PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

Limited Phase II Site Investigation
Former General Cable Facility

2515 E. Hanna Avenue, Tampa, FL

Prepared for

City of Tampa

July 25, 2014

Prepared by

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1.0 INTRODUCTION

Progressive Engineering & Construction, Inc. (Progressive), prepared this report to provide the City of Tampa Solid Waste Department Office of Environmental Coordination (City) a summary of the limited Phase II site investigation completed for the former General Cable facility located at 2515 East Hanna Avenue, Tampa, FL (Figure 1). Based upon historical documents, Progressive developed a scope of work to evaluate the general magnitude of current environmental impacts to subsurface soil and groundwater and the potential cost to remediate those impacts should the City decide to purchase the property. The results of the limited investigation are summarized below.

1.1 Background/Areas of Concern

Based upon the nature of historical operations at the site, numerous areas of potential concern for environmental media were previously identified and investigated by others (Figure 2). These included:

- tin plating building (later used for vehicle maintenance);
- air compressor area on southwest side of the main building;
- former methyl ethyl ketone (MEK) still on southeast side of main building;
- east end of the main building in the cable labeling process area where MEK/ink drawing solution tanks formerly were located outside the building;
- former paint shed area (south of former above-ground storage tank (AST) location);
- stormwater discharge pipe and ditch where the parts washer sink previously discharged;
- area south of the main building where drum(s) of ethylene glycol and sodium hydroxide waste were reportedly found leaking in the early 1990s;
- area on the south side of the site where used oil, spent MEK, and MEK product was stored; and
- former lead press pit and boiler room inside the building.

Previous investigations performed at the site confirmed that there was contamination present in soil and groundwater in some of the areas of the site.

- Groundwater impacted with lead, MEK, and cis/trans-1,2-dichloroethene (DCE) was reported from a temporary well installed in 1994 by Lagos & Associates, Inc. southwest of the main manufacturing building, and tetrachloroethene (PCE) was reported above groundwater cleanup target levels in a sample obtained from a monitoring well installed to 30 feet below land surface (ft bls) by PES Associates, Inc. in 2011 in the area near the rail spur on the eastern side of the property.

- There are also a number of areas where soils may have been impacted from past operations. A brief site visit performed by Progressive on May 28, 2014, revealed that there is oil staining throughout the floors of buildings where tin

plating, vehicle maintenance, and other possible manufacturing operations may have taken place. Although some soil impacts were confirmed in previous limited investigations completed by Lagos & Associates, Inc. (1994, 1996) and Pilko & Associates, Inc. (1996), high levels of contamination in soils tested from several of the areas listed above were not found in those studies. In addition, although there may be some soil impacts, remediation of such impacts is not considered to be a likely major cost when compared to the potential cost of active remediation of groundwater contamination, if needed.

Progressive's investigation was focused on evaluating the potential for significant groundwater contamination to be present at the facility because potential remedial costs would be driven by dealing with groundwater impacts if any were found. Potential soil impacts were not considered as significant as groundwater since the site has been inactive for several years, is covered with large buildings and paved areas, and, if acquired by the City, the City intends to maintain this level of impervious site coverage.

Previous data showed that at least the uppermost Upper Floridan (intermediate aquifer) contained PCE, and several other solvents reported to have been used at the site including 1,1,1,-trichloroethane (TCA). The solvent 1,1,1-TCA often contained 1,4-dioxane, which was added as a stabilizer. Because 1,4-dioxane is essentially miscible in water, if it were present at significant concentrations, it would be very expensive to remediate.

1.2 Conceptual Site Model

Previous studies at this property and nearby sites identified that a shallow perched aquifer is found sporadically throughout this area of Tampa and was previously found to be present under at least a portion of the property south of the main manufacturing building. The direction of groundwater flow in the shallow perched zone has generally been to the south and southeast; however, one report indicated that it was northeastward.

Beneath the perched aquifer lies what has been referred to as an "intermediate" aquifer, which is considered to be the top of the Upper Floridan Aquifer, which is present in weathered limestone and the underlying dense clayey/silty limestone of the Tampa Member of the Arcadia Formation. This intermediate aquifer was encountered during previous investigations at approximately 25 to 30 feet bls at the site. Based upon investigations done by the Florida Department of Environmental Protection (FDEP) at the nearby Former National Linen site, the direction of groundwater flow is thought to be westward (either to the northwest or southwest) in the intermediate aquifer in this area (IT Corp., 1997; PSI, 2008; and CRA, 2013).

Progressive's investigation confirmed that the direction of groundwater flow at the site is northwestward in the shallow perched zone and westward in the intermediate and deep zones.

2.0 MONITORING WELL INSTALLATION

Progressive originally proposed to install four intermediate (35 ft bls) wells and one deep (50 ft bls) well to investigate several potential source areas and to evaluate groundwater flow in the intermediate aquifer. Contingency wells would be added in the event that field screening using a photo-ionization detector (PID) indicated that subsurface impacts were significantly greater than anticipated. Parameters to be analyzed in the laboratory included those of concern considering the operations and materials that were historically handled at the site.

Progressive oversaw the installation by Cascade Drilling LP of four intermediate-depth monitoring wells to approximately 35 ft bls, two deeper wells to 50 ft bls, and one shallow well to 10 ft bls. Well locations were based upon areas of concern identified in previous reports. Due to the timing of the field investigation and availability of drilling rigs and personnel, a rotosonic rig was used instead of the originally proposed hollow stem auger and mud rotary drilling methods. This method yields continuous soil cores and is actually a preferable method of well installation because it does not require drilling mud, it gives continuous lithologic cores, and generates less investigative derived waste (IDW) to be disposed of after the wells are installed. The deep wells were installed by driving a temporary casing to the appropriate depth to isolate the upper zone, and then drilling through this temporary casing, which was then removed as the deep well was completed.

All of the monitoring wells were completed with 8-inch round steel bolt down manhole covers installed within 2-ft by 2-ft concrete pads that were sloped to drain rainfall away from the cover. Wells were developed in accordance with acceptable methods using a submersible pump. All drill cuttings and development water were drummed in 55-gallon drums for off-site disposal.

The monitoring well locations are shown on the attached Figure 3. The boring logs and well construction diagrams are included in Attachment A. Photographs from the field work are included in Attachment B. Descriptions of the field efforts in each area of concern are detailed below.

2.1 South Side of Site/Southwest of Former Tin Plating Building

On June 16, 2014, an intermediate well (MW-5) was installed to 35 ft bls near the area where waste oil, waste MEK and raw MEK was formerly stored on the south side of the site. No perched aquifer was observed at this location, and PID readings did not indicate excessive contamination in soil samples collected. Based upon the low PID readings, which decreased in the deeper portions of the borehole, it was not considered necessary to install a deeper contingency well at this location.

2.2 South of Former Tin Plating Building

One intermediate well (MW-6) was installed on June 17, 2014, south of the former tin plating building where an aboveground used oil tank and a tank with unknown contents

were formerly present. No perched aquifer was observed at this location, and PID readings did not indicate excessive contamination in soil. Based upon the field screening, it was not considered necessary to install a deeper contingency well at this location.

2.3 East Side of Main Building

On June 17, 2014, an intermediate well (MW-7) was installed to a depth of 35 ft bls approximately 30 ft east of the main manufacturing building near the location where several piping lines formerly exited the wall of the building and where drawing solution (ink) tanks were formerly known to have been located. No perched aquifer was observed at this location, and PID readings did not indicate excessive contamination in soil. It was not considered necessary to install a deeper contingency well at this location.

2.4 Rail Spur

The intermediate well (MW-4) that was installed in 2011 by PES Associates, Inc. was found in the paved area south of the rail spur (Figure 3). Therefore, no additional intermediate well was installed at this location, and only the planned deep well (DW-1) was installed near the rail spur where MW-4 had previously shown chlorinated compounds in the 30 ft zone. The deep well was installed to 50 ft bls on June 17, 2014.

2.5 Southwest Side of Main Building

On June 18-19, 2014, the installation of monitoring wells was initiated in this area of concern. It was anticipated that an intermediate well and a deep well would be installed at this location based upon the former presence of an air compressor and previous groundwater analyses that had reported elevated MEK, lead, and chlorinated solvents here. Initial drilling indicated that a perched aquifer zone was present and the PID screening indicated that shallow soils were impacted. Therefore, Progressive also installed a shallow well screened between 2 and 10 ft bls to assess the contamination present in the perched aquifer.

After the first boring was terminated at 10 ft and a shallow well completed, an intermediate well was initiated next to it. Dense grey clay was first encountered at a relatively shallow depth of 10 ft bls in this boring. Below that sandy clays containing some limestone fragments were present to 21 ft bls where another dense gray clay was encountered that extended down to 27 ft bls where brown clay with limestone and blue clay layers were found extending down to 35 ft bls. Between 31 and 35 ft bls, the PID readings indicated that contaminant levels were increasing with depth. Therefore, the boring was terminated at 35 ft to avoid drilling through an impervious layer (i.e., clay) into a more transmissive layer (i.e., limestone) without protective surface casing, and an intermediate depth well (MW-8) was completed. This well was screened from 19 to 34 ft bls, with a slightly longer well screen that was anticipated, in order to ensure that sufficient groundwater would be present to be able to purge the well and collect representative samples. A temporary surface casing was then advanced adjacent to

MW-8 to a depth of 40 ft and a deeper 50 ft contingency well (DW-2) was installed in the upper portion of the weathered limestone of the Floridian Aquifer.

2.6 Summary of Well Installations

Based upon the field screening results, which did not suggest that excessive concentrations of contaminants were present at the depths to which most of the intermediate wells were installed, only one additional deep contingency well was installed. This deep well (DW-2) was installed near the southwest side of the main manufacturing building, where both intermediate and shallow wells were also installed, based upon elevated PID readings increasing near the bottom of the intermediate well depth. In addition, because the shallow zone appeared to indicate shallow contamination in this location, the two existing shallow wells (ES-1 and ES-2) south of this well cluster were also sampled, even though they had not previously shown impacts, to confirm whether a groundwater plume was present in the perched zone.

After the monitoring wells were installed, their locations, ground surface elevations, and top of casing elevations were surveyed by City of Tampa survey crew. Table 1 provides a summary of well construction and survey data for the new and existing wells at this site.

3.0 GEOLOGY/HYDROGEOLOGY

A thick section of clay strata with thin interbedded sands was observed in the western and southern areas of the site where MW-5, MW-8 and DW-2 were installed. Well MW-8, installed at the southwestern corner of the main manufacturing building, contained mostly clay layers from 10 ft bls down to the total depth of the boring of 35 ft. At MW-5 in the southern part of the site, clay strata also dominate from 9 ft bls to 30 ft bls. This well is screened from 25 to 35 ft bls across sandy clays and the top of the weathered limestone (encountered at around 30 ft bls).

A thinner section of clays was observed on the eastern half of the site where wells MW-6, MW-7 and DW-1 were installed. On the eastern portion of the site the clays overlying the weathered limestone of the Upper Floridan had a total thickness of only about 6 ft. Thus, it appears that the thicker section of clay layers seen in MW-8 and DW-2 are pinching out toward the east across the site, and the top of the limestone is found at shallower depths toward the east. This is consistent with the limestone appearing at increasing depths to the west and the general westward direction of groundwater flow in the Upper Floridan aquifer here.

3.1 Water Table Elevations

The water table in the perched zone is approximately 3 to 4 ft bls. In the intermediate and deep zones the water table is encountered at approximately 25 to 30 ft bls. The water level measured in intermediate-depth well MW-8 appears to reflect connectivity between the sandy clays that extend down to 15 ft bls and the overlying perched aquifer at this location as the water table measured in this well was just over 4 ft bls, which is similar to the water levels in the shallow perched aquifer wells (SW-1, EW-1 and EW-2), and is almost 20 ft above that of the other 35 ft deep wells on the site. The water levels in the other intermediate wells and the deep wells are similar and represent the water level in the top of the Upper Floridan aquifer.

4.0 GROUNDWATER SAMPLING AND ANALYSIS

Groundwater samples were collected for laboratory analysis in accordance with FDEP Standard Operating Procedures (SOPs) from all of the new wells, the existing intermediate well (MW-4), and the two existing shallow wells on June 25 and 26, 2014. Groundwater sampling logs are included in Attachment C. Parameters selected for groundwater analyses were based upon documented previous contamination and/or operations at the facility that may have resulted in environmental impacts. Samples were submitted to our contract laboratory, Southern Research Laboratory, Inc. (SRL) in Orlando, Florida, for analyses of volatile organic compounds (VOCs) by EPA Method 8260, SVOCs by EPA Method 8270, fluoride, boron, RCRA metals (lead, cadmium, chromium, barium, selenium, mercury, arsenic, and antimony), copper, aluminum, and tin. In addition, because ethylene glycol and sodium hydroxide were reported from a leaking drum located south of the main building in the early 1990s, sodium and ethylene glycol was also analyzed in intermediate depth groundwater samples. The deep wells were only analyzed for VOCs by EPA Method 8260 as the presence of solvents at depth was the main concern being evaluated for purpose of estimating potential cleanup costs. Laboratory analytical reports are included in Attachment D.

The existing intermediate well (MW-4) near the rail spur is only 1-inch diameter, and therefore could not be sampled using a submersible pump. Because the depth to water was more than 20 ft (peristaltic pump cannot pull from depths exceeding 20 ft), a bailer had to be used to purge and sample this well. Purging was difficult because there was only about 3 feet of water in the bottom of the well screen, but field personnel were able to obtain one VOA vial for VOC analysis. If the City needs to sample this aquifer zone at this location in future, Progressive recommends that this well be properly abandoned (it is also not properly finished with a protective pad at the surface) and re-installed as a 2-inch diameter monitoring well of sufficient depth to enable purging and sampling with a submersible pump.

In addition, after initial well development some of the groundwater still had a milky appearance. Because of concern that the groundwater might not clear up when the wells were purged before sampling leading to high turbidity in the samples collected for metals analyses, Progressive personnel took the additional time to field filter and collect extra aliquots of filtered groundwater samples from each intermediate well. This ensured that samples could be analyzed for dissolved metals if the total metal analyses resulted in elevated values.

4.1 Determination of Groundwater Flow Directions

Water level data were collected from all of the available wells on June 25, 2014. Figures 4 through 6 show the directions of groundwater flow estimated for each zone of the aquifer. The general direction of shallow perched groundwater appears to be to the northwest toward the western end of the main manufacturing building. The general direction of groundwater flow in the intermediate and deeper zones is westward with relatively low gradients. Because of the limited number of wells in each aquifer zone, it

is difficult to tell whether the flow is directly westward or whether it is more toward the southwest or northwest.

4.2 Summary of Groundwater Quality

Preliminary analytical data were received from the laboratory on July 8, 2014, with final laboratory analytical reports being received July 8 through 17, 2014. Figure 7 illustrates the VOCs of concern detected in each well. The results were as follows:

- The perched zone reported only minor VOC impacts near the main manufacturing building. The previously installed EW-1 and EW-2 did not show any VOCs to be detected.
- In the intermediate zone (30 to 35 ft bls) low level VOC impacts were seen in several locations, including MW-8 (near the southwest corner of the building) and MW-4 (near the rail spur), where contamination had been reported at higher levels previously.
- VOC impacts were also confirmed in the underlying 50 ft zone, with the greatest impacts being reported from DW-2 along the southwestern side of the main manufacturing building. This well contained 310 ug/L of tetrachloroethene (PCE), which is just above the natural attenuation default concentration (NADC) of 300 ug/L. The deep well near the rail spur reported only low levels of several VOCs with PCE at 8.6 ug/L.

Based upon the presence of much higher concentrations of contaminants in the 50 ft zone when compared to the 35 ft and 10 ft zone wells near the manufacturing building, it appears that the source of the contamination in the deeper 50 ft zone at DW-2 reflects migration from a release point at another location on the site, potentially from underneath the building or from the loading docks located east of this part of the building.

Only two wells reported 1,4-dioxane to be detected: DW-2 and MW-5. The concentration in MW-5 near the south side of the site was 7.0 ug/L and the concentration in DW-2 was 1.6 ug/L. The groundwater cleanup target level (GCTL) for this compound is 3.2 ug/L. Based upon the different contaminants detected in MW-5 compared to the other wells, the lack of detection of 1,4-dioxane at higher levels in any of the other wells, and the uncertainty in groundwater flow direction, it is possible that the 1,4-dioxane detection in MW-5 may not reflect an on-site release of this compound. We would recommend that the direction of groundwater flow in the 35 ft zone be more closely determined before any conclusion is drawn as to whether the 1,4-dioxane is attributable to the site or to an upgradient off-site source.

Low levels of several trihalomethane compounds (bromodichloromethane, dibromochloromethane, and chloroform) were detected in several groundwater samples. Trihalomethanes are formed as by-product of chlorination of potable water, thus they likely resulted from the potable water used in the sonic coring process. They are not considered to be site-related VOC constituents of concern.

Concentrations of metals in the groundwater samples collected are generally not of concern. The only total metal analyses that were above any GCTL were boron in MW-6 (near the former tin-plating building where caustic soda and fluoroboric acid were previously used) and aluminum in several wells. In order to confirm that the aluminum was not a site-related constituent of concern, filtered samples were analyzed. The dissolved aluminum analyses were similar in concentration and were only slightly above the secondary GCTL of 200 ug/L for this metal. Therefore, we conclude that the elevated aluminum was a function of turbidity in the samples, aluminum naturally occurs at this site at relatively low concentrations close to the GCTL, and it is not a site-related constituent of concern in groundwater.

