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THIRD FIVE-YEAR REVIEW REPORT FOR OPERABLE UNIT 1 (OU 1) NTC ORLANDO FL

3/1/2016

RESOLUTION CONSULTANTS

THIRD FIVE-YEAR REVIEW REPORT FOR OPERABLE UNIT 1 FORMER NAVAL TRAINING CENTER ORLANDO, FLORIDA

Prepared for:

Department of the Navy
Naval Facilities Engineering Command Southeast
BRAC Program Management Office, East
203 S. Davis Drive, Bldg. 247
Joint Base Charleston

Prepared by:

Resolution Consultants
A Joint Venture of AECOM & EnSafe
1500 Wells Fargo Building
440 Monticello Avenue
Norfolk, Virginia 23510

Contract Number: N62470-11-D-8013
CTO JM69

March 2016

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OPERABLE UNIT 1
FORMER NTC ORLANDO, FLORIDA

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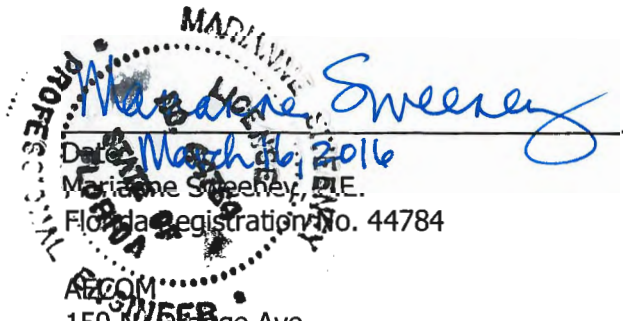
Reviewed by:



Date: March 16, 2016
Marianne Sweeney, P.E.
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Orlando, FL 32801
State of Florida, Board of Professional Engineers Certificate No.: 8115

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Operable Unit 1 (OU 1), Former Naval Training Center (NTC) Orlando		
EPA ID: FL6170023711		
Region: 4	**State:** FL	**City/County:** Orlando/Orange
SITE STATUS		
National Priority List (NPL) Status: Non-NPL		
Remediation Status (choose all that apply): □ Under Construction ☒ Operating □ Complete		
Multiple OUs: ☒ YES □ NO OU 1, OU 2, OU 3 and OU 4	**Construction Completion:** Pending	
Has site been put into reuse? : ☒ YES □ NO		
REVIEW STATUS		
Lead Agency: □ USEPA □ State □ Tribe ☒ Other Federal Agency: Department of the Navy, Base Realignment and Closure Program Management Office East (BRAC PMO East)		
Author Name: David Barney	**Author Title:** BRAC Environmental Coordinator	
Author Affiliation: Department of the Navy, NAVFAC SE, BRAC PMO East		
Review Period: January 2009 to December 2014		
Date(s) of Site Inspection: July 29, 2009; February 2, 2012; January 22, 2013; December 5, 2014		
Type of Review: Non-NPL – Statutory Review		
Review Number: 3 (Third)		
Triggering Action Event: Florida Department of Environmental Protection (FDEP) signature concurrence of previous Five-Year Review Report.		
Trigger Action Date: March 28, 2011		
Due Date *(five years after triggering action date)*: March 28, 2016		

Issues/Recommendations: No issues were identified in the five-year review that affect the protectiveness of the remedy at OU 1.

Protectiveness Statement(s):

The remedy is protective because Institutional Controls (ICs) are preventing potential exposure to groundwater and landfill materials, and the landfill cover provides adequate cover over potentially contaminated subsurface soil and known landfill materials. Continued ICs and cover inspections will ensure continued protectiveness of the remedy.

This five-year review documents that the Navy is meeting the requirements of the Record of Decision for OU 1 at the former NTC Orlando.

Signature of United States Department of the Navy and Date:

BARNEY.DAVID.A.1228582553

Digitally signed by BARNEY.DAVID.A.1228582553
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USN, cn=BARNEY.DAVID.A.1228582553
Date: 2016.03.16 09:39:59 -04'00'

David Barney
BRAC Environmental Coordinator
Base Realignment and Closure
Program Management Office East
Philadelphia, PA

Date

EXECUTIVE SUMMARY

The environmental cleanup at the former Naval Training Center (NTC) Orlando includes Operable Units (OUs) OU 1 through OU 4. This five-year review is for OU 1; remedial decisions for the remaining OUs are currently in progress. OU 1, the former North Grinder Landfill, is located in the northwestern corner of the former Main Base at NTC Orlando. OU 1 covers approximately 55 acres, including 18 acres of former landfill. The containment remedy for OU 1 as documented in the *Record of Decision (ROD)* dated November 10, 1997, consisted of the following major components:

- Long term groundwater monitoring to determine the migration of contamination and to assess the water quality in shallow aquifer.

- Visual site inspections to confirm the maintenance of adequate landfill cover and landfill surface.

- Institutional Controls (ICs) to restrict the use of surficial aquifer for drinking or irrigation, to limit intrusive activities within the landfill boundary, and to restrict the use of land within the landfill boundary to non-residential purposes.

The components above, excluding the groundwater monitoring component, are currently operational, and are being operated by the United States Department of the Navy (DoN). The first five-year review period was from 1997 - 2002. The second five-year review period was from 2002 – 2009. This is the third five-year review, covering the period 2009 – 2014, and triggered by the signing of the second five-year review on March 28, 2011.

It was determined in the second five-year review that there was not a statistical difference in the down gradient groundwater contaminant concentrations when compared with the up gradient groundwater contaminant concentrations. The landfill has been closed since 1967 and no additional release of leachate would be expected. The Florida Department of Environmental Protection (FDEP) and the Navy agree that the remedial action objective (RAO) for the groundwater monitoring component of the remedy is achieved and those data are not necessary to insure protection of human health and the environment. Groundwater monitoring at OU 1 was discontinued in 2008.

The assessment of this five-year review finds that the remedy at OU 1 is functioning as intended by the *ROD*. The remedy for OU 1 is expected to remain protective of human health and the

environment because the landfill cover and ICs are in place and operating properly and the existing use of the property is consistent with the objectives of the *ROD*.

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ACRONYMS AND ABBREVIATIONS

ABB-ES	ABB Environmental Services, Inc.
ARAR	applicable or relevant and appropriate requirement
bgs	below ground surface
BGSV	background screening value
BRAC	Base Realignment and Closure
CCI	CH2M Hill Constructors, Inc.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLEAN	Comprehensive Long-Term Environmental Action Navy
CTO	Contract Task Order
cy	cubic yards
DET	Environmental Detachment Charleston
DoD	Department of Defense
DoN	Department of the Navy
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FS	Feasibility Study
GCTL	Groundwater Cleanup Target Level
HHRA	human health risk assessment
IC	institutional control
msl	mean sea level
NAVFAC SE	Naval Facilities Engineering Command Southeast
Nodarse	Nodarse and Associates, Inc.
NPL	National Priorities List
NTC	Naval Training Center
O&M	operation and maintenance
OFR	Office of the Federal Register
OPT	Orlando Partnering Team

OU	Operable Unit
PAH	polynuclear aromatic hydrocarbon
PCBs	polychlorinated biphenyls
PMO	Program Management Office
RAB	Restoration Advisory Board
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
ROD	Record of Decision
SA	Study Area
SARA	Superfund Amendments and Reauthorization Act
SCG	Soil Cleanup Goal
SCTL	Soil Cleanup Target Level
SVOC	semi-volatile organic compound
TBC	to be considered
TtNUS	Tetra Tech NUS, Inc.
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

1.0 INTRODUCTION

This *Five-Year Review Report* has been prepared for Base Realignment and Closure (BRAC) Program Management Office (PMO) East under Contract Task Order (CTO) JM69 as part of the Comprehensive Long-Term Environmental Action Navy (CLEAN) IV Contract Number N62470-1-D-8013 with Naval Facilities Engineering Command Southeast (NAVFAC SE). Resolution Consultants (RC) conducted this third five-year review of the North Grinder Landfill, Operable Unit (OU) 1 at the former Naval Training Center (NTC) Orlando in accordance with *Navy/Marine Corps Policy for Conducting Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Reviews* [Department of Navy (DoN), 2011]; the Department of Defense (DoD) Manual 4715.20, *Defense Environmental Restoration Program Management* (DoD, 2012) and the June 2014 update to this manual; and the United States Environmental Protection Agency (USEPA) *Guidance for Five-Year Reviews* (USEPA, 2001).

The purpose of the five-year review is to determine whether the selected remedy at OU 1 is protective of human health and the environment. The methods, findings, and conclusions of the review are documented in this *Five-Year Review Report*. In accordance with Section 5.6 of the *Policy for Conducting Five-Year Reviews* (DoN, 2011), this *Five-Year Review Report* will 1) clearly state whether the remedy is expected to be protective; 2) document any deficiencies identified during the review; 3) recommend specific actions to ensure that the remedy will continue to be protective; and 4) include a statement of when the next five-year review is to be completed.

The former NTC Orlando is a BRAC base and is not a National Priorities List (NPL) site. However, because the BRAC program incorporates the principles of the Navy Installation Restoration program and is designed primarily as a vehicle for the transfer of former Navy property to the private sector in an environmentally responsible manner, the Navy is following the principles of CERCLA.

In general, statutory reviews are required for sites where, after initiation of the selected remedial action, hazardous substances, pollutants, or contaminants remain on site at levels that do not allow for unlimited use and unrestricted exposure (UU/UE). This requirement is set forth by CERCLA §121 and the National Oil and Hazardous Substances Pollution Contingency Plan. Statutory reviews are required if the Record of Decision (ROD) was signed on or after the effective date of the Superfund Amendments and Reauthorization Act (SARA) of 1986.

This is the third five-year review for OU 1. The first five-year review covered the period from November 1997 through September 2002 (TtNUS, 2003). The trigger date for the first five-year review was the ROD signature date, November 10, 1997. The trigger date for the second five-

year review corresponded to the United States Environmental Protection Agency (USEPA) concurrence signature date of December 16, 2003, for the first five-year review report, as required by USEPA's *Comprehensive Five-Year Review Guidance* (2001). The second five-year review covered the period from October 2002 to December 2008 and an additional site visit in July 2009. Finalization of the second five-year review report was delayed due to the recommendation to discontinue the groundwater monitoring component of the selected remedy. Due to the extended review period, the USEPA also requested a second detailed site inspection, performed in July 2009. The trigger date for this third five-year review corresponds to BRAC PMO signature date of March 28, 2011. This third five-year review covers the period from January 2009 to December 2014. This review is required because landfill wastes are still contained on site and do not allow for UU/UE. A chronology of significant events at NTC Orlando and OU 1 is presented in Table 1-1.

Final remedial action decisions are currently in progress for OU 2, OU 3, and OU 4, and final RODs have not been issued. The current status these three OUs is summarized in Table 1-2.

RC conducted the five-year review in conjunction with the Orlando Partnering Team (OPT), which includes:

- Art Sanford, NAVFAC SE, BRAC PMO East
- Dave Barney, NAVFAC SE, BRAC PMO East
- David Grabka, Florida Department of Environmental Protection (FDEP)
- Marianne Sweeney, RC

2.0 BACKGROUND

2.1 PHYSICAL CHARACTERISTICS

The Main Base is one of four non-contiguous facilities that comprised NTC Orlando located in Orange County, Florida. The other three facilities are Area C, Herndon Annex, and McCoy Annex. The Main Base is located approximately 8 miles north of McCoy Annex and the Orlando International Airport within the city limits of Orlando, Florida. Figure 2-1 shows the location of the Main Base relative to the other NTC Orlando facilities. OU 1 encompasses 55 acres in the northwestern corner of the former Main Base. Approximately 18 acres, located centrally within the OU 1 boundary, constitute the closed North Grinder Landfill, as presented in Figure 2-2. OU 1 is bordered by General Reese Avenue to the west, Lower Park Road to the south, Upper Park Road to the east, and Glenridge Way to the north.

The ground surface in the OU 1 area gently slopes from the southwest to the northeast. Current site elevations range from approximately 124 feet above mean sea level (msl) in the southwestern corner to 110 feet above msl in the northwestern corner. Lake Spier, a sinkhole lake, is located approximately 1,120 feet to the northeast of OU 1.

2.2 LAND AND RESOURCE USE (HISTORICAL AND CURRENT)

OU 1 includes a former landfill in which materials such as garbage, medical waste, construction debris, and solvent still bottoms were disposed. Landfilling operations began sometime between 1939 and 1947 and continued until 1967. The North Grinder Parade Field, constructed on top of the landfill in 1967, was used for graduation ceremonies and physical training, assembly, and marching of recruits. Two troop dormitories constructed in the late 1960s were situated east of the former parade field. Fire training activities involving diesel fuel and aviation fuel were also conducted at OU 1 as part of firefighting drills between 1961 and 1965. Fires were reportedly set on a weekly basis using gasoline, diesel fuel, or oil to facilitate firefighter training (ABB-ES, 1996). The location of the former firefighter training area is illustrated in Figure 2-2.

During the remediation of NTC Orlando Study Area (SA) 39 and SA 40, soil containing arsenic and polynuclear aromatic hydrocarbons (PAHs) from those two sites was excavated and transported to the OU 1 site. This contaminated soil was placed as a six to eight inch thick layer across the former landfill. A minimum of 24 inches of certified clean soil was placed above the contaminated soil, as the final soil cover (Nodarse, 2001).

