PM ENVIRONMENTAL

Environmental
& Engineering
Services

PHASE II ENVIRONMENTAL SITE ASSESSMENT

101-111 Geraldine Street | Key West, Florida
PM Project Number 06-3668-1

Prepared for:

Keys Energy Services
PO Box 6100
Key West, Florida 33040

Prepared by:

PM Environmental, Inc.
2131 Hollywood Boulevard, Suite 503
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October 8, 2013

Mr. Stanley Rzad
Keys Energy Services
1001 James Street
PO Box 6100
Key West, FL 33041

Re: Phase II Environmental Site Assessment
For the Former Key West Gas and Electric Company
Located at 101-111 Geraldine Street in Key West, Florida
PM Environmental, Inc. Project No. 06-3668-1

Dear Mr. Rzad:

PM Environmental, Inc. (PM) has completed the Phase II Environmental Site Assessment (ESA) report of the Former Key West Gas and Electric Company property located at 101-111 Geralding Street in Key West, Florida. The attached report is a summary of the field investigative techniques and results of the property assessment activities.

THE REPORT WAS PREPARED FOR THE EXCLUSIVE USE OF KEYS ENERGY SERVICES, WHO MAY RELY ON THE REPORT'S CONTENTS.

If you have any question or concerns, please feel free to contact our office at (954) 924-1801. We look forward to providing you with qualified and professional environmental consulting services in the future.

Sincerely,
PM ENVIRONMENTAL, INC.

Candace E. Chin Fatt
Project Manager

Michael T. Kulka, P.E.
Principal Engineer

Enclosure

EXECUTIVE SUMMARY

PM Environmental, Inc. (PM) has completed the Phase II Environmental Site Assessment (ESA) activities at the Former Key West Gas and Electric Company located 101-111 Geraldine Street in Key West, Monroe County, Florida (hereafter referred to as the "subject property") to address the on-site Recognized Environmental Conditions (RECs) identified in PM's Phase I ESA dated July 26, 2013.

According to the Phase I ESA Report completed by PM, the following RECs were identified:

- Assessment activities on behalf of the Florida Department of Environmental Protection (FDEP) in August 2012 to further assess the historical operations at the subject property identified concentrations of polynuclear aromatic hydrocarbons (PAHs), arsenic, and lead above FDEP Soil Cleanup Target Levels (SCTLs) in shallow soil samples to the southwest of the machine shop building. In addition, concentrations of isopropylbenzene and PAHs were identified above FDEP Groundwater Cleanup Target Levels (GCTLs). This contamination appears to be associated with former operations on the subject property.

- The subject property operated as a manufactured gas plant (MGP) from approximately 1884 until 1889. Operations of MGPs typically involved the gasification of combustible materials such as coal, wood, or oil. A former retort room, which is a processing area, and a former gasometer, which was a storage container for gas, were identified on the eastern portion of the property. The by-products of the gasification process typically included petroleum products and/or hazardous substances, including coal tars. The potential exists for a release to have occurred in association with the operation of the former MGP.

- Sanborn maps document the presence of six former 25,000-gallon crude oil above ground storage tanks (ASTs) along the southern property boundary between at least 1912 and 1926. In addition, two former crude oil ASTs were identified to the east of the main building. Limited sampling has been conducted in these areas that is not adequate to assess the potential for leaks, spills, and/or overfills to have occurred in association with these former ASTs; therefore, the potential exists for subsurface contamination to be present.

- The subject property operated as a power plant, which utilized petroleum products as a fuel source, from approximately 1890 until the 1950s/1960s. The potential exists for leaks and/or spills to have occurred in association with the operation of the turbine generators and/or other equipment within the main building and on various portions of the property. The integrity of the floor beneath the generators is unknown; therefore, the potential exists for subsurface impact to be present.

- Former machine shops were identified on the property within the southwestern portion of the main building and within the machine shop. Machine shop operations typically involve the use of general hazardous substances and/or petroleum products. This time period preceded major environmental regulations and current waste management and disposal procedures. The historical waste management practices associated with the former machine shop operations are unknown and may be a source of subsurface contamination.

The following adjoining and/or nearby RECs have been identified:

- The north adjoining properties were formerly part of the Truman Annex, which was a part of Naval Air Station Key West, from at least 1892 until 1971. Sanborn maps document the property was occupied by U.S. governmental land dating back to at least 1892. The historic usage of these properties associated with the former military base is unknown from at least 1892 until 1958. Therefore, the potential exists for operations to have included the use of petroleum products and/or hazardous substances, and/or landfilling activities to have occurred.

- The south adjoining properties, identified as 110-118 Geraldine Street, was occupied by a Standard Oil bulk petroleum plant. The potential exists for leaks, spills, and/or overfills associated with the operation of a former bulk petroleum plant to have resulted in migration of contamination onto the subject property.

- The west adjoining property was occupied by U.S. governmental land from at least 1892 until 1926. Specifically, a governmental slip was identified directly west of the property in 1892. According to previous investigations on the subject property, this property was filled in the 1890s or early 1990s. The potential exists for the fill materials to have originated from a contaminated property. Therefore, the potential exists for migration of contamination onto the subject property.

The subject property consists of eight parcels containing approximately 0.78 acres. The subject property is developed with three buildings which consist of a 13,300 square foot main building, a 459 square foot blacksmith shop, and a 945 square foot machine shop. Standard and other historical sources were able to document that the first developed use of the subject property occurred in at 1884, at which time the property was developed as a manufactured gas plant that operated until 1889. The property began to operate as an electrical power plant in approximately 1890 and continued to operate as a power plant until the 1950s/1960s. Five residential dwellings were present on the northern and southern portions of the property from at least 1892 until 1899. The property has been unoccupied since the power plant was closed down, with the exception of the construction of an electrical substation on the southern portion of the property in the late 2000s.

THE REPORT WAS PREPARED FOR THE EXCLUSIVE USE OF KEYS ENERGY SERVICES, WHO MAY RELY ON THE REPORT'S CONTENTS.

The scope of PM's Phase II ESA activities consisted of advancing 16 soil borings (SB-1 through SB-16), installing 10 temporary monitoring wells (TMW-1, TMW-4, TMW-5D, TMW-6D, TMW-7 through TMW-11, and TMW-14), and collecting soil and groundwater samples for laboratory analysis to investigate the RECs identified in PM's Phase I ESA dated July 26, 2013. A total of 16 soil and 10 groundwater samples were submitted for laboratory analysis of volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), total recoverable petroleum hydrocarbons (TRPHs), and 8 Resource Conservation and Recovery Act (RCRA) Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), or some combination thereof.

Based on the soil boring logs, the general lithology consists of two to four feet of medium sand underlain by limestone to a depth of 25.0 feet, the maximum depth explored. Groundwater was encountered at depths ranging from approximately 2.7 to 4.6 feet below ground surface (bgs).

Analytical results indicate concentrations of PAHs, TRPHs, and metals (arsenic, barium, and lead) in the soil above the FDEP SCTLs, and VOCs, PAHs, and TRPHs in the groundwater above the FDEP GCTLs, and the Natural Attentuation Default Concentrations (NADCs), as set forth in Chapter 62-777, Florida Administartive Code (FAC), which are not defined vertically or horizontally. Based on the history of the subject property, the contaminants detected in the soil and groundwater are consistent with the historic use of the subject property as a gas and electric plant, and consistent with previously reported soil and groundwater impacts.

According according to the rules set forth in Chapter 62-770, FAC, the FDEP requires that a Site Assessment Report (SAR) defining the extent of impact be completed. Therefore, additional soil borings/monitoring wells will need to be advanced on the subject property. PM recommends further investigation to delineate the horizontal and vertical extent of soil and groundwater contamination at the subject property for subsequent preparation of a corrective action plan.

This report has been reviewed for its completeness and accuracy. Please feel free to contact our office at (954) 924-1801 to discuss this report.

Report Prepared By:

Candace E. Chin Fatt
Project Manager

Report Reviewed By:

Michael T. Kulka, P.E.
Principal Engineer

Elliot J. Nightingale, P.G.
Senior Consultant

PM ENVIRONMENTAL | Environmental & Engineering Services

SITE ASSESSMENT REPORT

101-111 Geraldine Street | Key West, Florida
PM Project Number 06-3668-4

Prepared for:

Keys Energy Services
1001 James Street
Key West, Florida 33041

Prepared by:

PM Environmental, Inc.
2131 Hollywood Boulevard, Suite 503
Hollywood, Florida 33020

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March 10, 2014

Mr. Stanley Rzad
Keys Energy Services
1001 James Street
PO Box 6100
Key West, FL 33041

Re: Site Assessment Report and First Quarterly Monitoring Only Plan
For the Former Key West Gas and Electric Company
Located at 101-111 Geraldine Street in Key West, Florida
PM Environmental, Inc. Project No. 06-3668-4
FDEP Comet Site ID #303264

Dear Mr. Rzad:

PM Environmental, Inc. (PM) has completed the Site Assessment Report (SAR) at the Former Key West Gas and Electric Company property located at 101-111 Geraldine Street in Key West, Monroe County, Florida. The attached report is a summary of the field investigative techniques and results of the site assessment activities.

THE REPORT WAS PREPARED FOR THE EXCLUSIVE USE OF KEYS ENERGY SERVICES, WHO MAY RELY ON THE REPORT'S CONTENTS.

If you have any question or concerns, please feel free to contact our office at (954) 924-1801. We look forward to providing you with qualified and professional environmental consulting services in the future.

Sincerely,
PM ENVIRONMENTAL, INC.

Candace E. Chin Fatt
Project Manager

Elliot J. Nightingale, P.G.
Senior Consultant

Enclosure

SITE ASSESSMENT REPORT

For

FORMER KEY WEST GAS AND ELECTRIC COMPANY
LOCATED AT 101-111 GERALDINE STREET
KEY WEST, MONROE COUNTY, FLORIDA
FDEP Comet Site ID #303264

Prepared by

PM Environmental, Inc.
2131 Hollywood Boulevard
Suite 503
Hollywood, Florida, 33020

PM Project Number 06-3668-4

In accordance with the provisions of Florida Statutes, Chapter 492, this Site Assessment Report for the Former Key West Gas and Electric Company located at 101-111 Geraldine Street in Key West, Monroe County, Florida, has been prepared under the direct supervision of a Professional Geologist registered in the State of Florida. This report has been determined to be in accordance with good professional geological practices pursuant to Chapter 492 of the Florida Statutes and Chapter 62-770, Florida Administrative Code (FAC) as it applies to the work described herein. The data, findings, recommendations, specifications or professional opinions were prepared solely for the use of Keys Energy Services. PM makes no other warranty; either expressed or implied, and is not responsible for the interpretation by others of these data.

Elliot J. Nightingale, P.G.
Florida P.G. No. 2809
PM Environmental, Inc.
2131 Hollywood Boulevard
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Geology Business License # GB584

LIMITATIONS

This Site Assessment Report is a property-specific assessment that is related to the environmental conditions of the subject property only.

PM Environmental, Inc. (PM) performed its services in conformance with the care and skill ordinarily used by other reputable environmental consulting firms practicing under similar conditions, at the same time, and in the same or similar locality. In preparing the assessment report, PM may have relied on information obtained from or provided by others. PM makes no representation or warranty regarding the accuracy or completeness of this information gathered through outside sources or subcontracted services. No single page of this report should be relied upon alone, rather only the report in its entirety. No warranty, guarantee, or certification of any kind, expressed or implied, at common law or created by statute, is extended, made, or intended by rendering these environmental consulting services or by furnishing this written report. Environmental conditions and regulations are subject to constant change and reinterpretation. One should not assume that any on-site conditions and/or regulatory statutes or rules will remain constant in the future, after PM has completed the scope of work for this project. Furthermore, because of the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other professionals.

Contaminants may be hidden in subsurface material, covered by pavement, vegetation, or other substances. Additionally, contamination may not be present in predictable locations. The most that PM can do is prepare a logical assessment program to reduce the client's risk of discovering unknown contamination. This risk may be reduced by more extensive exploration on the property. Even with additional exploration, it is not possible to completely eliminate the risk of discovering contamination on-site. It cannot be assumed that samples collected and conditions observed are representative of an area that has not been sampled and/or tested. Tests and other data collected for the report were obtained only for the sole purposes stated in this report, and they should not be used for purposes or reasons other than those intended.

Some environmental assessments are undertaken to satisfy due diligence, all appropriate inquiry, or other regulatory requirements provided in federal, state, or local law. The level of investigation necessary to demonstrate due diligence or all appropriate inquiry has not been legislatively defined. Although PM strives to investigate a property in accordance with the scope of work, it cannot warrant that the work undertaken for this report will satisfy due diligence, all appropriate inquiry, or any other similar standard under any federal, state, or local law.

Due to changing environmental regulatory conditions and potential on-site or off-site activities occurring after this assessment, the client may not presume the continuing applicability to the property of the conclusions in this assessment for more than 180 days after the report's issuance date.

