

Five-Year Review Report
Third Five-Year Review Report
for
Airco Plating Co.
FLD004145140

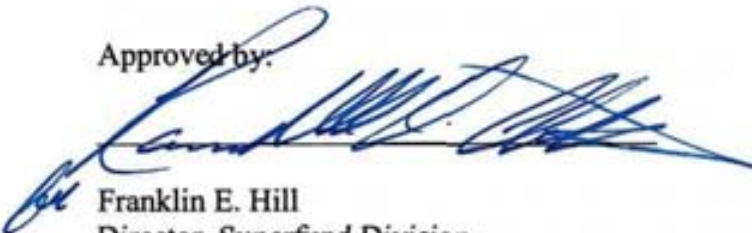
Miami
Miami-Dade County, Florida

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9/12/11

**Third Five-Year Review Report
for
Airco Plating Co.
3636 NW 46th Street
Miami
Miami-Dade, Florida**

List of Acronyms	5
Executive Summary	6
1.0 Introduction	13
2.0 Site Chronology	15
3.0 Background	16
3.1 PHYSICAL CHARACTERISTICS	16
3.2 LAND AND RESOURCE USE	20
3.3 HISTORY OF CONTAMINATION	20
3.4 INITIAL RESPONSE	21
3.5 BASIS FOR TAKING ACTION	21
4.0 Remedial Actions	23
4.1 REMEDY SELECTION	23
4.2 REMEDY IMPLEMENTATION	26
4.3 OPERATION AND MAINTENANCE (O&M).....	27
5.0 Progress Since the Last Five-Year Review	29
5.1 EVALUATION OF REMEDY EFFECTIVENESS	30
5.2 POTENTIOMETRIC MAPS	31
5.3 VAPOR INTRUSION ASSESSMENT	31
5.4 CAP INSPECTION	31
5.5 SITE INSTITUTIONAL CONTROLS	31
5.6 UPDATING SITE DOCUMENTATION.....	32
5.7 REMEDIAL ACTION REVIEW.....	32
6.0 Five-Year Review Process	33
6.1 ADMINISTRATIVE COMPONENTS	33
6.2 COMMUNITY INVOLVEMENT	33
6.3 DOCUMENT REVIEW	33
6.4 DATA REVIEW	36
6.5 SITE INSPECTION.....	45
6.6 INTERVIEWS.....	49
7.0 Technical Assessment	52
7.1 QUESTION A: IS THE REMEDY FUNCTIONING AS INTENDED BY THE DECISION DOCUMENTS?	52

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?	53
7.3	QUESTION C: HAS ANY OTHER INFORMATION COME TO LIGHT THAT COULD CALL INTO QUESTION THE PROTECTIVENESS OF THE REMEDY?	54
7.4	TECHNICAL ASSESSMENT SUMMARY	54
8.0	Issues	57
9.0	Recommendations and Follow-up Actions	58
10.0	Protectiveness Statement.....	60
11.0	Next Review	61
Appendix A: List of Documents Reviewed.....		A-1
Appendix B: Press Notice.....		B-1
Appendix C: Interview Forms		C-1
Appendix D: Site Inspection Checklist		D-1
Appendix E: Photographs from Site Inspection Visit		E-1
Appendix F: FDEP Memorandum.....		F-1
Appendix G: EPA Explanation of Potential Liability		G-1
Tables		
Table 1:	Chronology of Site Events.....	15
Table 2:	Zoning for Site Parcels	16
Table 3:	Ground Water COC Cleanup Goals	25
Table 4:	Soil COC Cleanup Goals.....	25
Table 5:	Annual O&M Costs	28
Table 6:	Progress on Recommendations from the 2006 FYR	29
Table 7:	Previous and Current ARARs for Ground Water COCs	35
Table 8:	Annual Ground Water Monitoring Results, 2006-2011	38
Table 9:	Quarterly Ground Water Influent Samples for RW-1, 2006-2010	40
Table 10:	Quarterly Ground Water Influent Samples for RW-4, 2006-2010	41
Table 11:	Statistical Trend Analysis for Cadmium and Nickel Concentrations, 2006-2010.....	42
Table 12:	Pumping Rates for Ground Water Recovery Wells, 2006-2010	43
Table 13:	Deed Documents from Miami-Dade Public Records Office	46
Table 14:	Institutional Control (IC) Summary Table	49
Table 15:	Chromium Oral Reference Dose	54
Table 16:	Current Site Issues	57
Table 17:	Recommendations to Address Current Site Issues	58

Figures

Figure 1: Site Location Map 17
Figure 2: Detailed Site Map 18
Figure 3: Detailed Site Map with Parcel Boundaries..... 19
Figure 4: Cadmium and Nickel Concentrations in RW-4, 1997-2010 45
Figure 5: Florida Ground Water Delineated Area 48

List of Acronyms

µg/L	Micrograms per Liter
APC	Airco Plating Company
ARAR	Applicable or Relevant and Appropriate Requirement
bls	Below Land Surface
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
DCE	Dichloroethene
EPA	United States Environmental Protection Agency
FDEP	Florida Department of Environmental Protection
FYR	Five-Year Review
HQ	Hazard Quotient
IC	Institutional Control
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MDL	Method Detection Limit
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
NA	Not Applicable
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PCE	Tetrachloroethene
POTW	Publicly Owned Treatment Works
PRP	Potentially Responsible Party
RA	Remedial Action
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
RW	Recovery Well
SARA	Superfund Amendments and Reauthorization Act
SMCL	Secondary Maximum Contaminant Level
SVE	Soil Vapor Extraction
TBC	To-Be-Considered
TCE	Trichloroethene
UAO	Unilateral Administrative Order
VOC	Volatile Organic Compound

Executive Summary

Introduction

The Airco Plating Co. Superfund site (the Site) is 2 acres in size and is located in Miami, in Miami-Dade County, Florida. The Site is the location of the Airco Plating Company, Inc. (APC) electroplating shop, which has operated at the Site since 1957. The APC facility primarily plates steel, copper and brass with zinc, but also plates various items with brass, cadmium, copper, nickel and tin. Since 1957, cyanide, acids and caustic compounds have been used in the electroplating process, and tetrachloroethene (PCE) had previously been used as a cleaning fluid for parts prior to plating. Until 1973, wastewaters from the plating operations were disposed of in three on-site seepage ponds pursuant to a permit from the Florida State Board of Health. From 1973 until 1981, plating wastes were pretreated and released into the Miami municipal sewage system. In 1981, the wastewater treatment system was upgraded to remove sludge from the treated effluent prior to discharge to the Miami municipal sewage system. This treatment train continues to operate at the site.

The United States Environmental Protection Agency (EPA) began conducting site investigations in July 1985 and the Site was proposed to the National Priorities List (NPL) in June 1988. APC performed a contamination assessment in May 1989 and submitted subsequent Contamination Assessment Reports to EPA and the Florida Department of Environmental Protection (FDEP) through March 1990. EPA finalized the Site on the NPL in February 1990. In the early 1990s, various metals, cyanide, PCE and trichloroethene (TCE) were detected in the soil at the Site and elevated levels of cadmium and volatile organic compounds (VOCs), such as PCE, were detected in shallow ground water on site. In addition, elevated levels of cadmium and PCE were detected in deeper ground water.

EPA designated one operable unit (OU) to address the Site's soil and ground water contamination. The triggering action for this Five-Year Review (FYR) was the signing of the previous FYR on September 28, 2006.

Remedial Action Objectives

The remedial action objectives (RAOs) in the Site's May 1993 Feasibility Study (FS) were established based on regulatory requirements and the level of contamination found at the Site. The purpose of the remedial action at the Site was to mitigate and minimize contamination in the ground water and soil to reduce potential risks to human health and the environment. The RAOs are:

- Prevent ingestion of ground water having a 1.0×10^{-6} or greater cancer risk for all contaminants of concern (COCs).
- Prevent ingestion of ground water having a Hazard Quotient (HQ) non-carcinogenic level of concern in excess of 1.0 for all COCs.
- Prevent ingestion, inhalation and direct contact with soil having 1.0×10^{-6} or greater risk for all COCs.
- Prevent ingestion, inhalation and direct contact with soil having a non-carcinogenic HQ in excess of 1.0 for all COCs.

- Prevent migration of contaminants from soil that would result in ground water contamination exceeding a HQ of 1.0 or a carcinogenic risk exceeding 1.0×10^{-6} for all COCs.

EPA signed the Site's Record of Decision (ROD) in October 1993, selecting a remedy to address ground water and soil contamination. Construction of the remedy began in December 1995 and was completed in September 1999. Ground water cleanup at the Site is ongoing. Major remedy components include: soil vapor extraction (SVE) of organic compounds; placement of a Resource Conservation and Recovery Act (RCRA)-type cap over cadmium-contaminated soil; institutional controls to preserve the integrity of the cap and to prohibit activities that are not compatible with the remedy; extraction of contaminated ground water, treatment by air stripping and proper discharge of treated water; evaluation of the need for treatment of inorganics in ground water; and modeling of air emissions and analysis of actual air emissions from the air-stripping tower and the SVE system.

Technical Assessment

The review of documents, applicable or relevant and appropriate requirements (ARARs) and risk assumptions as well as the site inspection indicate that the Site's remedy has been implemented according to Site decision documents. Contaminated soils were treated with SVE and consolidated under a RCRA-type cap in September 1999. EPA approved the ground water extraction and treatment system in June 1997 and the system has been continuously operated since that time.

Since ground water treatment system startup, ground water cleanup goals have been achieved in several monitoring wells and cleanup goals for individual COCs in specific monitoring wells have also been achieved. However, cadmium, nickel and VOCs continue to be detected in site-monitoring and recovery wells at concentrations exceeding cleanup goals. During the current FYR period, cadmium concentrations in shallow aquifer monitoring well APS-5 and nickel concentrations in intermediate aquifer monitoring well API-3 and shallow aquifer monitoring well APS-5 have shown an increasing trend. Aside from one 2010 exceedance in shallow aquifer monitoring well APS-5, nickel concentrations in these three wells were below the cleanup goal, but cadmium concentrations exceeded the cleanup goal in all three wells. Exceedances for both cadmium and nickel have been noted in shallow aquifer monitoring well APS-11 as well. This well exhibited anomalously high concentrations for these two metals in December 2009 and December 2010. Confirmatory sampling indicated that concentrations had declined, but remained substantially higher when compared with measurements from other years, and the cause for these spikes remains unknown. Given that corresponding spikes have not been detected in the adjacent recovery well, review of the current placement of recovery well RW-4 will be conducted to ensure no pockets of contamination are beyond the reach of the ground water treatment system. Concentrations of VOCs above the cleanup goals also continue to be detected at shallow aquifer monitoring well APS-11 and recovery well RW-4, located near the original source area for Site contamination.

Concerns that ground water remediation was not progressing at the rate anticipated by the ROD and that contaminant concentrations had achieved a steady state were expressed during the 2006 FYR and again by FDEP's Program and Technical Support Section office in Tallahassee in 2010

(Appendix F). The difference between average and instantaneous pumping rates for the Site suggests that the ground water treatment system spends significant portions of time offline. Currently, the PRP operates the system during business hours, but the system should be operated on a continuous basis, as specified in the site O&M Plan. Additionally, nickel and cadmium concentrations in RW-4 have not shown consistent declines and may have reached an asymptotic state. Further evaluation is needed at the site to determine the cause for the reduced average rate of ground water recovery, to determine how best to maintain continued progress toward achieving cleanup goals, and to evaluate whether the ground water system effectively captures and contains the ground water plume.

The 2006 FYR recommended that the human health risks associated with the vapor intrusion pathway be evaluated for the Site. A preliminary screening was performed using the Johnson and Ettinger Model and results were reported in the 2008 FYR Addendum. Site-specific inputs indicate a cancer risk of less than 1.0×10^{-4} and a hazard quotient of less than 1. In addition, the area of ground water contamination is not located under building foundations where current operations continue. Therefore, EPA determined that vapor intrusion is not an exposure pathway of concern.

The ground water ARAR for chloroform has become more stringent and a ground water ARAR for bis(2-ethylhexyl)phthalate has become available since the signing of the 1993 ROD. Additionally, the soil cleanup goal for chromium was risk-based and the toxicity criteria for chromium have been revised. These changes do not affect the protectiveness of the remedy at the Site in the short term. However, EPA will continue to monitor site-related contaminants and will take appropriate action to address potential risks.

The 1993 ROD selected institutional controls for site soils including a restrictive covenant to restrict land uses that would be incompatible with the remedy, and to protect the integrity of the on-site cap. A draft restrictive covenant is currently under review at EPA and FDEP. Through a Florida Ground Water Delineated Area, the South Florida Water Management District restricts well use and placement, effectively accomplishing the objective of preventing exposure to ground water contamination. Property perimeter fencing is in place around all site parcels and the placement of the on-site cap has eliminated the exposure pathway to contaminated soils.

The southern portion of the Site containing a section of the on-site cap, a recovery well and several monitoring wells has come under new ownership. The new owner has made several physical changes to the property, including covering flush mount monitoring wells with gravel and removing interior fencing around the southern portion of the on-site cap and monitoring well cluster 3. EPA has been in communication with the new owner to notify him about the Site and the remedial actions underway. EPA will continue to work with the owner to ensure that remedial components on his property remain intact and accessible. During the site inspection, some monitoring well caps were found to be broken. Though access to these wells is restricted by fencing around the perimeter of the impacted site parcels, well maintenance should be performed.

Conclusion

The Site remedy currently protects human health and the environment in the short term because source control remediation has been completed in accordance with the selected remedy, the ground water treatment system continues to operate at the Site and there are no complete exposure pathways. However, in order for the remedy to be protective in the long term, issues regarding ground water remedy optimization, ground water recovery rates, unexplained spikes in cadmium and nickel concentrations, and soil institutional controls should be addressed.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name (from CERCLIS): Airco Plating Co.		
EPA ID (from CERCLIS): FLD004145140		
Region: 4	State: FL	City/County: Miami-Dade
SITE STATUS		
NPL status: <input checked="" type="checkbox"/> Final <input type="checkbox"/> Deleted <input type="checkbox"/> Other (specify)		
Remediation status (choose all that apply): <input type="checkbox"/> Under Construction <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Complete		
Multiple OUs?*	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Construction completion date: 09/15/1999
Has site been put into reuse? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (Continued Use)		
REVIEW STATUS		
Lead agency: <input checked="" type="checkbox"/> EPA <input type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency		
Author name: Christy Fielden, Sabrina Foster and Sarah Alfano; Reviewed by EPA		
Author title: Associates	Author affiliation: Skeo Solutions	
Review period**: 12/16/2010 to 09/23/2011		
Date(s) of site inspection: 02/02/2011		
Type of review:		
<input checked="" type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA <input type="checkbox"/> NPL-Removal only <input type="checkbox"/> Non-NPL Remedial Action Site <input type="checkbox"/> NPL State/Tribe-lead <input type="checkbox"/> Regional Discretion		
Review number: <input type="checkbox"/> 1 (first) <input type="checkbox"/> 2 (second) <input checked="" type="checkbox"/> 3 (third) <input type="checkbox"/> Other (specify)		
Triggering action:		
<input type="checkbox"/> Actual RA On-site Construction at OU# <input type="checkbox"/> Actual RA Start at OU# <input type="checkbox"/> Construction Completion <input checked="" type="checkbox"/> Previous Five-Year Review Report <input type="checkbox"/> Other (specify)		
Triggering action date (from WasteLAN): 09/28/2006		
Due date (five years after triggering action date): 09/28/2011		

* ["OU" refers to operable unit.]

** [Review period should correspond to the actual start and end dates of the Five-Year Review in CERCLIS.]

Five-Year Review Summary Form (continued)

Issues:

- 1) Although some ground water cleanup goals have been achieved, cadmium, nickel and VOC concentrations continue to be detected above cleanup goals. Cadmium and nickel concentrations have not shown appreciable declines in the past ten years, slowing progress of the ground water remedial action. In addition, concerns were expressed in the 2006 FYR and in comments from FDEP in 2010 that ground water remediation is not progressing at the rate anticipated by the 1993 sitewide ROD.
- 2) Unexplained spikes in cadmium and nickel concentrations were detected in shallow aquifer well APS-11 in December 2009 and December 2010.
- 3) The 1996 O&M Plan anticipated that the ground water treatment system would operate at an average pumping rate of 22 gpm. With one exception (RW-1 in 2006), the average pumping rates for both recovery wells have been below 3 gpm during the current FYR period.
- 4) A new owner has acquired the parcel south of the APC property and has made physical modifications such as covering flush mounted monitoring wells with gravel and removing interior fencing around the on-site cap.
- 5) Institutional controls to restrict land uses that are incompatible with the remedy and to preserve the integrity of the on-site cap have not been implemented.

Recommendations:

- 1) The ground water treatment system should be operated continuously in accordance with the 1996 O&M Plan for the Site. The system should be assessed to determine whether it effectively captures the contaminant plume when operated according to the O&M Plan. If the assessment determines that system improvements are necessary, those changes should be implemented, as appropriate.
- 2) Evaluate potential seasonal, hydrologic, environmental or other factors that might be responsible for spikes in cadmium and nickel concentrations in ground water monitoring well APS-11.
- 3) Evaluate the cause(s) of the reduced average rate of ground water recovery and evaluate and perform an analysis of ground water recovery to determine whether the current configuration of recovery wells adequately contains the entire ground water plume area. Take next steps, as appropriate, to address findings of these evaluations.
- 4) Continue efforts to explain remedial components, liability concerns and owner/operator responsibilities to the new owner of the parcel south of the APC property. Implement a restrictive covenant for the parcel to prevent activities and land uses that would be incompatible with the remedy.
- 5) Finalize and implement the draft restrictive covenant for the APC property upon receiving approval from EPA and FDEP.