OU 1 was redeveloped as part of the Baldwin Park community. Current land use includes a public park (Blue Jacket Park) and school (Glenridge Middle School). The southern boundaries of OU 1 intersect residential properties. The school and residential properties are located

outside the former landfill boundaries. Prior to the completion of the school and outlying residential areas within the site boundary, an additional two to six feet of clean soil cover was installed above the closed landfill. Blue Jacket Park, which was constructed directly over the covered former landfill, is a recreational area consisting of tennis courts, baseball and soccer fields, a track and field facility, a common area, a fountain, and a pedestrian walkway. The site boundaries, as defined in the *ROD* and the Parcel 4 deed, along with current site features are shown on Figure 2-2.

Utility trenching by the Orange County School Board during construction of Glenridge Middle School in 2002 unearthed buried debris outside the recognized boundary of the OU 1 landfill (CH2M Hill Constructors, Inc. [CCI], 2002 and 2003). Approximately 5,900 tons of soil and waste material were excavated and disposed off site in August 2002 (Nodarse, 2002).

The groundwater aquifer underlying the site is currently not used as a drinking water source. As part of the institutional controls (ICs) in the *ROD*, the underlying surficial aquifer groundwater cannot be used for drinking or irrigation. The groundwater use restriction is included in the property deeds. Drinking water for the Baldwin Park community and the surrounding area is supplied by the City of Orlando. Raw water for the City is obtained from the Floridan drinking water aquifer located approximately 300 feet below ground surface (bgs).

The current land use is expected to continue into the foreseeable future.

2.3 BASIS FOR TAKING ACTION

A Remedial Investigation (RI) was completed by ABB Environmental Services, Inc. (ABB-ES) in 1996. RI activities included aerial photography evaluation, geophysical and soil gas surveys, and surface soil and groundwater sampling. The RI findings included the following:

- Existing landfill cover was a minimum of two feet in thickness and was in good condition.
- Groundwater contaminant concentrations were above regulatory standards.
- Human health risks for exposure to surface soil were within USEPA allowable risk range.
- Ecological receptors were not at risk.

The RI recommended ICs restricting land and groundwater use and a *ROD* was prepared and approved in 1997.

2.3.1 Groundwater

Groundwater contamination, principally in wells nearest the margins of the former landfill, consisted of exceedances of gross alpha and gross beta radionuclides above established background screening values (BGSVs) for NTC Orlando (ABB-ES, 1995). Some inorganic compounds were also present at concentrations exceeding background, secondary drinking water standards, or Groundwater Cleanup Target Level (GCTLs). Because of these exceedances, the groundwater in the vicinity of the former landfill is unsuitable for drinking or irrigation and requires ICs to prevent exposure, either through dermal contact, inhalation, or ingestion.

2.3.2 Soil

Surface soil samples were collected from the landfill cover during the RI. Surface soil contamination included arsenic, PAHs, polychlorinated biphenyls (PCBs), and pesticides as shown on Table 3-1. Soil contaminant concentrations did not require cleanup under a non-residential reuse scenario based on the human health risk assessment (HHRA) presented in the *RI Report* (ABB-ES, 1996).

2.3.3 Landfill Materials

The North Grinder Landfill had already been covered when the RI began in 1995. It was found through geophysical surveying that there was a minimum cover of 18 inches above the landfill and up to 22 inches in some locations (ABB-ES 1996).

In 2001, PAH and arsenic contaminated soil from SA 39 and arsenic contaminated soil from SA 40 was placed over the landfill. Contaminant concentrations for the SA 39 and SA 40 soils are also shown in Table 3-1. A minimum of 2 feet of clean fill was placed over the SA 39 and SA 40 soil.

The volume of waste material at OU 1 was estimated to be 194,000 cubic yards, although approximately one-third of the volume of landfill waste was believed to have been excavated in 1967 for construction of Buildings 212 and 214 (ABB-ES 1996).

3.0 REMEDIAL ACTIONS

3.1 REMEDY SELECTION

The *ROD* for NTC Orlando OU 1 (ABB-ES, 1997) was signed on November 10, 1997. The remedial action was selected to prevent imminent and substantial endangerment to public health and the environment that may be presented by actual or threatened releases of hazardous substances from this site.

Because OU 1 is a landfill site, the presumptive remedy of containment (USEPA, 1996) was selected as the final remedy. Although the *ROD* did not directly state remedial action objectives (RAOs), the RAOs for the presumptive remedy applicable to OU 1 are:

- Preventing direct contact with landfill contents,
- Minimizing infiltration and resulting contaminant leaching to groundwater,
- Controlling surface water runoff and erosion, and
- Contaminant containment via soil cover over landfill waste.

The selected remedy from the *ROD* states that remedial actions addressing contamination at OU 1 include groundwater monitoring (for a minimum of 3 years), landfill cover inspections, and ICs. Further, the *ROD* indicates that the USEPA and FDEP have concurred that more active site remediation actions are not necessary at OU 1. A HHRA was not performed for groundwater in the RI. Because of the exceedances of FDEP GCTLs, the groundwater under and near the former landfill is deemed unsuitable for drinking or irrigation. As described in the *ROD*, the following remedial actions selected for OU 1 are intended to address the principal threats and risks for OU 1, and are the chosen final remedy for OU 1:

- Sample and analyze groundwater from monitoring wells in the vicinity of OU 1 (quarterly for the first year and annual for the next two years).
- Analyze samples with gross alpha and/or beta greater than regulatory standards for gross gamma.
- Evaluate data collected and recommend, base on this evaluation, no further action, continued monitoring, or implementation of other remedial actions.
- Conduct visual inspection of the landfill surface during groundwater monitoring episodes.

- Disallow the use of surficial aquifer groundwater in the vicinity of the landfill for drinking or irrigation.
- Limit intrusive activities within the landfill boundary.
- Restrict use of the land within the landfill boundary to non-residential uses.

The final remedy for OU 1 includes annual site inspections and ICs for an indefinite period of time. However, the groundwater monitoring component of the *ROD* specifies three years of groundwater monitoring after which it was anticipated that groundwater monitoring would be discontinued. The *ROD* states that if no increases in contaminant concentrations were observed at the completion of the three year program, groundwater monitoring could be discontinued. During the second five-year review no increases in contaminant concentrations were observed; therefore, it was agreed that the groundwater monitoring would be discontinued.

3.2 REMEDY IMPLEMENTATION

Various activities were conducted at OU 1 to implement the remedy selected in the *ROD*. These include the following:

A. Environmental Detachment Charleston (DET) began quarterly groundwater sampling in March 1998. Groundwater monitoring, as documented in the approved *ROD* (ABB-ES, 1997), included sampling of 18 monitoring wells on site and one background well near the site. The analytical suite documented in the *ROD* included metals, gross alpha, gross beta, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and PCBs. The *ROD* also indicated that if the analytical data showed gross alpha or gross beta at concentrations exceeding screening criteria, then a groundwater sample from that well would be analyzed for gamma radiation.

B. Site inspections of the landfill began in March 1998 and were targeted to:

- Evaluate the integrity of the cover.
- Inspect the surface for signs of seeps, pits, cracks, or other imperfections. Inspect the integrity of monitoring wells at the site during the groundwater monitoring events as stated in the ROD (ABB-ES, 1997).

C. Guidelines for ICs and observations of site conditions were developed for OU 1 and documented in the transfer documents and the recorded deeds. The ICs are implemented accordingly. The ICs as listed in the *ROD* (ABB-ES, 1997) are as follows:

- Excavation and construction activities within the landfill boundary must be conducted in accordance with regulations for Hazardous Waste Site Workers (29 CFR Part 1910) during all excavation activities below a depth of 12 inches.

- The landfill cover consisting of a two-foot soil layer must be maintained at all times within the landfill boundary.

- The surficial groundwater aquifer within the site boundary must not be used for consumption or irrigation.

- The area within the landfill boundary is restricted to non-residential (e.g. industrial or recreational) uses.

3.2.1 Groundwater Monitoring

The groundwater monitoring component of the remedy included sampling six monitoring well clusters (18 wells total). Each cluster was comprised of a shallow, intermediate, and deep well. The shallow wells were generally screened to bracket the water table, with screen intervals from 9.5 to 24 feet bgs and were installed to monitor groundwater quality in the shallow portion of the surficial aquifer. Intermediate wells were installed with a five-foot screened interval at the bottom of each well, with screen intervals ranging from 29 to 50 feet bgs to monitor groundwater quality in the intermediate portion of the surficial aquifer. Deep wells were installed with five-foot screen intervals ranging from 35 to 70 feet bgs to monitor groundwater quality in the deep portion of the surficial aquifer.

After the *ROD* was signed in November 1997, quarterly groundwater sampling was performed in 1998. Although the *ROD* allowed for annual monitoring after Year 1, the OPT decided to modify the program and increase sampling to semi-annual to better evaluate trends in concentrations of groundwater contaminants. Subsequent sampling was performed in June and December 1999, June 2000, February and July 2001, and January/February 2002.

Prior to site development, original site monitoring wells were abandoned by Nodarse and Associates, Inc. (Nodarse) in February 2002, in accordance with FDEP and the St. Johns River Water Management District requirements. Following the completion of development activities, replacement wells were installed in May and September 2003, and monitoring resumed in December 2003 on an annual basis as recommended by the OPT. The replacement wells consisted of one upgradient cluster (OLD-OU1-25AR, -26BR, and -27CR), two downgradient clusters near the northern boundary of the landfill (OLD-OU1-13AR, -14BR, and -15CR and OLD-OU1-19AR, -20BR, and -21CR), two downgradient sentinel well clusters near the site boundary (OLD-OU1-10AR, -11BR, and -12CR and OLD-OU1-16AR, -17BR, and -18CR) and an

upgradient/crossgradient cluster (OLD-OU1-22AR, -23BR, and -24CR) southeast of the landfill area. The former locations of the monitoring wells are shown on Figure 3-1. Groundwater sampling was conducted annually from December 2003 through December 2008.

In order to quantify the impact of landfill material on surrounding surficial aquifer, statistical analyses were performed on the groundwater monitoring data. The intent of this analysis was to evaluate the statistical significance of the collected data and relevance with respect to the impact of landfill materials on the quality of shallow groundwater. Upgradient and downgradient monitoring well data was quantitatively analyzed in terms of standard deviations of various parameters. The statistical analyses of groundwater monitoring data confirmed that upgradient and downgradient well data are not statistically different.

This statistical analysis was presented in the Technical Memorandum on the *Optimization of the Groundwater Monitoring Program at OU 1* provided in the *Second Five-Year Review Report*. The Technical Memorandum recommends that groundwater monitoring be discontinued at OU 1 and that existing ICs and annual inspections continue. The recommendation to discontinue groundwater monitoring was predicated on the following information, analysis and conclusions:

- The former North Grinder Landfill, Operable Unit 1 (OU 1) was closed in 1967. Currently, OU 1 is covered primarily by Blue Jacket Park; however, the northeast part is covered by Glenridge Middle School.

- The *ROD* for OU 1, issued in 1997, specified groundwater monitoring, landfill inspections and ICs as the selected remedial action. The *ROD* also specified that the groundwater monitoring program would be reviewed after Year 3 to determine whether or not to continue monitoring as so additional releases of leachate from the landfill were expected to be observed due to the age of the landfill.

- Routine groundwater monitoring was performed from 1998 to 2008.

- Analyses for pesticides and herbicides were dropped in June 2005 due to lack of detections.

- Analyses for VOCs, SVOCs and PCBs were dropped in May 2007 due to lack of detections above GCTLs.

- Iron was the only analyte consistently detected above its background concentration in groundwater monitoring data collected between 1995 and 2008, and only in wells 20BR (immediately downgradient and adjacent to the landfill) and 23BR (sidegradient to the landfill).

- While several inorganics have consistently been detected above GCTLs or background concentrations in replacement wells installed in 2002, the concentrations detected in downgradient well clusters closest to the groundwater restriction boundary (10A, 11B, 12C and 16A, 17B and 18C) were all below health-based GCTLs.

- Various statistical analyses conducted by Tetra Tech NUS, Inc. (TtNUS) indicate that metals concentrations in downgradient wells do not significantly differ from concentrations in upgradient wells.

Based upon these arguments, FDEP concurred that groundwater monitoring could be eliminated and that protection of human health can be managed solely through the groundwater use restrictions implemented in the deed for OU 1. The groundwater monitoring data provided indicates that buried waste in the North Grinder landfill is not adversely impacting groundwater such that concentrations at the groundwater restriction boundary are above background concentrations or health-based GCTLs.

All of the OU 1 wells were abandoned in December 2011. The well abandonment reports are included in Appendix A.

3.2.2 Landfill Inspections

The former landfill is inspected for signs of settling, unnatural ground depressions (e.g., sinkholes), disturbance of the soil cover (e.g., erosion, digging), and the presence of exposed waste material. Tetra Tech conducted a site inspection in July 2009. RC conducted site inspections in 2012, 2013, and 2014 and interviewed local personnel with knowledge of the site as part of this five-year review. Photographs taken of the site during the December 2014 inspection are provided in Appendix B and interview records are presented as Appendix C.

3.2.3 Institutional Controls

The presence of buried wastes within the landfill and groundwater contamination within and beneath the waste prevents unrestricted use of the OU 1 site. In order to protect human health and the environment, certain specific land and groundwater use controls were established in the *ROD*. A groundwater use restriction has been imposed within the OU 1 site boundary, prohibiting use of the surficial aquifer groundwater for drinking or irrigation. Additionally, the area encumbered by landfill is restricted to non-residential (industrial or recreational) uses.