Any reports, field data, field notes, laboratory testing, calculations, estimates or other documents prepared by or relied upon by PM are the property of PM. If any of these documents are released or obtained by a party other than the client, PM may not discuss the project with that party unless the original contracted client notifies PM of the same and PM is authorized to disclose the information and to discuss the project with others. Except as otherwise agreed with the client, PM further states that it disclaims any duty of any kind or nature to any person or entity other than the client in preparing this report.

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Appendix A: Soil Boring and Monitoring Well Construction Logs
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Appendix C: Laboratory Analytical Reports and Chain of Custody

EXECUTIVE SUMMARY

PM Environmental, Inc. (PM) has completed a Site Assessment Report (SAR) for the subject property known as the Former Key West Gas and Electric Company, located at 101-111 Geraldine Street in Key West, Monroe County, Florida. This SAR was conducted in accordance with Chapter 62-770 Florida Administrative Code, (FAC).

The subject property consists of eight parcels containing approximately 0.78 acres. The subject property is developed with three buildings which consist of a 13,300 square foot main building, a 459 square foot blacksmith shop, and a 945 square foot machine shop. Standard and other historical sources were able to document that the first developed use of the subject property occurred in at 1884, at which time the property was developed as a manufactured gas plant that operated until 1889. The property began to operate as an electrical power plant in approximately 1890 and continued to operate as a power plant until the 1950s/1960s. Five residential dwellings were present on the northern and southern portions of the property from at least 1892 until 1899. The property has been unoccupied since the power plant was closed, with the exception of the construction of an electrical substation on the southern portion of the property in the late 2000s.

The Keys Energy Services, "the client", is currently in the process of expanding the current substation at the above-referenced property and has proposed plans for redevelopment. Prior to redevelopment, the client would like to obtain regulatory closure. PM completed a Phase I Environmental Site Assessment (ESA) in July 2013 and Phase II ESA in October 2013. The findings are summarized below.

The Phase I ESA completed by PM (PM Project Number 06-3668-0), dated July 26, 2013 identified the following Recognized Environmental Conditions (RECs):

- Assessment activities on behalf of the Florida Department of Environmental Protection (FDEP) in August 2012 to further assess the historical operations at the subject property identified concentrations of polynuclear aromatic hydrocarbons (PAHs), arsenic, and lead above FDEP Soil Cleanup Target Levels (SCTLs) in shallow soil samples to the southwest of the machine shop building. In addition, concentrations of isopropyl benzene and PAHs were identified above FDEP Groundwater Cleanup Target Levels (GCTLs). This contamination appears to be associated with former operations on the subject property.

- The subject property operated as a manufactured gas plant (MGP) from approximately 1884 until 1889. Operations of MGPs typically involved the gasification of combustible materials such as coal, wood, or oil. A former retort room, which is a processing area, and a former gasometer, which was a storage container for gas, were identified on the eastern portion of the property. The by-products of the gasification process typically included petroleum products and/or hazardous substances, including coal tars. The potential exists for a release to have occurred in association with the operation of the former MGP.

- Sanborn maps document the presence of six former 25,000-gallon crude oil above ground storage tanks (ASTs) along the southern property boundary between at least 1912 and 1926. In addition, two former crude oil ASTs were identified to the east of the main building. Limited sampling has been conducted in these areas that is not adequate to assess the potential for leaks, spills, and/or overfills to have occurred in association with these former ASTs; therefore, the potential exists for subsurface contamination to be present.

- The subject property operated as a power plant, which utilized petroleum products as a fuel source, from approximately 1890 until the 1950s/1960s. The potential exists for leaks and/or spills to have occurred in association with the operation of the turbine generators and/or other equipment within the main building and on various portions of the property. The integrity of the floor beneath the generators is unknown; therefore, the potential exists for subsurface impact to be present.

- Former machine shops were identified on the property within the southwestern portion of the main building and within the machine shop. Machine shop operations typically involve the use of general hazardous substances and/or petroleum products. This time period preceded major environmental regulations and current waste management and disposal procedures. The historical waste management practices associated with the former machine shop operations are unknown and may be a source of subsurface contamination.

The following adjoining and/or nearby RECs were identified:

- The north adjoining properties were formerly part of the Truman Annex, which was a part of Naval Air Station Key West, from at least 1892 until 1971. Sanborn maps document the property was occupied by U.S. governmental land dating back to at least 1892. The historic usage of these properties associated with the former military base is unknown from at least 1892 until 1958. Therefore, the potential exists for operations to have included the use of petroleum products and/or hazardous substances, and/or landfilling activities to have occurred.

- The south adjoining properties, identified as 110-118 Geraldine Street, was occupied by a Standard Oil bulk petroleum plant. The potential exists for leaks, spills, and/or overfills associated with the operation of a former bulk petroleum plant to have resulted in migration of contamination onto the subject property.

- The west adjoining property was occupied by U.S. governmental land from at least 1892 until 1926. Specifically, a governmental slip was identified directly west of the property in 1892. According to previous investigations on the subject property, this property was filled in the 1890s or early 1990s. The potential exists for the fill materials to have originated from a contaminated property. Therefore, the potential exists for migration of contamination onto the subject property.

Subsequent to the Phase I ESA, PM completed a Phase II ESA, dated October 8, 2013, which consisted of advancing 16 soil borings (SB-1 through SB-16), installing 10 temporary monitoring wells (TMW-1, TMW-4, TMW-5D, TMW-6D, TMW-7 through TMW-11, and TMW-14), and collecting soil and groundwater samples for laboratory analysis to investigate the RECs identified in PM's Phase I ESA dated July 26, 2013. A total of 16 soil and 10 groundwater samples were submitted for laboratory analysis of volatile organic compounds (VOCs), PAHs, total recoverable petroleum hydrocarbons (TRPHs), and 8 Resource Conservation and Recovery Act (RCRA) Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), or some combination thereof.

Results of the Phase II ESA indicated concentrations of PAHs, TRPHs, and metals (arsenic, barium, and lead) in the soil above the FDEP SCTLs, and VOCs, PAHs, and TRPHs in the groundwater above the FDEP GCTLs, and the Natural Attenuation Default Concentrations (NADCs), as set forth in Chapter 62-777, FAC, which are not defined vertically or horizontally.

Based on the history of the subject property, the contaminants detected in the soil and groundwater are consistent with the historic use of the subject property as a gas and electric plant, and consistent with previously reported soil and groundwater impacts.

Based on the known historical use and operations of the subject property, and the findings of the Phase II ESA, PM recommended that a SAR and Monitoring Only Plan (MOP) consisting of one year of quarterly monitoring be conducted.

On January 27th through 29th, 2014, as part of the SAR investigation, PM completed a scope of work to further delineate the groundwater impacts identified in the Phase II ESA report. The scope of services included the installation of seven permanent monitoring wells (PMW-1 though PMW-7), and the collection of groundwater samples for laboratory analysis of VOCs by EPA Method 8260, PAHs by EPA Method 8270, and TRPHs by Florida Petroleum Residual Organics (FL-PRO) Method.

Based on the soil boring logs, the general subsurface soil statigraphy consists of three to four feet of medium to fine brown sand underlain by coral limestone to a depth of 12.0 feet below land surface (bls), the maximum depth explored. Groundwater was encountered at depths ranging from approximately 3.6 to 4.7 feet bls.

The surficial aquifer on Key West is comprised of the Miami and Key Largo Limestones. An approximate five-foot thick freshwater lens exists on the western half of the island, however, no measurable fresh water lens exists in the eastern half of the island due to extensive areas of artificial fill. A fresh groundwater lens exists on the top of the saltwater due to the density differences and is found under water-table conditions between 5 to 8 feet bls in the site area. As the water table fluctuates, the shape of the lens changes due to tidal effects. Precipitation is the primary type of recharge to this fresh water lens. The freshwater head is greater in the center of the island where land surface elevations are higher, as ground water moves from the center of the lens and discharges along beaches and salt ponds. Based on regional flow patterns, the surficial flow of this lens in the subject property area is to the southwest. Tidal effects greatly influence the depth to water table and configuration of the lens, and therefore, a site specific groundwater flow diagram is not included as part of this assessment.

Laboratory analytical results of the SAR completed identified the following:

- VOC analytes bromodichloromethane (PMW-3), ethylbenzene (PMW-2), isopropyl benzene (PMW-1 to PMW-3 and PMW-5 to PMW-7), 1,2,3-trichloropropane (PMW-1), 1,2,3-trimethylbenzene (PMW-1 and PMW-2), 1,2,4-trimethylbenzne (PMW-1 and PMW-2), 1,3,5-trimethylbenzene (PMW-1), and xylenes (PMW-1 and PMW-2) were identified in the groundwater samples collected at concentrations that exceeded the GCTL criterion as set forth in Chapter 62-777, FAC, but were below the NADCs. Concentrations of isopropyl benzene at PMW-1 (48.4 µg/l) and PMW-2 (12.0 µg/l), and 1,2,4-trimethylpropane at PMW-1 (2.4 µg/l) exceeded their respective NADCs. No other VOCs were detected above the GCTLs and/or NADCs in the groundwater samples collected at the subject property.

- PAH analytes acenaphthalene (PMW-2), benzo(a)anthracene (PMW-1 and PMW-2), benzo(b)fluoranthene (PMW-2), naphthalene (PMW-1 and PMW-2), 1-methylnaphthalene, and 2-methylnaphthalene were identified in the groundwater samples collected at concentrations that exceed their respective GCTL cirtieria, but were below the NADCs. Concentrations of naphthalene at PMW-1 (1,480 µg/l) and PMW-2 (219 µg/l), and 2-

methylnaphthalene at PMW-2 (335 µg/l) exceeded their respective NADCs. No other PAHs were detected above the GCTLs and/or NADCs in the groundwater samples collected at the subject property.

- TRPH was identified in the groundwater sample collected PMW-1 (6,300 µg/l) at a concentration that exceeds the GCTL criteria, but is below the NADCs. No other TRPH concentrations were detected above the GCTLs in the groundwater samples collected at the subject property.

The borings, temporary monitoring wells, and permanent monitoring wells have investigated the known sources of VOCs and PAHs on the subject property. The SAR groundwater sampling event indicates that VOC and PAH groundwater impact is defined on the subject property, with the exception of the vicinity of PMW-1, where off-site migration is likely. Due to the tidal effects influencing the surficial groundwater flow, and a highly variable lateral water table gradient, solute transport may be a function of these fluctuating gradients, combined with molecular diffusion and lateral dispersion. A more detailed analysis on the localized groundwater flow and gradient is planned for the next monitoring event.

PM recommends the implementation of a Monitoring Only Program (MOP) to include quarterly monitoring of the groundwater for a minimum of one year. Additionally, based on the analytical results from PMW-1, the proximity to the property boundary, and the high tidal influence, additional wells may be required to further delineate the groundwater impact.

This report has been reviewed for its completeness and accuracy. Please feel free to contact our office at (954) 924-1801 to discuss this report.

Report Prepared By:

Candace E. Chin Fatt
Project Manager

Report Reviewed By:

Maryse Speckner
Senior Consultant

Elliot J. Nightingale, P.G.
Senior Consultant

1.0 INTRODUCTION

1.1 Authorization

Authorization for the Site Assessment activities was approved through PM's Proposal No. 06000998 dated December 10, 2013 and approved on January 8, 2014 between Keys Energy Services and PM.

1.2 Site Description

The subject property consists of eight parcels containing approximately 0.78 acres. The subject property is developed with three buildings which consist of a 13,300 square foot main building, a 459 square foot blacksmith shop, and a 945 square foot machine shop. Standard and other historical sources were able to document that the first developed use of the subject property occurred in at 1884, at which time the property was developed as a manufactured gas plant that operated until 1889. The property began to operate as an electrical power plant in approximately 1890 and continued to operate as a power plant until the 1950s/1960s. Five residential dwellings were present on the northern and southern portions of the property from at least 1892 until 1899. The property has been unoccupied since the power plant was closed, with the exception of the construction of an electrical substation on the southern portion of the property in the late 2000s. A United States Geological Survey (USGS) map of the site vicinity is included as Figure 1 and a map of the subject property and surrounding properties is provided as Figure 2.

1.3 Project Background

The Keys Energy Services, "the client", is currently in the process of expanding the current substation at the above-referenced property and has proposed plans for redevelopment. Prior to redevelopment, the client would like to obtain regulatory closure. PM completed a Phase I Environmental Site Assessment (ESA) in July 2013 and Phase II ESA in October 2013. The findings are summarized below.

The Phase I ESA completed by PM (PM Project Number 06-3668-0), dated July 26, 2013 identified the following Recognized Environmental Conditions (RECs):

- Assessment activities on behalf of the Florida Department of Environmental Protection (FDEP) in August 2012 to further assess the historical operations at the subject property identified concentrations of polynuclear aromatic hydrocarbons (PAHs), arsenic, and lead above FDEP Soil Cleanup Target Levels (SCTLs) in shallow soil samples to the southwest of the machine shop building. In addition, concentrations of isopropylbenzene and PAHs were identified above FDEP Groundwater Cleanup Target Levels (GCTLs). This contamination appears to be associated with former operations on the subject property.

