RECEIVED
December 17, 2014
DERM

Revised Remedial Action Plan

December 12, 2014

Florida Power & Light Company
Former Cutler Power Plant Property
HWR-442/File-16360/IW-79
Miami, Florida

Engineering Certification

In accordance with the applicable provisions of the Florida Administrative Code, including Chapter 62-780, this Focused Remedial Action Plan, dated August 28, 2014, for the former Cutler Power Plant Property, has been prepared under the guidance of Edward Preast, a licensed Professional Engineer in the State of Florida. Mr. Preast, an employee of FPL, whose business address is located at 700 Universe Boulevard in Juno Beach, Florida 33408, certifies that this Focused Remedial Action Plan complies with standard professional practices and the rules of Miami-Dade County and the Florida Department of Environmental Protection. This certification is not a guaranty or warranty, either expressed or implied.

Edward Preast

Edward Preast, P.E.
Florida Professional Engineer No. 33225

Date: December 12, 2014

Prepared by:
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408

Table of Contents

1. Introduction

2. Background Information

2.1 Site Setting

2.2 Geology and Hydrogeology

2.3 Power Plant Operations and Site Conditions

2.4 Assessment Summary

3. Proposed Remedial Action

3.1 General Scope of Work

3.2 Central Area Cleanup

3.3 Eastern Area Engineering Controls

4. Site Closure

References

Figures

Figure 1 Site Vicinity Map

Figure 2 Topographic Site Location Map

Figure 3 Cutler Power Plant Map

Figure 4 Soil and Groundwater Sampling Locations

Figure 5 Assessment Results Summary

Figure 6 Proposed Site Remedy

Figure 7 Proposed Central Area Cleanup

Figure 8 Proposed Eastern Area Engineering Controls

Figure 9 Cutler Site Closure and Reparceling Map

Appendices

Appendix A December 2014 Supplemental Soil Assessment

Appendix B Wetland Delineation and Protection

Appendix C Engineering Control Specifications

1. Introduction

Florida Power & Light Company (FPL) provides this focused remedial action plan (RAP) for the former Cutler Power Plant property (Cutler). This RAP has been prepared to support a site closure under Risk Management Option II (closure with institutional and engineering controls) as referenced in Chapter 62-780, Florida Administrative Code (F.A.C.). The work proposed herein is in accordance with FPL's discussions and correspondence with the Miami-Dade County Department of Regulatory and Economic Resources-Division of Environmental Resources Management (DERM). The goal of this project is to transition the Cutler property to benefit the local community.

Extensive soil and groundwater assessment work has been conducted at Cutler since February 2013. This work is documented within the Site Assessment Report (SAR) dated February 7, 2014; the Site Assessment Report Addendum (SARA) dated August 29, 2014; and **Appendix A** of this report which provides the assessment results for additional work recently requested by DERM. This appendix also includes responses to recent DERM comments. The extensive assessment work completed at Cutler detected chemicals of concern such as arsenic and vanadium. These compounds were also detected near the northern property boundary and regulations require that delineation work be conducted to the north of FPL's property. DERM acknowledges that offsite environmental work may proceed separately from the onsite work at Cutler. Conducting the offsite work and managing any offsite issues should not prevent the implementation of the RAP, the implementation of engineering and institutional controls and should not prevent the development of the Cutler property.

This RAP and the proposed work meet the intent of the applicable regulations. Certain aspects of the remedial design details however will ultimately be determined by the specific development plans for the property. The final details, such as specific soil management, soil blending options, dust management, stormwater management, and traffic control plans will be submitted to DERM prior to the development of the Cutler property consistent with established regulations and permitting procedures.

2. Background Information

The following sections summarize the relevant assessment results. This information includes the site setting, history, soil and groundwater quality conditions and the recent assessment results.

2.1 Site Setting

Cutler is located at 14925 SW 67th Avenue, Miami, Florida in eastern Miami-Dade County, Florida. The property covers approximately 82 acres and is depicted on **Figure 1** which shows the aerial view of the site vicinity and **Figure 2** which shows the USGS topographic quadrangle map (South Miami SE, USGS Quadrangle; photo revised 1997). Cutler is bordered to the north by residential properties, to the east and southeast by surface waters contiguous with Biscayne Bay, to the south by SW 152nd Street (Coral Reef Drive), and to the west by SW 67th Avenue (Ludlum Road).

Cutler is located west of Paradise Point on Biscayne Bay, 15 miles south of Miami. It is situated on the marl and peat-veneered seaward slope of the Atlantic Coastal Ridge the crest of which lies

approximately 1½ miles west of Cutler. The area's topographic setting is dominated by paleo sand bars, limestone ridges, and tidal-cut channels. The relief in the vicinity of Cutler gently slopes toward Biscayne Bay and the elevation generally ranges from 5 to 15 feet above the National Geodetic Vertical Datum (NGVD). The Cutler area lies between two major inland-interior drainage canals used to regulate fresh water levels and to prevent saltwater intrusion.

2.2 Geology and Hydrogeology

As indicated by the photograph shown on the lower cover page of this document, the entire Cutler property, including most of the surrounding area, was previously altered and improved. Traditional dredge and fill activities are responsible for most of the land around Cutler. The near-surface soils at Cutler were extensively altered during the original plant construction activities. Various fill materials composed of mixtures of sand, shell and limestone fragments were used. The fill material generally extends from the surface to about 3 feet below land surface (ft bls) on the eastern portion of the property and to about 10 ft bls on the western portion. Underlying the fill on the eastern portion is an approximate 1 foot layer of silty sand and clay which overlies about 1 to 2 feet of peat. Underlying the fill material and surficial sediments of the overall site area, alternating beds of limestone, sand, and sandstone are present to about 150 ft bls which is also the approximate depth that the Biscayne aquifer extends to in the Cutler area.

The permeability of the Biscayne aquifer ranges between 50,000 and 70,000 gal/ft^2/day (Parker, 1951). The aquifer's high range of permeability is attributable to the weathered zones of the limestone. Average values of transmissivity for the aquifer are 5 x 10^6 gpd/ft (Parker, 1951). A slug test was previously performed on a shallow monitoring well located in the former waste treatment area at Cutler and the transmissivity was reported to be 97 ft^2/day. The regional flow of surface water and groundwater is generally eastward toward Biscayne Bay. The local flow direction however, is influenced by canals, tidal fluctuations, rainfall, and consumptive use of groundwater.

The depth to groundwater at Cutler was generally found to be between 2 to 15 feet bls depending on the specific location on the property and the tidal cycle. Some higher and lower measurements were also observed. An upward vertical hydraulic gradient was predominately observed at Cutler regardless of the tide cycle. This is expected due to the regional hydrogeologic discharge zone associated with coastal areas. The average horizontal hydraulic gradient observed for Cutler during high tide was calculated to be 0.003 ft/ft towards the northwest and the gradient for low tide was calculated to be 0.002 ft/ft towards the southeast.

2.3 Power Plant Operations and Site Conditions

The former power plant began operation in 1949 and continued until 2012. The plant utilized oil-fired steam power-generating units in its early history and then gas-fired units were used for its later history. All of the units were located in the power block area. A switchyard/substation is located immediately north of the power block and remains energized and in service. The locations of former site features are shown on **Figure 3**.

The most common environmental impacts associated with older oil fired power plants are from historic releases of fuel oil, ash residue produced from combustion of oil, and the application of herbicides that contained arsenic. The primary constituents of concern (COCs) from these sources include arsenic, vanadium, nickel, and total recoverable petroleum hydrocarbons (TRPH). Other compounds are commonly present such as polynuclear aromatic hydrocarbons (PAHs), antimony and polychlorinated biphenyls (PCBs) but they are usually detected in low concentration and with less frequency.

Source removal activities were conducted at Cutler approximately 20 years ago. A large amount of ash and oil impacted soil was removed from the site and transported to Rinker Materials for proper disposal. The results of this work appear to have allowed for the attenuation of the groundwater impacts detected during the site assessment. Additional soil removal work was also conducted in recent months to support the planned site remedy and this work was described in the SAR and SARA.

2.4 Assessment Summary

Site assessment activities were performed at Cutler from February 2013 and have continued through December 2014. The comprehensive assessment included the analysis of approximately 800 soil samples and over 50 groundwater samples. **Figure 4** shows all of the soil and groundwater sampling locations. The laboratory results showed exceedances to the soil cleanup target levels (SCTLs) and groundwater cleanup target levels (GCTLs) listed in Chapter 62-777, Florida Administrative Code (F.A.C.). The primary COCs detected in the soil and groundwater included arsenic and vanadium. Other compounds were also detected such as TRPH, PAHs and nickel but they were not significant.

The most recent assessment results are provided in **Appendix A**. DERM requested that additional soil sampling be performed south of the former fuel pipeline to confirm that detected COCs (primarily arsenic) decreased in concentration to the south towards the mangrove area. Elevated arsenic was previously detected along the pipeline which appears to be related to the application of herbicides. The recent sampling was conducted at 12 locations and 37 soil samples were collected from depths ranging from 0 to 8 ft bls. The results show that arsenic concentrations significantly decreased toward the south prior to reaching the mangrove area. In fact almost all of the samples collected were within the observed background level for arsenic. Zoomed in maps and cross sections showing the area of recent sampling is provided in **Appendix A**.

The site assessment sufficiently characterized and defined the extent of soil and groundwater impacts to plan remediation. **Figure 5** summarizes the assessment results for Cutler. This figure depicts the extent of groundwater impacts that exceeded the GCTLs and the extent of soil impacts that exceeded the SCTLs for all compounds detected except for arsenic which is shown where it exceeded 5.2 milligrams per kilogram (mg/kg). This concentration represents an approximate background level for arsenic in the vicinity of Cutler. Although higher background concentrations have been reported, the 5.2 mg/kg value was selected to facilitate the review of the RAP. As indicated by **Figure 5**, the dissolved plume is located entirely within the Cutler property which corresponds with the majority of the reported soil impacts. The assessment results indicate that most of the source for the dissolved plume was effectively removed during the previous cleanup work conducted about 20 years ago.

3. Proposed Remedial Action

The former power plant has been demolished and the Cutler property now consists of a large open field with a substation located on a small portion of it. The assessment results show that Cutler can be transitioned safely to residential use to benefit the local community. The substation will remain operational and shall be assigned a separate plat by Dade County.

3.1 General Scope of Work

Based on discussions conducted with DERM during 2013 and 2014, a site remedy was developed to include a combination of source removal activities, the placement of clean fill over a large portion of the property, and the incorporation of institutional controls. **Figure 6** shows these areas along with the planned reparceling boundaries. Currently the property includes four primary management areas. The western area (highlighted in green) meets Residential standards and can be closed unconditionally with no requirement of a restrictive covenant (RC). This area comprises what has been termed as the "Western Parcel". The central area (shown in yellow) contains "hot spots" that need to be excavated and removed from the property so that the area will also meet Residential standards. Once the cleanup work is completed in the central area, it can then be included as part of the "Western Parcel".

The eastern area (shown in orange) covers the same area as that termed the "Eastern Parcel". This area will have a cap placed on the surface to eliminate direct exposure of soils that exceed the Residential SCTLs. The cap will likely be composed of 2 feet of clean fill but it can also include an impervious surface. An RC will be required for the "Eastern Parcel" to restrict subsurface activities and groundwater use. The fourth management area at Cutler is the "Substation Parcel" located on the northern portion of the property. FPL will maintain ownership of the substation which will have a separate conditional site closure to meet Commercial / Industrial standards.

3.2 Central Area Cleanup

To limit the areas requiring institutional controls at Cutler, the excavation and removal of impacted soil is proposed within the central area. **Figure 7** shows the lateral boundaries of soil that exceeds applicable regulatory standards, including leachability. The depicted areas include SCTL exceedances detected at various depths ranging from the surface down to the top of the water table. The water table is variable across the site and extends to as deep as about 10 ft bls in some locations and much shallower in others. Approximately 45,000 tons of soil is proposed for excavation.

Two options are available for the excavated soil: 1, the soil can be transported and disposed of offsite at a properly licensed landfill such as Waste Management's Okeechobee facility; or 2, the soil can be blended and used on the Eastern Parcel. As described below, the Eastern Parcel will eventually have 2 feet of clean fill placed across its surface. A detailed soil management plan describing the soil blending option will be provided to DERM for review when the proposed cleanup work in the central area moves forward and soil blending is desired. Once the excavation work is complete, clean fill material will be used as backfill or the excavated areas may be left open. As discussed with DERM, the limits of

excavation in the Central Area shall extend vertically and horizontally to an existing soil sample that is at or below applicable SCTLs or to confirmation samples collected where necessary.

3.3 Eastern Area Cap

It is not practical to excavate and remove large volumes of soil at Cutler for the sole purpose of meeting the default Residential SCTLs. While the removal of soil appears feasible for the central area, it is not for the entire Cutler property. Accordingly, the remedy for the Eastern Parcel includes the placement of 2 feet of clean fill across the surface. An impervious surface can also be used where desired. For example the asphalt surface near the existing boat ramp area does not require the placement of 2 feet of fill material. **Figure 8** shows the Eastern Parcel in detail. The cap remedy is a practical solution which allows for the transition of Cutler for residential use.

A considerable amount of public and private resources were spent dealing with concerns raised over wetland and potential wetland areas. These concerns however did not result in any substantive changes to the work proposed in the previously submitted RAP. All of the wetland concerns have been fully addressed and **Appendix B** contains information relating to the protection of wetland areas. This appendix contains maps generated in agreement with the Coastal and Wetlands Resources Section of DERM. The maps depict a Top of Bank (TOB) contour, an Engineering Control Limit (ECL), and the isolated areas on the eastern portion of the property that we have agreed represent wetlands. The contours and areas shown are conservative and intended to be overly protective of the wetland areas and individual wetland species.

Appendix C contains specifications for a containment barrier (sheet piling) proposed to be used along the boundaries of the Eastern Parcel where needed to confine the fill material. Sheet piling is not necessary at many locations however. For example, much of the land located to the north of Cutler is considerably higher in elevation than Cutler. Another example is the placement of the cap near the eastern property boundary. In this area the cap may be gradational based on the limited extent of soil impacts and location of wetland buffer areas. The use of sheet piling can prove particularly useful for those areas where the limits of the proposed engineering control are located adjacent to lower elevation land. A good example is the property near the intake canal.

It is recognized that a few areas near the canal contain individual wetland species that have branches overhanging the depicted ECL. As discussed with DERM, sheet piling or an appropriate alternative engineering control can be placed without disturbance of the wetland species. Barriers can be placed by hand within vegetative drip-line areas when warranted. This has already been discussed with the Coastal and Wetlands Resources Section of DERM. As stated in previous correspondence, FPL has not proposed any remedial action that would affect the wetlands along the canal. FPL has also not proposed any remedial action that would affect the wetland areas on the eastern portion of Cutler.

Below outlines the precautions consistent with best management practices and our discussions with personnel from the Coastal and Wetlands Resources Section and the Environmental Monitoring and Restoration Division of DERM:

1. A Professional Mangrove Trimmer (PMT) will be on-site during the installation of the Engineering Control to ensure avoidance of mangrove vegetation or other protected vegetation which may overhang the construction area.

2. The Engineering Control Limit is set a minimum of three feet offset from the top of bank. In several locations, the offset was modified to accommodate potential vegetative overhang and drip-line.

3. Erosion and sediment controls will be installed adjacent to the top of bank prior to commencement of construction and maintained throughout the installation of the appropriate Engineering Control.

4. All construction materials and debris shall be staged and placed as to not encroach onto the top of bank or down slope below the mean high water line.

5. Re-verification of the top of bank and extent of mangrove vegetation will be performed prior to commencement of construction.

As mentioned previously, the reuse of excavated soil from the central area is a permittable option. Although the reuse of central area soils would provide only a small amount of what would be needed for development of the Eastern Parcel, such reuse of material will limit unnecessary transportation and is a truly sustainable option.

4. Site Closure

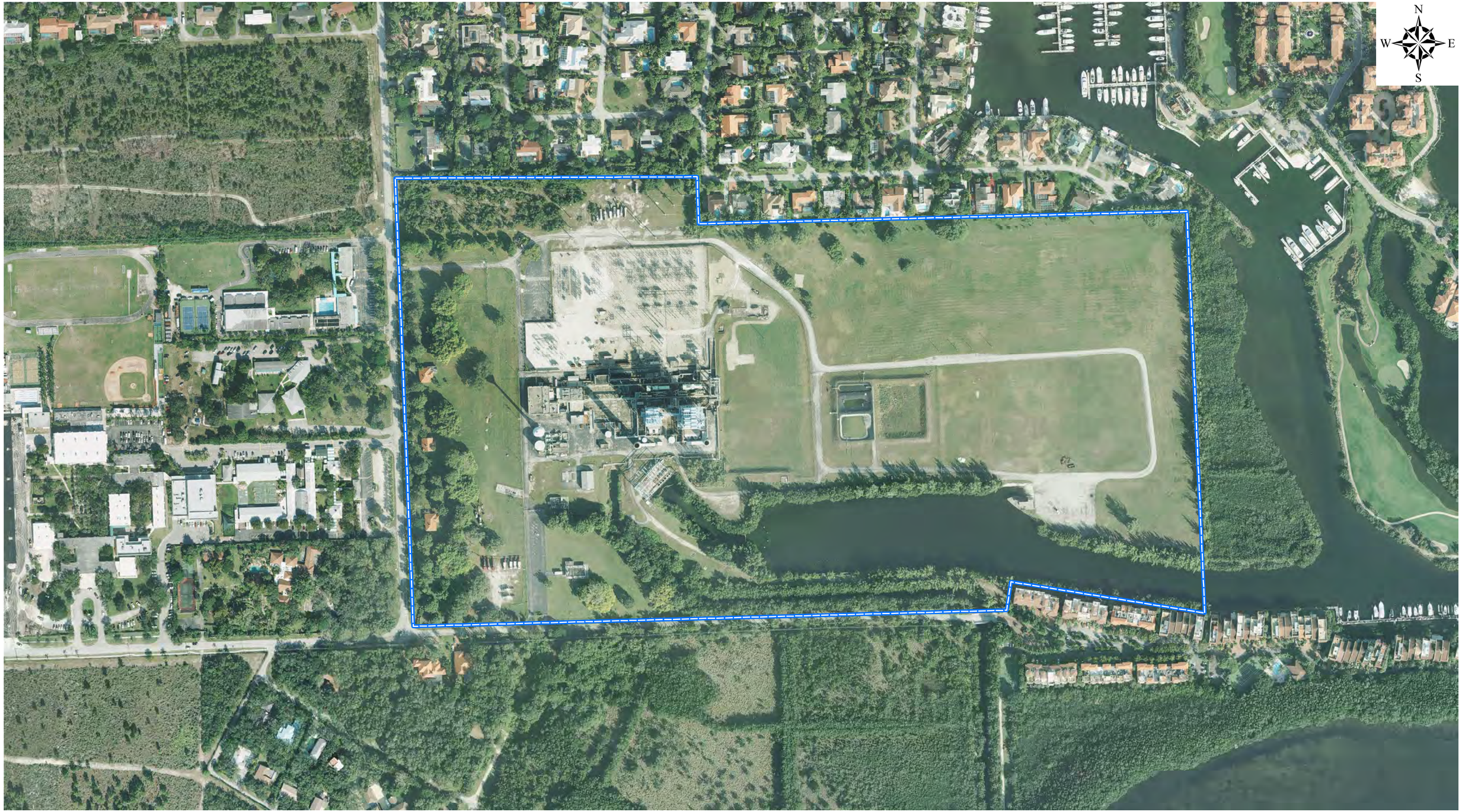
The assessment and cleanup work performed by FPL at Cutler have resulted in the ability to close the site using two options. Work can be conducted on the Eastern Parcel so that it meets the criteria for closure with institutional and engineering controls under Risk Management Option II, as referenced in Chapter 62-780, F.A.C. Work can be conducted on the Western Parcel so that it meets the criteria for unrestricted Residential use. **Figure 9** shows the proposed parcel boundaries that define the site closure options. It is understood by all stakeholders that institutional and engineering controls will have to be maintained on the Eastern Parcel and an RC package will have to be prepared. If a future purchaser of the property is interested in having the RC removed, that entity can work with the County to undertake the necessary corrective actions at that time.

