STATE OF FLORIDA
MANUFACTURED GAS PLANT
AKA: COAL GASIFICATION PLANT
AKA: TOWN GAS PLANT
ASSESSMENT AND REMEDIATION STATUS

Prepared By:
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Division of Waste Management
Waste Clean-up Section
DoD, Brownfields and CERCLA Programs

A. James McCarthy Jr., P.G
Professional Geologist II
February 3, 2019
STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
February 2019

Introduction

Harry Leith-Ross (1886 - 1973, New Hope, Pennsylvania)

“Gas Works”
Watercolor on paper
20 x 26 inches
Signed at lower right
Private collection, Bucks County, Pennsylvania

In September 1985, the Florida Department of Environmental Regulation, now FDEP, Site Screening Superfund subsection (CERCLA Group) was tasked by then Bureau Chief Bill Buzick to identify and conduct Preliminary Assessments (PAs) at Florida’s known and unknown manufactured gas plant (MGP) sites. A legacy of the “Gas Light” era, these plants have also been referred to as “coal gas”, “coal gasification plants” or “Town Gas Plants”. This request was spurred by the discovery of coal tar contamination at the People’s Gas facility in North Miami Beach. Through a heating process, MPGs used coal (or coke); steam and a gasification agent (naphtha, Bunker C fuel oil, diesel fuel No. 6) to produce a combustible gas (hydrogen & carbon monoxide) for City street gas lights, home lighting and stoves. These plants were often municipally owned. However, they were often franchised out to private utilities. These plants operated in Florida from the late 1880’s to the late 1950’s. Most MGP operations ceased in Florida by 1959 with the completion of the natural gas transmission lines. Waste products from MGP operations included tars, aqueous ammoniacal liquors, cyanide “Prussian Blue” and heavy metals. Coal tar contains a number of volatile organic compounds including benzene, ethyl benzene, toluene & xylene (BTEX) and polycyclic aromatic hydrocarbons (PAHs) [i.e. benzo [a] pyrene]. Housekeeping practices at the MGPs were very careless. Tar and other waste products were often discharged directly to the ground and/or into nearby streams. Many of the storage tanks (tar water separators, pits, and Gasometers) were prone to leaking. As a result, soil, surface water/sediment and groundwater contamination was fairly common at the MGPs.
Through the use of the EPA’s Radian Corp. 1984 Report on Survey of Tar Disposal, Locations of Town Gas Producers, Brown’s Directories of American Gas Companies (1887-1944, 1950, 1959 & 1960), Sanborn Fire Insurance Maps, library research and just plain old-fashioned detective work, the FDER/FDEP CERCLA Group initially identified 24 locations of Florida MGPs. The list ultimately grew to 29 MGP and MGP Dump sites. However, two of the suspected MGP sites turned out to be a transfer station (Deland Gas Systems) and the other produced only Hasche gas (Deland Hasche Gas Plant) with no detected MGP impacts. Five of the MGP sites are currently under EPA Region 4 lead as Superfund Alternative Sites (i.e. West Florida Natural Gas, Cascade Park Gasification Plant/Cascade Landfill, Orlando Gasification Plant, Sanford Gasification Plant & St. Augustine Gas Plant). The first list of Florida MGP locations and status was generated in January 1990. This list included the location, owner and status of assessment and remediation. This list was subsequently updated in October 1990, September 2003, February 2004, May 2009 and March 2013. Information on this list was derived from the Departments Oculus and ERIC databases, FDEP’s District offices, EPA Region 4, the EPA Superfund Information Systems and Superfund NPL/ Superfund Alternative site websites. An explanation of the Columns (from left to right) in the Tables follows:

- Column 1 MGP Address, Off-site MGP Impacted Address and Current Activities/Business – includes street number, City and what business and/or activities are currently on site for the former MGP and any off-site impacted properties (via Google Maps/Street View).
- Column 2 District – FDEP District in which MGP site exists.
- Column 3 EPA ID #, FDEP ID #s and MDERM-RER (Miami-Dade Co. Sites) Folio# - EPA ID # is for CERCLA Superfund related work. FDEP ID #s are used on the Oculus/ERIC databases. MGP sites in Miami-Dade County are identified by MDERM-RER Folio #s.
- Column 4 Gas Type & Years of Operation - Using documents from Browns Annual Directories of American Gas Companies (and site file). Also, lists what type of gas manufacturing process the MGPs used, (i.e., Coal Carbonization, Water Gas, Carbureted Water Gas and/or Oil Gas). Also, the years the MGP was in operation manufacturing gas using one of the four processes.
- Column 5 CERCLA Assessments (PAs, APAs, SIs, etc.) List the month/year and type of CERCLA directed assessment reports, whether they were conducted by the FDEP CERCLA Group or EPA Region 4.
- Column 6: Comments: Re: EPA. County and/or State Enforcement, Activities, Major Documents and Milestones. Arranged chronologically and commonly grouped in decades for MGPs with a long site history. Please note this column does not include the various FDEP, EPA or local government review comments to PRPs and RPs on the various draft Workplans, Reports, etc.