Five-Year Review Summary Form (continued)

Protectiveness Statement:

The Site remedy currently protects human health and the environment in the short term because source control remediation has been completed in accordance with the selected remedy, the ground water treatment system continues to operate at the Site and there are no complete exposure pathways. However, in order for the remedy to be protective in the long term, issues regarding ground water remedy optimization, ground water recovery rates, unexplained spikes in cadmium and nickel concentrations, and soil institutional controls should be addressed.

Environmental Indicators

- Current human exposures at the Site are under control.
- Current ground water migration is under control.

Are Necessary Institutional Controls in Place?

All Some None

The 1993 ROD called for source control institutional controls to preserve the on-site cap integrity and to restrict land uses incompatible with the remedy. A draft restrictive covenant is currently in review and will be implemented upon receiving approval from EPA and FDEP. Ground water institutional controls were not called for in site decision documents; however, a State of Florida mechanism currently acts to restrict use of and prevent exposure to contaminated ground water.

Has the Site Been Designated as Site-Wide Ready for Anticipated Use?

Yes No

Third Five-Year Review Report for Airco Plating Co. Superfund Site

1.0 Introduction

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

The U.S. Environmental Protection Agency (EPA) prepares FYRs pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Contingency Plan (NCP). CERCLA Section 121 states:

“If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each 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.”

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

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

Skeo Solutions, an EPA Region 4 contractor, conducted the FYR and prepared this report regarding the remedy implemented at the Airco Plating Co. site (the Site) in Miami, Miami-Dade County, Florida. This FYR was conducted from December 2010 to September 2011. EPA is the lead agency for developing and implementing the remedy for the potentially responsible party (PRP)-financed cleanup at the Site. The Florida Department of Environmental Protection (FDEP), as the support agency representing the State of Florida, has reviewed all supporting documentation and provided input to EPA during the FYR process.

This is the third FYR for the Site. The triggering action for this review is the signature date of the previous FYR. A statutory review of the Site is required due to the fact that hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited

use and unrestricted exposure. Remedial actions at the Site are being performed under a single operable unit.

2.0 Site Chronology

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

Table 1: Chronology of Site Events

Event	Date
EPA discovered improperly treated discharge	1971
EPA discovered contamination	August 1, 1980
State of Florida began Preliminary Assessment	October 1, 1984
State of Florida completed Preliminary Assessment	October 28, 1985
Site Inspection	June 24, 1986
EPA began remedial investigation and feasibility study (RI/FS)	December 1, 1986
EPA completed NPL responsible party search	September 17, 1987
EPA proposed the Site to the National Priorities List (NPL)	June 24, 1988
EPA completed RI/FS	July 10, 1988
EPA finalized the Site on the NPL	February 21, 1990
EPA conducted treatability study	September 4, 1990
EPA and PRP executed Administrative Order on Consent; PRP began RI/FS	November 14, 1990
EPA conducted removal assessment	September 30, 1991
EPA and PRP signed Consent Decree (CD)	February 24, 1993
EPA conducted Baseline Risk Assessment	March 19, 1993
EPA completed Record of Decision (ROD); PRP completed RI/FS	October 1, 1993
EPA issued Unilateral Administrative Order	August 22, 1994
PRP began first remedial design (RD)	September 20, 1994
PRP completed first RD; PRP began first remedial action (RA)	December 20, 1995
PRP began second RD	February 26, 1998
PRP completed first RA; PRP began long-term response action	September 23, 1998
PRP completed second RD; PRP began second RA	May 25, 1999
EPA prepared Preliminary Close-Out Report; EPA granted Construction Completion	September 15, 1999
PRP completed second RA	September 30, 1999
EPA completed first FYR	September 25, 2001
EPA completed second FYR	September 28, 2006

3.0 Background

3.1 Physical Characteristics

The Site is located at 3636 NW 46th Street, Miami, Florida. The Site occupies approximately 2 acres in a predominately industrial and commercial area of northeastern Miami-Dade County, Florida (see Figure 1). A mobile home community is located 300 feet south of the Site. Airco Plating Company, Inc. (APC) continues to operate an electroplating facility at the Site (Figure 2). The topography of the surrounding area is relatively flat with a land surface elevation of about eight feet above mean sea level. The Miami Canal is located approximately two-thirds of a mile southwest of the Site and is the only surface water body in the vicinity of the Site. The Site is underlain by the Biscayne Aquifer, which is 100 feet thick in the vicinity of the Site.

Underlying the Site, below the surficial soils, is a 40- to 45-foot-thick layer of fine to coarse-grained, moderately sorted, unconsolidated quartz sand, which contains randomly distributed limestone rubble that increases in proportion with depth. The sand ranges in color from a white to a light brown. The sand overlies coral limestone, which ranges in depth from 45 to 55 feet below land surface (bls); sand has filled some of the voids and open spaces within the limestone. Crystalline calcite also occurs at this depth. From 52 to 65 feet bls, there is a fairly-dense, fine-grained limestone containing abundant solution channels and voids that might be filled with sand. At approximately 65 to 70 feet bls, the fairly-dense, fine-grained limestone grades into a less-dense, coarse-grained shelly limestone that continues to at least 75 feet bls. The water table at the Site is about 4.5 to 6 feet bls. Ground water flow direction varies from the southeast to the southwest.

The 2-acre Site consists of four parcels owned by APC (parcel numbers 30-3121-000-1060, 30-3121-000-0991, 30-3121-000-1053 and 30-3121-000-1052) and a portion of a fifth parcel owned by a separate private party (parcel number 30-3121-000-1056). All site parcels are zoned for industrial land uses (Table 2).

Table 2: Zoning for Site Parcels

Folio Number	Primary Zone	Parcel Area (square feet)	Owner
30-3121-000-1060	7100 INDUSTRIAL	43,995	APC
30-3121-000-0991	7100 INDUSTRIAL	13,067	APC
30-3121-000-1053	7100 INDUSTRIAL	9,894	APC
30-3121-000-1052	7100 INDUSTRIAL	3,872	APC
30-3121-000-1056	7100 INDUSTRIAL	73,616	Private Owner

Figure 1: Site Location Map



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

Figure 2: Detailed Site Map



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

Figure 3: Detailed Site Map with Parcel Boundaries



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

3.2 Land and Resource Use

APC began metal plating activities at the Site in the mid-1950s and continues to operate an active electroplating facility on site. The Site is zoned for industrial use, and land use in the surrounding area is mainly commercial and industrial. A mobile home community is located 300 feet south of the Site. The type of land use in the area has not changed significantly since discovery of the contamination or since the ROD was issued. The new private land owner of the southernmost portion of the Site (parcel folio #30-3121-000-1056) has made minor physical improvements to the property, but its use will remain industrial or commercial.

The Site is immediately underlain by the Biscayne Aquifer, which is classified as Class GII ground water for potable water use. The water table is found at the Site at depths of 4.5 to 6 feet bbls and ground water flow direction varies from the southeast to the southwest. The Biscayne Aquifer is the sole source of potable water in Miami-Dade County, Florida. There are no private wells in use around the Site and because the area is located in a Florida ground water delineated area, future well installation is prohibited.

3.3 History of Contamination

The APC facility primarily plates steel, copper and brass with zinc. The facility also plates various items with brass, cadmium, chromium, copper, nickel and tin. Cyanide, acids and caustic compounds have been used in the electroplating process since 1957 and continue to be used at the facility today. In addition, tetrachloroethene (PCE) was previously used as a cleaning fluid for parts prior to plating.

In 1957, APC obtained a permit from the Florida State Board of Health to discharge treated electroplating wastewater into three percolation ponds (see Figure 2). APC began using the center pond around 1957. In 1962, APC leased a portion of the property parcel adjacent to the southeastern corner of APC's current property boundary (see Figure 3). APC installed a second pond to receive treated electroplating wastewater on the leased land. The third pond, located to the northwest of the center pond, was constructed in the late 1960s. APC ceased discharging treated wastewater to all three ponds in 1972 and 1973. The wastewater treatment process used at the time the ponds were utilized included cyanide destruction, chromium reduction and pH neutralization. APC reports that no sludges or spent cyanide solutions were placed in the ponds.

In 1971, EPA observed that wastewater was being discharged directly into the percolation ponds without prior treatment. At that time, the wastewater was found to contain cadmium, copper, zinc and tin. Between June 1972 and January 1973, APC received at least three notices that wastewater discharges exceeded Miami-Dade County discharge requirements.

3.4 Initial Response

In February 1973, EPA ordered APC to pump out the three percolation ponds and make changes to the treatment system to comply with regulations. In June 1973, APC discontinued use of the percolation ponds, closed the ponds by backfilling and regrading them and began discharging treated electroplating effluent to the Miami municipal sewer. In 1981, the treatment process was improved to separate sludge from the treated effluent before it was discharged to the sewer. The sludge was collected and shipped off site for disposal.

EPA conducted investigations at the Site in July 1985, December 1986 and January 1987. APC performed a contamination assessment in May 1989 with subsequent Contamination Assessment Reports submitted in August 1989, December 1989 and March 1990. EPA completed its Expanded Site Investigation in two volumes which were approved in July 1987 and July 1988. The Site was proposed to the NPL in June 1988 and listed on the NPL in February 1990.

In July 1990, the Site's PRP received a special notice letter for the remedial investigation and feasibility study (RI/FS). APC signed an Administrative Order on Consent to implement the RI/FS on November 14, 1990.

3.5 Basis for Taking Action

The objective of the 1993 PRP-lead RI was to better define the nature and extent of contamination in the soils and ground water at the Site and to assess the current and potential risk to public health and the environment. Soil samples contained concentrations of metals, including cadmium, chromium, lead and zinc, and PCE at levels above those considered protective of human health. Soils with the highest levels of contaminant concentrations were found at the locations of each of the three former percolation ponds and also in a location adjacent to the main APC building (see Figure 2). Shallow ground water (10-20 feet bls) contained concentrations of cadmium, chromium, nickel, lead and several VOCs, including PCE, TCE, cis-1,2-dichloroethene, trans-1,2-dichloroethene, chloroform, 1,1-dichloroethene and vinyl chloride, above levels considered protective of human health. Within the boundaries of the APC property, cadmium and VOCs were the primary contaminants in shallow ground water. Intermediate (35-45 feet bls) and deep (65-75 feet bls) ground water also contained elevated VOC concentrations in excess of levels considered protective of human health.

EPA's 1993 Baseline Risk Assessment evaluated the potential current and future exposure pathways for site-related contamination. The potential current or future exposure pathways under an industrial land use scenario included:

- Ingestion of surface soil by a trespasser or an on-site worker.
- Dermal absorption from surface soil by a trespasser or an on-site worker.
- Inhalation of fugitive dust and VOCs by a trespasser or an on-site worker.

The potential future exposure pathways under a residential land use scenario included:

- Ingestion of surface soil by an on-site resident.
- Dermal absorption from surface soil by an on-site resident.
- Ingestion of ground water by an on-site resident.
- Inhalation of VOCs in ground water by an on-site resident during showering.
- Inhalation of airborne dust by an on-site resident.

Of the potential and current exposure pathways evaluated, the Baseline Risk Assessment identified ingestion of ground water to be an unacceptable risk. Given that the Site is underlain by the Biscayne Aquifer, which serves as the source of drinking water for Miami-Dade County, EPA determined that actual or threatened releases of hazardous substances from the Site may present an imminent and substantial endangerment to the public. Movement of contaminated soil and dust via surface water or airborne transmigration was also determined to present secondary environmental pathways of concern. No completed exposure pathways were identified for ecological risk.

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 Site, and final selection was made based on an evaluation of each alternative against nine evaluation criteria that are specified in Section 300.430(e)(9)(iii) of the NCP. The nine criteria include:

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

4.1 Remedy Selection

In the Site's 1993 FS, EPA identified the purpose of the remedial action at the Site, which is to mitigate and minimize the completion of any exposure pathways to ground water and soil in order to reduce potential risks to human health and the environment. The remedial action objectives (RAOs) are:

- Prevent ingestion of ground water having a 1.0×10^{-6} or greater cancer risk for all COCs.
- Prevent ingestion of ground water having a Hazard Quotient (HQ) non-carcinogenic level of concern in excess of 1.0 for all COCs.
- Prevent ingestion, inhalation and direct contact with soil having 1.0×10^{-6} or greater risk for all COCs.
- Prevent ingestion, inhalation and direct contact with soil having a non-carcinogenic HQ in excess of 1.0 for all COCs.
- Prevent migration of contaminants from soil that would result in ground water contamination exceeding a HQ of 1.0 or a carcinogenic risk exceeding 1.0×10^{-6} for all COCs.

The Record of Decision (ROD) for the Site was signed on October 1, 1993, and included remedies for both soil source contamination and contaminated ground water. The goal of the remedy is to address source contamination to prevent exposure to contaminated soil and to prevent further migration of metals and VOCs into the ground water. In addition, the remediation of ground water is necessary to protect the Biscayne Aquifer, the sole source of drinking water for the Miami-Dade County area. The major components of the selected remedy include:

- Soil vapor extraction (SVE) of organic compounds, such as PCE concentrations in excess of 90 milligrams per kilogram (mg/kg), that are present in site soils to a depth of five to six feet below land surface, or just above the water table, whichever is lower.
- Placement of a Resource Conservation and Recovery Act (RCRA)-type cap over soils with cadmium concentrations in excess of 73 mg/kg or PCE concentrations in excess of 0.060 mg/kg.
- Implementation of institutional controls, including deed restrictions, to preserve the integrity of the cap and to prohibit activities that are not compatible with the remedy.
- Extraction of contaminated ground water with subsequent treatment by air stripping at the Site.
- Discharge of treated water to the publicly owned treatment works or to the surficial aquifer via a recharge gallery in accordance with all applicable regulations and other performance standards.
- Evaluation of the need for treatment of inorganics in ground water will be conducted during the remedial design (RD).
- Modeling of air emissions and analysis of actual air emissions from the air-stripping tower and the SVE system will be conducted during the RD in order to determine the need for air emission control equipment.

The 1993 sitewide ROD identified 16 ground water COCs. The ROD's cleanup goals were based on federal and state regulatory standards (Table 3). No regulatory standards for acetone or bis(2-ethylhexyl)phthalate existed in 1993; therefore, chemical-specific cleanup goals were only identified for the remaining 14 ground water COCs.

Table 3: Ground Water COC Cleanup Goals

Ground Water COC	1993 ROD Ground Water Cleanup Goal (µg/L)
Acetone	Not Available
Chloroform	100 ^a
cis-1,2-dichloroethene (DCE)	70 ^a
trans-1,2-DCE	100 ^a
1,1-DCE	7 ^a
PCE	3 ^b
TCE	3 ^b
vinyl chloride	1 ^b
bis(2-ethylhexyl)phthalate	Not Available
Cyanide	200 ^a
Cadmium	5 ^a
Chromium	100 ^a
Copper	1,300 ^c
Lead	15 ^d
Nickel	100 ^a
Zinc	5,000 ^e
a- Federal maximum contaminant level (MCL) b- Florida MCL c- Federal maximum contaminant level goal (MCLG) d- Federal action level e- Federal secondary maximum contaminant level (SMCL)	

The 1993 sitewide ROD also selected cleanup goals for 8 soil COCs (Table 4).

Table 4: Soil COC Cleanup Goals

Soil COC	1993 ROD Soil Cleanup Goal (mg/kg)
PCE	0.060 ^a
cadmium	73 ^b
chromium	1,350 ^c
copper	9,990 ^c
cyanide	5,940 ^c
lead	500 ^c
nickel	5,400 ^c
zinc	8,100 ^c
a. The 1993 ROD determined that site soils with PCE concentrations of 0.06 to 90 mg/kg would be contained beneath a RCRA-type cap. Site soils with PCE concentrations in excess of 90 mg/kg (the Summers Model calculation for protection of ground water) would first be treated with SVE to reduce the concentration to 90 mg/kg before being consolidated under the RCRA-type cap. b. Based on Summers Model calculation for protection of ground water c. Based on 1993 Baseline Risk Assessment calculation for protection of human health for contact with soil.	

4.2 Remedy Implementation

On August 22, 1994, EPA issued a Unilateral Administrative Order (UAO) directing the PRP to perform the RD and remedial action (RA) for the Site. The PRP completed an initial RD in December 1995. Based upon findings described in the RD report, the remedy was divided into two separate phases. The first phase of remedial action, addressed in the 1995 RD, focused on organic contaminants and the required systems for SVE and air stripping. The second phase of remedial action, addressed in a 1999 RD, focused on construction of the on-site RCRA-type cap.

Soil

The SVE system was installed during the spring of 1995 and operated from December 1995 to June 1999. The SVE system was designed to address a limited area of contamination and included four shallow vapor extraction wells. Contaminant concentrations in vapor emissions from the SVE unit had declined significantly over the four years it was in operation, indicating that the targeted source contaminant area had been successfully removed.

In May 1999, the PRP completed the RD for the on-site RCRA-type cap. Prior to construction of the cap, the PRP excavated over 60 cubic yards of contaminated soil from the Site and transported it to an approved off-site disposal facility. This removal action was not required by the ROD but was performed by the PRP in response to comments from FDEP. A 40 mil geomembrane liner was placed over the areas of elevated soil contamination defined in the 1999 RD, and a 4- to 6-inch-thick reinforced concrete cap was installed over the liner. The concrete cap covers an approximate area of 17,000 square feet, including the area of the former SVE treatment, and has an irregular shape because it was constructed between existing buildings and structures on the Site.