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products and/or hazardous substances, including coal tars. The potential exists for a release to have occurred in association with the operation of the former MGP.

- Sanborn maps document the presence of six former 25,000-gallon crude oil above ground storage tanks (ASTs) along the southern property boundary between at least 1912 and 1926. In addition, two former crude oil ASTs were identified to the east of the main building. Limited sampling has been conducted in these areas that is not adequate to assess the potential for leaks, spills, and/or overfills to have occurred in association with these former ASTs; therefore, the potential exists for subsurface contamination to be present.

- The subject property operated as a power plant, which utilized petroleum products as a fuel source, from approximately 1890 until the 1950s/1960s. The potential exists for leaks and/or spills to have occurred in association with the operation of the turbine generators and/or other equipment within the main building and on various portions of the property. The integrity of the floor beneath the generators is unknown; therefore, the potential exists for subsurface impact to be present.

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- The south adjoining properties, identified as 110-118 Geraldine Street, was occupied by a Standard Oil bulk petroleum plant. The potential exists for leaks, spills, and/or overfills associated with the operation of a former bulk petroleum plant to have resulted in migration of contamination onto the subject property.

- The west adjoining property was occupied by U.S. governmental land from at least 1892 until 1926. Specifically, a governmental slip was identified directly west of the property in 1892. According to previous investigations on the subject property, this property was filled in the 1890s or early 1990s. The potential exists for the fill materials to have originated from a contaminated property. Therefore, the potential exists for migration of contamination onto the subject property.

Subsequent to the Phase I ESA, PM completed a Phase II ESA, dated October 8, 2013, which consisted of advancing 16 soil borings (SB-1 through SB-16), installing 10 temporary monitoring wells (TMW-1, TMW-4, TMW-5D, TMW-6D, TMW-7 through TMW-11, and TMW-14), and

collecting soil and groundwater samples for laboratory analysis to investigate the RECs identified in PM's Phase I ESA dated July 26, 2013. A total of 16 soil and 10 groundwater samples were submitted for laboratory analysis of volatile organic compounds (VOCs), PAHs, total recoverable petroleum hydrocarbons (TRPHs), and 8 Resource Conservation and Recovery Act (RCRA) Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), or some combination thereof.

Results of the Phase II ESA indicated concentrations of PAHs, TRPHs, and metals (arsenic, barium, and lead) in the soil above the FDEP SCTLs, and VOCs, PAHs, and TRPHs in the groundwater above the FDEP GCTLs, and the Natural Attenuation Default Concentrations (NADCs), as set forth in Chapter 62-777, Florida Administrative Code (FAC), which are not defined vertically or horizontally. Based on the history of the subject property, the contaminants detected in the soil and groundwater are consistent with the historic use of the subject property as a gas and electric plant, and consistent with previously reported soil and groundwater impacts.

PM reviewed the following reports pertaining to previous environmental investigation completed at the subject property:

- Contamination Assessment Report (CAR), September 1991, CH2M Hill;
- CAR Addendum, July 1992, CH2M Hill;
- Remedial Action Plan (RAP), October 1992, CH2M Hill;
- Remedial Action Plan Modification, June 1993, PDG Environmental Services;
- 1st Quarter Groundwater Monitoring Report, April 4, 1994, CH2M Hill;
- Third Quarter Monitoring Only Water Quality Results, April 17, 1995, PDG Environmental Services;
- Site Rehabilitation Completion Order, July 27, 1995, FDEP;
- Enhanced Pre-CERCLIS Screening Assessment Checklist/Decision Form, January 7, 2011, FDEP;
- Abbreviated Preliminary Assessment Checklist, October 31, 2011, FDEP; and
- Site Inspection Report, October 16, 2012, FDEP.

According to the information obtained from the regulatory files reviewed, a release was identified in March 1991 based on the presence of free phase hydrocarbons within a concrete lined pit located east of the main building. Free product was also subsequently identified in MW-7, which was located to the northwest of the pit. As a result of the identification of free product, the former ASTs and the concrete lined pit were emptied, cleaned, and removed in August 1992. A total of approximately 30,000 gallons of free product/impacted groundwater and 3,850 cubic yards of impacted soil was removed from the property during decommissioning activities and disposed of off-site. The extent and location of the excavation was not documented in previous reports. In addition, approximately 100 gallons of free product was removed from MW-7 between 1991 and 1992. Subsequent groundwater sampling between 1992 and 1995 did not identify free product within MW-7. The most recent sampling in 1994 and 1995 did not identify concentrations of PAHs or TRPHs above the most restrictive FDEP GCTLs in the area of the former ASTs or former concrete pit. The FDEP issued a Site Rehabilitation Completion Order (SRCO) for the release on July 27, 1995, and PM has identified the closed LUST release at the property as a historical REC.

An additional assessment was completed on behalf of the FDEP in August 2012 to further assess the historical operations at the subject property and to determine if the property qualified as a Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) site. Soil and groundwater samples were submitted for laboratory analysis of VOCs, semi-volatile organic compounds (SVOCs), the RCRA eight metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), and cyanide. Analytical results identified concentrations of PAHs, arsenic, and lead above FDEP SCTLs in shallow soil samples to the southwest of the machine shop building. In addition, concentrations of isopropyl benzene and PAHs were identified above FDEP GCTLs in groundwater samples from the central portion of the property.

Sediment sampling from a storm water catch basin to the south of the subject property, across Fort Street, identified a concentration of lead above FDEP Sediment Quality Assessment Guidelines.

Based on the concentrations of contaminants identified at the subject property, no additional CERCLIS investigation was recommended. The facility did not qualify as a CERCLIS site, and the identified contamination was referred to the FDEP for additional investigation.

Based upon the reports reviewed and the projected goal to obtain some form of regulatory closure of this property from the FDEP; PM was requested to complete the following activities in order to facilitate a SAR that can be submitted to the FDEP under Chapter 62-770, FAC.

1.4 Investigation/Scope of Work

The objectives of this SAR were based on PM's previous Phase II ESA activities as well as previous reports and studies completed on the property. The investigation included the advancement of seven permanent monitoring wells in the vicinity of the previously identified impacted areas. PM performed the SAR in general accordance with Chapter 62-770, FAC.

2.0 ASSESSMENT ACTIVITIES

2.1 Quality Assurance/Quality Control

All field decontamination and sampling procedures were performed in general accordance with the FDEP Standard Operating Procedure (SOP) FS/001-01 for Field Activities. Field decontaminated soil and groundwater sampling equipment, and disposable tubing were utilized in order to minimize the potential for cross-contamination of the soil and groundwater samples. Additionally, all personnel utilized single-use disposable latex gloves during monitoring well installation and groundwater sample collection to reduce the potential for cross-contamination.

All soil and groundwater sampling activities were performed in general accordance with FDEP SOP 001/01. All groundwater samples were packed on ice immediately following collection and delivered under chain-of-custody to the analytical laboratory. Pace Analytical Services, Inc., a National Environmental Laboratory Accreditation Conference (NELAC) accredited and Florida Department of Health certified laboratory (DOH E83079) performed all analytical testing for the assessment.

All laboratory analytical procedures were performed by Pace Analytical Services, Inc. located in Ormond Beach, Florida.

2.2 Groundwater Assessment

On January 27, 2014, PM installed seven 2-inch permanent monitoring wells (PMW-1 through PMW-7) in the vicinity of the areas where groundwater impacts were previously identified. The monitoring wells were installed using a Geoprobe® drill rig with hollow stem continuous flight auger method to depths of 12 feet below land surface (bls). All wells were constructed using ten feet of 2-inch diameter, 0.010-inch factory slotted polyvinyl chloride (PVC) well screen and two feet of 2-inch diameter PVC casing. A 20/30-grade silica sand pack was placed from the base of the well screen to approximately six inches above the well screen. A six-inch bentonite seal was placed above the sand pack and the monitoring well finished to grade with permanent well cap. The wells were developed using over pumping techniques until relatively clean water was produced and were allowed to equilibrate for a minimum of 24 hours after development before purging and sampling were conducted. The monitoring well locations are shown on Figure 3. Monitoring well construction logs are found in Appendix A and groundwater sampling logs are found in Appendix B.

PM conducted groundwater sampling activities at the subject property on January 28 and 29, 2014. Groundwater samples were collected from the newly installed monitoring wells PMW-1 through PMW-7 and submitted for laboratory analysis of VOCs by EPA Method 8260, PAHs by EPA Method 8270, and TRPHs by FL-PRO Method.

All sampling activities were conducted in accordance with FDEP SOP 001/01. Prior to sample collection, the monitoring wells were purged and stabilized. The groundwater samples were obtained utilizing the peristaltic pump and were subsequently transferred to laboratory supplied sample containers, placed in a cooler, packed with ice, and transported under chain of custody to Pace Analytical Services, Inc. for laboratory analysis.

2.4 Decontamination Procedures

All downhole equipment utilized during the field activities was decontaminated prior to use. Decontamination of said equipment was accomplished by washing with an Alconox and water solution, followed by a distilled water rinse, subsequent isopropanol rinse, and final distilled water rinse. Single-use disposable latex gloves were used during the sampling event in an attempt to eliminate cross-contamination between sampling locations.

3.0 DATA ANALYSIS AND INTERPRETATION

Analysis and interpretation of the data generated during the field investigation and laboratory analyses are presented in the following sections. Where appropriate, the results are compared with applicable regulatory target levels for the chemicals identified in the soil and groundwater.

3.1 Regional Geology and Hydrogeology

Key West is located in the Oolite Keys geomorphologic feature of the Southern or Distal Zone geomorphologic province. The lower Florida Keys are an extension of the same oolitic

limestone lithology underlying Miami and much of the southeastern Florida. The Keys represent coral reef colonies which built up during the Pleistocene Epoch as a result of fluctuations in sea level. The last major drop in sea level exposed the ancient reefs which make up the Keys today.

The Pleistocene age deposits underlying the subject property include, in descending order, the Miami Limestone (Miami Oolite) and the Key Largo Limestone. The Pleistocene deposits are underlain, in descending order, by the Hawthorn Group (Miocene age) and the Suwannee Limestone (Oliocene age).

The Miami Limestone (5 to 35 feet thick) is composed of white-cream to pale orange, crystalline, granular, and porous to cavernous oolitic limestone. The ooliths may be up to 2.0 millimeters (mm) in diameter. The existence and plentitude of corals and other marine fossils indicates deposition in a marine environment. The oolitic limestone is honeycombed with solution holes, giving it an extremely high permeability. Porosity generally increases with depth. The solution holes may connect with channels open to the ocean. This interconnection would allow for interchange of rainwater to the ocean and sea water into the oolitic limestone. The oolitic limestone in Key West extends to a depth of about 200 feet.

The coralline Key Largo Limestone underlies the Miami Limestone in the lower (oolite) keys. The Key Largo Limestone is a white to tan limestone, consisting of lime-sand, coral skeletal remains and invertebrate shells, marine plant and algal debris. The thickness of the Key Largo Limestone varies irregularly from 75 to over 200 feet.

The Hawthorn Group includes the Arcadia and Peace River Formations. The Hawthorn Group consists primarily of interbedded carbonates (limestone, dolostone), quartz sands and clays. The Hawthorn is considered to be a confining unit and is approximately 900 feet thick in the Key West area. The Suwannee Limestone is composed of highly fossiliferous, cream colored limestone and is found approximately 1,300 feet bls in the Key West area.

The Miami and Key Largo Limestones together comprise the surficial aquifer on the island. A freshwater lens exists on the western half of the island. No measurable fresh water lens exists in the eastern half of the island due to extensive areas of artificial fill. A fresh groundwater lens exists on the top of the saltwater due to the density differences. The lens exists under water-table conditions and is found between 5 to 8 feet bls in the site area. The water table fluctuates and the shape of the lens changes due to tidal effects. Precipitation is the primary type of recharge to the fresh water lens. The lens is approximately 5 feet thick (less than 250 milligrams per liter (mg/l) chloride) in the center of the island. The freshwater head is greater in the center of the island where land surface elevations are higher. Ground water moves from the center of the lens and discharges along beaches and salt ponds. Based on regional flow patterns, the surficial aquifer flow in the subject property area is to the southwest.