References

Numerous correspondence, emails, phone calls, and meetings have been conducted with DERM for the Cutler project. Below lists the majority of the formal documents produced since 2013.

Assessment Activities, June 24, 2013
Demolition Work Plan, July 18, 2013
Demolition Aerosol Monitoring, August 19, 2013
Soil Management Plan, July 18, 2013
Background Arsenic Study, November, 6, 2013
Miami-Dade County Background Study, February 27, 2014
Site Assessment Report, February 7, 2014
DERM Comments to the SAR, June 16, 2014
Response to DERM Comments, August 4, 2014
Focused RAP, August 28, 2014;
Site Assessment Report Addendum, August 29, 2014
Response to DERM comments (northern cross sections), September 18, 2014
DERM Comments to the SARA, October 17, 2014
Groundwater Monitoring Plan, October 30, 2014
Response to DERM Comments, October 31, 2014
DERM Comments to October 31st Responses, November 26, 2014
DERM Comments on Wetland Delineation, November 26, 2014

FIGURES



TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

SITE VICINITY MAP

FORMER CUTLER POWER PLANT PROPERTY
MIAMI, FLORIDA

LEGEND:

FORMER PLANT PROPERTY BOUNDARY

SCALE:

300 150 0 300
Feet

FIGURE 1

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

TOPOGRAPHIC SITE LOCATION MAP

FORMER CUTLER POWER PLANT PROPERTY
MIAMI, FLORIDA

NOTES:

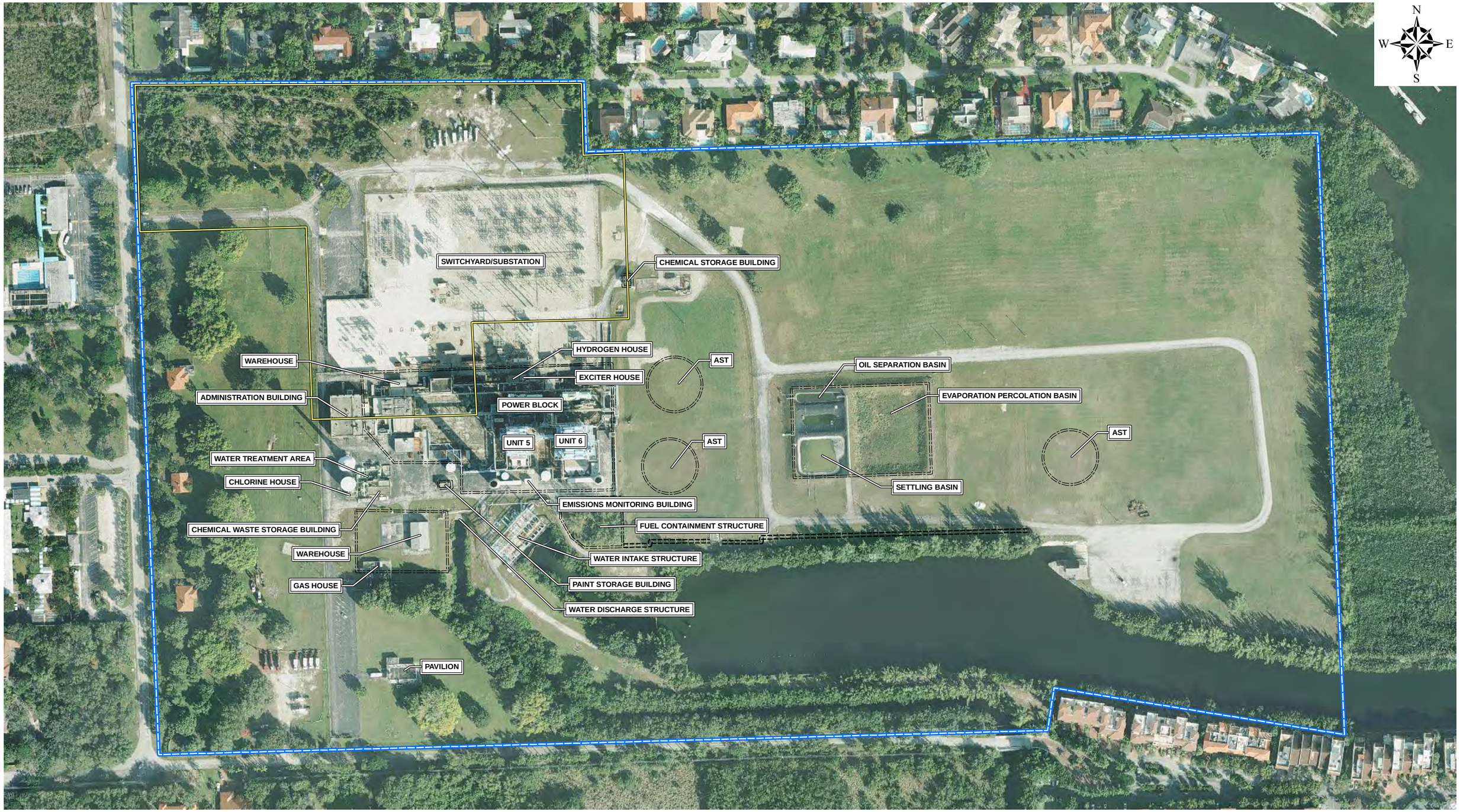
South Miami SE, USGS Quadrangle;
Photo revised 1997

SCALE:

2000 1000 0 2000

Feet

FIGURE 2



TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

CUTLER POWER PLANT MAP

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

- FORMER PLANT PROPERTY BOUNDARY
- SUBSTATION BOUNDARY
- FORMER INFRASTRUCTURE LOCATION

SCALE:

200 100 0 200

Feet

FIGURE 3

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

SOIL AND GROUNDWATER SAMPLING LOCATIONS

FORMER CUTLER POWER PLANT PROPERTY
MIAMI, FLORIDA

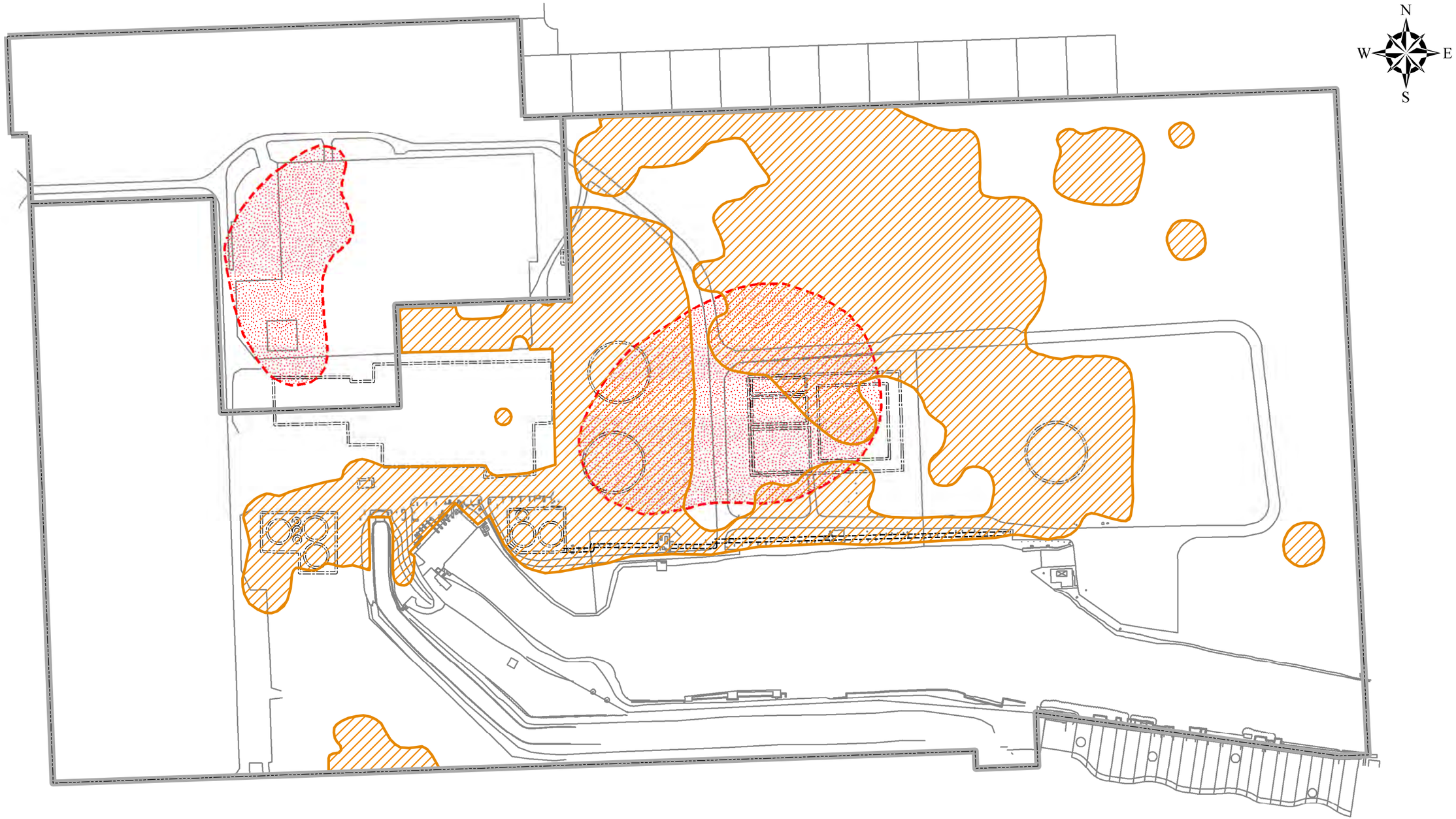
LEGEND:

- SOIL BORING LOCATION
- MONITORING WELL
- PROPOSED PARCEL DIVISIONS
- FORMER PLANT PROPERTY BOUNDARY

SCALE:

200 100 0 200
Feet

FIGURE 4



TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

ASSESSMENT RESULTS SUMMARY

FORMER CUTLER POWER PLANT PROPERTY
MIAMI, FLORIDA

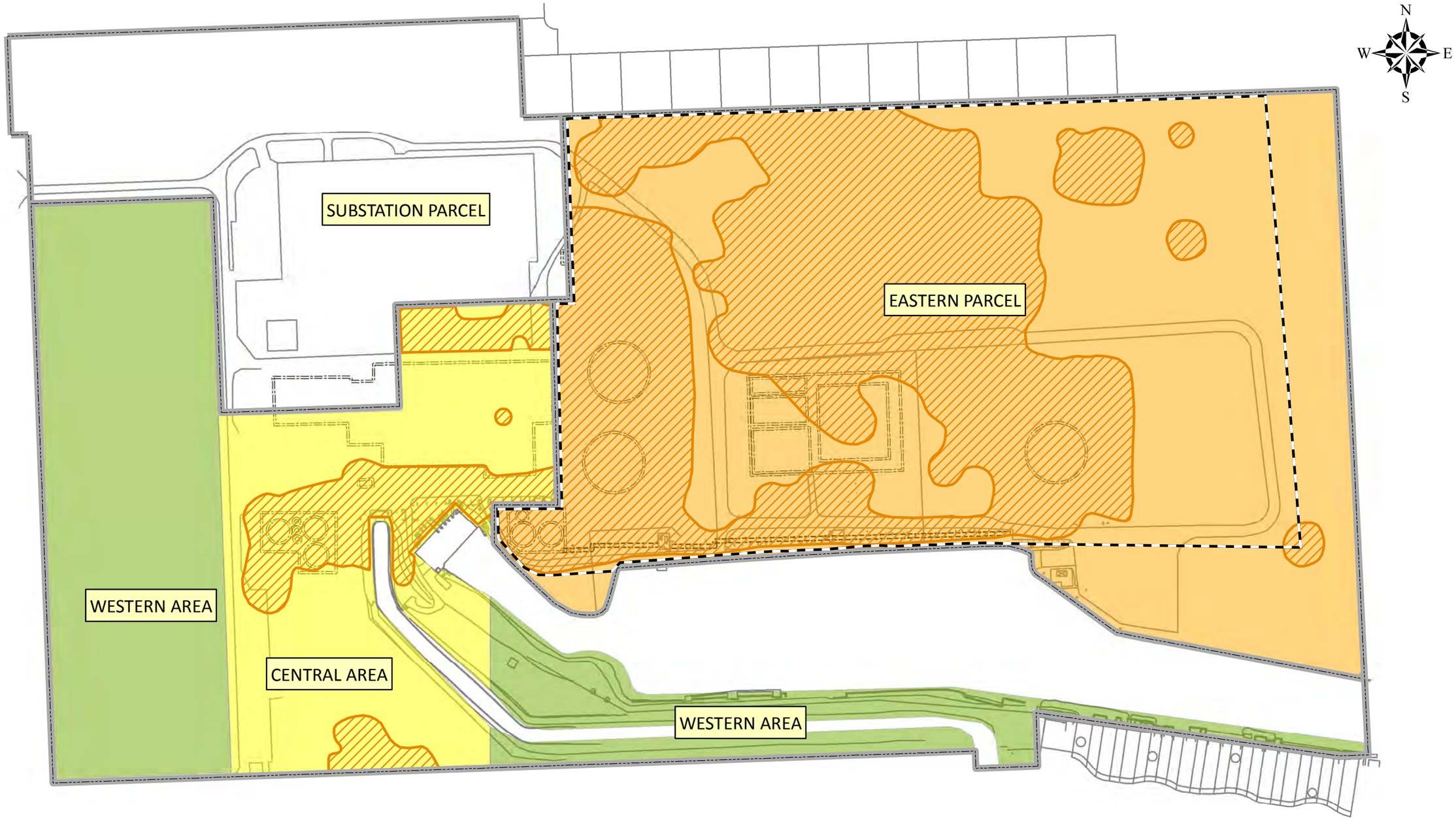
LEGEND:

- FORMER PLANT PROPERTY BOUNDARY
- EXTENT OF SOIL IMPACTS
- EXTENT OF GROUNDWATER IMPACTS

SCALE:

200 100 0 200
Feet

FIGURE 5



tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

PROPOSED SITE REMEDY

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

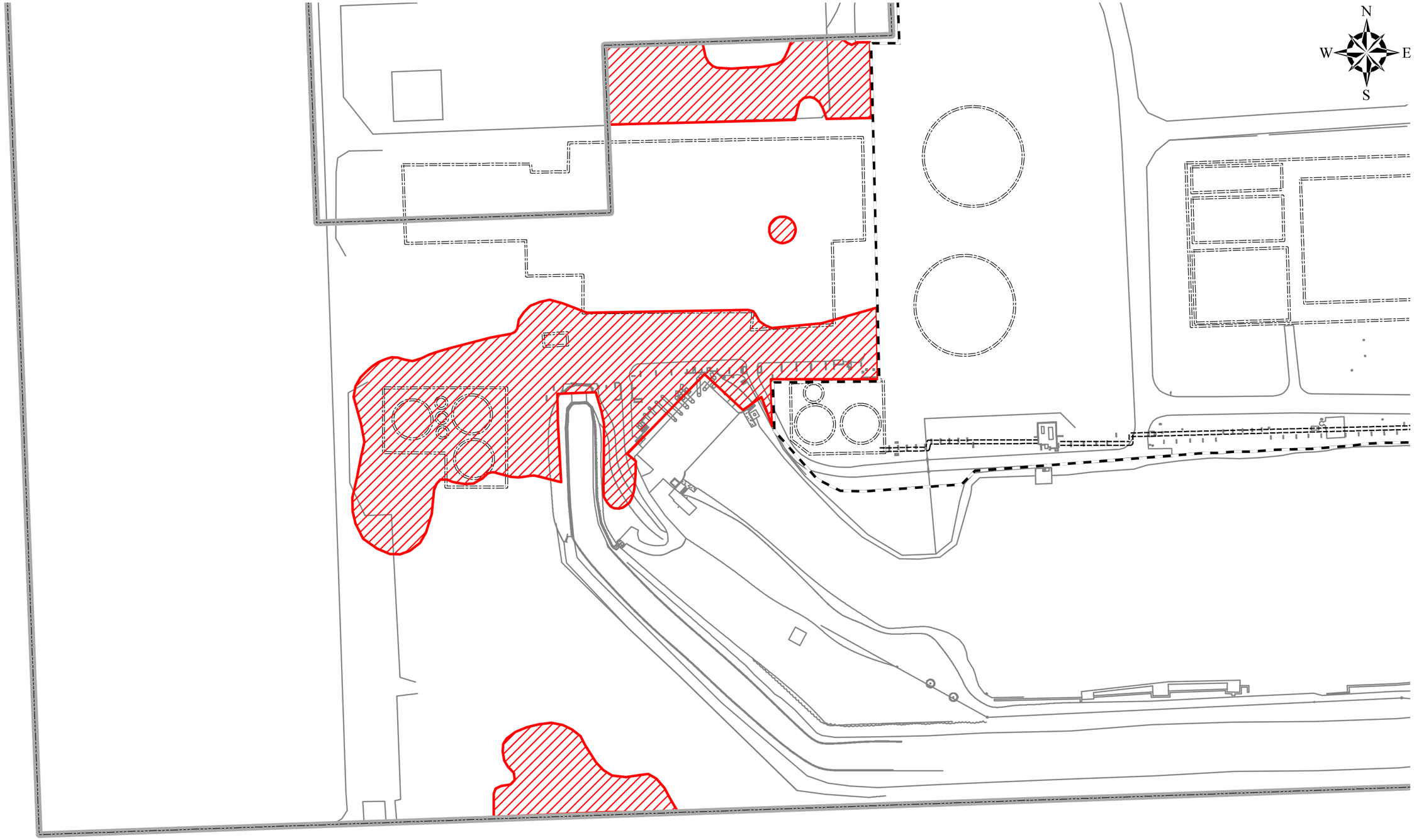
- AREA REQUIRING ENGINEERING CONTROLS
- AREA REQUIRING EXCAVATION AND CLEAN FILL
- AREA DOES NOT REQUIRE EXCAVATION OR FILL
- ENGINEERING CONTROL LIMIT
- FORMER PLANT PROPERTY BOUNDARY
- PROPOSED PARCEL DIVISIONS
- EXTENT OF IMPACTED SOIL