Ground Water

Construction of the ground water extraction and treatment system was completed in June 1997 and the system has been in continuous operation since that time. The system currently operates for approximately eight to ten hours a day during normal APC business days (i.e., Monday through Friday). Ground water is currently being extracted from two recovery wells (RW-1 and RW-4), then passed through two sequential air stripping towers as treatment to remove VOCs. The water is then routed to a holding tank to be pumped through the facility for use as rinse water in the plating operation. The rinse water is then treated in APC's pretreatment plant before being discharged to the POTW. The 1993 ROD specified that treated water could be discharged to the POTW or to an infiltration gallery; to date, treated water has only been discharged to the POTW. The contingency is if any water that has been treated to remove VOCs, but is not recycled for use in the plating process that it would be sent to the sewer system. Because the existing treatment system could not consistently achieve the discharge requirements for cadmium, APC applied for and received additional discharge capacity under their existing wastewater retreatment permit with Miami-Dade County.

A pre-final construction inspection was conducted by EPA in August 1999. No deficient items were noted during the inspection. A Preliminary Closeout Report was issued in September 1999 to document the construction completion of all remedy components.

4.3 Operation and Maintenance (O&M)

The site O&M Plan was prepared in January 1996 and approved by EPA in August 1997. The plan describes the O&M requirements for the ground water extraction and treatment system as well as the soil SVE system. The plan was finalized prior to discontinuation of the soil SVE system in June 1999 and completion of the on-site cap construction in September 1999. Soil SVE system O&M requirements no longer need to be performed because this system is no longer active and has been decommissioned. The O&M Plan was amended in January 2007 to include O&M activities for the on-site cap.

O&M activities at the Site include daily operation of the ground water treatment system and quarterly sampling of ground water monitoring wells, ground water recovery wells, treated ground water in the on-site holding tank and vapor effluent from the top of air stripper tower #1. The fourth quarterly sampling event is the same as the annual sampling event, and data from this event is reported in annual operating reports prepared by HSA Engineers and Scientists for APC and submitted to EPA and FDEP.

O&M obligations also include monthly inspections of the ground water recovery and monitoring wells and the ground water treatment system. The on-site cap is inspected on a daily basis. Quarterly maintenance tasks include:

- Checking sumps, tanks, pumps and blowers.
- Lubricating pumps and pump motors.
- Checking the static air pressure for the stripping towers.
- Measuring the pumping rates for recovery wells RW-1 and RW-4.
- Sampling of effluent from the ground water treatment system.
- Measuring pH levels in recovery wells and holding tanks.

The 1993 ROD estimated that annual O&M total costs would be \$92,600. The actual annual O&M costs for the Site for 2006 to 2010 are significantly lower than the annual O&M costs estimated in the 1993 ROD (Table 5). Costs incurred in 2006 and 2010 are higher relative to other years in this FYR period. The higher expenditures in 2006 are due to costs associated with addressing issues raised in the 2006 FYR. The higher costs incurred in 2010 are due to legal work related to the research, drafting and proposal of a restrictive covenant for the Site. The PRP has indicated that years 2007, 2008 and 2009 are examples of typical annual O&M expenditures for the Site.

Table 5: Annual O&M Costs

Year	Total Cost (rounded to the nearest \$1,000)
2006	\$15,000
2007	\$7,000
2008	\$7,000
2009	\$8,000
2010	\$11,000

5.0 Progress Since the Last Five-Year Review

The protectiveness statement from the 2006 FYR for the Site stated the following:

“A protectiveness determination of the remedy cannot be made at this time until further information is obtained. Further information will be obtained by taking the following actions:

- *Conducting a study to evaluate the effectiveness of the remedy including evaluating possible remedial actions for remaining source areas in soils and alternative remedial strategies for reducing the remaining contaminants in ground water to levels below ROD treatment standards; and*
- *Evaluating the vapor intrusion exposure pathway for VOCs to determine whether this pathway presents an unacceptable risk to human health.*

It is expected that these actions will take two years to complete, at which time a protectiveness determination will be made.”

The 2006 FYR included six issues and seven recommendations. Each recommendation and its current status is discussed below.

Table 6: Progress on Recommendations from the 2006 FYR

Section	Recommendation	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
5.1	Evaluate the effectiveness of the remedy including evaluating possible remedial actions for remaining source areas in soils and alternative remedial strategies for reducing the remaining contaminants in ground water to levels below ROD treatment standards.	PRP	09/28/2008	The FYR Addendum was completed in September 2008 and concluded that the existing ground water remedy is effective and functioning as intended.	09/23/2008
5.2	Potentiometric maps should be developed during sampling events representing ground water conditions prior to recovery well pumping and during pumping.	PRP	09/28/2007	Potentiometric maps were created during the 2008 sampling year, were presented in the 2008 Annual Operating Report and have been included in each Annual Operating Report thereafter.	4/13/2009

Section	Recommendation	Party Responsible	Milestone Date	Action Taken and Outcome	Date of Action
5.3	The human health risks associated with the soil vapor intrusion pathway should be evaluated.	PRP	09/28/2008	The FYR Addendum was completed in September 2008 and included a vapor intrusion assessment of the building and ground water plumes; results indicated that soil vapor intrusion is not an exposure pathway for workers.	09/23/2008
5.4	The integrity of the cap should be routinely inspected, maintained and recorded in annual reports.	PRP	09/28/2007	The O&M Plan for the Site was amended to include inspection and maintenance activities of the on-site cap.	01/2007
5.5	Ensure that institutional controls in the form of deed restrictions are recorded on the property in accordance with Florida Administrative Code 62-780.	PRP	09/28/2008	EPA, FDEP and the PRP are currently reviewing a draft of institutional controls for the APC property.	Incomplete
5.6	Update the records held in the public information repository.	PRP	09/28/2007	EPA mailed a complete administrative record to the public information repository to bring site information up to date.	06/02/2011
5.7	EPA will review the remedial actions implemented at the Site in two years.	EPA	09/28/2008	EPA completed an FYR Addendum in September 2008 and found the sitewide remedy to be protective.	09/23/2008

5.1 Evaluation of Remedy Effectiveness

The 2006 FYR's evaluation of ground water results from the 2006 FYR period indicated that the remedy may not have been effective in treating contaminated ground water and that the concentrations of ground water contaminants may have reached a steady state. As a result of the 2006 FYR recommendation, EPA reviewed historical ground water sampling results from 1995 to 2006 and confirmed the presence of elevated concentrations of VOCs and metals in site ground water monitoring wells and recovery wells. Additional ground water samples collected from October 2006 through 2008 as part of routine ground water monitoring indicated continued decreases in site-related ground water contaminants over this time. An extended trend analysis for the period of 1995 through 2008 showed continued decreases in contaminant concentrations and several COCs had achieved the cleanup standards identified in the 1993 ROD. Based on

these analyses, the 2008 FYR Addendum determined that the ground water remedy was effectively addressing contamination.

5.2 Potentiometric Maps

In the 2008 Annual Operating Report, APC began submitting potentiometric maps that represented ground water flow throughout the Site in relation to the monitoring wells, recovery wells, and the APC plant. APC continues to submit potentiometric maps in each Annual Operating Report even though it is not required by the O&M Plan.

5.3 Vapor Intrusion Assessment

The 2006 FYR stated that the human health risk associated with the vapor intrusion pathway had not been properly evaluated for the Site. A preliminary screening of the Site was performed using the Johnson and Ettinger Model. The site-specific data inputs indicated a cancer risk of less than 1.0×10^{-4} and an HQ of less than 1. The contaminated ground water associated with the Site is not located under the building foundations where current operations continue; therefore, it was concluded that it does not pose a source for vapor intrusion. Furthermore, an investigation into APC business practices indicated that APC provides a well-ventilated work space with sufficient ventilation inside buildings to address any associated potential risks for an on-site worker. As part of company policy, all doors and windows must be open during operation, and the buildings stay ventilated during non-operational hours because some of the windows have been removed. The results of the vapor intrusion assessment were documented in the 2008 FYR Addendum.

5.4 Cap Inspection

The 2006 FYR noted that the existing 1996 O&M Plan was finalized and approved by EPA prior to completion of the on-site cap and therefore had not included O&M activities for the capped area. The O&M Plan was amended in January 2007 to include routine/informal cap inspections, formal annual cap inspections and repairs as needed. The cap is currently inspected on a daily basis and APC, in collaboration with their contractors HSA Engineers and Scientists, began including information about cap inspections and repairs starting with the 2006 Annual Report.

5.5 Site Institutional Controls

The 1993 ROD selected institutional controls as part of the remedy for the Site. These institutional controls included deed restrictions to restrict future site uses that would be incompatible with the remedy and to restrict soil excavation and building construction on the Site. The 2006 FYR was unable to locate recorded institutional controls with the Miami-Dade County Deeds and Records Office and recommended that the appropriate restrictive covenant be properly recorded. The PRP prepared a draft restrictive covenant for the Site in 2010 and the document is currently under review with EPA and FDEP.

5.6 Updating Site Documentation

Some site documents, including the 2007, 2009 and 2010 Annual Reports, and the 2001 FYR, were provided to the John F. Kennedy Public Library; however, no site-related documents could be located at this library during the current FYR site inspection on February 2, 2011. An alternate federal information repository, Miami-Dade Main Library, was identified; however, no site-related documents could be located at this repository either. The current EPA Remedial Project Manager (RPM), Peter Thorpe, was notified that the public information repository was incomplete. On June 2, 2011, EPA mailed a complete copy of the administrative record to the John F. Kennedy Public Library to bring the public information repository up to date.

5.7 Remedial Action Review

The 2008 FYR Addendum investigations found the remedy for the Site to be protective of human health and the environment because there were no current exposure pathways that could result in unacceptable risks and no potential future exposure pathways were expected to develop. Based on the ground water contaminant concentration trend analysis for 1995 through 2008, EPA concluded that contaminant concentrations were showing continual declines over time and that the remedy selected in the 1993 ROD remained effective. However, in May 2010, FDEP issued a letter from their Program and Technical Support Section office in Tallahassee to APC regarding the ground water results included in the 2009 Annual Operating Report and requested additional assessments of remedy effectiveness (see Appendix F). The letter expressed FDEP's concerns that VOC levels have remained constant for the last ten years, indicating that the ground water extraction and treatment system is not achieving cleanup goals. FDEP recommended that an assessment be performed to determine whether it is cost effective to continue to operate the ground water remedy considering the current performance results and recommended that VOCs be added to the sampling requirements for monitoring wells APS-6 and APS-11 based on the increased concentrations of VOCs in recovery well RW-4.

6.0 Five-Year Review Process

6.1 Administrative Components

EPA Region 4 initiated the FYR in December 2010 and scheduled its completion for September 2011. The EPA site review team was led by EPA RPM Peter Thorpe and also included EPA Community Involvement Coordinator (CIC) L'Tonya Spencer, and contractor support provided to EPA by Skeo Solutions. In December 2011, EPA held a scoping call with the review team to discuss the Site and items of interest as they relate to the protectiveness of the remedy currently in place. A review schedule was established that consisted of the following activities:

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

6.2 Community Involvement

In January 2011, a public notice was published in the *Sun Sentinel* newspaper announcing the commencement of the FYR process for the Site, providing contact information for RPM Peter Thorpe and CIC L'Tonya Spencer, and inviting community participation. The press notice is available in Appendix B. No one contacted EPA as a result of this advertisement.

The FYR Report will be made available to the public once it has been finalized. Copies of this document will be placed in the designated site repository: John F. Kennedy Public Library, located at 190 West 49th Street in Hialeah, Florida. Upon completion of the FYR, a public notice will be placed in the *Sun Sentinel* newspaper to announce the availability of the final FYR Report in the Site's document repository.

6.3 Document Review

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

ARARs Review

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

appropriate. Applicable requirements are those cleanup standards, standards of control, and other substantive requirements, criteria or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, remedial action, location or other circumstance found at a CERCLA site. Relevant and appropriate requirements are those standards that, while not “applicable,” address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards that are more stringent than federal requirements may be applicable or relevant and appropriate. To-Be-Considered (TBC) criteria are non-promulgated advisories and guidance that are not legally binding, but should be considered in determining the necessary remedial action.

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

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

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

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

Ground Water ARARs

According to the 1993 ROD, cleanup goals for ground water COCs were based on federal primary and secondary MCLs, federal maximum contaminant level goals (MCLGs) and Florida MCLs. No regulatory standards for acetone or bis(2-ethylhexyl)phthalate existed in 1993; therefore, chemical-specific cleanup goals were only identified for 14 of the 16 ground water COCs. During this FYR, cleanup goals from the 1993 ROD were compared to current federal and Florida standards (Table 7). This comparison showed that ground water ARARs have not changed for 14 of 16 ground water COCs. The current 2011 ARAR for chloroform (70 µg/L) is more stringent than the 1993 ARAR of 100 µg/L. A federal MCL for bis(2-ethylhexyl)phthalate is now available. A cleanup goal for acetone will be determined once a regulatory standard is made available.

Table 7: Previous and Current ARARs for Ground Water COCs

COCs	1993 ROD ARARs (µg/L)	2011 ARARs (µg/L)	ARARs Change
acetone	Not Available	Not Available	None
chloroform	100 ^e	70 ^k	More Stringent
cis-1,2-dichloroethene ^a	70 ^e	70 ^l	None
trans-1,2-dichloroethene ^a	100 ^e	100 ^l	None
1,1-dichloroethene ^a	7 ^e	7 ^l	None
PCE ^b	3 ^f	3 ^l	None
TCE ^c	3 ^f	3 ^l	None
vinyl chloride	1 ^f	1 ^l	None
bis(2-ethylhexyl)phthalate ^d	Not Available	6 ^j	New Standard
cyanide	200 ^e	200 ^l	None
cadmium	5 ^e	5 ^l	None
chromium	100 ^e	100 ^l	None
copper	1,300 ^g	1,300 ^m	None
lead	15 ^h	15 ^{l,m}	None
nickel	100 ^e	100 ⁿ	None
zinc	5,000 ⁱ	5,000 ^l	None

a. Dichloroethene is also known as dichloroethylene.
 b. PCE (tetrachloroethene) is also known as tetrachloroethylene.
 c. TCE (trichloroethene) is also known as trichloroethylene.
 d. Bis(2-ethylhexyl)phthalate is also known as di(2-ethylhexyl)phthalate.
 e. Federal MCL.
 f. Florida MCL.
 g. Federal MCLG.
 h. Federal action level.
 i. Federal SMCL.
 j. Federal MCLs, MCLGs and SMCLs are available at <http://water.epa.gov/drink/contaminants/index.cfm> (accessed 2/20/2011).
 k. The federal MCL for trihalomethanes, including chloroform, is 80 µg/L. The chloroform specific MCLG of 70 µg/L is indicated in the table.
 l. MCLs for Drinking Water in Florida are available at <http://www.dep.state.fl.us/legal/rules/drinkingwater/62-550.pdf> (accessed 2/20/2011).
 m. Based on the federal action level for a Treatment Technique that requires systems to control the corrosiveness of their water.
 n. The federal MCL for nickel was remanded in 1995. Therefore, the Florida MCL for nickel has been indicated in the table.

Soil Cleanup Goals

No federal or state contaminant-specific ARARs were promulgated for soil cleanup levels at the time of the 1993 ROD; therefore, cleanup goals for soil were not based on ARARs. The Site’s 1993 ROD selected soil cleanup goals either to reduce the leaching of contaminants from soil to ground water such that ground water standards would no longer exceeded, or to reduce the risk associated with direct exposure to contaminated soil. Cleanup goals for soil are listed in Table 4. Changes in toxicity criteria used to calculate soil cleanup goals are discussed in Section 7.2.

6.4 Data Review

Soil

In 1999, a reinforced RCRA-type cap (4 to 6 inches thick over a 40 mil geomembrane) was installed over the contaminated soil at the Site. Prior to installation of the cap, over 60 cubic yards of contaminated soil were excavated and transported to an approved disposal facility. This excavation was not required by the ROD but was performed by the PRP in response to comments from FDEP. A Superfund Preliminary Closeout Report was issued in September 1999 to document the completion of these remedial components. The soil remedy has been completed and no further sampling activities are required. As a result, no soil samples from the last five years are available for review.

Ground Water

The current FYR reviewed ground water monitoring data collected between 2006 and 2011. Annual samples were collected from two intermediate aquifer monitoring wells (API-2 and API-3) and four shallow aquifer monitoring wells (APS-5, APS-6, APS-7 and APS-11); quarterly influent samples were collected from the two recovery wells (RW-1 and RW-4). The results of these sampling events were presented in annual operating reports for the years 2006, 2007, 2008, 2009 and 2010.

The 1993 sitewide ROD indicated that ground water would be treated until compliance with ground water cleanup goals had been achieved. After demonstration of compliance with cleanup goals, confirmation monitoring should continue for a minimum of five years. Cleanup standards and the five-year confirmatory monitoring period have been achieved at several monitoring wells and these are no longer included in the annual sampling protocol. In addition, cleanup standards and the five-year confirmatory monitoring period have been achieved for individual COCs at specific monitoring wells and sampling for these COCs is no longer included in the annual sampling protocol.

During the current FYR period, monitoring for 7 of the 16 ground water COCs (acetone, bis(2-ethylhexyl)phthalate, chromium, copper, cyanide, lead and zinc) was not performed. Monitoring for chromium, copper, cyanide, lead and zinc was not performed because cleanup goals had been achieved for at least a five-year period.

The 1993 sitewide ROD specified that confirmatory sampling for acetone and bis(2-ethylhexyl)phthalate should be performed to determine whether the presence of these COCs was attributable to the Site or to laboratory compounds that may have cross-contaminated a ground water sample during analyses. The results of this confirmatory sampling could not be located during this review. Cleanup goals for acetone and bis(2-ethylhexyl)phthalate were not selected in the 1993 sitewide ROD because standards and regulations for these two COCs did not exist at that time. As a result, monitoring for acetone and bis(2-ethylhexyl)phthalate has not been performed because there has been no basis for comparison of detected concentrations. An MCL for bis(2-ethylhexyl)phthalate is now available, but a regulatory standard for acetone still does not exist.

