45 DEGREES 59 MINUTES 53 SECONDS WEST, ALONG THE EXCAVATION LINE OF THE "CLEAN FILL AREA", AS DESIGNATED ON THE SURVEY PREPARED BY A.R.TOUSSAINT, TITLED AS-BUILT SURVEY OF PEPPER'S STEEL AND ALLOYS SITE, DATED APRIL 1989, UNDER ORDER NO. 8753, FOR 60.47 FEET, TO THE POINT OF BEGINNING.

NOTES:

BEARINGS SHOWN HEREON REFER TO AN ASSUMED BEARING OF S50°56'32"E, ALONG THE SURVEY BASELINE OF N.W. SOUTH RIVER DRIVE.
ORDERED BY: T. COZZIE CONSULTING, INC.

SHEET 2 OF 2 SHEETS

K:\335240\BATTERY.DWG

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3240 CORPORATE WAY • MIRAMAR, FLORIDA 33025
TEL. NO.(954)435-7010 FAX NO.(954)438-3288

ORDER NO. 188355-B

DATE: 07-18-03

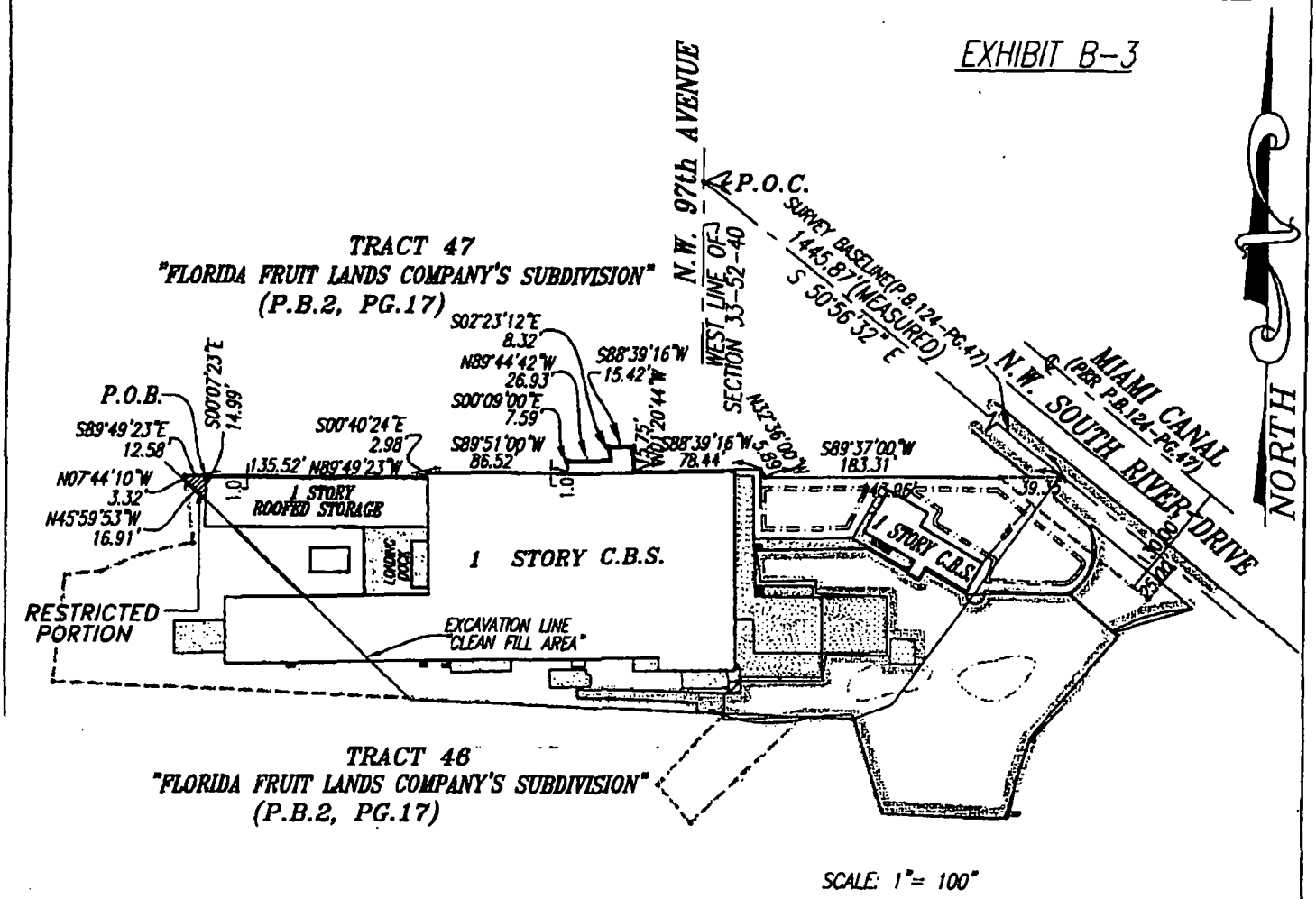
(LB#87) THIS IS NOT A "BOUNDARY SURVEY"

PREPARED UNDER MY SUPERVISION

Robert L. Parker PRESIDENT

SKETCH TO ACCOMPANY LEGAL DESCRIPTION

EXHIBIT B-3



SCALE: 1"= 100'

LEGEND:

P.O.C.	DENOTES POINT OF COMMENCEMENT
P.O.B.	DENOTES POINT OF BEGINNING
P.B.	DENOTES PLAT BOOK
PG.	DENOTES PAGE
℄	DENOTES CENTERLINE

SHEET 1 OF 2 SHEETS

K:\335240\BATTERY1.DWG

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TEL. NO.(954)435-7010 FAX NO.(954)438-3288

3240 CORPORATE WAY • MIRAMAR, FLORIDA 33025

ORDER NO. 188355-A

DATE: 07-18-03

(LB#87) THIS IS NOT A "BOUNDARY SURVEY"

PREPARED UNDER MY SUPERVISION

Robert F. Shiskin PRESIDENT

LEGAL DESCRIPTION TO ACCOMPANY SKETCH

(RESTRICTED PORTION)

EXHIBIT B-4

A PORTION OF TRACT 46 AND PORTION OF THE SOUTH 1/2 OF TRACT 47, OF THE SOUTHWEST 1/4 OF SECTION 33, TOWNSHIP 52 SOUTH, RANGE 40 EAST, "FLORIDA FRUIT LANDS COMPANY'S SUBDIVISION", ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 2, AT PAGE 17, OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA, LYING AND BEING IN MIAMI-DADE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE INTERSECTION OF THE WEST LINE OF SAID SECTION 33 WITH THE "SURVEY BASELINE OF N.W. SOUTH RIVER DRIVE", AS SHOWN ON PLAT BOOK 124, AT PAGE 47, OF THE PUBLIC RECORDS OF DADE COUNTY, FLORIDA; THENCE RUN SOUTH 50 DEGREES 56 MINUTES 32 SECONDS EAST, ALONG SAID BASELINE, FOR 1445.87 FEET; THENCE SOUTH 89 DEGREES 37 MINUTES 00 SECONDS WEST, FOR 39.35 FEET, TO A POINT LYING 130.00 FEET SOUTHWESTERLY OF, THE CENTER LINE OF THE MIAMI CANAL, AS SHOWN ON THE SAID PLAT BOOK 124, AT PAGE 47; THENCE CONTINUE SOUTH 89 DEGREES 37 MINUTES 00 SECONDS WEST, FOR 143.96 FEET; THENCE NORTH 32 DEGREES 36 MINUTES 00 SECONDS WEST, FOR 5.89 FEET; THENCE SOUTH 88 DEGREES 39 MINUTES 16 SECONDS WEST, FOR 78.44 FEET; THENCE NORTH 01 DEGREES 20 MINUTES 44 SECONDS WEST, FOR 15.75 FEET; THENCE SOUTH 88 DEGREES 39 MINUTES 16 SECONDS WEST, FOR 15.42 FEET; THENCE SOUTH 02 DEGREES 23 MINUTES 12 SECONDS EAST, FOR 8.32 FEET; THENCE NORTH 89 DEGREES 44 MINUTES 42 SECONDS WEST, FOR 26.93 FEET; THENCE SOUTH 00 DEGREES 09 MINUTES 00 SECONDS EAST, FOR 7.59 FEET; THENCE SOUTH 89 DEGREES 51 MINUTES 00 SECONDS WEST, FOR 86.52 FEET; THENCE SOUTH 00 DEGREES 40 MINUTES 24 SECONDS EAST, FOR 2.98 FEET; THENCE NORTH 89 DEGREES 49 MINUTES 23 SECONDS WEST, FOR 135.52 FEET, TO THE POINT OF BEGINNING OF THE PARCEL OF LAND HEREINAFTER DESCRIBED, SAID LAST MENTIONED NINE COURSES BEING PARALLEL WITH AND APPROXIMATELY 1.0 FOOT OFF OF THE FACE OF A ONE STORY C.B.S. BUILDING; THENCE SOUTH 00 DEGREES 07 MINUTES 23 SECONDS EAST, ALONG THE FACE OF SAID ONE STORY C.B.S. BUILDING AND ITS NORTHERLY PROLONGATION, FOR 14.99 FEET; THENCE NORTH 45 DEGREES 59 MINUTES 53 SECONDS WEST, ALONG THE EXCAVATION LINE OF THE "CLEAN FILL AREA" AS DESIGNATED ON THE SURVEY PREPARED BY A.R.TOUSSAINT, TITLED AS-BUILT SURVEY OF PEPPER'S STEEL AND ALLOYS SITE, DATED APRIL 1989, UNDER ORDER NO.8753, FOR 16.91 FEET; THENCE NORTH 07 DEGREES 44 MINUTES 10 SECONDS WEST, FOR 3.32 FEET; THENCE SOUTH 89 DEGREES 49 MINUTES 23 SECONDS EAST, FOR 12.58 FEET, TO THE POINT OF BEGINNING.

NOTES:

BEARINGS SHOWN HEREON REFER TO AN ASSUMED BEARING OF S50°56'32"E, ALONG THE SURVEY BASELINE OF N.W. SOUTH RIVER DRIVE.
ORDERED BY: T. COZZIE CONSULTING, INC.

SHEET 2 OF 2 SHEETS

K:\335240\BATTERY1.DWG

SCHWEBKE-SHISKIN & ASSOCIATES, INC.
LAND PLANNERS • ENGINEERS • LAND SURVEYORS (LB#87)
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TEL. NO.(954)435-7010 FAX NO.(954)438-3288

ORDER NO. 188355-A

DATE: 07-18-03

(LB#87) THIS IS NOT A "BOUNDARY SURVEY"

PREPARED UNDER MY SUPERVISION

Robert F. Shiskin PRESIDENT

CFN 2004R0746599
OR Bk 22606 Pgs 3935 - 3977; (43pgs)
RECORDED 08/25/2004 11:46:19
DEED DOC TAX 730.80
SURTAX 548.10
HARVEY RUVIN, CLERK OF COURT
MIAMI-DADE COUNTY, FLORIDA

Instrument prepared under the approval of:
Tom Goldstein, Assistant County Attorney
111 N.W. 1 Street, Suite 2800
Miami, Florida 33128-1907

Folio No. 22-2033-001-0530

COUNTY DEED

THIS DEED, made this 20th day of August, 2004 A.D. by MIAMI-DADE COUNTY, FLORIDA, a Political Subdivision of the State of Florida, party of the first part, whose address is Stephen P. Clark Center, 111 N.W. 1 Street Suite 17-202, Miami, Florida 33128-1963, and NORTON BLOOM, party of the second part, whose address is 2810 Seminole Street, Miami, Florida 33133:

WITNESSETH:

That the said party of the first part, for and in consideration of the sum of One Hundred and Twenty One Thousand Seven Hundred Eight and Nine Dollars and 73/100 ($121,708.73) to it in hand paid by the party of the second part, receipt whereof is hereby acknowledged, in accordance with Florida Statue 197.592 (1) and (2) has granted, bargained, and conveyed as is, where is to the said party of the second part, his/her heirs and assigns forever, the following described land lying and being in Miami-Dade County, Florida:

West ½ of Tract 44 lying northeasterly of the railway, LESS the South 25 Feet, of FLORIDA FRUIT LAND COMPANY'S SUBDIVISION according to the Plat thereof recorded in Plat Book 2 at Page 17 of the Public Records of Miami-Dade County, Florida.

This conveyance is made subject to the following restrictions as outlined in the Consent Degree filed in the U.S. District Court for the Southern District of Florida, Miami Division, under Civil Action No. 85-0571-CIV-SPELLMAN:

1. This property contains at least a portion of a Remediated Area that is defined in a Consent Decree (including its attached survey) entered in the civil action known as United States v. Pepper's Steel & Alloys, Inc., United States District Court, Southern District of Florida, Civil No. 85-0571-CIV-SPELLMAN. That Remediated Area contains "hazardous substances" as defined by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund amendments and Reauthorization Act of 1986, 42 United States Code § 9601 et seq., which have been the subject of remedial action by Florida Power and Light Company (FPL);

2. If any owner of record of any portion of the Remediated Area intends to make use of the Remediated Area in a manner that would disturb the performance or integrity of the final cover, the monolith (i.e., FPL soil stabilization and solidification project), or any component of the containment system at the Site, or the functions of any monitoring system at the Site, such owner must first present his proposed use in writing to the Regional Administrator, United States Environmental Protection Agency, Region IV, 345 Courtland Street, N.E., Atlanta, Georgia 30365, and furnish a copy of such proposal to the Secretary, State of Florida Department of Environmental Regulation (DER), 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and to the Director, Miami-Dade County Department of Environmental Resources Management (DERM), 33 S.W. 2 Avenue, Penthouse 2, Miami, Florida 33130.

Any such proposal must include a commitment by the proponent to undertake all operation and maintenance responsibilities for the affected Remediated Area, including the drainage collar. DER and DERM shall have 45 days from the date of submission of such proposal within which to provide comments to United States Environmental Protection Agency (EPA) on such proposal.

The EPA Regional Administrator (RA) shall have sixty days from the date of the submission of such proposal to determine whether such proposed use will increase the potential hazard to human health or the environment. If the RA fails to make his determination within that sixty-day period, the owner of

record may petition the Court for approval of such proposed use. If the RA determines that the proposed use will increase the potential hazard to human health or the environment, the owner shall have thirty-days (30) to submit additional information to the RA for reconsideration. The RA shall have thirty-days (30) to respond. If the RA fails to respond within the thirty-day period, or if the owner disputes the RA's determination, the owner may petition the Court for approval of such proposed use. All parties shall bear their own costs.

3. The information and documents required in "items 1 and 2 above" have also been filed with the zoning authority of Miami-Dade County and City of Medley, and also with DER, DERM and the EPA Regional Administrator.

This grant conveys only the interest of the County and its Board of County Commissioners in the property herein described and shall not be deemed to warrant the title or to represent any state of facts concerning the same.

IN WITNESS WHEREOF the said party of the first part has caused these presents to be executed in its name by the Mayor as authorized by its Board of County Commissioners acting the day and year aforesaid.

(OFFICIAL SEAL)

ATTEST:
HARVEY RUVIN, CLERK

By: _____
Deputy Clerk

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

By: _____
Mayor

Approved by the County Attorney as to form and legal sufficiency.

The foregoing was authorized and approved by Resolution No. R-40-02 of the Board of County Commissioners of Miami-Dade County, Florida, on the 29th day of January 2002.

Site: ___
Break: 8.3
Other: Vol. I

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF FLORIDA
MIAMI DIVISION

UNITED STATES OF AMERICA, Plaintiff, v. PEPPER'S STEEL AND ALLOYS, INC.; et al., Defendants.	Civil Action No. 85-0571-CV-EDB-DAVIS

CONSENT DECREE

I. BACKGROUND

A. The United States of America ("United States"), on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), filed a Complaint in this matter on March 5, 1985, and later filed an Amended and Supplemental Complaint, pursuant to Section 107(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9607(a), as amended ("CERCLA"), seeking reimbursement of costs that it has incurred and will incur for response actions taken at or in connection with the release or threatened release of hazardous substances at the Pepper's Steel Superfund Site, located in Medley, Dade County, Florida.

B. By its Omnibus Order on All Pending Motions dated June 12, 1995, the Court entered summary judgment on liability against Defendants Thomas Curtis, Norton Bloom, and Pepper's Steel.

C. The Settling Defendants make no admission of fact or conclusion of law except as they have previously admitted or as the Court has determined, or as expressly stated below, and further admit no liability to plaintiff United States or to any other party or to any other person, except as described below or as previously determined by the Court.

D. The United States and Settling Defendants, Norton Bloom, Pepper's Steel, Thomas Curtis, Miami Battery Manufacturing Company, and William, Flora and Lowell Payne agree, and this Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith, that settlement of this matter will avoid prolonged and complicated litigation among the Parties, and that this Consent Decree is fair, reasonable, and in the public interest.

THEREFORE, with the consent of the Parties to this Consent Decree, it is ORDERED, ADJUDGED, AND DECREED:

II. ADMISSIBILITY OF THIS CONSENT DECREE

The Settling Parties have entered into this Consent Decree with the express understanding that it is the product of extended and comprehensive settlement negotiations. The Court expressly finds that the Settling Parties participated in those negotiations and have executed this Consent Decree in good faith, and that neither this Consent Decree, its attachments, nor the fact of its execution or negotiation shall be admissible against any signatory in any judicial or administrative proceeding other

than one to enforce or interpret the terms of this Consent Decree.

III. JURISDICTION

This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1345 and 42 U.S.C. §§ 9607 and 9613(b), and also has personal jurisdiction over Settling Defendants. Settling Defendants consent to and shall not challenge entry of this Consent Decree or this Court's jurisdiction to enter and enforce this Consent Decree.

IV. PARTIES BOUND

This Consent Decree is binding upon the United States and upon Settling Defendants and their heirs, successors and assigns. Any change in ownership or corporate or other legal status, including but not limited to, any transfer of assets or real or personal property, shall in no way alter the status or responsibilities of Settling Defendants under this Consent Decree.

V. DEFINITIONS

Unless otherwise expressly provided herein, terms used in this Consent Decree which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Consent Decree or in any appendix attached hereto, the following definitions shall apply:

A. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601, et seq.

B. "Consent Decree" shall mean this Consent Decree and all appendices attached hereto. In the event of conflict between this Consent Decree and any appendix, the Consent Decree shall control.

C. "Day" shall mean a calendar day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

D. "DOJ" shall mean the United States Department of Justice.

E. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

F. "EPA Hazardous Substance Superfund" shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

G. "Institutional Controls" shall mean land and/or water use restrictions including, but not limited to, restrictions in the form of contractual agreements, restrictive easements/covenants that run with the land, and governmental controls.

H. "Interest" shall mean interest at the current rate specified for interest on investments of the Hazardous Substance Superfund established under Subchapter A of Chapter 98 of Title 26 of the U.S. Code, compounded on October 1 of each year, in accordance with 42 U.S.C. § 9607(a).

I. "Owner Settling Defendants" or "Landowners" (including present and previous owners) shall mean Thomas Curtis, Norton Bloom, and William, Flora and Lowell Payne, and Miami Battery Manufacturing Co. ("Miami Battery").

J. "Paragraph" shall mean a portion of this Consent Decree identified by an arabic numeral or an upper case letter.

K. "Parties" shall mean the United States and the Settling Defendants.

L. "Plaintiff" shall mean the United States.

M. "Plaintiff's Response Costs" shall mean the amount of plaintiff United States' previously unreimbursed response costs, including interest, in the amount of Six Million, One Hundred and Ninety-Four Thousand, Three Hundred and Seventeen dollars and 90 cents ($6,194,317.90) incurred by the United States at and in connection with the Pepper's Steel Superfund Site.

N. "Remediated Area" means that part of the Site as established by the Survey attached hereto on Exhibit B, which is occupied by the monolith (i.e., Florida Power & Light Company's soil source stabilization and solidification project) and the drainage collar located around the monolith.

O. "Operation and Maintenance" or "O & M" shall mean all activities required to maintain the effectiveness of the Remedial Action and the integrity of Remediated Area, as set forth in any Operation and Maintenance Plan approved or developed by EPA for the Site.

P. "Section" shall mean a portion of this Consent Decree identified by a roman numeral.

Q. "Settling Defendants" shall mean Norton Bloom, Pepper's Steel, Thomas Curtis, Miami Battery, and William, Flora and Lowell Payne.

R. "Site" shall mean the real property comprised of the portions of Tracts 44, 45 and 46 that were or are contaminated with hazardous substances. The Site is located at and about 11100 North-West South River Drive. The Site is approximately bounded by 109th Street, the Miami Canal, 115th Street and the Florida East Coast Railway right-of-way.

S. "Tract 44" means that parcel of real property located in Dade County, Florida, encompassing 10 acres, more or less, and more particularly recorded and described in Plat Book 2, Page 17 of the Public Records of Dade County as located in Section 33, Township 52 South, Range 40 East.

T. "Tract 45" means that parcel of real property located in Dade County, Florida, encompassing 10 acres, more or less, and more particularly recorded and described in Plat Book 2, Page 17 of the Public Records of Dade County as located in Section 33, Township 52 South, Range 40 East.

U. "Tract 46" means that parcel of real property located in Dade County, Florida, encompassing 10 acres, more or less, and more particularly recorded and described in Plat Book 2, Page 17 of the Public Records of Dade County as located in Section 33, Township 52 South, Range 40 East.

V. "Tract" or "Tracts" shall mean any or all of Tracts 44, 45 and/or 46, and any portion(s) thereof.

W. "United States" shall mean the United States of America and its agencies.

VI. ALLOCATION OF INSURANCE SETTLEMENT PROCEEDS

The Settling Defendants have entered into settlement agreements as to claims for coverage with several of their insurance carriers. They entered into a settlement agreement with Transportation Insurance Company and Continental Casualty Company ("CNA") under which they received a payment of $835,000 (hereinafter referred to as "the CNA Settlement"). They also entered into a settlement agreement with Home Insurance Company under which they received a payment of $50,000 (hereinafter referred to as "the Home Settlement").

There is also pending before this Court an Order on Remand from the United States Court of Appeals for the Eleventh Judicial Circuit in USF&G v. Pepper's Steel & Alloys, Inc., et. al. (Case No. 94-5187), directing this Court to enter an Order (hereinafter referred to as "the USF&G Judgment"), enforcing a binding settlement agreement between USF&G and the Settling Defendants, pursuant to which USF&G is obligated to pay to the

Settling Defendants the sum of Two Million Dollars ($2,000,000), plus such additional pre-judgment and post-judgment interest and attorney's fees and costs as provided by law and determined by this Court.

As a part of this Consent Decree, the Settling Defendants hereby agree to the allocation and distribution of any sums received or to be received from the CNA and Home Settlements and USF&G Judgment as follows:

A. Settling Defendants, within thirty (30) days following their receipt of money awarded to them in or as a result of the USF&G Judgment, shall pay the following sums to the "EPA Hazardous Substance Superfund" pursuant to Section IX of this Consent Decree:

1. Nine Hundred and Sixty-Two Thousand and Five Hundred Dollars ($962,500), together with all interest that has accrued on any monies deposited with and held in escrow on behalf of the United States by counsel for Pepper's and Bloom arising out of the CNA and Home Settlements; plus,

2. Two Hundred Thousand Dollars ($200,000) of such sums as may be awarded by this Court for pre-judgment and post-judgment interest earned on the USF&G Judgment.

B. With respect to any attorney's fees and costs awarded by this Court to Settling Defendants or their counsel for their enforcement and subsequent appeal and remand of the USF&G Judgment, such sums shall be paid directly to the counsel for Settling Defendants to whom such sums were awarded.

VII. ALLOCATION OF PROCEEDS FROM SALE, LEASE OR DEVELOPMENT OF TRACTS 44, 45 OR 46, AND RELEASE OF SUPERFUND LIENS

A. Proceeds from Sale, Lease or Development

1. If, at any time, any Settling Defendant(s) enter(s) into any agreement for the sale of any of Tracts 44, 45 or 46 or any portion(s) thereof, such Settling Defendant(s) shall pay to the United States, within thirty (30) days after its (their) receipt of such proceeds, the lesser of (a) Fifty Percent (50%) of the gross proceeds received by such Settling Defendant(s) under any such agreement, less closing costs for such sale including attorney's fees, or (b) the amount of Plaintiff's Response Costs. Such gross proceeds shall include any compensation, fees for services rendered, or other income received by the Settling Defendants in connection with any arrangement for development of any of Tracts 44, 45 or 46.

2. If, at any time, any Settling Defendant(s) enter(s) into any agreement for the lease of any portion(s) of Tracts 44, 45 or 46, except for those portions of Tract 46 which are presently the subject of an oral or written lease between Thomas Curtis and Miami Battery, such Settling Defendant(s) shall pay to the United States, within thirty (30) days after its (their) receipt of such lease proceeds or rental payments, the lesser of (a) Fifty Percent (50%) of the gross lease or rental income received by such Settling Defendant(s) under any such agreement, or (b) the amount of Plaintiff's Response Costs.