SCALE:

200 100 0 200

Feet

FIGURE 6



TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

PROPOSED CENTRAL AREA CLEANUP

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

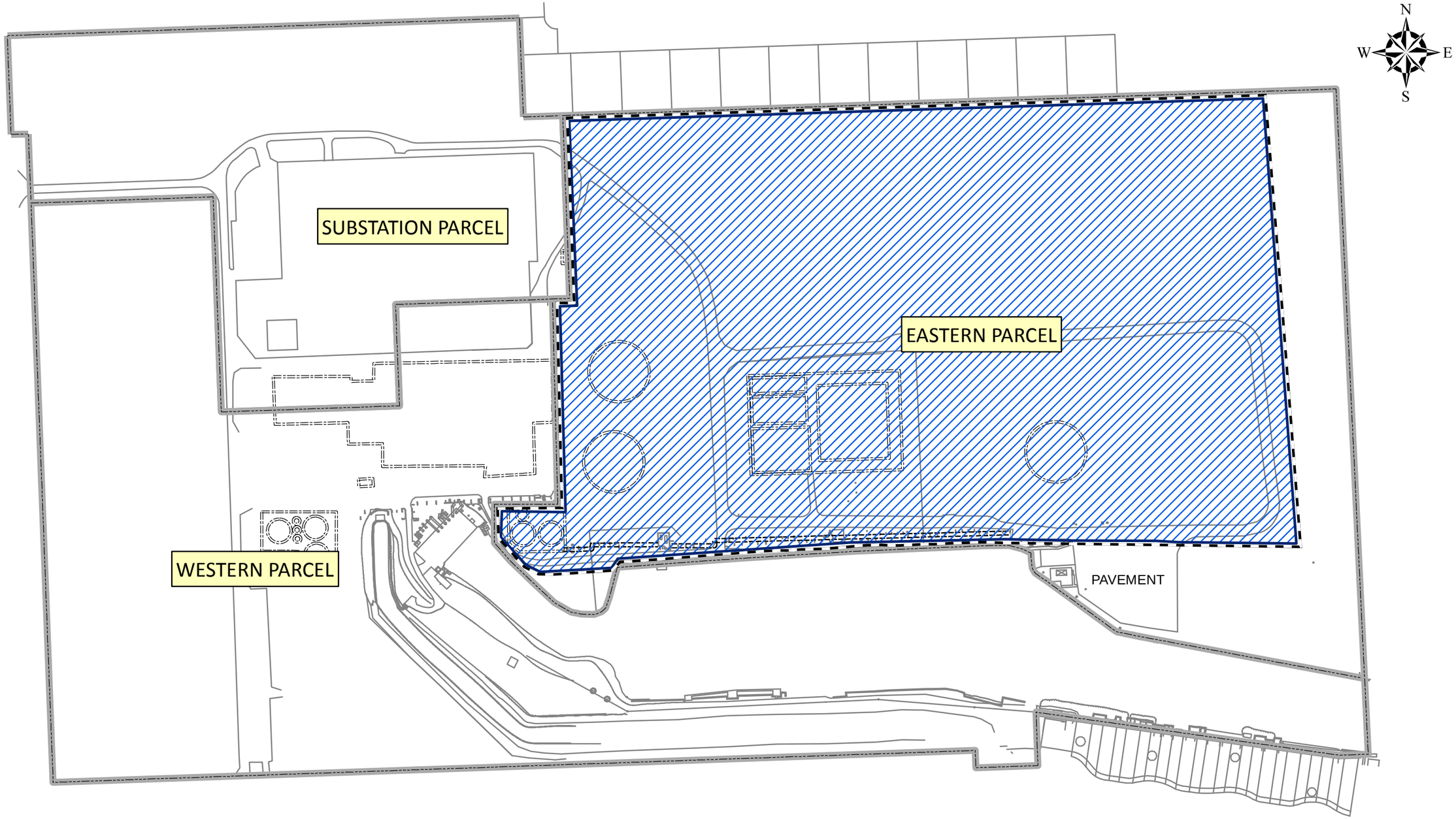
- FORMER PLANT PROPERTY BOUNDARY
- IMPACTED SOIL REQUIRING EXCAVATION AT ANY DEPTH
- ENGINERING CONTROL LIMITS

SCALE:

150 75 0 150

Feet

FIGURE 7



TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

PROPOSED EASTERN AREA ENGINEERING CONTROLS

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

- FORMER PLANT PROPERTY BOUNDARY
- ENGINEERING CONTROL LIMIT
- PROPOSED PARCEL DIVISIONS
- PROPOSED EXTENT OF ENGINEERING CONTROLS

SCALE:

200 100 0 200
Feet

FIGURE 8

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

CUTLER SITE CLOSURE AND RE-PARCELING MAP

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

- FORMER PLANT PROPERTY BOUNDARY
- SUBSTATION BOUNDARY
- PROPOSED PARCEL DIVISIONS

SCALE:

200 100 0 200

Feet

FIGURE 9

APPENDIX A

December 2014 Supplemental Soil Assessment

December 2014
Supplemental Soil Assessment

On December 4, 2014, 37 soil samples were collected from 12 soil borings advanced at locations intended to evaluate soil quality between the proposed engineering control limit and wetland areas in the eastern parcel. All soil samples were collected in accordance with FDEP Standard Operating Procedures (SOP) FS-3000, as provided by Chapter 62-160 F.A.C., at 2 foot intervals between land surface and the soil/water interface. The soil/water interface was encountered at depths between 6 and 8 feet below land surface (bls).

All samples were analyzed for arsenic at a National Environmental Laboratory Accreditation Conference (NELAC) certified environmental laboratory, Jupiter Environmental Laboratories, Inc. [Florida Department of Health (DOH) certification number E86546]. Three samples (SP003-6, SP005-4 and SP008-2) were also analyzed for vanadium. The soil laboratory analytical report and chain of custody documentation are attached.

Analysis of the results indicated arsenic concentrations in four samples had exceeded 5.2 milligrams per kilogram (mg/kg): SP002-6, SP004-4, SP005-4 and SP011-2, which is the background concentration of arsenic in soil from 0 to 2 feet below land surface in southern Miami-Dade County, per Miami-Dade County Regulatory & Economic Resources memorandum "Miami-Dade County Anthropogenic Background Study," dated April 3, 2014. Vanadium was detected at a concentration exceeding Soil Cleanup Target Levels (SCTLs) for Residential Direct Exposure in one sample (SP008-2). The soil analytical results are summarized in the **Table A-1** and the soil boring locations with their respective analytical results are depicted on **Figures A-1** through **A-3F**.

TABLE A-1
SUMMARY OF DECEMBER 2014 SOIL SAMPLING RESULTS
FORMER CUTLER POWER PLANT PROPERTY

Point ID	Sample ID	Sample Depth	Sample Date	Arsenic	Vanadium
				mg/kg	mg/kg
STCL- Leachability to Groundwater Criteria				***	980
SCTL Residential Direct Exposure				***5.2 [1]***	***67*****
SCTL Commercial/Industrial Direct Exposure				**12**	**10000**
SP001	SP001-2	4-Dec-14	0 to 2 ft bls	3.9	na
SP001	SP001-4	4-Dec-14	2 to 4 ft bls	2.4	na
SP001	SP001-5	4-Dec-14	4 to 5 ft bls	4.3	na
SP002	SP002-2	4-Dec-14	0 to 2 ft bls	1.3	na
SP002	SP002-4	4-Dec-14	2 to 4 ft bls	1.9	na
SP002	SP002-6	4-Dec-14	4 to 6 ft bls	**25**	na
SP003	SP003-2	4-Dec-14	0 to 2 ft bls	1.8	na
SP003	SP003-4	4-Dec-14	2 to 4 ft bls	3.6	na
SP003	SP003-6	4-Dec-14	4 to 6 ft bls	2.5	5.7
SP004	SP004-2	4-Dec-14	0 to 2 ft bls	**14**	na
SP004	SP004-4	4-Dec-14	2 to 4 ft bls	2.3	na
SP004	SP004-6	4-Dec-14	4 to 6 ft bls	4.2	na
SP005	SP005-2	4-Dec-14	0 to 2 ft bls	5.0	na
SP005	SP005-4	4-Dec-14	2 to 4 ft bls	***6.8***	14
SP005	SP005-6	4-Dec-14	4 to 6 ft bls	4.9	na
SP006	SP006-2	4-Dec-14	0 to 2 ft bls	4.2	na
SP006	SP006-4	4-Dec-14	2 to 4 ft bls	1.8	na
SP006	SP006-6	4-Dec-14	4 to 6 ft bls	1.2	na
SP007	SP007-2	4-Dec-14	0 to 2 ft bls	4.2	na
SP007	SP007-4	4-Dec-14	2 to 4 ft bls	1.6	na
SP007	SP007-6	4-Dec-14	4 to 6 ft bls	1.3	na
SP008	SP008-2	4-Dec-14	0 to 2 ft bls	3.5	***100***
SP008	SP008-4	4-Dec-14	2 to 4 ft bls	2.2	na
SP008	SP008-6	4-Dec-14	4 to 6 ft bls	1.2	na
SP009	SP009-2	4-Dec-14	0 to 2 ft bls	1.6	na
SP009	SP009-4	4-Dec-14	2 to 4 ft bls	2.9	na
SP009	SP009-6	4-Dec-14	4 to 6 ft bls	2.0	na
SP010	SP010-2	4-Dec-14	0 to 2 ft bls	2.9	na
SP010	SP010-4	4-Dec-14	2 to 4 ft bls	1.9	na
SP010	SP010-6	4-Dec-14	4 to 6 ft bls	1.5	na
SP011	SP011-2	4-Dec-14	0 to 2 ft bls	***9.0***	na
SP011	SP011-4	4-Dec-14	2 to 4 ft bls	4.6	na
SP011	SP011-6	4-Dec-14	4 to 6 ft bls	4.4	na
SP012	SP012-2	4-Dec-14	0 to 2 ft bls	1.9	na
SP012	SP012-4	4-Dec-14	2 to 4 ft bls	0.99	na
SP012	SP012-6	4-Dec-14	4 to 6 ft bls	0.89	na
SP012	SP012-8	4-Dec-14	6 to 8 ft bls	0.47i	na

Notes:

mg/kg = milligrams per kilogram

SCTL = Soil Cleanup Target Level as provided by Chapter 62-777 FAC

5.2[1] = Background concentration of arsenic in soil from 0 to 2 feet below land surface in southern Miami-Dade County, per Miami-Dade County Regulatory & Economic Resources memorandum "Miami-Dade County Anthropogenic Background Study," dated April 3, 2014.

** Direct exposure value based on acute toxicity considerations

Red, Bold, Underlined = Exceeds Commercial/Industrial Direct Exposure SCTL

Blue, Bold, Italics = Exceeds Residential Direct Exposure SCTL

U = indicates that the compound was analyzed, but not detected

i = indicates the reported value is between the laboratory MDL and the laboratory PQL

J-03 = indicates matrix spike recovery exceeded method acceptance limits

n/a = Not analyzed

*** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

DECEMBER 4, 2014
SOIL BORING LOCATION MAP

FORMER CUTLER
POWER PLANT PROPERTY
MIAMI, FLORIDA

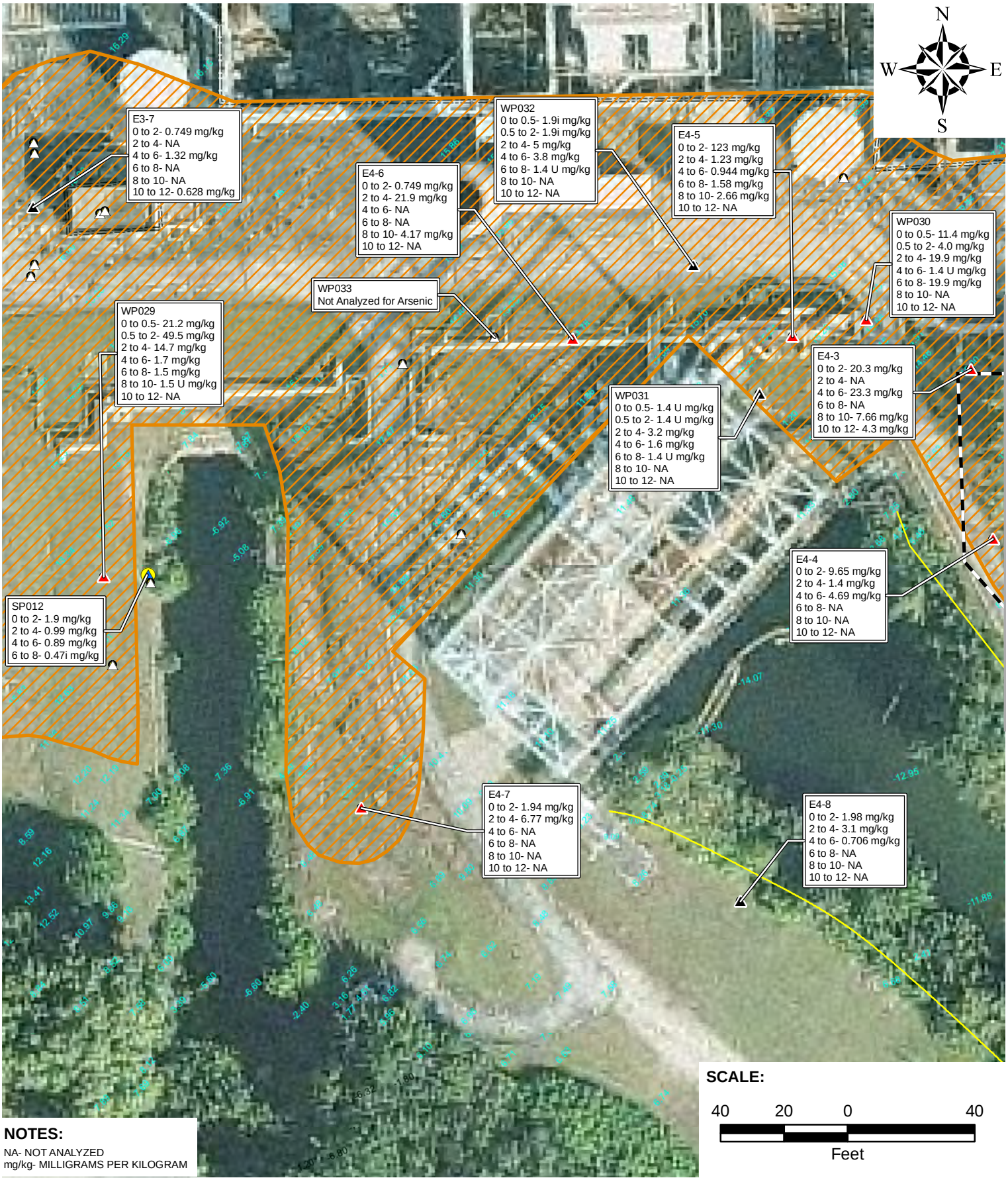
LEGEND:

- SOIL BORING ADVANCED ON 12/4/14
- FORMER HFOPIPELINE
- FORMER WASTEWATER/ STORMWATER BASINS
- FORMER NO.6/HEAVY FUEL OIL BULK STRORAGE AST
- FORMER NO.6/HEAVY FUEL OIL BULK STRORAGE AST
- FORMER WEST METERING TANK/CONTAINMENT STRUCTURE
- FORMER POWER BLOCK/ BACKFILLED AREA
- PROPERTY BOUNDARY

SCALE:

200 100 0 200
Feet

FIGURE A-1



NOTES:

NA- NOT ANALYZED
mg/kg- MILLIGRAMS PER KILOGRAM

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

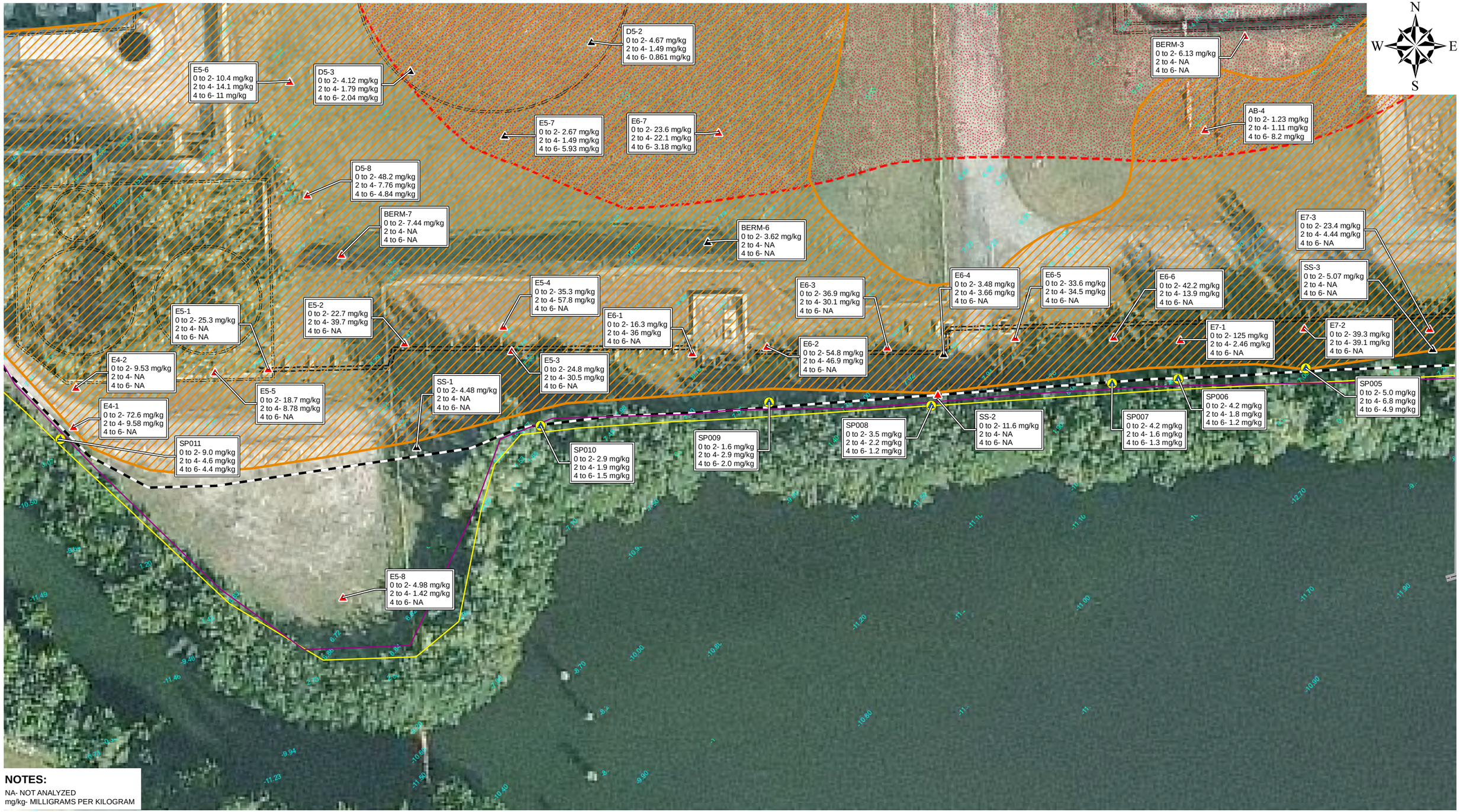
ARSENIC IN SOIL (SOUTHWEST)