Boron is very soluble, so filtering of samples and analysis for dissolved boron was not done. It appears that the elevated boron in MW-6 is related to the former use of fluoroboric acid in the adjacent tin-plating building. Its occurrence above the GCTL appears to be limited to this area as concentrations of boron are not elevated in any of the other groundwater samples analyzed.

5.0 EVALUATION OF RESULTS OF INVESTIGATION

Progressive discussed our initial findings/conclusions regarding site conditions with the City on July 9, 2014, and generalized cost estimates for "best and worst case" scenarios to complete the assessment and cleanup of the site were provided via e-mail on July 18, 2014 (Attachment E). This report summarizes the work performed and Progressive's evaluation of the significance of the environmental impacts found, recommendations for next steps, and a brief description of the most likely remedial approaches for groundwater.

5.1 Recommended Next Steps

Review of historical documents indicated that some soils at the site may be impacted from historical operations on the property, but groundwater issues were considered to be a more likely controlling factor for any remedial options because the main contaminants of concern identified at the site were chlorinated volatile organic compounds, which tend to sink in an aquifer, and the upper portion of the Floridan Aquifer is present in the shallow subsurface beneath the site.

In general, with the exception of the area around DW-2, most of the site does not appear to have significantly elevated concentrations of groundwater contamination. The depth of contamination at DW-2 and the lack of greater contamination at shallower depths above it, however, suggests that the likely release point does not coincide exactly with the well location. Thus, there could be one or more areas of the site that have higher groundwater contaminant concentrations.

The recommended next steps in investigation would be to determine whether the concentration of contaminants in the 50 ft aquifer zone are decreasing or increasing downgradient from DW-2, to further refine the direction of groundwater flow in this zone of the aquifer, and to determine whether contamination extends below the 50 ft aquifer zone to any significant extent. Once this information is known, any further investigations would be based upon the need to identify potential source areas and delineate the full extent of contamination.

If the contamination has not migrated any deeper than the 50 ft aquifer zone, and if DW-2 reflects the highest concentrations observed on-site, natural attenuation monitoring (NAM) is an option that could be pursued. This is a relatively low-cost option, but it will take a longer period of time to achieve closure criteria than if the source is actively treated. Alternatively, the City could consider more active remediation of the source area(s) followed by NAM.

6.0 REFERENCES

Conestoga Rovers & Associates, Inc. (CRA), 2013. Site Assessment Workplan, Former National Linen Service, 1919 East Paris Street, Tampa, Hillsborough County, prepared for the Florida Department of Environmental Protection (dated December 2013).

IT Corporation, 1997. Final Site Investigation Report, Seminole Heights Solvent Site, Tampa, FL, prepared for the Florida Department of Environmental Protection Site Investigation Section (dated May 1997).

Lagos & Associates, Inc., 1994. Environmental Assessment, General Cable Company Facility (dated June 1994).

PES Associates, 2011. Limited Subsurface Investigation, Electrical Machine Enterprises, 2515 East Hanna Avenue, Tampa, FL 33610 (dated June 16, 2011).

Pilko & Associates, Inc., 1994. Workplan for the Site at 2515 East Hanna Avenue, Tampa, Florida, prepared for General Cable Corporation (dated November 1994).

Pilko & Associates, Inc., 1996. Field Investigation of Tampa, Florida, Site prepared for General Cable Corporation (dated February 13, 1996).

PSI, 2008. Groundwater Well Sampling and Analysis, Seminole Heights Solvent Study, 1919 East Paris Street, Tampa, Hillsborough County, Florida prepared for the Florida Department of Environmental Protection (dated June 24, 2008).

TABLES

Table 1. Well Construction Details and Groundwater Elevation Summary, Former General Cable Facility, Tampa, FL

Well ID:	SW-1		EW-1		EW-2		MW-4		MW-5		MW-6		MW-7		MW-8		DW-1		DW-2	
Diameter (in):	2		2		2		1		2		2		2		2		2		2	
Depth (ft):	10		12.9		9.7		30 (28.6)		35		35		35		35		50		50	
Screen Interval (ft):	2-10		unk - 12.9		unk - 9.7		20-30		25-35		26-35		25-35		19-34		45-50		45-50	
TOC Elevation (ft amsl):	54.94		54.33		54.80		52.55		56.81		51.98		51.88		54.8		52.4		55.04	
Land Elevation (ft amsl):	54.7		54.33		54.80		52.4		56.81		51.98		51.88		54.7		52.4		54.9	
Date Measured	DTW	WTE	DTW	WTE	DTW	WTE	DTW	WTE	DTW	WTE	DTW	WTE	DTW	WTE	DTW	WTE	DTW	WTE	DTW	WTE
6/25/2014	3.75	51.19	2.71	51.62	3.10	51.70	--	--	29.20	27.61	24.33	27.65	23.73	28.15	4.43	50.37	24.62	27.78	--	--
6/26/2014	--	--	--	--	--	--	25.06	27.49	--	--	--	--	--	--	--	--	--	--	27.47	27.57

Notes:
in - inches.
ft - feet.
ft amsl - feet above mean sea level.
TOC - top of casing.
DTW - depth to water, measured from top of casing.
WTE - water table elevation.
unk - upper depth of well screen is unknown.

Table 2. Groundwater Analytical Summary, Former General Cable Facility, Tampa, FL

	Sample ID	SW-1	EW-1	EW-2	MW-4	MW-5	MW-6	MW-7	MW-8	DW-1	DW-2
	Sample Date	6/25/2014	6/25/2014	6/25/2014	6/26/2014	6/25/2014	6/25/2014	6/25/2014	6/25/2014	6/25/2014	6/25/2014
Volatile Organic Compounds (ug/L)[1]	GCTL (ug/L)										
Tricholoroethene	3	0.2 J	<1.0	<1.0	<1.0	0.2 J	2.2	<1.0	2.7	3	**70**
Tetracholoroethene	3	0.7 J	<1.0	<1.0	**20**	<1.0	0.5 J	1	2.8	**8.6**	**310 D**
Cis-1,2-Dichloroethene	70	<1.0	<1.0	<1.0	<1.0	<1.0	3	<1.0	<1.0	<1.0	25
Trans-1,2-Dichloroethene	100	<1.0	<1.0	<1.0	<1.0	<1.0	0.4 J	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	7	<1.0	<1.0	<1.0	<1.0	2.8	<1.0	<1.0	<1.0	<1.0	0.6 J
1,1-Dichloroethane	70	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.8 J	<1.0
1,4-Dioxane	3.2	--	--	--	--	**7.0**	<1.0	<1.0	<0.5	<0.5	1.6
Benzene	1	<1.0	<1.0	<1.0	<1.0	0.5 J	<1.0	<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)	4200	<10	<10	<10	<10	25	<10	<10	<10	<10	<10
Semi-Volatile Organic Compounds[1]	--	--	--	--	--	--	--	--	--	--	--
In-Organic Compounds[1]											
Aluminum (dissolved)	200	**246**	--	--	--	**275**	**202**	**322**	**283**	--	--
Aluminum (total)	200[2]	**1550**	--	--	--	**1860**	**275**	**339**	**343**	--	--
Barium	2000	30.3	--	--	--	21.9	26.6	12.7	7.88	--	--
Boron	1400	111	--	--	--	86.6	**1760**	109	88.5	--	--
Cadmium	5	0.263 J	--	--	--	0.778 J	<0.170	<0.170	0.521 J	--	--
Lead	15	3.65 J	--	--	--	2.78 J	<2.20	<2.20	<2.20	--	--
Sodium	160000	6560	--	--	--	13800	12900	5250	13400	--	--
Tin	4200	5.92 J	--	--	--	<5.40	6.23 J	<5.40	<5.40	--	--
Mercury	2	0.109 J	--	--	--	0.0367 J	<0.0230	<0.0230	<0.0230	--	--
Fluoride	2000	--	--	--	--	0.28	0.24	0.35	0.5 J	--	--

Notes:

ug/L - micrograms per liter.

GCTL - Florida Department of Environmental Protection Groundwater Cleanup Target Level.

< - Compound was not detected, numerical value is the limit of detection for that compound.

J - Estimated value between the Method Detection Limit and the Practical Quantitation Limit flagged by the laboratory using an "I".

D - Data reported from a dilution or multiple dilutions.

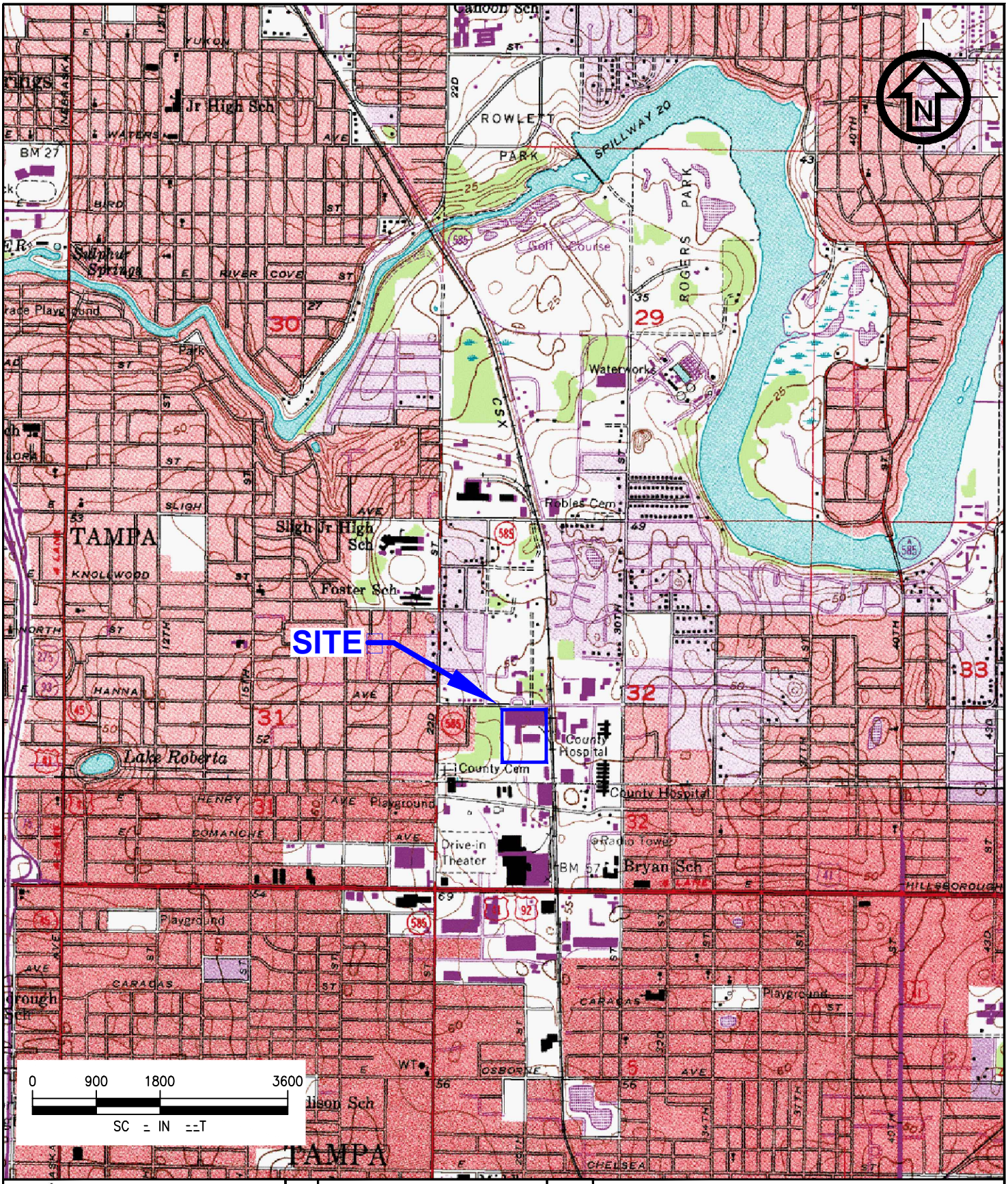
-- - sample was not analyzed for this compound.

BOLD - Bold value indicates a result above the GCTL.

[1] Only compounds of concern detected in at least one sample are presented herein, unabridged data are presented in the lab reports. All results were non-detect for semi-volatile organic compounds, TCLP, and ethylene glycol, see lab reports. Low levels of trihalomethanes were detected in several samples, but are not considered to be site-related compounds of concern.

[2] Aluminum GCTL is based upon organoleptic concentrations.

FIGURES



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NO.	REVISION DETAILS	DATE
1		
2		
3		
4		
5		

SITE LOCATION

CITY OF TAMPA
FORMER GENERAL CABLE FACILITY, 2515 E. HANNA AVE., TAMPA, FL

DATE: 7/25/14
DRAWN BY: KWC
APPROVED BY: GNT

DRAWING NUMBER: 1

FILE PATH: G:\PROJECTS\Tampa - East Hanna Avenue\Drawings\2014\Site Location Map.dwg

SCALE: 1" = 1800'

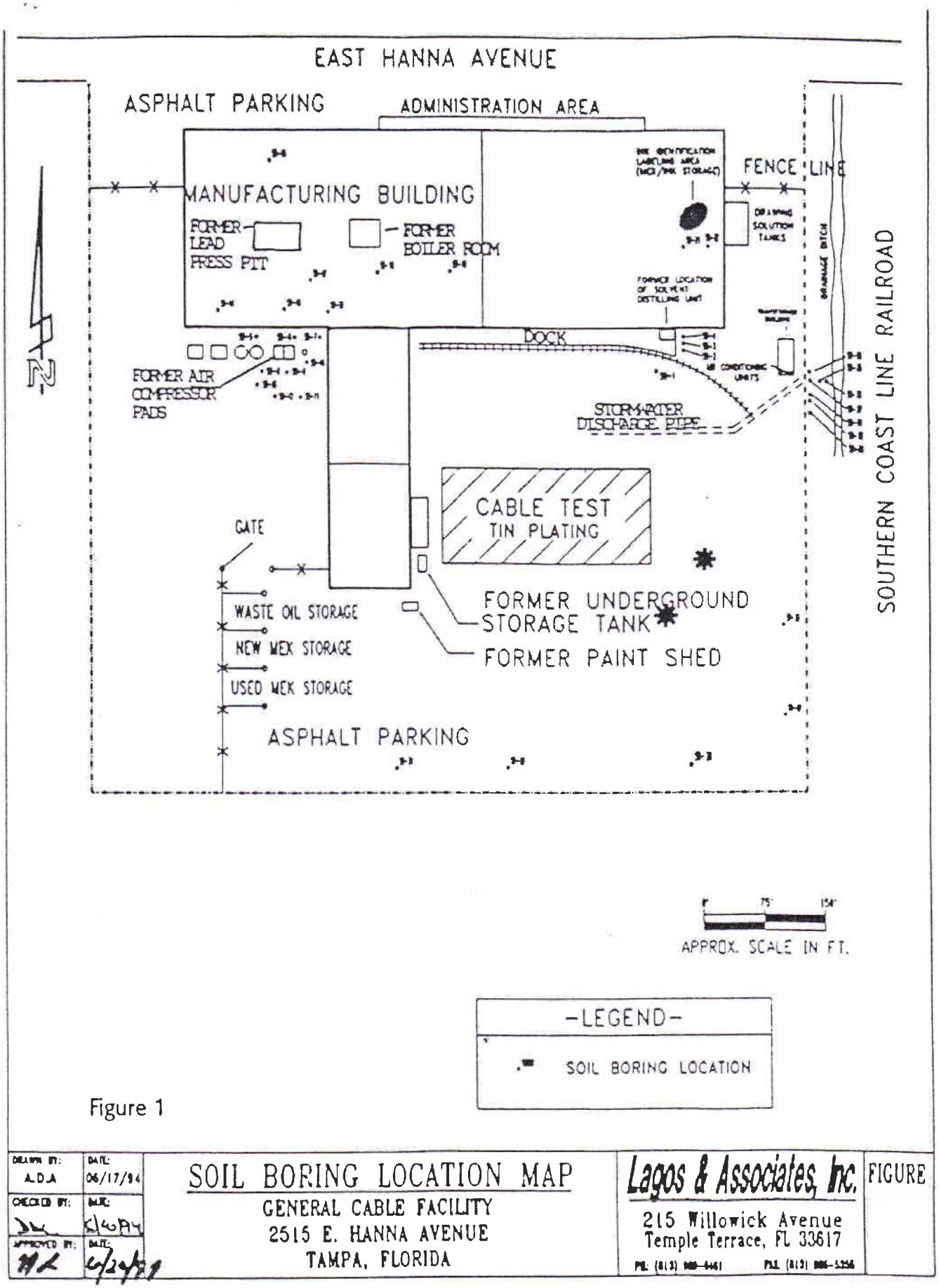
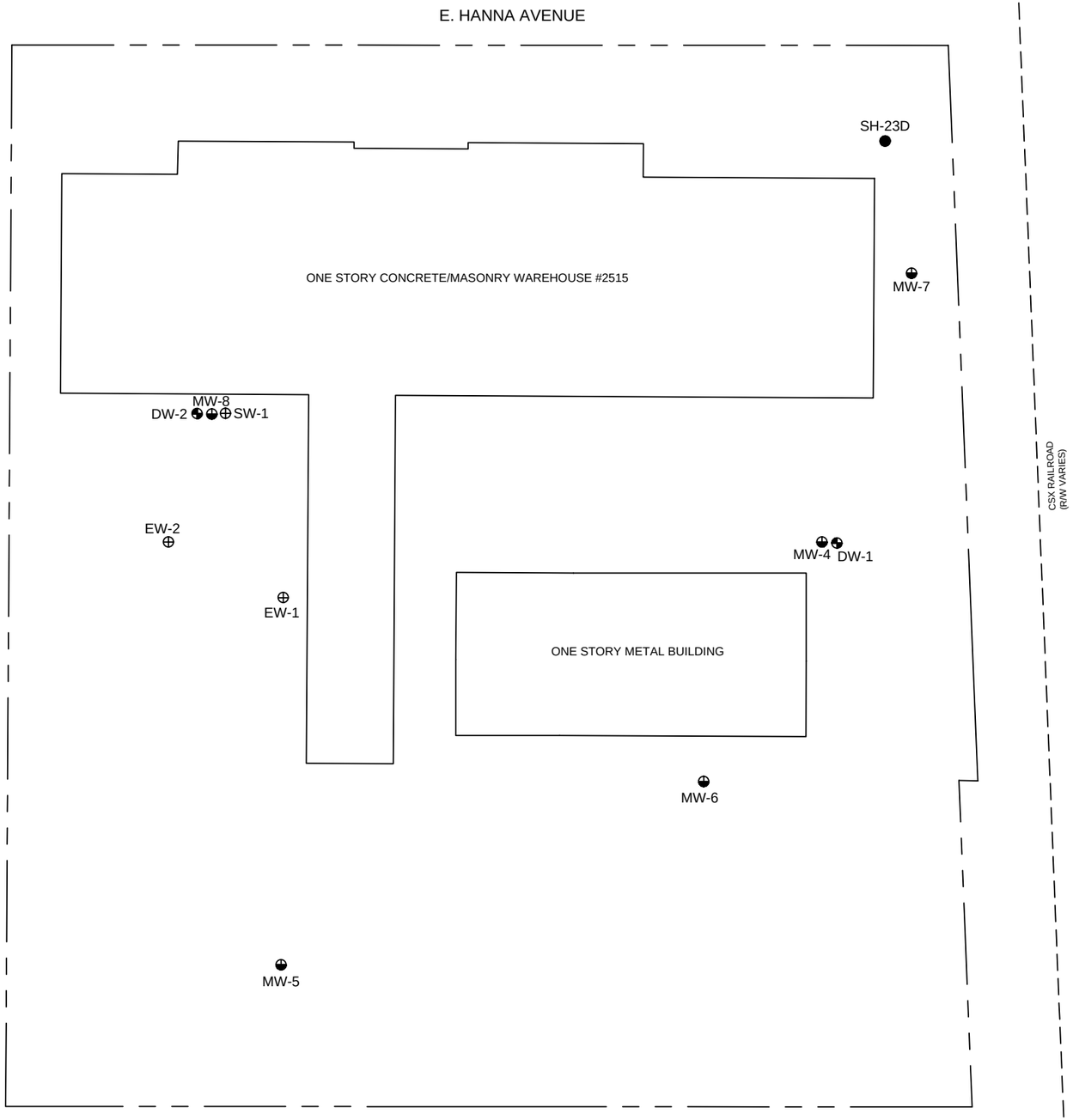