Wells are currently sampled for the following parameters:

Intermediate Aquifer Monitoring Wells

- API-2: Nickel
- API-3: Nickel and Cadmium

Shallow Aquifer Monitoring Wells

- APS-5: Nickel and Cadmium
- APS-6: Nickel and Cadmium
- APS-7: Nickel and Cadmium
- APS-11: Nickel, Cadmium and VOCs

Recovery Wells

- RW-1: Nickel and Cadmium
- RW-4: Nickel, Cadmium and VOCs

Exceedances of the 1993 ROD cleanup goal for cadmium were consistently noted in shallow aquifer monitoring wells APS-5, APS-6, APS-7 and APS-11 (Table 8), as well as both recovery wells, RW-1 (Table 9) and RW-4 (Table 10). Cadmium and nickel concentrations in intermediate aquifer monitoring well API-3 and shallow aquifer monitoring wells APS-5 and APS-6 have increased during the current FYR review period. While nickel concentrations mostly remain below the cleanup goal, cadmium concentrations in these wells exceed the cleanup goal.

Table 8: Annual Ground Water Monitoring Results, 2006-2011

Well	COC (1993 ROD Cleanup Goal)	chloroform (100 µg/L)	trans-1,2 DCE (100 µg/L)	cis-1,2 DCE (70 µg/L)	1,1-DCE (7 µg/L)	PCE (3 µg/L)	TCE (3 µg/L)	vinyl chloride (1 µg/L)	cadmium (5 µg/L)	nickel (100 µg/L)
	Date									
API-2		---	---	---	---	---	---	---	---	11
	1/30/2006	---	---	---	---	---	---	---	---	6
	12/22/2006	---	---	---	---	---	---	---	---	6
	1/29/2008	---	---	---	---	---	---	---	---	5
	1/7/2009	---	---	---	---	---	---	---	---	39
	12/11/2009	---	---	---	---	---	---	---	---	12
API-3	12/15/2010	---	---	---	---	---	---	---	---	6.8
	1/12/2006	---	---	---	---	---	---	---	#	6.5
	12/22/2006	---	---	---	---	---	---	---	1.8^	12
	12/21/2007	---	---	---	---	---	---	---	11	12
	1/7/2009	---	---	---	---	---	---	---	6	5.3
	12/11/2009	---	---	---	---	---	---	---	0.8	31
APS-5	12/20/2010	---	---	---	---	---	---	---	77	21
	1/12/2006	---	---	---	---	---	---	---	19	17
	3/29/2006	---	---	---	---	---	---	---	15	22
	1/29/2007	---	---	---	---	---	---	---	17	20
	12/21/2007	---	---	---	---	---	---	---	15	20
	1/7/2009	---	---	---	---	---	---	---	20	57
	12/11/2009	---	---	---	---	---	---	---	56	122
12/15/2010	---	---	---	---	---	---	---	63		

Well	COC (1993 ROD Cleanup Goal)	chloroform (100 µg/L)	trans-1,2 DCE (100 µg/L)	cis-1,2 DCE (70 µg/L)	1,1-DCE (7 µg/L)	PCE (3 µg/L)	TCE (3 µg/L)	vinyl chloride (1 µg/L)	cadmium (5 µg/L)	nickel (100 µg/L)
APS-6	1/12/2006	---	---	---	---	---	---	---	47	29
	3/29/2006	---	---	---	---	---	---	---	25	29
	12/22/2006	---	---	---	---	---	---	---	35	40
	12/21/2007	---	---	---	---	---	---	---	16	51
	1/7/2009	---	---	---	---	---	---	---	29	41
	12/11/2009	---	---	---	---	---	---	---	60	65
	12/15/2010	---	---	---	---	---	---	---	59	63
APS-7	1/30/2006	---	---	---	---	---	---	---	6.5	60
	12/22/2006	---	---	---	---	---	---	---	12	41
	1/29/2008	---	---	---	---	---	---	---	---	10
	1/7/2009	---	---	---	---	---	---	---	8	41
	12/11/2009	---	---	---	---	---	---	---	10	47
	12/15/2010	---	---	---	---	---	---	---	1	8
APS-11	1/12/2006	#	#	0.92	#	11	2.1	#	99	45
	12/22/2006	0.36 [^]	#	0.72 [^]	#	8.6	1.4	#	130	190
	12/21/2007	<0.80	<0.50	1.53	<0.52	8.25	<0.09	<0.34	75	84
	1/7/2009	<0.46	<0.95	<0.47	<0.77	1.83	<0.48	<0.77	75	159
	12/11/2009	6.40 [^]	<0.30	0.55 [^]	<0.50	0.32 [^]	<0.37	<0.27	1000	5400
	3/11/2010*	---	---	---	---	---	---	---	112	380
	12/15/2010	<0.27	0.53	6.93	<0.19	4.99	1.43	4.64	210	4337
	1/19/2011*	---	---	---	---	---	---	---	134	609
	2/11/2011	<0.27	<0.21	4.61	<0.42	2.68	0.85	<0.79	---	---

---: Analyte was not included in sample parameters.
*: Monitoring well APS-11 was resampled for cadmium and nickel in March 2010 and January 2011 due to anomalous concentrations encountered in the December 2009 and December 2010 sampling events, respectively.
#: Analyte concentration was below the minimum detection limit.
[^]: Concentration detected is greater than the method detection limit and less than the practical quantitation limit; therefore, the concentration cannot be quantified.
Bolded: Indicates an exceedance of the 1993 ROD cleanup goal.

Table 9: Quarterly Ground Water Influent Samples for RW-1, 2006-2010

Ground Water COC (1993 ROD Cleanup Goal)	Cadmium (5 µg/L)	Nickel (100 µg/L)
Date		
1/12/2006	20	18
3/29/2006	22	16
6/30/2006	41	29
10/23/2006	22	16
1/18/2007	34	16
4/17/2007	90	40
7/20/2007	90	60
10/2/2007	50	60
12/21/2007	18	11
3/4/2008	18	25
10/16/2008	65	33
12/3/2008	87	41
1/7/2009	87	47
6/3/2009	91	41
9/4/2009	35	23
12/11/2009	24	20
3/8/2010	18	13
6/7/2010	18	12
9/3/2010	17	11
12/3/2010	20	11

Bolded: Indicates an exceedance of the 1993 ROD cleanup goal.

Table 10: Quarterly Ground Water Influent Samples for RW-4, 2006-2010

Ground Water COC (1993 ROD Cleanup Goal)	chloroform (100 µg/L)	trans-1,2 DCE (100 µg/L)	cis-1,2 DCE (70 µg/L)	1,1 DCE (7 µg/L)	PCE (3 µg/L)	TCE (3 µg/L)	vinyl chloride (1 µg/L)	cadmium (5 µg/L)	nickel (100 µg/L)
Date									
1/12/2006	0.55	2	50	0.89	390	62	6.8	89	49
3/29/2006	0.36 [^]	1.6	42	0.58 [^]	240	43	4.5	100	55
6/30/2006	#	0.93 [^]	16	0.35 [^]	86	17	1.7	53	32
10/23/2006	#	0.66 [^]	20	0.33 [^]	180	23	1.3	88	45
1/18/2007	1.5	1.9	57	0.88 [^]	450	67	5	92	52
4/17/2007	<0.8	<0.50	24.1	<0.52	126	23.7	2.48	40	20
7/20/2007	---	---	---	---	---	---	---	30	20
8/9/2007	<0.8	<0.50	<0.11	<0.52	17.4	1.06	<0.34	---	---
10/2/2007	<0.8	<0.50	28.8	<0.52	133	33.6	3.3	60	60
12/21/2007	<0.8	1.19 [^]	41.8	<0.52	333	49.8	5.36	80	52
3/4/2008	<0.8	1.00 [^]	206	<0.52	20.5	24.3	1.71	98	47
6/3/2008	<0.46	<0.95	39.1	<0.77	382	45.4	<0.77	84	37
10/16/2008	1.47	1.75 [^]	56.3	1.03 [^]	277	51.3	6.59	86	47
12/3/2008	<0.46	2.67 [^]	48.8	1.06 [^]	332	54.1	5.8	92	43
1/7/2009	1.6	2.00 [^]	56.9	<0.77	301	54.4	4.19	82	41
6/3/2009	2.33	2.99	45.5	1.49	254	47.6	5.43	86	42
9/4/2009	1.84	1.7	49.9	0.870 [^]	279	52.4	8	96	46
12/11/2009	1.4 [^]	1.7	43	0.71 [^]	410	48	3.9	93	36
3/8/2010	<0.27	2.06	51	<0.19	287	49.9	4.28	96	42
6/7/2010	0.9	1.76	31.8	0.70 [^]	219	39	2.89	70	33
9/3/2010	0.41 [^]	1.72	21.4	<0.19	268	34.5	2.71	81	40
12/3/2010	<0.27	2.21	43.7	<0.19	300	56.2	6.21	91	42

---: Analyte was not included in sample parameters.
: Analyte concentration was below the minimum detection limit.
^ : Concentration detected is greater than the method detection limit and less than the practical quantitation limit; therefore, the concentration cannot be quantified.
Bolded: Indicates an exceedance of the 1993 ROD cleanup goal.

The Mann-Kendall test is a non-parametric test for identifying trends in time series data by comparing the relative magnitudes of sample data rather than the data values themselves. The Mann-Kendall test was performed to evaluate the trend in cadmium and nickel concentrations in monitoring wells API-3, APS-5 and APS-6. Table 11 shows that there is an apparent trend of increasing concentration for one of the two metals at each of the three wells: cadmium in APS-5 and nickel in API-3 and APS-6. Although this test did not identify an increasing trend in nickel concentrations in APS-5, the most recent sample from this well (December 2010) contained a concentration of 122 µg/L of nickel. This is the highest nickel value reported in APS-5 dating back to October 1999. This is also the only nickel concentration exceeding the Florida MCL (100 µg/L) in any of the 2006-2011 samples from the three wells.

Table 11: Statistical Trend Analysis for Cadmium and Nickel Concentrations, 2006-2010

Well	Contaminant	Number of Samples	Positives	Negatives	Positives-Negatives	Test Statistic	Conclusion
API-3	Cadmium	6	9	6	3	0.36	No apparent trend
	Nickel	6	12	2	10	0.048	Increasing trend
APS-5	Cadmium	7	16	4	12	0.05	Increasing trend
	Nickel	7	15	5	10	0.094	No apparent trend
APS-6	Cadmium	7	14	7	7	0.191	No apparent trend
	Nickel	7	18	2	16	0.0034	Increasing trend

Anomalously high concentrations of both cadmium and nickel were detected in monitoring well APS-11 during the annual sampling events in December 2009 and December 2010. Follow-up sampling events for just cadmium and nickel were performed in March 2010 and January 2011. Results from these follow-up events found concentrations that were consistent with concentrations detected in annual sampling events for 2006 through 2008.

Recovery well RW-4 is located adjacent to APS-11; both wells are located in the center of the original contamination source area (Figure 2). The greatest cadmium concentration detected in RW-4 during the current FYR period was 100 µg/L in March 2006. The cadmium spikes detected in APS-11 were 1,000 µg/L in December 2009 and 210 µg/L in December 2010. The greatest nickel concentration detected in RW-4 during the current FYR period was 60 µg/L (i.e., no exceedances of the 100 µg/L cleanup goal); however, nickel spikes detected in APS-11 were 5,400 µg/L in December 2009 and 4,337 µg/L in December 2010. The occurrence of these anomalously elevated concentrations in the same month of sequential years suggests that there may be an unknown seasonal effect on ground water flow; however, there does not appear to be a corresponding increase in contaminant concentrations detected in the adjacent RW-4. Further investigation into potential seasonal, hydrologic, environmental or other factors contributing to these cadmium and nickel spikes is needed to ensure that the remedy is effective in the long term.

Monitoring for VOCs occurs in monitoring well APS-11 and recovery well RW-4. Consistent exceedances of the PCE cleanup goal were noted for APS-11. The annual samples from APS-11 show a decline in PCE concentrations from 11 µg/L in 2006 to 2.68µg/L in 2011, and these numbers are reduced from the initial PCE concentration of 192 µg/L reported in 1999. At APS-11, there was one exceedance of the vinyl chloride cleanup goal, in December 2010; however, a follow-up VOC sampling for this well in February 2011 found that the vinyl chloride concentration had declined below the cleanup goal and the minimum detection level. The February 2011 sampling event also indicated that PCE concentrations had declined below the cleanup goal since the December 2010 sampling event.

Effluent from the ground water treatment system is sampled prior to discharge to the Miami sewer system. Any detected concentrations in the effluent tank are typically well below the ground water cleanup goals for the Site because these waters have already been treated to remove contaminants. However, the December 2010 sampling event detected a chloroform concentration of 88.4 µ/L in the effluent tank. This concentration is below the 100 µ/L cleanup goal selected in the 1993 ROD, but exceeds the 70 µ/L 2011 ARAR for chloroform in ground water. Historical chloroform concentrations in the effluent tank have not previously exceeded 0.8 µ/L. Sampling results for chloroform and other contaminants in the effluent tank should continue to be carefully monitored to ensure that the ground water treatment system is operating effectively.

The 2006 FYR noted that remaining contaminant concentrations were not decreasing at the anticipated rate and in comments on the 2009 Annual Operating Report FDEP expressed further concern that the cleanup goals have not yet been achieved. While contaminant concentrations have decreased since the startup of the ground water treatment system and some cleanup goals have been achieved, remediation could potentially be improved by increasing the time the system is operational. Average annual pumping rates for the ground water treatment system are significantly lower than the instantaneous pumping rates reported for the days when the annual ground water sampling events were performed (Table 12).

Table 12: Pumping Rates for Ground Water Recovery Wells, 2006-2010

Date	RW-1		RW-4	
	Average Pumping Rate (gallons per minute (gpm))	Instantaneous Pumping Rate (gpm)	Average Pumping Rate (gpm)	Instantaneous Pumping Rate (gpm)
2006	7.9	45	2.3	16
2007	2.6	28	2.4	18
2008	1.7	9	1.9	15
2009	2.2	24	1.8	16
2010	2.4	23	1.5	10

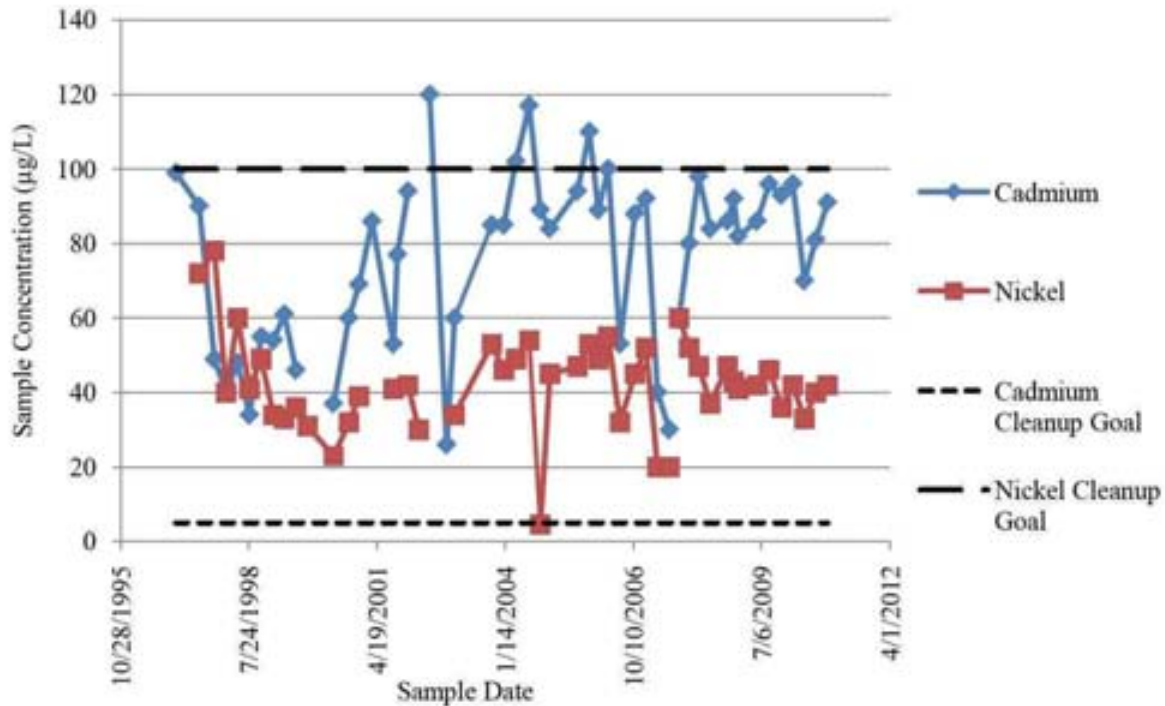
The 1996 O&M Plan anticipated that the ground water treatment system would be operated on a daily basis at an average pumping rate of 22 gpm. The 2001 FYR reported that the system was being operated on a continuous basis. The 2006 FYR indicated that the pumping time had decreased to approximately 11 hours a day during business days.

During the site inspection for the current FYR, the PRP reported that this pumping time is now 8-10 hours a day during business days and that the system is periodically shut off for 4-5 hour periods to use up effluent in the holding tank.

Nickel and cadmium concentrations in RW-4 both declined markedly when the system was being operated on a continuous basis. However, both nickel and cadmium concentrations began to increase again around 2001 and have shown no consistent decreases over the past ten years (Figure 4). Cadmium concentrations in RW-4 have been well above the cadmium cleanup goal of 5 µg/L for the entire history of sampling (January 1997 to present). Nickel concentrations in RW-4 have been consistently below the nickel cleanup goal of 100 µg/L for the entire history of sampling. While the nickel concentrations do not exceed the cleanup goal, the static concentrations for both nickel and cadmium suggest that the ground water treatment system, as currently operated, may not be effectively remediating contamination.