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

- ▲ HISTORIC SOIL BORING ARSENIC CONCENTRATION BELOW 5.2 MG/KG IN ALL INTERVALS
- ▲ HISTORIC SOIL BORING- ARSENIC CONCENTRATION EXCEEDS 5.2 MG/KG IN ONE OR MORE INTERVALS
- △ HISTORIC SOIL BORING- SAMPLES NOT ANALYZED FOR ARSENIC
- SOIL BORING ADVANCED ON 12/4/14
- PROPOSED ENGINEERING CONTROL
- 1.40 ELEVATION
- EXTENT OF SOIL IMPACTS
- TOP OF BANK

FIGURE A-2A



NOTES:

NA- NOT ANALYZED
mg/kg- MILLIGRAMS PER KILOGRAM

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

ARSENIC IN SOIL (SOUTH)

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

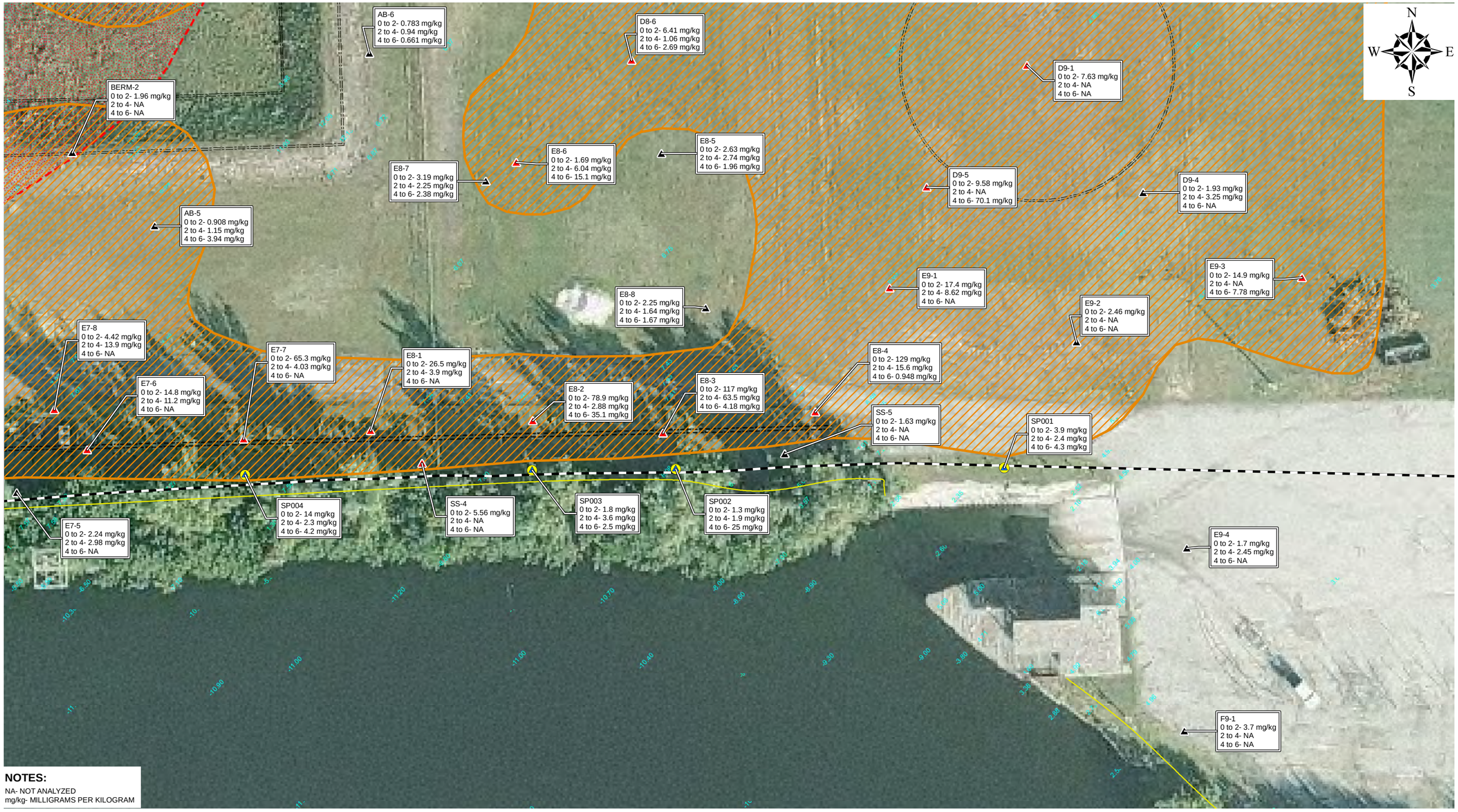
LEGEND:

- HISTORIC SOIL BORING ARSENIC CONCENTRATION BELOW 5.2 MG/KG IN ALL INTERVALS
- HISTORIC SOIL BORING- ARSENIC CONCENTRATION EXCEEDS 5.2 MG/KG IN ONE OR MORE INTERVALS
- SOIL BORING ADVANCED ON 12/4/14
- PROPOSED ENGINEERING CONTROL
- 1.40 ELEVATION
- TOP OF BANK
- EXTENT OF GROUNDWATER IMPACTS
- EXTENT OF SOIL IMPACTS
- FORMER HFOPIPELINE
- FORMER WASTEWATER/ STORMWATER BASINS
- FORMER NO.6/HEAVY FUEL OIL BULK STRORAGE AST
- FORMER WEST METERING TANK/CONTAINMENT STRUCTURE

SCALE:

40 20 0 40
Feet

APPENDIX A
FIGURE 2B



NOTES:

NA- NOT ANALYZED
mg/kg- MILLIGRAMS PER KILOGRAM

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

ARSENIC IN SOIL (SOUTHEAST)

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

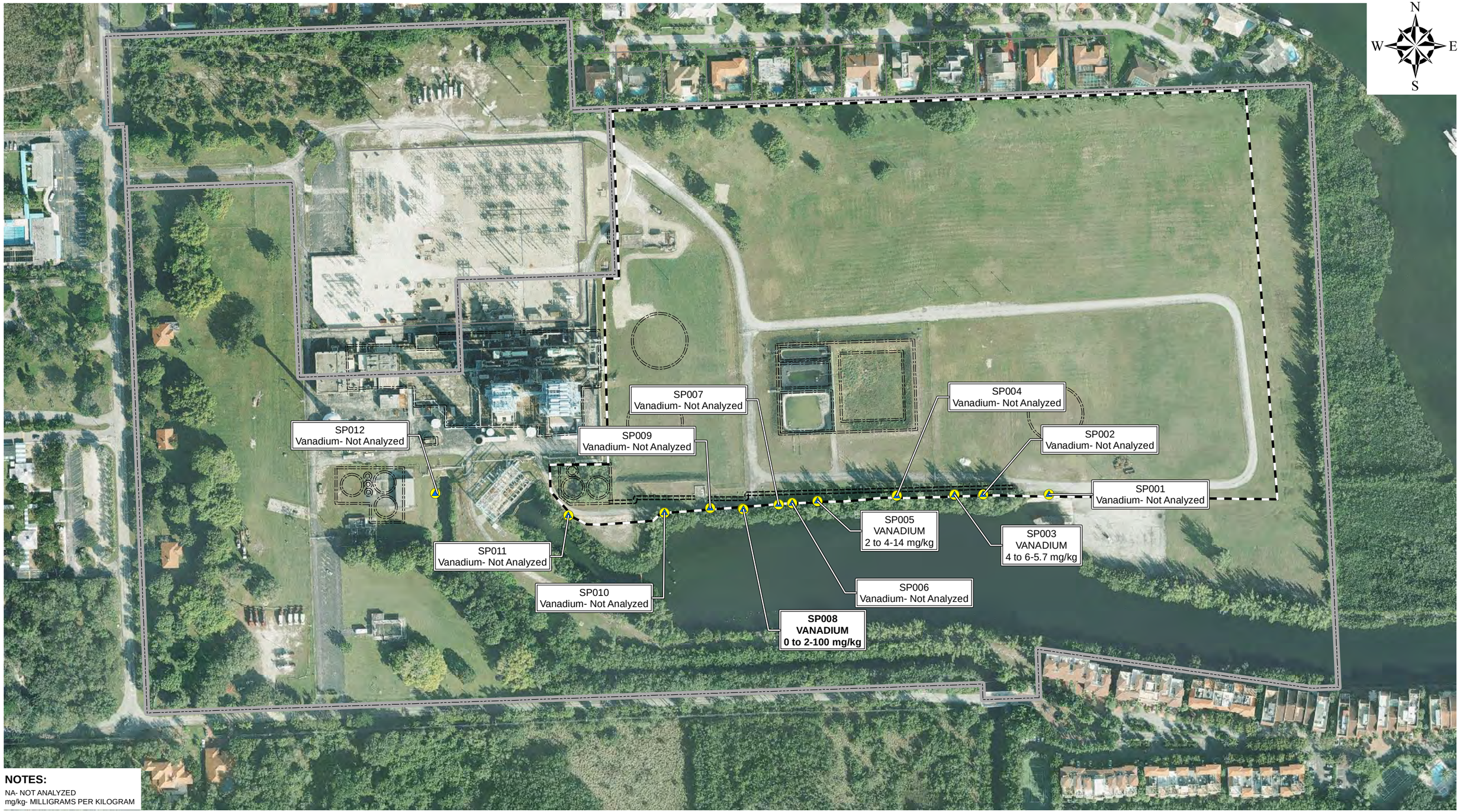
LEGEND:

- HISTORIC SOIL BORING ARSENIC CONCENTRATION BELOW 5.2 MG/KG IN ALL INTERVALS
- HISTORIC SOIL BORING- ARSENIC CONCENTRATION EXCEEDS 5.2 MG/KG IN ONE OR MORE INTERVALS
- SOIL BORING ADVANCED ON 12/4/14
- PROPOSED ENGINEERING CONTROL
- 1.40 ELEVATION
- TOP OF BANK
- EXTENT OF GROUNDWATER IMPACTS
- EXTENT OF SOIL IMPACTS
- FORMER HFOPIPELINE
- FORMER WASTEWATER/ STORMWATER BASINS
- FORMER NO.6/HEAVY FUEL OIL BULK STRORAGE AST

SCALE:

40 20 0 40
Feet

FIGURE A-2C



NOTES:

NA- NOT ANALYZED
mg/kg- MILLIGRAMS PER KILOGRAM

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

VANADIUM IN SOIL

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

- SOIL BORING ADVANCED ON 12/4/14
- FORMER HFOPIPELINE
- FORMER WASTEWATER/ STORMWATER BASINS
- FORMER NO.6/HEAVY FUEL OIL BULK STRORAGE AST
- FORMER NO.6/HEAVY FUEL OIL BULK STRORAGE AST
- FORMER WEST METERING TANK/CONTAINMENT STRUCTURE
- FORMER POWER BLOCK/ BACKFILLED AREA
- PROPERTY BOUNDARY

SCALE:

200 100 0 200
Feet

FIGURE A-2D

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

CROSS SECTION LOCATION MAP

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

FORMER HFOPIPELINE

ENGINEERING CONTROL

PROPERTY BOUNDARY

CROSS SECTIONS DEPICTED ON FIGURES 3B - 3F

NOTE:

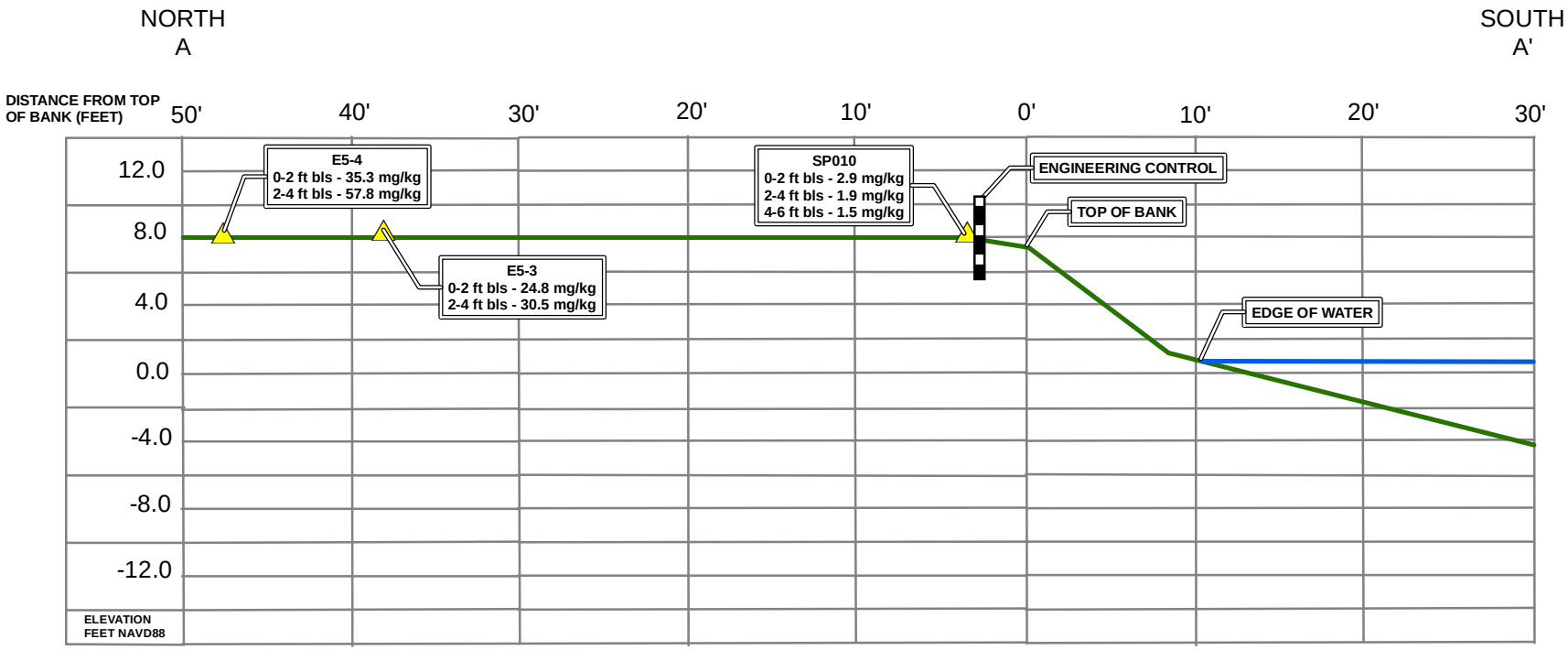
CROSS SECTION ELEVATION DATA BASED ON BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY A.R. TOUSSAINT & ASSOCIATES, INC. DECEMBER 10, 2014 UPDATE.

SCALE:

200 100 0 200

Feet

FIGURE A-3A



CROSS SECTION A TO A'
(REFER TO FIGURE 3A)

TIERRA CONSULTING GROUP
5815 N. ANDREWS WAY, SUITE B
FT. LAUDERDALE, FL, 33309

ARSENIC CONCENTRATION IN SOIL
CROSS SECTION A TO A'

FORMER CUTLER
POWER PLANT PROPERTY
MIAMI, FLORIDA

LEGEND:

WATER LEVEL

LAND SURFACE/SLOPE

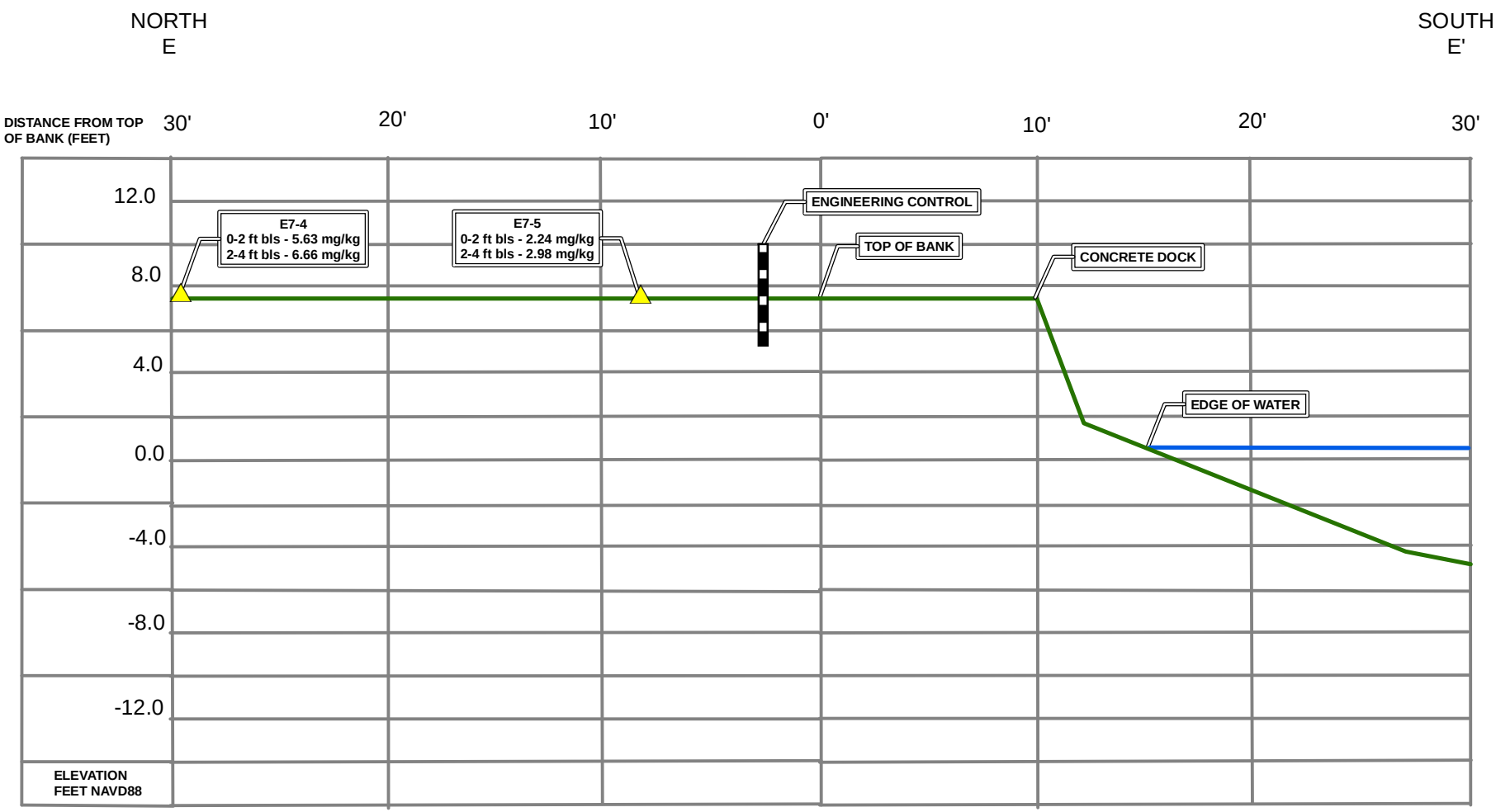
SOIL BORING

ENGINEERING CONTROL

NOTES:

ft bls - feet below land surface
mg/kg - milligrams per kilogram
NAVD88 - North American Vertical Datum of 1988