B. Nothing in this Consent Decree is intended or shall be interpreted to preclude any Settling Defendant(s) and

Plaintiff from entering into any agreement to modify this Section VII concerning the allocation of proceeds from the sale or lease of any Tract(s) or portion(s) thereof, as provided herein, should additional investment in the development or enhancement of any Tract(s) or portion(s) thereof be undertaken by such Settling Defendant(s) to increase the likelihood of realization of additional proceeds from such sale or lease.

C. Settling Defendants shall provide the United States, under Section XVI of this Consent Decree, with complete copies of all executed agreements for the sale, lease or development of any Tract(s) or portion(s) thereof. If any Settling Defendant(s) enters into any partnership, joint venture, corporation or any other business entity or relationship for the sale or development of any Tract(s) or portion(s) thereof, such Settling Defendant(s) shall also provide the United States, under Section XVI of this Consent Decree, complete copies of any agreement(s) concerning its involvement with such entity or relationship. Settling Defendants shall also provide the United States, under Section XVI of this Consent Decree, with copies of complete documentation of any sales or lease payments, loans, investments, capital or partnership contributions, and any other proceeds of money received by any Settling Defendant(s) or by any entity or partnership in which any Settling Defendant(s) participates, concerning any sale, lease or development of any Tract(s) or portion(s) thereof.

D. Superfund Liens. On or about April 10, 1991, EPA recorded in the Office of the Recorder of Dade County, Florida, Superfund Liens on each of the Tracts to secure payment of its response costs and other monies expended by it, thereby encumbering each of those three Tracts comprising the Pepper's Steel Site.

E. In order to facilitate Settling Defendants' sale of the Tracts, and notwithstanding any dispute as to the attachment or applicability of the Superfund Lien to any Tract or portion(s) thereof to be sold, the United States hereby agrees to affirmatively execute and deliver a release of its Superfund Lien on any Tract or portion(s) thereof being sold in exchange for the United States' Fifty Percent (50%) share of the proceeds from such sale of any such Tract or portion(s) thereof, as provided in this Section VII.

F. Each of the Superfund Liens shall remain and continue, to the extent otherwise provided by law, on any Tract or portion(s) thereof not sold until Plaintiff's execution of a satisfaction of Judgment as provided in Paragraph VIII.H. of this Consent Decree. The United States agrees to provide a release of its Superfund Liens as to all of the Tracts in their entirety after Plaintiff's execution of a satisfaction of Judgment as provided in Paragraph VIII.H. of this Consent Decree.

G. Notwithstanding any dispute as to the attachment or applicability of any Superfund Lien to any Tract or portion(s) thereof to be sold, the United States agrees to execute such

documents as may be necessary to subordinate its Superfund Lien on any Tract or portion(s) thereof to any security instrument or mortgage required by any third-party lender, to the extent that the funds loaned by such lender are necessary for the development of any Tract or portion(s) thereof and/or for the purpose of preparing any Tract or portion(s) thereof for sale.

H. It is expressly understood and agreed that notwithstanding the Parties' agreement hereunder to allocations of proceeds from the potential sale or lease of any Tract or portion(s) thereof, or the release or subordination of Superfund Liens in conjunction therewith, nothing in this Consent Decree shall be construed or interpreted to contractually extend, enlarge or concede the attachment of any Superfund Lien to any Tract or portion(s) thereof beyond those which are otherwise subject to such attachment pursuant to the provisions of CERCLA § 107(l), 42 U.S.C. § 9607(l).

VIII. PLAINTIFF'S JUDGMENT AGAINST SETTLING DEFENDANTS

A. As a further inducement to Plaintiff to enter into this Consent Decree with the Settling Defendants, and because the amount of money to be realized from the CNA and Home Settlements and the USF&G Judgment is necessarily limited and less than the amount of response costs incurred at the Site by Plaintiff, Settling Defendants hereby stipulate that Plaintiff shall have and may execute upon, subject to the limitations specified herein, a judgment to be entered in Plaintiff's favor against each of them jointly and severally in this action in the amount

of Plaintiff's Response Costs as defined herein (such judgment is hereinafter referred to as "Plaintiff's Judgment").

The amount of Plaintiff's Judgment shall be subject to offset by any sums or proceeds received by Plaintiff from Settling Defendants, including but not limited to: (i) proceeds from the CNA and Home Settlements and the USF&G Judgment, as provided in Section VI of this Consent Decree; (ii) proceeds from the sale or lease of any Tract or portion(s) thereof, as provided in Section VII of this Consent Decree; and (iii) proceeds from certain insurance coverages, as provided in Paragraph VIII.F. of this Consent Decree.

B. As a further inducement to Settling Defendants for their stipulation to the entry of such judgment, Plaintiff's Judgment shall be recoverable, enforceable and collectible through any proceedings to enforce this Consent Decree or in any other proceedings to enforce, collect or execute upon Plaintiff's Judgment; provided, however, that so long as Settling Defendants make all payments to the United States required under Sections VI, VII and VIII.F. of this Consent Decree, any payment or satisfaction of Plaintiff's Judgment is to be collected from or executed against only the proceeds from any applicable insurance coverage which may be owned by or on behalf of Settling Defendants, and further, Plaintiff's Judgment shall not be collected from or executed against any sums of money received by Settling Defendants as their allocated shares of proceeds from: (i) the USF&G Judgment and the CNA and Home Settlements under

Section VI of this Decree; (ii) settlement of Settling Defendants' claims under insurance policies issued by General Accident Insurance Co. and the Maryland Casualty Insurance Co.; and (iii) settlement of Settling Defendants' claims in FP&L v. Allis-Chalmers, Civil No. 86-1571-CIV-ATKINS, S.D. Fla.

C. Plaintiff further agrees that provided that Defendants make all payments to the United States required under Sections VI, VII and VIII.F. of this Consent Decree, Plaintiff's Judgment shall not be recorded, and the execution or collection of Plaintiff's Judgment shall not be sought or obtained against any personal assets of Settling Defendants.

D. Although not named as a defendant on the claims asserted by Plaintiff in this action, Miami Battery, a party to this litigation by virtue of cross-claims and third-party claims asserted as part of this litigation, hereby waives any requirements of personal service of Plaintiff's claims in this action, stipulates and agrees that Plaintiff's Amended and Supplemental Complaint be deemed amended and conformed to name Miami Battery as a defendant thereto, and assumes and adopts each of the answers and affirmative defenses asserted by Thomas Curtis and the Paynes thereto, and consents and agrees to entry of Plaintiff's Judgment against it as provided herein;

E. Plaintiff consents to the institution by Settling Defendants of proceedings in a court of competent jurisdiction against certain of Settling Defendants' insurance carriers to collect on Plaintiff's Judgment from such insurance carriers. Such proceedings shall be instituted by Settling Defendants within a reasonable time following entry of this Consent Decree. Settling Defendants shall provide Plaintiff with a quarterly report describing any such proceedings, and shall upon any request by Plaintiff provide Plaintiff with copies of any pleadings or other materials filed or produced in such proceedings.

F. Plaintiff's Share of the Recovery. If the Settling Defendants' proceedings to collect from their insurance carriers on Plaintiff's Judgment as described in Paragraph VIII.E. of this Consent Decree are successful, Settling Defendants shall pay to Plaintiff Fifty Percent (50%) of any sums that they collect in such proceedings, subject to the Total Cap defined below. However, if the sums received by Settling Defendants in such proceedings do not include an award of their attorney's fees and costs incurred in prosecuting such proceedings, then the Settling Defendants shall pay to Plaintiff the lesser of: (i) Fifty Percent (50%) of the sums received by Settling Defendants in such proceedings, less any attorney's fees and costs incurred by Settling Defendants in prosecuting such proceedings subject to a cap on such attorney's fees and costs totaling Thirty-Five Percent (35%) of any sums awarded in such proceedings; or (ii)

the remaining amount of Plaintiff's Judgment unrecovered by Plaintiff from any other source, including but not limited to proceeds received pursuant to this Consent Decree. Settling Defendants shall provide Plaintiff with a quarterly accounting of their attorney's fees and costs incurred in prosecuting such proceedings until Plaintiff has received all of its share of the sums from such proceedings.

G. Total Cap. In no event shall Plaintiff be entitled to receive, under all provisions of this Consent Decree, or otherwise from any other claim or lien or agreement between the Settling Defendants and Plaintiff, more than the lesser of (1) the amount of Plaintiff's Response Costs as defined herein, or (2) Plaintiff's percentage share of sums received by Settling Defendants as described and provided for in Sections VI and VII and Paragraph VIII.F. of this Consent Decree, regardless of the source of the monies so received. The United States' share of the sums received by the Settling Defendants, as provided for in Sections VI and VII and Paragraph VIII.F. of this Consent Decree shall not, however, exceed the amount of Plaintiff's Response Costs. Any amount paid by Settling Defendants to Plaintiff pursuant to Sections VI and VII and Paragraph VIII.F. of this Consent Decree shall include any accrued Interest and/or stipulated penalties, as provided in this Consent Decree.

H. Within thirty (30) days after the occurrence of the earlier of either (i) Plaintiff's receipt of sums equaling the Total Cap as set forth above, or (ii) Plaintiff's receipt of

its share of all sums as provided in Sections VI and VII and Paragraph VIII.F. of this Consent Decree, the conclusion by satisfaction of judgment of the coverage litigation described in Paragraph VIII.E. of this Consent Decree, and the sale or transfer of all of Settling Defendants' ownership and other property interests in the Tracts, Plaintiff agrees to execute a Satisfaction of Judgment in favor of Settling Defendants. Such Satisfaction of Judgment shall be prepared by Settling Defendants and forwarded to Plaintiff for execution.

IX. REIMBURSEMENT OF PLAINTIFF'S RESPONSE COSTS

A. Within 30 days of Settling Defendants' receipt of any of the sums described in Sections VI and VII and Paragraph VIII.F. of this Consent Decree, and subject to Paragraph VIII.G. of this Consent Decree, Settling Defendants shall pay the amounts constituting the United States' share of each such sum to the "EPA Hazardous Substance Superfund" in reimbursement of Plaintiff's Response Costs. Payment shall be made by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice account in accordance with current EFT procedures, referencing USAO File Number 8501690, the EPA Region 4 Site Spill ID Number 0480, and DOJ Case Number 90-11-2-62A. Payments shall be made in accordance with instructions provided to Settling Defendants by the Financial Litigation Unit of the U.S. Attorney's Office in the Southern District of Florida following lodging of this Consent Decree. Any payments received by the Department of Justice after 4:00 p.m. Eastern Time shall be

credited on the next business day. Settling Defendants shall send notice that payment has been made to EPA and DOJ pursuant to Section XVI of this Consent Decree and to the Regional Financial Management Officer, EPA Region 4, 61 Forsyth Street, Atlanta, Georgia 30303.

B. Of the total amount to be paid pursuant to Section IX.A., Five Hundred and Fifty-Seven Thousand, Eight Hundred and Sixty Nine Dollars ($557,869.00) may be deposited by EPA in the Pepper's Steel Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance Operation and Maintenance (as described and set forth in "Appendix A" hereto) at or in connection with the Site, and the remainder of such sum shall be deposited in the EPA Hazardous Substance Superfund as reimbursement for Response Costs incurred by EPA at or in connection with the Site as of the date of entry of this Consent Decree. Any balance remaining in the Pepper's Steel Site Special Account upon the completion of Operation and Maintenance may be transferred by EPA to the EPA Hazardous Substance Superfund.

X. FAILURE TO COMPLY WITH REQUIREMENTS OF DECREE

A. Interest on Late Payments. If any payments by Settling Defendants required under this Consent Decree are not received by Plaintiff when due, Interest shall continue to accrue on the unpaid balance through the date of payment.

B. Stipulated Penalty.

1. If any amounts due to Plaintiff under this Consent Decree are not paid by the required date, Settling Defendants shall pay to Plaintiff as a stipulated penalty, in addition to the Interest required by Paragraph X.A. of this Consent Decree, $5,000 per day that such payment is late.

2. Stipulated penalties are due and payable within 30 days of the date of the demand for payment of the penalties by EPA. All payments to Plaintiff under this Paragraph shall be made pursuant to Paragraph IX.A. of this Consent Decree.

3. Penalties shall accrue as provided in this Paragraph regardless of whether Plaintiff has notified Settling Defendants of the violation or made a demand for payment, but need only be paid upon demand. All penalties shall begin to accrue on the day after payment is due and shall continue to accrue through the day payment is made. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Decree.

C. If the United States brings an action to enforce this Consent Decree, Settling Defendants shall reimburse the United States for all costs of such action, including but not limited to costs of attorney time.

D. Payments made under Paragraphs X.A., X.B. and X.C. of this Consent Decree shall be in addition to any other remedies or sanctions available to Plaintiff by virtue of Settling

Defendants' failure to comply with the requirements of this Consent Decree.

E. The obligations of Settling Defendants to pay amounts owed the United States under this Consent Decree are joint and several. In the event of the failure of any one or more Settling Defendants to make the payments required under this Consent Decree, the remaining Settling Defendants shall be responsible for such payments.

F. Notwithstanding any other provision of this Section, the United States may, in its unreviewable discretion, waive payment of any portion of the stipulated penalties that have accrued pursuant to this Consent Decree.

XI. COVENANTS NOT TO SUE BY PLAINTIFF

A. In consideration of the actions that will be performed and the payments that will be made by Settling Defendants under the terms of this Consent Decree, and Settling Defendants' stipulation to entry of Plaintiff's Judgment against them, and except as specifically provided in Section VIII of this Consent Decree and Paragraphs B through F., inclusive, of this Section XI, the United States covenants not to sue or take administrative action against Settling Defendants pursuant to Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607, and Section 7003 of RCRA, 42 U.S.C. § 6973, relating to the Site, and further covenants not to sue Settling Defendants or their respective counsel pursuant to the Federal Priorities Act, 31 U.S.C. § 3713, for any proceeds from the CNA Settlement. These

covenants not to sue shall take effect upon receipt by Plaintiff of all payments required by Sections VI and VII and Paragraph VIII.F. of this Consent Decree, and performance by Settling Defendants of all actions required under this Consent Decree. These covenants not to sue are conditioned upon the satisfactory performance by Settling Defendants of their obligations under this Consent Decree. These covenants not to sue extend only to Settling Defendants and do not extend to any other person.

B. Reservation of Rights by United States.

1. Notwithstanding any other provision of this Consent Decree, the United States reserves, and this Consent Decree is without prejudice to, the right to institute proceedings in this action or in a new action, or to issue an administrative order seeking to compel Settling Defendants (1) to perform further response actions relating to the Site or (2) to reimburse the United States for additional costs of response if,

(a) conditions at the Site, previously unknown to EPA, are discovered, or

(b) information previously unknown to EPA, is received, in whole or in part,

and these previously unknown conditions or this information together with other relevant information indicate that the Remedial Action is not protective of human health and the environment.

2. The covenants not to sue set forth above do not pertain to any matters other than those expressly specified in Paragraph XI.A. The United States reserves, and this Consent Decree is without prejudice to, all rights against Settling Defendants with respect to all other matters, including but not limited to, the following:

a. criminal liability;

b. claims based on a failure by Settling Defendants to meet a requirement of this Consent Decree;

c. liability arising from the past, present or future disposal, release or threat of release, outside of the Site, of any hazardous substance, any "pollutant or contaminant" under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33), or any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27);

d. liability for violations of federal or state law; and

e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments.

C. Notwithstanding any other provision of this Consent Decree, the covenants not to sue in this Section XI shall not relieve Settling Defendants of their obligation to comply with the requirements set forth in this Consent Decree.

D. Notwithstanding any other provision of this Consent Decree, the United States retains all authority and reserves all rights to take any and all response actions authorized by law.

E. Notwithstanding any other provision of this Consent Decree, the United States reserves the right to execute and collect on Plaintiff's Judgment as provided in Section VIII of this Consent Decree.

F. Except as otherwise provided in Section VII of this Consent Decree, no provision of this Consent Decree shall operate to prejudice or extinguish the rights that EPA and the United States have by reason of the Superfund Liens on the Tracts.

XII. COVENANTS NOT TO SUE BY SETTLING DEFENDANTS

A. Settling Defendants covenant not to sue and agree not to assert any claims or causes of action against the United States or its contractors or employees, with respect to the Site or this Consent Decree, including but not limited to:

1. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund (established pursuant to the Internal Revenue Code, 26 U.S.C. § 9507) through CERCLA Sections 106(b)(2), 107, 111, 112, or 113, or any other provision of law;

2. any claims against the United States, including any department, agency or instrumentality of the United States, under CERCLA Sections 107 or 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Site, or

3. any claims arising out of response activities at the Site, including claims based on EPA's selection of response actions, oversight of response activities or approval of plans for such activities.

B. Nothing in this Consent Decree shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. 300.700(d).

XIII. EFFECT OF SETTLEMENT/CONTRIBUTION PROTECTION

A. Nothing in this Consent Decree shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Consent Decree. Each of the Parties expressly reserves any and all rights (including, but not limited to, any right to contribution), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto.

B. The Parties agree, and by entering this Consent Decree this Court finds, that Settling Defendants are entitled, as of the effective date of this Consent Decree, to protection from contribution actions or claims as provided by Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), for matters addressed in this Consent Decree. The matters addressed in this Consent Decree shall not include Settling Defendants' liability to Florida Power and Light.

C. Each Settling Defendant agrees that, with respect to any future suit or claim for contribution brought by it for matters related to this Consent Decree, it will notify EPA and DOJ in writing no later than 60 days prior to the initiation of such suit or claim. Each Settling Defendant also agrees that, with respect to any future suit or claim for contribution brought against it for matters related to this Consent Decree, it will notify EPA and DOJ in writing within 10 days of service of the complaint or claim upon it. In addition, each Settling Defendant shall notify EPA and DOJ within 10 days of service or receipt of any Motion for Summary Judgment, and within 10 days of receipt of any order from a court setting a case for trial, for matters related to this Consent Decree.

D. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, recovery of response costs, or other relief relating to the Site, Settling Defendants shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the Covenants Not to Sue by Plaintiff set forth in Section XI of this Consent Decree.

XIV. NOTICE TO SUCCESSORS-IN-TITLE

A. With respect to each of Tracts 44, 45 and 46, within 15 days after the entry of this Consent Decree, the Owner Settling Defendant(s) of each Tract shall submit to EPA for review and approval a notice to be filed with the Office of the Recorder, Dade County, State of Florida, which shall provide notice to all successors-in-title for each Tract in which such Settling Defendant has or obtains any ownership interest, that such Tract contains part of the Pepper's Steel Superfund Site, that a permanent remedy has been implemented on such Tract, and that there exists a Consent Decree imposing institutional controls and restricting the use of such Tract. Such notices shall identify the United States District Court in which the Consent Decree was filed, the name and civil action number of this case, and the date the Consent Decree was entered by the Court. The Owner Settling Defendant(s) for each such Tract shall file and record the notices within 10 days of EPA's written approval of the notices. The Owner Settling Defendant(s) shall provide EPA with a certified copy of the recorded notices within 10 days of recording such notices.

B. At least 30 days prior to the conveyance by any Settling Defendant(s) of any interest in any Tract, including, but not limited to, fee interests, leasehold interests, and mortgage interests, the Owner Settling Defendant(s) conveying the interest shall give the grantee written notice and a copy of (i) this Consent Decree, (ii) any instrument by which an interest in

real property has been conveyed that confers a right of access to the Tract pursuant to Section XV (Access and Institutional Controls) of this Consent Decree, and (iii) any Institutional Controls in the form of restrictive easements/covenants that have been filed with respect to the Tract pursuant to Section XV of this Consent Decree.

At least 30 days prior to such conveyance, the Owner Settling Defendant(s) conveying the interest shall also give written notice to EPA of the proposed conveyance, including the name and address of the grantee, and the date on which notice of the Consent Decree and/or restrictive easements/covenants was given to the grantee.

C. In the event of any such conveyance, the obligations of any Owner Settling Defendant(s) under this Consent Decree, including but not limited to, its obligation to provide access and Institutional Controls, as well as to abide by such Institutional Controls, pursuant to Section XV (Access and Institutional Controls) of this Consent Decree, shall continue to be met by the Owner Settling Defendant(s). In no event shall the conveyance release or otherwise affect the liability of the Owner Settling Defendant(s) to comply with all provisions of this Consent Decree.

XV. ACCESS AND INSTITUTIONAL CONTROLS

A. Commencing upon the date of the EPA Regional Administrator's signature on this Consent Decree, Settling Defendants shall provide the United States and its

representatives, including EPA and its contractors, access at all reasonable times to Tracts 44, 45 and 46 to the extent that those Tracts are owned or controlled by Settling Defendants, as well as to any other property owned or controlled by any Settling Defendant(s), for the purpose of conducting any activity related to this Consent Decree including, but not limited to, the following activities:

i. Conducting and overseeing Operation and Maintenance for the Site Source Control Remedy;

ii. Monitoring or evaluation of investigation, removal, remedial or other activities at the Site, including the effectiveness of the Source Control Remedy, the monolith or the drainage collar;

iii. Verifying any data or information submitted to the United States;

iv. Conducting investigations relating to contamination at or near the Site;

iv. Obtaining samples;

v. Assessing the need for, planning, or implementing additional response actions at or near the Site;

vi. Assessing the compliance of Settling Defendants with this Consent Decree; and

vii. Determining whether the Site is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted, by Paragraph XV.B. of this Consent

Decree or the Institutional Controls established pursuant to Section XV.B. of this Consent Decree.

B. Commencing upon the date of the EPA Regional Administrator's signature on this Consent Decree, Settling Defendants agree themselves not to, and not to permit their lessees, licensees, assignees or agents to:

1. undertake or engage in any activity on any Tract or portion(s) thereof that involves or requires the extraction, manipulation of the flow or level, or use in any way, of the groundwater in the area of the Site; or

2. formally, or informally, apply for or seek in any way to have any Tract or portion(s) thereof rezoned from industrial or commercial use to residential use; or

3. engage in any activities or make any use of any portion of any Tract or portion(s) thereof that will, in any manner, interfere with or adversely affect the performance, integrity or protectiveness of the final cover, the monolith (i.e., FP&L's soil source stabilization and solidification project), any component of the containment system at the Site, or the functions of any monitoring system on the Site.

C. If any Owner Settling Defendant(s) proposes to use any Tract or portion(s) thereof in a way that may result in activity or a use that is prohibited by Paragraph XV.B. of this Consent Decree, such Owner Settling Defendant(s) must first present its proposed use in writing to the Regional Administrator, U.S. Environmental Protection Agency, Region 4, 61

Forsyth Street, Atlanta, Georgia 30303, and furnish a copy of such proposal to the Secretary, State of Florida Department of Environmental Protection ("DEP"), 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and to the Director, Dade County Department of Environmental Resources Management ("DERM"), Metro-Dade Government Center, 13th Floor, 111 N.W. First Street, Miami, Florida 33128. Any such proposal must include a commitment by the proponent to undertake all operation and maintenance responsibilities for the affected portion of the Tract, including the drainage collar. DEP and DERM shall have 45 days from the date of submission of such proposal within which to provide comments to EPA on such proposal.

The EPA Regional Administrator ("RA") shall have sixty days from the date of the submission of such proposal to determine whether such proposed use may increase the potential hazard to human health or the environment. If the RA fails to make his determination within that sixty-day period, the owner of record may petition the Court for approval of such proposed use. If the RA determines that the proposed use will increase the potential hazard to human health or the environment, the owner shall have thirty (30) days to submit additional information to the RA for reconsideration. The RA shall have thirty (30) days to respond. If the RA fails to respond within the thirty-day period, or if the owner disputes the RA's determination, the owner may petition the Court for approval of such proposed use.

All parties shall bear their own costs with respect to these activities.

D. Settling Defendant(s) shall record in the Office of the Recorder, Dade County, State of Florida, for each of Tracts 44, 45 and 46 in which such Settling Defendant has or obtains any ownership interest, restrictive easements/covenants, running with the land, that impose the obligations and restrictions established by Paragraph XV.B. of this Consent Decree, or that are otherwise necessary to implement, ensure non-interference with, or ensure the protectiveness of the remedial measures to be performed pursuant to this Consent Decree. Settling Defendant(s) shall grant the restrictive easements/covenants to one or more of the following persons or entities, as directed by EPA: (i) the United States, on behalf of EPA, and its representatives; (ii) the State and its representatives, or (iii) other appropriate grantees.

E. Such Settling Defendant(s) shall, within 45 days of EPA's request, submit to EPA for review and approval with respect to such property, draft restrictive easements/covenants that are enforceable under the laws of the State of Florida, free and clear of all prior liens and encumbrances (except as approved by EPA). Within 15 days of EPA's approval and acceptance of such restrictive easements/covenants, Settling Defendant(s) shall file the restrictive easements/covenants with the Office of the Recorder, Dade County, State of Florida. Within 30 days of filing the restrictive easements/covenants, such Settling

Defendant(s) shall provide EPA with a certified copy of the original recorded restrictive easements/covenants showing the clerk's recording stamps.

F. Notwithstanding any provision of this Consent Decree, the United States retains all of its access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA and any other applicable statute or regulations.

XVI. NOTICES AND SUBMISSIONS

Whenever, under the terms of this Consent Decree, notice is required to be given or a document is required to be sent by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing. Written notice as specified herein shall constitute complete satisfaction of any written notice requirement of the Consent Decree with respect to the United States, EPA, DOJ, and Settling Defendants, respectively.