The deeds transferring the property from the Navy to the City of Orlando in October 1999 and later transferring the property to the developer included the restrictions required by the *ROD*. Additional delineation of landfill material was completed in 2001. As a result, the deeds were

revised expanding the area of landfill restrictions to include the additional areas shown in Figure 2-2.

3.3 SYSTEMS OPERATION AND MAINTENANCE

Park maintenance includes erosion control for the soil cover over the landfill and is performed by the City of Orlando. Landfill cover inspection and associated reporting is performed by Navy. The Navy's annual Operation and Maintenance (O&M) costs for these activities are estimated at approximately $5,000.

4.0 PROGRESS SINCE THE LAST FIVE-YEAR REVIEW

TtNUS completed the second five-year review for OU 1 in March 2011. The protectiveness statement from the second five-year review stated the following:

> *"The remedy is expected to be protective of human health and the environment, regardless of whether GCTLs have been met through the natural attenuation of contaminants, as long as institutional controls remain in place. Institutional controls are preventing exposure to, or the ingestion of, contaminated groundwater. The threats at the site have been addressed through the addition of cover materials over potentially contaminated surface soil and landfill materials. Institutional controls closely regulating the disturbance of cover materials over landfill materials will prevent exposure to site users and workers when the planned recreational facilities have been completed."* (TtNUS, 2011)

Recommendations made in the last review have been addressed as follows:

- The Navy has continued the landfill inspection program and ICs specified in the *ROD*.
- The Navy has discontinued annual groundwater sampling and abandoned the site monitoring wells.

The following actions were implemented to address issues raised in the last review:

- In March 2006, the Baldwin Park Development Company requested a reduction to the limits of the groundwater restriction area. This request was intended to remove the groundwater use restrictions from the residential lots. It was determined that the level of effort exceeded the benefit, therefore the reduction to the limits will not be pursued.

5.0 FIVE-YEAR PROCESS

Components that require review as part of the five-year review process are presented below. This is the third five-year review for OU 1.

5.1 ADMINISTRATIVE COMPONENTS

Members of the OPT were notified of the initiation of this five-year review in November 2014. The review was led by Marianne Sweeney of RC and included assistance from RC staff. Art Sanford of BRAC PMO assisted in the review.

This review included the following components:

- Community involvement,
- Document review,
- Data review,
- Site inspection,
- Interviews, and
- Five-Year Review Report development and review.

5.2 COMMUNITY INVOLVEMENT

The Restoration Advisory Board (RAB) was founded in 1994 to facilitate communication between those responsible for environmental cleanup and the affected community (DoN 1995). The RAB held meetings from monthly to semi-annually from 1994 to 2007. The RAB was adjourned in September 2007 after approving the planned selected remedies for the remaining sites (TtNUS 2009)

The Navy created a *Community Relations Plan* (CRP) in 1995 to plan public involvement activities in support of BRAC and IR activities at NTC, Orlando. Specific objectives noted were: 1) Provide public with opportunity to express comments on and provide input on technical decisions 2) inform the public of planned and ongoing activities, 3) and identify and resolve conflict.

An Information Repository was established at the Orange County Public Library (Reference Department) for documents related to the BRAC and IR activities. In September 2010, the Navy held a public information session. The public was notified of the status of all ongoing cleanup actions including the OU 1 five-year review. A notice was placed in the local newspaper, *The Orlando Sentinel* on January 5th, 2014, to notify the public of the start of this five-year review

process. Upon completion of this five-year review, a notice of completion will be placed in *The Orlando Sentinel*, and a copy of the document will be placed in the Information Repository at the Orlando Public Library.

5.3 DOCUMENT REVIEW

This five-year review consisted of reviewing relevant documents including the first *Five-Year Review Report* (TtNUS, 2003), the *Second Five-Year Review Report* (TtNUS, 2011), the *RI Report* (ABB-ES, 1996), the *ROD* (ABB-ES, 1997), and reports of groundwater sampling events and site inspections. In addition, Florida *Contaminant Cleanup Target Levels* (FDEP, 2005) and other applicable or relevant and appropriate requirements (ARARs) were reviewed. The reference section of this report includes a listing of these documents.

5.4 SITE INSPECTION

The purpose of site inspections is to assess the protectiveness of the remedy, including the potential presence of impacted/stressed vegetation, integrity of the landfill cover, and influences that site construction activities have had on surface water drainage. No concerns were noted during routine annual inspections performed during this five-year reporting period. As part of this five-year review, detailed site inspections were conducted by RC. The detailed site inspections included a site walkover, during which photographs were taken from various locations around the site. Photographs of the December 2014 site visit and a figure that provides a key for the location of the photographs are included in Appendix B.

The landfill is covered with grass, asphalt, basketball courts and concrete sidewalks. No conditions were observed during the site inspections that would impact the protectiveness of the remedy. The ICs that are in place include prohibiting the use of groundwater either as a potable water source or for irrigation until cleanup levels are achieved. Groundwater usage was not observed. Likewise, excavation activities into landfill materials or other activities that could affect the protectiveness of the landfill cover are prohibited, or closely monitored when approved, to prevent unauthorized site work. No evidence of unauthorized excavation was observed.

5.5 INTERVIEWS

Interviews were conducted with various parties with intimate knowledge of the site. Interviewees included:

- David Grabka, Remedial Project Manager, DoD and Brownfields Partnerships, Waste Cleanup Program, FDEP.

- Dan Dashtaki, Environmental Manager, City of Orlando.
- Michael Wilson, Athletic Fields Manager, City of Orlando.
- Raymond Roe, Florida Department of Health, Orange County.

No problems regarding the site were identified during the interviews. The questions and responses of those interviewed are included in Appendix C.

6.0 TECHNICAL ASSESSMENT

The technical assessment for OU 1 presented in this section describes how each of the three key assessment questions (USEPA, 2001) were answered for OU 1. The discussion presented here is a framework for the protectiveness determination that explains the conclusions of the review, based on the information presented in the previous sections.

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

Yes, the review of documents, ARARs, and observations during the site visits indicate that the remedy is functioning as intended by the *ROD*. The landfill cover prevents the potential for direct contact with, or ingestion of, contaminants in subsurface soil or landfill debris. The groundwater monitoring obligations were fulfilled and have been discontinued. ICs prevent the use of groundwater for potable water or irrigation purposes.

The O&M activities are functioning correctly and will maintain the effectiveness of the response action. The landfill cover has been maintained well. No unexpected changes or other problems were identified that could place protectiveness at risk.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of the remedy selection still valid?

There have been no changes in physical conditions of the site that would affect the protectiveness of the remedy.

- Changes in Requirements and To Be Considered: A review of current regulations for changes that could affect protectiveness has revealed that ARARs cited in the *ROD* have not changed substantively since the *ROD* was signed, with the exception of Florida rules as follows:

  - Chapter 62-777, Florida Administrative Code (FAC) *Contaminant Cleanup Target Levels* promulgated in 2005 replaces the June 1994 Florida Groundwater Guidance and September 1995 Florida Soil Cleanup Goals (SCGs). Chapter 62-777 GCTLs were considered during the evaluation to terminate groundwater monitoring. Comparison of current Soil Cleanup Target Levels (SCTLs) and previous SCGs reveals that the current SCTLS for Arochlor 1260 and dieldrin are lower than previous SCGs (Table 3-1). The lower SCTLs are not expected to have any impact on the protectiveness of the current remedy.

- Chapter 62-780, FAC *Contaminated Site Cleanup Criteria* was also promulgated in 2005 and most recently updated in 2014. This rule applies to site rehabilitation conducted at sites contaminated with pollutants, hazardous substances, drycleaning solvents, petroleum and petroleum products. This chapter applies to site rehabilitation whether the release or discharge causing or contributing to the contamination occurred prior to, on, or after the effective date of this chapter, unless the site has received a "No Further Action" determination or a Site Rehabilitation Completion Order from the Department prior to April 17, 2005.

A synopsis of ARARs and To Be Considereds (TBCs) is included in Appendix D. The changes to the ARARs do not affect the protectiveness of the remedial actions specified in the approved *ROD* and implemented at OU 1.

- Changes in Exposure Pathways: The land use for OU 1 is unchanged. No new exposure pathways were identified.

- Changes in Toxicity and Other Contaminant Characteristics: Toxicity and other factors for chemicals of concern have not changed.

- Changes in Risk Assessment Methodologies: Changes in risk assessment methodologies since the time of the *ROD* do not call into question the protectiveness of the remedy.

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

No other information that could call into question the protectiveness of the remedy has been discovered.

Technical Assessment Summary

The *ROD* for OU 1, issued in 1997, specified groundwater monitoring, landfill inspections, and ICs as the selected remedial action. The *ROD* also specified that the groundwater monitoring program would be reviewed after Year 3 to determine whether or not to continue groundwater monitoring as no additional releases of leachate from the landfill were expected to be observed due to the age of the landfill. Several years of monitoring data indicated no increases in contaminant concentrations; therefore, the decision was made during the second five-year review to discontinue groundwater monitoring.

7.0 ISSUES AND RECOMMENDATIONS

There are no issues that affect the protectiveness of the remedy. There are no issues and associated recommendations that have been identified that would call into question the protectiveness of the remedy.

8.0 PROTECTIVENESS STATEMENT

The remedy is protective of human health and the environment. The landfill cover is in excellent condition, graded, seeded, and well maintained. No areas of erosion were observed during the third five-year reporting period.

The Baldwin Park community is restricted from groundwater use, including the area within the OU 1 site boundary. All potable water is supplied by the City of Orlando. Blue Jacket Park and the residential areas are irrigated using reclaimed water.

Exposure pathways that could result in unacceptable risks are effectively addressed by the ICs by preventing groundwater usage, requiring landfill cover inspections, and restricting construction activity.

The Navy, with oversight from FDEP, will continue the ICs as specified in the *ROD*.

9.0 NEXT REVIEW

The next five-year review for OU 1, North Grinder Landfill Site, is scheduled for completion by March 2021.

10.0 REFERENCES

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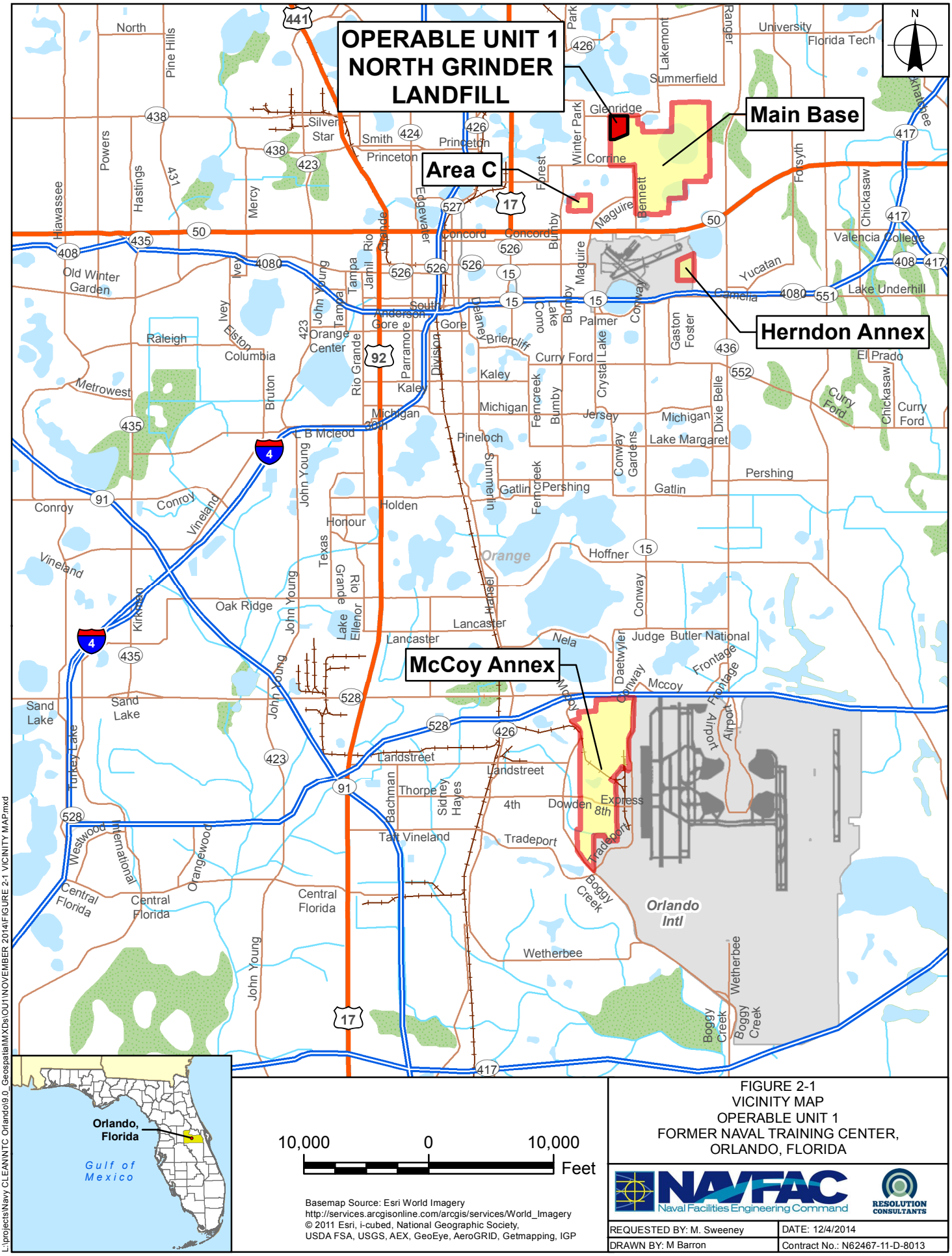
Figures