FIGURE A-3B



CROSS SECTION E TO E'
(REFER TO FIGURE 3A)

TIERRA CONSULTING GROUP
5815 N. ANDREWS WAY, SUITE B
FT. LAUDERDALE, FL, 33309

ARSENIC CONCENTRATION IN SOIL
CROSS SECTION E TO E'

FORMER CUTLER
POWER PLANT PROPERTY
MIAMI, FLORIDA

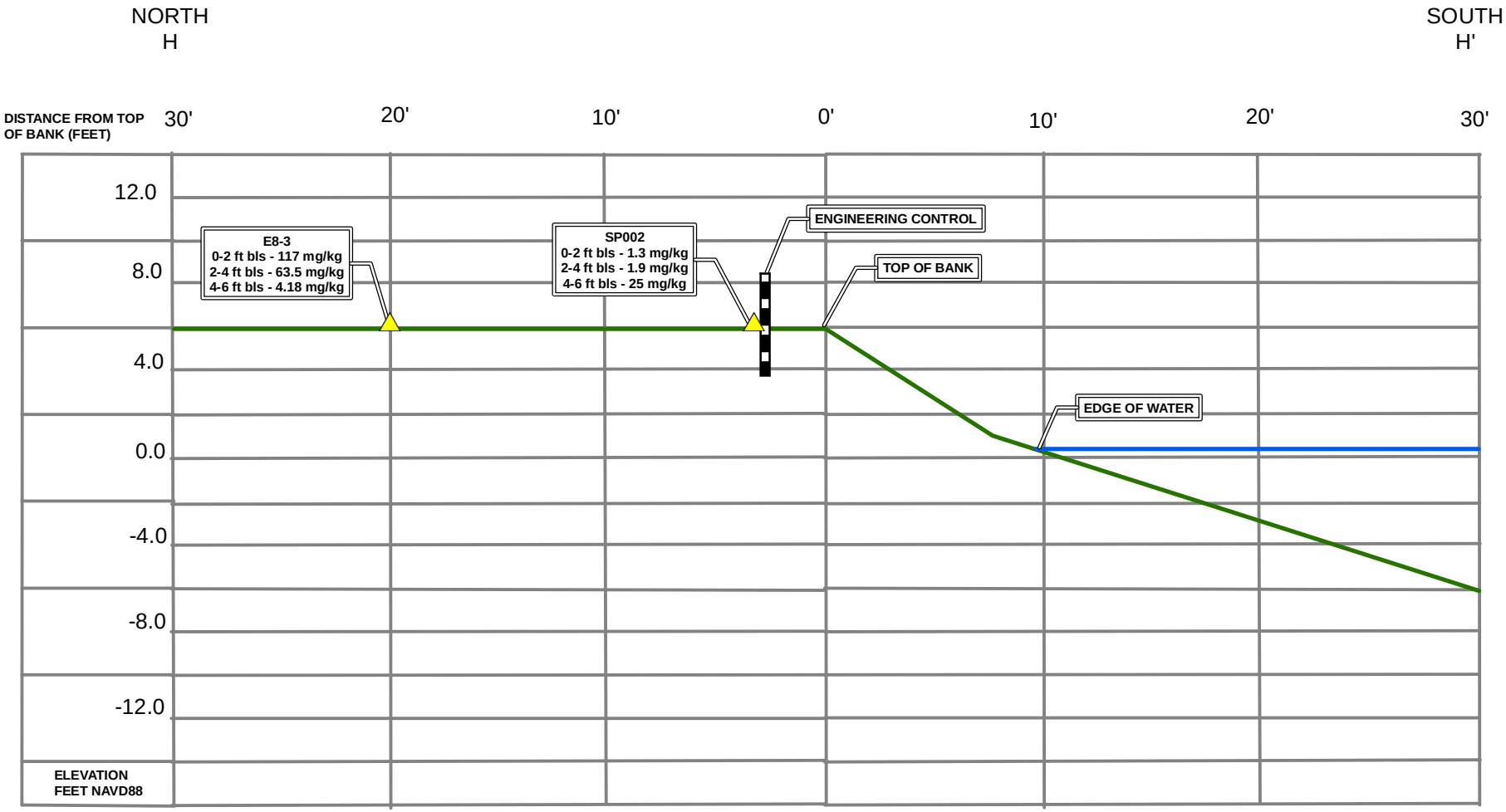
LEGEND:

- WATER LEVEL
- LAND SURFACE/SLOPE
- SOIL BORING
- ENGINEERING CONTROL

NOTES:

ft bls - feet below land surface
mg/kg - milligrams per kilogram
NAVD88 - North American Vertical Datum of 1988

FIGURE A-3C



CROSS SECTION H TO H'
(REFER TO FIGURE 3A)

TIERRA CONSULTING GROUP
5815 N. ANDREWS WAY, SUITE B
FT. LAUDERDALE, FL, 33309

ARSENIC CONCENTRATION IN SOIL
CROSS SECTION H TO H'

FORMER CUTLER
POWER PLANT PROPERTY
MIAMI, FLORIDA

LEGEND:

WATER LEVEL

LAND SURFACE/SLOPE

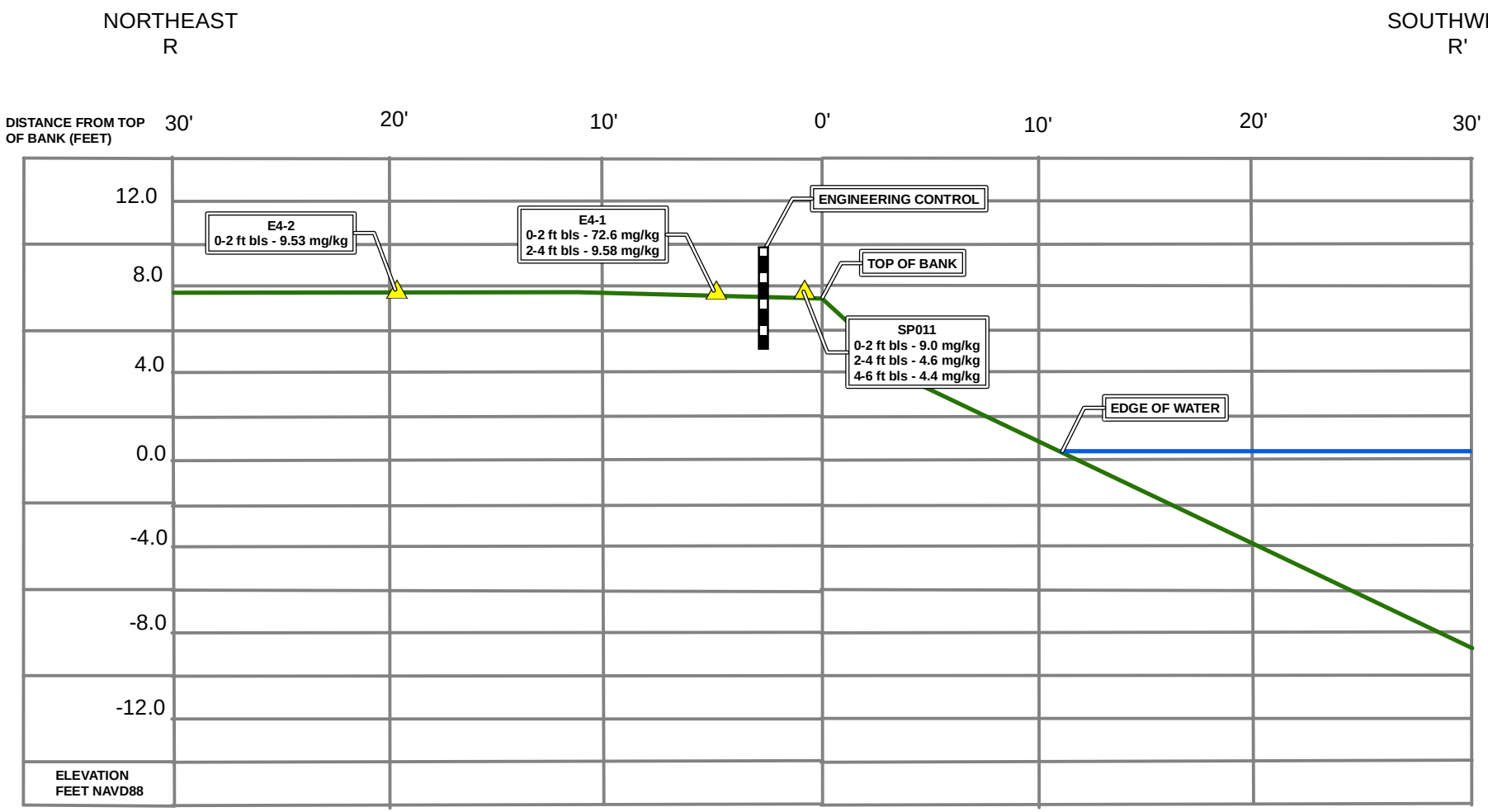
SOIL BORING

ENGINEERING CONTROL

NOTES:

ft bls - feet below land surface
mg/kg - milligrams per kilogram
NAVD88 - North American Vertical Datum of 1988

FIGURE A-3D



CROSS SECTION R TO R'
(REFER TO FIGURE 3A)

TIERRA CONSULTING GROUP
5815 N. ANDREWS WAY, SUITE B
FT. LAUDERDALE, FL, 33309

ARSENIC CONCENTRATION IN SOIL
CROSS SECTION R TO R'

FORMER CUTLER
POWER PLANT PROPERTY
MIAMI, FLORIDA

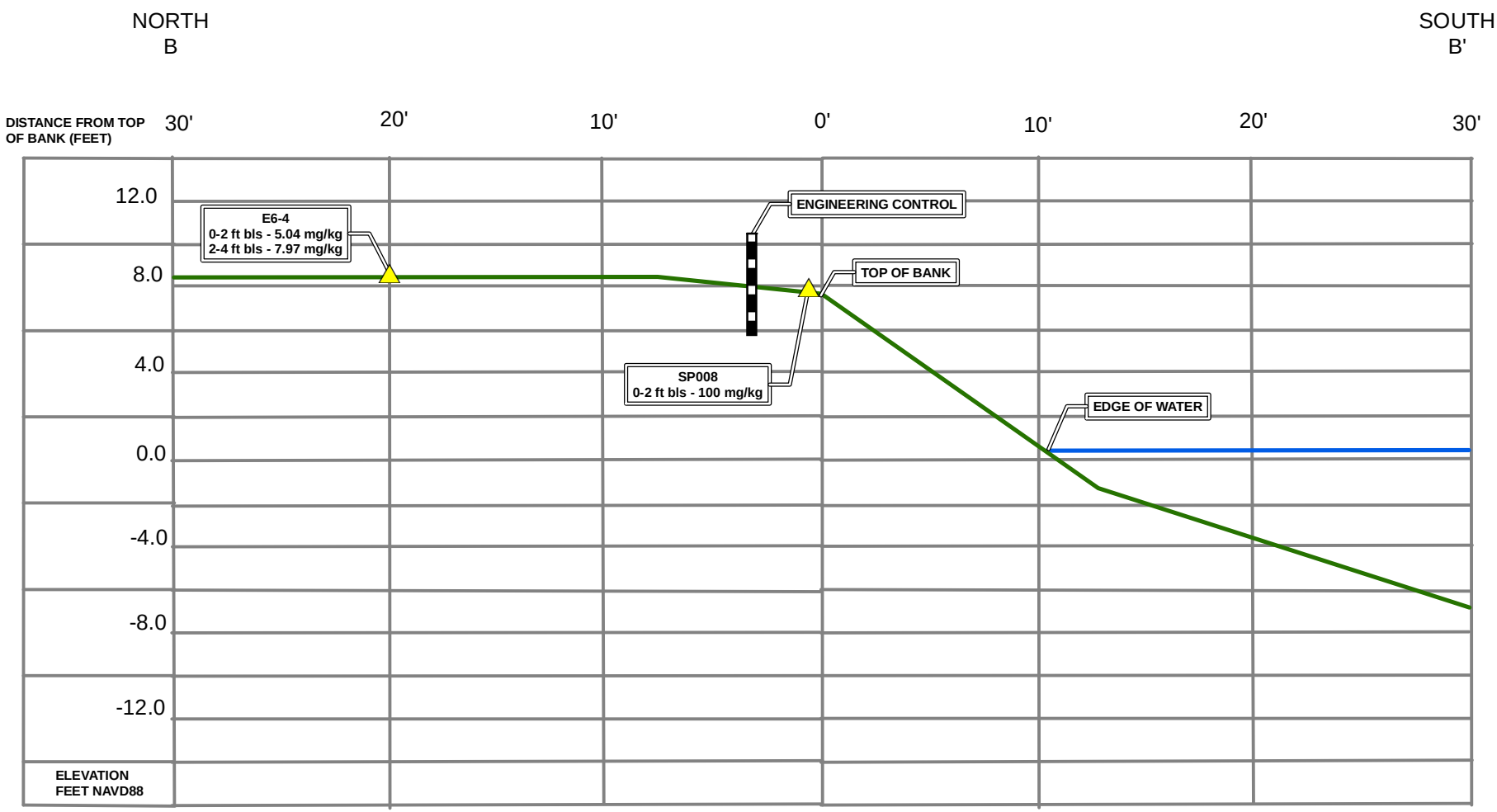
LEGEND:

- WATER LEVEL
- LAND SURFACE/SLOPE
- SOIL BORING
- ENGINEERING CONTROL

NOTES:

ft bls - feet below land surface
mg/kg - milligrams per kilogram
NAVD88 - North American Vertical Datum of 1988

FIGURE A-3E



CROSS SECTION B TO B'
(REFER TO FIGURE 3A)

TIERRA CONSULTING GROUP
5815 N. ANDREWS WAY, SUITE B
FT. LAUDERDALE, FL, 33309

VANADIUM CONCENTRATION IN SOIL
CROSS SECTION B TO B'

FORMER CUTLER
POWER PLANT PROPERTY
MIAMI, FLORIDA

LEGEND:

WATER LEVEL

LAND SURFACE/SLOPE

SOIL BORING

ENGINEERING CONTROL

NOTES:

ft bls - feet below land surface
mg/kg - milligrams per kilogram
NAVD88 - North American Vertical Datum of 1988

FIGURE A-3F

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118
www.jupiterlabs.com
clientservices@jupiterlabs.com

December 5, 2014

Ed Preast
Florida Power & Light
700 Universe Blvd
North Palm Beach, FL 33408

RE:	LOG#	1440106
	Project ID:	Cutler
	COC#	440106

Dear Ed Preast:

Enclosed are the analytical results for sample(s) received by the laboratory on Thursday, December 04, 2014. Results reported herein conform to the most current NELAC standards, where applicable, unless indicated by * in the body of the report. The enclosed Chain of Custody is a component of this package and should be retained with the package and incorporated therein.

Results for all solid matrices are reported in dry weight unless otherwise noted. Results for all liquid matrices are reported as received in the laboratory unless otherwise noted. Results relate only to the samples received. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

Samples are disposed of after 30 days of their receipt by the laboratory unless extended storage is requested in writing. The laboratory maintains the right to charge storage fees for archived samples. This report will be archived for 5 years after which time it will be destroyed without further notice, unless prior arrangements have been made.