As to the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-11-2-62A

Director, Waste Management Division
United States Environmental Protection Agency
Region 4
61 Forsyth Street
Atlanta, Georgia 30303
Re: Pepper's Steel Site

and

EPA Project Coordinator
United States Environmental protection Agency
Region 4
61 Forsyth Street
Atlanta, Georgia 30303
Re: Pepper's Steel Site

As to Settling Defendants:

Norton Bloom; Pepper's Steel & Alloys, Inc.
c/o R. Hugh Lumpkin, Esq.
Keith Mack Lewis Cohen & Lumpkin
First Union Financial Center, Twentieth Floor
200 South Biscayne Boulevard
Miami, Florida 33131

William, Lowell and Flora Payne;
Thomas Curtis; Miami Battery Manufacturing Company
c/o Derek B. Spilman, Esq.
Akerman Senterfitt & Eidson
100 South Ashley Drive, Suite 1500
Tampa, Florida 33602

XVII. RETENTION OF JURISDICTION

This Court shall retain jurisdiction over this matter for the purpose of interpreting and enforcing the terms of this Consent Decree.

XVIII. INTEGRATION/APPENDICES

This Consent Decree and its appendices constitute the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Consent Decree. The Parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Consent Decree. The following appendices are attached to and incorporated into this Consent Decree:

"Appendix A" is the EPA Operation and Maintenance Plan. That Plan may be revised by EPA.

"Appendix B" is a survey of the Remediated Area prepared by Florida Power & Light Company.

XIX. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

This Consent Decree shall be lodged with the Court for a period of not less than 30 days for public notice and comment. The United States reserves the right to withdraw or withhold its consent if the comments regarding this Consent Decree disclose facts or considerations which indicate that this Consent Decree is inappropriate, improper, or inadequate. Settling Defendants consent to the entry of this Consent Decree without further notice.

If for any reason this Court should decline to approve this Consent Decree in the form presented, the agreement evidenced by this Consent Decree is voidable at the sole discretion of any Party and the terms of the agreement may not be used as evidence in any litigation between the Parties.

XX. EFFECTIVE DATE

The effective date of this Consent Decree shall be the date upon which it is entered by the Court.

XXI. SIGNATORIES/SERVICE

Each undersigned representative of a Settling Defendant to this Consent Decree and the Assistant Attorney General for the Environment and Natural Resources Division of the United States Department of Justice certifies that he or she is authorized to

enter into the terms and conditions of this Consent Decree and to execute and bind legally such Party to this document.

Each Settling Defendant hereby agrees not to oppose entry of this Consent Decree by this Court or to challenge any provision of this Consent Decree, unless the United States has notified Settling Defendants in writing that it no longer supports entry of the Consent Decree.

DONE AND ORDERED in Chambers at Miami, Florida, this 16th day of October, 1997.

Edward B. Davis

EDWARD B. DAVIS
CHIEF UNITED STATES DISTRICT JUDGE

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of United States v. Pepper's Steel & Alloys, Inc., Civil No. 85-0571-CV-EDB-DAVIS, relating to the Pepper's Steel Superfund Site.

FOR THE UNITED STATES OF AMERICA

LOIS J. SCHIFFER
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice
Washington, D.C. 20530

LAWRENCE W. PUCKETT
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, DC 20044-7611

RICHARD D. GREEN
Director, Waste Management
Division
U.S. Environmental Protection
Agency
Region 4
61 Forsyth Street
Atlanta, Georgia 30303

REUBEN T. BUSSEY, JR.
Assistant Regional Counsel
U.S. Environmental Protection
Agency
Region 4
61 Forsyth Street
Atlanta, Georgia 30303

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of United States v. Pepper's Steel & Alloys, Inc., Civil No. 85-0571-CV-EDB-DAVIS, relating to the Pepper's Steel Superfund Site.

FOR DEFENDANTS NORTON BLOOM and PEPPER'S STEEL & ALLOYS, INC.

NORTON BLOOM

12-18-96

R. HUGH LUMPKIN, Esq.
Keith Mack Lewis Cohen & Lumpkin
First Union Financial Center
Twentieth Floor
200 South Biscayne Boulevard
Miami, Florida 33131

Appendix H:

2007 Ground Water Sampling Results

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4, SCIENCE and ECOSYSTEM SUPPORT DIVISION
ATHENS, GEORGIA 30605-2700

4SESD-EIB APR 1 6 2007

MEMORANDUM

SUBJECT: Pepper Steel Alloy Site, Medley, Dade County, Florida.
Field Investigation Work Plan.
SESD Project No 07-0279.

FROM: Dan Thoman, Regional Expert
Superfund and Air Section

THRU: Danny France, Chief
Superfund and Air Section

TO: Jan Rogers, Waste Programs Coordinator
South Florida Office

During the week of March 5, 2007 SESD personnel conducted a field investigation at the Pepper Steel Alloy Site, in Medley, Dade County, Florida. The investigation was conducted to provide data for a Five Year Review. Eleven samples were collected from 10 existing monitor wells on and around the site. Sample MW-6A-207D is a duplicate of sample MW-6A-207. The wells were purged using a peristaltic pump and Teflon® tubing. All purge water was discharged to the ground. The monitor well designations, sample numbers, depths, construction information and purge/sample method are indicated in Table 1. The samples were analyzed for PCBs. lead and arsenic. The analytical data summaries are presented in Tables 2 and 3. The field parameter measurement results are presented in Table 4. Complete analytical data including applicable detection levels are attached. The location numbers with 207 added to the end were used as the sample numbers. The 207 represents February, 2007 (when the investigation was originally scheduled). For example, the sample from well MW-4A is identified as MW-4A-207. Table 5 presents the latitude and longitude for each location. Copies of the field log books are also attached.

No PCB's were detected in any of the samples. Arsenic was detected in sample MO-1-207 at a concentration of 66 ug/l and sample MO-3-207 at a concentration of 6.5 J ug/l. Lead was detected in samples MO-1-207, MO-2-207, MW-5A-207, MW-5B-207 and MW-6B-207 at concentrations of 230 ug/l, 4.5 ug/l, 57 ug/l, 4.7J ug/l and 8.8J ug/l, respectively.

The pH of the samples ranged from 7.0 SU in sample MW-6B-207 to 9.0 SU in sample MO-1-207. The specific conductance ranged between 333 umhos/cm and 1951 umhos/cm. The turbidity ranged between 0.36 NTU and 204 NTU. Only sample MO-6A-207 was above 11 NTU. The temperature ranged from a low of 23.3 °C to a high of 26.0 °C.

All field measurements and samples were collected as specified in the following United States Environmental Protection Agency, Region 4, Science and Ecosystem Support Division Procedures:

SESDPROC-100-R0, Field pH Measurement
SESDPROC-101-R0, Field Specific Conductance Measurement
SESDPROC-102-R0, Field Temperature Measurement
SESDPROC-103-R0, Field Turbidity Measurement
SESDPROC-105-R0, Ground Water Level Measurement
SESDPROC-202-R0, Management of Investigative Derived Waste
SESDPROC-203-R0, Pump Operation
SESDPROC-205-R0, Field Equipment Cleaning and Decontamination
SESDPROC-209-R0, Packing, Marking Labeling and Shipping of Environmental and Waste Samples
SESDPROC-301-R0, Ground Water Sampling

All Samples were analyzed as specified in the United States Environmental Protection Agency, Region 4, Science and Ecosystem Support Division, Analytical Support Branch Operations and Quality Control Manual, January, 2007, or as specified in the CLP.

If you have any questions, please call me at 706-355-8621.

Attachments

Table 1
Well Number/Sample Number, Well Construction Details, Purge/Sample Method
Pepper Steel Alloy, Inc. Site
Medley, Florida

Well Number/ Sample Number	Diameter (Inches)	Construction Material	Total Depth (Feet)	Purge Method	Sample Method
MO-1	2	Stainless Steel	11.33	peristaltic	peristaltic
MO-2	2	Stainless Steel	13.21	peristaltic	peristaltic
MO-3	2	Stainless Steel	14.23	peristaltic	peristaltic
MW-4A	4	Carbon Steel	19.44	Grundfos	peristaltic
MW-5A	4	Carbon Steel	31.15	Grundfos	peristaltic
MW-5B	4	Carbon Steel	19.25	Grundfos	peristaltic
MW-6A	4	Carbon Steel	14.1	Grundfos	peristaltic
MW-6B	4	Carbon Steel	30.34	Grundfos	peristaltic
MW-8A	2	Stainless Steel	15.48	peristaltic	peristaltic
MW-9A	2	Stainless Steel	17.14	peristaltic	peristaltic

Table 2
Analytical Data Summary - Polychlorinated biphenyls
Pepper Steel and Alloy
Medley, Fl

	MO-1-207	MO-2-207	MO-3-207	MW-4A-207	MW-5A-207	MW-5B-207
	3/7/2007	3/7/2007	3/6/2007	3/6/2007	3/6/2007	3/6/2007
No PCBs were detected in the samples						

	MW-6A-207	MW-6A-207D	MW-6B-207	MW-8A-207	MW-9A-207
	3/6/2007	3/6/2007	3/6/2007	3/6/2007	3/6/2007
No PCBs were detected in the samples					

Sample MW-6A-207D is a duplicate of sample MW-6A-207.

Table 3
Analytical Data Summary - Lead, Arsenic
Pepper Steel and Alloy
Medley, Fl

	MO-1-207		MO-2-207		MO-3-207		MW-4A-207		MW-5A-207		MW-5B-207	
	3/7/2007		3/7/2007		3/6/2007		3/6/2007		3/6/2007		3/6/2007	
Arsenic (ug/l)	66		10	U	6.5	J	10	U	10	U	10	U
Lead (ug/l)	230		4.5	J	10	U	10	U	57		4.7	J

	MW-6A-207		MW-6A-207D		MW-6B-207		MW-8A-207		MW-9A-207		QA01PB	
	3/6/2007		3/6/2007		3/6/2007		3/6/2007		3/6/2007		3/7/2007	
Arsenic (ug/l)	10	U	10	U	10	U	10	U	10	U	10	U
Lead (ug/l)	10	U	10	U	8.8	J	10	U	10	U	10	U

Sample MW-6A-207D is a duplicate of sample MW-6A-207.
Sample QA01PB is a preservative blank.

Table 4
Analytical Data Summary - Field Parameters
Pepper Steel and Alloy
Medley, Fl

Sample ID	pH (SU)	Specific Conductance (mhos/cm)	Turbidity (NTU)	Temperature (C)
MO-1-207	9.0	1951	10.4	23.3
MO-2-207	8.3	586	2.08	24.9
MO-3-207	7.6	535	0.76	23.6
MW-4A-207	7.1	597	0.49	25.4
MW-5A-207	7.3	532	0.59	25.7
MW-5B-207	8.3	333	10.8	26.0
MW-6A-207	7.1	626	204	24.2
MW-6A-207D	Sample MW-6A-207D is a duplicate of sample MW-6A-207			
MW-6B-207	7.0	613	7.41	24.9
MW-8A-207	7.1	609	0.36	25.3
MW-9A-207	7.1	593	0.55	25.6

Table 5
Latitude and Longitude
Pepper Steel and Alloy
Medley, Fl

Sample ID	Latitude	Longitude
MO-1-207	25 52 28.907	80 21 13.084
MO-2-207	25 52 28.164	80 21 08.000
MO-3-207	25 52 25.328	80 21 11.774
MW-4A-207	25 52 21.209	80 21 08.521
MW-5A-207	25 52 21.538	80 21 15.589
MW-5B-207	25 52 21.551	80 21 15.700
MW-6A-207	25 52 29.470	80 21 16.344
MW-6A-207D	Sample MW-6A-207D is a duplicate of sample MW-6A-207	
MW-6B-207	25 52 29.523	80 21 16.147
MW-8A-207	25 52 28.757	80 21 08.855
MW-9A-207	25 52 27.441	80 21 06.500

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

April 6, 2007

4SESD-MTSB

MEMORANDUM

SUBJECT: FINAL Analytical Report
07-0314, Pepper Steel & Alloys, Inc.
Superfund Remedial

FROM: Denise Goddard
Quality Assurance Section Chemist

THRU: Marilyn Maycock, Chief
Quality Assurance Section

TO: Dan Thoman

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the associated contract Statement Of Work (SOW). In general, project data quality objectives have not been used to evaluate these data prior to release by the Quality Assurance Section. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report.

Analyses Included in this report:	Method Used:
Total Metals	
Total Metals	CLP Inorganics

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Report Narrative

Data Review and Validation Report
Site Name: Pepper Steel & Alloy, Medley, FL
Case No. 36228, Project No. 07-0314 , Work Order No. C71002
ELEMENT Nos. C071002-01 - C71002-15
Inorganic Analysis: Chemtech Consulting Group, Mountainside, NJ
Date Received from Lab: 03/26/07

The ESAT Work Team has reviewed the above-captioned CLP data package consisting of 15 water samples for arsenic and lead analysis by ICP-AES by SOW ILM05.3, according to the contract Statement of Work and EPA guidelines. This package presents acceptable contractual and technical performance with qualifications. Further details are provided below and in the attached review summary form.

ICP-AES Analysis

Examination of blank samples revealed no apparent low-level contamination with arsenic or lead as listed in Table 1.

cc: Nardina Turner

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

SAMPLES INCLUDED IN THIS REPORT

Project: 07-0314, Pepper Steel & Alloys, Inc. **Contract Lab Case: 36228**

Sample ID	Laboratory ID	MD#	D#	Matrix	Date Collected	Date Received
MW-00-207	C071002-01	3Z08		Groundwater	3/7/07 09:30	3/8/07 14:22
MO-3-207	C071002-02	3Z09		Groundwater	3/6/07 08:45	3/8/07 14:22
MO-4A-207	C071002-03	3Z10		Groundwater	3/6/07 14:05	3/8/07 14:22
MO-5A-207	C071002-04	3Z11		Groundwater	3/6/07 12:40	3/8/07 14:22
MO-5B-207	C071002-05	3Z12		Groundwater	3/6/07 13:25	3/8/07 14:22
MO-6A-207	C071002-06	3Z13		Groundwater	3/6/07 11:15	3/8/07 14:22
MO-6A-207D	C071002-07	3Z14		Groundwater	3/6/07 11:15	3/8/07 14:22
MO-6B-207	C071002-08	3Z15		Groundwater	3/6/07 10:20	3/8/07 14:22
MO-8A-207	C071002-09	3Z16		Groundwater	3/6/07 16:00	3/8/07 14:22
MO-9A-207	C071002-10	3Z17		Groundwater	3/6/07 15:05	3/8/07 14:22
MO-2-207	C071002-11	3Z18		Groundwater	3/7/07 08:15	3/8/07 14:22
MO-1-207	C071002-12	3Z19		Groundwater	3/7/07 08:45	3/8/07 14:22
QA01PB	C071002-13	3Z20		Preservative Blank	3/7/07 08:55	3/8/07 14:22

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
J	The identification of the analyte is acceptable; the reported value is an estimate.
Q-2	Result greater than MDL but less than MRL.

ACRONYMS AND ABBREVIATIONS

CAS	Chemical Abstracts Service Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
MDL	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
MRL	Minimum Reporting Limit - The analyte concentration which corresponds to the lowest quantitative point on the calibration curve or the lowest demonstrated level of acceptable quantitation.
TIC	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228
MD No: 3Z08 CHEM
D No:

Sample ID: MW-00-207 **Lab ID:** C071002-01

Matrix: Groundwater

Date Collected: 3/7/07 9:30

CAS No.	Analyte	Result	Qualifier	Units	CRQL	Prepared	Analyzed	Method
7439-92-1	Lead	10	U	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228
MD No: 3Z09 CHEM
D No:

Sample ID: MO-3-207 **Lab ID:** C071002-02

Matrix: Groundwater

Date Collected: 3/6/07 8:45

7439-92-1	Lead	10 U	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228

Sample ID: MO-4A-207

Lab ID: C071002-03

MD No: 3Z10 CHEM

D No:

Matrix: Groundwater

Date Collected: 3/6/07 14:05

7439-92-1	Lead	10 U	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228
MD No: 3Z11 CHEM
D No:

Sample ID: MO-5A-207 **Lab ID:** C071002-04

Matrix: Groundwater
Date Collected: 3/6/07 12:40

7439-92-1	Lead	57	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228

MD No: 3Z12 CHEM

D No:

Sample ID: MO-5B-207 **Lab ID:** C071002-05

Matrix: Groundwater

Date Collected: 3/6/07 13:25

CAS Number	Analyte	Result	Units	Dilution Factor	Prep Date	Analysis Date	Method
7439-92-1	Lead	4.7 J, Q-2	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228
MD No: 3Z13 CHEM
D No:

Sample ID: MO-6A-207 **Lab ID:** C071002-06

Matrix: Groundwater
Date Collected: 3/6/07 11:15

7439-92-1	Lead	10 U	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228
MD No: 3Z14 CHEM
D No:

Sample ID: MO-6A-207D **Lab ID:** C071002-07

Matrix: Groundwater

Date Collected: 3/6/07 11:15

7439-92-1	Lead	10 U	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228
MD No: 3Z15 CHEM
D No:

Sample ID: MO-6B-207 **Lab ID:** C071002-08

Matrix: Groundwater
Date Collected: 3/6/07 10:20

7439-92-1	Lead	8.8 J, Q-2	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228
MD No: 3Z16 CHEM
D No:

Sample ID: MO-8A-207 **Lab ID:** C071002-09

Matrix: Groundwater
Date Collected: 3/6/07 16:00

CAS No.	Analyte	Result	Qualifier	Units	RL	Prep Date	Analysis Date	Method
7439-92-1	Lead	10	U	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228
MD No: 3Z17 CHEM
D No:

Sample ID: MO-9A-207 **Lab ID:** C071002-10

Matrix: Groundwater

Date Collected: 3/6/07 15:05

7439-92-1	Lead	10 U	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228

MD No: 3Z18 CHEM

D No:

Sample ID: MO-2-207

Lab ID: C071002-11

Matrix: Groundwater

Date Collected: 3/7/07 8:15

CAS Number	Analyte	Result/Qualifier	Units	MRL	Analyzed	Prepared	Method
7439-92-1	Lead	4.5 J, Q-2	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228

Sample ID: MO-1-207

Lab ID: C071002-12

MD No: 3Z19 CHEM

D No:

Matrix: Groundwater

Date Collected: 3/7/07 8:45

7439-92-1	Lead	230	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Total Metals

07-0314, Pepper Steel & Alloys, Inc.

Contract Lab Case: 36228

Sample ID: QA01PB

Lab ID: C071002-13

MD No: 3Z20 CHEM

D No:

Matrix: Preservative Blank

Date Collected: 3/7/07 8:55

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7439-92-1	Lead	10 U	ug/L	10	3/14/07	3/19/07	CLP ILM05.3 P

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

March 24, 2007

4SESD-ASB

MEMORANDUM

SUBJECT: FINAL Analytical Report
07-0279, Pepper Steel & Alloys, Inc.
Superfund Remedial

FROM: Sallie Hale
ASB Organic Chemistry Section Chief

THRU: Gary Bennett, Chief
Analytical Support Branch

TO: Dan Thoman

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and may have been qualified if the applicable quality control criteria were not met. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are representative only of the samples as received by the laboratory.

Analyses Included in this report:	Method Used:
PCB Aroclors	
PCB aroclors	EPA 8082

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 90 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 90-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 90-day period, please contact our Sample Control Coordinator, Debbie Colquitt, by e-mail at Colquitt.Debbie@epa.gov, and provide a reason for holding samples beyond 90 days

cc: Nardina Turner

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

SAMPLES INCLUDED IN THIS REPORT

Project: 07-0279, Pepper Steel & Alloys, Inc.

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
MO-1-207	E071004-01	Groundwater	3/7/07 08:45	3/8/07 14:08
MO-2-207	E071004-02	Groundwater	3/7/07 08:15	3/8/07 14:08
MO-3-207	E071004-03	Groundwater	3/6/07 08:45	3/8/07 14:08
MW-4A-207	E071004-04	Groundwater	3/6/07 14:05	3/8/07 14:08
MW-5A-207	E071004-05	Groundwater	3/6/07 12:40	3/8/07 14:08
MW-5B-207	E071004-06	Groundwater	3/6/07 13:25	3/8/07 14:08
MW-6A-207	E071004-07	Groundwater	3/6/07 11:15	3/8/07 14:08
MW-6A-207D	E071004-08	Groundwater	3/6/07 11:15	3/8/07 14:08
MW-6B-207	E071004-09	Groundwater	3/6/07 10:20	3/8/07 14:08
MW-8A-207	E071004-10	Groundwater	3/6/07 16:00	3/8/07 14:08
MW-9A-207	E071004-11	Groundwater	3/6/07 15:05	3/8/07 14:08

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.

ACRONYMS AND ABBREVIATIONS

CAS	Chemical Abstracts Service Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
MDL	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
MRL	Minimum Reporting Limit - The analyte concentration which corresponds to the lowest quantitative point on the calibration curve or the lowest demonstrated level of acceptable quantitation.
TIC	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Science and Ecosystem Support Division
980 College Station Road, Athens, Georgia 30605-2700

PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MO-1-207 **Lab ID:** E071004-01

Matrix: Groundwater

Date Collected: 3/7/07 8:45

11104-28-2	PCB-1221 (Aroclor 1221)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.4 U	ug/L	1.4	3/15/07	EPA 8082

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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MO-2-207 **Lab ID:** E071004-02

Matrix: Groundwater

Date Collected: 3/7/07 8:15

11104-28-2	PCB-1221 (Aroclor 1221)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.4 U	ug/L	1.4	3/15/07	EPA 8082

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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MO-3-207 **Lab ID:** E071004-03

Matrix: Groundwater

Date Collected: 3/6/07 8:45

11104-28-2	PCB-1221 (Aroclor 1221)	1.3 U	ug/L	1.3	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.3 U	ug/L	1.3	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.3 U	ug/L	1.3	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.3 U	ug/L	1.3	3/15/07	EPA 8082

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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MW-4A-207 **Lab ID:** E071004-04

Matrix: Groundwater

Date Collected: 3/6/07 14:05

11104-28-2	PCB-1221 (Aroclor 1221)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.4 U	ug/L	1.4	3/15/07	EPA 8082

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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MW-5A-207 **Lab ID:** E071004-05

Matrix: Groundwater

Date Collected: 3/6/07 12:40

CAS Number	Analyte	Result Qualifier	Units	MDL	Date Analyzed	Method
11104-28-2	PCB-1221 (Aroclor 1221)	1.5 U	ug/L	1.5	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.5 U	ug/L	1.5	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.5 U	ug/L	1.5	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.5 U	ug/L	1.5	3/15/07	EPA 8082

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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MW-5B-207 **Lab ID:** E071004-06

Matrix: Groundwater

Date Collected: 3/6/07 13:25

11104-28-2	PCB-1221 (Aroclor 1221)	1.5 U	ug/L	1.5	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.5 U	ug/L	1.5	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.5 U	ug/L	1.5	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.5 U	ug/L	1.5	3/15/07	EPA 8082

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Region 4 Science and Ecosystem Support Division
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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MW-6A-207 **Lab ID:** E071004-07

Matrix: Groundwater

Date Collected: 3/6/07 11:15

11104-28-2	PCB-1221 (Aroclor 1221)	1.5 U	ug/L	1.5	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.5 U	ug/L	1.5	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.5 U	ug/L	1.5	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.5 U	ug/L	1.5	3/15/07	EPA 8082

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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MW-6A-207D **Lab ID:** E071004-08

Matrix: Groundwater

Date Collected: 3/6/07 11:15

11104-28-2	PCB-1221 (Aroclor 1221)	1.6 U	ug/L	1.6	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.6 U	ug/L	1.6	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.6 U	ug/L	1.6	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.6 U	ug/L	1.6	3/15/07	EPA 8082

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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MW-6B-207 **Lab ID:** E071004-09

Matrix: Groundwater

Date Collected: 3/6/07 10:20

11104-28-2	PCB-1221 (Aroclor 1221)	1.3 U	ug/L	1.3	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.3 U	ug/L	1.3	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.3 U	ug/L	1.3	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.3 U	ug/L	1.3	3/15/07	EPA 8082

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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MW-8A-207 **Lab ID:** E071004-10

Matrix: Groundwater

Date Collected: 3/6/07 16:00

CAS Number	Analyte	Results (Qualifier)	Units	MDL	Date Analyzed	Analysis Method
11104-28-2	PCB-1221 (Aroclor 1221)	1.3 U	ug/L	1.3	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.3 U	ug/L	1.3	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.3 U	ug/L	1.3	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.3 U	ug/L	1.3	3/15/07	EPA 8082

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PCB Aroclors

07-0279, Pepper Steel & Alloys, Inc.