Basemap Source: Esri World Imagery
http://services.arcgisonline.com/arcgis/services/World_Imagery
© 2011 Esri, i-cubed, National Geographic Society,
USDA FSA, USGS, AEX, GeoEye, AeroGRID, Getmapping, IGP

FIGURE 2-1
VICINITY MAP
OPERABLE UNIT 1
FORMER NAVAL TRAINING CENTER,
ORLANDO, FLORIDA

NAVFAC Naval Facilities Engineering Command

RESOLUTION CONSULTANTS

REQUESTED BY: M. Sweeney	DATE: 12/4/2014
DRAWN BY: M Barron	Contract No.: N62467-11-D-8013

L:\projects\Navy CLEAN\NTC Orlando\9.0_Geospatial\MXDs\OU1\NOVEMBER 2014\FIGURE 2-1 VICINITY MAP.mxd

\\usorl2fp002\data\projects\Navy CLEAN\NTC Orlando\9.0_GeospatialMXDs\OU1\April 2015 OU1 5-YR REVIEW\FIGURE 2-2 OU-1 Site Map.mxd

Legend

- Landfill Boundary (Baldwin Park Development Company Deed 4)
- Landfill Boundary (ROD)
- Waste Excavation Site
- Groundwater Use Restriction/Site Boundary
- Historical Buildings
- Glenridge Middle School Boundary
- Firefighter Training Area

0 125 250 Feet

Basemap Source:
Florida Department of Transportation (FDOT)
Aquisition Date: January 22, 2012
Resolution: 0.5 foot
Coordinate System: NAD 1983 HARN
State Plane Florida East

FIGURE 2-2
SITE LAYOUT
OPERABLE UNIT 1
FORMER NAVAL TRAINING CENTER,
ORLANDO, FLORIDA

NAVFAC Naval Facilities Engineering Command
RESOLUTION CONSULTANTS

REQUESTED BY: J.CEATHER	DATE: 6/22/2015
DRAWN BY: M. Martin	CONTRACT NUMBER: N62467-11-D-8013

Legend

- Abandoned Monitoring Well
- Groundwater Use Restriction/Site Boundary
- Landfill Boundary (Baldwin Park Development Company Deed 4)
- Landfill Boundary (ROD)
- Waste Excavation Site (Aug. 2002)

0 125 250 Feet

Basemap Source:
Orange County, Florida GIS
Aquisition Date: January 2014
Resolution: 0.5 foot
Coordinate System: NAD 1983 HARN
State Plane Florida East

FIGURE 3-1
HISTORICAL MONITORING WELL LOCATIONS
OPERABLE UNIT 1
FORMER NAVAL TRAINING CENTER,
ORLANDO, FLORIDA

NAVFAC Naval Facilities Engineering Command
RESOLUTION CONSULTANTS

REQUESTED BY: J. Ceather	DATE: 6/11/2015
DRAWN BY: M.Barron	CONTRACT NO.: N62467-11-D-8013

\\usorl2fp002\data\projects\Navy CLEAN\NTC Orlando\9.0_GeospatialMXDs\OU1\April 2015 OU1 5-YR REVIEW\FIGURE 4-1 OU-1 Historical MW Map.mxd

Tables

Table 1-1 - Chronological Summary of Activities

Operable Unit 1

Naval Training Center, Orlando, Florida

Date	Event
1940 to 1947	United States Army Air Corps conducted operations at Orlando Air Base, including the parcel that became Main Base where OU 1 is located; North Grinder Landfill operations started prior to 1947.
1947	United States Air Force assumed command of former Army Air Corps facilities (called Orlando Air Force Base).
1949 to 1950	Base decommissioned and on standby status.
1951	Reactivated as Air Force Aviation Engineers training site.
1953	Military Airlift Command assumed full jurisdiction.
1961 to 1965	A small central portion of OU 1 was used as a firefighter training area.
1965 to mid-1967	United States Navy moved its Training Device Center to Orlando Air Force Base from Port Washington, New York.
1967	North Grinder Landfill closed prior to construction of two dormitories, Buildings 212 and 214.
July 1, 1968	Base commissioned as Naval Training Center (NTC) Orlando.
September 1985	*Initial Assessment Study* of NTC Orlando facilities by C.C. Johnson & Associates.
December 1986	*Verification Study* at NTC Orlando facilities by Geraghty & Miller.
December 1994	Environmental Baseline Survey submitted to Navy by ABB Environmental Services, Inc. (ABB-ES).
December 1996	*Remedial Investigation (RI) Report* submitted to Navy by ABB-ES.
December 19, 1996	Decision made not to perform *Feasibility Study (FS)* because Presumptive Remedy for Landfills is documented in RI transmittal letter.
May 15, 1997	*Proposed Plan* submitted to Navy by ABB-ES.
May 15 to June 16, 1997	Public Comment Period for *Proposed Plan*.
May 22, 1997	Public meeting held at City Hall to allow public comment on proposed remedy.
July 1997	*Record of Decision (ROD)* submitted.
October 1997	Preliminary OU 1 specification for site monitoring and Closure Plan submitted.
November 10, 1997	*ROD* approved by the Navy, Florida Department of Environmental Protection (FDEP) and United States Environmental Protection Agency (USEPA).
March 1998 to December 1998	Environmental Detachment Charleston (DET) conducted quarterly groundwater monitoring and site inspection.
June 1999	DET conducted semi-annual groundwater monitoring and site inspection.

Date	Event
October 28, 1999	Navy signed transfer documents transferring Main Base to City of Orlando.
December 1999 to January 2002	CH2M HILL Constructors, Inc. (CCI) conducted semi-annual groundwater monitoring and site inspection.
March 2000	Developer began demolition of existing structures at NTC Orlando.
February to May 2001	Three Navy buildings (207, 214, 215) and associated asphalt parade ground on Parcel 4 (North Grinder landfill parcel) demolished by developer.
July 2001	Nodarse & Associates, Inc. (Nodarse) placed approximately 12,000 cubic yards (cy) of polynuclear aromatic hydrocarbons (PAHs) and arsenic contaminated soil from SA 39, and approximately 5,500 cy of arsenic contaminated soil from SA 40 over landfill materials. A minimum of 2 feet of clean fill was placed over the SA 39 and SA 40 soil.
October 2001	Developer began new construction of Baldwin Park.
January 2002	Nodarse began monitoring well abandonment prematurely and had to reinstall 6 wells to allow semi-annual monitoring.
February 2002	Existing OU 1 monitoring wells abandoned by Nodarse to allow redevelopment of property.
August 2002	CCI investigated the extent of waste materials encountered during school construction in the northeast corner of the landfill. Approximately 5,906 tons of nonhazardous waste (soil and debris) was excavated and disposed offsite and the area was backfilled to pre-existing grade (Tech Memo dated Feb 2008).
May 2003	14 replacement monitoring wells installed by Nodarse.
August 2003	Glenridge Middle School opened (constructed within OU 1 but outside landfill boundary.)
September 2003	4 additional replacement monitoring wells installed by Nodarse.
December 2003 to June 2007	Annual groundwater monitoring and site inspection conducted by Terraine, Inc.
December 16, 2003	First *Five-Year Review Report* issued by Tetra Tech NUS, Inc.(TtNUS) and approved by USEPA.
June 24, 2005	Received FDEP approval to discontinue groundwater analyses for pesticides and herbicides.
May 22, 2007	Received FDEP approval to discontinue groundwater analyses for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs).
December 2008	Annual sampling at 18 wells by Barnes, Ferland, and Associates, Inc. Samples were analyzed for metals, gross alpha, and gross beta.
August 2009	Technical Memorandum on the *Optimization of the Groundwater Monitoring Program at OU 1* recommends discontinuing monitoring well sampling based on statistical analyses (TtNUS).

Date	Event
September 2010	Last NTC Orlando Partnering meeting attended by USEPA.
December 2010	FDEP comments on the Draft *Five-Year Review Report* concurs with the August 2009 Optimization Tech Memo and includes a summary of the rationale for discontinuing groundwater sampling at OU 1.
March 2011	*Second Five-Year Review*, including recommendation to discontinue groundwater monitoring, approved by Navy.
July 2011	*Second Five-Year Review* approved by FDEP. Note, USEPA did not review the Second Five-Year Review Report.
December 2011	Groundwater Monitor Wells Abandoned.
December 2012	Annual Land Use Control Inspection.
December 2013	Annual Land Use Control Inspection.
January 2015	Public Notice of Third Five-Year Review published in local newspaper.

Table 1-2 - Status of Operable Units
Naval Training Center, Orlando, Florida

Site	Status
OU 2 McCoy Annex Landfill	LTM; RI/FS Addendum in progress, PP and ROD in review.
OU 3 Greenskeeper's Storage/Pesticide Handling and Storage Area	LTM; RI/FS Addendum in progress, PP and ROD in review.
OU 4 Area C	LTM/O&M; RI/FS Addendum in progress, PP and ROD in review.

Table 3-1 - Surface Soil Contaminant Concentrations
Operable Unit 1
Naval Training Center, Orlando, Florida

Contaminant [a]	Concentration Range [b]	Soil Screening Criteria [c]	62-777 SCTLs, 2005 [d]
Surface Soil at OU 1			
Arsenic	0.42 – 3.5	0.851 / 0.7 / 3.1	2.1 / 12
Benzo(a)pyrene	0.2 – 1.2	---/ 0.1 / 0.5	0.1 / 0.7
Dibenzo(a,h)anthracene	0.12 – 0.76	--- / 0.1 / 0.5	# / #
Indeno(1,2,3-cd)pyrene	0.16 – 2.3	--- / 1.4 / 5.0	# / #
Aroclor-1260 (PCBs)	0.035 – 0.15	--- / 0.9 / 3.5	0.5 / 2.6
Dieldrin	0.038 – 0.175	--- / 0.07 / 0.3	0.06 / 0.3
Surface Soil From SA 39			
Arsenic	1.2 – 6.7	1.0 / 0.8 / 3.7	2.1 / 12
Benzo(a)pyrene	157 – 1,440	--- / 0.1 / 0.5	0.1 / 0.7
Dibenzo(a,h)anthracene	101 – 354	--- / 0.1 / 0.5	# / #
Surface Soil From SA 40			
Arsenic	1.2J – 13.5J	1.0 / 0.8 / 3.7	2.1 / 12

[a] Only contaminants that exceeded the residential or industrial Soil Cleanup Goals [(SCGs) FDEP, 1995] are shown for OU 1; contaminants that exceeded the FDEP residential or industrial Soil Cleanup Target Levels (SCTLs, FDEP, 1999) are shown for SA 39 and SA 40.

[b] All units are milligrams per kilogram (mg/kg).

[c] NTC Background / residential SCGs/ industrial SCGs shown for OU 1; NTC background / 1999 residential SCTLs / 1999 industrial SCTLs shown for SA 39 and SA 40. Note that background is not applicable to organic contaminants.

Note that NTC Background for arsenic was reported as 0.851 mg/kg in Tables 6-2 and 6-10 of the OU 1 Remedial Investigation Report (ABB-ES, 2006). The background screening value (BGSV) for surface soil in the Main Base was reported as 1.0 mg/kg (ABB-ES, 1995).

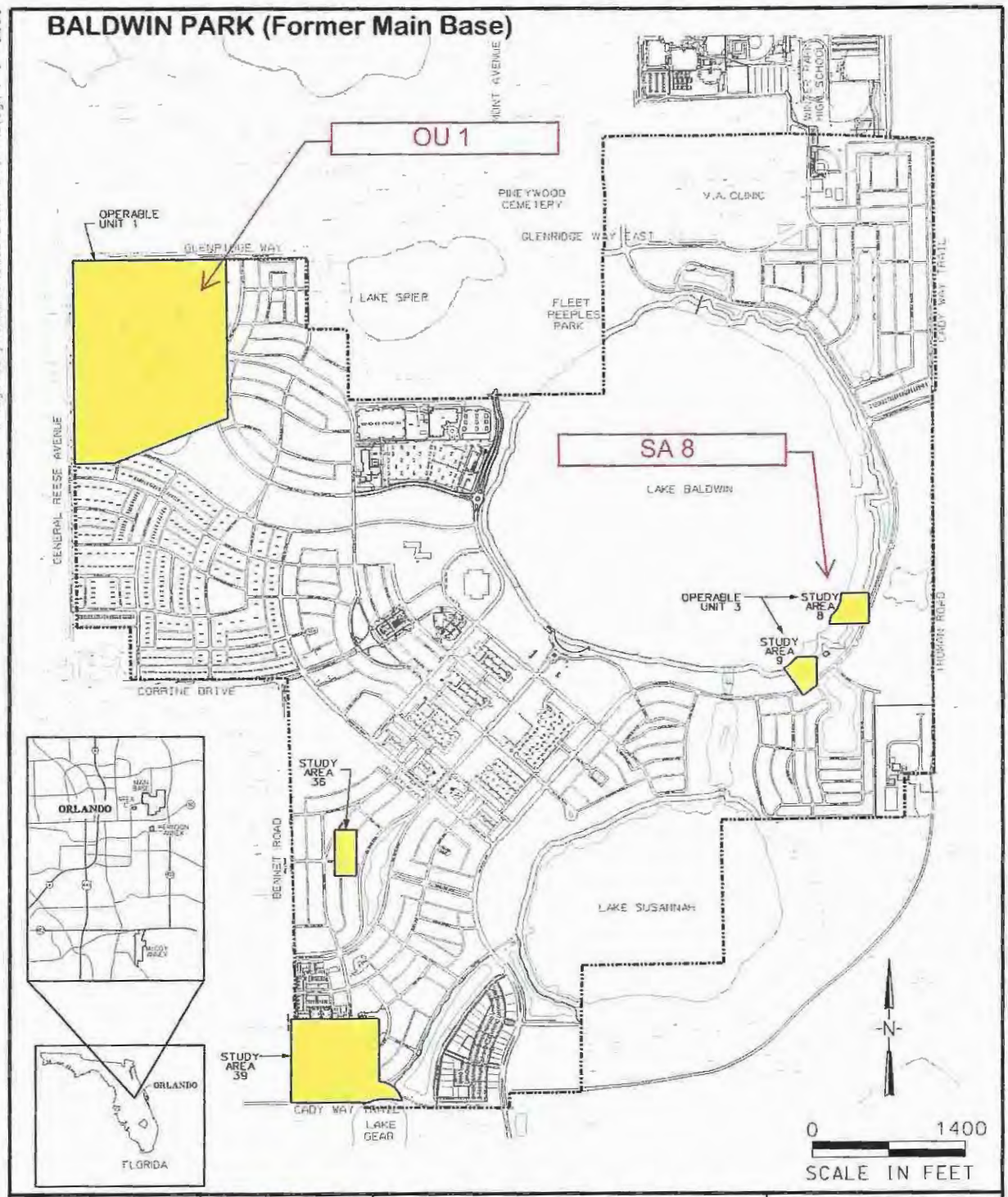
[d] Current 62-777 SCTLs; residential/industrial are provided for comparison.