Please refer to the Key to Abbreviations and Acronyms below for definitions of the abbreviations. The reader is encouraged to review the site files on FDEP’s Oculus™/ERIC databases or County websites (Broward, Miami-Dade) for more detailed information about the MGPs.

Contributors:
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Allen W. Hatheway, Ph.D, P.G – International Consultant
STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
February 2019

COAL GAS PLANT

Courtesy: Dr. A.W. Hatheway’s Former Manufactured Gas Plant web site
STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
February 2019

Enlarged gas plant supplies increasing demands for service at Orlando and Winter Park.

Orlando and Tampa MGPs
<table>
<thead>
<tr>
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<th>FDEP Site ID #</th>
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<th>Gas Type &amp; Years of MGP Operation</th>
<th>CERCLA Assessments (PAx, APA’s, SI’s, etc.)</th>
<th>Comments:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Former CSX Property-Depot Park 874 S.E 4th Street, Gainesville FL 32601 Currently: Former MGP; As of February 2017, an Artist Workshop &amp; vacant land (Fmr. Hortonsphere &amp; Holder Tanks). Off-site former CSX MGP impacted property: Depot Park including pond areas, walking trails, play area, Cade Museum and a nature preserve; Also, a restaurant, bar and general store along SE Depot Ave.</td>
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<td>Main Street MGP/Parkview Inn (Former Citizens MGP) Aka: EHT/Confederate Park 901 North Main St. (MGP)956 Hubbard Street (Confederate Park) Jacksonville, FL 32202/32286 Currently: Former MGP - Parkview Inn now mostly demolished with remnants of the parking garage associated with former hotel. Off-site MGP impacted area: Confederate Park with Hogan Creek, a pond and monument</td>
<td>FLSFN0407139 COM 152721 COM_185118 9801051 BF106001017</td>
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| Pintsch Compressing Gas Co. Gas Works Aka: West Bay Creosote Study Intersection of West of Bay Street and Myrtle Ave. Jacksonville, FL 32204 Currently: Former MGP; TTX Company Property. Off-site MGP Impacts: COJ & FDOT ROW & JTA Paratransit Services retention pond area. | NED | FLN000407365 COM_69669 ERIC_5901 271-1 | O (Pintsch), 1903 - 1927 | PNA 7/2001 PA-9/2001 SL-12/2008 EPA Recommendation: FA ESI Start Needed | Initially an EPA Lead. SL and some GW contamination detected during 2008 SI. Due to lack of receptors and urban setting, EPA issued an NFRAP. Site reportedly referred to NED District. Former rail yard MGP. Gas was manufactured by the rail company designed expressly for the illumination of railroad cars. 1980 to 1989 - January & February 1987 & January 1988 – May 1988. Geotechnical exploration for I-95 expansion. Petroleum odors in SL borings near southeast corner of Myrtle Ave. underpass & West Bay Street/Myrtle Ave. intersection. Petroleum product and SL staining detected. May 1988 SL sample from a boring had PAHs similar to coal tar. September 1988 FDOT Contamination Assessment of property at northeast corner West Bay Street/Myrtle Ave. intersection. SL contamination determined. GW samples contained elevated levels BTEX and PAHs. November 1988 FEC PCA conducted at northeast corner West Bay Street/Myrtle Ave. intersection. Heavy oil SL contamination detected. January 1989. Additional assessment, heavily contaminated SLS detected. GW and SL samples collected east of intersection. Black dense residue encountered. SL and residue samples contained PAHs typical of coal tars. GW samples contained elevated levels of VOCs, PAHs and TRPHs. 1990 to 1999 – January 1990 & February 1990. OVA screening of cuttings during I-95 support structure drill shafts during rehabilitation of I-95 near southwest and northeast corners of West Bay Street/Myrtle Ave. intersection. Excessively contaminated SLS (>100 PPM organic vapors) detected. GW with strong “creosote/petroleum” odors encountered. GW sample had high levels of lead and “creosote”. July 1991 A “creosote” seep discovered emanating from cracks in retaining wall of the Myrtle Ave underpass. Seep near former MGP. FDER collects sample of seep. Sample had high levels of BTEX and PAHs similar to creosote or coal tar. Lead and silver also detected. March 1997 FDER SIS begins West Bay Creosote Study. October 1997 dark brown, yellow brown, viscous NAPL observed during SL borings and GW sampling of former MGP and adj. ROWs. Benzene, ethylbenzene and xylene, TRPHs and PAHs (BaP) detected above SCTL criteria in SL samples on FMGP and adjacent ROW. November 1997 Benzene, ethylbenzene, PAHs (i.e. naphthalene, BaP), TRPHs detected in GW above GCTLs. SW sample from seep has elevated BTEX and PAHs. Highest levels of PAHs near retention pond north of FMGP. In general, highest levels of VOCs, PAHs &/or TRPHs on footprint of FMGP. 2000 to 2009 - February – March 2000 Benzene, ethylbenzene and PAHs (i.e. acenaphthene, naphthalene) detected in GW above GCTLs. SL samples also collected. VOCs & PAHs detected. Highest levels of PAHs near retention pond north of FMGP. July 2001 FDER SIS completes West Bay Creosote study. GW, SL, GW flow contamination data suggests MGP (Pintsch) is source. Recommends additional delineation of SL and GW contamination. February 2003 EPA CERCLA SI Workplan. July 2008 SI fieldwork. Delay in SI caused by EPA START contract termination. December 2008 Final CERCLA SI report produced by FDER using EPA START data. Elevated levels of VOCs (Benzene, ethylbenzene and xylene), PAHs (BaPTE) detected in SLs above SCTL criteria. Criteria. Highest levels of VOCs and PAHs on former MGP site and just north of West Bay Street/Myrtle Ave. intersection. Benzene, PAHs, Phenanthrene, acenaphthene detected in GW above GCTLs. Update: As of January 2019, no new documents on FDEP Oculus/ERIC databases. Additional site assessment may be warranted. |}
## Status of Florida Manufactured Gas Plant Sites