The surficial aquifer system in Key West is generally not considered to be an adequate or reliable source of potable water. As stated earlier, due to the density differences, a small freshwater lens floats on top the salt water. The freshwater lens on Key West has chloride concentrations varying from zero to 250 mg/l. It is underlain by a number of successively deeper transition zones. These transition zones become progressively more saline with depth and include a very slightly saline water zone (250-400 mg/l), and slightly saline water zone (400-

1,500 mg/l), a moderately saline water zone (1,500-5,000 mg/l) and very saline water zone (5,000-19,000 mg/l). The water table has been known to fluctuate from 0.8 feet above mean sea level (MSL) to 2.4 feet above MSL near the center of Old Town. Tidal effects greatly influence the depth to water table and configuration of the freshwater lens. The freshwater lens averages about 5 inches in thickness in the center of the western half (Old Town) of Key West. The thickness and amount of the freshwater is dependent on precipitation, discharge to the ocean, evapotranspiration and withdrawal. It is underlain by a freshwater-saltwater mixture. This mixture extends to a depth of about 40 feet deep in the center of the island. The salt-water interface (19,000 mg/l chloride) exists around this depth. A number of private wells may tap the fresh-water lens in the western half of the island. Most of them are used primarily for irrigation purposes. However, Florida Keys Aqueduct Authority (FKAA) and Monroe County Health Department (MCHD) report that an undetermined number of residents on the island refuse to hookup to the FKAA water lines and use private wells for portable water.

The Suwannee Limestone forms the upper part of the Floridan aquifer system in south Florida. This aquifer exists under artesian conditions. Water in this aquifer is saline and unsuitable as a potable water source.

3.2 Site Specific Geology

Based on the soil boring logs, the general subsurface soil statigraphy consists of two to three feet of medium to fine brown sand underlain by coral limestone to a depth of 12.0 feet bls, the maximum depth explored. Groundwater was encountered at depths ranging from approximately 3.6 to 4.7 feet bls.

3.3 Groundwater Assessment Results and Evaluation

Concentrations of VOC analytes acetone (PMW-3, PMW-5, PMW-7), benzene (PMW-1 and PMW-2), bromodichloromethane (PMW-3), n-butylbenzene (PMW-1, PMW-2, PMW-3, PMW-5, PMW-6), sec-butylbenzene (PMW-2 through PMW-7), tert-butylbenzene (PMW-5, PMW-6), chloroform (PMW-3, PMW-5), ethylbenzene (PMW-1 and PMW-2), isopropyl benzene (PMW-1, PMW-2, PMW-3, PMW-5, PMW-6, PMW7), p-isopropyltoluene (PMW-1 and PMW-2), n-propylbenzene (PMW-1 through PMW-7), styrene (PMW-1 and PMW-2), toluene (PMW-1 and PMW-2), 1,2,3-trichloropropane (PMW-1), 1,2,3-trimethylbenzene (PMW-1, PMW-2, PMW-3, PMW-6), 1,2,4-trimethylbenzene (PMW-1 and PMW-2), 1,3,5-trimethylbenzene (PMW-1 and PMW-2), and xylenes (PMW-1 and PMW-2) were detected above their respective laboratory MDLs, but below the FDEP GCTLs, except for bromodichloromethane (PMW-3), ethylbenzene (PMW-2), isopropylbenzene (PMW-1, PMW-2, PMW-3, PMW-5, PMW-6, PMW-7), 1,2,3-trichloropropane (PMW-1), 1,2,3-trimethylbenzene (PMW-1 and PMW-2), 1,2,4-trimethylbenzene (PMW-1 and PMW-2), 1,3,5-trimethylbenzene (PMW-1), and xylenes (PMW-1 and PMW-2). The analytes detected above the FDEP GCTLs were below their respective Natural Attenuation Default Concentrations (NADCs), except for isopropyl benzene at PMW-1 and PMW-2, and 1,2,4-trichloropropane at PMW-1. No other VOCs were detected above the laboratory MDLs in the groundwater samples collected.

Concentrations of PAH analytes acenaphthene (PMW-1 through PMW-7), acenaphthylene (PMW-1 through PMW-7), anthracene (PMW-1 through PMW-7), benzo(a)anthracene (PMW-1 and PMW-2), benzo(a)pyrene (PMW-2), benzo(b)fluoranthene (PMW-1 and PMW-2),

benzo(k)fluoranthene (PMW-1), benzo(g,h,i)perylene (PMW-2), chrysene (PMW-1 through PMW-3), fluoranthene (PMW-1 through PMW-6), fluorene (PMW-1 through PMW-7), indeno(1,2,3-cd)pyrene (PMW-2), naphthalene (PMW-1, PMW-2, PMW-3, PMW-6), phenanthrene (PMW-1 through PMW-7), pyrene (PMW-1 through PMW-7), 1-methylnaphthalene (PMW-1, PMW-2, PMW-3, PMW-5, PMW-6, PMW-7), and 2-methylnaphthalene (PMW-1, PMW-2, PMW-3, PMW-5, PMW-6, PMW-7) were detected above their respective laboratory MDLs, but below the FDEP GCTLs, except for acenaphthene (PMW-2), benzo(a)anthracene (PMW-1 and PMW-2), benzo(b)fluoranthene (PMW-2), naphthalene (PMW-1 and PMW-2), 1-methylnaphthalene and 2-methylnaphthalene (PMW-1, PMW-2, PMW-3, PMW-5 and PMW-6). The concentrations of naphthalene (PMW-1 and PMW-2), and 2-methylnaphthalene (PMW-1) were also detected above their respective NADCs. No other PAHs were detected above the laboratory MDLs in the groundwater samples collected.

Concentrations TRPHs were detected in all the groundwater samples collected above their respective laboratory MDLs, but below the FDEP GCTL, except for the sample collected at PMW-1. The TRPH concentration at PMW-1 was below the NADC.

A summary of the groundwater analytical results is presented in Table 1 and on Figure 3. The laboratory analytical results are presented in Appendix C.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

PM has conducted a site assessment for the subject property known as the Former Key West Gas and Electric Company located at 101-111 Geraldine Street in Key West, Monroe County, Florida in accordance with the requirements of Chapter 62-770, FAC. The SAR investigation scope was based upon PM's Phase II ESA and review of previous reports. Based upon the completion of this work, PM believes that the property has been thoroughly investigated and that all potential sources of contamination at the site have been evaluated.

In PM's opinion, the monitoring wells advanced and groundwater samples collected were adequate to address the former gas and electric plant operations on the subject property. Laboratory analytical results of the SAR completed identified the following:

- VOC analytes bromodichloromethane (PMW-3), ethylbenzene (PMW-2), isopropyl benzene (PMW-1 to PMW-3 and PMW-5 to PMW-7), 1,2,3-trichloropropane (PMW-1), 1,2,3-trimethylbenzene (PMW-1 and PMW-2), 1,2,4-trimethylbenzne (PMW-1 and PMW-2), 1,3,5-trimethylbenzene (PMW-1), and xylenes (PMW-1 and PMW-2) were identified in the groundwater samples collected at concentrations that exceeded the GCTL criteria as set forth in Chapter 62-777, FAC, but were below the NADCs. Concentrations of isopropyl benzene at PMW-1 (48.4 µg/l) and PMW-2 (12.0 µg/l) exceeded the NADCs. No other VOCs were detected above the GCTLs and/or NADCs in the groundwater samples collected at the subject property.

- PAH analytes acenaphthalene (PMW-2), benzo(a)anthracene (PMW-1 and PMW-2), benzo(b)fluoranthene (PMW-2), naphthalene (PMW-1 and PMW-2), 1-methylnaphthalene,

and 2-methylnaphthalene were identified in the groundwater samples collected at concentrations that exceed their respective GCTL criteria as set forth in Chapter 62-777, FAC, but were below the NADCs. Concentrations of naphthalene at PMW-1 (1,480 µg/l) and PMW-2 (219 µg/l), and 2-methylnaphthalene at PMW-2 (335 µg/l) exceeded their respective NADCs. No other PAHs were detected above the GCTLs and/or NADCs in the groundwater samples collected at the subject property.

- TRPH was identified in the groundwater sample collected PMW-1 at a concentration that exceeds the GCTL criteria as set forth in Chapter 62-777, FAC, but below the NADCs. No other TRPH concentrations were detected above the GCTLs in the groundwater samples collected at the subject property.

4.2 Recommendations

The borings, temporary monitoring wells, and permanent monitoring wells have investigated the known sources of VOCs and PAHs on the subject property. The SAR groundwater sampling event indicates that VOC and PAH groundwater impact is defined on the subject property, with the exception of the vicinity of PMW-1, where off-site migration is likely. Due to the tidal effects influencing the surficial groundwater flow, and a highly variable lateral water table gradient, solute transport may be a function of these fluctuating gradients, combined with molecular diffusion and lateral dispersion. A more detailed analysis on the localized groundwater flow and gradient is planned for the next monitoring event.

PM recommends the implementation of a Monitoring Only Program (MOP) to include quarterly monitoring of the groundwater for a minimum of one year. Additionally, based on the analytical results from PMW-1, the proximity to the property boundary, and the high tidal influence, additional wells may be required to further delineate the groundwater impact. The next quarterly sampling event is scheduled for the week of April 21, 2014.

This report has been reviewed for its completeness and accuracy. Please feel free to contact our office at (954) 924-1801 to discuss this report.

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Tables

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TABLE 1
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS, POLYNUCLEAR AROMATIC HYDROCARBONS, AND TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
101-111 GERALDINE STREET, KEY WEST, FLORIDA
PM PROJECT NO. 06-3668-4
FDEP Comet Site ID #303264