#Site concentrations for these contaminants must be converted to benzo(a)pyrene equivalents before comparison with the direct exposure SCTL for benzo(a)pyrene.

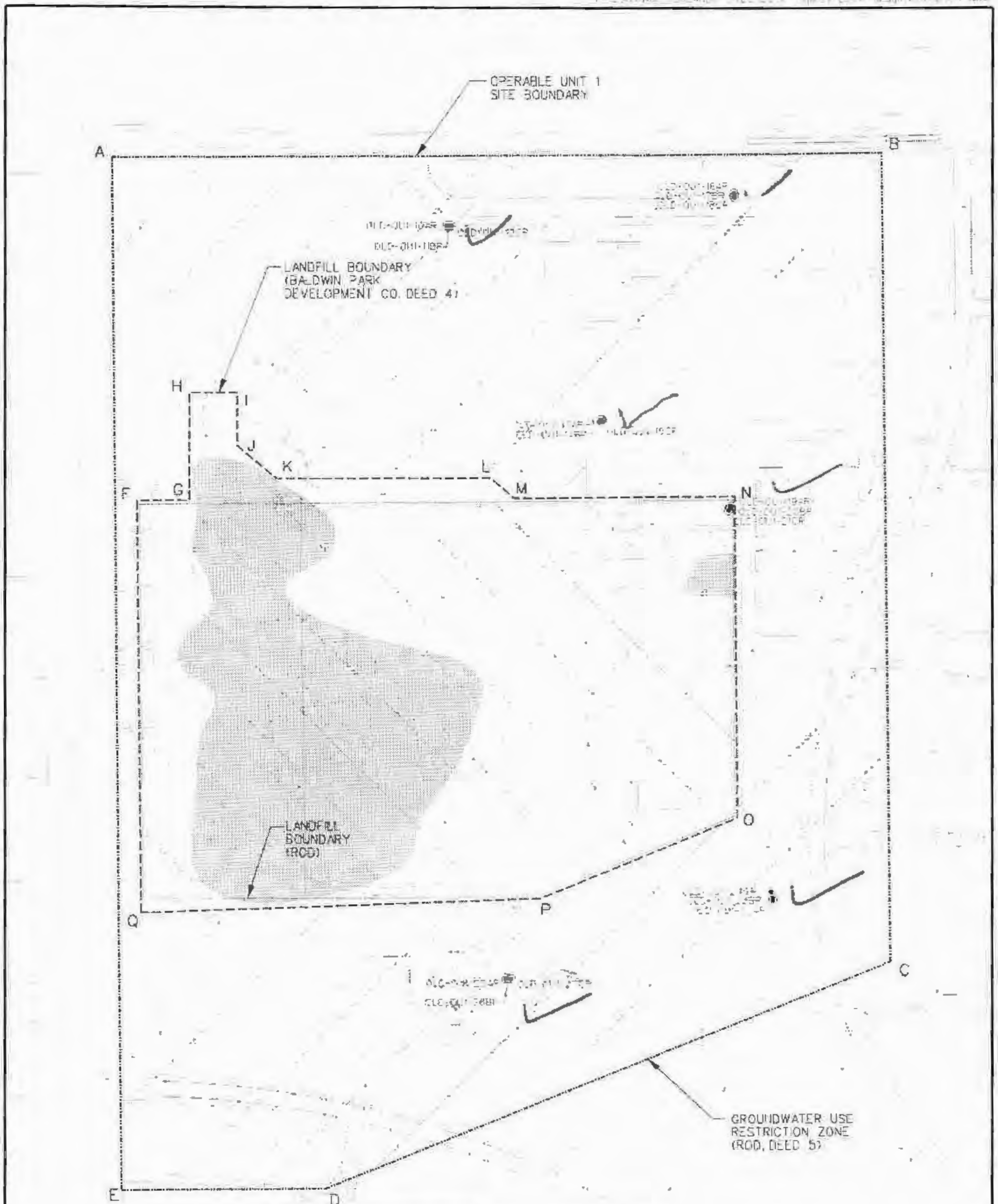
Appendix A

Well Abandonment Reports

k:\dgn\navy\orlando\sites\LUCIP\LUCIP-15.dgn / 9-1-2009



DRAWN BY: WRW	DATE: 9-1-2009	SITE LOCATION MAP SITES ON THE FORMER MAIN BASE WITH LAND USE CONTROLS NAVAL TRAINING CENTER ORLANDO, FLORIDA	CONTRACT NO.: N62467-04-D-0055
CHECKED BY: TKG	DATE: 9-1-2009		OWNER NO.: —
REVISED BY: —	DATE: —		APPROVED BY: — / DATE: —
SCALE: AS NOTED			Figure 1 / REV.: 0



LOT	STREET ADDRESS
926	3738 LOWER PARK RD
927	3638 LOWER PARK RD
928	3674 LOWER PARK RD
929	3690 LOWER PARK RD
930	3626 LOWER PARK RD
931	3602 LOWER PARK RD
970	2743 UPPER PARK RD
971	2719 UPPER PARK RD
972	2697 UPPER PARK RD
1055	2831 UPPER PARK RD
1056	2787 UPPER PARK RD
1057	2783 UPPER PARK RD
1058	2779 UPPER PARK RD
1059	2775 UPPER PARK RD
1060	2771 UPPER PARK RD
1061	2767 UPPER PARK RD
1062	2763 UPPER PARK RD
1063	2759 UPPER PARK RD
1064	2755 UPPER PARK RD
[illegible]	2827 UPPER PARK RD

LOCATION COORDINATES		
LOC	EASTING	NORTHING
A	547118	1543244
B	548527	1543274
C	548533	1541797
D	547509	[illegible]
E	547136	[illegible]
F	547184	1542645
G	547260	1542640
H	547262	1542577
I	547347	1542977
J	547347	1542741
K	547420	1542690
L	547809	1542751
M	548909	[illegible]
N	548084	[illegible]
O	548054	1541758
P	547906	1541312
Q	547172	1541865

LEGEND

MONITORING WELL

FORMER LANDFILL

GROUNDWATER USE RESTRICTION ZONE

LAND AND GROUNDWATER USE RESTRICTION ZONE

DRAWN BY WRW, DATE 6-10-2009		**SITE MAP** **OPERABLE UNIT 1 - MAIN BASE**	CONTRACT NO. **N62467-04-D-0055**
CHECKED BY TKG, DATE 6-10-2009			OWNER NO. —
REVISED BY —, DATE —		**NAVAL TRAINING CENTER** **ORLANDO, FLORIDA**	APPROVED BY —, DATE —
SCALE AS NOTED			DRAWING NO. **FIGURE 1**, REV. 0

WELL CONSTRUCTION DETAILS
STUDY AREA 2

NAVAL TRAINING CENTER ORLANDO
ORLANDO, FLORIDA

SITE	WELL DESIGNATION	WELL INNER DIAMETER	CASING MATERIAL	TOTAL DEPTH (BTOC)
SA 2	OLD-02-46D	2	PVC Sch 40	70
SA 8	OLD-08-26	1	PVC Sch 40	13
SA 8	OLD-08-29	1	PVC Sch 40	13
SA 16	OLD-7175-CW02	2	PVC Sch 40	12
SA 16	OLD-7175-CW04	2	PVC Sch 40	12
SA 16	OLD-7175-CW06	2	PVC Sch 40	12
SA 16	OLD-7175-CW07	2	PVC Sch 40	12
SA 16	OLD-7175-CW09	2	PVC Sch 40	12
SA 16	OLD-7175-CW10	2	PVC Sch 40	12
SA 16	OLD-7175-MW05	2	PVC Sch 40	12
SA 16	OLD-7175-MW07	2	PVC Sch 40	12
SA 16	OLD-7175-MW08	2	PVC Sch 40	12
SA 18	MW-1	2	PVC Sch 40	12
SA 18	MW-2	2	PVC Sch 40	12
SA 18	MW-3	2	PVC Sch 40	12
SA 18	OLD-18-01	2	PVC Sch 40	12
SA 18	OLD-18-02	2	PVC Sch 40	12
SA 18	OLD-18-03	2	PVC Sch 40	12
SA 18	OLD-18-04	2	PVC Sch 40	12
SA 18	OLD-18-05	2	PVC Sch 40	12
SA 18	OLD-18-06	2	PVC Sch 40	12
OU 1	OLD-OU1-10AR	2	PVC Sch 40	23.55
OU 1	OLD-OU1-11BR	2	PVC Sch 40	40.51
OU 1	OLD-OU1-12CR	2	PVC Sch 40	65.44
OU 1	OLD-OU1-13AR	2	PVC Sch 40	24.63
OU 1	OLD-OU1-14BR	2	PVC Sch 40	41.33
OU 1	OLD-OU1-15CR	2	PVC Sch 40	55.92
OU 1	OLD-OU1-16AR	2	PVC Sch 40	20.18
OU 1	OLD-OU1-17BR	2	PVC Sch 40	35.46
OU 1	OLD-OU1-18CR	2	PVC Sch 40	48.54
OU 1	OLD-OU1-19AR	2	PVC Sch 40	20.9
OU 1	OLD-OU1-20BR*	2	PVC Sch 40	34.71
OU 1	OLD-OU1-21CR*	2	PVC Sch 40	41.48
OU 1	OLD-OU1-22AR*	2	PVC Sch 40	20.43
OU 1	OLD-OU1-23BR*	2	PVC Sch 40	40.32
OU 1	OLD-OU1-24CR	2	PVC Sch 40	70.54
OU 1	OLD-OU1-25AR	2	PVC Sch 40	20.41

Fig 3
Fig 4
Fig 2
Fig 1

WELL CONSTRUCTION DETAILS
STUDY AREA 2

NAVAL TRAINING CENTER ORLANDO
ORLANDO, FLORIDA

SITE	WELL DESIGNATION	WELL INNER DIAMETER	CASING MATERIAL	TOTAL DEPTH (BTOC)
OU 1	OLD-OU1-26BR	2	PVC Sch 40	50.36
OU 1	OLD-OU1-27CR	2	PVC Sch 40	63.18

} Fig 1

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110820 CUP/WUP No. _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 1 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage
Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen:From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From 0 ft. To 24 ft. No of Bags 0.50 Seal Material (Check One): X Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron

I certify that the information in this report is accurate & true.

* Permit No. 110820

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2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
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PHONE: (386) 329-4500
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152 WATER MANAGEMENT DR., HAVANA FL 32333-4712
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WEST PALM BEACH, FL 33416-4680
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9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 OR (800) 226-1066 (FLORIDA ONLY)
WWW.MYSUWANNEERIVER.COM

DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zones.

From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
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From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

COMMENTS ____

GP WO 1211025
Grout Abandon 1 (2" x 24')
OUI 10

Detailed Site Map of Well Location

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
☐ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110821 CUP/WUP No _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 3 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage

Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic

_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen:From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From 0 ft.	To 41 ft.	No of Bags 0.82	Seal Material (Check One):	X	Neat Cement	_____	Bentonite	_____	Other
From _____ ft.	To _____ ft.	No of Bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other
From _____ ft.	To _____ ft.	No of Bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other
From _____ ft.	To _____ ft.	No of Bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other
From _____ ft.	To _____ ft.	No of Bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other

*** LINER CASING DIAMETER & DEPTH**

Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement	_____	Bentonite	_____	Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine

Horsepower _____ Pump Capacity (GPM) _____

Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm

_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron

I certify that the information in this report is accurate & true.

* Permit No. 110821

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE (352) 796-7211 OR (800) 423-1476
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LIVE OAK, FL 32060
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WWW.MYSUWANNEERIVER.COM

DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zones.

From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
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From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
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From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

COMMENTS ____

Detailed Site Map of Well Location

N

GP WO 1211025
Grout Abandon 3 (2" x 41')
OUI 11
OUI 14
OUI 21

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110820 CUP/WUP No. _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 1 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage
Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From	0 ft.	To	66 ft.	No of Bags	1.32	Seal Material (Check One):	X	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

PUMP TYPE (If Known)
_____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump depth _____ ft. Intake Depth _____ ft.