**February 2019**

### Currently: Riverfront Park and Palatka City Dock and Boat Ramp

**St. Augustine Gasification**

Aka: St. Augustine Gas Co.  
Aka: St. Augustine Gas Service  
98 Riberia St.  
St. Augustine, FL 32084  
Currently: Owned by Fisherman's Harbor Marina, Inc. Includes Seafood Wholesale Shop.

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### Daytona Beach Gasification Plant

Aka Daytona Beach MGP  
Aka: Daytona Beach Service Center  
132 N Seagrave Ave.  
Daytona Beach, FL 32114-3139  
Currently: Still FP&L Service Center.

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### Deland Gas System

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<td>Tank transfer station. No MGP operations. Gas piped from Sanford MGP. No further federal or State action.</td>
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Peoples Gas/West Florida Natural Gas
Aka: Ocala MGP
613 NE Oseola Ave. (Behind 206 N.E. 9th Street)
Ocala, FL 34470-5243
Currently: Occupied by a company specializing sales of new and surplus metals (i.e. scrap metal yard).

MGP Address, Off-site MGP Impacted Property Address & Current Activities/Businesses

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August 2018 Meeting with EPA for comments to finalize RAP Final Design (Barrier Wall and GW remedial design) for OU-1. September 2018 Final Design Report for OU-1. No comments from FDEP on either final design or Pilot Study. EPA comments being addressed. As of September 2018, PRPs completed the remedial design for OU-1. Early remedial action activities to address the contaminated surface SL on parcels 4, 5, & 6 are ongoing. Remedial Action started. Remedial action field activities to address the contaminated SLs (Parcels 1, 2, & 3) and the contaminated GW from the upper-level aquifer will begin in early 2019. Robenson Joseph (404-562-8891) in the EPA Remedial Project Manager joseph.robenson@epa.gov.