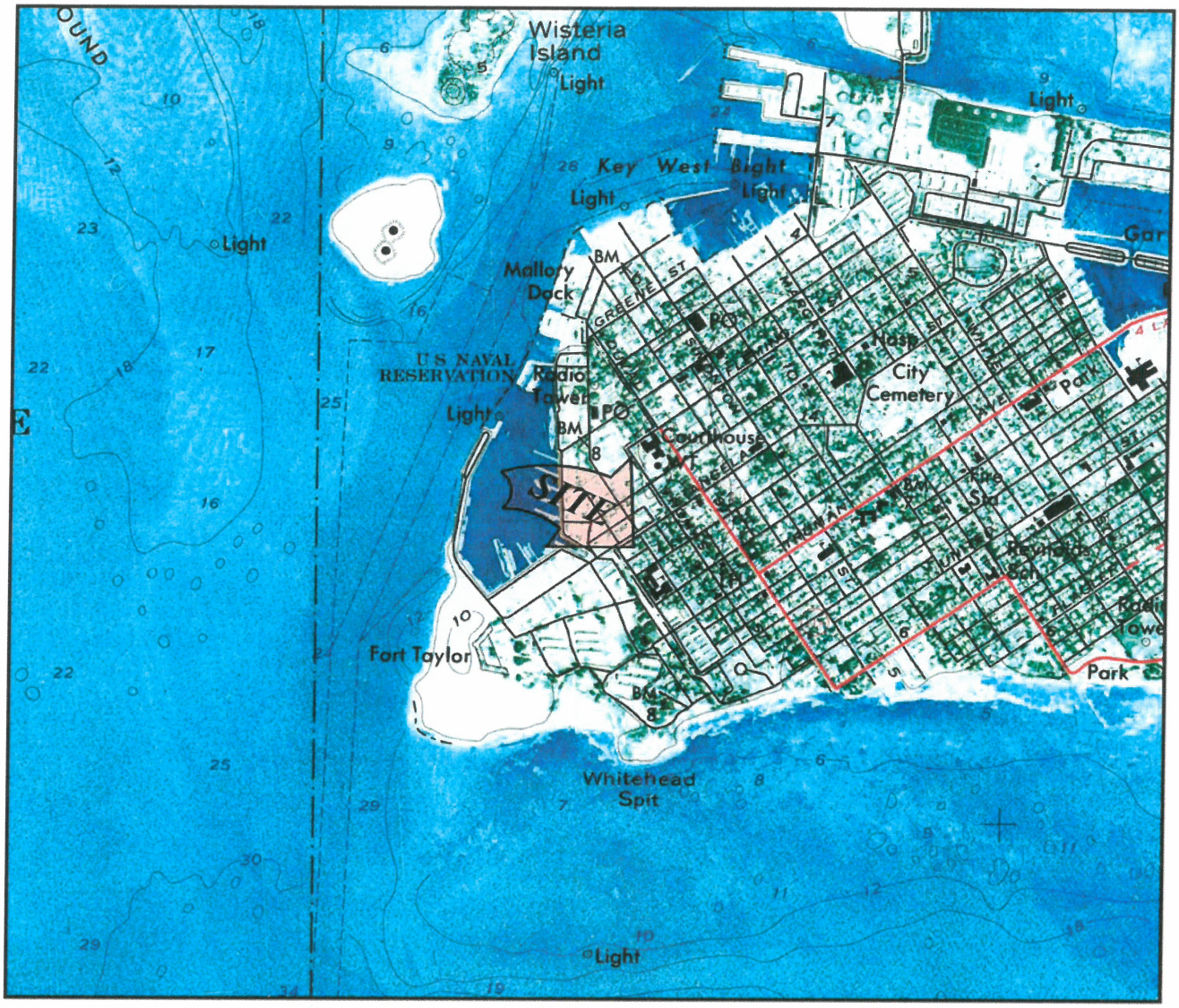
Volatile Organic Compounds, Polynuclear Aromatic Hydrocarbons, and Total Recoverable Petroleum Hydrocarbons (ug/L)				Acetone	Benzene	Bromodichloromethane	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Chloroform	Dibromochloromethane	Ethylbenzene	Isopropyl benzene	p-Isopropyltoluene	n-Propylbenzene	Styrene	Toluene	1,2,3-Trichloropropane	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Xylenes	Other VOCs
Chemical Abstract Service Number (CAS #)				67641	71432	75274	104518	135988	98066	67663	124481	100414	98828	99876	103651	100425	108883	96184	526738	95636	108678	1330207	Various
Sample ID	Sample Date	Screen Depth (bgs)	Depth to Groundwater (bgs)	VOCs																			
PM's Phase II ESA dated October 8, 2013																							
TMW-1	9/4/2013	2.0-12.0	4.2	5.0 U	0.1 U	**3.7**	4.7	0.50 U	0.50 U	2.7	1.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.36 U	1.0 U	0.50 U	0.50 U	0.50 U	ND
TMW-4	9/4/2013	2.0-12.0	3.5	9.7 I	0.1 U	**3.5**	0.50 U	0.50 U	0.50 U	2.1	0.26 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.36 U	1.0 U	4.1	0.50 U	0.50 U	ND
TMW-5D	9/4/2013	20.0-25.0	3.6	5.0 U	0.1 U	0.27 U	0.50 U	0.50 U	0.50 U	0.50 U	0.26 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.36 U	1.0 U	0.50 U	0.50 U	0.50 U	ND
TMW-6D	9/4/2013	20.0-25.0	4.0	5.0 U	0.1 U	0.27 U	0.50 U	0.50 U	0.50 U	0.50 U	0.26 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.36 U	1.0 U	0.50 U	0.50 U	0.50 U	ND
TMW-7	9/4/2013	2.0-12.0	4.6	5.0 U	0.1 U	**3.1**	5.2	1.1	0.50 U	1.6	0.26 U	0.50 U	**4.6**	0.50 U	5.1	0.50 U	0.50 U	0.36 U	1.0 U	4.1	0.50 U	0.50 U	ND
TMW-8	9/4/2013	2.0-12.0	4.4	5.0 U	0.38 I	0.27 U	0.50 U	0.50 U	0.50 U	0.50 U	0.26 U	**296**	**36.4**	10.3	17.6	5.0	5.6	**5.5**	**67.6**	**128**	**56.1**	**224**	ND
TMW-9	9/4/2013	1.7-11.7	3.7	5.0 U	0.1 U	0.27 U	6.0	2.7	0.50 U	0.59 I	0.26 U	0.50 U	**7.3**	0.50 U	9.2	0.50 U	0.50 U	0.36 U	1.1	5.2	0.62 I	0.88 I	ND
TMW-10	9/4/2013	2.0-12.0	4.2	5.0 U	0.1 U	0.27 U	6.0	1.9	0.50 U	0.50 U	0.26 U	0.50 U	**5.3**	0.50 U	7.5	0.50 U	0.50 U	0.36 U	1.0 U	0.50 U	0.50 U	0.50 U	ND
TMW-11	9/4/2013	2.0-12.0	4.6	5.0 U	0.1 U	0.27 U	0.50 U	0.50 U	0.50 U	0.50 U	0.26 U	0.50 U	**3.1**	0.50 U	2.4	0.50 U	0.50 U	0.36 U	1.0 U	0.50 U	0.50 U	0.50 U	ND
TMW-14	9/4/2013	1.3-11.3	2.7	5.0 U	0.1 U	0.27 U	0.50 U	0.50 U	0.50 U	0.50 U	0.26 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.38 U	1.0 U	0.50 U	0.50 U	0.50 U	ND
Site Assessment and 1st Quarter MOP dated March 3, 2014																							
PMW-1	1/28/2014	1.90-11.90	4.7	10.0 U	0.21 I	0.27 U	3.0	0.50 U	0.50 U	0.50 U	0.26 U	3.3	**48.4**	5.6	15.7	1.4	1.1	**2.4**	**61.6**	**86.3**	**85.2**	**71.9**	ND
PMW-2	1/28/2014	2.20-12.20	4.0	10.0 U	0.11 I	0.27 U	0.88 I	1.4	0.50 U	0.50 U	0.26 U	**38.4**	**12.0**	3.8	4.5	0.50 I	1.0	0.36 U	**18.7**	**29.0**	7.1	**26.9**	ND
PMW-3	1/28/2014	2.25-12.25	4.0	13.0 I	0.10 U	**0.69**	1.4	1.8	0.50 U	1.0	0.26 U	0.50 U	**4.4**	0.50 U	6.4	0.50 U	0.50 U	0.36 U	1.1	0.50 U	0.50 U	0.50 U	ND
PMW-4	1/28/2014	2.30-12.30	4.2	10.0 U	0.10 U	0.27 U	0.50 U	0.84 I	0.50 U	0.50 U	0.26 U	0.50 U	0.50 U	0.50 U	1.5	0.50 U	0.50 U	0.36 U	1.0 U	0.50 U	0.50 U	0.50 U	ND
PMW-5	1/28/2014	2.30-12.30	4.3	10.9 I	0.10 U	0.27 U	0.85 I	2.0	0.51 I	1.3	0.26 U	0.50 U	**3.6**	0.50 U	4.9	0.50 U	0.50 U	0.36 U	1.0 U	0.50 U	0.50 U	0.50 U	ND
PMW-6	1/28/2014	2.10-12.10	4.0	10.0 U	0.10 U	0.27 U	1.7	2.4	0.54 I	0.50 U	0.26 U	0.50 U	**3.9**	0.50 U	6.4	0.50 U	0.50 U	0.36 U	1.2	0.50 U	0.50 U	0.50 U	ND
PMW-7	1/28/2014	2.25-12.25	3.6	11.6 I	0.10 U	0.27 U	0.50 U	0.78 I	0.50 U	0.50 U	0.26 U	0.50 U	**1.1**	0.50 U	2.7	0.50 U	0.50 U	0.36 U	1.0 U	0.50 U	0.50 U	0.50 U	ND
Groundwater Cleanup Target Levels Chapter 62-777 of the Florida Administrative Code																							
Groundwater Criteria				6,300	1	0.6	NL	280	NL	70	0.4	30	0.8	NL	NL	100	40	0.02	10	10	10	20	Various
Natural Attenuation Default Concentrations				63,000	100	60	NL	2,800	NL	700	40	300	8	NL	NL	1,000	400	2	100	100	100	200	Various

Volatile Organic Compounds, Polynuclear Aromatic Hydrocarbons, and Total Recoverable Petroleum Hydrocarbons (ug/L)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Other PAHs	Total Recoverable Petroleum Hydrocarbons
Chemical Abstract Service Number (CAS #)	83329	208968	120127	56553	50328	205992	207089	191242	218019	53703	206440	86737	193395	91203	85018	129000	90120	91576	Various	Various
Sample ID	PAHs																			TRPH
PM's Phase II ESA dated October 8, 2013																				
TMW-1	0.56	0.33	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	2.4	0.025 U	1.0 U	1.9	0.025 U	1.0 I	1.0 U	ND	280
TMW-4	0.72	0.18	0.11	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	4.3	0.025 U	0.025 U	1.0 U	1.0 U	ND	66 I
TMW-5D	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	1.0 U	0.20	0.025 U	1.0 U	1.0 U	ND	59 U
TMW-6D	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	3.0	0.72	0.63	1.0 U	1.0 U	ND	59 U
TMW-7	1.3	0.34	0.12	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	3.0	0.025 U	4.7	2.9	0.025 U	5.7	1.0 U	ND	400
TMW-8	40.6	40.2	13.4	2.1	2.1	1.6	0.025 U	0.55	2.2	**0.20**	7.0	57.6	0.36	**2,400**	89.2	16.6	**543**	**560**	ND	**22,000**
TMW-9	2.4	0.65	0.18	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	5.5	0.025 U	**1,190**	5.6	0.025 U	**61.5**	**56.6**	ND	4,200
TMW-10	2.4	0.82	0.15	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	5.4	0.025 U	1.0 I	4.3	0.025 U	**133**	**140**	ND	3,300
TMW-11	1.1	0.20	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	1.7	0.025 U	2.1	1.9	0.025 U	11.8	4.7	ND	240
TMW-14	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	1.0 U	0.025 U	0.025 U	1.0 U	1.0 U	ND	60 U
Site Assessment and 1st Quarter MOP dated March 3, 2014																				
PMW-1	14.4	27.5	4.6	**0.16**	0.025 U	0.027 I	0.028 I	0.025 U	0.18	0.025 U	2.4	21.0	0.025 U	**1,480**	41.7	4.9	**259**	**335**	ND	**6,300**
PMW-2	**37.1**	11.2	5.5	**0.54**	0.14	**0.12**	0.025 U	0.043 I	0.49	0.025 U	5.8	9.7	0.026 I	**219**	55.0	12.1	**187**	**62.4**	ND	2,300
PMW-3	2.2	0.60	0.35	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.035 I	0.025 U	0.51	4.0	0.025 U	2.6	4.4	0.88	**55.1**	**55.2**	ND	930
PMW-4	0.48	0.18	0.12	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.047 I	1.1	0.025 U	1.0 U	0.37	0.072 I	1.0 U	1.0 U	ND	230
PMW-5	1.0	0.36	0.21	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.049 I	2.4	0.025 U	1.0 U	2.6	0.12	**35.5**	**46.6**	ND	810
PMW-6	2.1	0.67	0.28	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.077 I	3.9	0.025 U	2.4	4.2	0.10	**61.0**	**88.5**	ND	1,700
PMW-7	0.42	0.16	0.094 I	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	1.0	0.025 U	1.0 U	1.1	0.036 I	11.1	12.6	ND	340
Groundwater Cleanup Target Levels Chapter 62-777 of the Florida Administrative Code																				
Groundwater Criteria	20	210	2,100	0.05	0.2	0.05	0.5	210	4.8	0.005	280	280	0.05	14	210	210	28	28	Various	5,000
Natural Attenuation Default Concentrations	200	2,100	21,000	5	20	5	50	2,100	480	0.5	2,800	2,800	5	140	2,100	2,100	280	280	Various	50,000

Applicable Criteria Exceeded
BOLD Value Exceeds Applicable Criteria
ug/L Micrograms per Liter
bgs Below Ground Surface (feet)
ND Not detected at levels above the laboratory Method Detection Limit (MDL) or Minimum Quantitative Level (MQL)
I The reported value is between the laboratory MDL and the laboratory practical quantitation limit
U Indicates the compound was analyzed for, but not detected
NL Not Listed

Figures

PM ENVIRONMENTAL | Environmental & Engineering Services



FLORIDA QUADRANGLE LOCATION

MONROE COUNTY

SCALE 1:24,000

1 MILE 1/2 MILE 0 1 MILE

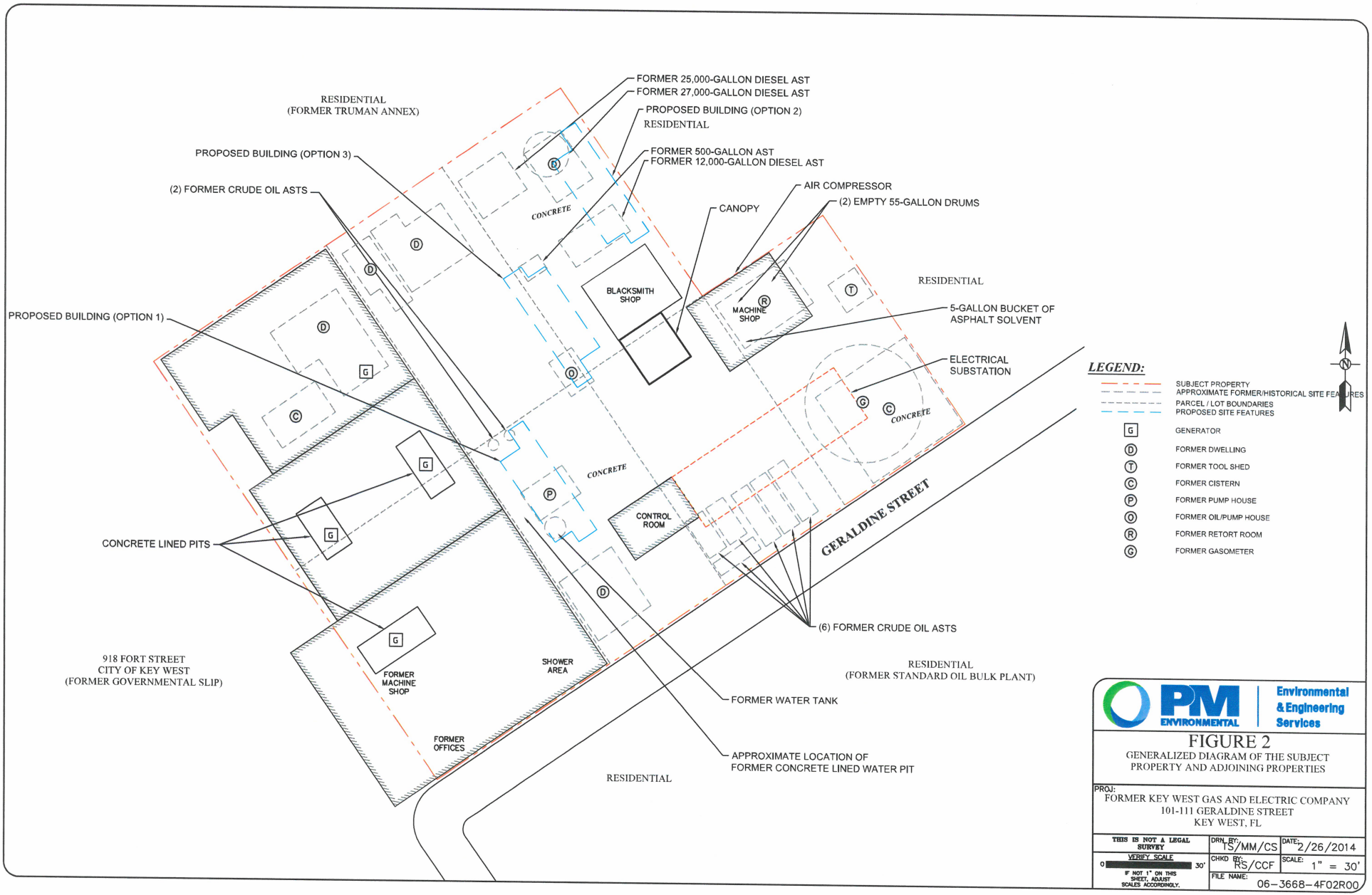
FIGURE 1

PROPERTY VICINITY MAP

USGS, 7.5 MINUTE SERIES

KEY WEST, FL QUADRANGLE, 1971.