Figure 2: Lagos & Associates, Inc. Figure from Pilko & Associates, Inc. (1994)



LEGEND

- SHALLOW MONITORING WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- FDEP WELL, 150' DEEP
- PROPERTY LINE

NOTES:

1. SURVEY PERFORMED BY CITY OF TAMPA, FLORIDA TRANSPORTATION DIVISION SURVEY SECTION FROM JUNE 2, 2014 THROUGH JUNE 25, 2014.
2. COORDINATES ARE IN FEET AND BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR, WEST ZONE NAD 83/90.

SCALE

PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.
3912 W. Humphrey Street, Tampa, Florida 33614
Phone: (813) 930-0669 Fax: (813) 930-9809
Web Site: http://www.progressiveec.com

NO.	REVISION DETAILS	DATE
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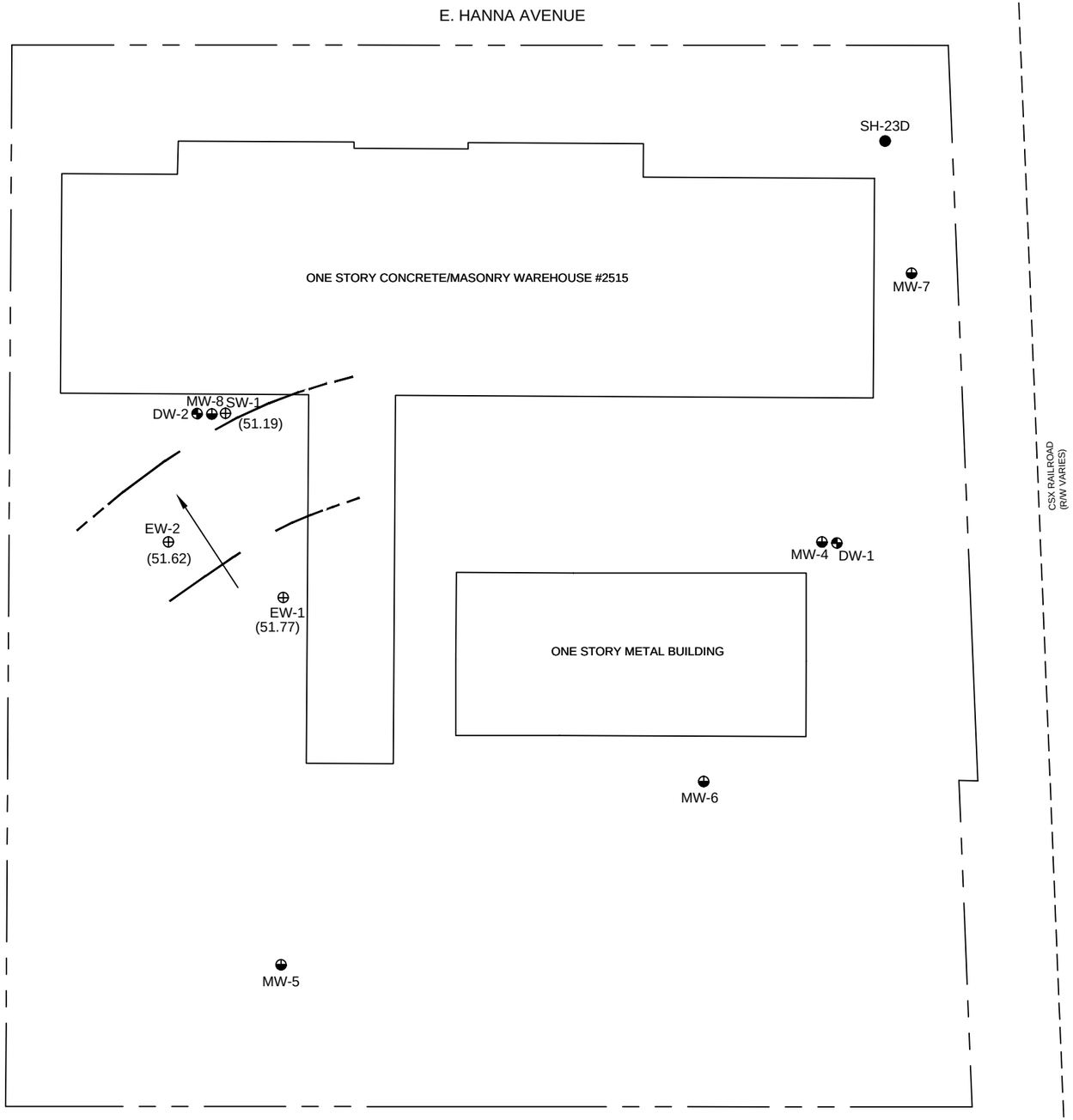
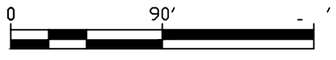
MONITOR WELL LOCATIONS

CITY OF TAMPA
2515 EAST HANNA AVENUE, TAMPA, FL 33610

FILE PATH: G:\PROJECTS\Tampa - East Hanna Avenue\Drawings\2014\Monitor Well Locations.dwg
SCALE: 1" = 90'
DATE: 07/25/14
DRAWN BY: KWC
APPROVED BY: GNT
DRAWING NUMBER: 3





LEGEND

- ⊕ SHALLOW MONITORING WELL
- ◒ INTERMEDIATE MONITORING WELL
- ◔ DEEP MONITORING WELL
- ● FDEP WELL, 150' DEEP
- PROPERTY LINE
- GROUNDWATER COUNTOUR, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION

NOTES:

1. SURVEY PERFORMED BY CITY OF TAMPA, FLORIDA TRANSPORTATION DIVISION SURVEY SECTION FROM JUNE 2, 2014 THROUGH JUNE 25, 2014.
2. COORDINATES ARE IN FEET AND BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR, WEST ZONE NAD 83/90.
3. ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

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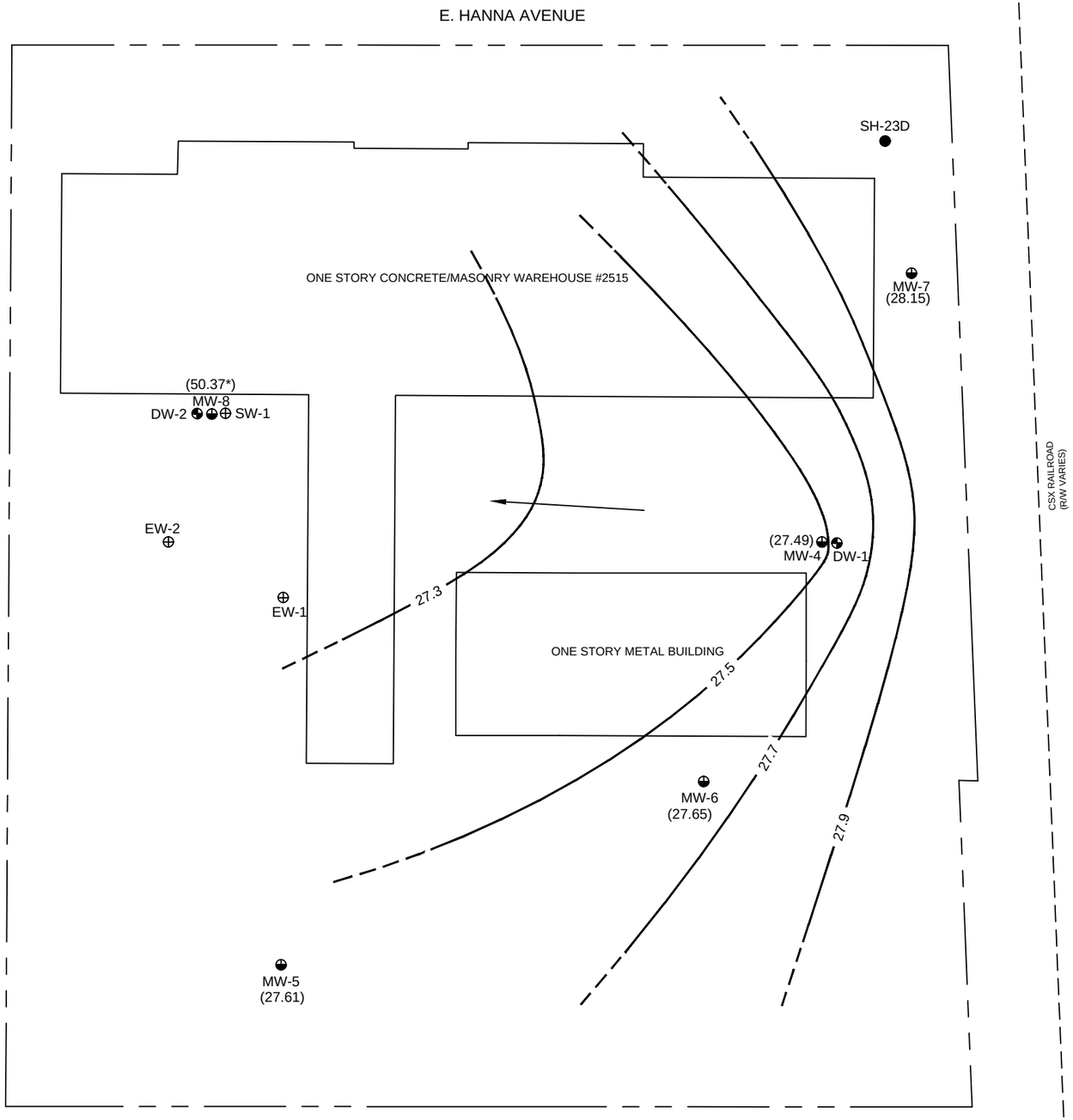
GROUNDWATER ELEVATION SHALLOW/PERCHED ZONE

CITY OF TAMPA
2515 EAST HANNA AVENUE, TAMPA, FL 33610

FILE PATH: G:\PROJECTS\Tampa - East Hanna Avenue\Drawings\2014\GW Countour_Shallow Zone.dwg
SCALE: 1" = 90'
DATE: 07/25/14
DRAWN BY: KWC
APPROVED BY: GNT
DRAWING NUMBER: 4

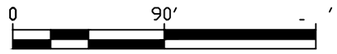


LEGEND

- ⊕ SHALLOW MONITORING WELL
- ◒ INTERMEDIATE MONITORING WELL
- ◕ DEEP MONITORING WELL
- ● FDEP WELL, 150' DEEP
- PROPERTY LINE
- GROUNDWATER COUNTOUR, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION

NOTES:

1. SURVEY PERFORMED BY CITY OF TAMPA, FLORIDA TRANSPORTATION DIVISION SURVEY SECTION FROM JUNE 2, 2014 THROUGH JUNE 25, 2014.
2. COORDINATES ARE IN FEET AND BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR, WEST ZONE NAD 83/90.
3. ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.
4. * MW-8 DATA NOT USED IN CONTOUR SINCE IT APPEARS TO REPRESENT THE UPPER PERCHED ZONE WATER LEVEL.



SCALE

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NO.	REVISION DETAILS	DATE
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GROUNDWATER ELEVATION INTERMEDIATE ZONE (25'-35')

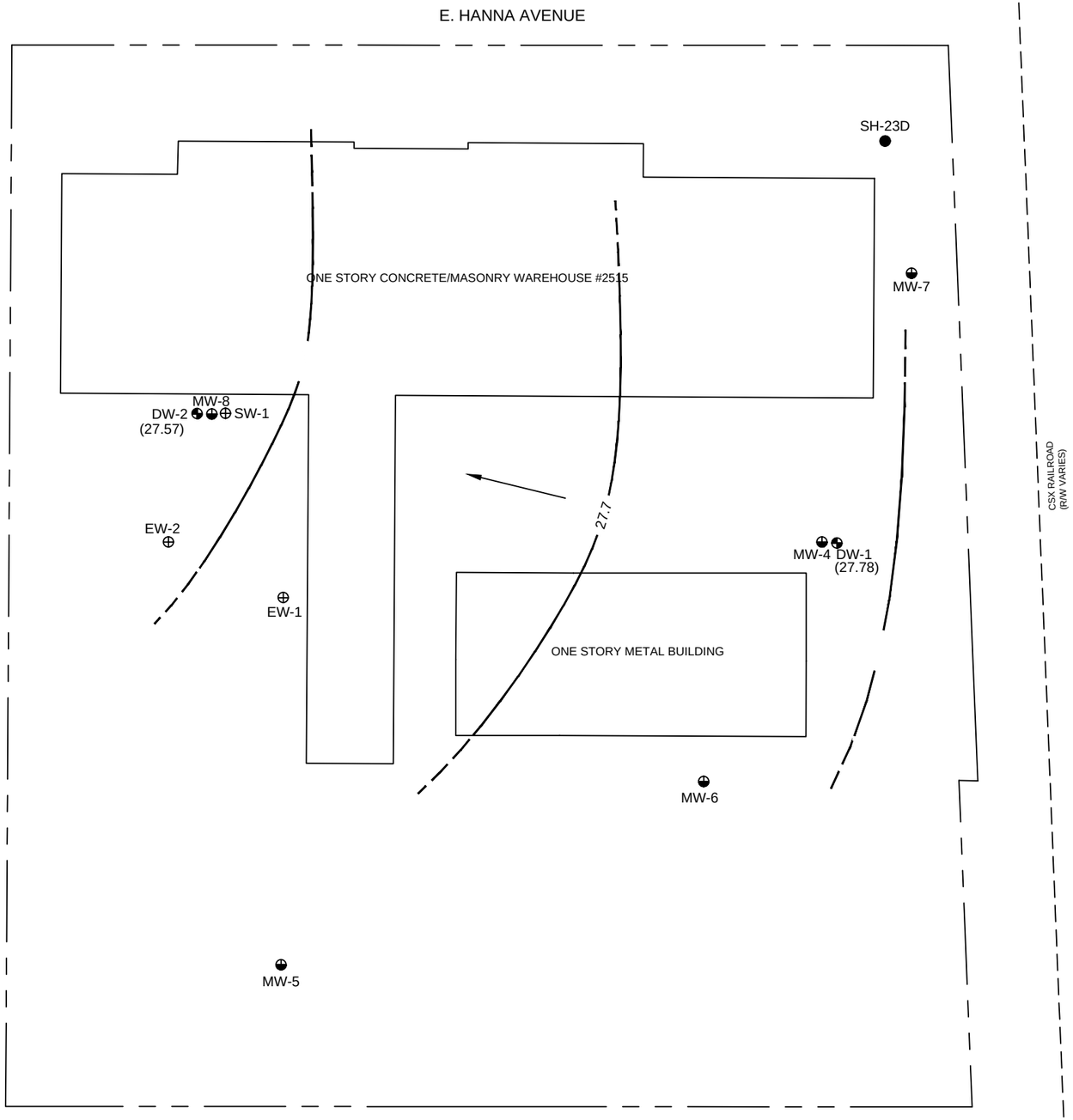
CITY OF TAMPA
2515 EAST HANNA AVENUE, TAMPA, FL 33610

DATE: 07/25/14
DRAWN BY: KWC
APPROVED BY: GNT

DRAWING NUMBER: 5

FILE PATH: G:\PROJECTS\Tampa - East Hanna Avenue\Drawings\2014\GW Countour_Intermediate Zone.dwg

SCALE: 1" = 90'

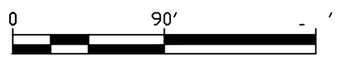


LEGEND

- SHALLOW MONITORING WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- FDEP WELL, 150' DEEP
- PROPERTY LINE
- GROUNDWATER COUNTOUR, DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION

NOTES:

1. SURVEY PERFORMED BY CITY OF TAMPA, FLORIDA TRANSPORTATION DIVISION SURVEY SECTION FROM JUNE 2, 2014 THROUGH JUNE 25, 2014.
2. COORDINATES ARE IN FEET AND BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR, WEST ZONE NAD 83/90.
3. ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.