Sanford Gasification Plant
Aka: Florida Public Utilities
830 West 6th Street (both sides of Street)
Sanford, FL 32771-2435
Site consists of two parcels separated by West 6th Street. South parcel contained most of MGP processing apparatus

MGP Address, Off-site MGP Impacted Property Address & Current Activities/Businesses

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**STATUS OF FLORIDA MANUFACTURED GAS PLANT SITES**  
February 2019

| MGP Address, Off-site MGP Impacted Property Address & Current Activities/Businesses | District | EPA ID# & FDEP Site ID # | Gas Type & Years of MGP Operation | CERCLA Assessments (PAx, APA’s, SIs, etc.) | Comments:
|---|---|---|---|---|---|
| Cascade Landfill  
Aka: Old Abandoned City of Tallahassee Landfill, Tallahassee, FL 32301  
“Former Cascades Sinks” area south of RR and former Cascade Park MGP  
Currently: southern part of renovated Cascade Park including parking area and Capital Cascades Trail. | NWD | FLD984169177 COM_67392 | PA – 5/1989  
SL-2/1989  
NUS ESI Data 5/1989  
ESI-5/1997  
- April 2010 COT began rebuilding Cascade Park which includes trails, playgrounds, a 16-foot waterfall, interactive fountains, a war memorial, and a state-of-the-art amphitheater for concerts and community events. 2012 COT performing initial RI activities. COT currently performing a treatability study & will be sending a report of findings to EPA in mid-June 2013. If COT maintains current schedule, a FS study will be completed by November 8, 2013. EPA hoped to issue a ROD for the site by September 30, 2014.  
| Pensacola Gasification Plant  
Aka: Pensacola Manufactured Gas Plant  
Cervantes & N Hayne Streets  
Pensacola, FL 32503  
Currently: Majority of FMGP on north side of Cervantes St. under I-110 overpass & Exit 2 off ramp; abutting the Louisville & Nashville RR. One Gasometer was located under I-110 overpass just south of Cervantes Street on FDOT property adjacent to City Police Station. | NWD | FLD984169250 COM_69033 | PA-1/1990  
Desk-top SSI-1/1992  
SIP 7/1993  
EPA Recommendation: OCA, State Lead Cleanup | State lead through FDEP NWD District.  
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<th>FDEP Site ID #</th>
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<tr>
<td><strong>Lakeland Gasification Plant</strong></td>
<td>Lakeland MGP</td>
<td>Aka: Peoples/TECO Gas System 445 Kathleen Rd.</td>
<td>445 Peoples Lane</td>
<td>Lakeland, FL 33815-1315</td>
<td>SWD</td>
<td>PA-1/1990</td>
<td>State lead through FDEP SWD District.</td>
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<tr>
<td>Currently: Still TECO Peoples Gas/Morningstar Fleet Services and includes part of Peoples Lane ROW.</td>
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<td>CWG</td>
<td>State Lead through FDEP SWD District.</td>
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<td>Off-site: MGP impacts to Kathleen Road (constructed 1968) &amp; portion of nearby Florida Tile</td>
<td>FLD984169243</td>
<td>COM_65245</td>
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<td>Draft Reassessment -7/2000 EPA</td>
<td>1916 to 1959</td>
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<td>Recommendation: OCA, State Lead Cleanup</td>
<td>1916 to 1959</td>
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Update: May 2014 UW Laboratory Treatability Evaluation/Push-Pull Test Results & Pilot-Scale Study WP. FDEP approved a 4-task Pilot Study WP to allow University of Waterloo to conduct pilot test remediation using in situ chemical oxidation using sodium persulfate. September 2016 Status Report including: source area characterization & baseline conditions, Bench scale/Push-Pull Tests, treatment & short/long term monitoring. December 2017 BSRA executed. March 2018 RAP received by FDEP. May 2018 ISR Plan Approval from FDEP. July 2018 Quarterly O & M Report, 2nd Quarter, Year I. City of Clearwater has begun site redevelopment. The redevelopment is an approximately 3-year scope of work including storm water pond installation, associated dewatering, and GW monitoring. Site is in compliance with FDEP.