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Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
_____ Laboratory Test _____ Field Test Kit

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From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______

COMMENTS ______

GP WO 1211025
Grout Abandon 1 (2" x 66')
OUI 12

Detailed Site Map of Well Location

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

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☐ St. Johns River
☐ South Florida
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■ Delegated Authority (if Applicable) :

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11. Specify Intended Use(s) of Well(s):

_____ Domestic
_____ Bottled Water Supply
_____ Public Water Supply (Limited Use/DOH)
_____ Public Water Supply (Community or Non Community/DEP)
_____ Class I Injection
_____ Landscape Irrigation
_____ Recreation Area Irrigation
_____ Agricultural Irrigation
_____ Livestock
_____ Nursery Irrigation
_____ Commercial / Industrial
_____ Golf Course Irrigation
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_____ Monitoring
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X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen:From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From 0 ft. To 25 ft. No of Bags 0.50 Seal Material (Check One): X Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron

I certify that the information in this report is accurate & true.

* Permit No. 110820

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE (352) 796-7211 OR (800) 423-1476
WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 REID STREET, PALATKA, FL 32178-1427
PHONE: (386) 329-4500
WWW.SJRWMD.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA FL 32333-4712
(US HIGHWAY 90, 10 MILES WEST OF TALLAHASSEE)
PHONE: (850) 539-5999
WWW.NWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX 24680
3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
PHONE: (561) 686-8800
WWW.SFWMD.GOV

SUWANNEE RIVER WATER MANAGEMENT DISTRICE
9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 OR (800) 226-1066 (FLORIDA ONLY)
WWW.MYSUWANNEERIVER.COM

DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zones.

From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______

COMMENTS ______

Detailed Site Map of Well Location

N

GP WO 1211025
Grout Abandon 1 (2" x 25')
OUI 13

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110820 CUP/WUP No. _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 1 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage

Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen:From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From	0 ft.	To	56 ft.	No of Bags	1.12	Seal Material (Check One):	X	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine

Horsepower _____ Pump Capacity (GPM) _____

Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm

_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron

I certify that the information in this report is accurate & true.

* Permit No. 110820

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE (352) 796-7211 OR (800) 423-1476
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9225 CR 49
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DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zones.

From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______

COMMENTS ______

Detailed Site Map of Well Location

GP WO 1211025
Grout Abandon 1 (2" x 56')
OUI 15

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110821 CUP/WUP No. _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 4 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage

Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen:From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From	0 ft.	To	20 ft.	No of Bags	0.40	Seal Material (Check One):	X	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron

I certify that the information in this report is accurate & true.

* Permit No. 110821

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2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE (352) 796-7211 OR (800) 423-1476
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LIVE OAK, FL 32060
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WWW.MYSUWANNEERIVER.COM

DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zones.

From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

COMMENTS ____

Detailed Site Map of Well Location

GP WO 1211025
Grout Abandon 4 (2" x 20')
OUI 16
OUI 19
OUI 22
OUI 25

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110820 CUP/WUP No. _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 1 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage

Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic

_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From	0 ft.	To	35 ft.	No of Bags	0.70	Seal Material (Check One):	X	Neat Cement	____ Bentonite	____ Other
From	____ ft.	To	____ ft.	No of Bags	____	Seal Material (Check One):	____	Neat Cement	____ Bentonite	____ Other
From	____ ft.	To	____ ft.	No of Bags	____	Seal Material (Check One):	____	Neat Cement	____ Bentonite	____ Other
From	____ ft.	To	____ ft.	No of Bags	____	Seal Material (Check One):	____	Neat Cement	____ Bentonite	____ Other
From	____ ft.	To	____ ft.	No of Bags	____	Seal Material (Check One):	____	Neat Cement	____ Bentonite	____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam.	____ in.	From	____ ft.	To	____ ft.	# of bags	____	Seal Material (Check One):	____ Neat Cement	____ Bentonite ____ Other
Diam.	____ in.	From	____ ft.	To	____ ft.	# of bags	____	Seal Material (Check One):	____ Neat Cement	____ Bentonite ____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam.	____ in.	From	____ ft.	To	____ ft.	# of bags	____	Seal Material (Check One):	____ Neat Cement	____ Bentonite ____ Other
Diam.	____ in.	From	____ ft.	To	____ ft.	# of bags	____	Seal Material (Check One):	____ Neat Cement	____ Bentonite ____ Other
Diam.	____ in.	From	____ ft.	To	____ ft.	# of bags	____	Seal Material (Check One):	____ Neat Cement	____ Bentonite ____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam.	____ in.	From	____ ft.	To	____ ft.	# of bags	____	Seal Material (Check One):	____ Neat Cement	____ Bentonite ____ Other
Diam.	____ in.	From	____ ft.	To	____ ft.	# of bags	____	Seal Material (Check One):	____ Neat Cement	____ Bentonite ____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam.	____ in.	From	____ ft.	To	____ ft.	# of bags	____	Seal Material (Check One):	____ Neat Cement	____ Bentonite ____ Other
Diam.	____ in.	From	____ ft.	To	____ ft.	# of bags	____	Seal Material (Check One):	____ Neat Cement	____ Bentonite ____ Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine

Horsepower _____ Pump Capacity (GPM) _____

Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm

_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron

I certify that the information in this report is accurate & true.

* Permit No. 110820

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE (352) 796-7211 OR (800) 423-1476
WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
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152 WATER MANAGEMENT DR., HAVANA FL 32333-4712
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3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
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9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 OR (800) 226-1066 (FLORIDA ONLY)
WWW.MYSUWANNEERIVER.COM

DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zones.

From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
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From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______

COMMENTS ______

GP WO 1211025
Grout Abandon 1 (2" x 35')
OUI 17

Detailed Site Map of Well Location

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110820 CUP/WUP No _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 1 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage
Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen:From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From	0 ft.	To	48 ft.	No of Bags	0.96	Seal Material (Check One):	X	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other
From	_____ ft.	To	_____ ft.	No of Bags	_____	Seal Material (Check One):	_____	Neat Cement	_____ Bentonite _____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other
Diam.	_____ in.	From	_____ ft.	To	_____ ft.	# of bags	_____	Seal Material (Check One): _____	Neat Cement _____ Bentonite _____ Other

PUMP TYPE (If Known)
_____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump depth _____ ft Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)
Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron
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From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
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From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
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From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______

COMMENTS ______

Detailed Site Map of Well Location

GP WO 1211025
Grout Abandon 1 (2" x 48')
OUI 18

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110820 CUP/WUP No _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 1 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage
Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen:From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From 0 ft. To 34 ft. No of Bags 0.68 Seal Material (Check One): X Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron
I certify that the information in this report is accurate & true.

* Permit No. 110820

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DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zones.

From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
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From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

COMMENTS ____

GP WO 1211025
Grout Abandon 1 (2" x 34')
OUI 20

Detailed Site Map of Well Location

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110821 CUP/WUP No. _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 1 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
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_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage
Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen:From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)**

From 0 ft.	To 40 ft.	No of Bags 0.80	Seal Material (Check One):	X	Neat Cement		Bentonite		Other
From _____ ft.	To _____ ft.	No of Bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite		Other
From _____ ft.	To _____ ft.	No of Bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite		Other
From _____ ft.	To _____ ft.	No of Bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite		Other
From _____ ft.	To _____ ft.	No of Bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite		Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite	Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite	Other

*** LINER CASING DIAMETER & DEPTH**

Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite	Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite	Other
Diam. _____ in.	From _____ ft.	To _____ ft.	# of bags _____	Seal Material (Check One):	_____	Neat Cement		Bentonite	Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
_____ Laboratory Test _____ Field Test Kit

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I certify that the information in this report is accurate & true.

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From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

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From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

COMMENTS ____

Detailed Site Map of Well Location

GP WO 1211025
Grout Abandon 1 (2" x 40')
OUI 23

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) :

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110820 CUP/WUP No _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 1 * Number of permitted wells not constructed, repaired, or abandoned 0

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage
Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen:From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From 0 ft. To 70 ft. No of Bags 1.40 Seal Material (Check One): X Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron

I certify that the information in this report is accurate & true.

* Permit No. 110820

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE (352) 796-7211 OR (800) 423-1476
WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 REID STREET, PALATKA, FL 32178-1427
PHONE: (386) 329-4500
WWW.SJRWMD.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA FL 32333-4712
(US HIGHWAY 90, 10 MILES WEST OF TALLAHASSEE)
PHONE: (850) 539-5999
WWW.NWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX 24680
3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
PHONE: (561) 686-8800
WWW.SFWMD.GOV

SUWANNEE RIVER WATER MANAGEMENT DISTRICE
9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 OR (800) 226-1066 (FLORIDA ONLY)
WWW.MYSUWANNEERIVER.COM

DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zones.

From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____
From ____ ft. To ____ ft. Color ____ Grain Size (F, M, C) ____ Material ____

COMMENTS ____

GP WO 1211025
Grout Abandon 1 (2" x 70')
OUI 24

Detailed Site Map of Well Location

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

STATE OF FLORIDA WELL COMPLETION REPORT

☐ Southwest
☐ Northwest
☐ St. Johns River
☐ South Florida
☐ Suwannee River
☐ DEP
■ Delegated Authority (if Applicable) : Orange County

PLEASE FILL OUT ALL APPLICABLE FIELDS
(* Denotes Required FieldS Where Applicable)

Date Stamp

Official Use Only

1. *Permit Number 110819 CUP/WUP No. _____ DID Number _____ 62-524 Delineation No. _____

2. * Number of permitted wells constructed, repaired, or abandoned 2 * Number of permitted wells not constructed, repaired, or abandoned 6

3. * Owner's Name City of Orlando 4. * Completion Date 12/27/2011 5. Florida Unique ID _____

6. 2501 General Rees Ave - Orlando
* Well Location - Address, Road Name or Number, City, ZIP

7. * County Orange * Section 17 Land Grant _____ * Township 22 * Range 30

8. Latitude _____ Longitude _____

9. Data Obtained From : _____ GPS _____ Map _____ Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10* TYPE OF WORK: _____ Construction _____ Repair _____ Modification X Abandonment

11. Specify Intended Use(s) of Well(s):

_____ Domestic	_____ Landscape Irrigation	_____ Agricultural Irrigation	_____ Site Investigation
_____ Bottled Water Supply	_____ Recreation Area Irrigation	_____ Livestock	_____ Monitoring
_____ Public Water Supply (Limited Use/DOH)		_____ Nursery Irrigation	_____ Test
_____ Public Water Supply (Community or Non Community/DEP)		_____ Commercial / Industrial	_____ Earth - Coupled Geothermal
_____ Class I Injection		_____ Golf Course Irrigation	_____ HVAC Supply
			_____ HVAC Return

Class V Injection: _____ Recharge _____ Commercial/Industrial Disposal _____ Aquifer Storage & Recovery _____ Drainage
Remediation : _____ Recovery _____ Air Sparge _____ Other (Describe) _____

X Other (Describe) PLUGGED BY APPROVED METHOD

12. *Drill Method: _____ Auger _____ Cable Tool _____ Rotary _____ Combination (Two or More Methods) _____ Jetted _____ Sonic
_____ Horizontal Drilling _____ Hydraulic Point (Direct Push) X Other Tremie Grout

13. *Measured Static Water Level _____ ft. Measured Pumping Water Level NA ft. After NA Hours a NA GPM

14. *Measuring Point (Describe) Land Surface Which is 0 ft. _____ Above _____ Below Land Surface * Flowing _____ Yes X No

15.* Casing Material: _____ Black Steel _____ Galvanized X PVC _____ Stainless Steel _____ Not Cased Other _____

16.* Total Well Depth: _____ ft. Cased Depth _____ ft. Open Hole From: NA to NA ft. Screen From _____ to _____ ft. Slot Size _____

*** ABANDONMENT** **OTHER (Explain)** _____

From 0 ft. To 50 ft. No of Bags 1.00 Seal Material (Check One): X Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
From _____ ft. To _____ ft. No of Bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** SURFACE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** PRIMARY CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** LINER CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

*** TELESCOPE CASING DIAMETER & DEPTH**

Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other
Diam. _____ in. From _____ ft. To _____ ft. # of bags _____ Seal Material (Check One): _____ Neat Cement _____ Bentonite _____ Other

PUMP TYPE (If Known)

_____ Centrifugal _____ Jet _____ Submersible _____ Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump depth _____ ft. Intake Depth _____ ft.

CHEMICAL ANALYSIS (When Required)

Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
_____ Laboratory Test _____ Field Test Kit

WATER WELL CONTRACTOR

* Contractor Name: James Hinst * License No. 9311 Email Address: Jim@drillprollc.com

*Contractor's Signature : James Hinst * Driller's Name : Raymond Lebron

I certify that the information in this report is accurate & true.

* Permit No. **110820**

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE (352) 796-7211 OR (800) 423-1476
WWW.SWFWMD.STATE.FL.US

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
4049 REID STREET, PALATKA, FL 32178-1427
PHONE: (386) 329-4500
WWW.SJRWMD.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA FL 32333-4712
(US HIGHWAY 90, 10 MILES WEST OF TALLAHASSEE)
PHONE: (850) 539-5999
WWW.NWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
P.O. BOX 24680
3301 GUN CLUB ROAD
WEST PALM BEACH, FL 33416-4680
PHONE: (561) 686-8800
WWW.SFWMD.GOV

SUWANNEE RIVER WATER MANAGEMENT DISTRICE
9225 CR 49
LIVE OAK, FL 32060
PHONE: (386) 362-1001 OR (800) 226-1066 (FLORIDA ONLY)
WWW.MYSUWANNEERIVER.COM

DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zones.