While the reduced average pumping rate is most likely attributable to the decreased duration of system operation, other potential factors, such as a reduction in well efficiency due to fouling or encrustation or unavailability of ground water for pumping, should also be evaluated. In addition, an evaluation should be performed to determine whether the contaminant plume is effectively being contained or whether this containment may have been compromised by the reduced pumping rate. Daily operation of the system at an average pumping rate consistent with the O&M Plan may help achieve ground water cleanup goals in a more efficient manner and should be considered as a primary option for testing the effectiveness of the current remedy.

Figure 4: Cadmium and Nickel Concentrations in RW-4, 1997-2010



6.5 Site Inspection

The site inspection was held on February 2, 2011. In attendance were Peter Thorpe, EPA RPM; Christopher Pellegrino of FDEP; Michael King of APC; and Christy Fielden and Sarah Alfano of Skeo Solutions. For a full list of site inspection activities, see the Site Inspection Checklist in Appendix D. For photographs of the Site, see Appendix E.

The Site is in continued use by the PRP, APC, which incorporated the remedial components into its electroplating process by using the treated ground water during the rinsing processes. The new private owner of the southern portion of the Site uses part of the cap as a parking lot and uses his land for cabinet manufacturing operations. The Site perimeter is fenced with secured gates and “no trespassing” signs on both owners’ properties. APC’s fence also includes warning signs for guard dogs. The concrete cap has additional fencing.

Documented monitoring wells are secured within at least one fence; however, API-2 needs maintenance and APS-7 and APD-3 are currently inaccessible because they have been covered by gravel by the new private owner of the southern portion of the Site. Two unmapped wells were located during the site inspection, one in need of maintenance near well cluster 8 (thought to be APS-8) and one well that might be site-related was found unsecured in the parking lot of the neighboring refrigeration business, located to the northwest of the Site (Figure 2). The concrete cap is in good condition and the air strippers and recovery wells are functioning as designed. New use in the area has

involved the elimination of inner fencing around the cap and RW-1 and monitoring well cluster 3, although perimeter fencing remains around the entire property. In order to maintain the integrity of RW-1 and monitoring well cluster 3, which is located near a parking lot, site inspection participants discussed possible ways to secure its safety, including adding pylons around the well. This would require collaboration between EPA, FDEP, the PRP and the new owner of the southern portion of the Site.

The PRP has implemented all O&M activities outlined in the O&M Plan, but the Site lacks adequate institutional controls to protect the integrity of the cap and to restrict land uses incompatible with the remedy at the Site. The PRP is required to continue O&M under a 1994 Unilateral Administrative Order on Consent, but the restrictive covenant needs to be finalized to ensure the protectiveness of the remedy throughout potential property transfers.

On February 2, 2011, Skeo Solutions staff visited the designated local site repository for the Site: the John F. Kennedy Public Library, located at 190 West 49th Street in Hialeah, Florida. No site documents were located at the time of the site inspection, but the library was later able to locate copies of the 2001 FYR and annual operating reports from 2007, 2009 and 2010. EPA was notified of the missing site repository documents and mailed a complete administrative record to update the repository on June 2, 2011.

Contractor staff conducted research at the Miami-Dade County Deeds and Records Office and found deed information pertaining to the Site, which is listed in Table 13.

Table 13: Deed Documents from Miami-Dade Public Records Office

Date	Type of Document	Folio Number	Description	Book #	Page #
04/21/1969	Warranty Deed	30-3121-000-0991 30-3121-000-1060	Warranty deed transferring property from the 3650 Corporation to Airco Plating Company, Inc.	6375	709
06/02/1969	Warranty Deed	30-3121-000-1053 30-3121-000-1052	Warranty deed transferring property from the Allied Products Corporation to Airco Plating Company, Inc.	6496	706
08/22/1994	UAO	30-3121-000-0991 30-3121-000-1052 30-3121-000-1053 30-3121-000-1056 30-3121-000-1060	Order directing the PRP to develop the RD for the site remedy described in the ROD.	16529	851
11/24/2010	Warranty Deed	30-3121-000-1056	Warranty deed transferring property from BRB Cabinets, Inc. to another private owner.	27504	67

The 1993 ROD selected institutional controls as part of the Site remedy. A restrictive covenant for the Site is required to be recorded with the following objectives:

- Preserve the integrity of the cap.
- Restrict activities that are not compatible with the remedy.
- Prohibit residential use of the Site as long as contaminated soil remains in place.
- Prohibit removal of the cap unless any necessary remedial action, such as a soil treatment, is conducted.
- Ensure that the remedy remains protective of human health and the environment if on-site buildings that are currently located over contaminated soil undergo any significant physical modification or alteration. Those areas under such buildings would then be evaluated to determine if remedial action is necessary, such as extending the RCRA-type cap over those areas.

APC submitted a proposed restrictive covenant for the cap portion of the Site to EPA and FDEP for review in 2010 and the agencies' review processes are currently underway. The restrictive covenant will be implemented and recorded upon approval from the agencies. Ground water contamination associated with the Site is present at concentrations above drinking water standards and ground water use should be restricted. A State of Florida mechanism currently serves as a ground water institutional control. The Site is located within a Florida Ground Water Delineated Area, which is subject to the South Florida Water Management District administration controlling the installation and potable use of wells at the Site and immediate area (Figure 5). Table 14 lists the institutional controls associated with areas of interest at the Site.

Table 14: Institutional Control (IC) Summary Table

Media	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Instrument in Place
Ground Water	Yes	No	30-3121-000-1060, 30-3121-000-0991, 30-3121-000-1053, 30-3121-000-1052 and 30-3121-000-1056	Restrict installation of ground water wells and ground water use.	The Site lies within a Florida Ground Water Delineated Area, managed by the South Florida Water Management District, ^a which restricts well placement. ^b
Soil	Yes	Yes	30-3121-000-1060, 30-3121-000-0991, 30-3121-000-1053, 30-3121-000-1052 and 30-3121-000-1056	Restrict uses that would disturb the integrity of the cap	None. A draft restrictive covenant is currently under review with EPA and FDEP.

a. South Florida Water Management District information is available at: <http://www.sfwmd.gov/portal/page/portal/sfwmdmain/home%20page>.

b. Florida Ground Water Delineated Area information is available at: <http://www.dep.state.fl.us/water/groundwater/delineate.htm>.

6.6 Interviews

During the FYR process, interviews were conducted with parties impacted by the Site, including the current landowners and regulatory agencies involved in site activities or aware of the Site. The purpose of the interviews was to document the perceived status of the Site and any perceived problems or successes with the phases of the remedy that have been implemented to date. Interviews were conducted in person during the site inspection on February 2, 2011, or by e-mail or telephone after the site inspection. Interviews are summarized below and complete interviews are included in Appendix C.

Pete Thorpe: Mr. Thorpe is the EPA RPM for the Site. Mr. Thorpe believes that the project is progressing well with the remedy functioning as designed. The ground water remediation system is operating and cleaning up ground water contamination, and no contamination is migrating off site. Though ground water contaminants continue to be detected above cleanup goals, contaminant concentrations have been reduced to non-detect levels in the delineation monitoring locations around the perimeter of the plume. Mr. Thorpe thinks that the Site has had limited effects on the community. Mr. Thorpe would like to help the community become more informed about the Site, which he believes could be achieved by mailing a fact sheet or by updating the repository.

Chris Pellegrino: Mr. Pellegrino is the FDEP representative for the Site. He stated that he believes that the remedy appears to be functioning as expected for a ground water extraction and treatment system and that he is unaware of any effects that the Site has had

on the community. Mr. Pellegrino explained that other than the annual monitoring reports, his department has not conducted any additional site-related communications; however, when the EPA RPM changed, a meeting was held with the PRP. Mr. Pellegrino noted that a restrictive covenant has been proposed for the APC property and a draft document is going through FDEP's review process.

Michael King: Mr. King is the PRP's representative for the Site. He indicated that he believes the remedy is effective, relatively problem-free and uniquely tailored to work in concert with ongoing APC operations at the facility. Mr. King stated that ground water contamination at the Site is hydraulically contained with no on-site or off-site receptors or exposure pathways. He indicated that he believes the impact of the Site on the surrounding community is negligible because ground water contaminants are no longer being detected in off-site wells. Mr. King also mentioned that VOCs above MCLs are now only detected in one well, RW-4, and that average concentrations of VOCs in this well have declined over time. He indicated that the remedy is not fast but it is stable, economical and progressing. Mr. King believes that the remedy remains a practical remedial approach to the very low environmental risk presented by the Site. He noted that he was unaware of any community impacts and feels well informed about remedial operations at the Site.

Local Business Employee: This employee works at one of the businesses adjacent to the Site. The employee stated that she had never heard anything about the Site but does not think there have been any vandalism problems. She also mentioned that a brochure in English and Spanish could be helpful to inform neighbors about the Site.

Local Business Manager 1: This business manager works at one of the businesses adjacent to the Site. The manager stated that he had never heard about the Site and they have been at the same location for over 25 years. He did not believe that there had been any problems with vandalism and suggested that e-mail updates would help keep the community informed.

Local Business Manager 2: This business manager works at one of the businesses adjacent to the Site. The manager stated that he is aware of the project but does not know enough to comment on it. He has observed monitoring well testing and does not think there have been any problems with trespassing. He explained that their business is located on part of the Site and he has never received any information from EPA.

Local Business President: This business president works at one of the businesses adjacent to the Site. His business has been in the area since contamination was discovered and he believes EPA should have excavated the whole area to remove contaminated soil, and not just cap the area. He also questioned the effectiveness of the air stripping as a ground water remedy. He does not think that there have been any effects on the community because no one knows about the Site. He is not aware of any trespassing.

Local Business Owner: This business owner works at a business adjacent to the Site. He is aware of the Site but after EPA came to test his land and did not find contamination he

never looked into the Site further. He has not heard about any problems with vandalism. Though he has never received any information about the Site, he believes it might not be necessary.

7.0 Technical Assessment

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

The review of documents, ARARs and risk assumptions as well as the site inspection indicate that the Site's remedy has been implemented according to Site decision documents. Contaminated soils were treated with SVE and consolidated under a RCRA-type cap in September 1999. EPA approved the ground water extraction and treatment system in June 1997 and the system has been in operation since that time.

Since the ground water treatment system startup, ground water cleanup goals have been achieved in several monitoring wells and cleanup goals for individual COCs in specific monitoring wells have also been achieved. However, cadmium, nickel and VOCs continue to be detected in site-monitoring and recovery wells at concentrations exceeding cleanup goals. During the current FYR period, cadmium concentrations in shallow aquifer monitoring well APS-5 and nickel concentrations in intermediate aquifer monitoring well API-3 and shallow aquifer monitoring well APS-5 have shown an increasing trend. Aside from one 2010 exceedance in shallow aquifer monitoring well APS-5, nickel concentrations in these three wells remain below the cleanup goal, but cadmium concentrations exceed the cleanup goal in all three wells. Exceedances for both cadmium and nickel have been noted in shallow aquifer monitoring well APS-11 as well. This well also exhibited anomalously high concentrations for these two metals in December 2009 and December 2010. Confirmatory sampling indicated that concentrations had declined, but remained substantially higher when compared with measurements from other years, and the cause for these spikes remains unknown. Given that corresponding spikes have not been detected in the adjacent recovery well, review of the current placement of recovery well RW-4 will be conducted to ensure no pockets of contamination are beyond the reach of the ground water treatment system. Concentrations of VOCs above the cleanup goals also continue to be detected at shallow aquifer monitoring well APS-11 and recovery well RW-4, located near the original source area for Site contamination.

Concerns that ground water remediation was not progressing at the rate anticipated by the ROD and that contaminant concentrations may have achieved a steady state were expressed during the 2006 FYR and again by FDEP's Program and Technical Support Section office in Tallahassee in 2010 (Appendix F). The difference between average and instantaneous pumping rates for the Site suggests that the ground water treatment system spends significant portions of time offline. Currently, the PRP operates the system during business hours, but the system should be operated on a continuous basis, as specified in the site O&M Plan, to improve the performance of the remedy. Additionally, nickel and cadmium concentrations in RW-4 have not shown consistent declines and may have reached an asymptotic state. Further evaluation is needed at the site to determine the cause for the reduced average rate of ground water recovery, to determine how best to maintain continued progress toward achieving cleanup goals, and to evaluate whether the ground water system effectively captures and contains the ground water plume.

The 2006 FYR recommended that the human health risks associated with the vapor intrusion pathway be evaluated for the Site. A preliminary screening was performed using the Johnson and Ettinger Model and results were reported in the 2008 FYR Addendum. Site-specific inputs indicate a cancer risk of less than 1.0×10^{-4} and a hazard quotient of less than 1. In addition, the area of ground water contamination is not located under building foundations where current operations continue. Therefore, EPA determined that vapor intrusion is not an exposure pathway of concern.

The 1993 ROD selected institutional controls for site soils including a restrictive covenant to restrict land uses that would be incompatible with the remedy, and to protect the integrity of the on-site cap. A draft restrictive covenant is currently under review at EPA and FDEP. Through a Florida Ground Water Delineated Area, the South Florida Water Management District restricts well use and placement, effectively accomplishing the objective of preventing exposure to ground water contamination. Property perimeter fencing is in place around all site parcels and the placement of the on-site cap has eliminated the exposure pathway to contaminated soils.

During the site inspection, some monitoring well caps were found to be broken. Though access to these wells is restricted by fencing around the perimeter of the impacted site parcels, routine well maintenance should be performed. The remedy is functioning as intended by the decision documents with the exception of the soil ICs.

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?

The current ARAR for chloroform has become more stringent since the signing of the 1993 ROD. Chloroform is currently being monitored in wells APS-11 and RW-4, where it is present at concentrations below the more stringent MCL. In addition, an ARAR for bis(2-ethylhexyl)phthalate was not available at the time the 1993 ROD was signed but an MCL is now available. A cleanup goal for acetone may be selected once a regulatory standard for this COC is made available.

During contaminated soil evaluations and the risk assessment, trivalent chromium was not distinguished from hexavalent chromium. The toxicity for hexavalent chromium is higher than the value used in the risk assessment (Table 15). If the chromium at the Site is hexavalent chromium, it is possible that it could pose an unacceptable risk to human health and the environment. If the chromium is trivalent chromium, then no further assessment is necessary and the cleanup remains effective. Although there have been changes to toxicity criteria, the land use assumptions used during development of the 1993 ROD remain unchanged and the RAOs remain valid.

Table 15: Chromium Oral Reference Dose

COC	1993 ROD Baseline Risk Assessment Oral Reference Dose (mg/kg/day)	Current Oral Reference Dose (mg/kg/day)
Chromium	0.005	Trivalent Chromium: 1.5
		Hexavalent Chromium: 0.003

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

Recently, the southernmost portion of the Site has come under new ownership. The current owner of the southern portion of the Site uses part of the cap as a parking lot for industrial trucks and has taken down the fences immediately surrounding the cap, monitoring well cluster 3 and RW-1; however, the cap and wells remain within the gated section of the business parking lot and are thus restricted from public access. The new property owner has added sand and gravel along a portion of the cap in order to make the cap more accessible as a parking area. The new owner was sent a letter in April 2011 notifying him of his potential liability under Superfund and the expectation of cooperation with EPA for the remedy in place (Appendix G). The new owner has also expressed interest in slightly modifying the cap.

During the site inspection, EPA and FDEP met with the new property owner to inform him that he should not make changes to existing components of the remedy. EPA is actively working to ensure that the site owner is aware of the Site, the status of remedial activities and the limitations on changes he can make to the portion of his property that is part of the Site. An access agreement is needed to ensure that EPA, FDEP and the PRP are able to access this portion of the Site when conducting remedial activities. The restrictive covenant for this parcel will preserve the integrity of the cap and restrict land uses and activities that are incompatible with the remedy.

7.4 Technical Assessment Summary

The review of documents, ARARs and risk assumptions as well as the site inspection indicate that the Site's remedy has been implemented according to Site decision documents. Contaminated soils were treated with SVE and consolidated under a RCRA-type cap in September 1999. EPA approved the ground water extraction and treatment system in June 1997 and the system has been in operation since that time.

Since ground water treatment system startup, ground water cleanup goals have been achieved in several monitoring wells and cleanup goals for individual COCs in specific monitoring wells have also been achieved. However, cadmium, nickel and VOCs continue to be detected in site-monitoring and recovery wells at concentrations exceeding cleanup goals. During the current FYR period, cadmium concentrations in shallow aquifer monitoring well APS-5 and nickel concentrations in intermediate aquifer monitoring well API-3 and shallow aquifer monitoring well APS-5 have shown an

increasing trend. Aside from one 2010 exceedance in shallow aquifer monitoring well APS-5, nickel concentrations in these three wells remain below the cleanup goal, but cadmium concentrations exceed the cleanup goal in all three wells. Exceedances for both cadmium and nickel have been noted in shallow aquifer monitoring well APS-11 as well. This well also exhibited anomalously high concentrations for these two metals in December 2009 and December 2010. Confirmatory sampling indicated that concentrations had declined, but remained substantially higher when compared with measurements from other years, and the cause for these spikes remains unknown. Given that corresponding spikes have not been detected in the adjacent recovery well, review of the current placement of recovery well RW-4 will be conducted to ensure no pockets of contamination are beyond the reach of the ground water treatment system. Concentrations of VOCs above the cleanup goals also continue to be detected at shallow aquifer monitoring well APS-11 and recovery well RW-4, located near the original source area for Site contamination.