2000 to 2009 – September 2000 Comparison of EPA Study to Actual Field Work and Cleanup. April 2000 FDEP SWD provides comments Re: possible MGP impacts on Florida Tile property and Kathleen Rd ROW to FP & L. June 2000 FP & L notifies FDEP that Kathleen Rd borings not warranted. January 2001 FDEP notifies EPA of findings of Florida Tile Comparison Report. FDEP approved source removal of coal tar residuals from area owned by Florida Tile. April 2001, FDEP notifies Florida Tile no further assessment of MGP related waste necessary since Comparison Report shows removal of MGP impacted soils occurred during construction of Northwest Reservoir. October 2005 Off-site Notification letters issued Data from a 2007 report demonstrates area was sufficiently re-worked, re-graded and re-paved that any remaining impacts would likely have been removed. In 2008, Kathleen Road was expanded, and re-routed north and east of the site, and George Jenkins Blvd. was constructed. New road to west is now People’s Lane. As of March 2013, Summary Source Removal by FP & L in 1997-98. Tar under Kathleen Road. Site Reassessment ongoing by EPA. Little progress finalizing the assessment portion of this site. Request made to collect a GW from an offsite area, but this has not occurred. FDOT does not have current plans to remove the portion of Kathleen Road where the tar is still present, but FDEP doesn’t have any way to gain assurance that it won’t be removed in the future. Still working with FDOT on that aspect.
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<th>SWD Files indicate last correspondence from FPL was request for meeting to discuss scope of additional GW &amp; SL sampling. Pump &amp; Treat GW remediation system in place. In 2006 FDOT discussed their bypass construction on part of site. SWD not actively managing site. 2010 to March 2013 Last communication regarding site was emails with Jim McCarthy, P.G. in Tallahassee in January 2010. FDEP would revisit site enforcement history. Update: 2013 – 2014 Meetings with various entities were held, file review and historic review completed. January 2014, FDEP SWD sends inquiry to FDOT: Re: any SL removal or sampling of Kathleen Road project. September 2014, FDEP issues an NFA for site. FDEP determined since the area was sufficiently reworked, regraded and repaved during Kathleen Road project (now Peoples Lane) any MGP impacts likely removed. Road re-grading has resulted in run-off swales, where road run-off can result in groundwater exceedances of BaPs and may not be indicative of contamination from former MGP. FDEP closed the file in September 2014 – no SRCO issued.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGP Address, Off-site MGP Impacted Property Address &amp; Current Activities/Businesses</td>
<td>EPA ID#</td>
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</tbody>
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## Status of Florida Manufactured Gas Plant Sites

**February 2019**

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<tr>
<td>Aventura Gasworks Dump Aka: Former Binnings Pan American Southwest and south of intersection of NE 28th Ct and NE 185th St., Aventura, FL. 33160-2083 Currently Footprint of former MGP dump on portions of Biscayne Academy, Admiral’s Port Condominium parking lot, Aventura Landings Condominiums, and a synagogue.</td>
<td>SED</td>
<td>FLN000410532 COM_299239 MDER-RER Case # SW-01705 Folio# 2822030000250</td>
<td>N/A</td>
<td>MGP Dump</td>
<td>PSA-11/2009 APA-12/2009 SI-10/2010 EPA Recommendation: FA (Low Priority) Site came to FDEP attention via Dr. Hatheway FMCMP web site. Lead is MDERM-RER. Dump area used by a nearby MGP for disposal of MGP wastes (i.e. tar, purifier wastes, etc.). PRP completed source removal of at former Binnings Pan American facility (Merco Group/Aventura Landings) portion of site in 2002. MGP and other wastes removed from a 300 feet x 400 feet excavation area down to limestone bedrock. A smaller area (100 x 150 feet) excavated an additional area of MGP hunt still exist. DURING CERCLA SI, FDEP finds SL and GW contamination by VOCs and SVOCs on Biscayne Institute/Academy &amp; Admiral Point Condominiums parking area. Possible MGP impacts to northwestern edge of Little Lake Maule. MDERM-RER assumes responsibility of Biscayne Institute/Academy (GSOMR, LLC) part of site requiring additional SI sampling and institutional and engineering controls. April 2010 MDERM-RER conducts SI sampling of Biscayne Institute/Academy. September 2012 GSOMR submits Partial Engineering Control Implementation Report to MDERM-RER. Plan documents completion of clean fill engineering control. November 2012. MDERM-RER notifies GSOMR, LLC of fencing restriction requirements and/or an engineering control. Update: December 2013 MDER-RER issues a past due letter to GSOMR/Biscayne Institute Re: Engineering Control Implementation Report. February 2014 GSOMR/Biscayne Institute provides photo documentation of engineering control (Fencing) in Area 2. Biscayne Institute plans on completing fencing Area 3, the North side, by April 2014 and the remaining Area 4, on the West side by May 2014. March 2014 MDERM-RER conducts SI sampling of Biscayne Institute/Academy. September 2012 GSOMR submits Partial Engineering Control Implementation Report to MDERM-RER. Plan documents completion of clean fill engineering control. November 2012. MDERM-RER notifies GSOMR, LLC of fencing restriction requirements and/or an engineering control.</td>
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<tr>
<td>Hospital District and adjacent to Broward Health Medical Center Parking area</td>
<td>SED</td>
<td>FLD080043163 CON_57754 MDERM-RER</td>
<td>Case # IV5-01444/File-1343</td>
<td>CWG</td>
<td>1929 to 1959</td>
</tr>
<tr>
<td>Peoples Gas System/TECO Inc. (North Miami Beach) 15779 West Dixie Hwy N. Miami Beach, FL 33162-6037</td>
<td>SED</td>
<td>FLD080043163 CON_57754 MDERM-RER</td>
<td>Case # IV5-01444/File-1343</td>
<td>CWG</td>
<td>1929 to 1959</td>
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</table>