From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______
From ______ ft. To ______ ft. Color ______ Grain Size (F, M, C) ______ Material ______

COMMENTS ______

Detailed Site Map of Well Location

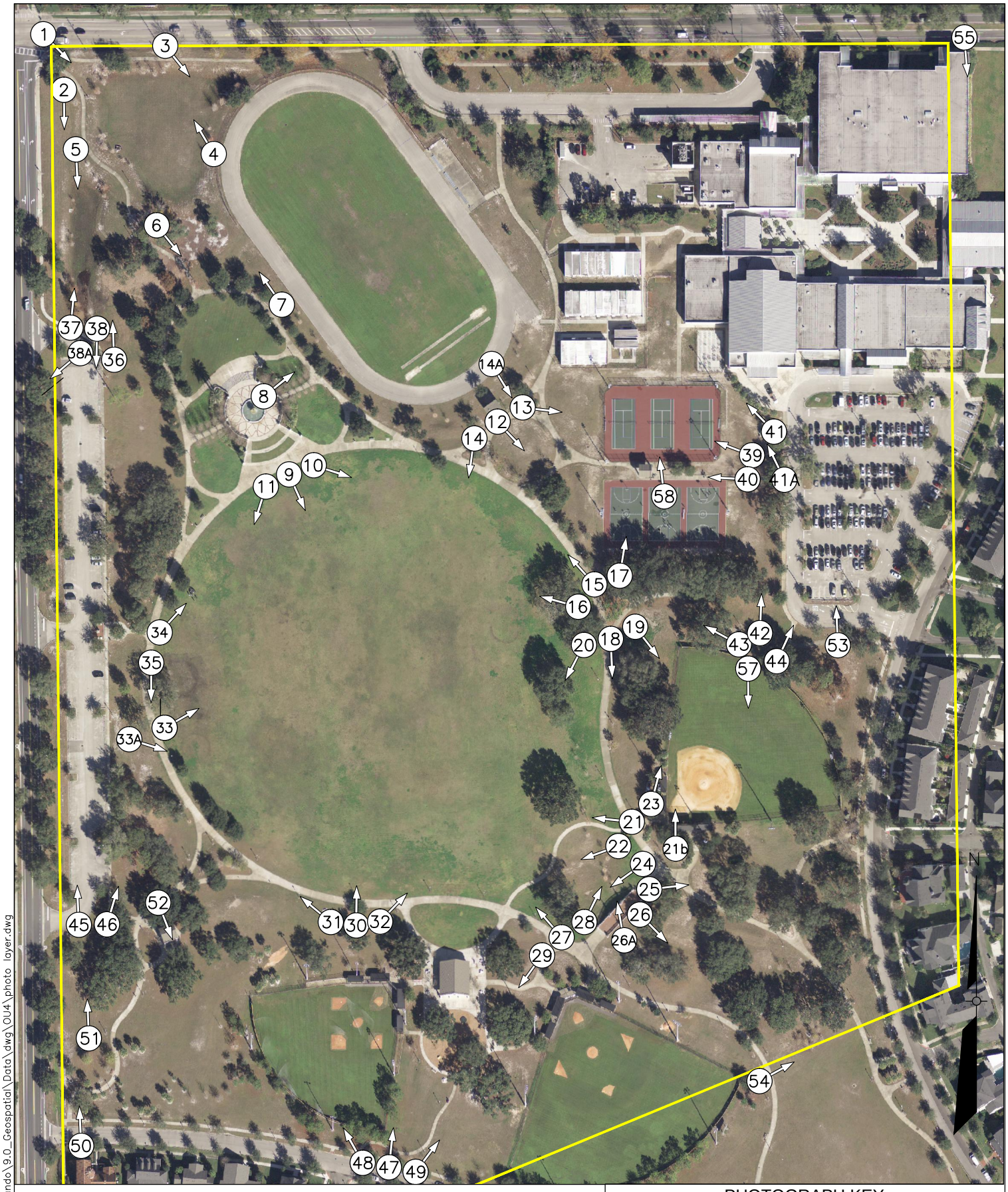
GP WO 1211025
Grout Abandon 2 (2" x 50')
OUI 26
OUI 27

N

Give distances from all reference point or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well

Appendix B

Site Photographs - December 2014



SCALE 0' 100' 200' 400'

LEGEND:

12 LOCATION, NUMBER, AND DIRECTION OF PHOTO

GROUNDWATER USE RESTRICTION / SITE BOUNDARY

Basemap Source:
Florida Department of Transportation (FDOT)
Aquisition Date: January22, 2012
Resolution: 0.5 foot
Coordinate System: NAD 1983 HARN
State Plane Florida East

PHOTOGRAPH KEY

OPERABLE UNIT 1

FORMER NAVAL TRAINING CENTER
ORLANDO, FLORIDA

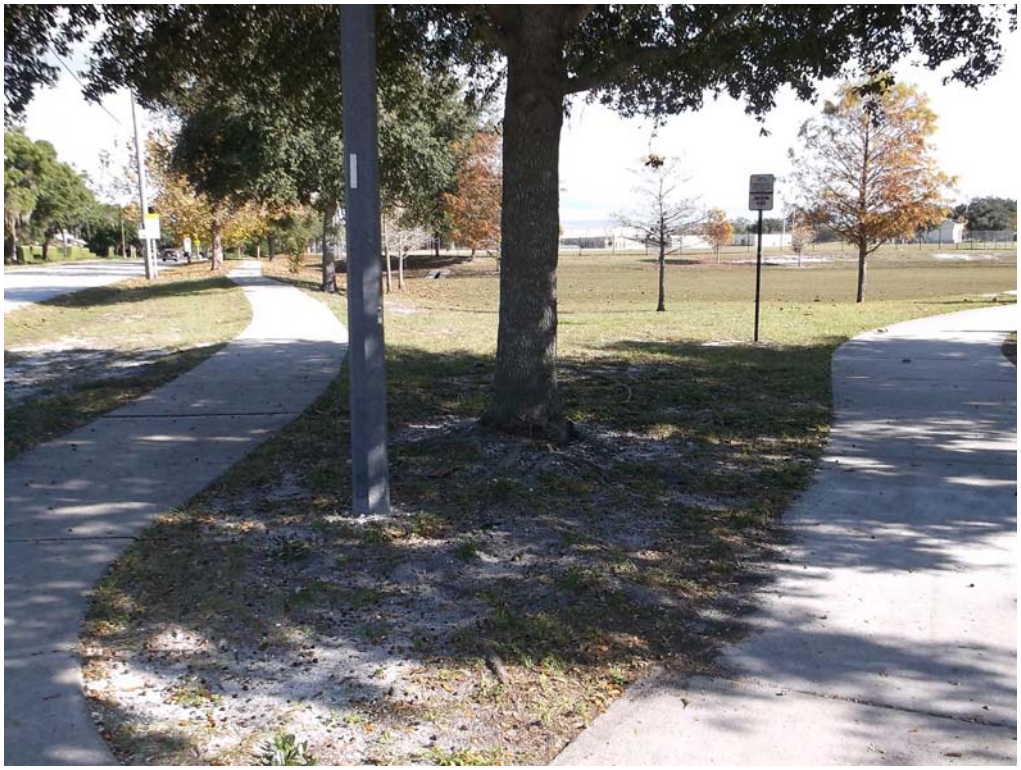
NAVFAC Naval Facilities Engineering Command