Sample ID: MW-9A-207 **Lab ID:** E071004-11

Matrix: Groundwater

Date Collected: 3/6/07 15:05

11104-28-2	PCB-1221 (Aroclor 1221)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
53469-21-9	PCB-1242 (Aroclor 1242)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
11097-69-1	PCB-1254 (Aroclor 1254)	1.4 U	ug/L	1.4	3/15/07	EPA 8082
37324-23-5	PCB-1262 (Aroclor 1262)	1.4 U	ug/L	1.4	3/15/07	EPA 8082

JOB BOOK

PROJECT NAME Pepper Steel & Alloy

PROJECT NUMBER 07-0279, 07-0314(CLP)

CREW Thoman(EPA), Herndon (ESAT)

DATE 3/6/07 BOOK # ~~2~~ 2 OF 2

WEATHER Mild, Cloudy

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JOB BOOK

PROJECT NAME PEPPER STEEL

PROJECT NUMBER 07-0279

CREW THOMAN, HERNDON, ROSE

DATE 3-6-07 BOOK # 1 OF 2

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CURVE FORMULAS

$T = R \tan \frac{1}{2} I$	$R = T \cot. \frac{1}{2} I$	Chord def. $= \frac{\text{chord}^2}{R}$
$T = \frac{50 \tan \frac{1}{2} I}{\text{Sin.} \frac{1}{2} D}$	$R = \frac{50}{\text{Sin.} \frac{1}{2} D}$	No. chords $= \frac{I}{D}$
$\text{Sin.} \frac{1}{2} D = \frac{50}{R}$	$E = R \text{ ex. sec } \frac{1}{2} I$	
$\text{Sin.} \frac{1}{2} D = \frac{50 \tan \frac{1}{2} I}{T}$	$E = T \tan \frac{1}{4} I$	Tan. def. $= \frac{1}{2}$ chord def.

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.) and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance. Multiply the angle by .01745, and the product by the distance.

GENERAL DATA

RIGHT ANGLE TRIANGLES. Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt. $10. 10^2 + 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. $25. 25^2 + 200 = 3.125$; $100 - 3.125 = 96.875$ = Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

LEVELING. The correction for curvature and refraction, in feet and decimals of feet is equal to $0.574 d^2$, where d is the distance in miles. The correction for curvature alone is closely, $\frac{2}{3} d^2$. The combined correction is negative.

PROBABLE ERROR. If d_1, d_2, d_3, etc. are the discrepancies of various results from the mean, and if Σd^2 = the sum of the squares of these differences and n = the number of observations, then the probable error of the mean $= \pm 0.6745 \sqrt{\frac{\Sigma d^2}{n(n-1)}}$

MINUTES IN DECIMALS OF A DEGREE

1'	.0167	11'	.1833	21'	.3500	31'	.5167	41'	.6833	51'	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

INCHES IN DECIMALS OF A FOOT

1-16	3-32	1/8	3-16	1/4	5-16	3/8	1/2	5/8	3/4	7/8
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729
1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

JK
3-6-07 (1)

PEPPER STEEL 07-0279
MEDLEY FL

ON DUTY 0730
ON SITE ~~08~~ 0750

HELD SAFETY MTG

SAMPLE MONITOR WELLS FOR LEAD, ARSENIC, PCBs WITH PERISTALTIC PUMP AND TEFLON TUBING/VACUUM JUG ASSEMBLY. WILL FILL 2-1L AMBER GLASS 1-1L POLY AT EACH LOCATION UNLESS OTHERWISE NOTED

WILL OPERATE UNDER FOLLOWING PROCEDURE

SEQ PROC -105-RD
101 -RD
102 -RD
103 -RD
105 -RD
202 -RD
203 -RD
205 RD
209 RD

ALL FIELD PARAMETER AND CALIBRATIONS IN BOOK 2

3-6 DB (2)

MO-3 2" SS

TD 14.23
DTW 10.93
3.30
= PURGE VOL 1.7 gal

START PURGE 0825 w/ PERISTALTIC
WILL SPLIT SAMPLE W/ OWNER
CONTRACTOR EAG
MARK SAENBERG

SAMPLE TIME 0845
THOMAN COLLECTED MS/MSD
FILLED 3-1L AMBER
1-POLY

EAG - GAVE - 2-1L AMBER
3-500 ML POLY
3-40 ML VOA

HERNDON PRESERVED

WATER LEVEL INDICATOR FAILED. LEVELS ARE APPROXIMATELY OF

MO 6A 4" CARBON STEEL 3-6 DB (3)
TD 14.1
DTW 5.35
8.75
PURGE VOL ~ 1 gal PURGE WITH GRUNDFOS
START PURGE 1030
PURGED DRY WITH GRUNDFOS. CONTINUE PURGE WITH
PERISTALTIC, PURGE ~ 5 gal ADDITIONAL
SAMPLE TIME 11:15
THOMAN COLLECTED, HERNDON PRESERVED

MO 6B 4" CARBON STEEL
TD 30.34
DTW 6.68
23.66 - PURGE VOL 48 gal
PURGE WITH GRUNDFOS / SAMPLE PERISTALTIC
START PURGE 0952
TEFLON TUBING SET AT 20 FT,
GRUNDFOS AT TOP OF WATER COLUMN
5 gal BUCKETS THOMAN

Sample time 10:20 THOMAN COLLECTED
HERNDON PRESERVED

5B WELL CLOSEST TO [illegible]

3-6 [illegible]

5A 4" CARBON STEEL (4)
TD 31.75 30.5
DTW 6.05
24.45 PURGE VOL 40 gal

START PURGE 1225 WITH GRUNDFOS AT TOP OF WATER COLUMN TEFLON TUBING FOR PERISTALTIC AT 20 FT, SAMPLE WITH PERISTALTIC
5g BUCKETS [illegible] THOMAS COLLECTED
Sample taken 1240 HERNDON PRESERVED
5A D - Duplicate 1245

5B 4" CARBON STEEL
TD 19.25
DTW 7.30
11.95 PURGE VOL 24 gal

START PURGE 1305 WITH GRUNDFOS AT TOP OF WATER COLUMN TEFLON AT 12 FT TO SAMPLE WITH PERISTALTIC
5 GAL BUCKETS [illegible]

SAMPLE TIME 1325 THOMAS COLLECTED HERNDON PRESERVED

3-6 [illegible]

4A 4" CARBON STEEL (5)
TD 19.44
DTW 7.3
12.14 PURGE VOL 24 gal

START PURGE 1355 WITH GRUNDFOS TEFLON TUBING AT 15 FT WILL SAMPLE WITH PERISTALTIC

5 GAL BUCKETS [illegible]
Sample time 1405

THOMAS COLLECTED
HERNDON PRESERVED

3-6 DH

9A 2" SS (6)
TD 17.14
DTW 6.0
11.14 PURGE VOL 6 gal
PURGE/SAMPLE WITH PERISTALTIC
START 1435
SAMPLE TIME 1505

THOMAN COLLECTED
HENDERSON PRESERVED

3-6 DH

MWRA 2" SS (7)
TD 15.48
DTW 5.8
9.68 PURGE VOL 5 gal

PURGE/SAMPLE WITH PERISTALTIC

START 1535

SAMPLE TIME 1600

THOMAN COLLECTED
HENDERSON PRESERVED

OFF DUTY ~~1?3~~ 1730

BROKE 1-1L AMBER WHILE ~~[illegible]~~ PACKING
SAMPLE MWRA

3-7   OV   (8)

ONSITE 0720

CLEAR WARM
HELD SAFETY BRIEFING

MW-02-S
MO-2   2" SS
TD 13.25
DTW 11
2.2   PURGE VOL 1.5 gal
PURGE SAMPLE WITH PERISTALTIC
START PURGE 0802
SAMPLE TIME 8:15

THOMAN COLLECTED
HEANDON PRESERVED

3-7-02   (9)

MO1   2" SS
TD 11.33
DTW 10.5
.8   PURGE VOL 3 gal
START PURGE 0835
- PURGE SAMPLE WITH PERISTALTIC
- WELL PURGED DRY, VERY SLOW RECOVERY
SAMPLE TIME 0845
COLLECTED PCB SAMPLE FROM PUMP DISCHARGE. INSUFFICIENT VOLUME TO USE VACUUM CAP.

THOMAN FILLED 1-1L POLY
2-1 L AMBER
HEANDON PRESERVED

LV SITE 0915

Site Name Pepper Steel & Alloy

Site Location Medley, FL

Project Number 07-0279, 07-0314(a1)

Project Leader Dan Thoman

Sample Team Leader Dan Thoman

Include in notes, where appropriate:

*Number and intitial/sign each page
*Applicable procedure numbers
*Collection equipment
*Measurement equipment w/identification numbers
*Calculations (e.g., purge volumes)
*Sample ID and Station ID
*Date and Time of collection
*Description of sample location, w/map or sketch, if applicable
*GPS coordinates
*Description of sample
*Who collected sample (All)
*How the sample was collected
*Parameters, characteristics or quantities to be detemined w/sample containers
*Diagrams of process, where applicable
*Photographic or videographic logs, where applicable
*Weather conditions

(per SESDPROC-010)

5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

INCHES IN DECIMALS OF A FOOT

1-16	3-32	1/8	5-16	1/4	5-16	3/8	7/16	1/2	9/16	5/8	11/16
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729	
1	2	3	4	5	6	7	8	9	10	11	
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	

3/6/07 D

- This logbook Contains Water Instrument Calibration & Verification Data

- This logbook contain GPS Lat/Long data for Monitoring Wells located at the Pepper Steel & Alloy site in Medley, FL

BUFFER 4 - LOT 060326

7 - 060302-24

10 - 060419-24

COND 46.7 - 090560

6445 - 072760

(2) 3/6/07

Water Instrument Calibration / Verification
Conducted by Brian Herndon @ 8:15

Turbidimeter HACH 2100P #17 s/n 0104000028641

std	4.82	52.4	490	Battery ✓
Reading	4.89	52.3	494	

pH Meter Orion model 230A #11 s/n 009707

std	7.	10.	slope 99.9
cal point	7.00	10.00	

Orion Conductivity + Temperature Meter

model 140		std 46.7	445
#710150 s/n 09100655		Reading 47	436
Temp Standard	SRA ID 07-005-TH		cell .677
Orion	15.9°C		
Std'd	15.9°C		

Completed @ 0825

(3) 3/6/07

MW-03 Purge Started at 8:25
Parameters taken by Brian Herndon

Time	pH	Cond	Temp	Turb
8:27	8.35	464	23.6	2.57
8:32	8.37	486	23.9	1.69
8:36	7.82	525	24.0	0.91
8:40	7.60	535	23.6	0.76

Sample taken @ 0845
Lat.
Long.

(4) Parameters taken by Brian Herndon

MW6A lat: 25°52'29.470 long: 80°21'16.344

Start	time	pH	Cond	Temp	Turbidity
	10:46	7.19	621	23.5	158
	10:53	7.20	627	24.3	267
	10:58	7.15	626	24.4	320
	11:10	7.09	626	24.2	204

Sample taken 11:15

Parameters taken by Brian Herndon

MW6B lat: 25°52'29.523N long 80°21'16.447 W

	time	pH	Cond	Temp	Turbidity
Grundfos	10:02	7.82	542	24.1	8.27
Purge H2O	10:08	7.03	613	24.9	7.41
Peristaltic	10:12	7.24	586	24.3	22.5
Purge H2O	10:16	7.20	590	23.9	14.2
	10:18	7.18	605	24.3	12.8

Sample taken 10:20

3/6/07 (5)

MW5A lat: 25°52'21.538 N Long: 80°21'15.589

Purge started 12:25

time	pH	Cond	Temp	Turb
12:27	7.40	484	26.3	16.5
12:31	7.27	527	25.9	3.24
12:33	7.25	531	25.7	2.07
12:40	7.25	532	25.7	0.59

Sample time 1240

Parameters taken by Brian Herndon

FROM INSTACALC BY HARVEY 25 52 21.557 80 21 15.700

MW5B lat: 25°52'21.538 N long: 80°21'15.589°W

Purge started = 1310

time	pH	Cond	Temp	Turb
13:15	7.90	343	26.5	21.6
13:19	8.14	339	26.0	17.2
13:25	8.33	333	26.0	10.8

Parameters taken by Brian Herndon

Sample taken 13:26

3/6/07 (6)

MW4A Lat: 25°52'21.209"N Long: 80°21'08.521"W

Purge started @ 1350 BH 1358

time	pH	Cond	Temp	Turb
1357	7.10	591	25.8	1.60
1400	7.12	595	25.4	0.98
1403	7.11	597	25.4	0.49

Parameters taken by Brian Herndon

Sample taken @ 1405

MW9 lat: 25°52'27.441"N long: 80°21'06.500"W

time	pH	Cond	Temp	Turb
1442	7.25	591	25.8	1.77
1448	7.17	594	25.6	1.07
1503	7.09	593	25.6	0.55

Parameters taken by Brian Herndon

Sample taken @ 15:05

MW8 lat: 25°52'28.757"N long: 80°21'08.865"W

Parameters taken by Brian Herndon

time	pH	Cond	Temp	Turb
1537	7.08	603	25.6	7.78
1540	7.07	609	25.4	1.53
1549	7.02	608	25.3	0.61
1557	7.08	609	25.3	0.36

Sample taken @ 1600

3/6/07 (7)

BH

MW2 ~~MW2~~

lat: 25°52'28.166"N long: 80°21'08.000"W

Meter Post-Verification

Conducted by Herndon @ 1605

HACH 2100P Turbidimeter #17 S/N 01040000285411

Std	1.92	52.4	490
Reading	1.81	52.2	485

Orion model 230A pH Meter #11 S/N 009707

Std	4	7	10
Reading	3.93	6.89	9.81

Orion Model 140 Conductivity + Temp. Probe

#710150 S/N 9910015E

Temp. Standard EPA ID 07-003-TH

Std Probe 28.8 °C

Orion Probe 28.9

Cond. Std.	46.7		445
Reading	47		436

BH 3/6/07

(8)

3/7/07

Water Instrument Calibration / Verification

Taken by: Brian Herndon @ 0750

Turbidimeter HACH 2100P # 17 SN 010400028541

std	4.82	52.4	490	Battery ✓
Reading	4.80	52.7	490	

pH Meter Orion model 230A # 11 SN 009707

std	7	10	slope = 101.0
Calibration Point	7.00	10.0	

Orion Conductivity & Temp. Meter

Model 140 #710150 SN 09100155

Temp. Standard EPA ID 07-003-TH

std	46.7	445	cell	.677
Reading	47	436		

Temp. Probe

Orion ____ °C

Temp. 15.1

Std. 15.2

(9)

MO2

Lat: 25°52'28.164"N long: 80°21'08.000"W

Purge started 8:04

time	pH	Cond	Temp	Turbidity
8:05	7.96	630	23.9	11.4
8:08	8.31	602	24.8	3.17
8:10	8.28	586	24.9	2.08

Sample taken @ 8:15

MO1 ~~25°~~ BH

Lat: 25°52'28.807"N long: 80°21'13.089"W

time	pH	Cond	Temp	Turbidity
8:40	9.04	1951	23.3	10.4

Slow recharge Sample taken @ 8:45

Preservative Blank taken @ 8:55 by Herndon & Thomas

Blind Blank assigned MW00-207 @ 9:30

MO3 Lat 25 52 25.324"

Long 80 21 11.774

3/7/07 (10)

Water Instrument Post Verification

Hach 2100P Turbidimeter #17 S/N 01070002591

std	4.87	52.4	490
Reading	4.75	52.4	475 BH 488

Orion Model 230A pH Meter #11 S/N

std	4	7	10
Reading	3.99	6.94	9.91

Orion Model 145 Conductivity/Temp. Probe
#710150 S/N 09100165

Std	46.7	445	Cell 677
Reading	48	443	

Temp. Verification Std. EPA ID 07-003-TH

std temp	15.7	°C
Orion Temp	15.7	

3/7/07 BH

Appendix I:

DERM Cooperative Agreement and Soils Memo

Pepper Steel + Alloys
file: 7.6

MIAMI-DADE COUNTY

Department of Environmental Resources Management
Office of Administrative Services
33 SW 2nd Avenue, 12th Floor
Miami, Florida 33130-1540
T 305-372-6789 F 305-372-6760
miamidade.gov

January 24, 2007

Ms. Rhonda Foucher
Waste Management Division
USEPA - Region 4
61 Forsyth Street SW
Atlanta, GA 30303

Re: Final Closeout Report for Cooperative Agreement #V97460802-0
Superfund State Site, CERCLA, Section 104
Pepper Steel and Alloys Superfund Site

Dear Ms. Foucher:

On October 10, 2002, Miami-Dade County (MDC) formally entered into a Cooperative Agreement (CA) with the US Environmental Protection Agency (EPA) in order to perform work associated with the operation & maintenance of the Pepper Steel & Alloys Superfund Site located in Medley, Florida. The original CA was set to expire on October 1, 2004. On June 30, 2004, the CA was extended for an additional period of two years. The new expiration date for the CA was October 1, 2006. On September 18, 2006 Miami-Dade County was instructed by the EPA to commence with the process of closing the CA. Attached to this letter report please find a copy of the Financial Status Report, the Lobbying and Litigation Certification Form, and the MBE/WBE Utilization Form.

The following is a breakdown of the total costs to date for the project and a brief summary of the activities performed at the site:

- Total approved in Agreement = $372,885
- Subcontractor costs = $172,452
- MDC Management & Benefits = $12,143
- Total remaining in Agreement = $188,290

The project was to be performed in two separate phases. Phase I consisted of the clearing & grubbing of approximately 12 acres of land and a visual observation of the condition of the monolith and the surrounding property. Fieldwork on Phase I commenced on December 9, 2002 and was completed by April 4, 2003. A total of eight truckloads of loose lumber, 5,200 Cubic Yards (CY) of intermingled brush and wood, 5 truckloads of wood chipper mulch, 182 CY of solid waste, and 400 CY of cane grass cuttings were removed and properly disposed. All Phase I work was closely monitored and documented by representatives of both Miami-Dade County DERM and the EPA.

Following the initial land clearing activities, representatives of the EPA, DERM, and the subcontractor performed a site visit. It was determined that the limerock cover on top of the monolith was in poor condition and had been compromised at several locations. Unauthorized activities had been conducted on top of the monolith for several years, including truck parking, truck repairs and parts storage, which accounted for some of the damage. Additional damage was the result of overgrown vegetation (Australian pines and other brush) on the monolith. The drainage collar on the perimeter of the monolith was also damaged for the same reasons. At some points, the drainage collar was nonexistent. Following the clearing activities, each monitoring well was identified and labeled according to the original as-built survey. The fencing along the perimeter of the property appeared to be in bad condition and/or absent so it was determined that new fencing was required at various predetermined locations.

Phase II consisted of additional land clearing of solid waste, cane grass cutting, performance of a site survey, and the installation of fencing and signs at various locations throughout the site. The Work Order for Phase II was executed on November 19, 2003. Work commenced immediately thereafter with the initial cutting of the overgrown cane grass. Six additional cuttings of the cane grass would follow every two months for a period of one year. Immediately following the initial cane grass cutting, the contractor conducted the site survey and the new fence installation. Signs were eventually installed on the new fence at various locations along the perimeter of the property identifying the site as a Superfund Site and warning against unauthorized entry. Throughout the next year and a half, the subcontractor performed additional cane grass cuttings. On several occasions, trespassers had to be removed from the site and on one occasion solid waste that had been illegally dumped at the entrance to the site had to be removed and disposed. Subcontractor work on the site ended on September 5, 2005. All Phase II work was closely monitored and documented by representatives of Miami-Dade County DERM and the EPA.

During a routine visit to the site on March 17, 2005, it was noted that someone was clearing and grubbing the southeastern portion of the site (former Norman Bloom parcel), which included the southern portion of the monolith. The EPA representative in West Palm Beach, Florida, Mr. Jan Rogers, was immediately notified of the events. Mr. Rogers was aware of the work and also stated that the Norman Bloom portion of the property had been sold to a new owner. The new owner's intent was to redevelop the parcel for purposes of truck parking, materials staging and other activities. Subsequently, a follow-up site visit was conducted on June 20, 2006 between the DERM Project Manager, Mr. Victor Mendez, and Mr. Rogers of the EPA. Mr. Rogers concluded that the work was in accordance with the site restrictions and stated that the two remaining parcels were probably also going to be sold and redeveloped in the same fashion in the near future.

The final cane grass cutting on the two remaining parcels was performed in August 2005. On September 26, 2005, Mr. Rogers of the EPA instructed Miami-Dade County to stop all work at the site until further notice.

No work under this CA other than some routine site visits by the DERM Project Manager was performed from September 2005 to September 2006 at the site.

We hope that the information contained in this letter report is acceptable to you and meets the CA closure requirements of the EPA. In closing, Miami-Dade County and its staff would like to thank the EPA for the opportunity to work on this project. It was a pleasure working with you, Ms. Julie Santiago-Ocasio (EPA-Atlanta) and with Mr. Jan Rogers (EPA-West Palm Beach). Please don't hesitate to call us if future work is required at this site or any other EPA site within Miami-Dade County.

If you have any questions regarding the above or any other matter, please call Mr. Victor Mendez of DERM's Airports & Contracts Section or me at (305) 372-6789.

Sincerely,

Carlos Espinosa, P.E., Director
Miami-Dade County DERM

VM
File#14813/HWR
Pc: Jan Rogers – USEPA (West Palm)
Paul Voight – DERM
Manny Almuina – DERM

MIAMI-DADE

MEMORANDUM

ERM

TO: Section Chiefs
Pollution Control Division

DATE: February 8, 2002

FROM: Wilbur Mayorga, P.E., Chief
Pollution Remediation Section

SUBJECT: Natural Background Concentrations in Miami-Dade County Soil

The results of the natural background concentration study for Miami-Dade County soils are provided in the table below for your information. The fourteen inorganic chemicals provided in the table were measured in 38 unsaturated surficial soil samples collected from unimpacted areas of Miami-Dade County. The University of Florida Center for Environmental and Human Toxicology statistically analyzed the results. The following summary provides the best statistical descriptor of the background results (i.e., the Minimum Variance Unbiased Estimate of the mean) for each of the chemicals analyzed:

Natural Background Concentrations in Miami-Dade County Soils

Chemical Name	Natural Background Concentration (mg/kg)	Chemical Name	Natural Background Concentration (mg/kg)
Arsenic	1.2	Lead	26
Aluminum	2656	Manganese	55
Barium	7	Mercury	0.08
Cadmium	0.1	Nickel	2.1
Chromium	6.8	Selenium*	<0.45
Copper	4.1	Silver*	<0.025
Iron	2176	Zinc	12

** The data for selenium and silver were not analyzed statistically because all of the selenium results were below the detection limit and silver was detected in only one sample.*

If you have any question, please contact me at extension 6700.

pc Jose Gonzalez, P.E.
PRS Staff

Table 1. Soil Concentrations of Twelve Inorganics in Miami-Dade County Soils (mg/kg)