This MGP site consists of two parcels divided by West Dixie Highway. East Parcel contained most of MGP processing apparatus (retort building, tar separator pit, scrubbers, purifiers, tar storage tank, relief holder, etc.) West Parcel had a relief storage and storage holder tank. Currently: West Parcel - Vacant Land Incl. Retention Pond East Parcel TECO Peoples Gas

**Comments:**

Re: EPA, County and/or State Enforcement, Activities, Major Documents and Milestones.


## STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
### February 2019

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<tr>
<td>Site divided into two parcels by 2nd Street. South parcel had the majority of MGP apparatus including retort building (with gas producers), Gas tanks, tar cooker, tar separator, Hortonsphere tank, gasometer tank, purifiers, fuel oil tanks and oil tank. North parcel included two gas holders. Offsite contamination: East parcel.</td>
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<tr>
<td>Key West Gas &amp; Electric (Key West MGP#1)</td>
<td>FL0008410751 COM_303264</td>
<td>O</td>
<td>PSA-12-2011 APA-10-2011</td>
<td>Site lead through FDEP SD</td>
<td></td>
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Status of Florida Manufactured Gas Plant Sites
February 2019

Re: EPA, County and/or State Enforcement, Activities, Major Documents and Milestones.
## STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
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| Aka: Keys Energy Services Substation  
Aka: Abandoned Diesel Plant Key West  
101-111 Geraldine St. & 709 Fort St.  
Key West, FL 33040  
Currently: Keys Energy Services Key West Diesel Substation/Shop Area. | SD | CWS-8/1990 Desktop SI- 09/1993 EPA Recommendation: NFRAP | 1884 to 1890’s | SI- 8/2012. EPA Recommendation: NFRAP | **1990 to 1999** - October 1991 CAR Abandoned Diesel Plant Key West. July 1992 CARA Abandoned Diesel Plant Key West. October 1992 RAP Abandoned Diesel Plant Key West. May 1993 RAP Addendum Abandoned Diesel Plant Key West. June 1993 RAP Modification Abandoned Diesel Plant Key West. July 1993 FDEP approves RAP, RAP Addendum and RAP Modification for Abandoned Diesel Plant Key West site. April 1994 to July 1995 First to Third Quarter GW Monitoring reports Abandoned Diesel Plant Key West. CERCLA SI summary - MGP/petroleum impacts (i.e. staining, odors) noted in SL & GW during CERCLA SI. Arsenic, lead & PAHs (benzo [a] pyrene, dibenzo [a, h] anthracene) detected in SL. Isopropylbenzene,acenaphthene and naphthalene were detected in on-site GW above GCTLs. Site did not score on HRS. November 2012 Site referred to FDEP SD for possible enforcement.  
| Former Key West Gasification Plant (Key West MGP#2)  
Aka: Suburban Propane  
726 Catherine Street  
Key West, FL 33040-3226  

Links to electronic databases for additional Information:

- FDEP Oculsus: [http://dwmedms.dep.state.fl.us/Oculus/servlet/login](http://dwmedms.dep.state.fl.us/Oculus/servlet/login)
- Broward County Site Inventory Report [http://www.broward.org/Environment/CONTAMINATEDSITES/Pages/SiteLocations.aspx](http://www.broward.org/Environment/CONTAMINATEDSITES/Pages/SiteLocations.aspx)
Key to Abbreviations and Acronyms