Certain analyses are subcontracted to outside NELAC certified laboratories, please see the Project Summary section of this report for NELAC certification numbers of laboratories used. A Statement of Qualifiers is available upon request.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ann McKewin

Ann McKewin for
Kacia Baldwin
V.P. of Operations

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

SAMPLE ANALYTE COUNT

Workorder 1440106

Project ID: Cutler

Lab ID	Sample ID	Method	Analytes Reported
1440106001	SP001-2	EPA 6020	1
		SM 2540G	1
1440106002	SP001-4	EPA 6020	1
		SM 2540G	1
1440106003	SP001-5	EPA 6020	1
		SM 2540G	1
1440106004	SP002-2	EPA 6020	1
		SM 2540G	1
1440106005	SP002-4	EPA 6020	1
		SM 2540G	1
1440106006	SP002-6	EPA 6020	1
		SM 2540G	1
1440106007	SP003-2	EPA 6020	1
		SM 2540G	1
1440106008	SP003-4	EPA 6020	1
		SM 2540G	1
1440106009	SP003-6	EPA 6020	2
		SM 2540G	1
1440106010	SP004-2	EPA 6020	1
		SM 2540G	1
1440106011	SP004-4	EPA 6020	1
		SM 2540G	1
1440106012	SP004-6	EPA 6020	1
		SM 2540G	1
1440106013	SP005-2	EPA 6020	1
		SM 2540G	1
1440106014	SP005-4	EPA 6020	2
		SM 2540G	1
1440106015	SP005-6	EPA 6020	1
		SM 2540G	1
1440106016	SP006-2	EPA 6020	1
		SM 2540G	1
1440106017	SP006-4	EPA 6020	1
		SM 2540G	1

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

SAMPLE ANALYTE COUNT

Workorder 1440106

Project ID: Cutler

Lab ID	Sample ID	Method	Analytes Reported
1440106018	SP006-6	EPA 6020	1
		SM 2540G	1
1440106019	SB007-2	EPA 6020	1
		SM 2540G	1
1440106020	SB007-4	EPA 6020	1
		SM 2540G	1
1440106021	SB007-6	EPA 6020	1
		SM 2540G	1
1440106022	SB008-2	EPA 6020	2
		SM 2540G	1
1440106023	SB008-4	EPA 6020	1
		SM 2540G	1
1440106024	SB008-6	EPA 6020	1
		SM 2540G	1
1440106025	SB009-2	EPA 6020	1
		SM 2540G	1
1440106026	SB009-4	EPA 6020	1
		SM 2540G	1
1440106027	SB009-6	EPA 6020	1
		SM 2540G	1
1440106028	SB010-2	EPA 6020	1
		SM 2540G	1
1440106029	SB010-4	EPA 6020	1
		SM 2540G	1
1440106030	SB010-6	EPA 6020	1
		SM 2540G	1
1440106031	SB011-2	EPA 6020	1
		SM 2540G	1
1440106032	SB011-4	EPA 6020	1
		SM 2540G	1
1440106033	SB011-6	EPA 6020	1
		SM 2540G	1
1440106034	SB012-2	EPA 6020	1
		SM 2540G	1

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

SAMPLE ANALYTE COUNT

Workorder 1440106

Project ID: Cutler

Lab ID	Sample ID	Method	Analytes Reported
1440106035	SB012-4	EPA 6020	1
		SM 2540G	1
1440106036	SB012-6	EPA 6020	1
		SM 2540G	1
1440106037	SB012-8	EPA 6020	1
		SM 2540G	1

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

SAMPLE SUMMARY

Workorder 1440106

Project ID: Cutler

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1440106001	SP001-2	Soil/Solid	12/4/2014 09:03	12/4/2014 15:30
1440106002	SP001-4	Soil/Solid	12/4/2014 09:05	12/4/2014 15:30
1440106003	SP001-5	Soil/Solid	12/4/2014 09:07	12/4/2014 15:30
1440106004	SP002-2	Soil/Solid	12/4/2014 09:10	12/4/2014 15:30
1440106005	SP002-4	Soil/Solid	12/4/2014 09:12	12/4/2014 15:30
1440106006	SP002-6	Soil/Solid	12/4/2014 09:14	12/4/2014 15:30
1440106007	SP003-2	Soil/Solid	12/4/2014 09:20	12/4/2014 15:30
1440106008	SP003-4	Soil/Solid	12/4/2014 09:22	12/4/2014 15:30
1440106009	SP003-6	Soil/Solid	12/4/2014 09:24	12/4/2014 15:30
1440106010	SP004-2	Soil/Solid	12/4/2014 09:30	12/4/2014 15:30
1440106011	SP004-4	Soil/Solid	12/4/2014 09:32	12/4/2014 15:30
1440106012	SP004-6	Soil/Solid	12/4/2014 09:34	12/4/2014 15:30
1440106013	SP005-2	Soil/Solid	12/4/2014 09:37	12/4/2014 15:30
1440106014	SP005-4	Soil/Solid	12/4/2014 09:38	12/4/2014 15:30
1440106015	SP005-6	Soil/Solid	12/4/2014 09:39	12/4/2014 15:30
1440106016	SP006-2	Soil/Solid	12/4/2014 09:43	12/4/2014 15:30
1440106017	SP006-4	Soil/Solid	12/4/2014 09:44	12/4/2014 15:30
1440106018	SP006-6	Soil/Solid	12/4/2014 09:48	12/4/2014 15:30
1440106019	SB007-2	Soil/Solid	12/4/2014 09:50	12/4/2014 15:30
1440106020	SB007-4	Soil/Solid	12/4/2014 09:52	12/4/2014 15:30
1440106021	SB007-6	Soil/Solid	12/4/2014 09:54	12/4/2014 15:30
1440106022	SB008-2	Soil/Solid	12/4/2014 09:59	12/4/2014 15:30
1440106023	SB008-4	Soil/Solid	12/4/2014 10:01	12/4/2014 15:30
1440106024	SB008-6	Soil/Solid	12/4/2014 10:03	12/4/2014 15:30
1440106025	SB009-2	Soil/Solid	12/4/2014 10:10	12/4/2014 15:30
1440106026	SB009-4	Soil/Solid	12/4/2014 10:12	12/4/2014 15:30
1440106027	SB009-6	Soil/Solid	12/4/2014 10:14	12/4/2014 15:30
1440106028	SB010-2	Soil/Solid	12/4/2014 10:20	12/4/2014 15:30
1440106029	SB010-4	Soil/Solid	12/4/2014 10:21	12/4/2014 15:30
1440106030	SB010-6	Soil/Solid	12/4/2014 10:22	12/4/2014 15:30
1440106031	SB011-2	Soil/Solid	12/4/2014 10:25	12/4/2014 15:30
1440106032	SB011-4	Soil/Solid	12/4/2014 10:27	12/4/2014 15:30
1440106033	SB011-6	Soil/Solid	12/4/2014 10:30	12/4/2014 15:30
1440106034	SB012-2	Soil/Solid	12/4/2014 10:42	12/4/2014 15:30
1440106035	SB012-4	Soil/Solid	12/4/2014 10:45	12/4/2014 15:30

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

SAMPLE SUMMARY

Workorder 1440106

Project ID: Cutler

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1440106036	SB012-6	Soil/Solid	12/4/2014 10:47	12/4/2014 15:30
1440106037	SB012-8	Soil/Solid	12/4/2014 10:49	12/4/2014 15:30

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106001** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP001-2** Date Collected: 12/4/2014 09:03

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	87.9	%	0.1		1			12/5/2014 13:56	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	3.9	mg/Kg	0.57	0.093	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106002** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP001-4** Date Collected: 12/4/2014 09:05

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	81.3	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	2.4	mg/Kg	0.62	0.10	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106003** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP001-5** Date Collected: 12/4/2014 09:07

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	61.8	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	4.3	mg/Kg	0.81	0.13	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106004** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP002-2** Date Collected: 12/4/2014 09:10

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	92.9	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.3	mg/Kg	0.54	0.088	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106005** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP002-4** Date Collected: 12/4/2014 09:12

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	88.9	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.9	mg/Kg	0.56	0.092	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106006** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP002-6** Date Collected: 12/4/2014 09:14

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	81.0	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	25	mg/Kg	0.62	0.10	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106007** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP003-2** Date Collected: 12/4/2014 09:20

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	93.5	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.8	mg/Kg	0.53	0.088	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106008** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP003-4** Date Collected: 12/4/2014 09:22

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	88.6	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	3.6	mg/Kg	0.56	0.093	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106009** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP003-6** Date Collected: 12/4/2014 09:24

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	90.1	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Vanadium	5.7	mg/Kg	0.55	0.11	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	
Arsenic	2.5	mg/Kg	0.55	0.091	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106010** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP004-2** Date Collected: 12/4/2014 09:30

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	93.8	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	14	mg/Kg	0.53	0.087	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106011** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP004-4** Date Collected: 12/4/2014 09:32

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	90.0	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	2.3	mg/Kg	0.56	0.091	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106012** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP004-6** Date Collected: 12/4/2014 09:34

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	82.2	%	0.1		1			12/5/2014 13:52	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	4.2	mg/Kg	0.61	0.10	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106013** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP005-2** Date Collected: 12/4/2014 09:37

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	92.9	%	0.1		1			12/5/2014 13:52	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	5.0	mg/Kg	0.54	0.088	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106014** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP005-4** Date Collected: 12/4/2014 09:38

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	86.9	%	0.1		1			12/5/2014 13:52	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Vanadium	14	mg/Kg	0.58	0.11	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	
Arsenic	6.8	mg/Kg	0.58	0.094	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106015** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP005-6** Date Collected: 12/4/2014 09:39

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	78.6	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	4.9	mg/Kg	0.64	0.10	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106016** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP006-2** Date Collected: 12/4/2014 09:43

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	87.6	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	4.2	mg/Kg	0.57	0.094	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106017** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP006-4** Date Collected: 12/4/2014 09:44

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	85.2	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.8	mg/Kg	0.59	0.096	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106018** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SP006-6** Date Collected: 12/4/2014 09:48

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	78.6	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.2	mg/Kg	0.64	0.10	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106019** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB007-2** Date Collected: 12/4/2014 09:50

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	80.9	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	4.2	mg/Kg	0.62	0.10	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106020** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB007-4** Date Collected: 12/4/2014 09:52

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	87.1	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.6	mg/Kg	0.57	0.094	2	12/4/2014 16:57	ZS	12/5/2014 11:34	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106021** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB007-6** Date Collected: 12/4/2014 09:54

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	80.5	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.3	mg/Kg	0.62	0.10	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106022** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB008-2** Date Collected: 12/4/2014 09:59

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	94.2	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Vanadium	100	mg/Kg	0.53	0.10	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	
Arsenic	3.5	mg/Kg	0.53	0.087	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106023** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB008-4** Date Collected: 12/4/2014 10:01

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	84.8	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	2.2	mg/Kg	0.59	0.097	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106024** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB008-6** Date Collected: 12/4/2014 10:03

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	83.1	%	0.1		1			12/5/2014 15:28	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.2	mg/Kg	0.60	0.099	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106025** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB009-2** Date Collected: 12/4/2014 10:10

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	94.2	%	0.1		1			12/5/2014 13:52	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.6	mg/Kg	0.53	0.087	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106026** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB009-4** Date Collected: 12/4/2014 10:12

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	87.8	%	0.1		1			12/5/2014 13:54	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	2.9	mg/Kg	0.57	0.093	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106027** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB009-6** Date Collected: 12/4/2014 10:14

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	82.8	%	0.1		1			12/5/2014 13:54	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	2.0	mg/Kg	0.60	0.099	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106028** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB010-2** Date Collected: 12/4/2014 10:20

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	91.8	%	0.1		1			12/5/2014 13:54	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	2.9	mg/Kg	0.54	0.089	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106029** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB010-4** Date Collected: 12/4/2014 10:21

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	88.3	%	0.1		1			12/5/2014 13:54	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.9	mg/Kg	0.57	0.093	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106030** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB010-6** Date Collected: 12/4/2014 10:22

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	87.6	%	0.1		1			12/5/2014 13:54	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.5	mg/Kg	0.57	0.094	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106031** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB011-2** Date Collected: 12/4/2014 10:25

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	83.6	%	0.1		1			12/5/2014 13:54	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	9.0	mg/Kg	0.60	0.098	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106032** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB011-4** Date Collected: 12/4/2014 10:27

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	88.8	%	0.1		1			12/5/2014 13:54	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	4.6	mg/Kg	0.56	0.092	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106033** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB011-6** Date Collected: 12/4/2014 10:30

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	81.3	%	0.1		1			12/5/2014 13:54	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	4.4	mg/Kg	0.61	0.10	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106034** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB012-2** Date Collected: 12/4/2014 10:42

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	89.9	%	0.1		1			12/5/2014 13:54	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	1.9	mg/Kg	0.56	0.091	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106035** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB012-4** Date Collected: 12/4/2014 10:45

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	86.2	%	0.1		1			12/5/2014 13:56	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	0.99	mg/Kg	0.58	0.095	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106036** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB012-6** Date Collected: 12/4/2014 10:47

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	84.5	%	0.1		1			12/5/2014 13:56	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	0.89	mg/Kg	0.59	0.097	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS

Workorder 1440106
Project ID: Cutler

Lab ID: **1440106037** Date Received: 12/4/2014 15:30 Matrix: Soil/Solid
Sample ID: **SB012-8** Date Collected: 12/4/2014 10:49

Parameters	Results	Units	PQL	MDL	DF	Prepared	By	Analyzed	By	Qual
Wet Chemistry										
Analysis Desc: 2540G Percent Solids (Dryweight)					Analytical Method: SM 2540G					
Percent Solids (Dryweight)	83.3	%	0.1		1			12/5/2014 13:49	BH	
Analysis Desc: EPA 6020 Metals SCAN by ICP/MS (S)					Preparation Method: EPA 3050B Analytical Method: EPA 6020					
Arsenic	0.47i	mg/Kg	0.60	0.098	2	12/4/2014 16:58	ZS	12/5/2014 12:43	ZS	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

ANALYTICAL RESULTS QUALIFIERS

Workorder 1440106

Project ID: Cutler

PARAMETER QUALIFIERS

PROJECT COMMENTS

1440106	A reported value of U indicates that the compound was analyzed for but not detected above the MDL. A value flagged with an "i" flag indicates that the reported value is between the laboratory method detection limit and the practical quantitation limit.

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

QUALITY CONTROL DATA

Workorder 1440106

Project ID: Cutler

QC Batch: MXX/6483 Analysis Method: EPA 6020

QC Batch Method: EPA 3050B

Associated Lab Samples: 1440106001 1440106002 1440106003 1440106004 1440106005 1440106006 1440106007 1440106008 1440106009 1440106010 1440106011 1440106012 1440106013 1440106014 1440106015 1440106016 1440106017 1440106018 1440106019 1440106020

METHOD BLANK: 75115

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Vanadium	mg/Kg	U	0.049	
Arsenic	mg/Kg	U	0.041	

LABORATORY CONTROL SAMPLE & LCSD: 75116 75117

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Vanadium	mg/Kg	10	9.6	9.8	96.4	97.5	75-125	2.06	20	
Arsenic	mg/Kg	10	9.9	10	98.8	99.9	75-125	1.01	20	

MATRIX SPIKE SAMPLE: 75119 Original: 1440106020

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/Kg						
Arsenic	mg/Kg	1.4	20	22	105	75-125	

SAMPLE DUPLICATE: 75118 Original: 1440106020

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
Vanadium	mg/Kg		U			
Arsenic	mg/Kg	1.4	1.6	0	20	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

QUALITY CONTROL DATA

Workorder 1440106

Project ID: Cutler

QC Batch: MXX/6484 Analysis Method: EPA 6020

QC Batch Method: EPA 3050B

Associated Lab Samples: 1440106021 1440106022 1440106023 1440106024 1440106025 1440106026 1440106027 1440106028 1440106029 1440106030 1440106031 1440106032 1440106033 1440106034 1440106035 1440106036 1440106037

METHOD BLANK: 75120

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Vanadium	mg/Kg	U	0.049	
Arsenic	mg/Kg	U	0.041	

LABORATORY CONTROL SAMPLE & LCSD: 75121 75122

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
Vanadium	mg/Kg	10	9.7	9.7	96.9	97.3	75-125	0	20	
Arsenic	mg/Kg	10	9.9	9.9	99.3	98.8	75-125	0	20	

MATRIX SPIKE SAMPLE: 75124 Original: 1440106037

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Vanadium	mg/Kg						
Arsenic	mg/Kg	0.39	20	20	98.4	75-125	

SAMPLE DUPLICATE: 75123 Original: 1440106037

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
Vanadium	mg/Kg		U			
Arsenic	mg/Kg	0.39	0.44i	5.26	20	

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder 1440106

Project ID: Cutler

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1440106001	**SP001-2**	SM 2540G	WGR/2283		
1440106035	**SB012-4**	SM 2540G	WGR/2283		
1440106036	**SB012-6**	SM 2540G	WGR/2283		
1440106002	**SP001-4**	SM 2540G	WGR/2286		
1440106003	**SP001-5**	SM 2540G	WGR/2286		
1440106004	**SP002-2**	SM 2540G	WGR/2286		
1440106005	**SP002-4**	SM 2540G	WGR/2286		
1440106006	**SP002-6**	SM 2540G	WGR/2286		
1440106007	**SP003-2**	SM 2540G	WGR/2286		
1440106008	**SP003-4**	SM 2540G	WGR/2286		
1440106009	**SP003-6**	SM 2540G	WGR/2286		
1440106010	**SP004-2**	SM 2540G	WGR/2286		
1440106011	**SP004-4**	SM 2540G	WGR/2286		
1440106037	**SB012-8**	SM 2540G	WGR/2286		
1440106001	**SP001-2**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106002	**SP001-4**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106003	**SP001-5**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106004	**SP002-2**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106005	**SP002-4**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106006	**SP002-6**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106007	**SP003-2**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106008	**SP003-4**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106009	**SP003-6**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106010	**SP004-2**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106011	**SP004-4**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106012	**SP004-6**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106013	**SP005-2**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106014	**SP005-4**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder 1440106

Project ID: Cutler

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1440106015	**SP005-6**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106016	**SP006-2**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106017	**SP006-4**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106018	**SP006-6**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106019	**SB007-2**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106020	**SB007-4**	EPA 3050B	MXX/6483	EPA 6020	MMS/5787
1440106021	**SB007-6**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106022	**SB008-2**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106023	**SB008-4**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106024	**SB008-6**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106025	**SB009-2**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106026	**SB009-4**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106027	**SB009-6**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106028	**SB010-2**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106029	**SB010-4**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106030	**SB010-6**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106031	**SB011-2**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106032	**SB011-4**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106033	**SB011-6**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106034	**SB012-2**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106035	**SB012-4**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106036	**SB012-6**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106037	**SB012-8**	EPA 3050B	MXX/6484	EPA 6020	MMS/5788
1440106012	**SP004-6**	SM 2540G	WGR/2287		
1440106013	**SP005-2**	SM 2540G	WGR/2287		
1440106014	**SP005-4**	SM 2540G	WGR/2287		
1440106015	**SP005-6**	SM 2540G	WGR/2287		
1440106016	**SP006-2**	SM 2540G	WGR/2287		

FDOH# E86546
CERTIFICATE OF ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter Environmental Laboratories, Inc.
150 S. Old Dixie Highway
Jupiter, FL 33458
Phone: (561)575-0030
Fax: (561)575-4118

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder 1440106

Project ID: Cutler

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1440106017	**SP006-4**	SM 2540G	WGR/2287		
1440106018	**SP006-6**	SM 2540G	WGR/2287		
1440106019	**SB007-2**	SM 2540G	WGR/2287		
1440106020	**SB007-4**	SM 2540G	WGR/2287		
1440106021	**SB007-6**	SM 2540G	WGR/2287		
1440106022	**SB008-2**	SM 2540G	WGR/2287		
1440106023	**SB008-4**	SM 2540G	WGR/2287		
1440106024	**SB008-6**	SM 2540G	WGR/2287		
1440106025	**SB009-2**	SM 2540G	WGR/2287		
1440106026	**SB009-4**	SM 2540G	WGR/2288		
1440106027	**SB009-6**	SM 2540G	WGR/2288		
1440106028	**SB010-2**	SM 2540G	WGR/2288		
1440106029	**SB010-4**	SM 2540G	WGR/2288		
1440106030	**SB010-6**	SM 2540G	WGR/2288		
1440106031	**SB011-2**	SM 2540G	WGR/2288		
1440106032	**SB011-4**	SM 2540G	WGR/2288		
1440106033	**SB011-6**	SM 2540G	WGR/2288		
1440106034	**SB012-2**	SM 2540G	WGR/2288		

FDOH# E86546

CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Jupiter Environmental Laboratories, Inc..