#	Surficial Soils	ID	As	Pb	Al	Ba	Cd	Cr	Cu	Fe	Mn	Hg	Ni	Zn
1	Viscaya	Vis1	0.600	33.15	2034.1	4.96	0.125	5.51	5.50	1301.9	49.42	0.1620	1.77	12.67
2	Viscaya 2	Vis2	0.710	268.50	3549.1	6.71	0.154	6.15	5.00	2167.5	97.66	0.2432	2.33	20.14
3	Virginia3	VK3	3.890	11.66	599.8	8.06	0.375	6.20	6.20	1675.3	17.06	0.1110	2.16	27.91
4	Matheson	Mat	0.500	0.20	908.4	4.67	0.049	3.70	6.90	947.9	6.65	0.0472	0.95	8.66
5	Cutler Natural	CN	0.890	17.16	2047.0	5.25	0.068	5.13	2.13	1104.3	27.18	0.0497	1.64	7.12
6	Oleta1	Ole1	0.510	0.26	341.0	6.30	0.160	1.92	4.62	725.2	17.81	0.2217	6.85	12.33
7	Oleta3	Ole3	1.860	41.92	223.0	4.67	0.090	1.97	1.57	700.0	10.80	0.0338	1.79	6.19
8	Oleta4	Ole4	1.290	35.24	381.0	4.22	0.062	2.51	1.64	801.5	7.55	0.0349	1.16	12.14
9	Greynold1	Gry1	0.590	12.55	1488.6	7.57	0.131	3.43	7.60	1702.3	54.84	0.2250	1.10	19.97
10	Greynold2	Gry2	0.340	36.59	645.9	6.63	0.073	1.89	3.13	1084.2	15.09	0.1222	1.38	12.56
11	Greynold3	Gry3	2.580	37.67	674.7	7.56	0.367	10.64	6.40	801.4	24.95	0.1988	1.64	29.89
12	Greynold4	Gry4	0.100	16.92	945.7	6.09	0.140	2.10	2.69	899.2	31.34	0.1528	1.30	15.84
13	Countyli1	CL1	0.100	5.71	467.1	2.50	0.028	1.62	0.76	273.5	2.58	0.0115	0.58	4.80
14	Countyli2	CL2	0.100	11.94	150.6	2.60	0.067	2.39	1.51	117.9	14.38	0.0141	0.48	7.17
15	Dolphin C	DC	0.100	5.05	91.4	1.48	0.016	0.60	0.35	99.4	1.31	0.0075	0.30	2.79
16	Madden1	Mad1	0.320	7.35	420.1	5.64	0.074	1.43	5.10	740.4	14.29	0.0242	0.74	11.84
17	Madden2	Mad2	0.100	5.13	757.8	6.05	0.075	2.17	6.10	675.1	16.30	0.0195	0.88	11.25
18	Madden3	Mad3	0.910	22.59	693.0	8.93	0.090	2.26	12.60	1404.9	24.31	0.0203	0.93	10.82
19	Madden4	Mad4	1.060	40.73	744.6	16.80	0.254	3.47	8.70	1446.9	40.59	0.0249	1.17	30.02
20	Madden5	Mad5	1.960	10.03	1018.8	6.74	0.066	3.32	2.65	1890.8	14.16	0.0148	1.24	7.73
21	Madden6	Mad6	2.600	23.25	715.2	10.50	0.074	2.94	3.23	1582.2	19.59	0.0158	1.81	3.89
22	Madden7	Mad7	1.620	5.96	677.2	7.27	0.070	2.49	2.57	1060.5	20.15	0.0124	1.48	5.77
23	Madden8	Mad8	1.920	12.46	751.5	7.69	0.065	2.05	2.67	1777.7	11.28	0.0149	0.92	4.00
24	Tamiami Complex No 5	Site 15	0.957	17.16	1660.3	3.81	0.017	3.30	1.71	2102.3	17.86	0.0078	0.96	4.19
25	L. and P. Thompson Park	Site 18	2.090	23.78	7965.4	4.86	0.035	18.82	3.95	4915.5	107.56	0.0277	3.17	5.49
26	Boystown	Site 14	0.620	11.66	2825.7	4.50	0.008	6.89	1.52	2755.2	12.45	0.0267	1.84	2.15
27	MB Thompson Campground	Site 3C	0.100	0.20	612.8	3.63	0.080	6.52	0.57	547.6	20.67	0.0035	1.63	0.72
28	MB Thompson Campground	Site 6C	0.662	0.26	574.4	2.52	0.037	4.86	0.51	525.5	12.50	0.0026	1.01	0.52
29	Deering Estate Addition	Site 13	0.374	94.38	3379.3	13.81	0.086	3.88	6.07	2491.9	276.53	0.0595	3.10	12.09
30	Deering Estate B	Site 12	0.573	11.72	4787.7	4.22	0.027	11.72	1.37	2978.4	44.10	0.0622	1.94	4.86
31	Deering Estate A	Site 11	0.655	6.41	3827.0	4.84	0.024	8.26	1.46	2243.4	36.48	0.0579	1.90	7.08
32	Snapper Creek Park B	Site 10	1.084	6.57	5344.3	8.11	0.023	13.09	1.32	2751.7	33.42	0.0518	2.87	6.30
33	East Greynolds Park	Site 7	0.823	49.06	2364.2	9.43	0.094	5.67	4.22	2306.7	77.77	0.1400	1.26	19.18
34	Snapper Creek Park A	Site 9	0.177	7.87	3477.3	14.87	0.342	5.95	5.58	2274.5	49.38	0.1594	1.77	95.01
35	Matheson Hammock	Site 8	0.361	9.35	4044.7	11.04	0.063	9.09	2.82	2083.7	215.64	0.1139	2.27	6.23
36	L. and P. Thompson Park	Site 17	1.670	29.18	9689.0	6.95	0.025	23.62	2.82	8064.2	257.37	0.0202	4.45	4.17
37	Owaissa Bauer Park	Site 20	1.454	20.40	9355.1	9.85	0.078	23.22	7.20	4278.7	156.46	0.0836	5.48	5.28
38	Castellow Hammock Park	Site 19	2.929	33.99	23835.5	12.92	0.035	58.47	5.90	17280.4	220.48	0.0642	14.14	8.16

Table 2. Statistical Descriptors

Parameter	As	Pb	Al	Ba	Cd	Cr	Cu	Fe	Mn	Hg	Ni	Zn
Summary Statistics												
n *	38	38	38	38	38	38	38	38	38	38	38	38
Minimum	ND	0.2	91.4	1.48	0.008	0.6	0.35	99.4	1.31	0.0026	0.3	0.52
Maximum	3.89	268.50	23836	16.80	0.37	58.47	12.60	17280	276.53	0.24	14.14	95.01
Arithmetic Mean	1.031	25.89	2739	6.95	0.096	7.35	3.86	2173	54.68	0.070	2.17	12.29
Arithmetic STD	0.911	44.34	4293	3.50	0.092	10.19	2.70	2922	72.89	0.070	2.39	15.70
Mean (ln transformed data)	-0.422	2.41	7.2	1.81	-2.707	1.52	1.06	7.2	3.32	-3.23	0.47	2.07
STD (ln transformed data)	1.070	1.60	1.2	0.52	0.873	0.91	0.84	1.0	1.19	1.184	0.72	0.97
Geomean	0.655	11.18	1293	6.14	0.067	4.55	2.90	1361	27.71	0.039	1.60	7.91
GeoSTD	2.915	4.93	3.4	1.69	2.394	2.49	2.32	2.7	3.29	3.27	2.06	2.63
95% of data	3.810	154.22	9734	14.51	0.280	20.5	11.6	6908	196.5	0.276	5.25	38.78
Skewness	1.289	4.737	3.594	1.024	2.049	3.808	1.025	4.145	2.043	1.162	3.810	4.215
CV	0.883	1.712	1.568	0.504	0.963	1.386	0.700	1.344	1.333	1.005	1.105	1.278
Distributional Test												
Shapiro-Wilk Test at 5% signif.												
Reject Normal?	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Reject Lognormal?	no**	no**	no	no	no	no	yes	no	no	no	no	no
Q-Q Plot Fit (LN or N)	LN**	LN**	LN	LN	LN	LN	LN	LN	LN	LN	LN	LN
UCL Statistics												
n	32	34	38	38	38	38	38	38	38	38	38	38
MVUE Mean	1.22	25.89	2656	7.01	0.10	6.80	4.08	2176	54.62	0.077	2.06	12.40
MVUE STD	1.01	26.90	4404	3.87	0.10	7.35	3.95	2613	86.36	0.121	1.65	14.44
95%LCL Bootstrap-t (parametric)	0.96	19.43	1730	6.05	0.07	5.14	3.16	1601	36.50	0.052	1.66	9.14
95%UCL Bootstrap-t (parametric)	1.55	34.89	4114	8.14	0.13	9.11	5.27	2996	83.13	0.116	2.57	17.02
95% UCL Bootstrap-t (PROUCL) (nonp	1.53	65.49	4903	8.03	0.13	12.78	4.69	3968	82.01	0.090	3.48	20.83

All concentrations in mg/kg.
NA = This statistic not applicable for this inorganic.
ND = Non-detect
* VK4 was removed before results were analyzed.
** Results were computed excluding the six non-detects for As and four lowest values for Pb.
***Default leachability values are currently not available.
#Direct exposure value based on acute toxicity considerations

Sle 7.8

U.S. ENVIRONMENTAL PROTECTION AGENCY
Environmental Response Team
2890 Woodbridge Avenue, Building 18
Edison, New Jersey 08837-3679

TO: Jan Rogers, Region IV, RPM

FROM: Edward Bates, ORD
Jeff Catanzarita, ERT

DATE: Monday, July 26, 2004

RE: **The Redevelopment of the Pepper Steel and Alloys, Inc. Superfund Site Located in Medley, FL**

Introduction:

In 2003, the United States Environmental Protection Agency (EPA) Region 4 requested EPA's Environmental Response Team (ERT) and the Office of Research and Development (ORD) personnel to assist it with a reuse assessment of the Pepper Steel and Alloys, Inc. Superfund Site ("Site"). This memorandum provides EPA Region 4 with a technical assessment regarding the potentials and/or limitations for the redevelopment of the Site based on field observations and laboratory results of that field effort. The field investigation evaluated three aspects of the site relevant to reuse: site contamination (*i.e.*, soil and groundwater); geo-technical properties; and site stormwater drainage issues. For brevity this document focuses on the results of the most recent work delineated in EPA's ERT REAC Trip Report, dated July 2004. For quick reference, please find attached some of the tables and figures of that report. Please note, however, that other historical documents reside at EPA's site file in Atlanta, GA.

It is important to understand that any recommendations herein are general and are not specific to any plan or request by any private interest. Any person or party proposing to redevelop the Site must submit plans, of sufficient detail, for review by EPA Region 4 and

other appropriate agencies to ensure that the proposed redevelopment is compatible with the completed site remediation.

Site Background Information:

Prior to1987, the approximately 20 acre Site consisted of 89,274 yd^3 of contaminated soil with elevated levels of PCBs, arsenic, and lead. Contamination was to the maximum depth of 7 ft., reference the March 1986 Record of Decision (ROD) for more information.

The result of the completed remediation is a 120,193 yd^3 irregularly shaped monolith, approximately 12 feet above sea level with varying surface elevations. The monolith additives consisted of 40 % Type I Portland cement and 60% Class F fly ash. The monolith was covered with 2 feet of crushed limestone. In short, the contaminated soil was excavated, mixed with the aforementioned additives (*i.e.*, solidification/stabilization) and placed back into the excavated areas, then covered with limestone. A drainage collar was installed around the entire monolith.

Summary of Field Work:

In 2003, ERT and ORD ("team") made two trips to the Site to perform field work. On the first trip, ERT collected four monolith cores under ORD oversight and sampled several perimeter Monitoring Wells (MWs) for arsenic, lead and PCBs (Table 1). The cores were analyzed for Unconfined Compressive Strength (UCS), total arsenic and lead, permeability, and leachate testing (*i.e.*, TCLP, MEP, SPLP) and other geo-technical parameters (Tables 2, 3 and 4) . On the second trip, the team employed a backhoe to visibly inspect the surface of the monolith as well as excavate into, and inspect, a portion of the Site drainage collar. Field compressive strength and permeability testing were also performed (Table 5). All results of the field work can be found in the 2004 Trip Report.

Site Conditions in 2003:

At the time of the initial site visit, the integrity of the site security had *substantially* deteriorated. For example: fencing around portions of the Site was essentially gone; surrounding businesses—now removed—had encroached onto the monolith; the cover had been disturbed in places and small portions of the monolith surface were exposed; over 1,000 large trees—now removed—had been allowed to grow on the monolith; and portions of the designed drainage system had been disturbed to some degree. That said, the monolith itself appeared to be in good condition and functioning as designed. The Site is currently surrounded by commercial businesses (*e.g.*, two cement companies, a battery company, a boat repair operation, and various truck repair shops).

Site Investigations:

According to the March 1986 ROD, prior to remediation, the maximum soil concentrations of lead, arsenic and PCBs were 98,000, 76 and 67 ppm, respectively. In 2003, the team collected four monolith cores and analyzed them for total lead and arsenic. Lead ranged from 800 to 3,700 ppm and arsenic ranged from 18 to 29 ppm (Table 3). The team also performed TCLP, MEP, and SPLP leachate analysis on the cores (Table 2). These data show that no significant levels of contaminants are leachable from the monolith under these test conditions.

In addition, in 1994, ERT performed work at the Site as part of a national effort to evaluate the long-term reliability of stabilization/solidification as a remediation technology. Samples were analyzed for TCLP, MEP, total metals, and PCBs, via Scanning Electron Microscopy (SEM), and X-Ray Diffraction (XRD). The analysis showed PCBs in the ppb level, and non-detect via TCLP and MEP extraction procedures for lead and arsenic. Most important, the SEM and XRD showed that the lead appears to be diffused into the treated matrix indicating that the metal is chemically bound (immobilized) as well as mechanically entrained. Comparison with historical data on leaching properties of the monolith material indicate that there has been no deterioration in contaminant immobilization properties with time.

Treated Soil Monolith: Physical Properties

The team also analyzed the 2003 cores for permeability and UCS. Laboratory permeability ranged from 10^{-5} to $10^{-6.62}$ cm/sec (Table 4). As stated in the RA Report, prior to treatment, Site soils had Darcy permeabilities of 10^{-2} to 10^{-4} cm/sec. The overall design objective regarding permeability was to make the monolith significantly less permeable than the native soils (1,000 to 100,000 times lower). There is also a plethora of permeability data collected in the remedial action. The current permeability of the monolith continues to meet the RA objectives

The recent UCS tests show the cores range from 15.9 to 680 psi. The UCS design specification called for a UCS ≥20.8 psi with testing of every 500 yds^3 of treated soil. EPA maintains a large quantity of UCS data of the monolith, from the remedial action, which also show approximately the same range of UCS as ERT's recent data. EPA has no significant data that suggest that the UCS is below 20.8 psi. In fact, all the UCS data averages above 200 psi. The moisture content ranges from 17.3 to 30.3 % for the four cores (Table 4). Note that the recently measured UCS value of 15.9 psi likely results from damage done to the core from the coring process.

The monolith has a significant amount of heterogeneity with regard to UCS and contamination. Some portions of the monolith are more rigid than others. However, while performing the scrapes with the backhoe, the team attempted, without success, to dig into the monolith at several locations. The best that could be done was to chip away at it. (Hence, other methods of excavation may be required for reuse construction). It should be noted, the team augured down into the monolith to the natural formation in one location with a drill-rig without difficultly. The soil cuttings came up with a soft, moist, almost topsoil like characteristic. This was performed in the less rigid part of the monolith. The integrity of the monolith remains in excellent condition. The Geo-technical data are summarized in Table 4 of the July 2004 Report. Using limited field, in-situ testing methods, it appears even these softer areas of monolith possess significant "confined" compressive strength.

Groundwater:

All results from the monitoring well sampling are given in Table 1 along with historical values taken from previous sampling events. In the most recent sampling event of December 3, 2003, all values for lead were well below the Consent Decree Remedial Action Level (CDRAL) of 50 µg/L, as well as below the current Federal drinking water standard of 15 µg/L. Arsenic concentrations in all of the sampled wells were well below the CDRAL of 50 µg/L for the site, as well as the new Federal MCL of 10 µg/L (effective date - January 23, 2006). PCB levels for all sampled wells were below method detection limits for the following PCB/Aroclors: 1016, 1221, 1232, 1242, 1248, 1254, and 1260. This further reinforces the leaching data.

Drainage:

The Site drainage issue has long been a purported problem, due to complaints from the surrounding property owners. Whether the Site contributes to the surrounding property(s) flooding has yet to be proven. Some theories have been proposed, but no substantial testing and/or surface water drainage evaluations have been performed to date. Some of the surrounding properties clearly flood after rain events without any contribution of water from the Site. The surrounding properties are low lying and poorly drained, or not drained. Due to the remediation, the Site monolith cover is at a higher elevation when compared to the surrounding areas but has the drainage collar to contain all runoff. It should be noted that the Site most likely has the best drainage system of all the surrounding areas. That is not to say it may not have some functional problems or that it works as designed.

As stated in the *Final Report on Remedial Action*, the drainage trench (collar) was constructed with a 2 ft minium width and depth to bedrock. The trench is immediately adjacent to the outside limits of, and completely surrounds, the monolith.

In a first attempt to assess the drainage of the Site, the team decided to excavate into the drainage collar

via a backhoe. The drainage collar was excavated to a total depth of 8-feet below ground surface (bgs). The first six inches of the drain collar was a very well vegetated layer of dark organic matter including root mass and fine soils mixed with large 2 to 3 inch gravel. Below the organic layer was a layer of approximately 1 foot of light grey weathered limestone fines mixed with the large gravel. At approximately 2 feet bgs, the trench material was primarily lightly weathered large 2 to 3 inch limestone gravel. The large gravel continued until groundwater was reached at 7 ½ feet bgs. The trench was approximately 2 feet wide at the bottom with a vertical side away from the monolith. Along the monolith, some scattering of large gravel could be seen along the side slope of the monolith. It was believed that the original trench was dug to the depth of the limestone bedrock. At 8 feet bgs, bedrock had not yet been reached with the exploratory excavation. The collar appeared as designed. The only potential problem of the collar could be the organic matter in the upper layer, which could slow storm water infiltration into the trench.

Unfortunately, at this time, the team has not obtained enough hydrological data to appropriately assess the drainage of the Site. Additional work is planned.

Any new property use must have a drainage system that meets the local ordinance for storm water control.

Conclusion:

At this time, no issues concerning contamination would prevent the land from being redeveloped, so long as redevelopment maintains the integrity of the monolith, the cap over the monolith, and the functionality of the drainage collar or a larger property-wide drainage system.

At this time, ERT and ORD conclude that the Site could and should be redeveloped. However, EPA should not approve of any reuse development of the land without a thorough evaluation of the design and operational use proposed.

The monolith poses no unacceptable human health or ecological risk while in place. If however the monolith is significantly disturbed, such as excavating or drilling into it, the appropriate environmental safety practices should be employed, and any exposed portion(s) of the monolith should be covered with a suitable cap. Disturbance of the monolith should be limited to the necessity of construction, since disturbing the monolith increases the surface area of the monolith. Any disturbance of the monolith while performing construction at the Site should be delineated and approved of by EPA Region 4 prior to commencing such work.

Any development plan, should include additional and standard geo-technical evaluations, prior to new construction. No geo-technical data or issues are known that suggest the land could not be redevelopment. In fact, the PRP's contractor also makes this conclusion in the *Final Report on Remedial Action*. The property was designed with reuse in mind.

The other issue involving the contamination is that once the monolith is disturbed, monolith material should be handled according to the appropriate environmental regulations. An experienced private environmental consultant should be able to provided guidance for any developer working on the property.

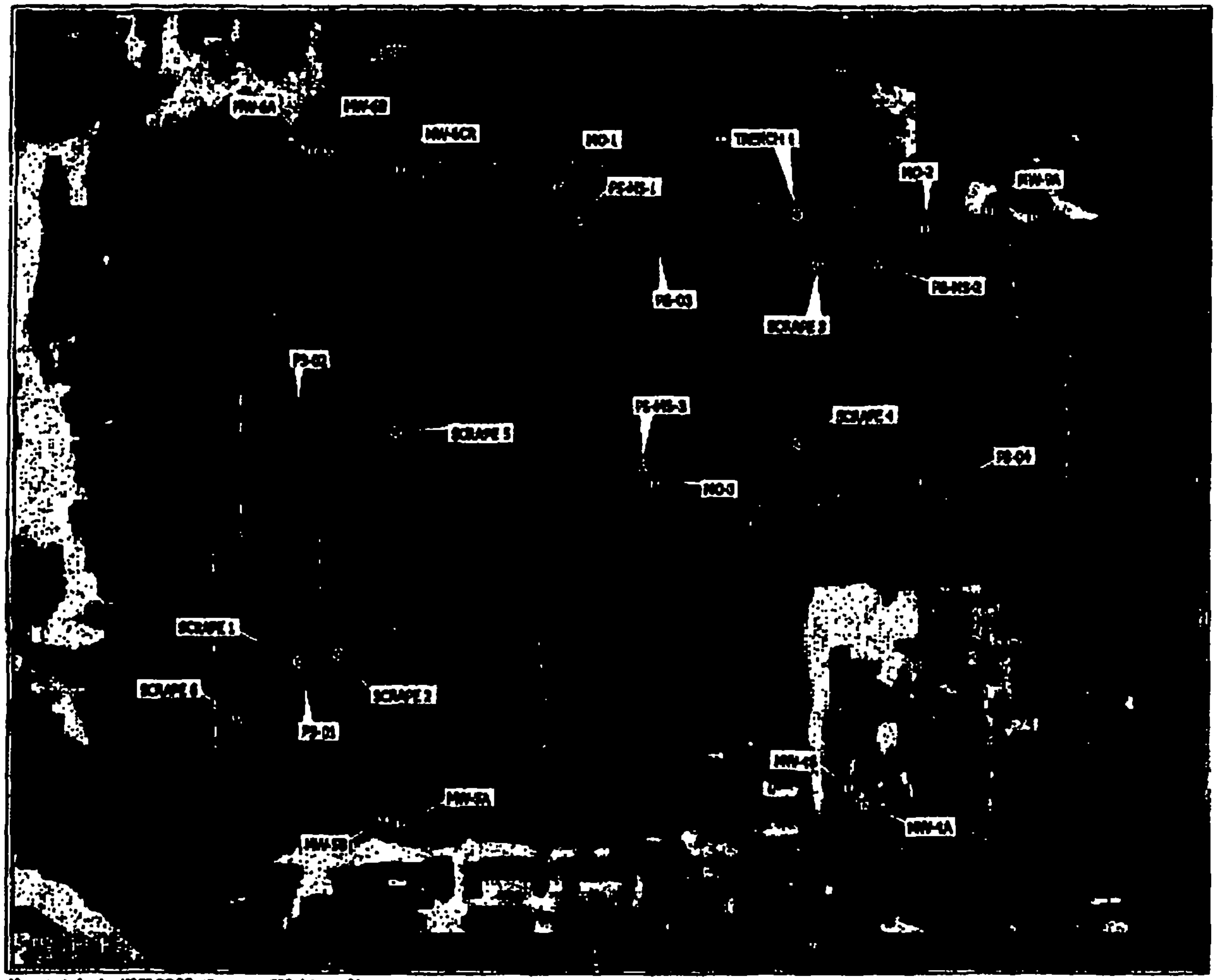
Remaining Issues:

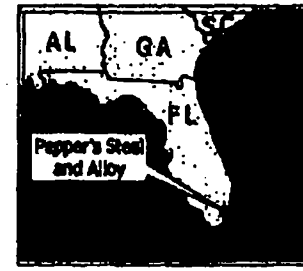
The only environmental issues that need to be further assessed are the handling of any part of the monolith that is disturbed and the regulations that would apply to such handling, and the drainage issue. In the near future, ERT plans to assess if Site surface drainage is, in fact, flowing to the surroundings properties. If the Site is responsible for flooding in the surrounding areas, ERT can repair the drainage collar and/or design a new drainage system for the Site.

Attachment(s)

- Site map

-Tables 1-5





Legend

- Monolith Sample Location January 11, 2000
- FPL Monitoring Well
- Drainage Collar Sample Location March 29, 2004
- Monolith Sample Location December 2-5, 2003
- Drainage Collar

Map created using USGS DOQQ, site survey GPS data, and legacy AutoCAD drawing file. GPS data collected in Lat, Lon, Decimal Degrees, WGS84. AutoCAD drawing file georeferenced to GPS data, and spatially adjusted using a 2-point conversion algorithm.