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NO.	REVISION DETAILS	DATE
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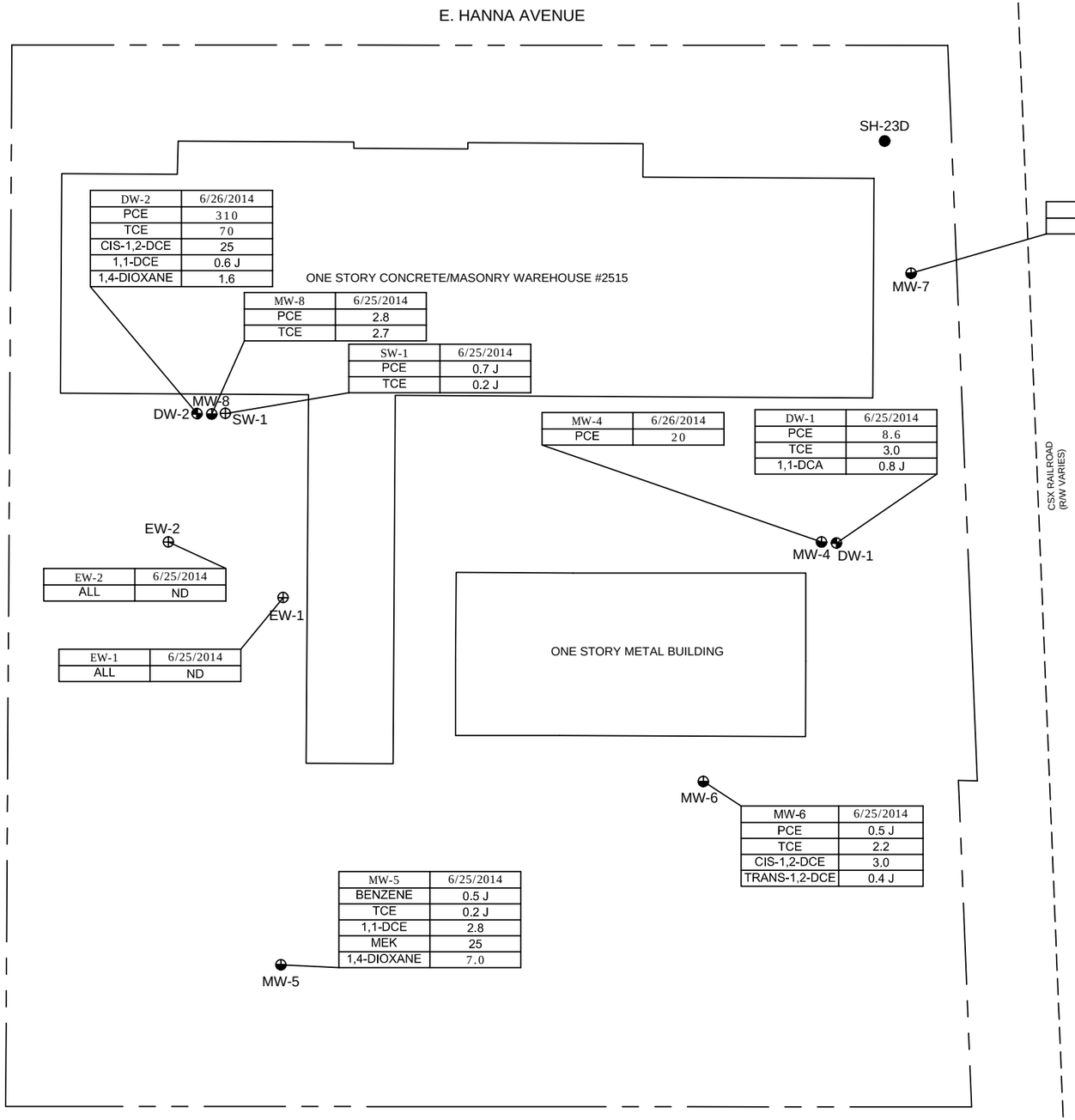
GROUNDWATER ELEVATION DEEP ZONE (40'-50')

CITY OF TAMPA
2515 EAST HANNA AVENUE, TAMPA, FL 33610

FILE PATH: G:\PROJECTS\Tampa - East Hanna Avenue\Drawings\2014\GW Countour_Deep Zone.dwg
SCALE: 1" = 90'
DATE: 07/25/14
DRAWN BY: KWC
APPROVED BY: GNT
DRAWING NUMBER: 6



DW-2	6/26/2014
PCE	310
TCE	70
CIS-1,2-DCE	25
1,1-DCE	0.6 J
1,4-DIOXANE	1.6

MW-7	6/25/2014
PCE	1.0

MW-8	6/25/2014
PCE	2.8
TCE	2.7

SW-1	6/25/2014
PCE	0.7 J
TCE	0.2 J

MW-4	6/26/2014
PCE	20

DW-1	6/25/2014
PCE	8.6
TCE	3.0
1,1-DCA	0.8 J

EW-2	6/25/2014
ALL	ND

EW-1	6/25/2014
ALL	ND

MW-6	6/25/2014
PCE	0.5 J
TCE	2.2
CIS-1,2-DCE	3.0
TRANS-1,2-DCE	0.4 J

MW-5	6/25/2014
BENZENE	0.5 J
TCE	0.2 J
1,1-DCE	2.8
MEK	25
1,4-DIOXANE	7.0

N
W — E

LEGEND

- ⊕ SHALLOW MONITORING WELL
- ◒ INTERMEDIATE MONITORING WELL
- ◍ DEEP MONITORING WELL
- ● FDEP WELL, 150' DEEP
- ——– PROPERTY LINE

WELL ID	DATE
PCE	**8.6**
TCE	3.0
1,1-DCA	0.8 J

PCE - TETRACHLOROETHENE
TCE - TRICHLOROETHENE
DCE - DICHLOROETHENE
DCA - DICHLOROETHANE
MEK - METHY ETHYL KETONE
ND - NOT DETECTED
GCTL - GROUNDWATER CLEANUP TARGET LEVEL
BOLD VALUE - EXCEEDS GCTL
J - ESTIMATED VALUE BETWEEN METHOD DETECTION LIMIT (MDL) AND PRACTICAL QUANTITATION LIMIT (PQL)
RESULTS REPORTED IN MICROGRAMS PER LITER (ug/L)

NOTES:

1. SURVEY PERFORMED BY CITY OF TAMPA, FLORIDA TRANSPORTATION DIVISION SURVEY SECTION FROM JUNE 2, 2014 THROUGH JUNE 25, 2014.
2. COORDINATES ARE IN FEET AND BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR, WEST ZONE NAD 83/90.
3. ONLY DETECTED VOLATILE CONSTITUENTS OF CONCERN SHOWN.

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NO.	REVISION DETAILS	DATE
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GROUNDWATER VOC CONCENTRATIONS

CITY OF TAMPA
2515 EAST HANNA AVENUE, TAMPA, FL 33610

DATE: 07/25/14
DRAWN BY: KWC
APPROVED BY: GNT
DRAWING NUMBER: 7

FILE PATH: G:\PROJECTS\Tampa - East Hanna Avenue\Drawings\2014\GW VOC Data.dwg
SCALE: 1" = 90'

ATTACHMENT A

Well Construction Diagrams/Boring Logs

BORING LOG and WELL CONSTRUCTION DETAIL

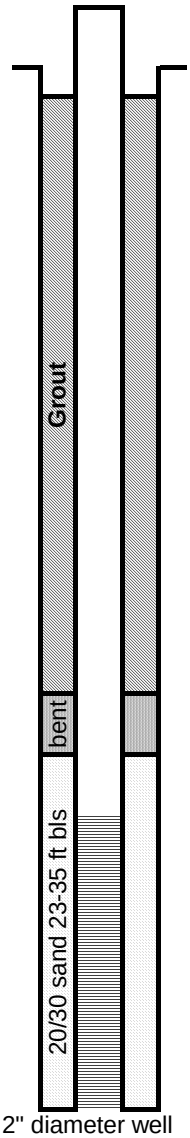
PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.

Boring/Well ID: MW-5

PROJECT: City of Tampa	LOCATION: 2515 E Hanna Ave, Tampa, FL
PROJECT NO: P2324	SURFACE ELEVATION: 56.81
DATE STARTED: 6/16/14	TOC ELEVATION: 56.81
DATE FINISHED: 6/16/14	DEPTH TO WATER: 29.20
DRILLING METHOD: Sonic	TOTAL DEPTH: 34.80
DRILLING COMPANY: Cascade Drilling	SUPERVISOR: Nichols

DEPTH (feet BGS)	ELEVATION (feet above MSL)	BLOWS PER 6 INCHES	PERCENT RECOVERY	OVA (ppm) FID or PID	SOIL CLASS	GEOLOGIC DESCRIPTION
				2.3		post hole 0-5 ft
				2.3		lt brown SAND
				2.3		
				2.3		
5				2.3		
				2.3		
				4.5		
						moist/wet to 9 ft v stiff gray CLAY
10				5.3/6.5		v stiff gray CLAY, more orange with depth
				11.1		Wet SAND at 10 ft (perched aquifer) OVA Low
				5.7		
				0.5		gray CLAY with trace limestone
				5.5		Mixed orange with gray CLAY; breaks up with some ls
15				7.0		orange & gray CLAY mixed; limerock pieces
				22.3		
				5.3		
				10.8/16.3		gray CLAY; with white limerocks trace sand
				7.2		white - sandy - trace clay, rock pieces
20				7.4		gray, more clay - sand - rock pieces
				4.5		stiff gray CLAY
				1.7		gray with white CLAY breaks up - sand and rocks
				4.8		
				5.9		
25				6.9		
				8.6		lt brown - sandy with some rocks
				8.6		
				8.1		
				4.5		white - broken up limerock, damp
30				2.1/1.6		white - broken up limerock, dry
				1.6		white/sticky MARL/LIMESTONE - some rock pieces
				1.6		wet
				1.7		
				1.7		
35				1.7		
						TD = 35 ft.
40						
45						
50						

WELL DIAGRAM



2" diameter well

bent = bentonite

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG and WELL CONSTRUCTION DETAIL

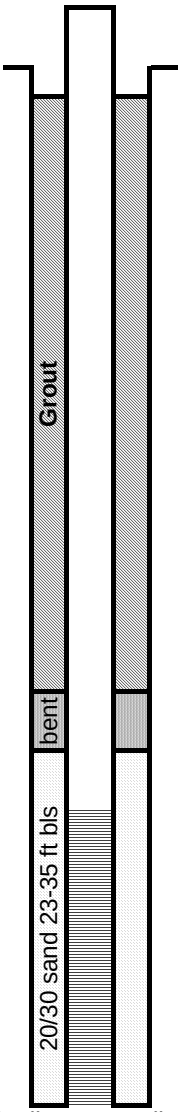
PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.

Boring/Well ID: MW-6

PROJECT: City of Tampa	LOCATION: 2515 E Hanna Ave, Tampa, FL
PROJECT NO: P2324	SURFACE ELEVATION: 51.98
DATE STARTED: 6/16/14	TOC ELEVATION: 51.98
DATE FINISHED: 6/16/14	DEPTH TO WATER: 24.33
DRILLING METHOD: Sonic	TOTAL DEPTH: 34.60
DRILLING COMPANY: Cascade Drilling	SUPERVISOR: Nichols

DEPTH (feet BGS)	ELEVATION (feet above MSL)	BLOWS PER 6 INCHES	PERCENT RECOVERY	OVA (ppm) FID or PID	SOIL CLASS	GEOLOGIC DESCRIPTION
						dk brown fine SAND
						dk brown fine SAND
						sandy CLAY - turning gray
						gray CLAY, some small to med. SAND (white)
5						gray CLAY (dark gray)
				0.0		
				0.0		
				0.0		lt. med. brown CLAY, small trace med. SAND
				0.0		lt. med. gray CLAY, some SAND
10				0.0		dense, gray CLAY
				18.5		lt. med. brown CLAY w/ SAND, limerock pieces
				13.4		lt. med. brown CLAY - trace med. SAND
				13.2		
				10.0		
15				11.9		
				10.2		
				6.5		
				7.9		
				26.5		
20				30.6 (12.9)		
				26.9		LIMESTONE/marl starts ≈ 20ft.
				17.1		white marl with limerock pieces
				0.0		wet 21-22'
				0.0		
25				0.0		
				0.0		
				0.0		
				0.0		
30				0.0		
				0.0		
				0.0		
				0.0		
				0.0		
35				0.0		
						TD = 35 ft.
40						
45						
50						

WELL DIAGRAM



2" diameter well

bent = bentonite

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG and WELL CONSTRUCTION DETAIL

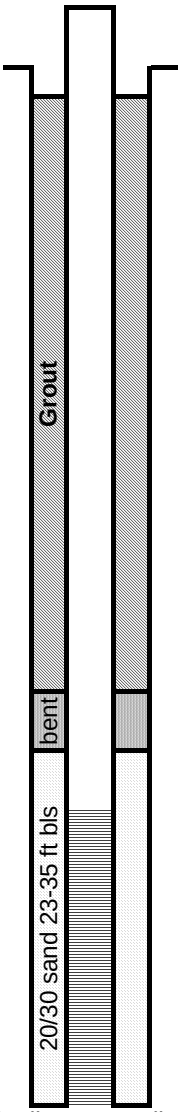
PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.

Boring/Well ID: MW-7

PROJECT: City of Tampa	LOCATION: 2515 E Hanna Ave, Tampa, FL
PROJECT NO: P2324	SURFACE ELEVATION: 51.88
DATE STARTED: 6/17/14	TOC ELEVATION: 51.88
DATE FINISHED: 6/17/14	DEPTH TO WATER: 23.73
DRILLING METHOD: Sonic	TOTAL DEPTH: 35
DRILLING COMPANY: Cascade Drilling	SUPERVISOR: Nichols

DEPTH (feet BGS)	ELEVATION (feet above MSL)	BLOWS PER 6 INCHES	PERCENT RECOVERY	OVA (ppm) FID or PID	SOIL CLASS	GEOLOGIC DESCRIPTION
						Concrete at surface
						lt. to med. brown silty SAND
						fine grained,
				2.1		
5				4.6/5.8		med. brown to orange fine SAND/some plastic-silt
				6.3		med. brown SAND - clay pieces, limerock pieces ≈ 1 cm.
				8.7		
				6.1		med. brown - orange, fine SAND/silt
				6.3		lt. brown fine SAND
10				4/3.9		lt. brown/orange fine grained SAND
				--		
				5.9		lt. brown SAND - transition to orange
				--		
				8.7		transition to gray CLAY
15				--		
				12.6		gray CLAY
				--		
				20.0		
				--		
20				25.2		
				6.6		wet at 20'; w/limestone pieces
				8.3		LIMESTONE - marl
				27.3		
				15.1		
25				26.4		24-25' dry
				20.3		wet again @ 26'
				16.3		
				27.7		
				37.6		
30				42.6		
				18.0		
				13.9		
				27.4		
				26.2		
35				26.4		
						TD = 35 ft.
40						
45						
50						

WELL DIAGRAM



2" diameter well

bent = bentonite

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG and WELL CONSTRUCTION DETAIL

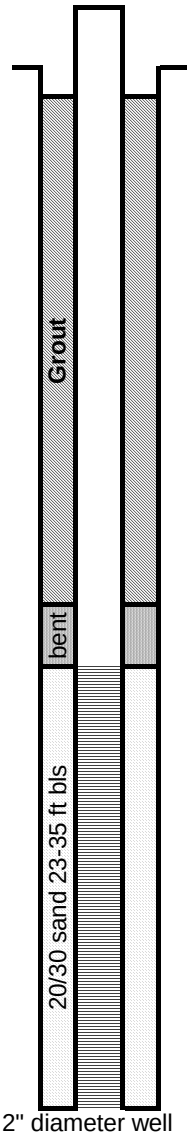
PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.