AOC = Administrative Order on Consent (EPA)
APA = Abbreviated Preliminary Assessment
ASCTL = Alternative Soil Cleanup Target Level
AS/SVE = Air Sparging/Soil Vapor Extraction
ARARs = Applicable or Relevant and Appropriate Requirements
As = Arsenic
BEQCB = Broward Co. Environmental Quality Control Board
BaPTE = Benzo [a] pyrene toxic equivalents
BSRA = Brownfield Site Rehabilitation Agreement
BS/SVE = Bio-sparging/soil vapor extraction
BTEX = Benzene, Ethyl benzene, Toluene & Xylene
C = Coal Carbonization – Early MGPs. Carbonizing coal in retort to produce hydrogen, methane & carbon monoxide (~ 500 BTU)
CAR = Contamination Assessment Report
CARA = Contamination Assessment Report Addendum
CD = Central District
CN = Cyanide
CO = Consent Order
COC = Contaminants of Concern.
COJ = City of Jacksonville
COSA = City of St. Augustine
COT = City of Tallahassee
CWG = Carbureted Water Gas (i.e., Lowe Process)- Produced by enriching gas by injecting oil into MGP carburetor. (~ 1,000 BTU)
Cyn = Cyanide
DERM = Dade Co. Environmental Resources
Desktop = Used PRP data
DNAPL = Dense non-aqueous phase liquids
DOH = Department of Health
DSAP = Design Sampling & Analysis Plan
DSAR = Design Sampling & Analysis Report
DW = Drainage well
EE/CA = Engineering Evaluation/Cost Analysis
ESA = Environmental Site Assessment
ESI = Expanded Site Inspection (CERCLA)
FA = Further Action
FDER = Florida Dept. of Environmental Regulation
FDEP = Florida Dept. of Environmental Protection
FEC = Florida East Coast Railroad Co.
FMGP = Former Manufactured Gas Plant
FP = Free Product
FPC = Florida Power Corporation
FPUC = Florida Public Utilities Corp.
FP&L = Florida Power and Light
FS = Feasibility Study
GAC = Granulated Active Carbon
GW = Groundwater
HASP = Health and Safety Plan
HRS = Hazard Ranking System
IA = Integrated Assessment
IRA = Interim Remedial Action
IRAP = Interim Remedial Action Plan
IRAR = Interim/Initial Remedial Action Report
ISR = Interim Source Removal
ISS = In-Situ Stabilization
JTA = Jacksonville Transportation Authority
LNA/PL = light non-aqueous phase liquids
LSI = Listing Site Investigation
MDERM = Miami-Dade Co. Dept. of Regulatory and Economic Resources Div.of -RER Environmental Resources Management
MOU = Memorandum of Agreement
MGP = Manufactured Gas Plant
MNA = Monitoring Natural Attenuation
MOP = Monitoring Only Plan
MPE = Multi-Phase Extraction
NAM = Natural Attenuation Monitoring
NAPL = Non Aqueous Phase Liquid
NED = Northeast District
NFA = No Further Action
NFRAP = No Further (CERCLA Activity) Remedial Action Planned
NOAA = National Oceanic and Atmospheric Administration
NOV = Notice of Violation
NPL = National Priorities Listing
NWD = Northwest District
O = Oil Gas - Pyrolysis of naptha & heavier petroleum oils to produce gas rich in methane, ethane, hydrogen & light hydrocarbons (i.e., Pintsch process) (~ 1,000 BTU)
OCA = Other Cleanup Activity (EPA Deferred to State or County Lead)
OGPS = Old Gas Plant Site
ORC = Oxygen Release Compounds
ORT = Operations Response Team (Now SIS)
OU = Operable Unit
PA = Preliminary Assessment (CERCLA)
PAHs = Polynuclear aromatic hydrocarbons
PAR = Preliminary Assessment Reassessment
PARM = Post Active Remediation Monitoring
PAW = Paul A. Wierzbiicki FDEP WPB District Office
PCA = Preliminary Contamination Assessment
PCAR = Preliminary Contamination Assessment Report
PERA = Miami-Dade County Permitting, Enforcement & Regulatory Affairs
PGS = Peoples Gas Service
PRP = Potential Responsible Party
PSA = Pre-CERCLA Screening Assessment
QAPP = Quality Assurance Project Plan
RA = Risk Analysis
RAI = Request for Additional Information
RAP = Remedial Action Plan
RI = Remedial Investigation
RMO = Risk Management Option
ROW = Right-of-Way
RP = Responsible Party
RR = Rail Road
ROD = Record of Decision
ROW = Right-of-Way
RP = Responsible party
RPM = Remedial Project Manager
SAR = Site Assessment Report
SSAR = Supplemental Site Assessment Report
SD = South District
Sed = Sediment
SSI = Site Inspection/Site Investigation (CERCLA)
SIP = Site Inspection Prioritization
SIS = Site Investigation Section
SL = Soil
SED = Southeast District
Sr = Strontium
SRCO = Site Rehabilitation Completion Order
SRCR = Site Rehabilitation Completion Report
SVE = Soil Vapor Extraction
SW = Surface Water
SWD = Southwest District
TM = Technical Memorandum
TRPHs = Total Recoverable Petroleum Hydrocarbons
UIC = Underground Injection Control
Unk = Unknown
VI = Vapor Intrusion
W = Water Gas ("Blue Gas") - MGP process of steaming coke or coal to produce hydrogen, & carbon monoxide (~ 300 BTU).
WP = Work Plan
Florida MGP
Summary Status February 3, 2019