Map Creation Date: 07/July/2004

Coordinate System: UTM
Zone: 17N
Datum: NAD83
Units: Meters

Data: [illegible]
DWG file: [illegible]

U.S. EPA Environmental Response Team Center
Response Engineering and Analytical Contract
EP-C-04-032
W.A.# EAC00065

Figure 1
Site Location Map
Pepper Steel and Alloy, Inc.
May 2004 Investigation
Medley, Florida

Tables

TABLE 1
Historic Groundwater Results
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

LEAD												
Date	CDRAL	MO-1	MW-6A	MW-6CR	MO-2	MO-3	MW-4A	MW-4B	MW-6A	MW-6B	MW-6B	MW-6A
9-Dec-1992	50	2.8 (1) 5.0U (2)	19 (1) 16 (2)	<1.0 (1) 5.0U (2)	4.8 (1) 7.8 (2)	1.2 (1) 5.0U (2)	NS	NS	NS	NS	2.7 (1) 9.4 (2)	<1.0 (1) 5.0U (2)
26-Jul-1995	50	4.8 (1)	22.9 (1)	0.48U (1)	NS	NS	NS	NS	NS	NS	NS	NS
20-Jan-1997	50	3U (1)	9.2 (1)	3U (1)	NS	NS	NS	NS	NS	NS	NS	NS
5-Feb-1998	50	10.9 (1)	15.4 (1)	2 (1)	NS	NS	NS	NS	NS	NS	NS	NS
11-Jan-2000	50	NS	12U (1)	NS	12U (1) 20 (2) 22 (2)D	12U (1) 2.9 (2)	89 (1)	12U (1)	12U (1) 2U (3)	12U (1) 2.3 (3)	12U (1)	12U (1)
3-Dec-2003	50	11 (2)	6.2 (2)	NS	2.8 (2)	0.39J (2)	1.6 (2)	NS	NS	NS	NS	NS
ARSENIC												
Date	CDRAL	MO-1	MW-6A	MW-6CR	MO-2	MO-3	MW-4A	MW-4B	MW-6A	MW-6B	MW-6B	MW-6A
9-Dec-1992	50	1.2 (1) 30U (2)	<1 (1) 30U (2)	<1.0 (1) 30U (2)	<1 (1) 30U (2)	2.9 (1) 30U (2)	NS	NS	NS	NS	<1.0 (1) 30U (2)	<1.0 (1) 30U (2)
11-Jan-2000	50	NS	12U (1)	NS	12U (1) 6U (2) 5U (2)D	12U (1) 6U (2)	12U (1)	12U (1)	12U (1) 2U (3)	12U (1)	12U (1)	12U (1)
3-Dec-2003	50	6.6 (2)	0.37J (2)	NS	0.68J (2)	3.6 (2)	0.57J (2)	NS	NS	NS	NS	NS
PCBs												
Date	CDRAL	MO-1	MW-6A	MW-6CR	MO-2	MO-3	MW-4A	MW-4B	MW-6A	MW-6B	MW-6B	MW-6A
9-Dec-1992	7	ND (1) ND (2)	ND (1) ND (2)	ND (1) ND (2)	ND (1) ND (2)	ND (1) ND (2)	NS	NS	NS	NS	ND (1) ND (2)	ND (1) ND (2)
11-Jan-2000	7	NS	ND (1)	NS	ND (1) ND (2) ND (2)D	ND (1) ND (2)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
3-Dec-2003	7	ND (2)	ND (2)	NS	ND (2)	ND (2)	ND (2)	NS	NS	NS	NS	NS

All values are in micrograms/L (ug/L)
(1) Florida Power and Light (FPL)
(2) EPA Science and Ecosystem Services Division Laboratory, Athens, Georgia
(3) Department of Environmental Resources Management Miami-Dade County
U - Below method detection limit
D - Duplicate Sample
NS - Not Sampled
J - Identification of analyte is acceptable; Reported Value is and estimate.
ND - Not detected above sample quantitation limits for all PCBs analyzed (PCB/Aroclor -1016, -1221, -1232, -1242, -1248, -1254, -1260)
CDRAL - Consent Decree Remedial Action Levels
Boldfaced &italicized values indicate values greater than current EPA and/or FDEP primary drinking water standard (MCL) indicated for that analyte.
< - Less than

TABLE 2
Historic MEP/TCLP/SPLP Results for Monolith Samples
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

LEAD											
Location	PS-01	PS-01 Dup.	PS-02	PS-03	PS-04		PS-MS-1	PS-MS-2	PS-MS-3		PS-4
Date	3-Dec-03	3-Dec-03	3-Dec-03	3-Dec-03	3-Dec-03		11-Jan-00	11-Jan-00	11-Jan-00		11/23/1993
MEP1	0.03U	0.03U	0.03U	0.45	0.06		0.033	0.013	0.01U		0.05U
MEP2	0.08	0.21	0.25	1.4	0.9		0.064	0.01U	0.01U		0.05U
MEP3	0.06	0.05	0.09	0.23	0.29		0.152	0.01U	0.011		0.05U
MEP4	0.04	0.03	0.1	0.1	0.47		0.129	0.01U	0.01U		0.05U
MEP5	0.05	0.05	0.08	0.11	0.05U		0.01U	0.01U	0.01U		0.05U
MEP6	0.09	0.04	.03U	0.09	0.33		0.01U	0.01U	0.01U		0.05U
MEP7	0.03	0.05	0.11	0.14	0.28		0.01U	0.01U	0.01U		0.05U
MEP8	1	1.1	2.4	4.5	0.17		0.01U	0.01U	0.01U		0.05U
MEP9	0.03	0.04	0.05	0.16	0.16		0.01U	0.01U	0.01U		0.05U
TCLP	0.2	0.09	0.05	0.05	0.22		0.5U	1.6	0.5U		0.05U
SPLP	0.047	0.058	NA	0.024	0.019		NA	NA	NA		NA

ARSENIC											
Location	PS-01	PS-01 Dup.	PS-02	PS-03	PS-04		PS-MS-1	PS-MS-2	PS-MS-3		PS-4
Date	3-Dec-03	3-Dec-03	3-Dec-03	3-Dec-03	3-Dec-03		11-Jan-00	11-Jan-00	11-Jan-00		11/23/1993
MEP1	0.02U	0.02U	0.02U	0.04	0.02U		0.015U	.015U	0.044		0.05U
MEP2	0.02U	0.02U	0.02U	0.05	0.02U		0.015U	0.016	0.048		0.05U
MEP3	0.02U	0.02U	0.02U	0.02U	0.02U		0.015U	0.037	0.096		0.05U
MEP4	0.02U	0.02U	0.02U	0.03	0.02U		0.015U	0.015U	0.041		0.05U
MEP5	0.03U	0.03U	0.03	0.03U	0.03U		0.015U	0.015U	0.015U		0.05U
MEP6	0.02U	0.02U	0.02	0.02	0.02U		0.015U	0.015U	0.015U		0.05U
MEP7	0.02U	0.02U	0.02U	0.02U	0.02U		0.015U	0.015U	0.027		0.05U
MEP8	0.02U	0.02U	0.04	0.04	0.02U		0.015U	0.015U	0.015U		0.05U
MEP9	0.02U	0.02U	0.03	0.02U	0.02U		0.015U	0.015U	0.016		0.05U
TCLP	0.02U	0.02U	0.02U	0.02U	0.02U		0.5U	0.5U	0.5U		0.05U
SPLP	0.005	0.009	NA	0.003	0.004		NA	NA	NA		NA

All values are in milligrams/Liter (mg/L)
U - Not detected above the sample quantitation limit (SQL)
Dup. - Duplicate
All values above the SQL are shown in bold type.
NA - Data Not Available
MEP = Multiple Extraction Procedure
TCLP = Toxicity Characteristic Leachate Procedure
SPLP = Synthetic Precipitation Leaching Procedure

TABLE 3
Monolith Sample Metals Content
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

Analyte	PS-01	PS-01 Dup.	PS-02	PS-03	PS-04
Arsenic	18	19	29	25	25
Barium	130	130	150	120	110
Cadmium	7.3	8.5	2.8	2	2.3
Chromium	34	34	28	17	17
Lead	800	840	1300	3700	2000
Selenium	4	5	2	5	4
Silver	5.4	4	1.9	1.9	2.7

All values are given in milligrams/kilogram (mg/kg) dry weight
Dup. - Duplicate

TABLE 4
Monolith Sample Physical Properties
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

Location	Date Sampled	UCS (lbs/in2)	Moisture Content (%)	Bulk Density (wet) (lbs/ft3)	Bulk Density (dry) (lbs/ft3)	Permeability (cm/sec)
PS-01	03-Dec-03	15.936	21.8	106.8	87.7	1.0E-05
PS-02	03-Dec-03	679.600	30.3	98.4	76.5	3.6E-07
PS-03	03-Dec-03	421.900	23.7	93.2	75.3	2.6E-07
PS-03 Dup.	03-Dec-03	347.200	25.6	95.8	76.3	2.4E-07
PS-04	03-Dec-03	149.730	17.3	94.9	81	1.6E-06

UCS - Unconfined Compressive Strength in Pounds Per Square Inch (lbs/in2).
% - Percent
lbs/ft3 - Pounds Per Cubic Foot
Dup. - Duplicate
cm/sec - Centimeters per Second

TABLE 5
Monolith Surface Scrape Observations and Results
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

Location	Cover Thickness	Monolith Color	Pocket Penetrometer Reading	Notes
Scrape 1*	8-12 inches	Dark Brown to Black	>600 psi	Monolith material is well compacted, but material is friable with backhoe bucket teeth. Guelph Permeameter Field Saturated Hydraulic Conductivity 3.21E-04 cm/sec. (Appendix C)
Scrape 2	20 inches	Dark Brown	>600 psi	Monolith material is well compacted, but material is friable with backhoe bucket teeth.
Scrape 3	24 inches	Dark Brown	>600 psi	Monolith material is well compacted, but material is friable. Material is moist, possibly saturated.
Scrape 4	15 inches	Black	>600 psi	Material very well compacted. Backhoe bucket teeth could not penetrate material.
Scrape 5	30 inches	Dark Brown	>600 psi	Teeth of backhoe do not penetrate easily, but material can be chipped away with backhoe teeth.
Scrape 6	16 inches	Dark Brown	>600 psi	Monolith material is well compacted, but material is friable with backhoe bucket teeth.

psi = pounds per square inch
cm/sec = centimeters per second
* - Permeability value is considered suspect due to the fact that a uniform wetting front was difficult to establish.

Appendix K:

Monolith Sampling and Drainage Trench Investigation

Lockheed Martin Technology Services
Environmental Services REAC
2890 Woodbridge Avenue Building 209 Annex
Edison, NJ 08837-3679
Telephone 732-321-4200 Facsimile 732-494-4021

LOCKHEED MARTIN

TRIP REPORT
Monolith Sampling and Drainage Trench Investigation
Pepper Steel and Alloy, Inc. Site, Medley, Florida
July 26, 2004

U.S. EPA Work Assignment No.: 0-065
Lockheed Martin Work Order No.: EAC00065
U.S. EPA Contract No.: EP-C-04-032

Prepared by:

Lockheed Martin/REAC

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7/26/04
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7/26/04
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Prepared for:

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LOCKHEED MARTIN

DATE: July 26, 2004

TO: Jeff Catanzarita, U.S. EPA/ERTC Work Assignment Manager

THROUGH: Deborah Killeen, Acting REAC Operations Section Leader

FROM: Jon McBurney, REAC Task Leader

SUBJECT: PEPPER STEEL AND ALLOY, INC. SITE, WELL MONITORING, MONOLITH CORING, AND DRAINAGE COLLAR INVESTIGATION RESULTS
WORK ASSIGNMENT EAC00065 - TRIP REPORT

INTRODUCTION

This report documents the results of two separate site visits to the Pepper Steel and Alloys, Inc. (PSA) site. These two site investigations in conjunction with the geotechnical and analytical results will assist the Environmental Protection Agency (EPA) Region IV Regional Program Manager (RPM) in the determination of the reusability of the PSA site. The Environmental Response Team Center (ERTC) had tasked Response Engineering and Analytical Contract (REAC) personnel with specific tasks to meet this objective.

BACKGROUND

The PSA site is located in Medley, Dade County, Florida (FL). The site is approximately 20 acres in size. Soils at the former PSA facility are contaminated primarily with arsenic (As), lead (Pb) and polychlorinated biphenyls (PCBs). In 1989, the primary Potentially Responsible Party (PRP), Florida Power and Light, completed the remedy, solidification/stabilization (S/S) of contaminated soil using Portland cement/fly ash mixture and placement on-site. The overall result of the response action was a 120,193 cubic yard (yd ^{3}) monolith. The monolith extends a maximum of six feet (ft) below and seven ft above the natural ground surface.

An international collaborative project has recently begun to verify the long-term effectiveness of cement-based S/S treatment of contaminated soils. The Performance Assessment of Stabilized/Solidified Waste Forms project involves universities, government agencies and non-government organizations from the United States (US), the United Kingdom (UK) and France. The aim of this collaboration is to improve the understanding of the performance of S/S waste forms by sampling and examining S/S material of different ages and with different contaminants from existing treated sites.

S/S treatment has been in use since the 1950s and is in widespread use in the U.S. and Europe though not in the UK. Despite its history, there is little data pertaining to the field performance of S/S on contaminated

soil forms over time. The lack of such data is also acknowledged by the EPA, who are active participants in this project and are supporting the effort by conducting sampling activities on sites in the U.S. Sampling of S/S sites in the U.S. will focus primarily on EPA Superfund sites where collection and analysis of samples will support five-year reviews, 10-year reviews and potential redevelopment options for these sites. In general, it will also support assessment of S/S technology for use at other Superfund sites in the future. The PSA site is one such example.

OBSERVATIONS AND ACTIVITIES

Groundwater Sampling

Eighteen monitor wells that vary in condition are on or surrounding the PSA site. Some wells have been abandoned while others are in need of repair. A review of the previous five-year sampling events shows that between December 9, 1992 through January 12, 2000, eleven wells have been sampled (Table 1). Of these, only the well identified as MW-6A had been sampled during each of the five separate sampling events. The REAC Task Leader (TL) in consultation with the ERTC Work Assignment Manager (WAM) selected five of these eleven monitor wells for sampling in December 2003. The selection criteria were based on the recommendations from the last five-year review, historical results and proximity to the monolith core sampling sites. The current EPA Operations & Maintenance (O&M) program calls for groundwater monitoring every 2.5 years at locations MO-1, MW-6A, and MW-6CR and all at locations every five years. The last five-year review recommended that location MO-2 be sampled since it had exceeded the current EPA maximum contaminant level (MCLs) of 15 µg/L for Pb when sampled in 2000. The locations selected were MO-1, MO-2, MO-3 (the only wells located on the monolith) and MW-4A and MW-6A, both located on adjacent properties. Monitor wells MW-4A, MW-6A and MO-2 were the only wells that had exceeded the MCLs during prior sampling events. All well locations are shown on Figure 1.

REAC personnel were directed to use Low Flow sampling methods as prescribed by U.S. EPA Region IV Science and Ecosystems Support (SESD) Environmental Investigations Standard Operating Procedures Quality Assurance Manual (EISOPQAM) Section 7, Ground Water Sampling. Field logs recorded during sampling can be found in Appendix A. Samples were collected, preserved, and handled in the field by REAC personnel in accordance with SESD procedures. Six groundwater samples (five locations plus one duplicate) were sent for Pesticides/PCB analysis to Envirosystems, Inc., 9200 Rumsey Rd., Suite B102, Columbia, Maryland 21045. Another seven samples (five locations, a duplicate and an inorganic blank) were sent to Sentinal Inc., 116 Washington St., NE, Huntsville, Alabama 35801 for As and Pb analysis. Copies of the chain of custodies are contained in Appendix B.

Monolith Matrix Sampling

In consultation with members of the EPA Office of Research and Development (ORD) and the University of New Hampshire representing the interests of an international consortium involved in the study of S/S projects, it was determined that a diamond bit coring drill would be used to obtain the samples. A B-57 drill rig equipped with a 2-inch diameter by 5-foot long coring drill was used. This diameter was smaller than the original specification of 3-inches, but it was allowed by the representatives. The original drill bit required by the specifications (3-inch diameter by 3-foot long) was not available at the time of sampling. The coring methods met the following conditions unless otherwise noted:

1. At least two feet of the core from each location shall be obtained without using liquids, since the core will be used for leaching and analytical tests. This core can be fractured or broken. Air may be used to facilitate drilling.
   Note: Compressed air was used during this phase. An air line was connected to a fitting that allowed the compressed air into the core.
2. At least two feet of core from each location must not be fractured or broken as it will be used for permeability and unconfined compressive strength tests. However, this core may be drilled using water for lubrication and cooling.
   Note: This proved problematic when it was discovered that the monolith, assumed to be of a homogenous material was shown during sampling to be solidified in some areas and of a friable nature in other parts. This made obtaining unfractured cores two feet in length impossible in those areas. In addition, the relatively narrow coring bit used increased the chances of fracturing solidified material. Fortunately, the narrow diameter also allowed the required total core sample length to be decreased while still meeting the analytical method guidelines.
3. Cores shall be labeled, packed, and shipped to the University of New Hampshire so as to arrive without breaking or fracturing during shipment.
4. Core holes shall be grouted with a cement mortar mix, or grout approved by REAC personnel. Chemical compatibility of the grout with the S/S monolith is essential. Sodium bentonite shall not be used to grout core holes.
5. The cover shall be restored comparable to original undisturbed conditions as approved by REAC personnel.

A total of 11 samples of the monolith matrix from four locations (PS-01, PS-02, PS-03, and PS-04) were sent to the University of New Hampshire for the following geotechnical and analytical parameters: Toxicity Characteristic Leaching Procedure (TCLP), Synthetic Precipitation Leaching Procedure (SPLP), Multiple Extraction Procedure (MEP), Unconfined Compressive Strength (UCS), Permeability, Porosity, Acid Neutralization Capacity (ANC), Wet/Dry Weathering and Minimum/Maximum Density. A copy of the chain of custody record is contained in Appendix B. Core sample locations are shown on Figure 1.

Monolith Surface Scrapes

In order to better understand the physical characteristics of the monolith, six surface scrapes were performed by REAC personnel during a site visit on March 29, 30 and 31, 2004, using a backhoe. Each scrape was approximately three feet wide and deep enough to remove the surface covering from the monolith proper. Once the monolith was reached, several scrapes were made with the backhoe bucket to determine the relative friability of each scrape location. Each location was then tested using a Soiltest Pocket Concrete Penetrometer model CT-421A to measure *in-situ* compressive strength. Each location was photodocumented and then returned to its original condition. Scrape locations are shown on Figure 1.

Drainage Collar Investigation

Due to anecdotal evidence of failure of the drainage collar design, it was determined by the WAM that a section of the drainage collar be excavated and investigated. In a technical memorandum prepared by REAC personnel on March 10, 2004, it was stated that the O&M of the drainage collar and the site in general were

leading to a reduced ability of the collar to handle storm events, possibly causing flooding on adjacent properties (see Appendix C).

During the site visit on March 29, 2004, a section of the drainage collar (see Figure 1 for location) was excavated to the full depth of the collar. The collar was photodocumented, measured and then replaced as close to its original condition as possible.

RESULTS

Groundwater Sampling

Monitor well results from the December 2003 sampling event are presented in Table 1 along with historical results obtained from previous sampling events. All Pb concentrations were below the consent decree remedial action level (CDRAL) of 50 µg/L and below the current EPA drinking water MCL of 15 µg/L. Arsenic concentrations in all wells sampled were well below the CDRAL of 50 µg/L for the site. PCB levels for all wells sampled were below method detection limits for the following PCB/Aroclors: 1016, 1221, 1232, 1242, 1248, 1254, and 1260 and below the CDRAL of 7 µg/L.

Monolith Matrix Sampling

Data for the following analyses is available for the monolith samples: TCLP/MEP, SPLP, Unconfined Compressive Strength, Metals Content, Bulk Density (wet and dry) and permeability. The TCLP/MEP results are presented in Table 2 with historic results for reference. It should be noted that each sample taken and analyzed for TCLP/MEP shown on Table 2 was taken in different locations on the monolith. This data should be used only for general comparison. The results for TCLP/MEP for lead indicate that some leaching may occur. The highest concentration of Pb observed during this analysis was 4.5 milligrams per liter (mg/L) during the 8th extraction (MEP8) of sample PS-03. Historically, the highest MEP result for Pb was 0.152 mg/L in a sample collected on January 11, 2000. TCLP results for Pb reached a maximum of 0.2 mg/L and 0.22 mg/L in sample PS-01 and sample PS-04, respectively. Previously, the highest TCLP Pb concentration was observed at 1.6 mg/L in sample PS-MS-2 taken on January 11, 2000. The maximum TCLP/MEP result for As was observed during the 2nd extraction (MEP2) for sample PS-04. Communications from the lab are presented in Appendix B.

The metals content of the samples taken on December 3, 2003 are given in Table 3. The monolith samples continue to exhibit elevated levels of arsenic and lead.

The physical properties for the monolith samples are presented in Table 4. All values reported for UCS are well above the criteria for the site with the exception of PS-01. PS-01 yielded an unconfined compressive strength of 15.936 pounds per square inch (lbs/in^2). This sample was collected from the area of Scrapes 1 and 2. It is of interest that in this area, the monolith indeed is much more friable than in other locations (See Table 5). However, the compressive strength as measured *in-situ* was well above 600 lbs/in^2. It was observed that in different areas of the monolith, the mixture has behaved differently. The permeability readings indicate that the monolith is relatively impermeable and will be resistant to most precipitation moisture.

Monolith Surface Scrapes

Results from the monolith surface scrapes are tabulated in Table 5. All monolith scrapes exhibited penetrometer readings well above 600 psi. The monolith surface in all scrapes ranged from a dark brown color to a black color and appeared to be moist. In general, scrapes performed on the main body of the monolith were more cohesive. The scrapes performed in the south-western corner of the monolith were much more friable. At Scrape 1, a Guelph Model 2800 permeameter was employed to measure the *in-situ* field saturated hydraulic conductivity (permeability). Calculations of the hydraulic conductivity are given in Appendix D. A hydraulic conductivity of 3.21×10^{-4} centimeters per second (cm/sec) was calculated for Scrape 1. The cover material was consistent with a crush and run limestone cover. Pictures are included as an attachment to this report on CDROM. Field notes are presented in Appendix E.

Drainage Collar Investigation

The drainage collar was excavated to a total depth of 8-feet below ground surface (bgs). The composition of the first six inches of the drain collar was a well vegetated layer of dark organic matter including root mass and fine soils mixed with large -2 to 3-inch gravel. Below the organic layer was a layer of approximately one foot of light grey weathered limestone fines mixed with the large gravel. At approximately two feet bgs, the trench material was primarily lightly weathered large 2 to 3 inch limestone gravel. The large gravel continued until groundwater was reached at 7 ½ feet bgs. The trench was approximately 2-feet-wide at the bottom with a vertical side away from the monolith. Along the monolith, some scattering of large gravel could be seen along the side slope of the monolith. It was believed that the original trench was dug to the depth of the limestone bedrock. At eight feet bgs, bedrock had not yet been reached. Pictures are included as an attachment to this report on CDROM.

CONCLUSIONS

The monolith at the PSA site is in good condition. All well sampling tests indicate that the stabilization of the contaminants of concern has continued to be effective. Physical testing of the monolith itself has yielded results which meet or exceed all criteria. It is clear from the data that the monolith is not a uniform structure, as shown by the varying compressive strength values. However, as most of these values greatly exceed the compressive strength values of the surrounding area, the monolith has performed up to specification.

The drainage collar of the PSA site is clearly in poor condition. From the subsurface investigation, it is clear that the top one foot of the collar material has been badly clogged by organic matter. This clogging could be contributing to the anecdotal evidence of flooding on adjacent properties.

RECOMMENDATIONS

Further investigation should be performed to determine if water is running off of the PSA site to adjacent properties. At a minimum, the first foot of the drainage collar should be refurbished to remove the large amount of organic matter which is currently visible. Further O&M is required to ensure that the function of the collar remains effective.

cc: Entire File - WA#EAC00065 (w/attachment)
Electronic File - L:/Archive/REAC4/065/D/TR/072204
Dennis Miller, REAC Program Manager

Tables

TABLE 1
Historic Groundwater Results
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

LEAD												
Date	CDRAL	MO-1	MW-6A	MW-6CR	MO-2	MO-3	MW-4A	MW-4B	MW-5A	MW-5B	MW-6B	MW-9A
9-Dec-1992	50	2.8 (1) 5.0U (2)	***16*** (1) ***15*** (2)	<1.0 (1) 5.0U (2)	4.8 (1) 7.5 (2)	1.2 (1) 5.0U (2)	NS	NS	NS	NS	2.7 (1) 5.4 (2)	<1.0 (1) 5.0U (2)
25-Jul-1995	50	4.6 (1)	***38.5*** (1)	0.48U (1)	NS	NS	NS	NS	NS	NS	NS	NS
20-Jan-1997	50	3U (1)	9.2 (1)	3U (1)	NS	NS	NS	NS	NS	NS	NS	NS
3-Feb-1998	50	10.9 (1)	***15.4*** (1)	2 (1)	NS	NS	NS	NS	NS	NS	NS	NS
11-Jan-2000	***50***	*NS*	*12U (1)*	*NS*	*12U (1)* ***20*** (2) ***22*** (2)D	*12U (1)* 2.9 (2)	***30*** *(1)*	*12U (1)*	*12U (1)* 2U (3)	*12U (1)* 2.3 (3)	*12U (1)*	*12U (1)*
3-Dec-2003	50	11 (2)	6.2 (2)	NS	2.6 (2)	0.38J (2)	1.6 (2)	NS	NS	NS	NS	NS
ARSENIC												
Date	CDRAL	MO-1	MW-6A	MW-6CR	MO-2	MO-3	MW-4A	MW-4B	MW-5A	MW-5B	MW-6B	MW-9A
9-Dec-1992	50	1.2 (1) 30U (2)	<1 (1) 30U (2)	<1.0 (1) 30U (2)	<1 (1) 30U (2)	2.9 (1) 30U (2)	NS	NS	NS	NS	<1.0 (1) 30U (2)	<1.0 (1) 30U (2)
11-Jan-2000	50	NS	12U (1)	NS	12U (1) 5U (2) 5U (2)D	12U (1) 5U (2)	12U (1)	12U (1)	12U (1) 2U (3)	12U (1)	12U (1)	12U (1)
3-Dec-2003	50	8.8 (2)	0.31J (2)	NS	0.88J (2)	3.8 (2)	0.57J (2)	NS	NS	NS	NS	NS
PCBs												
Date	CDRAL	MO-1	MW-6A	MW-6CR	MO-2	MO-3	MW-4A	MW-4B	MW-5A	MW-5B	MW-6B	MW-9A
9-Dec-1992	7	ND (1) ND (2)	ND (1) ND (2)	ND (1) ND (2)	ND (1) ND (2)	ND (1) ND (2)	NS	NS	NS	NS	ND (1) ND (2)	ND (1) ND (2)
11-Jan-2000	7	NS	ND (1)	NS	ND (1) ND (2) ND (2)D	ND (1) ND (2)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
3-Dec-2003	7	*ND (2)*	*ND (2)*	NS	*ND (2)*	*ND (2)*	*ND (2)*	NS	NS	NS	NS	NS

All values are in micrograms/L (ug/L)
(1) Florida Power and Light (FPL)
(2) EPA Science and Ecosystem Services Division Laboratory, Athens, Georgia
(3) Department of Environmental Resources Management Miami-Dade County
U - Below method detection limit
D - Duplicate Sample
NS - Not Sampled
J - Identification of analyte is acceptable: Reported Value is and estimate.
ND - Not detected above sample quantitation limits for all PCBs analyzed (PCB/Aroclor -1016, -1221, -1232, -1242, -1248, -1254, -1260)
CDRAL - Consent Decree Remedial Action Levels
Boldfaced italicized values indicate values greater than current EPA and/or FDEP primary drinking water standard (MCL) indicated for that analyte.
< - Less than.