Jupiter
Environmental Laboratories, Inc.

www.jupiterlabs.com
150 S. Old Dixie Highway, Jupiter, FL 33458
(561) 575-0030 • FAX (561) 575-4118 • clientservices@jupiterlabs.com

J.E.L. Log # 1440106
P.O. # _____
Quote # _____

Company Name TIERRA/FPL
Address ON FILE
City State Zip
Sampling Site Address
Attn: ED PREAST Email ON FILE
Project Name CUTLER Project #
Sampler Name/Signature PETE LAFORGE

LAB ANALYSIS

Requested Turnaround Time
Note: Rush requests subject to acceptance by the laboratory
Standard
✓ Expedited
Due 12/5/14
24 HR. Rush
Comments

#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont	Pres Codes	Parameters: ARSENIC	VANADIUM	Field Filtered (Y/N)
1	SP001-2	12/4/14	0903	S	1		✓		
2	SP001-4		0905	S	1		✓		
3	SP001-5		0907	S	1		✓		
4	SP002-2		0910	S	1		✓		
5	SP002-4		912	S	1		✓		
6	SP002-6		914	S	1		✓		
7	SP003-2		920	S	1		✓		
8	SP003-4		922	S	1		✓		
9	SP003-6		924	S	1		✓	✓	
10	SP004-2		930	S	1		✓		

Matrix Codes*
S Soil/Solid Sediment; SW Surface Water; GW Ground Water; SL Sludge; WW Waste Water; O Other (Please Specify); DW Drinking Water

Pres Codes
A- none; I- Ice; B- HNO_3; O- Other; C- H_2SO_4; M- MeOH; D- NaOH; N- $Na_2S_2O_3$; E- HCl; Z- ZnAc

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/4/14	12:50	[signature]	12/4/14	12:50
[signature]	12/4/14	14:10	[signature]	12/4/14	14:10
[signature]	12/4/14	1530	[signature]	12/4/14	1530

QA/QC level with report
None ___1___2___3___ See price guide for applicable fees

FDEP Dry Cleaning ☐ FDEP UST Pre-Approval ☐
SFWMD ☐ ADaPT ☐ DOT ☐

Temp Control: 4 °C

1440106

Jupiter
Environmental Laboratories, Inc.

www.jupiterlabs.com
150 S. Old Dixie Highway, Jupiter, FL 33458
(561) 575-0030 • FAX (561) 575-4118 • clientservices@jupiterlabs.com

J.E.L. Log # 1440106
P.O. # _____
Quote # _____

Company Name TIERRA / FPL
Address ON FILE
City State Zip
Sampling Site Address
Attn: ED PREAST Email ON FILE
Project Name CUTLER Project #
Sampler Name/Signature PETE LAFORGE

LAB ANALYSIS

Requested Turnaround Time
Note: Rush requests subject to acceptance by the laboratory
___ Standard
✓ Expedited
Due 12/5/14
24 HR. RUSH

#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont	Pres Codes	Parameters: ARSENIC	Parameters: VANADIUM	Field Filtered (Y/N)	Comments
11	SB004-4	12/4/14	932	S	1		✓			
12	SB004-6		934	S	1		✓			
13	SB005-2		937	S	1		✓			
14	SB005-4		938	S	1		✓	✓		
15	SB005-6		939	S	1		✓			
16	SB006-2		943	S	1		✓			
17	SB006-4		944	S	1		✓			
18	SB006-6		948	S	1		✓			
19	SB007-2		950	S	1		✓			
20	SB007-4		952	S	1		✓			

Matrix Codes*
S Soil/Solid Sediment
GW Ground Water
WW Waste Water
DW Drinking Water
SW Surface Water
SL Sludge
O Other (Please Specify)

Pres Codes
A- none
B- HNO_3
C- H_2SO_4
D- NaOH
E- HCl
I- Ice
O- Other
M- MeOH
N- $Na_2S_2O_3$
Z- $ZnAc$

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/4/14	12:50	[signature]	12/4/14	12:50
[signature]	12/4/14	14:10	[signature]	12/4/14	14:10
[signature]	12/4/14	1530	[signature]	12/4/14	1530

QA/QC level with report
None ___1___2___3___ See price guide for applicable fees

FDEP Dry Cleaning ☐ FDEP UST Pre-Approval ☐
SFWMD ☐ ADaPT ☐ DOT ☐

Temp Control: 2 °C

Jupiter
Environmental Laboratories, Inc.

www.jupiterlabs.com
150 S. Old Dixie Highway, Jupiter, FL 33458
(561) 575-0030 • FAX (561) 575-4118 • clientservices@jupiterlabs.com

J.E.L. Log # 1440106
P.O. #
Quote #

Company Name: TIERRA / FPL
Address: ON FILE
City: State: Zip:
Sampling Site Address:
Attn: ED PREAST Email: ON FILE
Project Name: CUTLER Project #:
Sampler Name/Signature: PETE LAFORGE

LAB ANALYSIS

Requested Turnaround Time
Note: Rush requests subject to acceptance by the laboratory
Standard
✓ Expedited
Due 12/5/14
24 HR. RUSH

#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont	Parameters: ARSENIC	Parameters: VANADIUM	Field Filtered (Y/N)	Comments
21	SB007-6	12/4/14	954	S	1	✓			
22	SB008-2		959	S	1	✓	✓		
23	SB008-4		1001	S	1	✓			
24	SB008-6		1003	S	1	✓			
25	SB009-2		1010	S	1	✓			
26	SB009-4		1012	S	1	✓			
27	SB009-6		1014	S	1	✓			
28	SB010-2		1020	S	1	✓			
29	SB010-4		1021	S	1	✓			
30	SB010-6		1022	S	1	✓			

Pres Codes

Matrix Codes*
S Soil/Solid Sediment; SW Surface Water; GW Ground Water; SL Sludge; WW Waste Water; O Other (Please Specify); DW Drinking Water

Pres Codes
A- none; I- Ice; B- HNO_3; O- Other; C- H_2SO_4; M- MeOH; D- NaOH; N- $Na_2S_2O_3$; E- HCl; Z- ZnAc

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/4/14	12:50	[signature]	12/4/14	12:50
[signature]	12/4/14	14:10	[signature]	12/4/14	14:10
[signature]	12/4/14	1530	[signature]	12/4/14	1530

QA/QC level with report
None ___ 1 ___ 2 ___ 3 ___ See price guide for applicable fees

FDEP Dry Cleaning ☐ FDEP UST Pre-Approval ☐
SFWMD ☐ ADaPT ☐ DOT ☐

Temp Control: 4 °C

1440106

Jupiter
Environmental Laboratories, Inc.

www.jupiterlabs.com
150 S. Old Dixie Highway, Jupiter, FL 33458
(561) 575-0030 • FAX (561) 575-4118 • clientservices@jupiterlabs.com

J.E.L. Log # 1440106
P.O. # _____
Quote # _____

Company Name TIERRA/FPL
Address ON FILE
City State Zip
Sampling Site Address
Attn: ED PREAST Email ON FILE
Project Name CUTLER Project #
Sampler Name/Signature PETE LAFORGE

LAB ANALYSIS

Requested Turnaround Time
Note: Rush requests subject to acceptance by the laboratory
___ Standard
✓ Expedited
Due 12/5/14
24 HR. RUSH

#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont	Pres Codes	Parameters: ARSENIC	Parameters: VANADIUM	Field Filtered (Y/N)	Comments
31	SB011-2	12/4/14	1025	S	1		✓			
32	SB011-4		1027				✓			
33	SB011-6		1030				✓			
34	SB012-2		1042				✓			
35	SB012-4		1045				✓			
36	SB012-6		1047				✓			
37	SB012-8		1049				✓			
38										
9										
0										

Matrix Codes*
S Soil/Solid Sediment; SW Surface Water; GW Ground Water; SL Sludge; WW Waste Water; O Other (Please Specify); DW Drinking Water

Pres Codes
A- none; I- Ice; B- HNO_3; O- Other; C- H_2SO_4; M- MeOH; D- NaOH; N- $Na_2S_2O_3$; E- HCl; Z- ZnAc

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/4/	1250	[signature]	12/4/14	12:50
[signature]	12/4/14	14:10	[signature]	12/4/14	14:10
[signature]	12/4/14	1530	[signature]	12/4/14	1530

QA/QC level with report
None ___1___2___3___ See price guide for applicable fees

FDEP Dry Cleaning ☐ FDEP UST Pre-Approval ☐
SFWMD ☐ ADaPT ☐ DOT ☐

Temp Control: 4 °C

1440106

Login Checklist

Cooler Unpacked/Checked by: AM Date: 12/4/14

JEL LOG#: 1440106

Cooler Check

Cooler ID	Cooler Temp (C)	# of Samples in Cooler	Evidence Tape				Method of Receipt		
			Present?		Intact?				
			Yes	No	Yes	No	Drop Off	Comm. Carrier	Pick Up
	4	37		X					X

Note: if the temperature of a cooler is above 6C or an evidence seal is damaged then identify the bottles in the affected cooler(s) on the sample discrepancy form.
*Write tracking number only if waybill copy cannot be placed in the folder

Condition of Containers:

Loose Caps: Yes____ No X
If yes, fill out sample discrepancy form.

Broken Containers: Yes____ No X
If yes, fill out sample discrepancy form.

Acid Preserved Samples: Are their pHs </=2 ?Yes____ No____ N/A X
If yes, pH strip lot #:HC412469
If no: Fill out sample discrepancy form
Check unpreserved containers with same Field ID
If acid is added: HCL Lot #: 8187, HNO3 Lot #: 7581, H2SO4 Lot #: 7582

Base Preserved Samples: Are their pHs >/=12 or 9 ?Yes____ No____ N/A X
(Cyanide >/= 12; Sulfide >/=9)
If yes, pH strip lot #: HC412469
If no: Fill out sample discrepancy form
Check unpreserved containers with same Field ID

Are all samples in cooler on COC?: Yes X No____
If no, fill out sample discrepancy form.

Are all samples on COC in cooler?: Yes X No____
If no, fill out sample discrepancy form.

N/A = not Applicable Temperature Gun ID #: TEMP-GUN-1

APPENDIX B

Wetland Delineation and Protection

NOTES:

1. A Professional Mangrove Trimmer (PMT) will be on-site during the installation of the Engineering Control to ensure avoidance of mangrove vegetation or other protected vegetation which may overhang the construction area.
2. The Engineering Control Limit is set a minimum of three feet offset from the top of bank. In several locations, the offset was modified to accommodate potential vegetative overhang and drip-line.
3. Erosion and sediment controls will be installed adjacent to the top of bank prior to commencement of construction and maintained throughout the installation of the appropriate Engineering Control.
4. All construction materials and debris shall be staged and placed as to not encroach onto the top of bank or down slope below the mean high water line.
5. Re-verification of the top of bank and extent of mangrove vegetation will be performed prior to commencement of construction.

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

ENGINEERING CONTROL LIMIT ALONG WETLAND AREA (SOUTHWEST)

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

PROPOSED ENGINEERING CONTROL

TOP OF BANK

OVERHEAD MANGROVE VEGETATION OR PROTECTED OTHER VEGITATION IN CLOSE PROXIMITY TO ENGINEERING CONTROL LIMIT

1.40 ELEVATION

PROFESSIONAL LAND SURVEY

SOURCE:

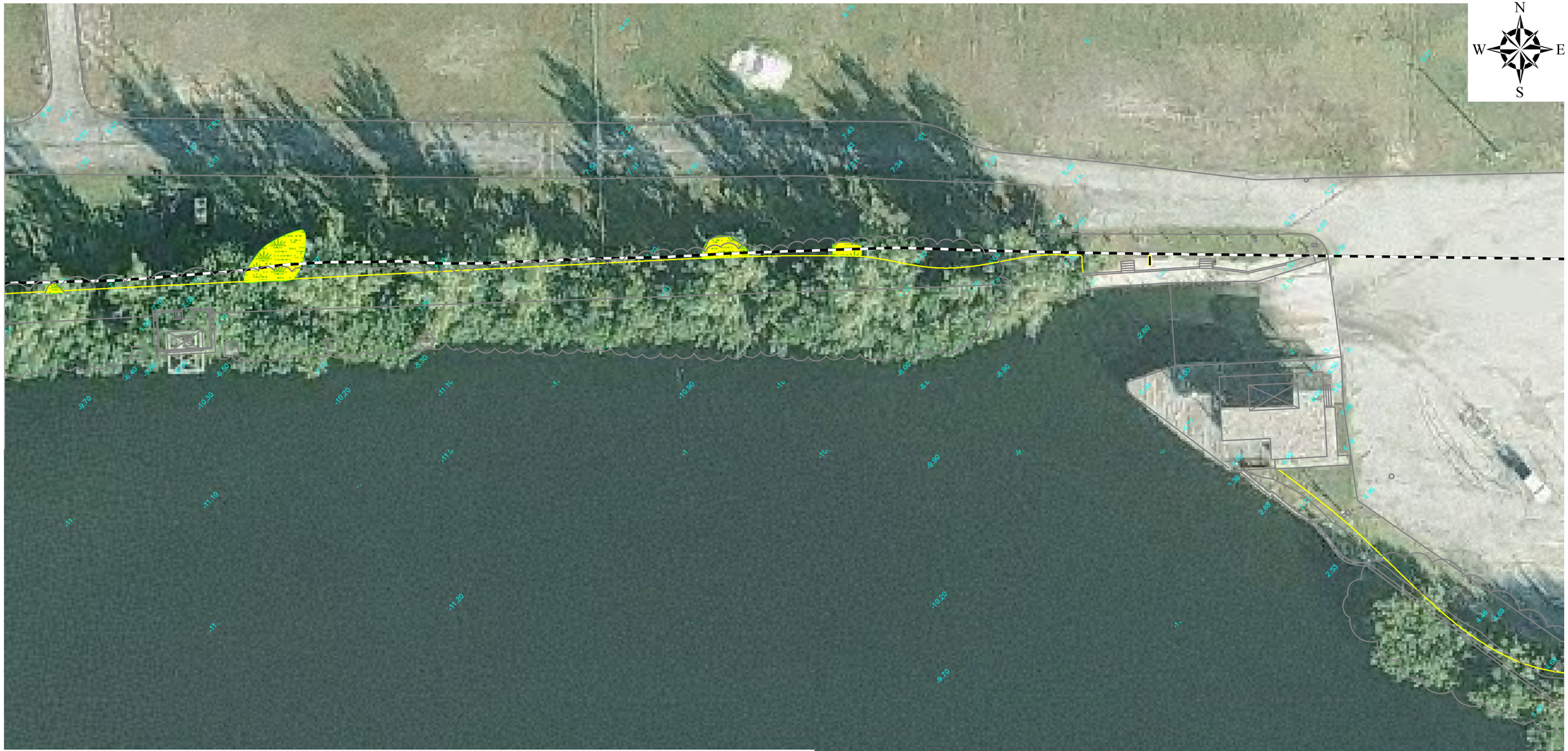
PROFESSIONAL LAND SURVEY BY A.R. TOUSSAINT & ASSOCIATES (DECEMBER 2014)

SCALE:

40 20 0 40

Feet

FIGURE B-1



NOTES:

1. A Professional Mangrove Trimmer (PMT) will be on-site during the installation of the Engineering Control to ensure avoidance of mangrove vegetation or other protected vegetation which may overhang the construction area.
2. The Engineering Control Limit is set a minimum of three feet offset from the top of bank. In several locations, the offset was modified to accommodate potential vegetative overhang and drip-line.
3. Erosion and sediment controls will be installed adjacent to the top of bank prior to commencement of construction and maintained throughout the installation of the appropriate Engineering Control.
4. All construction materials and debris shall be staged and placed as to not encroach onto the top of bank or down slope below the mean high water line.
5. Re-verification of the top of bank and extent of mangrove vegetation will be performed prior to commencement of construction.

tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

ENGINEERING CONTROL LIMIT ALONG WETLAND AREA (SOUTHEAST)

FORMER CUTLER POWER PLANT PROPERTY
MIAMI, FLORIDA

LEGEND:

PROPOSED ENGINEERING CONTROL

TOP OF BANK

OVERHEAD MANGROVE VEGETATION OR PROTECTED OTHER VEGITATION IN CLOSE PROXIMITY TO ENGINEERING CONTROL LIMIT

1.40 ELEVATION

PROFESSIONAL LAND SURVEY

SOURCE:

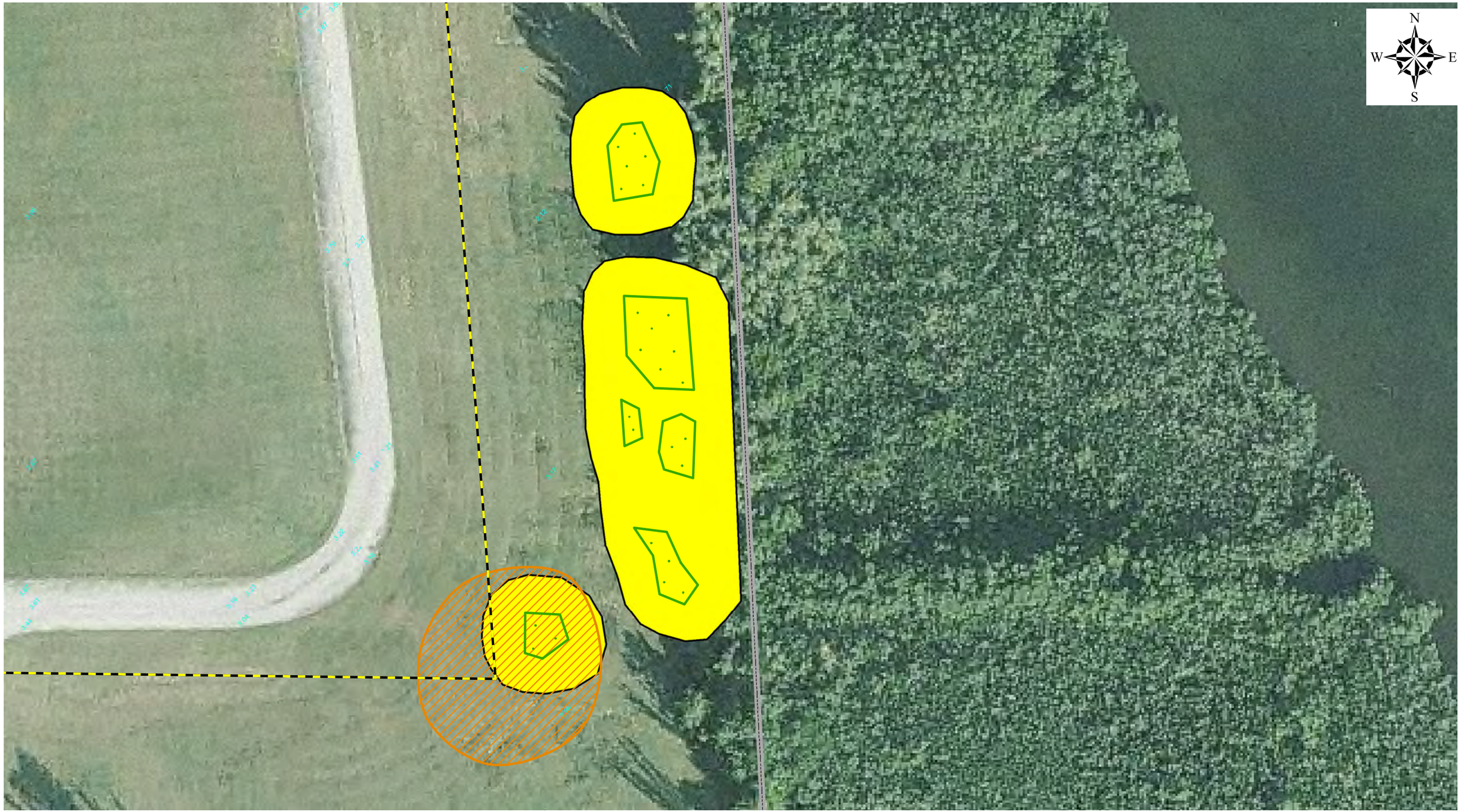
PROFESSIONAL LAND SURVEY BY A.R. TOUSSAINT & ASSOCIATES (DECEMBER 2014)