Boring/Well ID: MW-8

PROJECT: City of Tampa	LOCATION: 2515 E Hanna Ave, Tampa, FL
PROJECT NO: P2324	SURFACE ELEVATION: 54.0
DATE STARTED: 6/18/14	TOC ELEVATION: 54.80
DATE FINISHED: 6/18/14	DEPTH TO WATER: 4.43
DRILLING METHOD: Sonic	TOTAL DEPTH: 33.30
DRILLING COMPANY: Cascade Drilling	SUPERVISOR: Nichols

DEPTH (feet BGS)	ELEVATION (feet above MSL)	BLOWS PER 6 INCHES	PERCENT RECOVERY	OVA (ppm) FID or PID	SOIL CLASS	GEOLOGIC DESCRIPTION
				1.7		dk. brown fine SAND
				2.0		lt./med. SAND - some plastic fine grain friable
				2.0		
				2.0		lt. brown SAND - larger grain, stil some fine grained
5				2.0/6.3		lt./v. lt. fine SAND - wet (perched water table probably present here)
				8.7		med. brown fine SAND
				0.0		
				19.2		
				12.6		
10				10.3		dense gray CLAY starts @ 10'
				0.0		CLAY - shell - sand lt. brown
				9.1		Sandy CLAY - lt. brown
				11.5		dry
				5.7		
15				4.5		
				5.1		dense gray CLAY - some SAND
				2.1		
				0.6		
				0.0		0.5 ft. CLAY + 0.5 ft. limestone lense
20				0.0		dense gray CLAY and some sand and limestone
				5.8		dense gray CLAY
				15.1		
				18.0		
				13.3		
25				8.2		
				2.9		
				3.5		CLAY w/some limestone
				4.2		brown - med. CLAY w/limestone
				5.1		dense blue CLAY
30				2.4/9.0		med. Brown CLAY w/ limestone
				5.4		dense blue CLAY
				10.6		
				21.0		
				23.8		
35				43.5		increasing PID was of concern
						TD = 35 ft.
40						
45						
50						

WELL DIAGRAM



2" diameter well

bent = bentonite

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG and WELL CONSTRUCTION DETAIL

PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.

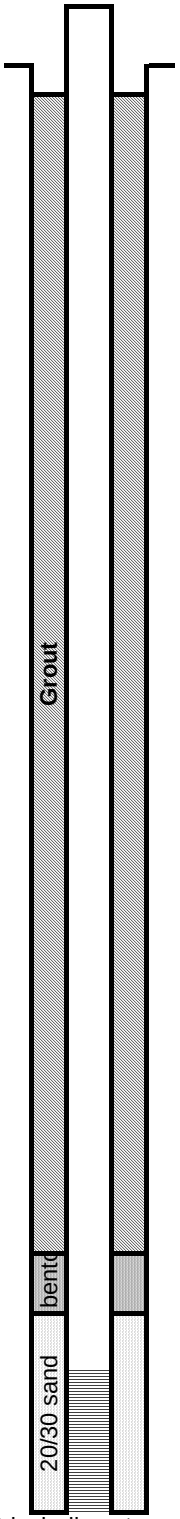
Boring/Well ID: DW-1

PROJECT: City of Tampa	LOCATION: 2515 E Hanna Ave, Tampa, FL
PROJECT NO: P2324	SURFACE ELEVATION: 52.40
DATE STARTED: 6/17/14	TOC ELEVATION: 52.40
DATE FINISHED: 6/17/14	DEPTH TO WATER: 24.62
DRILLING METHOD: Sonic	TOTAL DEPTH: 49.60
DRILLING COMPANY: Cascade Drilling	SUPERVISOR: Nichols

DEPTH (feet BGS)	ELEVATION (feet above MSL)	BLOWS PER 6 INCHES	PERCENT RECOVERY	OVA (ppm) FID or PID	SOIL CLASS	GEOLOGIC DESCRIPTION
				0-1.5		dark to light brown SAND/silty SAND
				"		
				"		moist @ 3'
				"		
5				6.4		
				10.7		med. brown fine grained SAND
				15.3		dark brown fine grained SAND
				19.4		dark brown fine SAND w/small clay pieces (<1 cm)
				7.4		lt. brown fine SAND (no plasticity)
10				1.5/10.7		
				--		
				16.0		orange silty SAND
				--		
				10.3		
15				--		
				8.5		med. brown and orange sandy CLAY, plastic, friable
				--		
				15.0		light/med. Sandy CLAY, friable
				--		limestone/marl
20				24.7/17.0		
				20.5		lt. brown to white - weathered limestone, moist
				17.7		white weathered LIMESTONE/MARL
				3.2		wet @ 23'
				5.8		
25				8.7		
				9.8		
				11.5		
				5.2		
				3.0		
30				3.7/6.5		
				30.6		
				19.3		
				20.6		
				6.1		
35				13.9		
				29.7		
				7.7		
				6.0		
				17.2		
40				10.3		
						41-46' weathered limerock v. stiff - white - v. few stones
						weathered limerock
45						
						med./lt. limerock - no marl
						light to med limerock - darker w/depth
50						

TD = 50 ft; bent = bentonite

WELL DIAGRAM



2-inch diameter well

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG and WELL CONSTRUCTION DETAIL

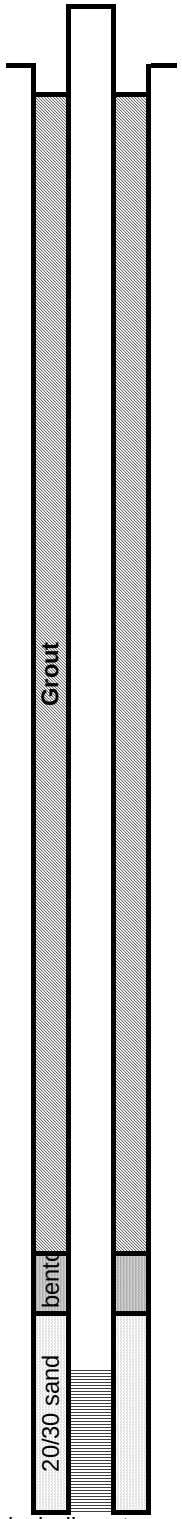
PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.

Boring/Well ID: DW-2

PROJECT: City of Tampa	LOCATION: 2515 E Hanna Ave, Tampa, FL
PROJECT NO: P2324	SURFACE ELEVATION: 54.90
DATE STARTED: 6/18/14	TOC ELEVATION: 55.04
DATE FINISHED: 6/19/14	DEPTH TO WATER: 27.47
DRILLING METHOD: Sonic	TOTAL DEPTH: 50.40
DRILLING COMPANY: Cascade Drilling	SUPERVISOR: Nichols

DEPTH (feet BGS)	ELEVATION (feet above MSL)	BLOWS PER 6 INCHES	PERCENT RECOVERY	OVA (ppm) FID or PID	SOIL CLASS	GEOLOGIC DESCRIPTION
						12" concrete
				<3		med. brown, silty SAND
				<3		light to medium brown and orange sand mixed, wet
				<3		
5				<3		
				6.15		light to medium brown fine SAND
				10.6		
				6.1		
				6.0		
10				5.1/--		
				5.5		light brown clayey SAND, wet
				11.2		
				19.9		
				6.6		less wet
15				17.3		white, LIMESTONE, some marl, dry
				20.0		
				24.4		
				26.3		
				24.9		White, increased marl, less limestone fragments
20				12.8		
				14.5		
				20.5		
				15.2		
				19.7		gray and orange CLAY
25				14.2		
				9.1		
				15.5		blue CLAY (Hawthorn) w/stones
				7.6		w/ some shells
				17.7		
30				9.4/16.9		
				32.2		
				41.2		
				66.5		
				65.4		
35				152.8		
				134.4		
				89.9		
				46.6		
				135.4		
40				246.6/4.4		
				22.3		41.5 transitions to white limestone and marl
				12.9		
				23.4		
				19.2		
45				10.5		
				2.6		
				12.5		
				13.2		
				10.7		
50				9.1		

WELL DIAGRAM



TD = 50 ft; bent = bentonite

2-inch diameter well

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG and WELL CONSTRUCTION DETAIL

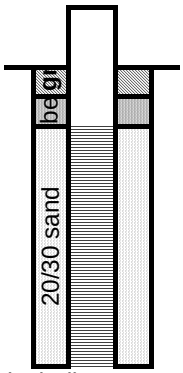
PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.

Boring/Well ID: SW-1

PROJECT: City of Tampa	LOCATION: 2515 E Hanna Ave, Tampa, FL
PROJECT NO: P2324	SURFACE ELEVATION: 54.7
DATE STARTED: 6/18/14	TOC ELEVATION: 54.94
DATE FINISHED: 6/18/14	DEPTH TO WATER: 3.75
DRILLING METHOD: Sonic	TOTAL DEPTH: 9.55
DRILLING COMPANY: Cascade Drilling	SUPERVISOR: Nichols

DEPTH (feet BGS)	ELEVATION (feet above MSL)	BLOWS PER 6 INCHES	PERCENT RECOVERY	OVA (ppm) FID or PID	SOIL CLASS	GEOLOGIC DESCRIPTION
				--		0-4" concrete
				2.6		fine, silty SAND
				7.4		@ 3.5' PID = 6.1
				4.7		
5				7.0		@4.5' PID = 7.0
				9.7/26.6		
				498.0		
				21.0		
				65.0		
10				75.0		
15						
20						
25						
30						
35						
40						
45						
50						

WELL DIAGRAM



2-inch diameter well

bent = bentonite
gr = grout

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

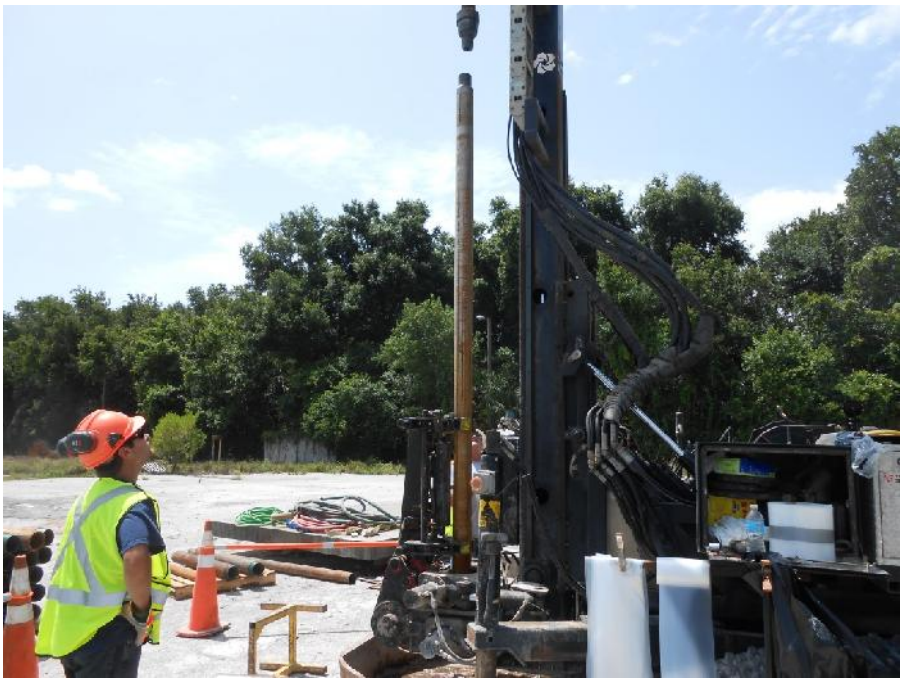
Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

ATTACHMENT B

Photo Documentation of Well Installations

ATTACHMENT B: PHOTOGRAPHIC DOCUMENTATION

MW-4 – Completed by Others



MW-5 Installation

ATTACHMENT B: PHOTOGRAPHIC DOCUMENTATION

MW-6 Well Pad – Completed

MW-7 Well Pad – Completed

ATTACHMENT B: PHOTOGRAPHIC DOCUMENTATION

MW-8 Installation

SW-1 Well Pad – Completed

ATTACHMENT B: PHOTOGRAPHIC DOCUMENTATION

DW-1 Well Pad – Completed

DW-2 Well Pad – Completed

ATTACHMENT C

Groundwater Sampling Logs

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO:	DATE:	SAMPLE ID:	PROJECT NO:
DW-2	6/26/14	DW-2	P2324

SITE NAME:	SITE LOCATION:
City of Tampa	2515 E Hanna Ave Tampa FL

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	TOTAL DEPTH:	PURGE PUMP TYPE OR BAILER:
2	na	45 feet to 50 feet	27.47	50	

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (50 feet – 27.47 feet) X 0.16 gallons/foot = 3.6 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
NA	NA	755	846	4.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/L or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
850	—	—	—		7.42	421.0	-	1.08	27.9	-27.6	cloudy/sm

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
C.Nichols		847	850

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
NA	NA	NA

FIELD DECONTAMINATION: Y (N)

FIELD FILTERED: Y (N) FILTER SIZE: _____micron

Filtration Equipment Type: _____

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SEE COC								

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO: DW-2	DATE: 6/25/14	SAMPLE ID: DW-2	PROJECT NO: P2324
SITE NAME:		SITE LOCATION:	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 45 feet to 50 feet	STATIC DEPTH TO WATER (feet):	TOTAL DEPTH: ~~50~~	PURGE PUMP TYPE OR BAILER: Sub pump.

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (50 feet – 27.47 feet) X 0.16 gallons/foot = 3.6 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 1625	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/l or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
1630	0.5	0.5	0.1	27.54	7.09	457.2		0.28	28.4	-24.3	rem/cloudy
1635	0.5										
1640											
1645											

Pump too high. Reset on 6/26.

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:	
FIELD DECONTAMINATION: Y N	FIELD FILTERED: Y N FILTER SIZE: _____micron Filtration Equipment Type: _____	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO:	DATE:	SAMPLE ID:	PROJECT NO:
MW-4	6/26/14	MW-4	P2324

SITE NAME:	SITE LOCATION:
City of Tampa	2515 E Hanna Ave Tampa FL

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	TOTAL DEPTH:	PURGE PUMP TYPE OR BAILER:
2	NA ~~3/8~~	? feet to ? feet	25.06	28.6	

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (28.6 feet – 25.06 feet) X 0.04 gallons/foot = 0.14 gal gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
NA	NA	—	—	0.14

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/L or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
745	0.14	0.14	—	25.70	6.91	330.7	1	2.49	25.4	77.0	dirty/none

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
C. Nichols		—	—

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
NA	NA	NA

FIELD DECONTAMINATION: Y (N)	FIELD FILTERED: Y (N) FILTER SIZE: _____micron Filtration Equipment Type: _____	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
See COC								

REMARKS:

not enough H_2O in well to collect samples

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO:	DATE:	SAMPLE ID:	PROJECT NO:
SW-1	6/25/14	SW1	P2324

SITE NAME:	SITE LOCATION:
City of Tampa	2515 E Hanna Ave Tampa FL

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	TOTAL DEPTH:	PURGE PUMP TYPE OR BAILER:
2	3/8	2 feet to 10 feet	3.75	10	PP.

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (10 feet – 3.75 feet) X 0.16 gallons/foot = 1.0 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
8	8	1542	1554	1.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/l or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
1545	0.3	0.3	0.1	4.42	6.47	294.2	163	0.44	29.2	-5.5	sewage / strong petrol
1548	0.3	0.6	0.1	4.53	6.37	290.9	149	0.36	29.1	-3.0	"
1551	0.3	0.9	0.1	4.62	6.29	288.8	108.5	0.28	29.2	-3.6	"
1554	0.3	1.20	0.1	4.66	6.28	292.2	99.4	0.26	29.1	-6.1	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
O. Nichols		1555	1602

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
8	< 100	PE

FIELD DECONTAMINATION: (P) N	FIELD FILTERED: (Y) N FILTER SIZE: _____micron Filtration Equipment Type: _____	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
see COC								

REMARKS:

- strong odor
- turbidity not red. muddy white (cloudy water)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO:	DATE:	SAMPLE ID:	PROJECT NO:
MW-6	6/25/14	MW-6	P2324

SITE NAME: City of Tampa

SITE LOCATION: 2515 E Hanna Ave Tampa FL

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	TOTAL DEPTH:	PURGE PUMP TYPE OR BAILER:
2	3/8	20 feet to 35 feet	4.43	35	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (35 feet – 4.43 feet) X 0.16 gallons/foot = 4.89 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
34	34	1423	1513	5.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/L or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
1428	0.5	0.5	0.1	4.18	5.42	1275	6.01	0.91	28.3	33.9	none/none
1433	0.5	1.0	0.1	4.18	5.30	119.1	4.81	0.78	28.2	28.8	"
1438	0.5	1.5	0.1	4.18	5.08	104.8	6.44	0.84	28.1	34.4	"
1443	0.5	2.0	0.1	4.18	5.02	99.6	5.44	0.89	28.0	34.7	"
1448	0.5	2.5	0.1	4.18	4.96	100.3	5.67	0.90	27.9	37.3	"
1453	0.5	3.0	0.1	4.18	4.97	98.0	4.91	0.89	28.0	37.5	"
1458	0.5	3.5	0.1	4.18	4.97	98.6	4.64	0.89	28.0	40.1	"
1503	0.5	4.0	0.1	4.18	4.97	95.7	4.08	0.89	28.1	37.5	"
1508	0.5	4.5	0.1	4.18	4.98	96.4	3.28	0.89	28.0	36.4	"
1513	0.5	5.0	0.1	4.18	4.99	95.8	4.12	0.89	28.0	37.1	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
C.N. Child		1514	1529

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
34	Flow	PE

FIELD DECONTAMINATION: (Y) N

FIELD FILTERED: (Y) N FILTER SIZE: 0.45 micron

Filtration Equipment Type: _____

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
see COC								

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO: EW-2	DATE: 6/25/14	SAMPLE ID: EW-2	PROJECT NO: P2324
SITE NAME: City of Tampa		SITE LOCATION: 2615 E Hanna Ave Tampa FL	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 3.10	TOTAL DEPTH: 9.70	PURGE PUMP TYPE OR BAILER: MP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (9.70 feet – 3.10 feet) X 0.16 gallons/foot = 1.05 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9.0	PURGING INITIATED AT: 1351	PURGING ENDED AT: 1406	TOTAL VOLUME PURGED (gallons): 1.25