TABLE 2
Historic MEP/TCLP/SPLP Results for Monolith Samples
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

LEAD											
Location	PS-01	PS-01 Dup.	PS-02	PS-03	PS-04		PS-MS-1	PS-MS-2	PS-MS-3		PS-4
Date	3-Dec-03	3-Dec-03	3-Dec-03	3-Dec-03	3-Dec-03		11-Jan-00	11-Jan-00	11-Jan-00		11/23/1993
MEP1	0.03U	0.03U	0.03U	0.45	0.05		0.033	0.013	0.01U		0.05U
MEP2	0.08	0.21	0.28	1.4	0.9		0.064	0.01U	0.01U		0.05U
MEP3	0.05	0.05	0.09	0.23	0.29		0.152	0.01U	0.011		0.05U
MEP4	0.04	0.06	0.1	0.1	0.47		0.129	0.01U	0.01U		0.05U
MEP5	0.05	0.06	0.08	0.11	0.05U		0.01U	0.01U	0.01U		0.05U
MEP6	0.09	0.04	.03U	0.09	0.33		0.01U	0.01U	0.01U		0.05U
MEP7	0.03	0.03	0.11	0.14	0.26		0.01U	0.01U	0.01U		0.05U
MEP8	1	1.1	2.4	4.5	0.17		0.01U	0.01U	0.01U		0.05U
MEP9	0.03	0.04	0.05	0.16	0.18		0.01U	0.01U	0.01U		0.05U
TCLP	0.2	0.09	0.05	0.05	0.22		0.5U	1.6	0.5U		0.05U
SPLP	0.047	0.056	NA	0.024	0.019		NA	NA	NA		NA

ARSENIC											
Location	PS-01	PS-01 Dup.	PS-02	PS-03	PS-04		PS-MS-1	PS-MS-2	PS-MS-3		PS-4
Date	3-Dec-03	3-Dec-03	3-Dec-03	3-Dec-03	3-Dec-03		11-Jan-00	11-Jan-00	11-Jan-00		11/23/1993
MEP1	0.02U	0.02U	0.02U	0.04	0.02U		0.015U	.015U	0.044		0.05U
MEP2	0.02U	0.02U	0.02U	0.05	0.02U		0.015U	0.016	0.048		0.05U
MEP3	0.02U	0.02U	0.02U	0.02U	0.02U		0.015U	0.037	0.086		0.05U
MEP4	0.02U	0.02U	0.02U	0.03	0.02U		0.015U	0.015U	0.041		0.05U
MEP5	0.03U	0.03U	0.03	0.03U	0.03U		0.015U	0.015U	0.015U		0.05U
MEP6	0.02U	0.02U	0.02	0.02	0.02U		0.015U	0.015U	0.015U		0.05U
MEP7	0.02U	0.02U	0.02U	0.02U	0.02U		0.015U	0.015U	0.027		0.05U
MEP8	0.02U	0.02U	0.04	0.04	0.02U		0.015U	0.015U	0.015U		0.05U
MEP9	0.02U	0.02U	0.03	0.02U	0.02U		0.015U	0.015U	0.018		0.05U
TCLP	0.02U	0.02U	0.02U	0.02U	0.02U		0.5U	0.5U	0.5U		0.05U
SPLP	0.006	0.006	NA	0.008	0.004		NA	NA	NA		NA

All values are in milligrams/Liter (mg/L)
U - Not detected above the sample quantitation limit (SQL)
Dup. - Duplicate
All values above the SQL are shown in bold type.
NA - Data Not Available
MEP = Multiple Extraction Procedure
TCLP = Toxicity Characteristic Leachate Procedure
SPLP = Synthetic Precipitation Leaching Procedure

TABLE 3
Monolith Sample Metals Content
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

Analyte	PS-01	PS-01Dup.	PS-02	PS-03	PS-04
Arsenic	18	19	29	25	25
Barium	130	130	150	120	110
Cadmium	7.3	8.5	2.8	2	2.3
Chromium	34	34	26	17	17
Lead	800	840	1300	3700	2000
Selenium	4	5	2	5	4
Silver	5.4	4	1.9	1.9	2.7

All values are given in milligrams/kilogram (mg/kg) dry weight
Dup. - Duplicate

TABLE 4
Monolith Sample Physical Properties
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

Location	Date Sampled	UCS (lbs/in2)	Moisture Content (%)	Bulk Density (wet) (lbs/ft3)	Bulk Density (dry) (lbs/ft3)	Permeability (cm/sec)
PS-01	03-Dec-03	15.936	21.8	106.8	87.7	1.0E-05
PS-02	03-Dec-03	679.800	30.3	98.4	75.5	3.6E-07
PS-03	03-Dec-03	421.900	23.7	93.2	75.3	2.6E-07
PS-03 Dup.	03-Dec-03	347.200	25.5	95.8	76.3	2.4E-07
PS-04	03-Dec-03	149.730	17.3	94.9	81	1.6E-06

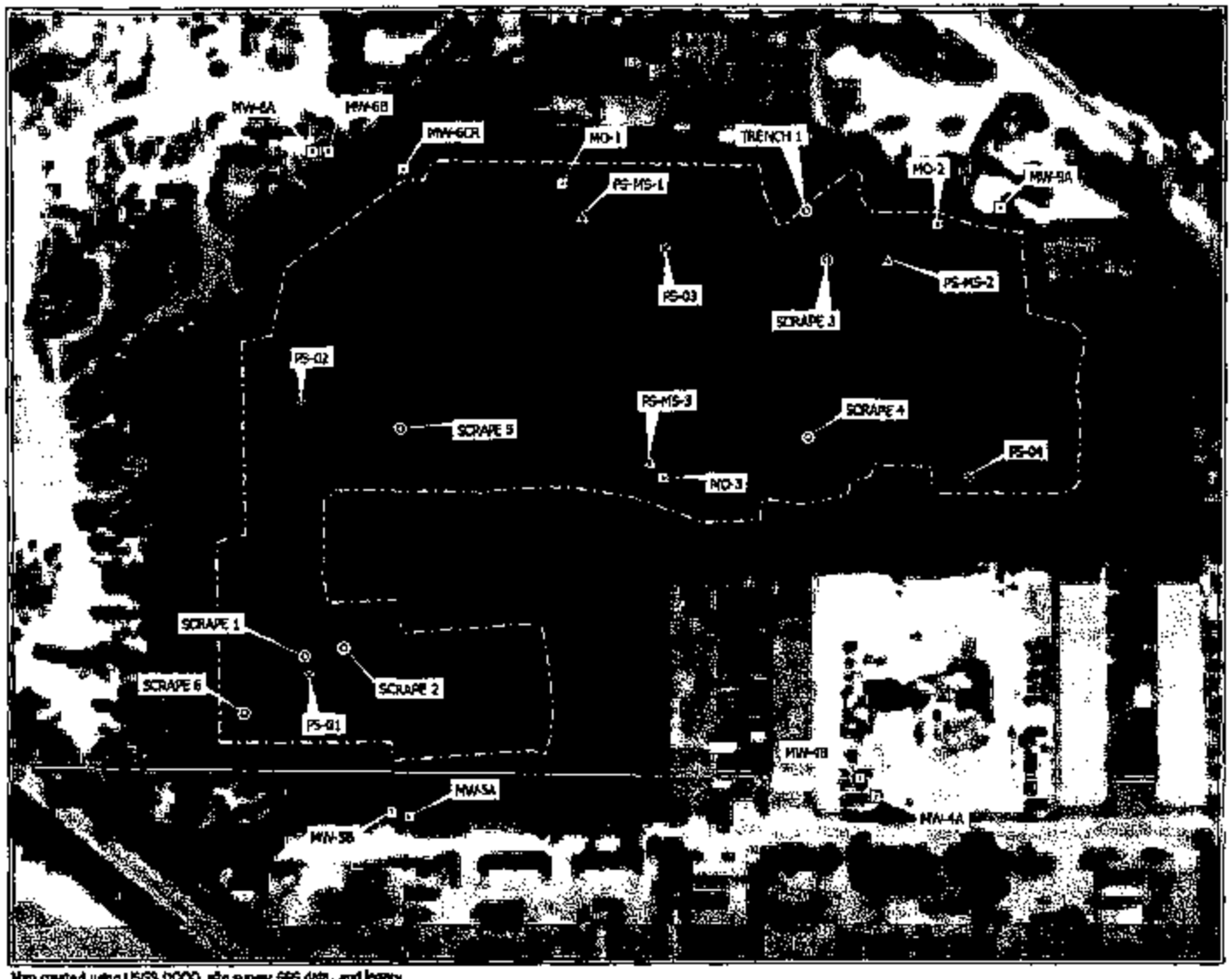
UCS - Unconfined Compressive Strength in Pounds Per Square Inch (lbs/in2)
% - Percent
lbs/ft3 - Pounds Per Cubic Foot
Dup. - Duplicate
cm/sec - Centimeters per Second

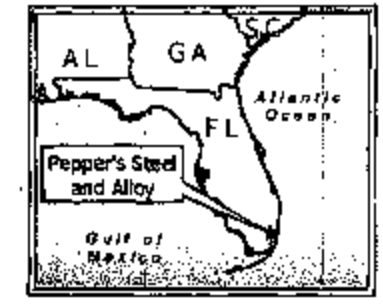
TABLE 5
Monolith Surface Scrape Observations and Results
Pepper Steel and Alloy, Inc. Site
Medley, Florida
July 2004

Location	Cover Thickness	Monolith Color	Pocket Penetrometer Reading	Notes
Scrape 1*	8-12 Inches	Dark Brown to Black	>600 psi	Monolith material is well compacted, but material is friable with backhoe bucket teeth. Guelph Permeameter Field Saturated Hydraulic Conductivity 3.21E-04 cm/sec. (Appendix C)
Scrape 2	20 Inches	Dark Brown	>600 psi	Monolith material is well compacted, but material is friable with backhoe bucket teeth.
Scrape 3	24 Inches	Dark Brown	>600 psi	Monolith material is well compacted, but material is friable. Material is moist, possibly saturated.
Scrape 4	15 Inches	Black	>600 psi	Material very well compacted. Backhoe bucket teeth could not penetrate material.
Scrape 5	30 Inches	Dark Brown	>600 psi	Teeth of backhoe do not penetrate easily, but material can be chipped away with backhoe teeth.
Scrape 6	16 Inches	Dark Brown	>600 psi	Monolith material is well compacted, but material is friable with backhoe bucket teeth.

psi = pounds per square inch
cm/sec = centimeters per second
* - Permeability value is considered suspect due to the fact that a uniform wetting front was difficult to establish.

Figures





Legend

- Monolith Sample Location January 11, 2000
- FPL Monitoring Well
- Drainage Collar Sample Location March 29, 2004
- Monolith Sample Location December 2-5, 2003
- Drainage Collar

Map created using USGS DOQQ, site survey GPS data, and legacy AutoCAD drawing file. GPS data collected in Lat, Lon, Decimal Degrees, WGS84. AutoCAD drawing file georeferenced to GPS data, and spatially adjusted using a 2-point conversion algorithm.

Map Creation Date: 06July2004

Coordinate System: UTM
Zone: 17N
Datum: NAD83
Units: Meters

60 0 60 120
Meters

U.S. EPA Environmental Response Team Center
Response Engineering and Analytical Contract
EP-C-04-032
W.A.# EAC00065

Figure 1
Site Location Map
Pepper Steel and Alloy, Inc.
May 2004 Investigation
Medley, Florida

Data: g:\ercview\projects\resp4\00-065
MXD file: g:\arcinfoprojects\resp4\EAC00065_PepperSteel\065_PS_siteMap_f.

Well ID	Date	well depth (ft TOC)	depth to water (ft TOC)	water column (ft)	well volume (gals)	start time	stop time	approx. pump intake depth (ft TOC)	pump discharge (gpm)	discharge duration (min)	volume purged (gals)
MO-1	12/2/2003	11.2	9.80	1.40		1111	1306	10	0.08	115	9
MO-2	12/2/2003	13.2	10.13	3.07		0959	1100	12	0.21	61	13
MO-3	12/2/2003	14.2	10.87	3.33		1330	1355	13	0.24	25	6
MW-4A	12/2/2003	19.2	7.20	12.00		1421	1452	18	0.16	31	5
MW-6A	12/2/2003	13.9	5.10	8.80		1522	1615	13	0.24	42	10

Well ID	Date	time (ft TOC)	temp (°C)	cond. mS/cm	DO%	pH	approx. gal. removed	water purged (ft TOC)	comments
MO-1	12/2/2003	1132	26.18	3.210	45.8	9.69	2		
	Devlp	1146	26.25	1.609	42.1	9.37	3		
		1202	26.53	1.295	55.3	9.38	5		
		1306	26.27	0.931	24.1	9.09	9	9	
	12/3/2003	1046	26.10	0.912	44.7	8.85	1		Well pumps slowly;
		1052	26.06	0.861	35.0	8.75	2		clearer than on 12/2/03.
	sample	1058	26.07	0.852	36.3	8.88	2.5		(A light, clear yellow.)
		1105	26.10	0.894	27.4	9.09	3.5		
		1115	26.17	0.901	27.2	9.10	4	4	
MO-2	12/2/2003	1041	26.3	0.603	40.4	7.67	5		
	Devlp	1050	26.28	0.601	33.7	7.62	7.5		
		1053	26.33	0.601	32.7	7.58	10		
		1058	26.31	0.599	31.4	7.53	13	13	
	12/3/2003	0952	26.15	0.571	42.6	7.68	1		Water clear (slightley
		0957	26.22	0.574	36.7	7.62	2		green); Well pumps
	sample	1004	26.24	0.572	34.2	7.57	3		easily, no bubbles.
		1011	26.20	0.570	31.9	7.54	5	5	
MO-3	12/2/2003	1335	26.35	0.530	32.5	7.97	1		
		1341	26.41	0.547	29.2	7.74	2		
	Devlp	1346	26.40	0.556	28.4	7.64	3		
		1352	26.37	0.564	27.8	7.58	4		
		1355	26.41	0.569	27.7	7.54	5	6	
	12/3/2003	1153	26.28	0.530	64.2	7.45	1		Well pumps clear.
	sample	1202	26.40	0.537	35.8	7.33	3		
		1210	26.28	0.534	31.4	7.37	4	4	
MW-4A	12/2/2003	1434	26.33	0.571	5.8	7.16	1		No inner or outer caps
		1440	26.31	0.570	8.4	7.11	2		on well.
	Devlp	1447	26.36	0.572	12.8	7.12	4		
		1451	26.28	0.571	15.3	7.11	5	5	
	12/3/2003	12.45	26.71	0.549	35.7	7.12	1		Well pumps clear.
	sample	12.5	26.58	0.547	32.0	7.13	2.5		
		12.56	26.43	0.546	29.3	7.14	4	4	
MW-6A	12/2/2003	1530	25.99	0.690	57.2	7.22	1		No inner or outer caps
		1539	25.99	0.685	30.7	7.09	4		on well.
	Devlp	1552	25.93	0.680	22.8	7.11	5		Water has color of
		1557	25.95	0.679	16.6	7.05	7		chocolate milk.
		1603	25.94	0.678	21.1	7.03	9		
		1612	25.91	0.677	23.5	7.03	10	10	
	12/3/2003	1335	25.82	0.642	36.1	7.11	1		Well pumps clear.
	sample	1345	25.76	0.641	29.7	7.09	2.5		
		1357	25.44	0.638	27.6	7.05	4	4	

Well ID	Date	Well Depth (ft TOC)	Depth to water (ft TOC)	water column (ft)	well vol (gals)	time	pump intake depth (ft TOC)	pump discharge (gpm)	discharge duration (min)	vol purged (gals)
MW2	12/2/03	13.2'	10.13'	2.07'		0959-1100		0.29 5/17min	6	13 gal
MW1	12/2/03	11.2'	9.80'	1.4'		1111-1300		0.08	115	9
MW3	12/2/03	14.2'	10.87	3.33		1330-1355		0.24	25	2
MW4A	12/2/03	19.2	7.2	12		1422-1452		0.16	31	5
MW6A	12/2/03	13.9'	5.10	8.8		1522				
~~MW2~~	~~12/3/03~~		~~10~~			~~0945~~				

Well ID	Date	time	temp °C	cond ms/cm	DO%	pH	approx gal removed	water purged	
MO2	12/2/03	~~0959~~ 1041	26.30°	0.603	46.4	7.67	5 gal		
		1050	26.28	0.601	33.7	7.62	7.5 gal		
		1053	26.33	0.601	32.7	7.58	10 gal		
		1058	26.31°	0.599	31.1	7.53	13 gal	13 gal	
MO1	12/2/03	1138	26.18	8.210	45.8	9.69	2 gal		
		1146	26.25	1.609	42.1	9.37	3 gal		
		1202	26.53	1.295	55.3	9.38	5 gal		
		1306	26.27	0.931	24.1	9.09	9 gal	9 gal	
MO3	12/2/03	1335	26.35	0.530	32.5	7.97	1 gal		
		1341	26.41	0.547	29.2	7.74	2 gal		
		1340	26.40	0.556	28.4	7.64	3 gal		
		1352	26.37	0.564	27.8	7.58	4 gal		
		~~1356~~	26.41	0.569	27.7	7.54	5 gal	6 gal	
MW4A	12/2/03	1434	26.33	0.571	5.8	7.16	1 gal		no inner or outer cap on well
		1440	26.31	0.570	8.4	7.11	2 gal		
		1447	26.34	0.572	12.8	7.12	4 gal		
		1451	26.28	0.571	15.3	7.11	5 gal	5 gal	
MW6A	12/2/03	1530	25.99	0.690	57.2	7.22	1 gal		no inner cap on well

		1306	26.27	0.931	24.1	9.09	9 gal	9 gal		
MO3	12/2/03	1335	26.35	0.530	32.5	7.97	1 gal			
		1341	26.41	0.547	29.2	7.74	2 gal			
		1340	26.40	0.556	28.4	7.64	3 gal			
		1352	26.37	0.564	27.8	7.58	4 gal			
		1356	26.41	0.569	27.7	7.54	5 gal	6 gal		
MW4A	12/2/03	1434	26.33	0.571	5.8	7.16	1 gal		no inner or outer capson well	
		1440	26.31	0.570	8.4	7.11	2 gal			
		1447	26.34	0.572	12.8	7.12	4 gal			
		1451	26.28	0.571	15.3	7.11	5 gal	5 gal		
MW6A	12/2/03	1530	25.99	0.690	57.2	7.22	1 gal		no inner capon well	
		1539	25.99	0.685	30.7	7.09	4 gal			
		1552	25.93	0.680	22.8	7.11	5 gal			
		1557	25.95	0.679	16.6	7.05	7 gal			
		1603	25.94	0.678	21.1	7.03	9 gal			
		1612	25.91	0.647	23.5	7.03	10 gal			

Well ID	Date	Time	°C temp	ms/cm cond	DO%	pH	approx gal removed	total water purged (gals)	comments
02	12/3/03	0952	26.15	0.571	42.6	7.68	1 gal		water clear (slightly cl
		0957	26.22	0.574	36.7	7.62	2 gal		well pumps vols easily,
		1004	26.24	0.572	34.2	7.57	3 gal		no bubbles
		1011	26.20	0.570	31.9	7.54	5		
01	12/3/03	1046	26.10	0.912	44.7	8.85	1		- well pumps slowly,
		1052	26.06	0.861	35.0	8.75	2		clearer than
		1058	26.07	0.852	36.3	8.88	2.5		yesterday
		1105	26.10	0.894	27.4	9.09	3.5		(a light, clear, yellow)
		1115	26.17	0.901	27.2	9.10	4		
03	12/3/03	1153	26.28	0.535	104.2	7.45	1		well pumps clear
		1202	26.40	0.537	35.8	7.33	3		
		1210	26.28	0.534	31.4	7.37	4		
W4A	12/3/03	1245	26.31°	0.549	35.7	7.12	1		well pumps clear
		1250	26.58	0.547	32.0	7.13	2.5		
		1256	26.43	0.546	29.3	7.14	4		
06A	12/3/03	1335	25.82	0.642	30.1	7.11	1		well pumps clear
		1345	25.75	0.641	29.7	7.09	2.5		(yesterday had color
		1357	25.44	0.638	27.6	7.05	4		of choc. milk)

Well ID	Date	Time	°C temp	ms/cm cond	DO%	pH	(gals) approx gal removed
MO2	12/3/03	0952	26.15	0.571	42.6	7.68	1 gal
		0957	26.22	0.574	36.7	7.62	2 gal
		1004	26.24	0.572	34.2	7.57	3 gal
		1011	26.20	0.570	31.9	7.54	5
MO1	12/3/03	1046	26.10	0.912	44.7	8.85	1
		1052	26.06	0.861	35.0	8.75	2
		1058	26.07	0.852	36.3	8.88	2.5
		1105	26.10	0.894	27.4	9.09	3.5
		1115	26.17	0.901	27.2	9.10	4
MO3	12/3/03	1153	26.28	0.530	64.1	7.45	1
		1202	26.40	0.537	35.8	7.33	3
		1210	26.28	0.534	31.4	7.37	4
MW4A	12/5/03	1245	26.71°	0.549	35.7	7.12	1
		1250	26.58	0.547	32.0	7.13	2.5
		1256	26.43	0.546	29.3	7.14	4
MW6A	12/3/03	1336	25.82	0.642	30.1	7.11	1
		1345	25.75	0.641	29.7	7.09	2.5
		1357	25.44	0.638	27.6	7.65	4

Well ID

	mS/cm cond	DO%	pH	(gals) approx gal removed	total water purged	comments
.15	0.571	46.6	7.68	1 gal		water clear/slightly gray
.2	0.574	36.7	7.62	2 gal		well pumps v dry easily,
.24	0.572	34.2	7.57	3 gal		no bubbles
.0	0.570	31.9	7.54	5		
.0	0.912	44.7	8.85	1		well pumps slowly,
.6	0.861	35.0	8.75	2		clearer than
.07	0.852	36.3	8.88	2.5		yesterday
.0	0.894	27.4	9.09	3.5		(a light, clear, yellow)
.17	0.901	27.2	9.10	4		
.28	0.530	44.2	7.45	1		well pumps clear
.2	0.537	35.8	7.33	3		
.48	0.534	31.4	7.37	4		
.10	0.549	35.7	7.12	1		well pumps clear
.58	0.547	32.0	7.13	2.5		
.3	0.546	29.3	7.14	4		
.1	0.642	30.1	7.11	1		well pumps clear
.75	0.641	29.7	7.09	2.5		(yesterday had color
.4	0.638	27.6	7.05	4		of choc. milk)

APPENDIX B

Chain-of-Custody Records and Preliminary Results
Pepper Steel and Alloy, Inc. Site
Trip Report
July 2004

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BB-011-TBW	MD25X2	well	Ground Water	12/03/2003			
MO-1	MD25X3	well	Ground Water	12/03/2003			
MO-1	D25X3	well	Ground Water	12/03/2003			
MO-1	D25X3	well	Ground Water	12/03/2003			
MO-2	D25X4	well	Ground Water	12/03/2003			
MO-2	MD25X4	well	Ground Water	12/03/2003			
MO-2	D25X4	well	Ground Water	12/03/2003			
MO-3	D25X5	well	Ground Water	12/03/2003			
MO-3	MD25X5	well	Ground Water	12/03/2003			
MO-3	D25X5	well	Ground Water	12/03/2003			
MW-4A	MD25X6	well	Ground Water	12/03/2003			
MW-4A	D25X6	well	Ground Water	12/03/2003			
MW-4A	D25X6	well	Ground Water	12/03/2003			
MW-6A	D25X7	well	Ground Water	12/03/2003			
MW-6A	MD25X7	well	Ground Water	12/03/2003			
MW-6A	D25X7	well	Ground Water	12/03/2003			

Blank MD 25X(2)

MO-1 MD/D 25X(3)

MO-2 MD/D 25X(4)

MO-3 MD/D 25X(5)

MW-4A MD/D 25X(6)

MW-6A MD/D 25X(7)

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/10/2004 08:19**

Sample **2395** FY **2004** Project: **04-0192**

SPECIFIED TESTS

Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF Case No: 32408
Id/Station: WELL / (spike ?) MD No: 25X2 Inorg Contractor: SENTIN
Media: BLANK

Produced by: Goddard, Denise 706-355-8568
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

RESULTS	UNITS	ANALYTE
9.4	UG/L	Arsenic
12	UG/L	Lead

(used as internal QC - sample spiked a sub allogquate for spike purposes and then reported wrong.