SCALE:

40 20 0 40

Feet

FIGURE B-2



tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

EAST WETLAND/UPLAND BOUNDARY (SOUTH)

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

- FORMER PLANT PROPERTY BOUNDARY
- EXTENT OF SOIL IMPACTS
- EXTENT OF GROUNDWATER IMPACTS
- SOIL BORING LOCATIONS
- 1.40 ELEVATION
- PROPOSED ENGINEERING CONTROL
- WATER LINE
- WETLAND/UPLAND BOUNDARY
- WETLAND AREA
- 15 FOOT WETLAND BUFFER

SCALE:

40 20 0 40
Feet

FIGURE B-3

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

EAST WETLAND/ UPLAND BOUNDARY (CENTRAL)

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

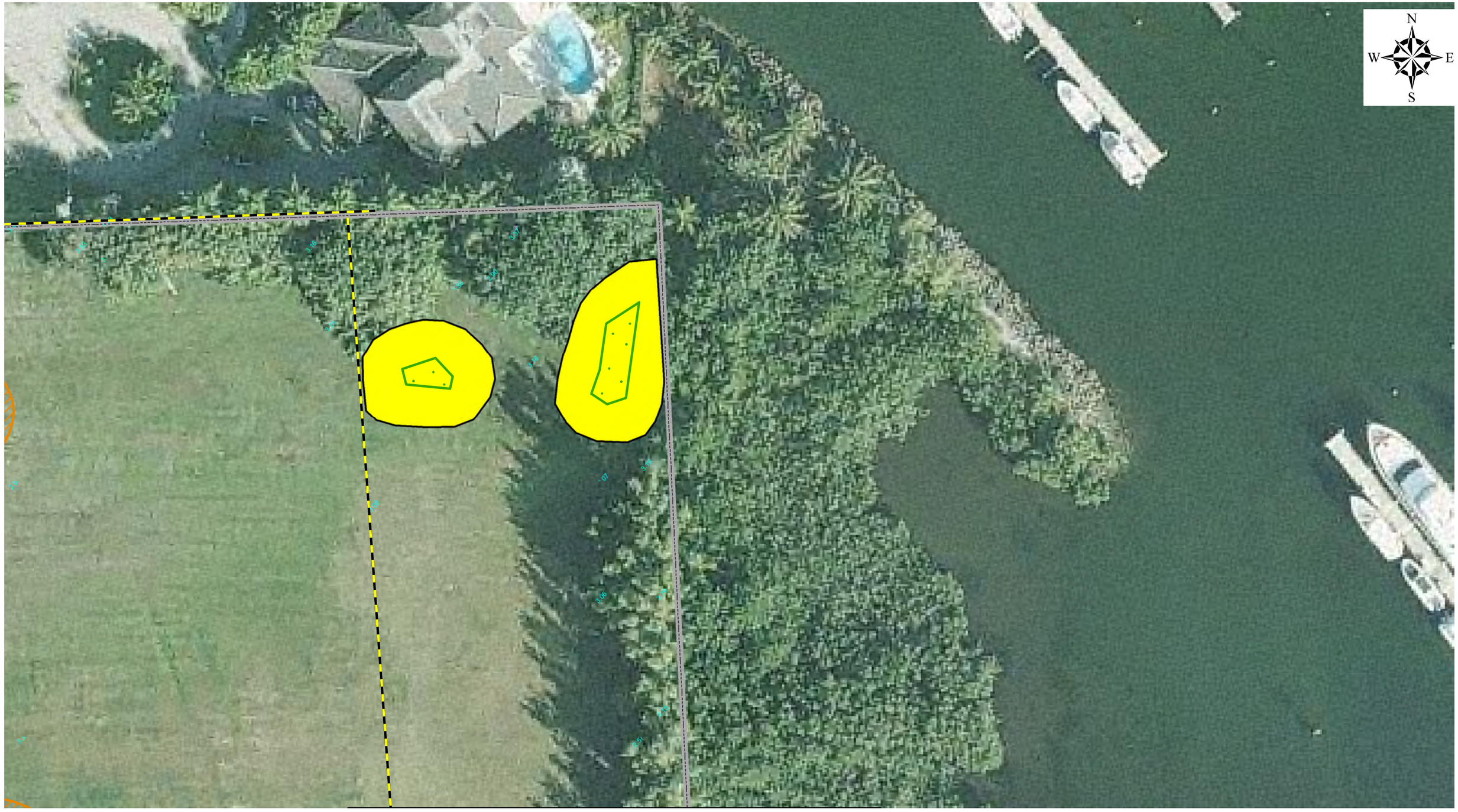
LEGEND:

- FORMER PLANT PROPERTY BOUNDARY
- EXTENT OF SOIL IMPACTS
- EXTENT OF GROUNDWATER IMPACTS
- SOIL BORING LOCATIONS
- 1.40 ELEVATION
- PROPOSED ENGINEERING CONTROL
- WATER LINE
- WETLAND/UPLAND BOUNDARY
- WETLAND AREA
- 15 FOOT WETLAND BUFFER

SCALE:

40 20 0 40
Feet

FIGURE B-4



tierra consulting group

TIERRA CONSULTING GROUP, INC.
PHONE: (954) 202-9226
WWW.TIERRACONSULTING.COM

NORTHEAST WETLAND/ UPLAND BOUNDARY

FORMER CUTLER POWER PLANT PROPERTY MIAMI, FLORIDA

LEGEND:

- FORMER PLANT PROPERTY BOUNDARY
- EXTENT OF SOIL IMPACTS
- EXTENT OF GROUNDWATER IMPACTS
- SOIL BORING LOCATIONS
- 1.40 ELEVATION
- PROPOSED ENGINEERING CONTROL
- WATER LINE
- WETLAND/UPLAND BOUNDARY
- WETLAND AREA
- 15 FOOT WETLAND BUFFER

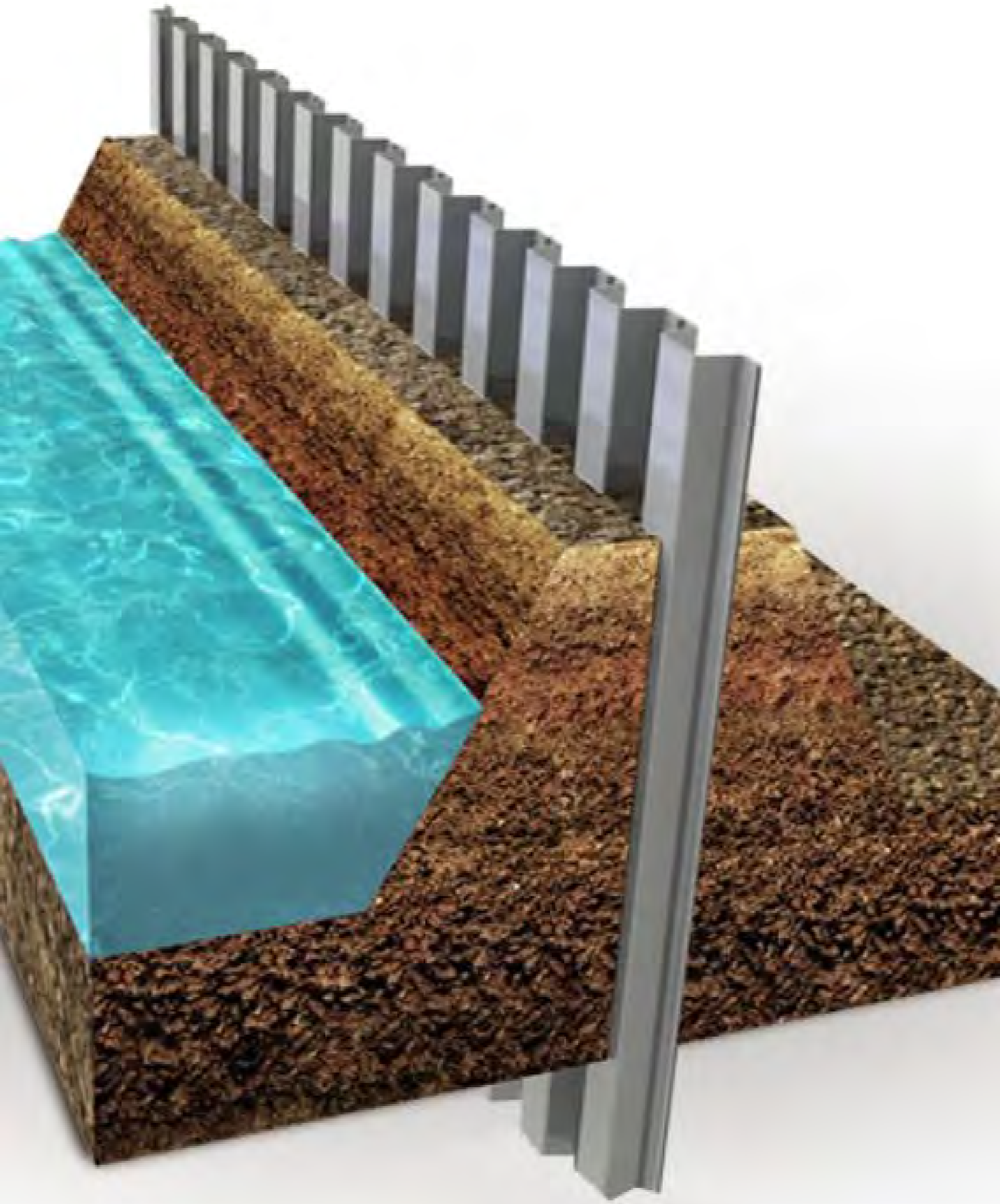
SCALE:

40 20 0 40
Feet

FIGURE B-5

APPENDIX C

Engineering Control Specifications

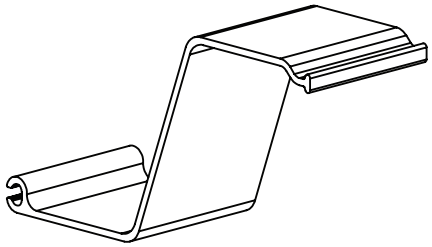


Crane Materials International

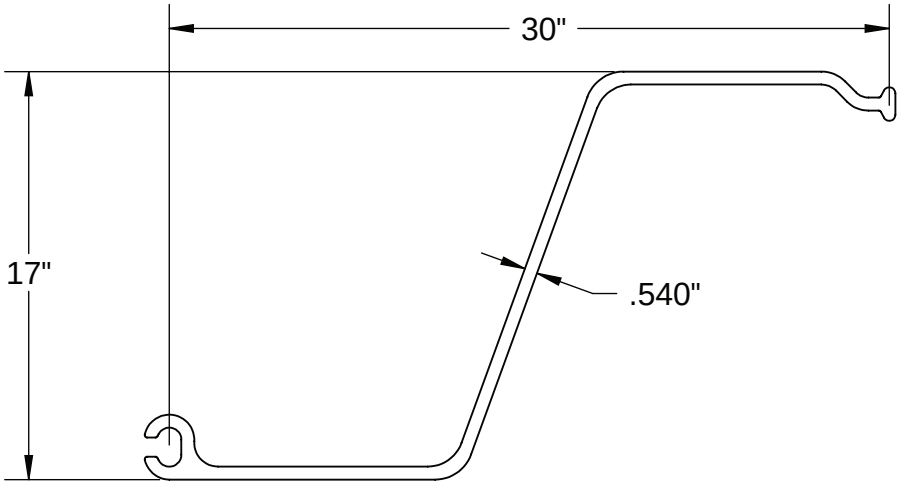
UltraComposite
Sheet Piling and Piles

Updated November 1, 2014

UC-95



Allowable Moment (M)	48,750 ft-lb/ft	216.84 kN-m/m
Section Modulus (Z)	58.5 in^3/ft	3,145 cm^3/m
Moment of Inertia (I)	497 in^4/ft	67,870 cm^4/m
Thickness (t)	0.540 in	13.7 mm
Section Depth	17 in	432 mm
Section Width	30 in	762 mm
Material	Structural FRP Composite	
Standard Colors	Charcoal	
Profile/Patented Features	Z Profile	



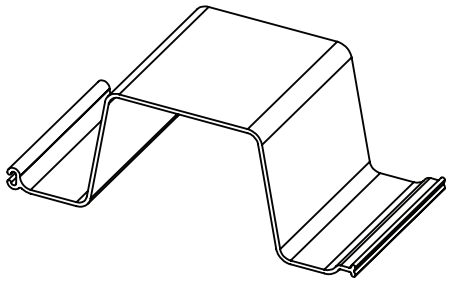
Physical properties are defined by ASTM testing standards, The Aluminum Association Design Manual, The Naval Facilities Design Manual DM 7.2, The US Army Corps of Engineers General Design Guide: PVC Sheet Pile and/or standard engineering practice. The values shown are nominal and may vary. The information found in this document is believed to be true and accurate. No warranties of any kind are made as to the suitability of any CMI product for particular applications or the results obtained there from. Crane Materials International is a Crane Building Products® company. ShoreGuard®, The ShoreGuard Seawall SystemTM, C-Loc®, TimberGuard®, GeoGuard®, Dura Dock®, Shore-All®, GatorGates®, GatorDock EliteTM, ArmorWareTM, ArmorRodTM, Box ProfileTM, UltraCompositeTM, Elite WallTM, Elite PanelTM, Elite Fascia PanelTM, Flat PanelTM, XCRTM, XCR TechnologyTM, XCR VinylTM, GatorBridgeTM, Gator AluminumTM, Gator Sheet PilingTM, GatorDockTM, I-Beam LockTM, Textured SlateTM, Crane Materials InternationalTM logo, CMI Sheet Piling SolutionsTM, Aqua Terra SystemTM, EnduranceTM, Endurance CSPTM, PolarisTM, EclipseTM, GridSpineTM, 21 PolyTM, PileClawTM, SheerScapeTM, SheerScape Retaining Wall SystemsTM, Sheer PanelTM and CMI Waterfront SolutionsTM are trademarks, service marks or trade names of Crane Materials International. United States and International Patent numbers 4,674,921; 4,690,588; 5,292,208; 5,145,287; 6,000,883; 6,033,155; 6,053,666; D420,154; 6,575,667; 7,059,807; 7,056,066; 7,025,539; 7,393,482; 5,503,503; 5,803,672; 6,231,271; 1,245,061CA; 7,914,237 and other patents pending. © 2014 Crane Materials International. All Rights Reserved.

Crane Materials International

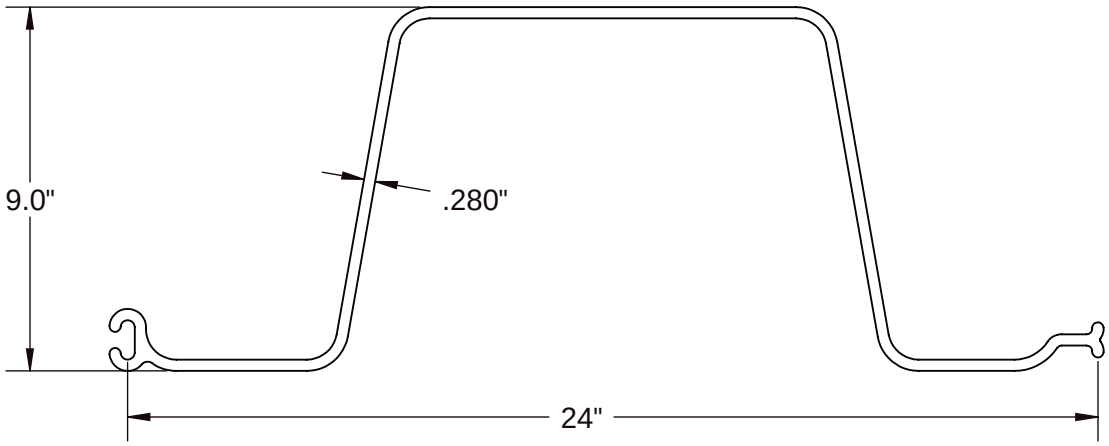
ShoreGuard
Synthetic Sheet Piling

Updated November 1, 2014

CL-9000



Allowable Moment (M)	4,320 lb-ft/ft	19.22 kN-m/m
Section Modulus (Z)	16.4 in^3/ft	871 cm^3/m
Moment of Inertia (I)	74 in^4/ft	9,969 cm^4/m
Impact Strength	13,750 in-lbs/in^2	2,406 N-mm/mm^2
Thickness (t)	0.280 in	7.1 mm
Section Depth	9.0 in	229 mm
Section Width	24 in	610 mm
Material	Weatherable Rigid Vinyl	
Standard Colors	Grey, Clay	
Technology	Box Profile, XCR™	
Standard Packaging	20 sheets/bundle	



Physical properties are defined by ASTM testing standards, The Aluminum Association Design Manual, The Naval Facilities Design Manual DM 7.2, The US Army Corps of Engineers General Design Guide: PVC Sheet Pile and/or standard engineering practice. The values shown are nominal and may vary. The information found in this document is believed to be true and accurate. No warranties of any kind are made as to the suitability of any CMI product for particular applications or the results obtained there from. Crane Materials International is a Crane Building Products® company. ShoreGuard®, The ShoreGuard Seawall SystemTM, C-Loc®, TimberGuard®, GeoGuard®, Dura Dock®, Shore-All®, GatorGates®, GatorDock EliteTM, ArmorWareTM, ArmorRodTM, Box ProfileTM, UltraCompositeTM, Elite WallTM, Elite PanelTM, Elite Fascia PanelTM, Flat PanelTM, XCRTM, XCR TechnologyTM, XCR VinylTM, GatorBridgeTM, Gator AluminumTM, Gator Sheet PilingTM, GatorDockTM, I-Beam LockTM, Textured SlateTM, Crane Materials InternationalTM logo, CMI Sheet Piling SolutionsTM, Aqua Terra SystemTM, EnduranceTM, Endurance CSPTM, PolarisTM, EclipseTM, GridSpineTM, 21 PolyTM, PileClawTM, SheerScapeTM, SheerScape Retaining Wall SystemsTM, Sheer PanelTM and CMI Waterfront SolutionsTM are trademarks, service marks or trade names of Crane Materials International. United States and International Patent numbers 4,674,921; 4,690,588; 5,292,208; 5,145,287; 6,000,883; 6,033,155; 6,053,666; D420,154; 6,575,667; 7,059,807; 7,056,066; 7,025,539; 7,393,482; 5,503,503; 5,803,672; 6,231,271; 1,245,061CA; 7,914,237 and other patents pending. © 2014 Crane Materials International. All Rights Reserved.