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/L or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
1354	0.25	0.25	0.1	3.26	4.18	77.3	19.8	2.70	31.3	86.3	none/none
1357	0.25	0.50	0.1	3.26	4.06	77.7	22.3	2.67	31.6	64.1	"
1400	0.25	0.75	0.1	3.26	4.06	77.9	14.2	2.68	31.8	60.9	"
1403	0.25	1.0	0.1	3.26	4.05	76.8	7.88	2.76	31.8	67.6	"
1406	0.25	1.25	0.1	3.26	4.03	75.8	6.15	2.78	31.8	68.2	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: C. Nichols	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1407	SAMPLING ENDED AT: 1409
PUMP OR TUBING DEPTH IN WELL (feet): 9.0	SAMPLE PUMP FLOW RATE (mL per minute): Low	TUBING MATERIAL CODE: PE	
FIELD DECONTAMINATION: (Y) N	FIELD FILTERED: Y (N) FILTER SIZE: _____micron Filtration Equipment Type: _____	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
see COC								

REMARKS:

S: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

NG APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO: MW-5	DATE: 6/25/19	SAMPLE ID: MW-5	PROJECT NO: P2324
SITE NAME: City of Tampa		SITE LOCATION: 2515 E Hanna Ave Tampa FL	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 25 feet to 35 feet	STATIC DEPTH TO WATER (feet): 29.20	TOTAL DEPTH: ~~37~~	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (35 feet – 29.20 feet) X 0.16 gallons/foot = ~~0.9~~ 0.93 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 32.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 34.5	PURGING INITIATED AT: 1220	PURGING ENDED AT: 1237	TOTAL VOLUME PURGED (gallons): 1.7

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/L or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
1225	0.5	0.5	0.1	30.27	7.07	470.5	273	0.83	27.7	0.6	none/none
1225/1230	0.3	0.8	0.1	30.95	6.80	478.0	524	0.43	28.1	-3.0	"
1230/1235	0.3	1.1	0.1	31.31	6.76	480.9	361	0.46	28.2	-4.5	"
1230/1234	0.3	1.4	0.1	31.64	6.77	484.2	107.2	0.52	27.8	-6.1	"
1237	0.3	1.7	0.1	32.09	6.79	485.1	64.9	0.48	27.7	-10.9	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: C.N.Childs	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1238	SAMPLING ENDED AT: 1356
PUMP OR TUBING DEPTH IN WELL (feet): 34.5	SAMPLE PUMP FLOW RATE (mL per minute): Low	TUBING MATERIAL CODE: PE	
FIELD DECONTAMINATION: (Y) N	FIELD FILTERED: Y (N) FILTER SIZE: _____micron Filtration Equipment Type: _____	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
see COC								

REMARKS:

Pulled sample @ 1237- turb still ↑; WL ↓.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO: MW-6	DATE: 6/25/14	SAMPLE ID: MW-6	PROJECT NO: P2324
SITE NAME: City of Tampa		SITE LOCATION: 2515 E Hanna Ave Tampa FL	

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	TOTAL DEPTH:	PURGE PUMP TYPE OR BAILER:
2	3/8	25 feet to 35 feet	24.33	35	peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (35 feet – 24.33 feet) X 0.16 gallons/foot = 1.76 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
34	34	1115	1133	1.8

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/L or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
1120	0.5	0.5	0.1	24.40	6.58	563	49.9	0.22	27.9	-23.5	none/none
1125	0.5	1.0	0.1	24.37	6.55	562	17.7	0.13	27.7	-21.6	"
1130	0.5	1.5	0.1	24.38	6.55	565	10.56	0.10	28.0	-19.0	"
1133	0.3	1.8	0.1		6.55	566	8.98	0.10	28.1	-18.3	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
C.N. Chuls		1134	1152

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
34	<100	PE

FIELD DECONTAMINATION: (Y) N

FIELD FILTERED: (Y) N FILTER SIZE: _____micron

Filtration Equipment Type: _____

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SEE COC								

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO: DW-1	DATE: 6/25/14	SAMPLE ID: DW-1	PROJECT NO: P2324
SITE NAME: City of Tampa		SITE LOCATION: 2515 E Hanna Ave Tampa FL	

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	TOTAL DEPTH:	PURGE PUMP TYPE OR BAILER:
2	3/8	45 feet to 50 feet	24.62	31	S. pump

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (50 feet – 24.62 feet) X 0.16 gallons/foot = 4.06 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
47	47	957	1040	4.3

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/L or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
1002	0.5	0.5									
1007	0.5	1.0	0.1	27.74	6.98	368.2	18.3	0.30	27.1	5.3	none/none
1012	0.5	1.5	0.1	27.97	6.90	367.4	14.9	0.22	27.1	6.9	"
1017	0.5	2.0	0.1	-	6.85	367.2	6.73	0.16	26.8	3.6	"
1022	0.5	2.5	0.1	28.40	6.85	365.1	5.20	0.16	26.8	2.6	"
1027	0.5	3.0	0.1	28.46	6.86	365.5	7.91	0.19	26.9	0.4	"
1032	0.5	3.5	0.1	28.45	6.86	362.2	10.81	0.21	26.7	-1.0	"
1037	0.5	4.0	0.1	28.45	6.89	357.8	5.97	0.23	26.8	-0.9	"
1040	0.3	4.3	0.1	28.45	6.90	356.2	8.49	0.25	26.9	-1.9	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
C Nichols		1040	1045

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
47	Low	PE

FIELD DECONTAMINATION: (Y) N

FIELD FILTERED: Y (N) FILTER SIZE: _____micron

Filtration Equipment Type: _____

DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
see COC								

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO:	DATE:	SAMPLE ID:	PROJECT NO:
MW-7	6.25.14	MW-7	P2324

SITE NAME:	SITE LOCATION:
City of Tampa	2515 E Hanna Ave Tampa FL

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	TOTAL DEPTH:	PURGE PUMP TYPE OR BAILER:
2"	3/8	25 feet to 35 feet	23.73	= 35	Sub.

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (35 feet – 23.73 feet) X 0.16 gallons/foot = 1.80 gal gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
34	34	852A	911	2.1

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (lpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/l or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
855	0.5	0.5	0.1	24.69	6.99	308.1	31.5	0.52	26.3	-6.1	white/murky
900	0.5	1.0	0.1	–	–	–	–	–	–	–	–
905	0.5	1.5	0.1	24.98	6.97	306.0	13.0	0.48	26.3	-0.6	"
908	0.3	1.8	0.1	24.95	6.96	307.0	9.02	0.56	26.4	8.1	"
911	0.3	2.1	0.1	24.70	6.97	307.8	7.21	0.60	26.6	16.0	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
C.Nichols		912	922

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
34	<100	PE

FIELD DECONTAMINATION: (Y) N	FIELD FILTERED: (Y) N FILTER SIZE: 0.45 micron Filtration Equipment Type: _____	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
See COC								

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

GROUNDWATER SAMPLING LOG

WELL NO:	DATE:	SAMPLE ID:	PROJECT NO:
EW-1	6/25/14	EW-1	P2324

SITE NAME:	SITE LOCATION:
City of Tampa	2515 E Hanna Ave Tampa FL

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	TOTAL DEPTH:	PURGE PUMP TYPE OR BAILER:
2	3/8		2.71	31	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY

(only fill out if applicable)

= (12.90 feet – 2.71 feet) x 0.16 gallons/foot = 1.63 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
12	12	1329	1344	1.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm or ml/min)	DEPTH TO WATER (feet)	pH (standard units) (± 0.1 units)	COND. (µS/cm) (± 3%)	TURBIDITY (NTUs) (± 10%)	DISSOLVED OXYGEN (mg/l or % saturation) (± 10%)	TEMP (°C) (± 1 °C)	ORP (mV) (± 19 mV)	COLOR/ ODOR (describe)
1327	0.25	0.25	0.1	2.89	5.87	157.8	52.2	1.70	28.9	44.5	none/none
1330	0.25	0.50	0.1	2.90	5.68	153.7	48.8	1.66	28.9	43.6	"
1333	0.25	0.75	0.1	2.90	5.59	154.9	30.9	1.57	28.9	39.3	"
1336	0.25	1.0	0.1	2.90	5.60	156.6	20.2	1.56	28.9	42.4	"
1339	0.25	1.25	0.1	2.90	5.61	157.2	18.3	1.56	28.9	42.6	"
1342	0.25	1.50	0.1	2.90	5.60	157.8	14.7	1.55	28.9	41.3	"
1344	0.25	1.75	0.1	2.90	5.59	158.1	10.6	1.56	28.9	42.2	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 8"= 2.61; 10" =4.08; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
C. Nichols		1347	1349

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
12	Low	PE

FIELD DECONTAMINATION: (Y) N	FIELD FILTERED: Y (N) FILTER SIZE: _____micron Filtration Equipment Type: _____	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# of CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
see COC								

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump

ATTACHMENT D

Laboratory Analytical Reports

Southern Research Laboratories, Inc.

2251 Lynx Lane, Suite 1
Orlando, Florida 32804
(407) 522-7100 Fax (407) 522-7043
Toll Free 1 (888) 420-Test

Thank you **Ms. Bridget Morello** for the opportunity to be of service to you and your company; we **S**incerely **A**ppreciate **Y**our **B**usiness. SRL certifies these **Laboratory Results** were produced in accordance with NELAC Standards. Hold times and preservation requirements were met for all analytes unless specifically noted in the report. Results relate only to the samples as received.

Client Name: **Progressive Eng. & Construction, Inc.**	Date(s) Collected: 06/25-06/26/14
Contact Name: **Bridget Morello**	Date Received: 06/27/14
Project Name: City of Tampa	Time Received: 14:10
Project Number: P9000	Date Reported : 07/08/14
Phone Number: (813) 930-0669	Date Emailed : 07/08/14
Fax Number: (813) 930-9809	SRL Work Order # 14-06032
	R1 071714

SRL WO #	Clients #	Matrix		Analysis Requested
1406032-001	DW-2	Liquid		EPA 8260(VOC)/8260-SIM(1,4-Dioxane)
1406032-002	SW-1	Liquid	*	EPA 8260(VOC)/Ethylene glycol/ Aluminum/Antimony/Arsenic /Barium/ Boron/Cadmium /Chromium/Lead/ Copper/Selenium /Sodium/Tin/ Mercury
1406032-003	MW-8	Liquid	*	EPA 8260(VOC)/8260-SIM(1,4-Dioxane) Ethylene glycol/Aluminum/Antimony/ Arsenic /Barium/Boron/Cadmium/ Chromium/Lead/Copper/Selenium/ Sodium/Tin/Mercury/Flouride/SVOCs
1406032-004	EW-2	Liquid		EPA 8260(VOC)
1406032-005	EW-1	Liquid		EPA 8260(VOC)
1406032-006	MW-5	Liquid	*	EPA 8260(VOC)/8260-SIM(1,4-Dioxane) Ethylene glycol/Aluminum/Antimony/ Arsenic /Barium/Boron/Cadmium/ Chromium/Lead/Copper/Selenium/ Sodium/Tin/Mercury/Flouride/SVOCs
1406032-007	Trip Blank	Liquid		EPA 8260(VOC)/8260-SIM(1,4-Dioxane)

Nonconformance: This report is an amendment to the original report dated June 08, 2014 for this work order.
Additional Information: The samples listed above (*) were originally on hold per client request. After the fin report was issued, the client requested dissolved Aluminum analysis of these samples. The results are included in this revised report.
Affected Samples: SW-1 [1406032-002], MW-8 [1406032-003], MW-5 [1406032-006]

Sherri Payne
Vice President & Quality Assurance Officer
Southern Research Laboratories, Inc.

Southern Research Laboratories, Inc.
an MBE Environmental Laboratory
2251 Lynx Lane, Suite 1
Orlando, Florida 32804 (407) 522-7100

NELAP Certified
FDOH Cert # : E83484
SRL Lab Ref # : 14-06032
Received Date : 06/27/14

Bridget Morello
Progressive Engineering & Construction, Inc.
3912 West Humphrey Street
Tampa, Florida 33614 (813) 930-0669

Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

EPA Method 8260B 1,4-Dioxane in Water by GC-MS
Method 8260 Purge and Trap using Gas Chromatography/Mass Spectrometry and Selective Ion Monitoring (SIM)

Client ID #	:	**DW-2**	**MW-8**	**MW-5**	**Trip Blank**			
SRL (Lab) ID#	:	1406032-001	1406032-003	1406032-006	1406032-007			
Date Collected	:	06/26/14	06/25/14	06/25/14	06/25/14			
Lab FDOH Certification #	:	E83484	E83484	E83484	E83484			
Date Prepared	:	07/03/14	07/03/14	07/03/14	07/03/14			
Date Analyzed	:	07/03/14	07/03/14	07/03/14	07/03/14	**MDL**	**PQL**	**CAS Number**
1,4-Dioxane		**1.6**	0.5 U	**7.0**	0.5 U	0.5	1.0	123-91-1
Units	:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Dilution Factor (MEDF)	:	1	1	1	1	1	1	
Surrogate (% Rec)	:					(Surrogate Control Limits)		
Dioxane-d8		109.3%	112.9%	117.3%	103.1%		70-130	

Client ID #	:	**Method Blank**						
SRL (Lab) ID#	:	MB070314						
Date Collected	:	NA						
Lab FDOH Certification #	:	E83484						
Date Prepared	:	07/03/14						
Date Analyzed	:	07/03/14				**MDL**	**PQL**	**CAS Number**
1,4-Dioxane		0.5 U				0.5	1.0	123-91-1
Units	:	ug/L				ug/L	ug/L	
Dilution Factor (MEDF)	:	1				1	1	
Surrogate (% Rec)	:					(Surrogate Control Limits)		
Dioxane-d8		100.0%					70-130	

	% Recovery LCS/MS/MSD	**Acceptable Limits**	**%RPD MS/MSD**	**Acceptable Limits**
1,4-Dioxane	97/93/106	70-130	11	0-30

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FDOH Cert # : E83484
SRL Lab Ref # : 14-06032
Received Date : 06/27/14

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Project Number/Project Name
P9000
City Of Tampa
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EPA Method 5030/8260B Volatile Organics in Water by GC-MS

Client ID #	**DW-2**	**SW-1**	**MW-8**	**EW-2**				
SRL (Lab) ID#	1406032-001	1406032-002	1406032-003	1406032-004				
Date Collected	06/26/14	06/25/14	06/25/14	06/25/14				
Lab FDOH Certification #	E83484	E83484	E83484	E83484				
Date Prepared	07/01/14	07/01/14	07/01/14	07/01/14				
Date Analyzed	07/01/14	07/01/14	07/01/14	07/01/14				
Units	ug/L	ug/L	ug/L	ug/L	**MDL**	**PQL**	**CAS Number**	
Dichlorodifluoromethane	2.0 U	2.0 U	2.0 U	2.0 U	0.5	2.0	75-71-8	
Chloromethane	2.0 U	2.0 U	2.0 U	2.0 U	0.5	2.0	74-87-3	
Vinyl Chloride	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	75-01-4	
Bromomethane	2.0 U	2.0 U	2.0 U	2.0 U	0.5	2.0	74-83-9	
Chloroethane	2.0 U	2.0 U	2.0 U	2.0 U	0.5	2.0	75-00-3	
Trichlorofluoromethane	2.0 U	2.0 U	2.0 U	2.0 U	1.0	2.0	75-69-4	
1,1-Dichloroethene	**0.6 I**	1.0 U	1.0 U	1.0 U	0.2	1.0	75-35-4	
Methylene Chloride	5.0 U	5.0 U	5.0 U	5.0 U	2.0	5.0	75-09-02	
Trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	156-60-5	
Acetone	50 U	50 U	50 U	50 U	25	50	67-64-1	
Methyl tert-Butyl Ether	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	1634-04-4	
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	75-34-3	
Cis-1,2-Dichloroethene	**25**	1.0 U	1.0 U	1.0 U	0.2	1.0	156-59-2	
2,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	590-20-7	
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	74-97-5	
Chloroform	**1.0**	1.0 U	1.0 U	1.0 U	0.2	1.0	67-66-3	
Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	0.8	1.0	56-23-5	
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	71-55-6	
1,1-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	563-58-6	
2-Butanone (MEK)	10 U	10 U	10 U	10 U	5.0	10	78-93-3	
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	71-43-2	
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	107-06-2	
Trichloroethene	**70**	**0.2 I**	**2.7**	1.0 U	0.2	1.0	79-01-6	
Dibromomethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	74-95-3	
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	78-87-5	
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	75-27-4	
Cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	10061-01-5	
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	108-88-3	
Tetrachloroethene	**310 D10**	**0.7 I**	**2.8**	1.0 U	0.2	1.0	127-18-4	
4-Methyl-2-Pentanone (MIBK)	10 U	10 U	10 U	10 U	5.0	10	108-10-1	
Trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	10061-02-6	
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	79-00-5	
Dibromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	124-48-1	
1,3-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	142-28-9	
1,2-Dibromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	0.1	1.0	106-93-4	
2-Hexanone (MBK)	10 U	10 U	10 U	10 U	5.0	10	591-78-6	
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	108-90-7	
Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	100-41-4	
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	630-20-6	
m- & p-Xylene	2.0 U	2.0 U	2.0 U	2.0 U	1.0	2.0	108-38-3/106-42-3	
o-Xylene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	95-47-6	

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EPA Method 5030/8260B Volatile Organics in Water by GC-MS (cont)