PM ENVIRONMENTAL Environmental & Engineering Services	PROJ: FORMER KEY WEST GAS AND ELECTRIC COMPANY 101-111 GERALDINE STREET KEY WEST, FL	THIS IS NOT A LEGAL SURVEY VERIFY SCALE 0 2,000' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	DRN BY: TS/CS	DATE: 2/10/2014
			CHKD BY: RS/CCF	SCALE: 1" = 2,000'
			FILE NAME: 06-3668-4F01R00	



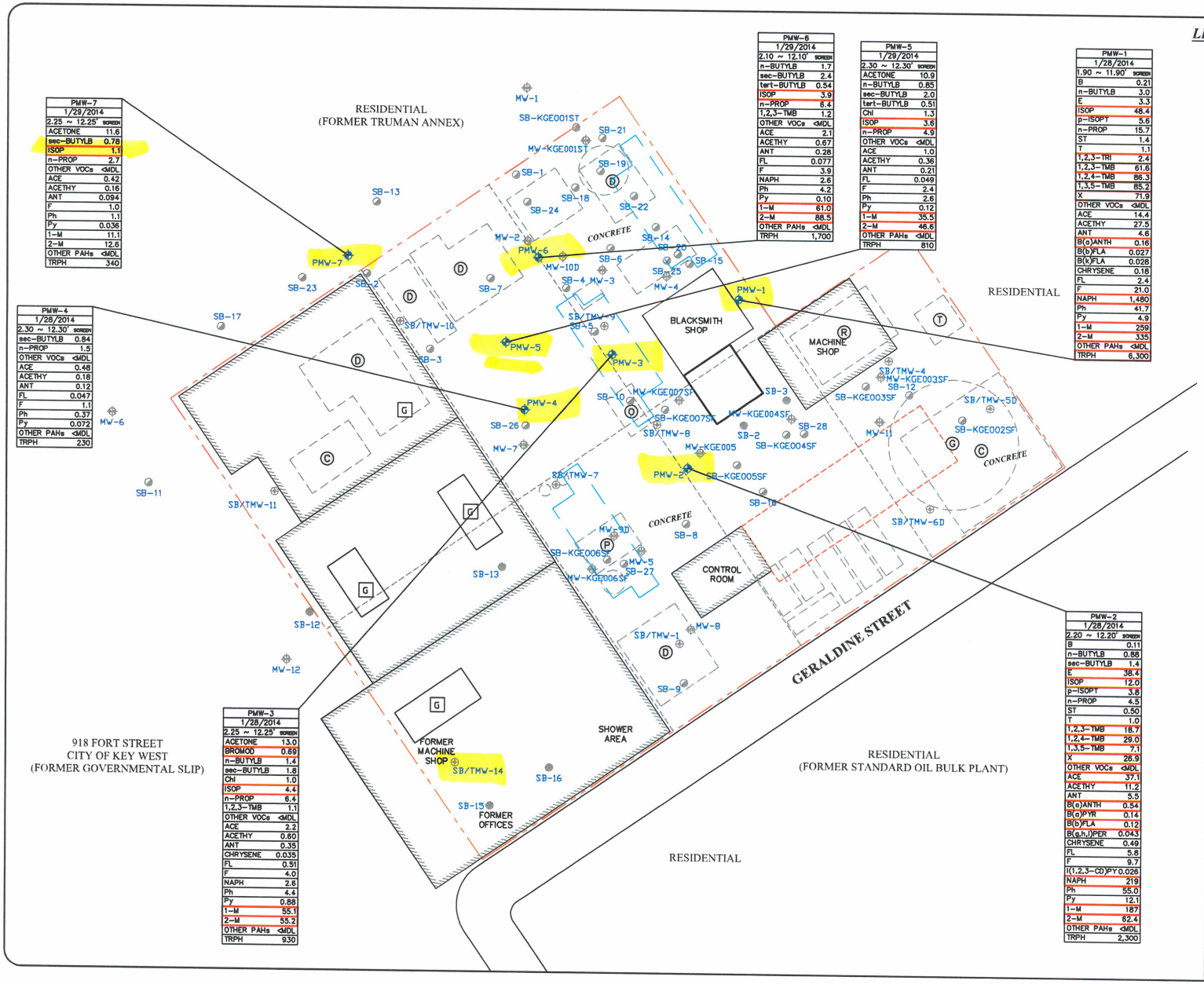
PM ENVIRONMENTAL | Environmental & Engineering Services

FIGURE 2

GENERALIZED DIAGRAM OF THE SUBJECT PROPERTY AND ADJOINING PROPERTIES

PROJ:
FORMER KEY WEST GAS AND ELECTRIC COMPANY
101-111 GERALDINE STREET
KEY WEST, FL

THIS IS NOT A LEGAL SURVEY	DRN BY: TS/MM/CS	DATE: 2/26/2014
VERIFY SCALE 0 30' IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.	CHKD BY: RS/CCF	SCALE: 1" = 30'
	FILE NAME: 06-3668-4F02R00	



PMW-7	
1/29/2014	
2.25 ~ 12.25' SCREEN	
ACETONE	11.6
sec-BUTYLB	0.78
ISOP	1.1
n-PROP	2.7
OTHER VOCs	<MDL
ACE	0.42
ACETHY	0.16
ANT	0.094
F	1.0
Ph	1.1
Py	0.036
1-M	11.1
2-M	12.6
OTHER PAHs	<MDL
TRPH	340

PMW-4	
1/28/2014	
2.30 ~ 12.30' SCREEN	
sec-BUTYLB	0.84
n-PROP	1.5
OTHER VOCs	<MDL
ACE	0.48
ACETHY	0.18
ANT	0.12
FL	0.047
F	1.1
Ph	0.37
Py	0.072
OTHER PAHs	<MDL
TRPH	230

PMW-3	
1/28/2014	
2.25 ~ 12.25' SCREEN	
ACETONE	13.0
BROMOD	0.69
n-BUTYLB	1.4
sec-BUTYLB	1.8
Chl	1.0
ISOP	4.4
n-PROP	6.4
1,2,3-TMB	1.1
OTHER VOCs	<MDL
ACE	2.2
ACETHY	0.60
ANT	0.35
CHRYSENE	0.035
FL	0.51
F	4.0
NAPH	2.6
Ph	4.4
Py	0.88
1-M	55.1
2-M	55.2
OTHER PAHs	<MDL
TRPH	930

PMW-6	
1/29/2014	
2.10 ~ 12.10' SCREEN	
n-BUTYLB	1.7
sec-BUTYLB	2.4
tert-BUTYLB	0.54
ISOP	3.9
n-PROP	6.4
1,2,3-TMB	1.2
OTHER VOCs	<MDL
ACE	2.1
ACETHY	0.67
ANT	0.28
FL	0.077
F	3.9
NAPH	2.6
Ph	4.2
Py	0.10
1-M	61.0
2-M	88.5
OTHER PAHs	<MDL
TRPH	1,700

PMW-5	
1/28/2014	
2.30 ~ 12.30' SCREEN	
ACETONE	10.9
n-BUTYLB	0.85
sec-BUTYLB	2.0
tert-BUTYLB	0.51
Chl	1.3
ISOP	3.6
n-PROP	4.9
OTHER VOCs	<MDL
ACE	1.0
ACETHY	0.36
ANT	0.21
FL	0.049
F	2.4
Ph	2.6
Py	0.12
1-M	35.5
2-M	46.6
OTHER PAHs	<MDL
TRPH	810

PMW-1	
1/28/2014	
1.90 ~ 11.90' SCREEN	
B	0.21
n-BUTYLB	3.0
E	3.3
ISOP	48.4
p-ISOPT	5.6
n-PROP	15.7
ST	1.4
T	1.1
1,2,3-TRI	2.4
1,2,3-TMB	61.6
1,2,4-TMB	86.3
1,3,5-TMB	85.2
X	71.9
OTHER VOCs	<MDL
ACE	14.4
ACETHY	27.5
ANT	4.6
B(a)ANTH	0.16
B(b)FLA	0.027
B(k)FLA	0.028
CHRYSENE	0.18
FL	2.4
F	21.0
NAPH	1,480
Ph	41.7
Py	4.9
1-M	259
2-M	335
OTHER PAHs	<MDL
TRPH	6,300

PMW-2	
1/28/2014	
2.20 ~ 12.20' SCREEN	
B	0.11
n-BUTYLB	0.88
sec-BUTYLB	1.4
E	38.4
ISOP	12.0
p-ISOPT	3.8
n-PROP	4.5
ST	0.50
T	1.0
1,2,3-TMB	18.7
1,2,4-TMB	29.0
1,3,5-TMB	7.1
X	28.9
OTHER VOCs	<MDL
ACE	37.1
ACETHY	11.2
ANT	5.5
B(a)ANTH	0.54
B(a)PYR	0.14
B(b)FLA	0.12
B(g,h,i)PER	0.043
CHRYSENE	0.49
FL	5.8
F	9.7
I(1,2,3-CD)PY	0.026
NAPH	219
Ph	55.0
Py	12.1
1-M	187
2-M	62.4
OTHER PAHs	<MDL
TRPH	2,300

LEGEND:

- SUBJECT PROPERTY
- APPROXIMATE FORMER/HISTORICAL SITE FEATURES
- PARCEL / LOT BOUNDARIES
- PROPOSED SITE FEATURES
- G — GENERATOR
- D — FORMER DWELLING
- T — FORMER TOOL SHED
- C — FORMER CISTERN
- P — FORMER PUMP HOUSE
- O — FORMER OIL/PUMP HOUSE
- R — FORMER RETORT ROOM
- G — FORMER GASOMETER
- FORMER SOIL BORING
- FORMER MONITORING WELL
- FORMER SOIL BORING
- FORMER SOIL BORING / TEMPORARY MONITORING WELL
- MONITORING WELL

B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	XYLENES
F	FLUORENE
Ph	PHENANTHRENE
Py	PYRENE
ST	STYRENE
FL	FLUORANTHENE
ANT	ANTHRACENE
ACE	ACENAPHTHENE
Chl	CHLOROFORM
ACETHY	ACENAPHTHYLENE
B(a)ANTH	BENZO(a)ANTHRACENE
B(a)PYR	BENZO(a)PYRENE
B(b)FLA	BENZO(b)FLUORANTHENE
B(g,h,i)PER	BENZO(g,h,i)PERYLENE
B(k)FLA	BENZO(k)FLUORANTHENE
1-M	1-METHYLNAPHTHALENE
2-M	2-METHYLNAPHTHALENE
NAPH	NAPHTHALENE
1,2,3-TRI	1,2,3-TRICHLOROPROPANE
1,2,4-TMB	1,2,4-TRIMETHYLBENZENE
1,3,5-TMB	1,3,5-TRIMETHYLBENZENE
1,2,3-TMB	1,2,3-TRIMETHYLBENZENE
I(1,2,3-CD)PY	INDENO(1,2,3,CD)PYRENE
ISOP	ISOPROPYLBENZENE
p-ISOPT	p-ISOPROPYLTOLUENE
n-PROP	n-PROPYLBENZENE
n-BUTYLB	n-BUTYLBENZENE
sec-BUTYLB	sec-BUTYLBENZENE
tert-BUTYLB	tert-BUTYLBENZENE
BROMOD	BROMODICHLOROMETHANE
VOCs	VOLATILE ORGANIC COMPOUNDS
PAHs	POLYNUCLEAR AROMATIC COMPOUNDS
TRPH	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
MDL	METHOD DETECTION LIMIT
UNITs	µg/L