RESOLUTION CONSULTANTS

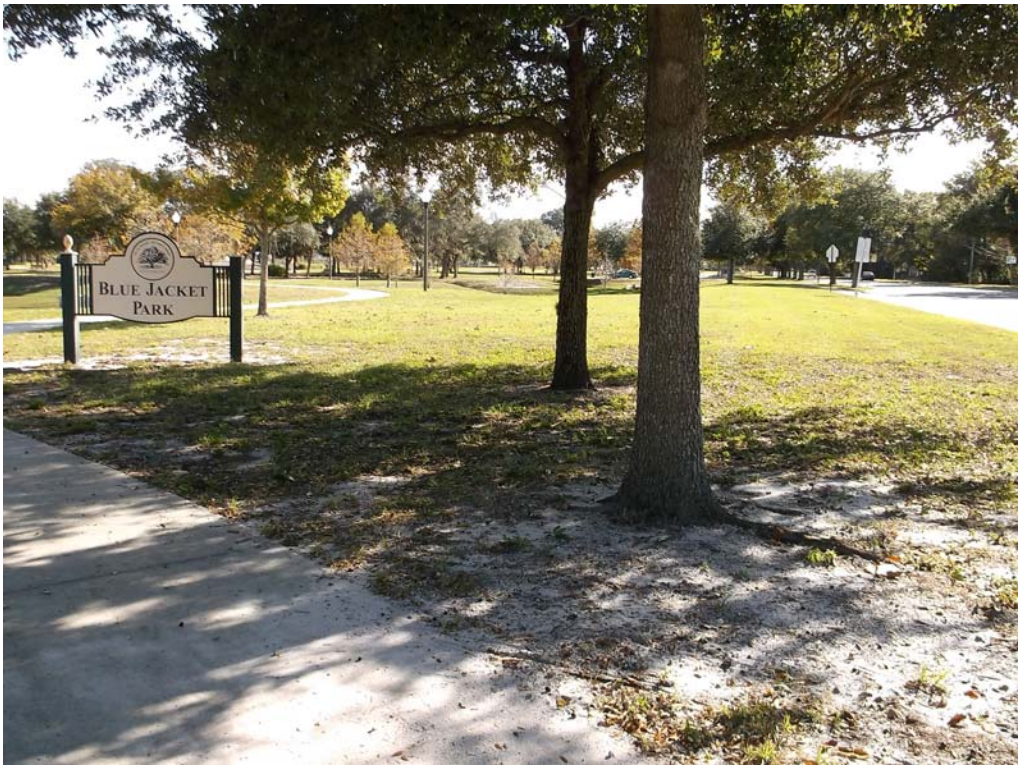
REQUESTED BY: J.C. DATE: 12/11/2014

EDITED BY: CEATHER, JACKIE CONTRACT NUMBER: N62467-11-D-8013

L:\projects\Navy CLEAN\NTC Orlando\9.0_Geospatial\Data\dwg\OU4\photo layer.dwg



Picture 1- North Detention Basin from Park Entrance - Southeast View



Picture 2- General Reese Road from Park Entrance - South View

Picture 3- North Detention Basin, Stormwater Inlet - Southeast View

Picture 4- North Detention Basin, Outfall - Northwest View

Picture 5- Northwest Detention Basin from Park Entrance - South View

Picture 6- Landscaping Along Path- Southeast View toward Fountain

Picture 7- Storm Drain near School Running Track- Northwest View

Picture 8- School Running Track from Fountain - Northeast View

Picture 9- Landfill Cap from Fountain - Southeast View

Picture 10- Landfill Cap from Fountain - East Southeast View

Picture 11- Landfill Cap from Fountain - South Southwest View

Picture 12- School/Park Boundary, Landfill Cap, from Restrooms - Southeast View

Picture 13- Tennis Courts from Restrooms - East View

Picture 14- Landfill Cap from Restrooms - South View

Picture 14A – East Side of Restrooms – Southeast View

Picture 15- Sidewalk, Capped Area- Northwest View

Picture 16- Landscaped, Capped Area - West View

Picture 17- Basketball Courts- North View

Picture 18- Sidewalk, Capped Area - South View

Picture 19- Former Playground (Ball Field in Background) - Southeast View

Picture 20- Landscaped, Capped Area - Southwest View

Picture 21- South Landfill Boundary, Capped Area - West View

Picture 22 - Grassy Capped Area - West View

Picture 23 - Ball Field- North Northeast View

Picture 24 - Swale at Bridge - Southwest View

Picture 25- Low Area near Bridge- East View

Picture 26 - Swale at Bridge - Southeast View

Picture 26A – Swale Under Bridge – North View

Picture 27 – Landfill Boundary Sidewalk at Bridge- Northwest View

Picture 28 - Swale at Bridge - Northeast View

Picture 29 - Sidewalk at Bridge - Southwest View

Picture 30- Grassy Cap- North View

Picture 31- Grassy Cap- Northwest View

Picture 32- Grassy Cap- Northeast View

Picture 33 – Grassy Cap – East View

Picture 33A – Slight Depression in Ground at Tree – Southeast View

Picture 34 - West Side of Landfill Boundary Sidewalk - Northeast View

Picture 35 – West Side of Landfill Boundary Sidewalk – South View

Picture 36- Northwest Detention Pond from North Parking Lot - North View

Picture 37- Northwest Detention Pond, Stormwater Inlet - North View

Picture 38 - North Parking Lot - South View

Picture 38A – North Parking Lot – Southwest View

Picture 39 - Tennis Courts- Northwest View

Picture 40 - Sidewalk between Tennis and Basketball Courts - West View

Picture 41 – South Side of School - Northwest View

Picture 41A – South Side of School – North View

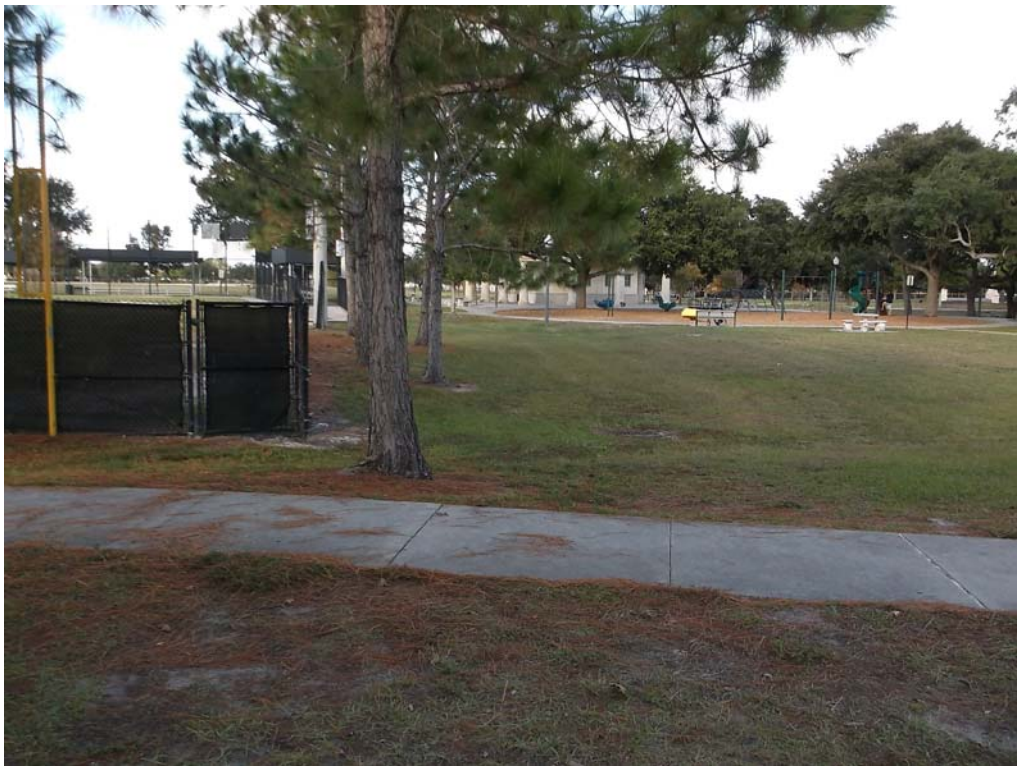
Picture 42 - Landfill/Waste Excavation Boundary - North View

Picture 43 – Sidewalk North of Northeast Ball Field - Northwest View

Picture 44- School Parking Lot, Former Waste Excavation Site- Northeast View

Picture 45 – South Parking Lot - North View

Picture 46 - Landscaped Area at South Parking Lot - Northeast View



Picture 47- Southwest Ball Field - North View

Picture 48 – Sidewalk at Southwest Ball Field – West Northwest View

Picture 49 – Southeast Ball Field from Southwest Ball Field - East Northeast View

Picture 50 - Southwest Corner of Park - North View

Picture 51 - South Parking Lot, Storm Drain - North view

Picture 52 – Southwest Concrete Pavilion - Southwest View

Picture 53 - School Parking Lot - North View

Picture 54 - East Side Swale - Northeast View

Picture 55 - School from Glenridge Way- South Southwest View

Picture 56 –School at OU1 Boundary – Northwest View

Picture 57 – Northeast Ball Field, East Landfill Boundary – South View

Picture 58 – Sidewalk between Tennis and Basketball Courts - North View

Appendix C

Interview Records

INTERVIEW RECORD			
Site Name: OU 1, North Grinder Landfill, NTC Orlando, Florida		**EPA ID NO.: FL6170023711**	
Subject: Five-Year Review Questions		**Time:** 2 PM	**Date:** 3/10/2015
Type: ☐ Telephone ☒ Visit ☐ Email		☐ Incoming ☐ Outgoing	
Contact Made By:			
Name: Marianne Sweeney	**Title:** PM	**Organization:** Resolution Consultants	
Individual Contacted:			
Name: David Grabka	**Title:** RPM	**Organization:** FDEP	
Telephone No.: 850.245.8997 **Fax No.:** 850.245.8976 **E-Mail Address:** david.grabka@dep.state.fl.us		**Street Address:** 2600 Blair Stone Road **City, State, Zip:** Tallahassee, FL 32399-2400	

Summary of Conversation

1. Are you familiar with Blue Jacket Park and the surrounding area? Yes. I was around when the site went from landfill to LUCs with groundwater monitoring, when buried waste was excavated during school construction activities, when enough fill was added to not worry about minor excavations over the landfill, and when the LTM was eliminated. I did not sign off on the ROD.

2. How long have you been familiar with Blue Jacket Park? Since 1998.

3. Are you aware of any special institutional controls or permitting for the residential area surrounding Blue Jacket Park? Yes. The groundwater use restriction extends onto residential property and multiple deeds are restricted.

4. Have you ever visited Blue Jacket Park or the surrounding area? If so, have you ever observed any unusual objects partially exposed on the ground surface or in the drainage swales? Yes; yes, but not currently. In the late 1990's there were vehicle ruts.

5. Have you ever observed any depressions or subsidence form on the grounds? Yes, but not recently.

6. Have you ever observed anyone digging within the park, such as a utility company installing or repairing underground lines, or a landscape company planting trees? Not personally.

INTERVIEW RECORD			
Site Name: OU 1, North Grinder Landfill, NTC Orlando, Florida		**EPA ID NO.: FL6170023711**	
Subject: Five-Year Review Questions		**Time:** 0900	**Date:** 4/10/15
Type: ☒ Telephone ☐ Visit ☐ Email		☐ Incoming ☒ Outgoing	
Contact Made By:			
Name: Marianne Sweeney	**Title:** Project Manager	**Organization:** Resolution Consultants	
Individual Contacted:			
Name: Dan Dashtaki	**Title:** Environmental Manager	**Organization:** City of Orlando	
Telephone No.: (407) 246-2664 **E-Mail Address:** dan.dashtaki@cityoforlando.net		**Street Address:** 5100 LB McLeod Rd. **City, State, Zip:** Orlando, FL 32811	

Summary of Conversation

1. Are you familiar with Blue Jacket Park and the surrounding area? Yes.

2. How long have you been familiar with Blue Jacket Park? Since before it was a park.

3. Are you aware of any special institutional controls or permitting for the residential area surrounding Blue Jacket Park? Yes, no groundwater use (in all of Baldwin Park), and no digging past the 2 foot cover in the park.

4. Have you ever visited Blue Jacket Park or the surrounding area? Yes. If so, have you ever observed any unusual objects partially exposed on the ground surface or in the drainage swales? No.

5. Have you ever observed any depressions or subsidence form on the grounds? Nothing unusual.

6. Have you ever observed anyone digging within the park, such as a utility company installing or repairing underground lines, or a landscape company planting trees? Just sprinkler/irrigation line repairs, limited to the upper 1 to 1.5 feet. The park is irrigated with reclaimed water.

INTERVIEW RECORD			
Site Name: OU 1, North Grinder Landfill, NTC Orlando, Florida		**EPA ID NO.: FL6170023711**	
Subject: Five-Year Review Questions		**Time:** 12:09 p.m.	**Date:** 12/17/14
Type: ☒ Telephone ☐ Visit ☐ Email		☐ Incoming ☒ Outgoing	
Contact Made By:			
Name: Jackie Ceather	**Title:** Engineer	**Organization:** Resolution Consultants	
Individual Contacted:			
Name: Michael Wilson	**Title:** Manager, Athletic Fields	**Organization:** City of Orlando	
Telephone No.: (407) 246-4286 **E-Mail Address:**michael.wilson@cityoforlando.net		**Street Address:** 595 N. Primrose Drive **City, State, Zip:** Orlando, FL 32803	

Summary of Conversation

1. Do you handle the maintenance for Blue Jacket Park?
   Only the ball fields, including the soccer fields. Parks and Rec handles the rest of the park.

2. Does an outside company handle the lawn care?
   Yes, GroundTek handles the lawn maintenance

3. How long have you been managing the ball fields' maintenance?
   Since either 2008 or 2009 to the present

4. Have you ever observed any unusual objects partially exposed on the ground surface or in the drainage swales?
   No

5. Have you ever observed any depressions or subsidence form on the grounds?
   There are 'ruts and potholes' caused by people playing on the soccer fields. Nothing that could have been caused by vehicles though.

6. Have you ever observed anyone digging within the park, such as a utility company installing or repairing underground lines, or a landscape company planting trees?
   No

INTERVIEW RECORD			
Site Name: OU 1, North Grinder Landfill, NTC Orlando, Florida		**EPA ID NO.: FL6170023711**	
Subject: Five-Year Review Questions		**Time:** 3:30 pm	**Date: 1/06/15**
Type: ☐ Telephone ☐ Visit × Email		☐ Incoming ☒ Outgoing	
Contact Made By:			
Name: Jackie Ceather	**Title:** Engineer	**Organization:** Resolution Consultants	
Individual Contacted:			
Name: Raymond Roe	**Title:** Environmental Mgr	**Organization:** FDOH, Orange County	
Telephone No.: (407) 858-1497, x 2292 **Fax No.:** **E-Mail Address:** Raymond.Roe@flhealth.gov		**Street Address:** 800 N. Mercy Dr., Ste. 1 **City, State, Zip:** Orlando, FL 32808	

Summary of Conversation

1. Are you familiar with Blue Jacket Park and the surrounding area? Yes

2. How long have you been familiar with Blue Jacket Park? 5 years

3. Are you aware of any special institutional controls or permitting for Blue Jacket Park or the surrounding residential area? No

4. Have you ever visited Blue Jacket Park or the surrounding area? Yes If so, have you ever observed any unusual objects partially exposed on the ground surface or in the drainage swales? No

5. Have you ever observed any depressions or subsidence form on the grounds? No

6. Have you ever observed anyone digging within the park, such as a utility company installing or repairing underground lines, or a landscape company planting trees? No

Appendix D

Synopsis of ARARs and TBCs

APPENDIX D
SYNOPSIS OF ARARS AND TBCS
OPERABLE UNIT 1 (OU 1)
NAVAL TRAINING CENTER
ORLANDO, FLORIDA

NAME AND REGULATORY CITATION	REQUIREMENT SYNOPSIS	CURRENT STATUS	CONSIDERATION IN THE REMEDIAL ACTION PROCESS	TYPE
Resource Conservation and Recovery Act (RCRA) Regulations, Landfills (40 CFR Part 264, Subpart N)	Provides monitoring, inspection, closure, and post-closure care requirements for landfills that contain hazardous waste.	Relevant and appropriate	These regulations are not applicable to OU 1 since they apply to landfills that received waste after 1980; however, the requirements are used as guidance for developing a landfill inspection program.	Action specific
RCRA Regulations, Releases from Solid Waste Management Units (SWMUs) (40 CFR Part 264, Subpart F)	Contains general groundwater requirements. Establishes detection and compliance monitoring programs that apply to owners and operators of solid waste units.	Relevant and appropriate	These regulations provided guidance for groundwater monitoring program at OU1.	Action specific
Safe Drinking Water Act Regulations, Maximum Contaminant Levels (MCLs) for Radioactive Pollutants and Chemicals (40 CFR Part 141, Subpart B)	Establishes maximum contaminant levels for radioactivity and chemicals in community water systems.	Relevant and appropriate	These regulations are used as relevant to potential drinking water sources such as the surficial aquifer groundwater at OU 1.	Action specific and chemical specific
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the National Hazardous Substance and Contingency Plan Regulations (40 CFR § 300.430)	Discusses the types of institutional controls to be established at CERCLA sites.	Relevant and appropriate	Although NTC Orlando is not listed on the National Priorities List (NPL), and is therefore not subject to CERCLA regulations, these regulations are used as guidance.	Action specific

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NAME AND REGULATORY CITATION	REQUIREMENT SYNOPSIS	CURRENT STATUS	CONSIDERATION IN THE REMEDIAL ACTION PROCESS	TYPE
USEPA, Design and Construction of RCRA/CERCLA Final Covers, (EPA 625 4-91 025, May 1991)	Provides guidance on components of landfill closure, including long-term maintenance, groundwater monitoring, and institutional controls. Recommends groundwater sampling frequency and strategy.	To be considered	This guidance is used for establishing and implementing groundwater program at OU 1.	Action specific guidance
Florida Groundwater Classes, Standards and Exemptions (Florida Administrative Code [FAC] 62-520)	Designates groundwater of the State into 5 classes and sets drinking water standards (primary and secondary) that must be met for Classes I and II.	Applicable	These regulations are used to evaluate data from the groundwater monitoring program.	Chemical specific
Florida Hazardous Waste Rules (FAC, 62-730)	Adopts by reference, specific sections of the Federal hazardous waste regulations including the section regulating hazardous waste landfills (40 CFR Part 264, subpart N) and makes additions to these regulations.	Relevant and appropriate	These regulations are not applicable to OU 1 since they apply only to landfills that received water after 1983; however, the requirements are used as guidance for developing the landfill inspection program.	Action specific and chemical specific
Florida Contaminant Cleanup Target Levels (FAC 62-777)	Establishes cleanup target levels for groundwater, surface water and soil.	To be considered	The values are used to evaluate the data from groundwater monitoring and soil boring samples.	Chemical specific
Florida Contaminant Site Cleanup Criteria (FAC, 62-780)	Applies to site rehabilitation conducted at sites contaminated with pollutants, hazardous substances, drycleaning solvents, petroleum and petroleum products.	Relevant and appropriate	The provisions of this chapter apply to all cleanups conducted by any legally responsible party, if they are seeking FDEP approval for any aspect of the work.	Action specific guidance