Client ID #	**DW-2**	**SW-1**	**MW-8**	**EW-2**			
SRL (Lab) ID#	1406032-001	1406032-002	1406032-003	1406032-004			
Date Collected	06/26/14	06/25/14	06/25/14	06/25/14			
Lab FDOH Certification #	E83484	E83484	E83484	E83484			
Date Prepared	07/01/14	07/01/14	07/01/14	07/01/14			
Date Analyzed	07/01/14	07/01/14	07/01/14	07/01/14	**MDL**	**PQL**	**CAS Number**
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	100-42-5
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	75-25-2
Isopropylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	98-82-8
Bromobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	108-86-1
n-Propylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.4	1.0	103-65-1
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	79-34-5
2-Chlorotoluene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	95-49-8
1,2,3-Trichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	96-18-4
1,3,5-Trimethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	108-67-8
4-Chlorotoluene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	106-43-4
tert-Butylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	98-06-6
1,2,4-Trimethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	95-63-6
sec-Butylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	135-98-8
p-Isopropyltoluene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	99-87-6
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.1	1.0	541-73-1
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.1	1.0	106-46-7
n-Butylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	104-51-8
1,2-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.1	1.0	95-50-1
1,2-Dibromo-3-Chloropropane	3.0 U	3.0 U	3.0 U	3.0 U	1.0	3.0	96-12-8
1,2,4-Trichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	120-82-1
Hexachlorobutadiene	3.0 U	3.0 U	3.0 U	3.0 U	2.0	3.0	87-68-3
Naphthalene	5.0 U	5.0 U	5.0 U	5.0 U	2.0	5.0	91-20-3
1,2,3-Trichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	87-61-6
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Dilution Factor (MEDF)	1	1	1	1	1	1	
Surrogate (% Rec)					(Surrogate Control Limits)		
Dibromofluoromethane	99.2%	99.3%	101.1%	98.1%		70-130	
1-2-Dichloroethane-d4	110.2%	105.2%	104.6%	105.3%		70-130	
Toluene-D8	89.0%	90.0%	90.3%	92.8%		70-130	
4-Bromofluorobenzene	92.3%	101.4%	96.1%	96.2%		70-130	

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Received Date : 06/27/14

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Project Number/Project Name
P9000
City Of Tampa
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EPA Method 5030/8260B Volatile Organics in Water by GC-MS

Client ID #	**EW-1**	**MW-5**	**Trip Blank**				
SRL (Lab) ID#	1406032-005	1406032-006	1406032-007				
Date Collected	06/25/14	06/25/14	06/25/14				
Lab FDOH Certification #	E83484	E83484	E83484				
Date Prepared	07/01/14	07/01/14	07/01/14				
Date Analyzed	07/01/14	07/01/14	07/01/14				
Units	ug/L	ug/L	ug/L	**MDL**	**PQL**	**CAS Number**	
Dichlorodifluoromethane	2.0 U	2.0 U	2.0 U	0.5	2.0	75-71-8	
Chloromethane	2.0 U	2.0 U	2.0 U	0.5	2.0	74-87-3	
Vinyl Chloride	1.0 U	1.0 U	1.0 U	0.2	1.0	75-01-4	
Bromomethane	2.0 U	2.0 U	2.0 U	0.5	2.0	74-83-9	
Chloroethane	2.0 U	2.0 U	2.0 U	0.5	2.0	75-00-3	
Trichlorofluoromethane	2.0 U	2.0 U	2.0 U	1.0	2.0	75-69-4	
1,1-Dichloroethene	1.0 U	**2.8**	1.0 U	0.2	1.0	75-35-4	
Methylene Chloride	5.0 U	5.0 U	* **28**	2.0	5.0	75-09-02	
Trans-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	0.2	1.0	156-60-5	
Acetone	50 U	50 U	50 U	25	50	67-64-1	
Methyl tert-Butyl Ether	1.0 U	1.0 U	1.0 U	0.2	1.0	1634-04-4	
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	0.2	1.0	75-34-3	
Cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	0.2	1.0	156-59-2	
2,2-Dichloropropane	1.0 U	1.0 U	1.0 U	0.2	1.0	590-20-7	
Bromochloromethane	1.0 U	1.0 U	1.0 U	0.5	1.0	74-97-5	
Chloroform	1.0 U	**1.3**	1.0 U	0.2	1.0	67-66-3	
Carbon tetrachloride	1.0 U	1.0 U	1.0 U	0.8	1.0	56-23-5	
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	0.2	1.0	71-55-6	
1,1-Dichloropropene	1.0 U	1.0 U	1.0 U	0.2	1.0	563-58-6	
2-Butanone (MEK)	10 U	**25**	10 U	5.0	10	78-93-3	
Benzene	1.0 U	**0.5 I**	1.0 U	0.5	1.0	71-43-2	
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	0.2	1.0	107-06-2	
Trichloroethene	1.0 U	**0.2 I**	1.0 U	0.2	1.0	79-01-6	
Dibromomethane	1.0 U	1.0 U	1.0 U	0.2	1.0	74-95-3	
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	0.2	1.0	78-87-5	
Bromodichloromethane	1.0 U	**0.3 I**	1.0 U	0.5	1.0	75-27-4	
Cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	0.2	1.0	10061-01-5	
Toluene	1.0 U	1.0 U	1.0 U	0.5	1.0	108-88-3	
Tetrachloroethene	1.0 U	1.0 U	1.0 U	0.2	1.0	127-18-4	
4-Methyl-2-Pentanone (MIBK)	10 U	10 U	10 U	5.0	10	108-10-1	
Trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	0.2	1.0	10061-02-6	
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	0.2	1.0	79-00-5	
Dibromochloromethane	1.0 U	**0.3 I**	1.0 U	0.2	1.0	124-48-1	
1,3-Dichloropropane	1.0 U	1.0 U	1.0 U	0.2	1.0	142-28-9	
1,2-Dibromoethane (EDB)	1.0 U	1.0 U	1.0 U	0.1	1.0	106-93-4	
2-Hexanone (MBK)	10 U	10 U	10 U	5.0	10	591-78-6	
Chlorobenzene	1.0 U	1.0 U	1.0 U	0.2	1.0	108-90-7	
Ethylbenzene	1.0 U	1.0 U	1.0 U	0.5	1.0	100-41-4	
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	0.2	1.0	630-20-6	
m- & p-Xylene	2.0 U	2.0 U	2.0 U	1.0	2.0	108-38-3/106-42-3	
o-Xylene	1.0 U	1.0 U	1.0 U	0.5	1.0	95-47-6	

* Common Laboratory Contaminant

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EPA Method 5030/8260B Volatile Organics in Water by GC-MS (cont)

Client ID #	**EW-1**	**MW-5**	**Trip Blank**			
SRL (Lab) ID#	1406032-005	1406032-006	1406032-007			
Date Collected	06/25/14	06/25/14	06/25/14			
Lab FDOH Certification #	E83484	E83484	E83484			
Date Prepared	07/01/14	07/01/14	07/01/14			
Date Analyzed	07/01/14	07/01/14	07/01/14	**MDL**	**PQL**	**CAS Number**
Styrene	1.0 U	1.0 U	1.0 U	0.2	1.0	100-42-5
Bromoform	1.0 U	1.0 U	1.0 U	0.2	1.0	75-25-2
Isopropylbenzene	1.0 U	1.0 U	1.0 U	0.5	1.0	98-82-8
Bromobenzene	1.0 U	1.0 U	1.0 U	0.2	1.0	108-86-1
n-Propylbenzene	1.0 U	1.0 U	1.0 U	0.4	1.0	103-65-1
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	0.2	1.0	79-34-5
2-Chlorotoluene	1.0 U	1.0 U	1.0 U	0.2	1.0	95-49-8
1,2,3-Trichloropropane	1.0 U	1.0 U	1.0 U	0.2	1.0	96-18-4
1,3,5-Trimethylbenzene	1.0 U	1.0 U	1.0 U	0.5	1.0	108-67-8
4-Chlorotoluene	1.0 U	1.0 U	1.0 U	0.2	1.0	106-43-4
tert-Butylbenzene	1.0 U	1.0 U	1.0 U	0.5	1.0	98-06-6
1,2,4-Trimethylbenzene	1.0 U	1.0 U	1.0 U	0.5	1.0	95-63-6
sec-Butylbenzene	1.0 U	1.0 U	1.0 U	0.5	1.0	135-98-8
p-Isopropyltoluene	1.0 U	1.0 U	1.0 U	0.2	1.0	99-87-6
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	0.1	1.0	541-73-1
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	0.1	1.0	106-46-7
n-Butylbenzene	1.0 U	1.0 U	1.0 U	0.5	1.0	104-51-8
1,2-Dichlorobenzene	1.0 U	1.0 U	1.0 U	0.1	1.0	95-50-1
1,2-Dibromo-3-Chloropropane	3.0 U	3.0 U	3.0 U	1.0	3.0	96-12-8
1,2,4-Trichlorobenzene	1.0 U	1.0 U	1.0 U	0.2	1.0	120-82-1
Hexachlorobutadiene	3.0 U	3.0 U	3.0 U	2.0	3.0	87-68-3
Naphthalene	5.0 U	5.0 U	5.0 U	2.0	5.0	91-20-3
1,2,3-Trichlorobenzene	1.0 U	1.0 U	1.0 U	0.5	1.0	87-61-6
Units	ug/L	ug/L	ug/L	ug/L	ug/L	
Dilution Factor (MEDF)	1	1	1	1	1	
Surrogate (% Rec)				(Surrogate Control Limits)		
Dibromofluoromethane	99.9%	100.3%	102.8%		70-130	
1-2-Dichloroethane-d4	105.9%	108.6%	109.4%		70-130	
Toluene-D8	90.8%	88.7%	93.1%		70-130	
4-Bromofluorobenzene	96.8%	97.8%	96.6%		70-130	

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EPA 8015C Non-Halogenated Semivolatile Organics by GC

Client ID #	**SW-1**	**MW-8**	**MW-5**	**Method Blank**			
SRL (Lab) ID#	1406032-002	1406032-003	1406032-006	MB070814			
Date Collected	06/25/14	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E82277	E82277	E82277	E82277			
Date Prepared	07/08/14	07/08/14	07/08/14	07/08/14			
Date Analyzed	07/08/14	07/08/14	07/08/14	07/08/14	**MDL**	**PQL**	**CAS Number**
Ethylene Glycol	8.7 U	8.7 U	8.7 U	8.7 U	8.7	10	107-21-1
Units	mg/L	mg/L	mg/L	mg/L			
Dilution Factor (MEDF)	1	1	1	1			
Surrogate (% Rec)					(Surrogate Control Limits)		
1,3-Butylene Glycol	101.0%	103.0%	100.0%	105.0%	50-150		

QAQC **Prep Method: No Prep**	**% Recovery LCS/MS/MSD**	**LCS Acceptable Limits**	**MS/MSD Acceptable Limits**	**%RPD MS/MSD**	**Acceptable Limits**
Ethylene Glycol	94/91/89	70-130	70-130	3	0-25

EPA 300.0 Classical Chemistry Parameters

Client ID #		**MW-8**	**MW-5**	**Method Blank**			
SRL (Lab) ID#		1406032-003	1406032-006	MB063014			
Date Collected		06/25/14	06/25/14	NA			
Lab FDOH Certification #		E83182	E83182	E83182			
Date Prepared		06/30/14	06/30/14	06/30/14			
Date Analyzed		06/30/14	06/30/14	06/30/14	**MDL**	**PQL**	**CAS Number**
Fluoride		**0.51**	**0.28**	0.02 U	0.02	0.20	16984-48-8
Units		mg/L	mg/L	mg/L			
Dilution Factor (MEDF)		1	1	1			

QAQC **Prep Method: No Prep**	**% Recovery LCS/MS/MSD**	**LCS Acceptable Limits**	**MS/MSD Acceptable Limits**	**%RPD MS/MSD**	**Acceptable Limits**
Fluoride	101/*83/*85	90-110	90-110	2	0-10

* The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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NELAP Certified
FDOH Cert # : E83484
SRL Lab Ref # : 14-06032
Received Date : 06/27/14

Bridget Morello
Progressive Engineering & Construction, Inc.
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Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

EPA Method 8270D Semivolatile Organic Compounds by GCMS

Client ID #	**MW-8**	**MW-5**	**Method Blank**			
SRL (Lab) ID#	1406032-003	1406032-006	MB062914			
Date Collected	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E83182	E83182	E83182			
Date Prepared	06/29/14	06/29/14	06/29/14			
Date Analyzed	07/07/14	07/07/14	07/07/14	**MDL**	**PQL**	**CAS Number**
1,2,4-Trichlorobenzene	3.3 U	3.3 U	3.3 U	3.3	10	120-82-1
1,2-Dichlorobenzene	3.2 U	3.2 U	3.2 U	3.2	10	95-50-1
1,3-Dichlorobenzene	3.4 U	3.4 U	3.4 U	3.4	10	541-73-1
1,4-Dichlorobenzene	3.2 U	3.2 U	3.2 U	3.2	10	106-46-7
1-Methylnaphthalene	3.1 U	3.1 U	3.1 U	3.1	10	90-12-0
2,4,5-Trichlorophenol	3.9 U	3.9 U	3.9 U	3.9	10	95-95-4
2,4,6-Trichlorophenol	6.4 U	6.4 U	6.4 U	6.4	10	88-06-2
2,4-Dichlorophenol	6.5 U	6.5 U	6.5 U	6.5	10	120-83-2
2,4-Dimethylphenol	^ 6.4 U	^ 6.4 U	6.4 U	6.4	10	105-67-9
2,4-Dinitrophenol	7.7 U	7.7 U	7.7 U	7.7	10	51-28-5
2,4-Dinitrotoluene	3.2 U	3.2 U	3.2 U	3.2	10	121-14-2
2,6-Dinitrotoluene	2.9 U	2.9 U	2.9 U	2.9	10	606-20-2
2-Chloronaphthalene	3.2 U	3.2 U	3.2 U	3.2	10	91-58-7
2-Chlorophenol	^ 7.4 U	^ 7.4 U	7.4 U	7.4	10	95-57-8
2-Methyl-4,6-dinitrophenol	6.0 U	6.0 U	6.0 U	6.0	10	534-52-1
2-Methylnaphthalene	3.8 U	3.8 U	3.8 U	3.8	10	91-57-6
2-Methylphenol	3.5 U	3.5 U	3.5 U	3.5	10	95-48-7
2-Nitroaniline	3.3 U	3.3 U	3.3 U	3.3	10	88-74-4
2-Nitrophenol	5.2 U	5.2 U	5.2 U	5.2	10	88-75-5
3 & 4-Methylphenol	8.2 U	8.2 U	8.2 U	8.2	10	108-39-4/106-44-5
3,3'-Dichlorobenzidine	^ 3.3 U	^ 3.3 U	3.3 U	3.3	10	91-94-1
3-Nitroaniline	3.3 U	3.3 U	3.3 U	3.3	10	99-09-2
4-Bromophenyl-phenylether	3.3 U	3.3 U	3.3 U	3.3	10	101-55-3
4-Chloro-3-methylphenol	7.3 U	7.3 U	7.3 U	7.3	10	59-50-7
4-Chloroaniline	4.3 U	4.3 U	4.3 U	4.3	10	106-47-8
4-Chlorophenyl-phenylether	3.2 U	3.2 U	3.2 U	3.2	10	7005-72-3
4-Nitroaniline	3.2 U	3.2 U	3.2 U	3.2	10	100-01-6
4-Nitrophenol	7.9 U	7.9 U	7.9 U	7.9	10	100-02-7
Acenaphthene	^ 3.0 U	^ 3.0 U	3.0 U	3.0	10	83-32-9
Acenaphthylene	3.3 U	3.3 U	3.3 U	3.3	10	208-96-8
Anthracene	^ 3.0 U	^ 3.0 U	3.0 U	3.0	10	120-12-7
Benzidine	7.1 U	7.1 U	7.1 U	7.1	10	92-87-5
Benzo(a)anthracene	^ 3.2 U	^ 3.2 U	3.2 U	3.2	10	56-55-3
Benzo(a)pyrene	3.1 U	3.1 U	3.1 U	3.1	10	50-32-8
Benzo(b)fluoranthene	3.4 U	3.4 U	3.4 U	3.4	10	205-99-2
Benzo(g,h,i)perylene	3.7 U	3.7 U	3.7 U	3.7	10	191-24-2
Benzo(k)fluoranthene	3.3 U	3.3 U	3.3 U	3.3	10	207-08-9
Benzoic acid	15 U	15 U	15 U	15	50	65-85-0
Benzyl alcohol	3.9 U	3.9 U	3.9 U	3.9	10	100-51-6
Bis(2-chloroethoxy)methane	^ 3.3 U	^ 3.3 U	3.3 U	3.3	10	111-91-1
Bis(2-chloroethyl)ether	^ 3.8 U	^ 3.8 U	3.8 U	3.8	10	111-44-4

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FDOH Cert # : E83484
SRL Lab Ref # : 14-06032
Received Date : 06/27/14

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Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