VALUE EXCEEDS APPLICABLE CRITERIA

NOTES: REFER TO TABLES FOR SPECIFIC COMPOUNDS ANALYZED

PM ENVIRONMENTAL — Environmental & Engineering Services

FIGURE 3

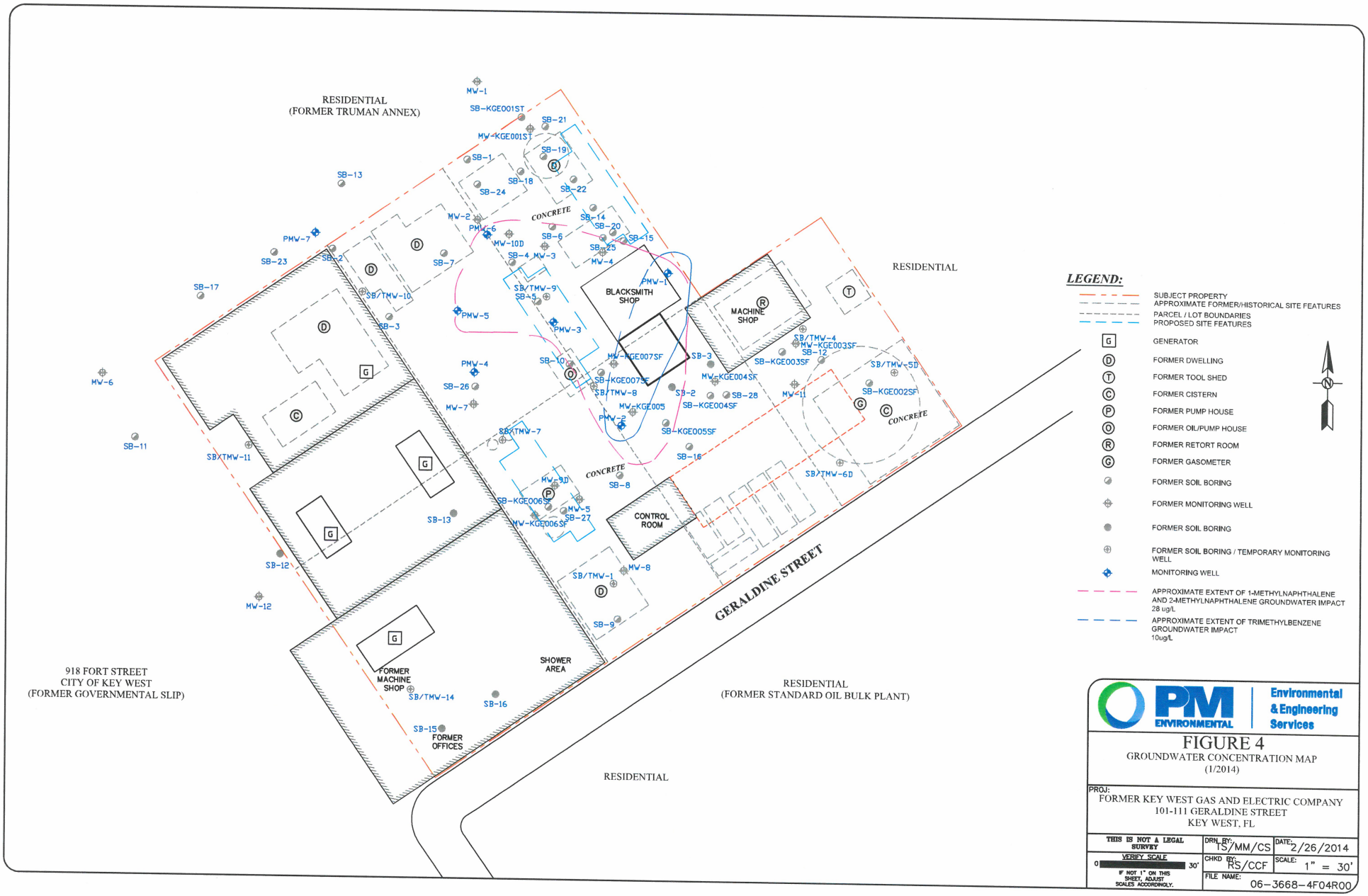
SOIL BORING/MONITORING WELL LOCATION MAP WITH GROUNDWATER ANALYTICAL RESULTS

PROJ: FORMER KEY WEST GAS AND ELECTRIC COMPANY
101-111 GERALDINE STREET
KEY WEST, FL

THIS IS NOT A LEGAL SURVEY

VERIFY SCALE 0 — 30'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRN BY: TS/MM/CS
DATE: 2/17/2014
CHKD BY: RS/CCF
SCALE: 1" = 30'
FILE NAME: 06-3668-4F03R00


RESIDENTIAL
(FORMER TRUMAN ANNEX)
RESIDENTIAL
918 FORT STREET
CITY OF KEY WEST
(FORMER GOVERNMENTAL SLIP)
RESIDENTIAL
(FORMER STANDARD OIL BULK PLANT)
RESIDENTIAL
GERALDINE STREET
BLACKSMITH SHOP
MACHINE SHOP
CONTROL ROOM
SHOWER AREA
FORMER MACHINE SHOP
FORMER OFFICES
CONCRETE
LEGEND:
SUBJECT PROPERTY
APPROXIMATE FORMER/HISTORICAL SITE FEATURES
PARCEL / LOT BOUNDARIES
PROPOSED SITE FEATURES
GENERATOR
FORMER DWELLING
FORMER TOOL SHED
FORMER CISTERN
FORMER PUMP HOUSE
FORMER OIL/PUMP HOUSE
FORMER RETORT ROOM
FORMER GASOMETER
FORMER SOIL BORING
FORMER MONITORING WELL
FORMER SOIL BORING
FORMER SOIL BORING / TEMPORARY MONITORING WELL
MONITORING WELL
APPROXIMATE EXTENT OF 1-METHYLNAPHTHALENE AND 2-METHYLNAPHTHALENE GROUNDWATER IMPACT 28 ug/L
APPROXIMATE EXTENT OF TRIMETHYLBENZENE GROUNDWATER IMPACT 10ug/L
PM ENVIRONMENTAL
Environmental & Engineering Services
FIGURE 4
GROUNDWATER CONCENTRATION MAP
(1/2014)
PROJ:
FORMER KEY WEST GAS AND ELECTRIC COMPANY
101-111 GERALDINE STREET
KEY WEST, FL
THIS IS NOT A LEGAL SURVEY
VERIFY SCALE
0 30'
IF NOT 1" ON THIS SHEET, ADJUST SCALES ACCORDINGLY.
DRN BY: TS/MM/CS
DATE: 2/26/2014
CHKD BY: RS/CCF
SCALE: 1" = 30'
FILE NAME: 06-3668-4F04R00

Appendix A

PM ENVIRONMENTAL | Environmental & Engineering Services

Well Log: .

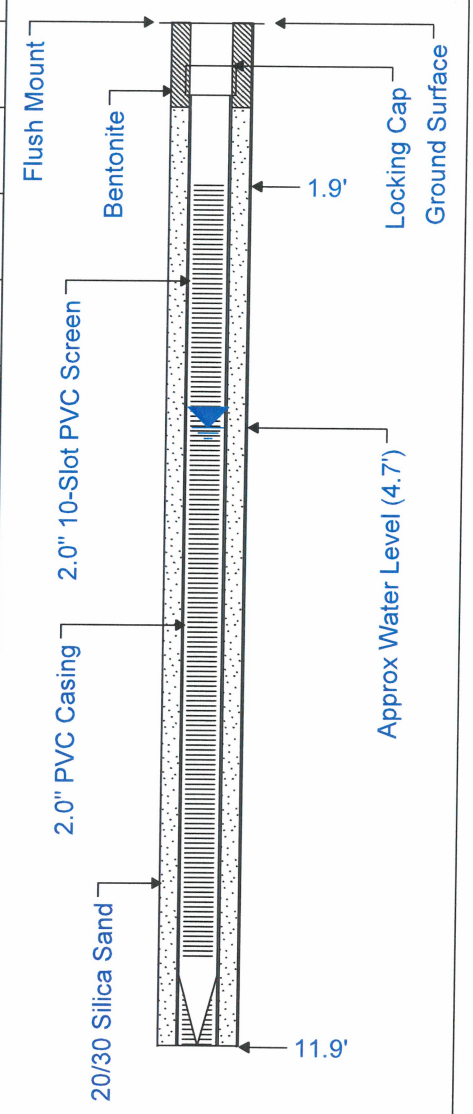
Project No.: 06-3668-4 **Well No.:** PMW-1

Project Name: Former Key West Gas & Electric **Date Drilled:** 1/27/2014

Facility ID#: **Drill Rig:** Geoprobe

Logged By: CCF **Sampling Method:**

Depth (ft.)	Boring Profile	Description and Comments	Sample # Depth	Blow Counts	FID (ppm)
		Ground Surface			
0		***SP- SAND*** Dark Brown, fine		-	0.0
				-	0.0
2		***SP- SAND*** Gray, fine		-	0.0
		LS- LIMESTONE (saturated)		-	0.0
4				-	0.0
				-	0.0
6				-	0.0
				-	0.0
8				-	0.0
				-	0.0
10				-	0.0
				-	0.0
12				-	0.0



Completion Notes: EOB @ 12' bgs.

1. The indicated stratification lines are approximate in situ. The transitions between materials may be gradual.
2. Boring backfilled with natural soils unless otherwise noted

Sheet: 1 of 1

Well Log: .

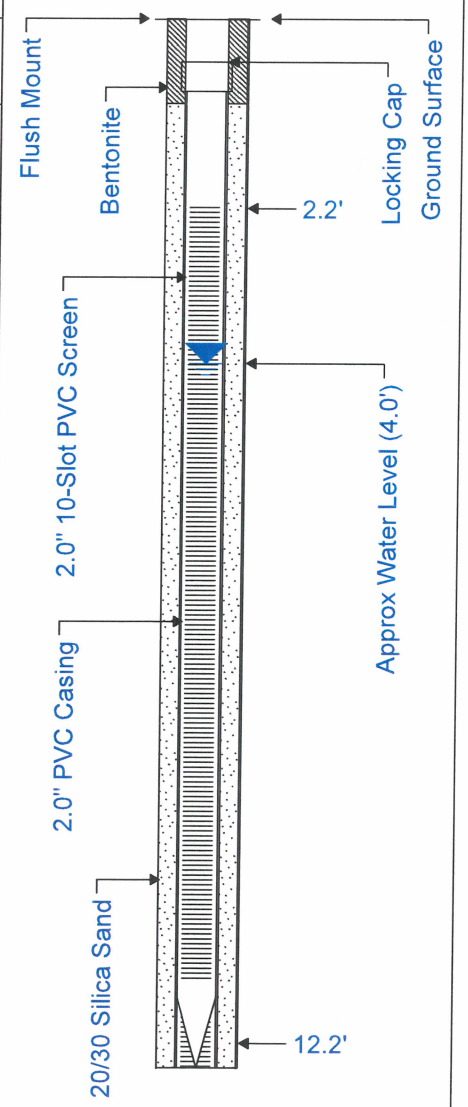
Project No.: 06-3668-4 **Well No.:** PMW-2

Project Name: Former Key West Gas & Electric **Date Drilled:** 1/27/2014

Facility ID#: **Drill Rig:** Geoprobe

Logged By: CCF **Sampling Method:**

Depth (ft.)	Boring Profile	Description and Comments	Sample # Depth	Blow Counts	FID (ppm)
		Ground Surface			
0		***SP- SAND*** Dark Brown, fine		-	0.0
				-	0.0
2		***SP- SAND*** Gray, fine		-	0.0
		LS- LIMESTONE (saturated)		-	0.0
4				-	0.0
				-	0.0
6				-	0.0
				-	0.0
8				-	0.0
				-	0.0
10				-	0.0
				-	0.0
12				-	0.0



Completion Notes: EOB @ 12' bgs.

1. The indicated stratification lines are approximate in situ. The transitions between materials may be gradual.
2. Boring backfilled with natural soils unless otherwise noted

Sheet: 1 of 1

Well Log: .