Denise will clk and get back w/ me. will take a couple of days. → Results correct mass. spec. → Had to dilute

Spike (25 X 0 nothing
25 X 1 something

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/10/2004 08:19**

Sample 2396 FY 2004 Project: 04-0192

SPECIFIED TESTS

Facility: Pepper Steel & Alloys, Inc. Medley, FL

Program: SF Case No: 32408

Id/Station: WELL / MD-1 MD No: 25X3 Inorg Contractor: SENTIN

Media: GROUNDWATER D No: 25X3 Org Contractor: ENVSYS

Produced by: Goddard, Denise 706-355-8568

Requestor:

Project Leader: CSANTIAG

Beginning: 12/03/2003

Ending:

RESULTS	UNITS	ANALYTE
8.8	UG/L	Arsenic
11	UG/L	Lead

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/10/2004 08:19**

Sample 2397 FY 2004 Project: 04-0192

Produced by: Goddard, Denise
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

SPECIFIED TESTS

Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF Case No: 32408
Id/Station: WELL / MO-2 MD No: 25X4 Inorg Contractor: SENTIN
Media: GROUNDWATER D No: 25X4 Org Contractor: ENVSYS

RESULTS	UNITS	ANALYTE
0.98 J	UG/L	Arsenic
2.6	UG/L	Lead

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/10/2004 08:19**

Sample **2398** FY **2004** Project: **04-0192**

SPECIFIED TESTS

Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF
Id/Station: WELL / MO-3
Media: GROUNDWATER

Case No: 32408
MD No: 25X5
D No: 25X5

Inorg Contractor: SENTIN
Org Contractor: ENVSYS

Produced by: Goddard, Denise
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

RESULTS	UNITS	ANALYTE
3.8	UG/L	Arsenic
0.38 J	UG/L	Lead

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/10/2004 08:19**

Sample **2399** FY **2004** Project: **04-0192**

SPECIFIED TESTS

Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF Case No: 32408
Id/Station: WELL / MW-4A MD No: 25X8 Inorg Contractor: SENTIN
Media: GROUNDWATER D No: 25X6 Org Contractor: ENVSYS

Produced by: Goddard, Denise
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

RESULTS	UNITS	ANALYTE
0.57 J	UG/L	Arsenic
1.6	UG/L	Lead

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/10/2004 08:19**

Sample 2400 FY 2004 Project: 04-0192
SPECIFIED TESTS
Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF Case No: 32408
Id/Station: WELL / MD No: 25X7 Inorg Contractor: SENTIN
Media: GROUNDWATER MW-6A D No: 25X7 Org Contractor: ENVSYS

Produced by: Goddard, Denise
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

RESULTS	UNITS	ANALYTE
0.31 J	UG/L	Arsenic
6.2	UG/L	Lead

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/10/2004 08:19**

Sample 2403 FY 2004 Project: 04-0192
SPECIFIED TESTS
Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF Case No: 32408
Id/Station: BB425 / MD No: 28A0 Inorg Contractor: SENTIN
Media: WATER (Blank ?)

Produced by: Goddard, Denise
Requestor:
Project Leader: CSANTIAG
Beginning:
Ending:

RESULTS	UNITS	ANALYTE
1.0 U	UG/L	Arsenic
1.0 U	UG/L	Lead

2401 2402) PES

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 01/29/2004 16:48**

Sample 2396 FY 2004 Project: 04-0192
Pesticides & Aroclors Scan
Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF Case No: 32408
Id/Station: WELL / MW-1 MD No: 25X3 Inorg Contractor: SENTIN
Media: GROUNDWATER D No: 25X3 Org Contractor: ENVSYS

Produced by: Messer, Edward
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

RESULTS	UNITS	ANALYTE
0.010 U	UG/L	alpha-BHC
0.010 U	UG/L	beta-BHC
0.010 U	UG/L	delta-BHC
0.010 U	UG/L	gamma-BHC (Lindane)
0.010 U	UG/L	Heptachlor
0.010 U	UG/L	Aldrin
0.010 U	UG/L	Heptachlor Epoxide
0.010 U	UG/L	Endosulfan I (alpha)
0.020 U	UG/L	Dieldrin
0.020 U	UG/L	4,4'-DDE (p,p'-DDE)
0.020 U	UG/L	Endrin
0.020 U	UG/L	Endosulfan II (beta)
0.020 U	UG/L	4,4'-DDD (p,p'-DDD)
0.020 U	UG/L	Endosulfan Sulfate
0.020 U	UG/L	4,4'-DDT (p,p'-DDT)
0.10 U	UG/L	Methoxychlor
0.020 U	UG/L	Endrin Ketone
0.020 U	UG/L	Endrin Aldehyde
0.010 U	UG/L	alpha-Chlordane /2
0.010 U	UG/L	gamma-Chlordane /2
1.0 U	UG/L	Toxaphene
0.20 U	UG/L	PCB-1016 (Aroclor 1016)
0.40 U	UG/L	PCB-1221 (Aroclor 1221)
0.20 U	UG/L	PCB-1232 (Aroclor 1232)
0.20 U	UG/L	PCB-1242 (Aroclor 1242)
0.20 U	UG/L	PCB-1248 (Aroclor 1248)
0.20 U	UG/L	PCB-1254 (Aroclor 1254)
0.20 U	UG/L	PCB-1260 (Aroclor 1260)

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.
C-confirmed by GCMS | /1-when no value is reported, see chlordane constituents | /2-constituents or metabolites of technical chlordane

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 01/29/2004 16:48**

Sample 2397 FY 2004 Project: 04-0192
Pesticides & Aroclors Scan
Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF Case No: 32408
Id/Station: WELL / MW-2 MD No: 25X4 Inorg Contractor: SENTIN
Media: GROUNDWATER D No: 25X4 Org Contractor: ENVSYS

Produced by: Messer, Edward
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

RESULTS	UNITS	ANALYTE
0.010 U	UG/L	alpha-BHC
0.010 U	UG/L	beta-BHC
0.010 U	UG/L	delta-BHC
0.010 U	UG/L	gamma-BHC (Lindane)
0.010 U	UG/L	Heptachlor
0.010 U	UG/L	Aldrin
0.010 U	UG/L	Heptachlor Epoxide
0.010 U	UG/L	Endosulfan I (alpha)
0.020 U	UG/L	Dieldrin
0.020 U	UG/L	4,4'-DDE (p,p'-DDE)
0.020 U	UG/L	Endrin
0.020 U	UG/L	Endosulfan II (beta)
0.020 U	UG/L	4,4'-DDD (p,p'-DDD)
0.020 U	UG/L	Endosulfan Sulfate
0.020 U	UG/L	4,4'-DDT (p,p'-DDT)
0.10 U	UG/L	Methoxychlor
0.020 U	UG/L	Endrin Ketone
0.020 U	UG/L	Endrin Aldehyde
0.010 U	UG/L	alpha-Chlordane /2
0.010 U	UG/L	gamma-Chlordane /2
1.0 U	UG/L	Toxaphene
0.20 U	UG/L	PCB-1016 (Aroclor 1016)
0.40 U	UG/L	PCB-1221 (Aroclor 1221)
0.20 U	UG/L	PCB-1232 (Aroclor 1232)
0.20 U	UG/L	PCB-1242 (Aroclor 1242)
0.20 U	UG/L	PCB-1248 (Aroclor 1248)
0.20 U	UG/L	PCB-1254 (Aroclor 1254)
0.20 U	UG/L	PCB-1260 (Aroclor 1260)

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. *Actual value expected to be greater than reported value.*
NA-Not Analyzed. | NAI-Not Analyzed due to interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.
C-confirmed by GC/MS. | /1-when no value is reported, see chlordane constituents | /2-constituents or metabolites of technical chlordane

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 01/29/2004 16:48**

Sample 2398 FY 2004 Project: 04-0192
Pesticides & Aroclors Scan
Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF Case No: 32408
Id/Station: WELL / MO-3 MD No: 25X5 Inorg Contractor: SENTIN
Media: GROUNDWATER D No: 25X5 Org Contractor: ENVSYS

Produced by: Messer, Edward
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

RESULTS	UNITS	ANALYTE
0.010 U	UG/L	alpha-BHC
0.010 U	UG/L	beta-BHC
0.010 U	UG/L	delta-BHC
0.010 U	UG/L	gamma-BHC (Lindane)
0.010 U	UG/L	Heptachlor
0.010 U	UG/L	Aldrin
0.010 U	UG/L	Heptachlor Epoxide
0.010 U	UG/L	Endosulfan I (alpha)
0.020 U	UG/L	Dieldrin
0.020 U	UG/L	4,4'-DDE (p,p'-DDE)
0.020 U	UG/L	Endrin
0.020 U	UG/L	Endosulfan II (beta)
0.020 U	UG/L	4,4'-DDD (p,p'-DDD)
0.020 U	UG/L	Endosulfan Sulfate
0.020 U	UG/L	4,4'-DDT (p,p'-DDT)
0.10 U	UG/L	Methoxychlor
0.020 U	UG/L	Endrin Ketone
0.020 U	UG/L	Endrin Aldehyde
0.010 U	UG/L	alpha-Chlordane /2
0.010 U	UG/L	gamma-Chlordane /2
1.0 U	UG/L	Toxaphene
0.20 U	UG/L	PCB-1016 (Aroclor 1016)
0.40 U	UG/L	PCB-1221 (Aroclor 1221)
0.20 U	UG/L	PCB-1232 (Aroclor 1232)
0.20 U	UG/L	PCB-1242 (Aroclor 1242)
0.20 U	UG/L	PCB-1248 (Aroclor 1248)
0.20 U	UG/L	PCB-1254 (Aroclor 1254)
0.20 U	UG/L	PCB-1260 (Aroclor 1260)

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
K-Identification of analyte is acceptable; reported value may be biased high. Actual value expected to be less than the reported value.
L-Identification of analyte is acceptable; reported value may be biased low. Actual value expected to be greater than reported value.
NA-Not Analyzed. | NAI-Not Analyzed due to Interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.
C-confirmed by GCMS | /1-when no value is reported, see chlordane constituents | /2-constituents or metabolites of technical chlordane

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 01/29/2004 16:48**

Sample 2399 FY 2004 Project: 04-0192
Pesticides & Aroclors Scan
Facility: Pepper Steel & Alloys, Inc. Medley, FL
Program: SF Case No: 32408
Id/Station: WELL / MW-4A MD No: 25X6 Inorg Contractor: SENTIN
Media: GROUNDWATER D No: 25X6 Org Contractor: ENVSYS

Produced by: Messer, Edward
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

RESULTS	UNITS	ANALYTE
0.010 U	UG/L	alpha-BHC
0.010 U	UG/L	beta-BHC
0.010 U	UG/L	delta-BHC
0.010 U	UG/L	gamma-BHC (Lindane)
0.010 U	UG/L	Heptachlor
0.010 U	UG/L	Aldrin
0.010 U	UG/L	Heptachlor Epoxide
0.010 U	UG/L	Endosulfan I (alpha)
0.020 U	UG/L	Dieldrin
0.020 U	UG/L	4,4'-DDE (p,p'-DDE)
0.020 U	UG/L	Endrin
0.020 U	UG/L	Endosulfan II (beta)
0.020 U	UG/L	4,4'-DDD (p,p'-DDD)
0.020 U	UG/L	Endosulfan Sulfate
0.020 U	UG/L	4,4'-DDT (p,p'-DDT)
0.10 U	UG/L	Methoxychlor
0.020 U	UG/L	Endrin Ketone
0.020 U	UG/L	Endrin Aldehyde
0.010 U	UG/L	alpha-Chlordane /2
0.010 U	UG/L	gamma-Chlordane /2
1.0 U	UG/L	Toxaphene
0.20 U	UG/L	PCB-1016 (Aroclor 1016)
0.40 U	UG/L	PCB-1221 (Aroclor 1221)
0.20 U	UG/L	PCB-1232 (Aroclor 1232)
0.20 U	UG/L	PCB-1242 (Aroclor 1242)
0.20 U	UG/L	PCB-1248 (Aroclor 1248)
0.20 U	UG/L	PCB-1254 (Aroclor 1254)
0.20 U	UG/L	PCB-1260 (Aroclor 1260)

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
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NA-Not Analyzed. | NAI-Not Analyzed due to interferences. | A-Analyte analyzed in replicate. Reported value is "average" of replicates.
R-Presence or absence of analyte can not be determined from data due to severe quality control problems. Data are rejected and considered unusable.
C-confirmed by GCMS. 1 /1-when no value is reported, see chlordane constituents | /2-constituents or metabolites of technical chlordane

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 01/29/2004 16:48**

Sample 2400 FY 2004 Project: 04-0192

Pesticides & Aroclors Scan

Facility: Pepper Steel & Alloys, Inc. Medley, FL

Program: SF Case No: 32408

Id/Station: WELL / MW-6R MD No: 25X7 Inorg Contractor: SENTIN

Media: GROUNDWATER D No: 25X7 Org Contractor: ENVSYS

Produced by: Messer, Edward
Requestor:
Project Leader: CSANTIAG
Beginning: 12/03/2003
Ending:

RESULTS	UNITS	ANALYTE
0.010 U	UG/L	alpha-BHC
0.010 U	UG/L	beta-BHC
0.010 U	UG/L	delta-BHC
0.010 U	UG/L	gamma-BHC (Lindane)
0.010 U	UG/L	Heptachlor
0.010 U	UG/L	Aldrin
0.010 U	UG/L	Heptachlor Epoxide
0.010 U	UG/L	Endosulfan I (alpha)
0.020 U	UG/L	Dieldrin
0.020 U	UG/L	4,4'-DDE (p,p'-DDE)
0.020 U	UG/L	Endrin
0.020 U	UG/L	Endosulfan II (beta)
0.020 U	UG/L	4,4'-DDD (p,p'-DDD)
0.020 U	UG/L	Endosulfan Sulfate
0.020 U	UG/L	4,4'-DDT (p,p'-DDT)
0.10 U	UG/L	Methoxychlor
0.020 U	UG/L	Endrin Ketone
0.020 U	UG/L	Endrin Aldehyde
0.010 U	UG/L	alpha-Chlordane /2
0.010 U	UG/L	gamma-Chlordane /2
1.0 U	UG/L	Toxaphene
0.20 U	UG/L	PCB-1016 (Aroclor 1016)
0.40 U	UG/L	PCB-1221 (Aroclor 1221)
0.20 U	UG/L	PCB-1232 (Aroclor 1232)
0.20 U	UG/L	PCB-1242 (Aroclor 1242)
0.20 U	UG/L	PCB-1248 (Aroclor 1248)
0.20 U	UG/L	PCB-1254 (Aroclor 1254)
0.20 U	UG/L	PCB-1260 (Aroclor 1260)

U-Analyte not detected at or above reporting limit. | J-Identification of analyte is acceptable; reported value is an estimate. | UJ-Analyte not detected at or above reporting limit. Reporting limit is an estimate.
N-Presumptive evidence analyte is present; analyte reported as tentative identification. | NJ-Presumptive evidence analyte is present; analyte reported as tentative identification. Reported value is an estimate.
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REAC, Edison, NJ
(732) 321-4200
EPA Contract 68-C99-223

CHAIN OF CUSTODY RECORD

Project Name: Peppers Steel
Project Number: RSA 00 354
RM Contact: J. Johnson Phone: (732) 321-4243

No: 05875
Sheet 01 of 01 (Do not copy)
(for addnl. samples use new form)

Sample Identification — Analyses Requested (See Special Inst)

REAC#	Sample No.	Sampling Location	Matrix	Date Collected	# of Bags	Container/Preservative	Note				
	PS-01A-A	D(0.5-4.5)	X	12/05/03	2	plastic bag/none	X				
	PS-01A-A	D(0.5-4.5)	X	12/05/03	2	↓	X				
	PS-02-A	D(1.25-6.5)	X	12/04/03	1	↓	X				
	PS-02-B	W(2-7)	X	12/05/03	1	↓	X				
	PS-02-C	W(2-5)	X	12/05/03	1	↓	X				
	PS-03-A	D(0-3.5)	X	12/04/03	1	↓	X				
	PS-03-A	D(1-4.5)	X	12/04/03	1	↓	X				
	PS-03-B	W(1-5)	X	12/04/03	6	↓	X				
	PS-04-A	D(1-3.5)	X	12/05/03	1	↓	X				
	PS-04-B	W(1-5)	X	12/05/03	2	↓	X				
	~~PS-04-B~~	~~W(1-5)~~	~~X~~	~~12/05/03~~							
	PS-04-C	W(1-6)	X	12/05/03	1	plastic bag/none	X				

Matrix:

A- Air
AT- Animal Tissue
DL- Drum Liquids
DS- Drum Solids
GW- Groundwater
O- Oil
PR- Product
PT- Plant Tissue
PW- Potable Water
S- Soil
SD- Sediment
SL- Sludge
SW- Surface Water
TX- TCLP Extract
W- Water
X- Other Treated soil

Special Instructions:

1. Total Metals (No Hg)
2. TCLP/SPLP/MEP (No Hg)
3. Permeability
4. Porosity
5. UCS
6. Wet/Dry weathering
7. ANC
8. Min/Max Da

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #:

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished by	Date	Received by	Date	Time
All/Analysis	[illegible]	12/05/03									

SPIKE AND CLP ORDER FORM
FAX # (706) 355-8803
ATTN: Debbie Colquitt

REQUESTOR:	BRIAN HOLDERNESS
ORGANIZATION: (NAME AND ADDRESS)	REAC
SITE NAME:	PEPPER STEEL & ALLOYS, INC.
LOCATION:	MEDLEY, FL
LAB NAME & ADDRESS	
SITE ACCOUNT NO:	302DD2C0480
REQUEST DATE:	11/25/03 **SAMPLING DATES:** 12/01/03 **THRU:** 12/05/03
PAPERWORK SHIP DATE:	11/25/03 **SPIKE SHIP DATE:** 12/02/03
FEDEX NO:	214616289

SPIKES REQUIRED

ORGANIC	✓	Organic Regular Concentration		✓	Organic Low Concentration		✓	INORGANIC	Inorganic Regular Concentration	
WATER		CLP	PE		CLP	PE		WATER	CLP	PE
VOLATILES	N			N			Y	METALS (W) ALUM		
SEMIVOLATILES	N			N			N	CYANIDE (W)		
PESTICIDES/PCB	N			Y			N	MERCURY (W)		
SOIL		CLP	PE		DIOXIN		Y	METALS (W) IRON		
SEMIVOLATILES	N			N	SPIKE (S)			SOIL	CLP	PE
PESTICIDES/PCB	N			N	BLANK (S)		N	METALS (S)		
AROCLOR 1248	N							BLANK	CLP	PE
AROCLOR 1254	N						Y	INORGANIC (W)	MD25X2	BB425
AROCLOR 1260	N									

PROJECT/PRP NO:	04-0192	**CASE NO:**	
PAPERWORK ORDER (EPA ONLY)		**Federal Express Tracking No.**	7909 7333 7908
ORGANIC (Regular Conc) (LAB:)		**Federal Express Tracking No.**	
NO. OF REPORTS:	**NO. OF STICKERS:** 5	**NO's ASSIGNED:**	D25X3 - D25X7
ORGANIC (Low Conc) (LAB:)		**Federal Express Tracking No.**	
INORGANIC (LAB:)		**Federal Express Tracking No.**	
NO. OF REPORTS:	**NO. OF STICKERS:** 5	**NO's ASSIGNED:**	MD25X3 - MD25X7

IF YOU HAVE ANY QUESTIONS, PROBLEMS, OR COMMENTS, PLEASE CONTACT DEBBIE COLQUITT AT (706)355-8804.
Traffic reports and sample stickers will be sent via Federal Express to the requestor's office on Wednesday of the week prior to the sampling event. Spikes will be sent via Federal Express directly to the laboratory by EPA on Tuesday of the week of the sampling event.

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: R
DAS No:

Region:	4	Date Shipped:	12/4/2003	Chain of Custody Record	Sampler Signature:
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:		Airbill:		1	
CERCLIS ID:		Shipped to:	Sentinel Inc. 116 Washington Street, NE Huntsville AL 35801 (256) 534-9800	2	
Spill ID:				3	
Site Name/State:	Pepper's Steel/FL			4	
Project Leader:	Brian Holdermeyer				
Action:					
Sampling Co:	Lockheed Martin REAC				

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MD25X2 (blank)	Ground Water	/G	TM (No Hg) (21)	100 (HNO3, 4 C) (1)	well	S: 12/3/2003		--
MD25X3	Ground Water	/G	TM (No Hg) (21)	101 (HNO3, 4 C) (1)	well	S: 12/3/2003		--
MD25X4	Ground Water	/G	TM (No Hg) (21)	104 (HNO3, 4 C) (1)	well	S: 12/3/2003		--
MD25X5	Ground Water	/G	TM (No Hg) (21)	107 (HNO3, 4 C) (1)	well	S: 12/3/2003		--
MD25X6	Ground Water	/G	TM (No Hg) (21)	110 (HNO3, 4 C) (1)	well	S: 12/3/2003		--
MD25X7	Ground Water	/G	TM (No Hg) (21)	113 (HNO3, 4 C) (1)	well	S: 12/3/2003		--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____
TM (No Hg) = CLP TAL Total Metals (No Hg)			

TR Number: 4-182978158-120303-0001

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

1 Cop ampl geme ce, 2 mun Dr., Reston, VA 20191-3400 Phone 703/264-9349 Fax 703/264-9222

EPA USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: R
Client No:

Region:	4	Date Shipped:	12/4/2003	Chain of Custody Record	Sampler Signature
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:		Airbill:		1	
CERCLIS ID:		Shipped to:	Envirosystems, Inc. 9200 Rumsey Rd. Suite B102 Columbia MD 21045 (410) 964-0330	2	
Spill ID:				3	
Site Name/State:	Pepper's Steel/FL			4	
Project Leader:	Brian Holderness				
Action:					
Sampling Co:	Lockheed Martin REAC				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	QC Type
D25X3	Ground Water	/G	Pest/PCB (21)	102 (4 C), 103 (4 C) (2)	well	S: 12/3/2003	-
D25X4	Ground Water	/G	Pest/PCB (21)	105 (4 C), 106 (4 C) (2)	well	S: 12/3/2003	-
D25X5	Ground Water	/G	Pest/PCB (21)	108 (4 C), 109 (4 C) (2)	well	S: 12/3/2003	-
D25X6	Ground Water	/G	Pest/PCB (21)	111 (4 C), 112 (4 C) (2)	well	S: 12/3/2003	-
D25X7	Ground Water	/G	Pest/PCB (21)	114 (4 C), 115 (4 C) (2)	well	S: 12/3/2003	-

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____
Pest/PCB = Pesticides/PCB			

TR Number: 4-182978158-120303-0002

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

KEMRON ENVIRONMENTAL SERVICES, INC.

SAIC

SOUTH 8th STREET GEOTECHNICAL TESTING PROJECT

TABLE 3

Unconfined Compressive Stress Testing - ASTM D1633

Summary of Results

SAMPLE ID	DATE RECEIVED	Initial Diameter (in)	Initial Height (in)	Initial Bulk Density (lbs/ft^3)	UCS Result (lbs/in^2)	Applied Correction Factor	Corrected UCS Result (lbs/in^2)
AC-02A	3/8/2004	3.0	3.8	109.5	337.4	0.93	313.8
PS-01A-A	3/8/2004	2.1	3.3	119.1	16.6	0.96	15.9
PS-02-B	3/8/2004	2.1	3.9	103.4	679.8	1	679.8
PS-03-B (1)	3/8/2004	2.0	4.5	98.6	421.9	1	421.9
PA-03B (2)	3/8/2004	2.1	4.6	100.0	347.2	1.0	347.2
PS-04-B	3/8/2004	2.0	2.7	97.0	161.0	0.93	149.7

KEMRON ENVIRONMENTAL SERVICES, INC.

SAIC

SOUTH 8th STREET GEOTECHNICAL TESTING PROJECT

TABLE 4
Falling Head Permeability Testing - ASTM D5084
Summary of Results

SAMPLE ID	DATE RECEIVED	Initial Moisture Content (%)	Initial Bulk Density (lbs/ft^3)	Initial Dry Density (lbs/ft^3)	Applied Consolidation Pressure (PSI)	Permeability (cm/sec)
AC-02-A	3/8/2004	12.0	105.4	94.1	10	6.2E-05
PS-1A-A	3/8/2004	21.8	106.8	87.7	10	1.0E-05
PS-02-C	3/8/2004	30.3	98.4	75.5	10	3.6E-07
PS-03B (1)	3/8/2004	23.7	93.2	75.3	10	2.6E-07
PS-03B (2)	3/8/2004	25.5	95.8	76.3	10	2.4E-07
PS-04-C	3/8/2004	17.3	94.9	81.0	10	1.6E-06

MEP; Method Reference EPA SW 846, 3rd Edition. 1320/6010B

Aresenic MEP results

	Arsenic Concentration (mg/L)				
	PS-01	PS-01 (dup)*	PS-02	PS-03	PS-04
MEP1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MEP2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MEP3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MEP4	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MEP5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MEP6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MEP7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MEP8	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MEP9	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Lead MEP Results

	Lead Concentration (mg/L)				
	PS-01	PS-01 (dup)*	PS-02	PS-03	PS-04
MEP1	< 0.1	< 0.1	< 0.1	0.4	< 0.1
MEP2	< 0.1	0.2	0.3	1.4	0.9
MEP3	< 0.1	< 0.1	< 0.1	0.2	0.3
MEP4	< 0.1	< 0.1	< 0.1	0.1	0.5
MEP5	< 0.1	< 0.1	< 0.1	0.1	< 0.1
MEP6	< 0.1	< 0.1	< 0.1	< 0.1	0.3
MEP7	< 0.1	< 0.1	0.1	0.1	0.3
MEP8	1	1.1	2.4	4.5	0.2
MEP9	< 0.1	< 0.1	< 0.1	0.2	0.2

* PS-01(dup) is sample # PS-05 in the lab reports on the subsequent worksheets