<table>
<thead>
<tr>
<th>Sites still in Site Assessment Stage¹</th>
<th>Sites with completed IRA, Soil Removal, Solidification, CAP and/or Free Product Recovery</th>
<th>Remedial Activities on-going²</th>
<th>Natural Attenuation Monitoring/Post Active Remediation Monitoring On-going</th>
<th>Remediation Complete-NFA or SRCO issued³</th>
</tr>
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<td>3</td>
<td>18</td>
<td>17</td>
<td>12</td>
<td>12</td>
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</table>

¹ Includes Main Street MGP (MGP [Former Hotel] portion), Pintsch Compressing Gas Co. and Key West Gasification (Key West MGP #2
² All remedial efforts for the MGP sites are funded by potential responsible parties (PRP) through either State Consent Orders or EPA Agreement on Consent Orders.
³ The twelve completed Remediation Sites are: Bradenton Gasification, Palatka Gas Works, Riverfront Park MGP (Palatka), St. Augustine Gas Plant, the two Deland Sites, Ft Lauderdale Gasification (Cox Plant), Ft Myers Gasification Plant, Key West Gas and Electric, Lakeland Gasification, Pensacola Gasification and Peoples Gas-Suncoast Dome sites.

J. McCarthy, PG
FDEP-02/03/19
STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
February 2019

MGP Summary Status

- Site Assessment Phase Still Ongoing
- Sites with completed IRA, Soil Removal, Solidification, CAP and/or Free Product Recovery
- Remedial Activities on-going
- Natural Attenuation Monitoring/ Post Active Remediation Monitoring On-going
- Remediation Complete-NFA or SRCO issued
STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
February 2019

Sanborn Insurance Map - Tallahassee Municipal Gas Works - May 1942
Courtesy of Florida Department of State Division of Library & Information Services
Sanborn Map Collection 1867 - 1970
Peoples Gas Storage Tank-Miami-Florida (Date Unknown)

West Palm Beach MGP Aka: Florida Public Utilities Inc
Gas tanks and MGP apparatus
West Palm Beach MGP Aka: Florida Public Utilities Inc
Retort Building, Purifiers, Gasometer tank, Fuel Oil tank
Courtesy of FPU
Typical MGP Impacts to Groundwater

MGP Wastes
Aventura Gas Works Dump, Miami Dade County
MGP soil impacts

May 1990 SI Coal tar seeping from old piping at Central Florida Gas Former Retort Building Winter Haven, Florida
STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
February 2019

May 1990 SI Central Florida Gas Gasification Plant – Winter Haven, Florida
Hardened coal tar under Hortonsphere/Gas Holder

July 1990 SI - MGP waste stained soil cores, West Palm Beach MGP Aka: Florida Public Utilities Inc
Tampa MGP Rotosonic core sample containing tar NAPL blebs, stringers and pore space saturation in a calcareous clay unit courtesy Arcadis
A. James McCarthy at Central Florida Gas-Winter Haven & Sphere Tank May 1990
STATUS of FLORIDA MANUFACTURED GAS PLANT SITES
February 2019

References


Dr. A.W. Hatheway’s Former Manufactured Gas Plant web site. http://www.hatheway.net/


EPA Region 4 Superfund Sites website. https://www.epa.gov/fl/list-superfund-sites-florida


Interstate Technology & Regulatory Council (ITRC) Web Site - Former Manufactured Gas Plants. https://www.itrcweb.org/petroleumvi-guidance/Content/Appendix%20E.%20Types%20of%20Petroleum%20Sites.htm#Former2


Jim McCarthy, PG II FDEP
DoD, Brownfields and CERCLA Programs Section
Division of Waste Management
February 3, 2019