Concerns that ground water remediation was not progressing at the rate anticipated by the ROD and that contaminant concentrations had achieved a steady state were expressed during the 2006 FYR and again by FDEP's Program and Technical Support Section office in Tallahassee in 2010 (Appendix F). The difference between average and instantaneous pumping rates for the Site suggests that the ground water treatment system spends significant portions of time offline. Currently, the PRP operates the system during business hours, but the system should be operated on a continuous basis, as specified in the site O&M Plan, to improve the performance of the remedy. Additionally, nickel and cadmium concentrations in RW-4 have not shown consistent declines and may have reached an asymptotic state. Further evaluation is needed at the site to determine the cause for the reduced average rate of ground water recovery, to determine how best to maintain continued progress toward achieving cleanup goals, and to evaluate whether the ground water system effectively captures and contains the ground water plume.

The 2006 FYR recommended that the human health risks associated with the vapor intrusion pathway be evaluated for the Site. A preliminary screening was performed using the Johnson and Ettinger Model and results were reported in the 2008 FYR Addendum. Site-specific inputs indicate a cancer risk of less than 1.0×10^{-4} and a hazard quotient of less than 1. In addition, the area of ground water contamination is not located under building foundations where current operations continue. Therefore, EPA determined that vapor intrusion is not an exposure pathway to on-site workers.

The ground water ARAR for chloroform has become more stringent and a ground water ARAR for bis(2-ethylhexyl)phthalate has become available since the signing of the 1993 ROD. In addition, the soil cleanup goal for chromium was risk-based and the toxicity criteria for chromium have been revised. These changes do not affect the protectiveness of the remedy at the Site in the short term. However, EPA will continue to monitor site-related contaminants and will take appropriate action to address potential risks.

The 1993 ROD selected institutional controls for site soils including a restrictive covenant to restrict land uses that would be incompatible with the remedy, and to protect

the integrity of the on-site cap. A draft restrictive covenant is currently under review at EPA and FDEP. Through a Florida Ground Water Delineated Area, the South Florida Water Management District restricts well use and placement, effectively accomplishing the objective of preventing exposure to ground water contamination. Property perimeter fencing is in place around all site parcels and the placement of the on-site cap has eliminated the exposure pathway to contaminated soils.

The southern portion of the Site containing a section of the on-site cap, a recovery well and several monitoring wells has come under new ownership. The new owner has made several physical changes to the property, including covering over flush mounted monitoring wells with gravel and removing interior fencing around the southern portion of the on-site cap and monitoring well cluster 3. EPA has been in communication with the new owner to notify him about the Site and the remedial actions underway. EPA will continue to work with the owner to ensure that remedial components on his property remain intact and accessible. During the site inspection, some monitoring well caps were found to be broken. Though access to these wells is restricted by fencing around the perimeter of the impacted site parcels, routine well maintenance should be performed.

8.0 Issues

Table 16 summarizes the current site issues.

Table 16: Current Site Issues

Issue	Affects Current Protectiveness (Yes or No)	Affects Future Protectiveness (Yes or No)
Although some ground water cleanup goals have been achieved, cadmium, nickel and VOC concentrations continue to be detected above cleanup goals. Cadmium and nickel concentrations have not shown appreciable declines in the past ten years, slowing progress of the ground water remedial action. In addition, concerns were expressed in the 2006 FYR and in comments from FDEP in 2010 that ground water remediation is not progressing at the rate anticipated by the 1993 sitewide ROD.	No	Yes
Unexplained spikes in cadmium and nickel concentrations were detected in shallow aquifer well APS-11 in December 2009 and December 2010.	No	Yes
The 1996 O&M Plan anticipated that the ground water treatment system would operate at an average pumping rate of 22 gpm. With one exception (RW-1 in 2006), the average pumping rates for both recovery wells have been below 3 gpm during the current FYR period.	No	Yes
A new owner has acquired the parcel south of the APC property and has made physical modifications such as covering flush mounted monitoring wells with gravel and removing interior fencing around the on-site cap.	No	Yes
Institutional controls to restrict land uses that are incompatible with the remedy and to preserve the integrity of the on-site cap have not been implemented.	No	Yes

9.0 Recommendations and Follow-up Actions

Table 17 provides recommendations to address the current site issues.

Table 17: Recommendations to Address Current Site Issues

Issue	Recommendations / Follow-Up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness? (Yes or No)	
					Current	Future
Although some ground water cleanup goals have been achieved, cadmium, nickel and VOC concentrations continue to be detected above cleanup goals. Cadmium and nickel concentrations have not shown appreciable declines in the past ten years, slowing progress of the ground water remedial action. In addition, concerns were expressed in the 2006 FYR and in comments from FDEP in 2010 that ground water remediation is not progressing at the rate anticipated by the 1993 sitewide ROD.	The ground water treatment system should be operated continuously in accordance with the 1996 O&M Plan for the Site. The system should be assessed to determine whether it effectively captures the contaminant plume when operated according to the O&M Plan. If the assessment determines that system improvements are necessary, those changes should be implemented, as appropriate.	PRP	EPA	3/30/2013	No	Yes
Unexplained spikes in cadmium and nickel concentrations were detected in shallow aquifer well APS-11 in December 2009 and December 2010.	Evaluate potential seasonal, hydrologic, environmental or other factors that might be responsible for spikes in cadmium and nickel concentrations in ground water monitoring well APS-11.	PRP	EPA	3/30/2013	No	Yes

Issue	Recommendations / Follow-Up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness? (Yes or No)	
					Current	Future
The 1996 O&M Plan anticipated that the ground water treatment system would operate at an average pumping rate of 22 gpm. With one exception (RW-1 in 2006), the average pumping rates for both recovery wells have been below 3 gpm during the current FYR period.	Evaluate the cause(s) of the reduced average rate of ground water recovery and evaluate and perform an analysis of ground water recovery to determine whether the current configuration of recovery wells adequately contains the entire ground water plume area. Take next steps, as appropriate, to address findings of these evaluations.	PRP	EPA	9/28/2012	No	Yes
A new owner has acquired the parcel south of the APC property and has made physical modifications such as covering flush mounted monitoring wells with gravel and removing interior fencing around the on-site cap.	Continue efforts to explain remedial components, liability concerns and owner/operator responsibilities to the new owner of the parcel south of the APC property. Implement a restrictive covenant for the parcel to prevent activities and land uses that would be incompatible with the remedy.	PRP/EPA	EPA	9/28/2012	No	Yes
Institutional controls to restrict land uses that are incompatible with the remedy and to preserve the integrity of the on-site cap have not been implemented.	Finalize and implement the draft restrictive covenant for the APC property upon receiving approval from EPA and FDEP.	PRP	EPA	9/28/2012	No	Yes

10.0 Protectiveness Statement

The Site remedy currently protects human health and the environment in the short term because source control remediation has been completed in accordance with the selected remedy, the ground water treatment system continues to operate at the Site and there are no complete exposure pathways. However, in order for the remedy to be protective in the long term, issues regarding ground water remedy optimization, ground water recovery rates, unexplained spikes in cadmium and nickel concentrations, and soil institutional controls should be addressed.

11.0 Next Review

The Site is a statutory site that requires ongoing FYRs as long as waste is left on site that does not allow for unrestricted use and unlimited exposure. The next FYR will be due within five years of the signature/approval date of this FYR.

Appendix A: List of Documents Reviewed

Airco Operation and Maintenance Plan, January 1996, A. L. Simons Consultants, Inc.

Annual Operating Report 2006: Airco Plating NPL Site. Prepared by HSA Engineers and Scientists for the Airco Plating Company. April 2007.

Annual Operating Report 2007: Airco Plating NPL Site. Prepared by HSA Engineers and Scientists for the Airco Plating Company. March 2008.

Annual Operating Report 2008: Airco Plating NPL Site. Prepared by HSA Engineers and Scientists for the Airco Plating Company. April 2009.

Annual Operating Report 2009: Airco Plating NPL Site. Prepared by HSA Engineers and Scientists for the Airco Plating Company. April 2010.

Annual Operating Report 2010: Airco Plating NPL Site. Prepared by HSA Engineers and Scientists for the Airco Plating Company. March 2011.

EPA Region IV Unilateral Administrative Order for Remedial Design and Remedial Action, September 1994.

EPA Superfund Preliminary Close-Out Report, September 15, 1999.

EPA Superfund Record of Decision: Airco Plating Company, Inc. Miami, Miami-Dade County FL, October, 1993.

Feasibility Study for Airco Plating NPL Site, Blasland, Bouck and Lee, May 1993.

Operations and Maintenance Plan Airco Plating Company, Inc., A. L. Simmons Consultants, Inc., January 1996.

Preliminary Design Prepared for Airco Plating Company, Inc., Clark Engineers-Scientists, Inc. October 1994.

Remedial Design (RD) Work Plan Prepared for Airco Plating Company, Inc., Clark Engineers-Scientists, Inc. October 1994.

Remedial Investigation, Airco Plating NPL Site Miami, Florida, Volume I and Volume II, December 1992, M. P. Brown & Associates, Inc. Consulting Hydrogeologists, Geologists and Engineers.

Soil Cap Remedial Action Report Airco Plating Company, Inc., A.L. Simmons Consultants, Inc., September 1999.

Superfund Five-Year Review Addendum Airco Plating Co. Inc. Miami, Miami-Dade County Florida, September 2008.

Superfund Five-Year Review Report Airco Plating Co. Inc. Miami, Miami-Dade County Florida, September 2001.

Superfund Five-Year Review Report Airco Plating Co. Inc. Miami, Miami-Dade County Florida, September 2006.

EPA Office of Emergency and Remedial Response. Comprehensive Five-Year Review Guidance (OSWER No. 9355.7-03B-P), June 2001.

Appendix B: Press Notice



The U. S. Environmental Protection Agency, Region 4 Announces the Third Five-Year Review for the Airco Plating Co. Superfund Site, Miami, Miami-Dade County, Florida

Purpose/Objective: The U.S. Environmental Protection Agency (EPA) is conducting a Five-Year Review of the remedy for the Airco Plating Co. Superfund Site (the Site) in Miami, Florida. The purpose of the Five-Year Review is to ensure that the selected cleanup actions effectively protect human health and the environment.

Site Background: The two-acre Site has been home to the Airco Plating Co. (APC) electroplating shop since 1957. The APC facility plates steel, copper, brass with zinc, cadmium, copper, nickel and tin. Cyanide, acids and caustic compounds are used in the electroplating process and tetrachloroethene (PCE) is used as a cleaning fluid for parts prior to plating. Until 1973, wastes from the plating operations, including sludge, were disposed of in three on-site seepage ponds. Beginning in 1973, plating wastes were pretreated and released into the Miami municipal sewage system. Since 1982, the sludges have been separated and transported to a hazardous waste facility regulated under Subtitle C of the Resource Conservation and Recovery Act. In the early 1990s, various metals, cyanide, PCE and trichloroethene were detected in the soil at the Site and elevated levels of cadmium and volatile organic compounds, such as PCE, were detected in shallow ground water on site. In addition to these discoveries, elevated levels of cadmium and PCE were detected in deeper ground water. EPA began conducting site investigations in July 1985 and the Site was proposed to the National Priorities List (NPL) in June 1988. APC performed a contamination assessment in May 1989 and submitted subsequent Contamination Assessment Reports to EPA and the Florida Department of Environmental Protection (FDEP) through March 1990. EPA finalized the Site on the NPL in February 1990. Major contaminants at the Site included metals, cyanide and PCE in the soil as well as PCE and cadmium in the ground water.

Cleanup Actions: EPA designated one operable unit (OU) to address the Site's soil and ground water contamination. EPA signed the Site's Record of Decision in October 1993, selecting a remedy to treat contamination at the Site. The major components of the remedy included soil vapor extraction (SVE) of organic compounds, the installment of a reinforced concrete protective cap, institutional controls to preserve the integrity of the remedy, extraction of contaminated ground water with subsequent treatment by air stripping, the discharge of treated water to the local Publicly Owned Treatment Works, the evaluation of the need for treatment of inorganic compounds in ground water, and the modeling of air emissions and analysis of actual air emissions from the air stripping tower and SVE system. Air stripping systems and the SVE system were installed during spring 1995 and the concrete cap was constructed in 1999. The SVE system continued in operation until June 1999, when it was removed from service because contaminant concentrations in vapor emissions had declined significantly. Construction of the remedy was completed on September 5, 1999. Since then, periodic monitoring and sampling has continued to ensure that the Site's remedy is functioning properly.

Five-Year Review Schedule: The National Contingency Plan requires that remedial actions resulting 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 the protection of human health and the environment. The third of the Five-Year Reviews for the Site will be completed by September 2011.

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

Peter Thorpe, Remedial Project Manager
Phone: 404-562-9688
E-mail: thorpe.peter@epa.gov

L'Tonya Spencer, Community Involvement Coordinator
Phone: 404-562-8463
E-mail: spencer.latonya@epa.gov

Mailing Address: EPA Region 4, 61 Forsyth St. S.W., Atlanta, GA 30303-8960

Additional site information is also available at the Site's document repository, located at John F. Kennedy Memorial Library, 190 West 49th Street, Hialeah, Florida 33012-3712, or online at: <http://www.epa.gov/superfund/sites/nplfs/fs0400561.pdf>

Appendix C: Interview Forms

Airco Plating Co. Superfund Site

Five-Year Review Interview Form

Site Name: Airco Plating Co.

EPA ID No.: FLD004145140

Subject Name: Pete Thorpe

Affiliation: US EPA Region 4

Subject Contact Information: (404) 562-9688; thorpe.peter@epa.gov

Time: _____

Date: 02/14/2011

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

Interview Category: EPA Remedial Project Manager

1. What is your overall impression of the project including cleanup, maintenance and reuse activities (as appropriate)?

I think the project is progressing well. There are still a couple of wells that have ground water contamination over the appropriate action levels in them. The ground water remediation system is working and cleaning up the ground water. All of the delineation monitoring wells are non-detect. There is no contamination heading off site.

2. What have been the effects of this Site on the surrounding community, if any?

Generally I would say not much. The majority of the area is industrial/commercial and Airco Plating fits within that type. It appears that there is little impact from the site to the community. During the community interviews, I didn't hear much impact from the cleanup at Airco Plating on the surrounding community.

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities since the implementation of the cleanup?

No, I have gotten no complaints about the site. Some of the citizens of the surrounding community were not aware of the site. We need to do a better job in informing the community about the site.

4. What is your assessment of the current performance of the remedy in place at the Site?

The remedy is functioning as designed. It is recovering contamination from the ground water. There is hydraulic control of the source area. The concrete caps are intact and functioning as designed. The remedy is working as intended.

5. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?

We are currently working with Airco Plating to get a restrictive covenant signed. FDEP is currently reviewing the restrictive covenant. Currently, there is a UAO signed and recorded with the county for Airco Plating.

6. Are you aware of any community concerns regarding the Site or the operation and maintenance of its remedy? If so, please provide details.

No, I have not heard any complaints. Again, I think the one thing we can improve on is to do a slightly better job in informing the community about the site. An updated fact sheet mailing or double check the documents at the site repository are two things that might help in getting

the community better informed.

7. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

No.

Airco Plating Co. Superfund Site		Five-Year Review Interview Form			
Site Name:	<u>Airco Plating Co.</u>	Site Name:	<u>Airco Plating Co.</u>		
Interviewer Name:	<u>Sarah Alfano</u>	Affiliation:	<u>Skeo Solutions</u>		
Subject Name:	<u>Chris Pellegrino</u>	Affiliation:	<u>FDEP</u>		
Subject Contact Information:	<u>(850) 245-8972</u>				
Time:	<u>12:00 PM</u>	Date:	<u>02/02/2011</u>		
Interview Location:	<u>Airco Plating Co. Site</u>				
Interview Format (circle one):	<u>In Person</u>	Phone	Mail	Other:	

Interview Category: State Agency

1. What is your overall impression of the project including cleanup, maintenance and reuse activities (as appropriate)?
It is going on as we would expect with a pump and treat system.
2. What is your assessment of the current performance of the remedy in place at the Site?
It is as effective as a pump and treat system usually is.
3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?
I am not aware of any complaints or inquiries.
4. Has your office conducted any site-related activities or communications in the past five years? If so, please describe the purpose and results of these activities.
Other than the standard monitoring reports there has not been any additional communication. We held a meeting with the PRP and the new RPM a year or two ago but that was it.
5. Are you aware of any changes to state laws that might affect the protectiveness of the Site's remedy?
I am not aware of any changes.
6. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?
The ICs are proposed and the DEP is currently reviewing them; it is a standard process.
7. Are you aware of any changes in projected land use(s) at the Site?
I am not aware of any changes in projected land use at the site.
8. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?
I do not have any comments or suggestions.

Airco Plating Co. Superfund Site**Five-Year Review Interview Form****Site Name:** Airco Plating Co.**EPA ID No.:** FLD004145140**Subject Name:** Michael King**Affiliation:** Airco Plating Co.**Subject Contact Information:** (305) 633-2476; mking@aircoplating.com**Time:** 10:30 AM**Date:** 2/8/2011**Interview Format (circle one):** In Person Phone Mail Other: E-mail**Interview Category:** Potentially Responsible Parties (PRPs)

1. What is your overall impression of the remedial activities at the Site?
The remedy is effective, relatively problem free and uniquely tailored to work in concert with our operations at the facility. I agree with the EPA's August 2008 assessment that the remedy is protective of human health and the environment.
2. What have been the effects of this Site on the surrounding community, if any?
The site is hydraulically contained with no on-site or off-site receptors or exposure pathways. No contaminants exist in off-site wells so the impact of this site on the surrounding community is negligible.
3. What is your assessment of the current performance of the remedy in place at the Site?
When we began pumping and treating ground water; organics were seen in several wells in low concentrations. RW-4 is now the only well showing organics above MCL's. In RW-4 average concentrations of PCE, TCE and Vinyl Chloride dropped approximately 70%, 45% and 74% respectively from the first five-year treatment interval to the second five-year period. Comparing average concentrations of the same compounds from the third five-year period versus the second also shows significant drops of approximately 34%, 19% and 57% respectively. The remedy is not a quick fix but it is stable, economical and headed squarely in the right direction. It remains a practical remedial approach to the very low environmental risk presented by the site.
4. Are you aware of any complaints or inquiries regarding environmental issues or the remedial action from residents since implementation of the cleanup?
I am not aware of any complaints or inquiries from neighboring residents.
5. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?
Yes, I feel well informed.
6. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?
I look forward to and remain committed to the operation of the remedy and its continued success.