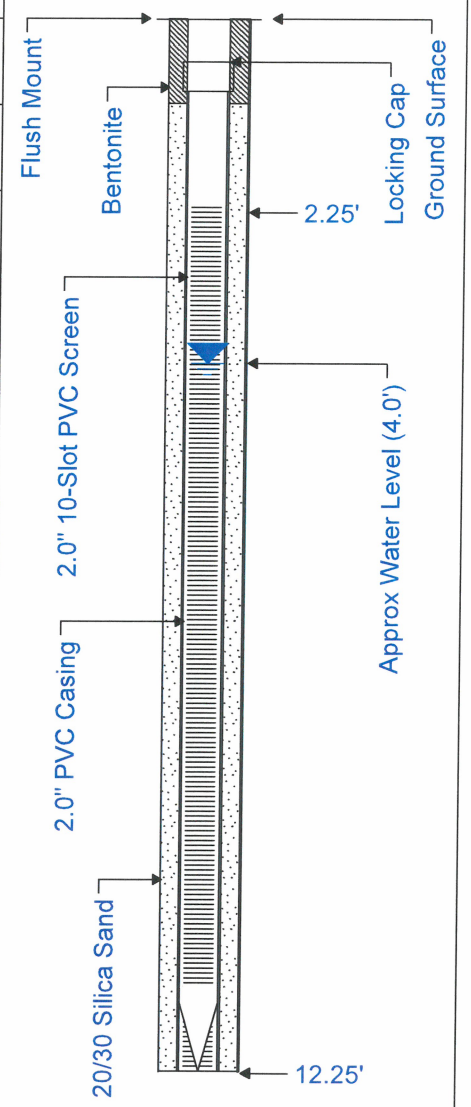
Project No.: 06-3668-4 **Well No.:** PMW-3

Project Name: Former Key West Gas & Electric **Date Drilled:** 1/27/2014

Facility ID#: **Drill Rig:** Geoprobe

Logged By: CCF **Sampling Method:**

SUBSURFACE PROFILE			SAMPLE			
Depth (ft.)	Boring Profile	Description and Comments	Sample # Depth	Blow Counts	FID (ppm)	Well Completion Details
0		Ground Surface				
		SP- SAND Dark Brown, fine		-	0.0	
				-	0.0	
2		***SP- SAND*** Gray, fine		-	0.0	
		LS- LIMESTONE (saturated)		-	0.0	
4				-	0.0	
				-	0.0	
6				-	0.0	
				-	0.0	
8				-	0.0	
				-	0.0	
10				-	0.0	
				-	0.0	
12						



Completion Notes: EOB @ 12' bgs.

1. The indicated stratification lines are approximate in situ. The transitions between materials may be gradual.
2. Boring backfilled with natural soils unless otherwise noted

Well Log: .

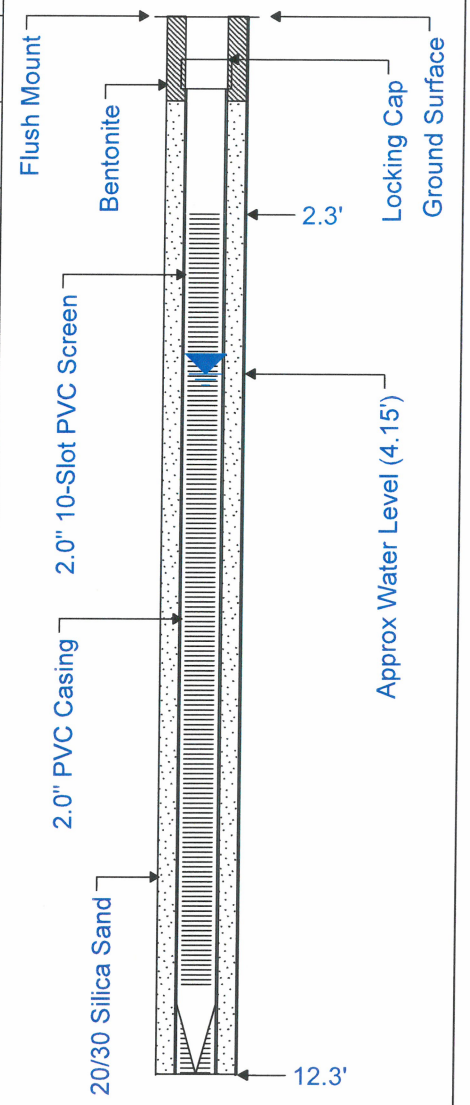
Project No.: 06-3668-4 **Well No.:** PMW-4

Project Name: Former Key West Gas & Electric **Date Drilled:** 1/27/2014

Facility ID#: **Drill Rig:** Geoprobe

Logged By: CCF **Sampling Method:**

SUBSURFACE PROFILE			SAMPLE			
Depth (ft.)	Boring Profile	Description and Comments	Sample # Depth	Blow Counts	FID (ppm)	Well Completion Details
0		Ground Surface				
		SP- SAND Dark Brown, fine		-	0.0	
				-	0.0	
2		**SP- SAND** Gray, fine		-	0.0	
		LS- LIMESTONE (saturated)		-	0.0	
4				-	0.0	
				-	0.0	
6				-	0.0	
				-	0.0	
8				-	0.0	
				-	0.0	
10				-	0.0	
				-	0.0	
12				-	0.0	



Completion Notes: EOB @ 12' bgs.

1. The indicated stratification lines are approximate in situ. The transitions between materials may be gradual.
2. Boring backfilled with natural soils unless otherwise noted

Well Log: .

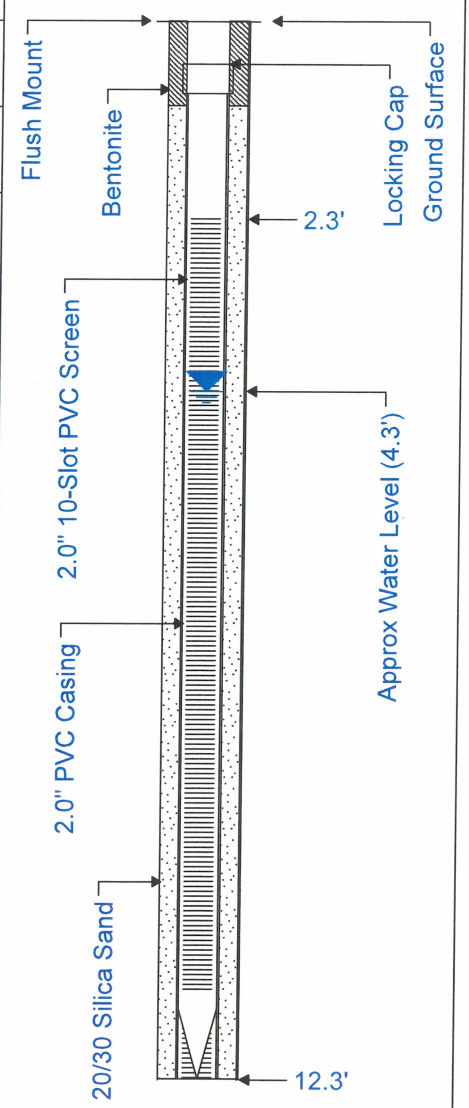
Project No.: 06-3668-4 **Well No.:** PMW-5

Project Name: Former Key West Gas & Electric **Date Drilled:** 1/27/2014

Facility ID#: **Drill Rig:** Geoprobe

Logged By: CCF **Sampling Method:**

SUBSURFACE PROFILE			SAMPLE			
Depth (ft.)	Boring Profile	Description and Comments	Sample # Depth	Blow Counts	FID (ppm)	Well Completion Details
		Ground Surface				
0		**SP- SAND** Dark Brown, fine		-	0.0	
				-	0.0	
2		**SP- SAND** Gray, fine		-	0.0	
		LS- LIMESTONE (saturated)		-	0.0	
4				-	0.0	
				-	0.0	
6				-	0.0	
				-	0.0	
8				-	0.0	
				-	0.0	
10				-	0.0	
				-	0.0	
12				-	0.0	



Completion Notes: EOB @ 12' bgs.

1. The indicated stratification lines are approximate in situ. The transitions between materials may be gradual.
2. Boring backfilled with natural soils unless otherwise noted

Well Log: .

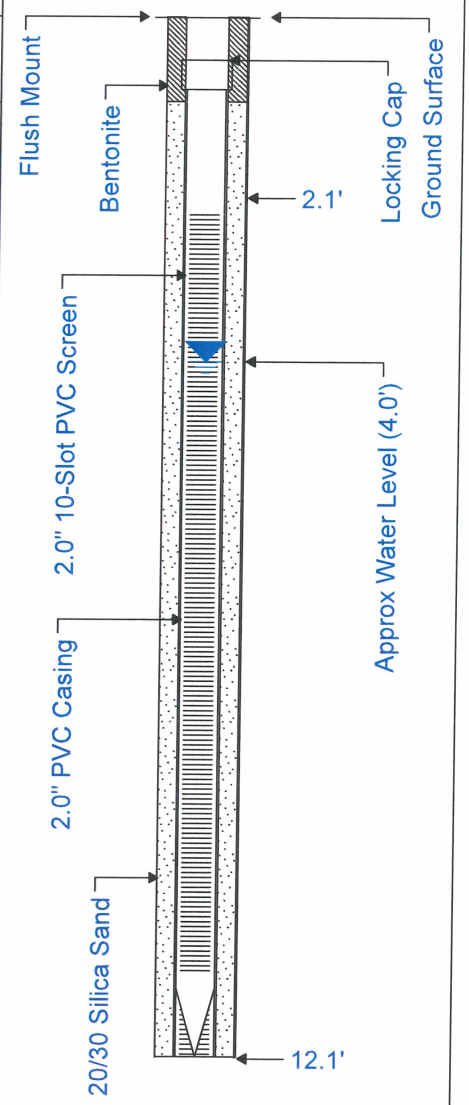
Project No.: 06-3668-4 **Well No.:** PMW-6

Project Name: Former Key West Gas & Electric **Date Drilled:** 1/27/2014

Facility ID#: **Drill Rig:** Geoprobe

Logged By: CCF **Sampling Method:**

SUBSURFACE PROFILE			SAMPLE			
Depth (ft.)	Boring Profile	Description and Comments	Sample # Depth	Blow Counts	FID (ppm)	Well Completion Details
0		Ground Surface				
		SP- SAND Dark Brown, fine		-	0.0	
				-	0.0	
2		**SP- SAND** Gray, fine		-	0.0	
		LS- LIMESTONE (saturated)		-	0.0	
4				-	0.0	
				-	0.0	
6				-	0.0	
				-	0.0	
8				-	0.0	
				-	0.0	
10				-	0.0	
				-	0.0	
12				-	0.0	



Completion Notes: EOB @ 12' bgs.

1. The indicated stratification lines are approximate in situ. The transitions between materials may be gradual.
2. Boring backfilled with natural soils unless otherwise noted

Well Log: .

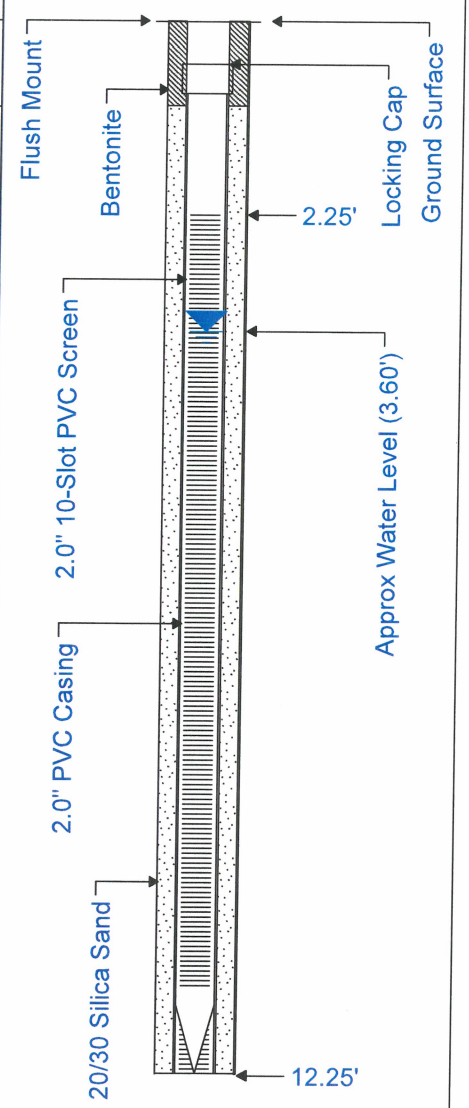
Project No.: 06-3668-4 **Well No.:** PMW-7

Project Name: Former Key West Gas & Electric **Date Drilled:** 1/27/2014

Facility ID#: **Drill Rig:** Geoprobe

Logged By: CCF **Sampling Method:**

SUBSURFACE PROFILE			SAMPLE			Well Completion Details
Depth (ft.)	Boring Profile	Description and Comments	Sample # Depth	Blow Counts	FID (ppm)	
0		Ground Surface				
		SP- SAND Dark Brown, fine		-	0.0	
				-	0.0	
2		***SP- SAND*** Gray, fine		-	0.0	
		LS- LIMESTONE (saturated)		-	0.0	
4				-	0.0	
				-	0.0	
6				-	0.0	
				-	0.0	
8				-	0.0	
				-	0.0	
10				-	0.0	
				-	0.0	
12						



Completion Notes: EOB @ 12' bgs.

1. The indicated stratification lines are approximate in situ. The transitions between materials may be gradual.
2. Boring backfilled with natural soils unless otherwise noted