Airco Plating Co. Superfund Site**Five-Year Review Interview Form**Site Name: Airco Plating Co.EPA ID No.: FLD004145140Interviewer Name: Sarah AlfanoAffiliation: Skeo SolutionsSubject Name: Local Business Employee

Affiliation:

Time: 12:00 PMDate: 2/2/2011Interview Location: Local BusinessInterview Format (circle one): In Person Phone Mail Other:Interview Category: Local Business Employee

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?
No, I do not know anything about that.
2. What is your overall impression of the project including cleanup, maintenance and reuse activities (as appropriate)?
I did not know about it.
3. What have been the effects of this Site on the surrounding community, if any?
Unknown.
4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?
No.
5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?
No, I am not informed and I don't think anyone knows about it. A brochure or leaflet in English and in Spanish about the site would be helpful.
6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?
No.
7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?
No.

Airco Plating Co. Superfund Site

Five-Year Review Interview Form

Site Name: Airco Plating Co.
Interviewer Name: Sarah Alfano
Subject Name: Local Business Manager
Time: 12:15 PM
Interview Location: Local Business

EPA ID No.: FLD004145140
Affiliation: Skeo Solutions
Affiliation:
Date: 2/2/11

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

Interview Category: Local Business Manager

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?
No.
2. What is your overall impression of the project including cleanup, maintenance and reuse activities (as appropriate)?
I did not know about it.
3. What have been the effects of this Site on the surrounding community, if any?
We are not aware of any effects but we have only been here since 1983.
4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?
No.
5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?
No, we have not heard anything except for this visit. E-mail would be the best way to keep us informed.
6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?
No.
7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?
I would like to see the site and the projects taking place there.

Airco Plating Co. Superfund Site**Five-Year Review Interview Form**Site Name: Airco Plating Co.EPA ID No.: FLD004145140Interviewer Name: Sarah AlfanoAffiliation: Skeo SolutionsSubject Name: Local Business Manager

Affiliation:

Time: 12:30 PMDate: 2/2/11Interview Location: Local BusinessInterview Format (circle one): In Person Phone Mail Other:Interview Category: Local Business Manager

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?
Yes.
2. What is your overall impression of the project including cleanup, maintenance and reuse activities (as appropriate)?
I don't know if I am informed enough to answer that question. I know that people come to test the monitoring wells on the property every few years but other than that I don't know much more about the project.
3. What have been the effects of this Site on the surrounding community, if any?
None that I know of.
4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?
No.
5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?
I don't think EPA has done a good job keeping people informed. I have never received any information about the site and we are located on the site. I only know about the site through other sources outside of EPA because I work with other local engineers.
6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?
No.
7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?
I would like to see the site and the projects taking place there.

Airco Plating Co. Superfund Site**Five-Year Review Interview Form**

Site Name: Airco Plating Co.
Interviewer Name: Sarah Alfano
Subject Name: Local Business President
Time: 12:30 PM
Interview Location: Local Business

EPA ID No.: FLD004145140
Affiliation: Skeo Solutions
Affiliation:
Date: 2/2/11

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

Interview Category: Local Business Employee, President

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?
Yes, we were here during the whole process.
2. What is your overall impression of the project including cleanup, maintenance and reuse activities (as appropriate)?
I believe the cleanup is a joke. I think you should have excavated the whole site to get rid of the soil, not just the small capped area. I also don't think the air stripping is effective at removing the contamination at all.
3. What have been the effects of this Site on the surrounding community, if any?
Physically, if the contamination was affecting us, we wouldn't know or be able to tell. However, nobody even knows about the site so there aren't any effects because it is a forgotten issue.
4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?
No.
5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?
Not really, it should be a matter of public records. People don't know about it but then again, the site doesn't really affect them.
6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?
No.
7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?
No.

Airco Plating Co. Superfund Site**Five-Year Review Interview Form**Site Name: Airco Plating Co.EPA ID No.: FLD004145140Interviewer Name: Sarah AlfanoAffiliation: Skeo SolutionsSubject Name: Local Business Owner

Affiliation:

Subject Contact Information: (305) 635-5134Time: 9:30 AMDate: 2/24/2011Interview Format (circle one): In Person Phone Mail Other:**Interview Category: Local Business Owner**

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?
Yes I am aware of the site, but that site is far away from us, we have almost 6 acres and that site is 3-4 blocks away from you. The government came and tested your site and it came up clean.
2. What is your overall impression of the project including cleanup, maintenance and reuse activities (as appropriate)?
I never even looked on the plant, I knew it was on 46th Street but we haven't been over there.
3. What have been the effects of this Site on the surrounding community, if any?
I don't know of any.
4. Have there been any problems with unusual or unexpected activities at the Site, such as emergency response, vandalism or trespassing?
Not that I know of.
5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?
I haven't been concerned since they came. I haven't received any information but they didn't find anything on our land. I'm not sure if it is necessary.
6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?
No, all we have is city water.
7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?
No, like I said, nothing has been in the area here and we don't know anything about it.

Area Business Interviews

Problems; suggestions; Report attached see Appendix C

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. O&M Documents			
<input checked="" type="checkbox"/> O&M manual	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
<input type="checkbox"/> As-built drawings	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input checked="" type="checkbox"/> Maintenance logs	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks: _____			
2. Site-Specific Health and Safety Plan			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Contingency plan/emergency response plan	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
3. O&M and OSHA Training Records			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
4. Permits and Service Agreements			
<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Effluent discharge	<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Waste disposal, POTW	<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Other permits _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
5. Gas Generation Records			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
6. Settlement Monument Records			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
7. Groundwater Monitoring Records			
	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks: _____			
8. Leachate Extraction Records			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
9. Discharge Compliance Records			
<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Water (effluent)	<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
Remarks: _____			
10. Daily Access/Security Logs			
	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
IV. O&M COSTS			

1. O&M Organization			
<input type="checkbox"/> State in-house	<input type="checkbox"/> Contractor for State		
<input type="checkbox"/> PRP in-house	<input checked="" type="checkbox"/> Contractor for PRP		
<input type="checkbox"/> Federal Facility in-house	<input type="checkbox"/> Contractor for Federal Facility		
<input type="checkbox"/> _____			
2. O&M Cost Records			
<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date		
<input type="checkbox"/> Funding mechanism/agreement in place	<input type="checkbox"/> Unavailable		
Original O&M cost estimate <u>\$1,900,000</u> <input type="checkbox"/> Breakdown attached			
Total annual cost by year for review period if available			
From <u>01/2006</u>	To <u>01/2007</u>	<u>\$15,000</u>	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From <u>01/2007</u>	To <u>01/2008</u>	<u>\$7,000</u>	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From <u>01/2008</u>	To <u>01/2009</u>	<u>\$7,000</u>	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From <u>01/2009</u>	To <u>01/2010</u>	<u>\$8,000</u>	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From <u>01/2010</u>	To <u>01/2011</u>	<u>\$11,000</u>	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
3. Unanticipated or Unusually High O&M Costs During Review Period			
Describe costs and reasons: <u>Costs incurred in 2006 and 2010 are higher relative to other years in this FYR period. The higher expenditures in 2006 are due to costs associated with addressing issues raised in the 2006 FYR. The higher costs incurred in 2010 are due to legal work related to the research, drafting and proposal of a restrictive covenant for the Site. The PRP has indicated that years 2007, 2008 and 2009 are examples of typical annual O&M expenditures for the Site.</u>			
V. ACCESS AND INSTITUTIONAL CONTROLS <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
A. Fencing			
1. Fencing damaged <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Gates secured <input type="checkbox"/> N/A			
Remarks: <u>Fencing surrounding RW-1 has been removed but public access is still limited.</u>			
B. Other Access Restrictions			
1. Signs and other security measures <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A			
Remarks: <u>Airco fencing features "no trespassing" signs and guard dog warning signs</u>			
C. Institutional Controls (ICs)			

1. Implementation and enforcement			
Site conditions imply ICs not properly implemented	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Site conditions imply ICs not being fully enforced	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Type of monitoring (e.g., self-reporting, drive by)	<u>Daily use and subsequent inspection by workers</u>		
Frequency	<u>daily</u>		
Responsible party/agency	<u>Airco Plating Co.</u>		
<u>Michael King</u>	<u>President of Airco Plating Co. Inc.</u>	<u>02/02/2011</u>	<u>(305) 633-2476</u>
Contact Name	Title	Date	Phone no.
Reporting is up-to-date	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Reports are verified by the lead agency	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Specific requirements in deed or decision documents have been met	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Violations have been reported	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Other problems or suggestions:	<input type="checkbox"/> Report attached		
2. Adequacy			
<input type="checkbox"/> ICs are adequate	<input checked="" type="checkbox"/> ICs are inadequate	<input type="checkbox"/> N/A	
Remarks: _____			
D. General			
1. Vandalism/trespassing			
<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident		
Remarks: _____			
2. Land use changes on site			
<input type="checkbox"/> N/A			
Remarks: <u>A new owner for a part of the land has begun using the cap as a parking lot for large trucks.</u>			
3. Land use changes off site			
<input checked="" type="checkbox"/> N/A			
Remarks: _____			
VI. GENERAL SITE CONDITIONS			
A. Roads			
<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A		
1. Roads damaged			
<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Roads adequate	<input type="checkbox"/> N/A	
Remarks: _____			
B. Other Site Conditions			
Remarks: _____			
VII. COVERS			
<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
A. Landfill Surface			
1. Settlement (Low spots)			
<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Settlement not evident		
Arial extent _____	Depth _____		
Remarks: _____			

2. Cracks Lengths _____ Widths _____ Remarks: _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Cracking not evident Depths _____
3. Erosion Aerial extent _____ Remarks: _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Erosion not evident Depth _____
4. Holes Aerial extent _____ Remarks: _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Holes not evident Depth _____
5. Vegetative Cover <input type="checkbox"/> No signs of stress Remarks: _____	<input type="checkbox"/> Grass <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram)	<input type="checkbox"/> Cover properly established
6. Alternative Cover (armored rock, concrete, etc.) Remarks: <u>Concrete cap is intact.</u>	<input type="checkbox"/> N/A	
7. Bulges Aerial extent _____ Remarks: _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Bulges not evident Height _____
8. Wet Areas/Water Damage <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade Remarks: _____	<input checked="" type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Location shown on site map	Aerial extent _____ Aerial extent _____ Aerial extent _____ Aerial extent _____
9. Slope Instability <input checked="" type="checkbox"/> No evidence of slope instability Aerial extent _____ Remarks: _____	<input type="checkbox"/> Slides	<input type="checkbox"/> Location shown on site map
B. Benches <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> 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 Remarks: _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
2. Bench Breached Remarks: _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay

3.	Bench Overtopped	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A or okay
Remarks: _____			
C. Letdown Channels <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> 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)	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of settlement
Aerial extent _____		Depth _____	
Remarks: _____			
2.	Material Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of degradation
Material type _____		Aerial extent _____	
Remarks: _____			
3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of erosion
Aerial extent _____		Depth _____	
Remarks: _____			
4.	Undercutting	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> No evidence of undercutting
Aerial extent _____		Depth _____	
Remarks: _____			
5.	Obstructions	Type _____	<input type="checkbox"/> No obstructions
<input type="checkbox"/> Location shown on site map		Aerial extent _____	
Size _____			
Remarks: _____			
6.	Excessive Vegetative Growth	Type _____	
<input type="checkbox"/> No evidence of excessive growth			
<input type="checkbox"/> Vegetation in channels does not obstruct flow			
<input type="checkbox"/> Location shown on site map		Aerial extent _____	
Remarks: _____			
D. Cover Penetrations <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Gas Vents	<input type="checkbox"/> Active	<input type="checkbox"/> Passive
<input type="checkbox"/> Properly secured/locked		<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> N/A
Remarks: _____			

2. Gas Monitoring Probes			
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> N/A
Remarks: _____			
3. Monitoring Wells (within surface area of landfill)			
<input type="checkbox"/> Properly secured/locked	<input checked="" type="checkbox"/> Functioning	<input checked="" type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration		<input checked="" type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
Remarks: <u>Some monitoring wells had broken caps and were not properly secured.</u>			
4. Extraction Wells Leachate			
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition
<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> N/A
Remarks: _____			
5. Settlement Monuments			
	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed	<input checked="" type="checkbox"/> N/A
Remarks: _____			
E. Gas Collection and Treatment			
	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A	
1. Gas Treatment Facilities			
<input type="checkbox"/> Flaring	<input type="checkbox"/> Thermal destruction	<input type="checkbox"/> Collection for reuse	
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance		
Remarks: _____			
2. Gas Collection Wells, Manifolds and Piping			
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance		
Remarks: _____			
3. Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings)			
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A	
Remarks: _____			
F. Cover Drainage Layer			
	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A	
1. Outlet Pipes Inspected			
	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A	
Remarks: _____			
2. Outlet Rock Inspected			
	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A	
Remarks: _____			
G. Detention/Sedimentation Ponds			
	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A	
1. Siltation			
	Area extent _____	Depth _____	<input type="checkbox"/> N/A
<input type="checkbox"/> Siltation not evident			
Remarks: _____			

2.	Erosion	Area extent _____	Depth _____
<input type="checkbox"/> Erosion not evident			
Remarks: _____			
3.	Outlet Works	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____			
4.	Dam	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____			
H. Retaining Walls		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Deformations	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident
Horizontal displacement _____		Vertical displacement _____	
Rotational displacement _____			
Remarks: _____			
2.	Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
Remarks: _____			
I. Perimeter Ditches/Off-Site Discharge		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Siltation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
Area extent _____		Depth _____	
Remarks: _____			
2.	Vegetative Growth	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
<input type="checkbox"/> Vegetation does not impede flow			
Area extent _____		Type _____	
Remarks: _____			
3.	Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Erosion not evident
Area extent _____		Depth _____	
Remarks: _____			
4.	Discharge Structure	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____			
VIII. VERTICAL BARRIER WALLS		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	Settlement	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Settlement not evident
Area extent _____		Depth _____	
Remarks: _____			

<p>1. Treatment Train (Check components that apply)</p> <p><input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation</p> <p><input checked="" type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers</p> <p><input type="checkbox"/> Filters _____</p> <p><input type="checkbox"/> Additive (e.g., chelation agent, flocculent) _____</p> <p><input type="checkbox"/> Others _____</p> <p><input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance</p> <p><input type="checkbox"/> Sampling ports properly marked and functional</p> <p><input checked="" type="checkbox"/> Sampling/maintenance log displayed and up to date</p> <p><input checked="" type="checkbox"/> Equipment properly identified</p> <p><input checked="" type="checkbox"/> Quantity of groundwater treated annually <u>2,068,600 gallons</u></p> <p><input type="checkbox"/> Quantity of surface water treated annually _____</p> <p>Remarks: _____</p>
<p>2. Electrical Enclosures and Panels (properly rated and functional)</p> <p><input type="checkbox"/> N/A <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance</p> <p>Remarks: _____</p>
<p>3. Tanks, Vaults, Storage Vessels</p> <p><input type="checkbox"/> N/A <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance</p> <p>Remarks: _____</p>
<p>4. Discharge Structure and Appurtenances</p> <p><input type="checkbox"/> N/A <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance</p> <p>Remarks: _____</p>
<p>5. Treatment Building(s)</p> <p><input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair</p> <p><input type="checkbox"/> Chemical and equipment properly stored</p> <p>Remarks: _____</p>
<p>6. Monitoring Wells (pump and treatment remedy)</p> <p><input type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition</p> <p><input type="checkbox"/> All required wells located <input checked="" type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A</p> <p>Remarks: <u>Located a MW that was not previously on the site map. Two wells were unsecured and required maintenance.</u></p>
<p>D. Monitoring Data</p>
<p>1. Monitoring Data</p> <p><input checked="" type="checkbox"/> Is routinely submitted on time <input checked="" type="checkbox"/> Is of acceptable quality</p>

<p>2. Monitoring data suggests:</p> <p><input type="checkbox"/> Groundwater plume is effectively contained <input checked="" type="checkbox"/> Contaminant concentrations are declining</p>
<p>E. Monitored Natural Attenuation</p> <p>1. Monitoring Wells (natural attenuation remedy)</p> <p><input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition</p> <p><input type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input checked="" type="checkbox"/> N/A</p> <p>Remarks: _____</p>
<p style="text-align: center;">X. OTHER REMEDIES</p> <p>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.</p>
<p style="text-align: center;">XI. OVERALL OBSERVATIONS</p>
<p>A. Implementation of the Remedy</p> <p>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.).</p> <p>The remedy was designed to contain contaminated ground water on site for treatment. Extracted ground water is treated by air stripping and a concrete cap was installed to prevent exposure to soil contamination and reduce infiltration. The cap is in place and functioning as intended. The ground water monitoring results show a decline in contaminant concentrations since the treatment system commenced operation. However, contaminants remain present at concentrations that exceed site cleanup goals.</p>
<p>B. Adequacy of O&M</p> <p>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.</p> <p>O&M for this site continues to keep the cap well-maintained and the recovery/monitoring wells and air strippers are in working condition, secure and well documented. The wells are consistently monitored, however, two of the wells were in need of maintenance and one well was found that was not documented on the well maps, but is thought to be related to the Site.</p>
<p>C. Early Indicators of Potential Remedy Problems</p> <p>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.</p> <p>A change in land use and land owners on the southern portion of the Site has occurred since the last FYR. The new owner has expressed interest in making slight modifications to the cap. EPA is aware of this and sent correspondence to the owner making him aware of his potential liability and responsibilities under Superfund.</p>
<p>D. Opportunities for Optimization</p> <p>Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.</p> <p>Pumping rates suggest lengthy downtime for the ground water treatment system. The site O&M plan calls for daily operation of the ground water treatment system, but APC indicated that the system only runs during normal business hours. Increasing the system run time may accelerate the rate of contaminant cleanup. Pumping rates have also declined over time and spikes in contaminant concentrations in wellAPS-11 were not detected in the adjacent recovery well (RW-4). An assessment to determine whether current recovery wells are placed in adequate locations to capture site contamination and whether additional recovery wells may be needed to address potential pockets of contamination not currently captured by the system could also improve ground water cleanup rates.</p>

Appendix E: Photographs from Site Inspection Visit



Cap on the west side of the Airco building.



Recovery well (RW-4) within the Airco Plating Facility.



Fence and tree next to monitoring well (APS-5).



Warning sign and "no trespassing" sign.



Recovery well (RW-1) and company truck parked on cap.



Cap on adjacent property where fence was removed.



Monitoring wells cluster #2.



Air strippers at the Airco Plating Co. facility.



Monitoring wells cluster #1 on the Branif Auto Parts property.




Unmapped monitoring well at neighboring parking lot.


Appendix F: FDEP Memorandum

Memorandum

Florida Department of Environmental Protection

TO: Chris Pellegrino, Project Manager
Waste Cleanup Section

THROUGH: Brian Dougherty, Administrator 
Program & Technical Support Section/BWC

FROM: Danielle Brown, Environmental Specialist III 
Program & Technical Support Section, BWC

DATE: May 18, 2010

SUBJECT: Airco Planting NPL Site
Port of the Islands Marina
Miami, Dade County
Annual Operating Report, dated April 2010
EPA ID# 00000000079

I have reviewed the Annual Operating Report (received April 26, 2010) from HSA Engineers & Scientist. The average pumping rate reported does not match the instantaneous rate which suggests system down time. Please address this issue. As stated in a previous memorandum, the pump and treat system is not achieving the clean-up goals anticipated with the start of this remedial project. The VOC levels have remained constant on this site for approximately 10 years. While the system continues to maintain most contaminate levels below GCTLs, RW-4 remains an exception. Cadmium was exceeded in several wells MW-APS-5, thru MW-APS-7 and MW-APS-11. In order to address these contaminants an evaluation of the current remedial strategy is recommended. At this point, we must determine if it is cost effective to continue to run the system under the current performance results. The system could be modified or a new remedial strategy adopted to reduce VOC levels and address the persistent cadmium levels. In addition, it is recommended that VOCs be added to the sampling requirements for APS-6 and APS-11 based on the increased levels in RW-4. Please contact the Department before the next monitoring event is scheduled.

If you have any questions, please contact me at (850)245-8996.

/cb

"More Protection. Less Process"

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Appendix G: EPA Explanation of Potential Liability



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

April 21, 2011

URGENT LEGAL MATTER
PROMPT REPLY NECESSARY
CERTIFIED MAIL: RETURN RECEIPT REQUESTED



Re: Airco Plating Company Superfund Site, Miami, Dade County, Florida



Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as the federal "Superfund" law, the U.S. Environmental Protection Agency (EPA) is responsible for responding to the release or threat of release of hazardous substances, pollutants or contaminants into the environment—that is, for stopping further contamination from occurring and for cleaning up or otherwise addressing any contamination that has already occurred. In 1980, EPA determined that such a release occurred at the Airco Plating Company Superfund Site (Site) located at 3650 N.W. 46th Street, Miami, Dade County, Florida.

According to the information available to EPA, you have recently purchased property located at 4310 N.W. 36th Avenue, Miami, Dade County, Florida, which is part of this Site. The purpose of this letter is to inform you of the potential environmental liabilities associated with purchasing a portion of the Site, which is defined in 40 C.F.R. Part 300, Appendix A, § 1.1 to include the property where the hazardous substance release occurred, as well as property where the contamination comes to be located. As you may be aware, various metals and chlorinated solvents associated with electroplating operations have been identified at elevated levels in Site soils and groundwater. These metals and compounds include cadmium, chromium, copper, lead, nickel, zinc, and tetrachloroethylene (PCE) and are considered "hazardous substances" within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). Consequently, CERCLA response actions have and continue to be undertaken by Airco Plating Company, Inc. (Airco), EPA, and the State of Florida Department of Environmental Protection (FDEP) to reduce and minimize any hazards posed by these conditions.

Site Background

Encompassing approximately two acres, the Site contains an active electroplating facility owned and operated by Airco since the mid-1950s. In 1957, Airco obtained a permit from the Florida State Board of Health to discharge electroplating wastewater into three seepage ponds following treatment. One of these ponds was located on property leased by Airco, immediately

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south of the southwest corner of its current property boundary. In 1971, EPA discovered that wastewater was being discharged directly into the seepage ponds without prior treatment. Between June 1972 and January 1973, Airco received at least three notices that wastewater discharges exceeded Dade County discharge requirements. In February 1973, Airco was ordered to pump out the ponds and make changes to the treatment system so that it would comply with regulations. Airco discontinued use of the ponds in June 1973 and began discharging its treated electroplating effluent to the Miami municipal sewer.

Following numerous Site investigations conducted between 1985 and 1988, EPA determined that volatile organic compounds (VOCs), metals, and other Site related contaminants had migrated from the ponds into adjacent soil and groundwater. Consequently, the Site was finalized on the National Priorities List (NPL) in February 1990. In November 1990, Airco and EPA entered into an Administrative Order on Consent (AOC) whereby Airco agreed to conduct the Remedial Investigation and Feasibility Study (RI/FS) for the Site. The purpose of the RI was to better define the nature and extent of contamination in the soils and groundwater at the Site and to assess the current and potential risk to public health and the environment. The RI was completed in February 1993 and the FS was completed in May 1993.

In August 1994, EPA issued a Unilateral Administrative Order (UAO) to Airco and Allied Products Corporation (Allied) to perform the Remedial Design and Remedial Action (RD/RA) for the Site. Airco and Allied were directed to perform the RD/RA pursuant to the remedy described in the Record of Decision (ROD), dated October 1, 1993, which consists of (1) groundwater extraction and treatment of VOCs and metals; (2) soil vapor extraction of PCE and related compounds from soil; (3) installation of a RCRA-type cap over soils containing high concentrations of cadmium; and (4) use of institutional controls (ICs) to restrict future site use that is not compatible with the remedy. Airco completed Site-wide construction of the remedy in 1999. However, contaminants in excess of allowable concentrations for unrestricted use remain at the Site and response actions therefore continue to be undertaken.

Explanation of Potential Liability

Under Section 107(a) of CERCLA, potentially responsible parties (PRPs) may be held liable for all costs incurred by EPA, as well as any interest that accrues, in responding to any release or threatened release of hazardous substances at the Site, unless the PRP can show divisibility of harm or assert any statutory defenses. PRPs include current and former owners and operators of the Site, as well as persons who arranged for treatment and/or disposal of any hazardous substances found at the Site, and persons who accepted hazardous substances for transport and selected the site to which the hazardous substances were delivered.

As the current owner of a portion of the Site, you may be subject to liability under CERCLA Section 107(a)(1), 42 U.S.C. Section 9607(a)(1). However, as referenced above, there are several statutory defenses which may be available to you. These include the "Innocent Landowner," "Bona Fide Prospective Purchaser," and "Contiguous Property Owner" defenses, authorized in CERCLA Sections 107(b)(3) and 101(35); 101(40); and 107(q), 42 U.S.C. Sections 9607(b)(3) and 9601(35); 9601(40), and 9607(q), respectively. You will note that

some of the requirements include not impeding the remedy, providing cooperation and access to parties conducting the remedy, and implementing institutional controls (ICs).

As you know, some of the remedy components are located on your property, including nine monitoring wells, one active recovery well, and a concrete cap. To be able to assert any of the defenses to liability listed above, you cannot alter, remove, or otherwise interfere with the remedy until such time as EPA and FDEP determine that the potential risk to human health and the environment from the Site no longer exists. There are numerous other requirements, which I will be happy to discuss in detail with you at a later date. Until then, it is important to note that any future developments, actions, and/or changes planned for your property must be compatible with EPA's cleanup action and property restrictions. It is advisable that you consult with EPA if you are unsure whether any proposed development or a specific action is compatible.

Information to Assist You

EPA would like to encourage communication between you, other PRPs and EPA. In order to discuss the ongoing response actions at the Site, including on your property, and to further explain EPA's immediate need for access and implementation of institutional controls, Site Attorney, Stephen P. Smith, and I would like to arrange a conference call with you. Please call me at (404) 562-9688 to arrange a convenient time to talk. You may wish to consult with an attorney, who could then participate in the call.

Thank you for your prompt attention to this matter.

Sincerely,



Pete Thorpe
Remedial Project Manager

cc: Stephen Smith, EPA
Chris Pellegrino, FDEP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

21 Abril 2011

ASUNTO JURÍDICO URGENTE
SE NECESITA PRONTA RESPUESTA
CORREO CERTIFICADO: SE SOLICITA RECIBO



Re: Sitio de "Superfund" de la empresa Airco Plating Company, Miami, Condado de Dade, Florida



En virtud de la Ley integral de respuesta, compensación y responsabilidad civil ambiental (CERCLA, por sus siglas en inglés), conocida comúnmente como la ley federal "Superfund", la Agencia de los Estados Unidos para la Protección Ambiental (EPA, por sus siglas en inglés) tiene la responsabilidad de responder a la descarga o amenaza de descarga de sustancias peligrosas o contaminantes en el medio ambiente; es decir, de poner freno para que no siga ocurriendo la contaminación y para limpiar o abordar de otro modo la contaminación que ya haya ocurrido. En 1980, la EPA determinó que ese tipo de descarga había tenido lugar en el sitio de "Superfund" de la empresa Airco Plating Company (el sitio), situado en 3650 N.W. 46th Street, Miami, Condado de Dade, Florida.

Según la información de que dispone la EPA, recientemente usted ha adquirido la propiedad situada en 4310 N.W. 36th Avenue, Miami, Condado de Dade, Florida, que es parte de este sitio. El propósito de la presente carta es informarle de las posibles responsabilidades ambientales relacionadas con la adquisición de una porción del sitio, que se define en el título 40 del Código de Reglamentos Federales (C.F.R.), Parte 300, Apéndice A, párrafo 1.1, para incluir la propiedad donde ocurrió la descarga de sustancias peligrosas, así como la propiedad donde la contaminación viene a estar situada. Como es posible que sea de su conocimiento, se ha constatado la presencia de varios metales y solventes clorados relacionados con las operaciones de electroplata a niveles elevados en el suelo y en las aguas subterráneas del sitio. Entre estos metales y compuestos figuran el cadmio, cobre, plomo, níquel, zinc y tetracloroetileno (o percloroetileno, PCE) que se consideran "sustancias peligrosas", según el significado de éstas que figura en la Sección 101(14) de la CERCLA, Título 42 del Código de los Estados Unidos (U.S.C.) párrafo 9601(14). Por consiguiente, la Airco Plating Company, Inc. (Airco), la EPA y el Departamento de Protección Ambiental del Estado de Florida (FDEP) han tomado las medidas de respuesta según la CERCLA, y siguen haciéndolo, para reducir y minimizar todos los peligros que plantean estas condiciones.

Antecedentes del sitio

1

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El sitio abarca aproximadamente dos acres de terreno y contiene una instalación activa de electroplastia de propiedad de Airco y manejada por ésta desde mediados de los años cincuenta. En 1957, Airco obtuvo un permiso de la Junta de Salud del Estado de Florida para descargar las aguas de desecho de la electroplastia en tres lagunas de filtración luego del tratamiento. Una de estas lagunas estaba situada en la propiedad arrendada por Airco, inmediatamente al sur del extremo suroeste de los límites de su propiedad actual. En 1971, la EPA descubrió que se estaban descargando aguas de desecho directamente en las lagunas de filtración sin tratamiento previo. Entre junio de 1972 y enero de 1973, Airco recibió por lo menos tres avisos de que las descargas de aguas de desecho excedían los requisitos impuestos para el efecto por el Condado de Dade. En febrero de 1973, se ordenó a Airco que bombeara las lagunas e hiciera los cambios al sistema de tratamiento para que cumpliera con la reglamentación. Airco dejó de utilizar las lagunas en junio de 1973 y comenzó a descargar su efluente tratado de electroplastia en el alcantarillado municipal de Miami.

Tras numerosas investigaciones del sitio que se realizaron entre 1985 y 1988, la EPA determinó que los compuestos orgánicos volátiles (VOC), metales y otros contaminantes relacionados con el sitio habían migrado de las lagunas al suelo y a las aguas subterráneas adyacentes. Por consiguiente, el sitio fue finalizado en la Lista Nacional de Prioridades (NPL) en febrero de 1990. En noviembre de 1990, Airco y la EPA suscribieron una Orden Administrativa de Consentimiento (OAC) mediante la cual Airco convenía en realizar el Estudio de Investigación Correctiva y de Factibilidad relativo al sitio. El propósito de este estudio era definir mejor la índole y el alcance de la contaminación en los suelos y las aguas subterráneas en el sitio y evaluar el riesgo actual y potencial para la salud pública y el medio ambiente. El estudio de investigación finalizó en febrero de 1993 y el estudio de factibilidad finalizó en mayo de 1993.

En agosto de 1994, la EPA emitió una Orden Administrativa Unilateral a Airco y a Allied Products Corporation (Allied) para que llevaran a cabo el Diseño Correctivo y la Acción Correctiva correspondientes al sitio. Se dio instrucciones a Airco y Allied que realizaran estas medidas, conforme a la acción correctiva descrita en el registro de Decisiones, de fecha 1 de octubre de 1993, que consta de: 1) extracción y tratamiento de aguas subterráneas de los VOC y metales; 2) extracción a vapor del suelo de PCE y compuestos afines del suelo; 3) instalación de una tapa sobre los suelos que contienen concentraciones elevadas de cadmio; y 4) uso de controles institucionales para restringir cualquier uso futuro del sitio que no sea compatible con la medida correctiva. Airco finalizó la construcción de la medida correctiva en todo el sitio en 1999. Sin embargo, permanecieron en el sitio contaminantes en exceso de las concentraciones permitidas para el uso sin restricciones y, por consiguiente, se siguen tomando medidas en respuesta a ello.

Explicación de la posible responsabilidad

En virtud de la Sección 107(a) de la CERCLA, puede corresponder a las partes potencialmente responsables (PRPs) el pago de todos los costos incurridos por la EPA, así como todo interés que ello devengue, en responder a toda descarga o amenaza de descarga de sustancias peligrosas en el sitio, a menos que dichas partes puedan demostrar la divisibilidad del daño o aservar defensas en virtud de la ley. Entre los PRPs figuran propietarios y operadores

actuales y antiguos del sitio, así como personas que se encargaron del tratamiento y la eliminación de sustancias peligrosas en el sitio, y personas que recibieron sustancias peligrosas para su transporte y escogieron el lugar en el cual se iban a descargar dichas sustancias.

Como propietario actual de una porción del sitio, es posible que usted esté sujeto a responsabilidad civil en el marco de la ley CERCLA, Sección 107(a)(1), Título 42 del U.S.C., Sección 9607(a)(1). Sin embargo, como se señaló anteriormente, hay varias defensas estipuladas por ley de las que usted puede disponer. Entre ellas figuran las defensas de "Propietario inocente", "Posible comprador de buena fe" y "Propietario de propiedad contigua", autorizadas en las Secciones 107(b)(3) y 101(35), 101(40) y 107(q) de la CERCLA; y en las Secciones 9607(b)(3) y 9601(35), 9601(40) y 9607(q), del Título 42 del U.S.C., respectivamente. Usted podrá observar que algunos de los requisitos comprenden no impedir la corrección, proporcionar cooperación y acceso a las partes que realizan la corrección e implantar controles institucionales.

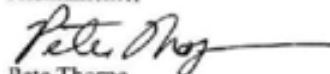
Como es de su conocimiento, algunos de los componentes de la corrección están situados en su propiedad, inclusive nueve pozos de monitoreo, un pozo activo de recuperación y una tapa de concreto. A fin de poder aseverar cualquiera de las defensas a la responsabilidad civil mencionadas anteriormente usted no puede alterar, quitar o interferir de algún otro modo con la corrección hasta que la EPA y el FDEP determinen que ya no existe el riesgo potencial para la salud humana y el medio ambiente. Hay otros numerosos requisitos, sobre los que tendré el gusto de conversar con usted en detalle en una fecha posterior. Hasta entonces, es importante señalar que todo acontecimiento, acciones y cambios futuros planeados para su propiedad deben ser compatibles con las medidas de limpieza y las restricciones a la propiedad de la EPA. Le aconsejamos que consulte con la EPA si usted no está seguro de que algún acontecimiento propuesto o una acción específica es compatible.

Información de utilidad para usted

La EPA desearía estimular la comunicación entre usted, otros PRPs y la EPA. A fin de tratar las medidas de respuesta que se encuentran en curso en el sitio, inclusive en su propiedad, y para explicar más la necesidad inmediata que tiene la EPA de acceder a los controles institucionales e implantarlos, el abogado del sitio representando la EPA, Stephen P. Smith, y yo desearíamos organizar una llamada telefónica en conferencia con usted. Sírvase llamarme al teléfono (404) 562-9688 para concertar una hora que sea apropiada para usted para dicha llamada. Tal vez usted desee consultar con un abogado que podría participar de la conferencia telefónica.

Le agradezco su pronta atención a este asunto.

Atentamente,



Pete Thorpe
Gerente de Proyectos de Saneamiento

cc: Stephen Smith, EPA

Chris Pellegrino, FDEP