EPA Method 8270D Semivolatile Organic Compounds by GCMS

Client ID #	**MW-8**	**MW-5**	**Method Blank**			
SRL (Lab) ID#	1406032-003	1406032-006	MB062914			
Date Collected	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E83182	E83182	E83182			
Date Prepared	06/29/14	06/29/14	06/29/14			
Date Analyzed	07/07/14	07/07/14	07/07/14	**MDL**	**PQL**	**CAS Number**
Bis(2-chloroisopropyl)ether	3.5 U	3.5 U	3.5 U	3.5	10	108-60-1
Bis(2-ethylhexyl)phthalate	3.5 U	3.5 U	3.5 U	3.5	5.0	117-81-7
Butylbenzylphthalate	^ 5.1 U	^ 5.1 U	5.1 U	5.1	10	85-68-7
Chrysene	^ 3.0 U	^ 3.0 U	3.0 U	3.0	10	218-01-9
Dibenzo(a,h)anthracene	3.8 U	3.8 U	3.8 U	3.8	10	53-70-3
Dibenzofuran	2.8 U	2.8 U	2.8 U	2.8	10	132-64-9
Diethylphthalate	^ 3.0 U	^ 3.0 U	3.0 U	3.0	10	84-66-2
Dimethylphthalate	3.0 U	3.0 U	3.0 U	3.0	10	131-11-3
Di-n-butylphthalate	^ 3.2 U	^ 3.2 U	3.2 U	3.2	10	84-74-2
Di-n-octylphthalate	^ 3.6 U	^ 3.6 U	3.6 U	3.6	10	117-84-0
Fluoranthene	^ 4.0 U	^ 4.0 U	4.0 U	4.0	10	206-44-0
Fluorene	2.9 U	2.9 U	2.9 U	2.9	10	86-73-7
Hexachlorobenzene	3.0 U	3.0 U	3.0 U	3.0	10	118-74-1
Hexachlorobutadiene	4.1 U	4.1 U	4.1 U	4.1	10	87-68-3
Hexachlorocyclopentadiene	3.8 U	3.8 U	3.8 U	3.8	10	77-47-4
Hexachloroethane	3.0 U	3.0 U	3.0 U	3.0	10	67-72-1
Indeno(1,2,3-cd)pyrene	4.1 U	4.1 U	4.1 U	4.1	10	193-39-5
Isophorone	4.5 U	4.5 U	4.5 U	4.5	10	78-59-1
Naphthalene	^ 3.6 U	^ 3.6 U	3.6 U	3.6	10	91-20-3
Nitrobenzene	3.2 U	3.2 U	3.2 U	3.2	10	98-95-3
N-Nitrosodimethylamine	3.8 U	3.8 U	3.8 U	3.8	10	62-75-9
N-Nitroso-di-n-propylamine	4.5 U	4.5 U	4.5 U	4.5	10	621-64-7
N-nitrosodiphenylamine/Diphenylamine	5.4 U	5.4 U	5.4 U	5.4	10	86-30-6/122-39-4
Pentachlorophenol	^ 8.2 U	^ 8.2 U	8.2 U	8.2	10	87-86-5
Phenanthrene	^ 2.8 U	^ 2.8 U	2.8 U	2.8	10	85-01-8
Phenol	5.6 U	5.6 U	5.6 U	5.6	10	108-95-2
Pyrene	^ 4.1 U	^ 4.1 U	4.1 U	4.1	10	129-00-0
Pyridine	3.5 U	3.5 U	3.5 U	3.5	10	110-86-1
Units	ug/L	ug/L	ug/L			
Dilution Factor (MEDF)	1	1	1			
Surrogate (% Rec)				(Surrogate Control Limits)		
2,4,6-Tribromophenol	91%	123%	78%	47-128		
2-Fluorobiphenyl	75%	90%	77%	44-102		
2-Fluorophenol	49%	65%	46%	25-79		
Nitrobenzene-d5	70%	92%	77%	43-112		
Phenol-d5	38%	50%	32%	14-54		
Terphenyl-d14	122%	* 128%	* 135%	65-122		

* Value is outside control limits.

^ The associated laboratory control sample exhibited high bias; since the result is ND, the impact on data quality is minimal.

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NELAP Certified
FDOH Cert # : E83484
SRL Lab Ref # : 14-06032
Received Date : 06/27/14

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Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

Metals (total recoverable) by EPA 6000/7000 Series Methods

Client ID #	**SW-1**	**MW-8**	**MW-5**	**Method Blank**				
SRL (Lab) ID#	1406032-002	1406032-003	1406032-006	MB070114				
Date Collected	06/25/14	06/25/14	06/25/14	NA				
Lab FDOH Certification #	E82277	E82277	E82277	E82277				
Date Prepared	07/01/14	07/01/14	07/01/14	07/01/14				
Date Analyzed	07/02/14	07/02/14	07/02/14	07/02/14	**MDL**	**PQL**	**CAS Number**	
Aluminum	**1550**	**343**	**1860**	86.0 U	86.0	200	7429-90-5	
Antimony	5.65 U	5.65 U	5.65 U	5.65 U	5.65	40.0	7440-36-0	
Arsenic	7.12 U	7.12 U	7.12 U	7.12 U	7.12	10.0	7440-38-2	
Barium	**30.3**	**7.88 J**	**21.9**	0.630 U	0.630	10.0	7440-39-3	
Boron	**111**	**88.5**	**86.6**	6.24 U	6.24	50.0	7440-42-8	
Cadmium	**0.263 J**	**0.521 J**	**0.778 J**	0.170 U	0.170	1.00	7440-43-9	
Chromium	**5.54 J**	1.30 U	**7.63 J**	1.30 U	1.30	10.0	7440-47-3	
Copper	**1.09 J**	0.940 U	0.940 U	0.940 U	0.940	10.0	7440-50-8	
Lead	**3.65 J**	2.20 U	**2.78 J**	2.20 U	2.20	10.0	7439-92-1	
Selenium	6.60 U	6.60 U	6.60 U	6.60 U	6.60	40.0	7782-49-2	
Sodium	**6560**	**13400**	**13800**	56.0 U	56.0	500	7440-23-5	
Tin	**5.92 J**	5.40 U	5.40 U	5.40 U	5.40	40.0	7440-31-5	
Units	ug/L	ug/L	ug/L	ug/L				
Dilution Factor (MEDF)	1	1	1	1				

Metals (total recoverable) by EPA 6000/7000 Series Methods

Client ID #	**SW-1**	**MW-8**	**MW-5**	**Method Blank**			
SRL (Lab) ID#	1406032-002	1406032-003	1406032-006	MB070714			
Date Collected	06/25/14	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E83182	E83182	E83182	E83182			
Date Prepared	07/07/14	07/07/14	07/07/14	07/07/14			
Date Analyzed	07/08/14	07/08/14	07/08/14	07/08/14	**MDL**	**PQL**	**CAS Number**
Mercury	**0.109 J**	0.0230 U	**0.0367 J**	0.0230 U	0.0230	0.200	7439-97-6
Units	ug/L	ug/L	ug/L	ug/L			
Dilution Factor (MEDF)	1	1	1	1			

Metals (Dissolved) by EPA 6000/7000 Series Methods

Client ID #	**SW-1**	**MW-8**	**MW-5**	**Method Blank**			
SRL (Lab) ID#	1406032-002	1406032-003	1406032-006	MB071414			
Date Collected	06/25/14	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E82277	E82277	E82277	E82277			
Date Prepared	07/14/14	07/14/14	07/14/14	07/14/14			
Date Analyzed	07/15/14	07/15/14	07/15/14	07/15/14	**MDL**	**PQL**	**CAS Number**
Aluminum	**246**	**283**	**275**	86.0 U	86.0	200	7429-90-5

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EPA Method 8270D Semivolatile Organic Compounds by GCMS

QAQC (SVOCs) Prep Method: EPA 3510C		% Recovery LCS/MS/MSD	LCS Acceptable Limits	MS/MSD Acceptable Limits	%RPD MS/MSD	Acceptable Limits
1,2,4-Trichlorobenzene		85/51/65	20-95	20-95	24	0-32
1,4-Dichlorobenzene		86/56/66	17-94	17-94	16	0-34
2,4-Dinitrotoluene		105/93/91	63-120	63-120	2	0-23
2-Chlorophenol	*	101/67/74	50-97	50-97	10	0-27
4-Chloro-3-methylphenol		101/61/75	54-108	54-108	22	0-28
4-Nitrophenol		46/40/32	10-129	10-129	20	0-35
Acenaphthene	*	102/64/80	50-95	50-95	22	0-27
N-Nitroso-di-n-propylamine		121/78/85	53-124	53-124	8	0-24
Pentachlorophenol	*	110/101/92	27-100	27-100	10	0-26
Phenol		44/24/25	14-54	14-54	7	0-32
Pyrene	*	135/122/105	61-115	61-115	15	0-28

QAQC Prep Method: EPA 3005A	% Recovery LCS/MS/MSD	LCS Acceptable Limits	MS/MSD Acceptable Limits	%RPD MS/MSD	Acceptable Limits
Aluminum	101/100/102	80-120	75-125	1	0-20
Antimony	102/102/103	80-120	75-125	0.8	0-20
Arsenic	104/103/105	80-120	75-125	2	0-20
Barium	102/102/103	80-120	75-125	1	0-20
Boron	102/102/103	80-120	75-125	1	0-20
Cadmium	105/104/105	80-120	75-125	1	0-20
Chromium	102/102/103	80-120	75-125	1	0-20
Copper	103/103/104	80-120	75-125	1	0-20
Lead	105/104/106	80-120	75-125	1	0-20
Selenium	102/97/98	80-120	75-125	1	0-20
Sodium	103/101/103	80-120	75-125	2	0-20
Tin	102/101/102	80-120	75-125	1	0-20

QAQC Prep Method: EPA 3005A	% Recovery LCS/MS/MSD	LCS Acceptable Limits	MS/MSD Acceptable Limits	%RPD MS/MSD	Acceptable Limits
Aluminum, Dissolved	99/99/97	80-120	75-125	3	0-20

QAQC Prep Method: EPA 7470A	% Recovery LCS/MS/MSD	LCS Acceptable Limits	MS/MSD Acceptable Limits	%RPD MS/MSD	Acceptable Limits
Mercury	97/94/96	80-120	75-125	1	0-20

* The associated laboratory control sample exhibited high bias; since the result is ND, the impact on data quality is minimal.

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DATA QUALIFIER CODES

Reporting Exceptions and Qualified Data

When quality control results are outside established control limits reanalysis, including re-extraction (if applicable), is preferred. If re-analysis is not viable or desirable, then results may be qualified. Sample results associated with quality control data that exceed acceptance criteria will be qualified with an appropriate comment.

D = Data reported from a dilution and or multiple dilutions.
D5=1/5, D10= 1/10, D20= 1/20, D50= 1/50, D100= 1/100, D200= 1/200, D1= 1/1000

J = Estimated Value, The reported value is between the Laboratory Method Detection Limit (**MDL**) and the Laboratory Practical Quantitation Limit (**PQL**)

L = Off-Scale high; exceeds the linear range or highest calibration standard.

O = Sampled, but analysis lost or not performed

Q = Sample held beyond normal holding time

U = indicates the compound was analyzed for, but not detected. The numerical value preceding the "U" is the limit of detection for that compound based upon the dilution. **MEDF** = **M**atrix **E**ffected **D**ilution **F**actor.

V = Analyte was detected in both the sample and associated Laboratory Method Blank; Laboratory Contamination

Y = The analysis was from an unpreserved or improperly preserved sample. The data may not be accurate

Unless otherwise noted, ug/Kg and mg/Kg denote dry weight.

(SOILS) Actual Reporting Limit will depend on moisture content of sample and the amount of sample received.

Southern Research Laboratories, Inc.
Quality Assurance/Quality Control Report

Client: **Progressive Engineering & Construction, Inc.** SRL# 1406032
Project: **P9000** QC07011404.D
City Of Tampa MSQC070114 18-19.D
Tampa, FL Parent Sample 07011417.D (DW-1)

VOC Analytes	Method Blank Value	LCS Obs. Value	LCS True Value	LCS % Rec.	Sample Value	Spike Amount Added	MS Value	MSD Value	MS % Rec.	MSD % Rec.	% Rec. Control Lower Limit	% Rec. Control Upper Limit	% RPD	RPD Control Limits
1,1-Dichloroethene (8)	0	28.2	25.0	113	0	25.0	30.2	30.6	121	122	70	130	1.3	30
Trans-1-2-Dichloroethene (11)	0	27.2	25.0	109	0	25.0	27.8	28.9	111	116	70	130	3.9	30
Chloroform (19)	0	24.5	25.0	98	0.6	25.0	26.5	25.8	103	101	70	130	2.6	30
Benzene (25)	0	22.5	25.0	90	0	25.0	23.1	23.4	92	94	70	130	1.5	30
Trichloroethene (28)	0	25.1	25.0	100	3.0	25.0	28.7	28.9	103	104	70	130	0.6	30
1,2-Dichloropropane (31)	0	22.5	25.0	90	0	25.0	22.8	23.3	91	93	70	130	2.3	30
Toluene (35)	0	24.6	25.0	98	0	25.0	25.1	24.0	100	96	70	130	4.4	30
Tetrachloroethene (36)	0	26.7	25.0	107	8.6	25.0	34.1	33.2	102	98	70	130	2.4	30
Chlorobenzene (44)	0	22.0	25.0	88	0	25.0	22.3	20.6	89	83	70	130	7.7	30
Ethylbenzene (45)	0	25.6	25.0	102	0	25.0	26.1	24.3	104	97	70	130	6.9	30
o-Xylene (48)	0	23.3	25.0	93	0	25.0	23.3	21.6	93	86	70	130	7.4	30
Surrogates:														
Dibromofluoromethane	101	9.9	10	98.9	94.7	10	10.5	10.9	105	109	70	130	3.4	30
1.2-Dichloroethane-D4	107	10.6	10	106	108	10	10.9	11.3	109	113	70	130	3.9	30
Toluene-D8	90.5	9.2	10	92.2	91.5	10	9.0	9.8	90.2	98.4	70	130	8.7	30
4-Bromofluorobenzene	97.3	9.7	10	96.6	97.3	10	9.2	9.8	92.4	98.0	70	130	5.9	30

07011402.D

SRL Quality Assurance Officer

Chain of Custody

[redacted]

Page of

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Project Name:	City of Tampa
Project Location:	Tampa, FL
Project Number:	P9000
REQUESTED DUE DATE:	Std.
Sampling QAP No.:	
Approval Date:	

Sampled by [Print Name(s)] / Affiliation: C. Nichols / PEC

Sampler(s) Signature(s):

	Sample Identification	Sampled Date:	Sampled Time:	Grab or Composite	Matrix: (see codes)	Total Number of Containers	Preservatives (see codes)	Analyses Requested: 1,4 Dioxane	VOC - 8260	ethylene glycol	metals - total	metals - dissolved	Fluoride	SVOC			Comments:
								I	H	I	N	N	I	I			
1	DW-2	6/26/14	847	G	GW	4		(2)	(2)				140603	2-001			* hold dissolved
2	SW-1	6/25/14	1555	G	GW	7			(2)	(3)	(1)	(1)				-002	metals samples until
3	MW-8	6/25/14	1514	G	GW	12		(2)	(2)	(3)	(1)	(1)	(1)	(2)		-003	results of TOTAL metals
4	EW-2	6/25/14	1407	G	GW	2			(2)							-004	is avail. N. Tyner
5	EW-1	6/25/14	1347	G	GW	2			(2)							-005	to approve running.
6	MW-5	6/25/14	1238	G	GW	12		(2)	(2)	(3)	(1)	(1)	(1)	(2)		-006	
7	Trip Blank	6/25/14		G	DT	2		(1)	(1)							-007	

Shipment Method:		Relinquished by: / Affiliation:	Date:	Time:	Accepted by: / Affiliation:	Date:	Time:
Out: / /	Via:	[redacted]	6/17/14	12:30		6/17/14	1230
Returned: / /	Via:		6/26/14	1100		6/27/14	14:10

Additional Comments: X316 ICED Temp +2.0°C

Cooler No.(s) / Temperature(s) (°C): X42, X316, X40

Sampling Kit No.: 6347

Equipment ID No.:

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water(Blanks) HW = Potential Haz Waste O = Other(Specify:)

Preservative Codes: H = Hydrochloric Acid & Ice I = Ice Only N = Nitric Acid & Ice S = Sulfuric Acid & Ice X = Sodium Hydroxide & Ice O = Other(Specify)

Southern Research Laboratories, Inc.

2251 Lynx Lane, Suite 1
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(407) 522-7100 Fax (407) 522-7043
Toll Free 1 (888) 420-Test

Thank you **Ms. Bridget Morello** for the opportunity to be of service to you and your company; we **S**incerely **A**ppreciate **Y**our **B**usiness. SRL certifies these **Laboratory Results** were produced in accordance with NELAC Standards. Hold times and preservation requirements were met for all analytes unless specifically noted in the report. Results relate only to the samples as received.

Client Name: **Progressive Eng. & Construction, Inc.**	Date(s) Collected: 06/25-06/26/14
Contact Name: **Bridget Morello**	Date Received: 06/27/14
Project Name: City of Tampa	Time Received: 14:10
Project Number: P9000	Date Reported : 07/08/14
Phone Number: (813) 930-0669	Date Emailed : 07/08/14
Fax Number: (813) 930-9809	SRL Work Order # 14-06033
	R1 071714

SRL WO #	Clients #	Matrix		Analysis Requested
14-06033-001	MW-4	Liquid		8260(VOC)
14-06033-002	Soil Preburn	Soilid		TCLP VOCs/TCLP 4-RCRA Metals
14-06033-003	GW De Water	Liquid		TCLP 4-RCRA Metals
14-06033-004	MW-6	Liquid	*	EPA 8260(VOC)/8260-SIM(1,4-Dioxane) Aluminum/Antimony/Arsenic /Barium/ Boron/Cadmium /Chromium/Lead/ Copper/Selenium /Sodium/Tin/ Mercury/Fluoride/SVOCs/ Ethylene glycol
14-06033-005	MW-7	Liquid	*	EPA 8260(VOC)/8260-SIM(1,4-Dioxane) Aluminum/Antimony/Arsenic /Barium/ Boron/Cadmium /Chromium/Lead/ Copper/Selenium /Sodium/Tin/ Mercury/Fluoride/SVOCs/ Ethylene glycol
14-06033-006	DW-1	Liquid		EPA 8260(VOC)/8260-SIM(1,4-Dioxane)
14-06033-007	Trip Blank	Liquid		EPA 8260(VOC)/8260-SIM(1,4-Dioxane)

Nonconformance: This report is an amendment to the original report dated June 08, 2014 for this work order.
Additional Information: The samples listed above (*) were originally on hold per client request. After the final report was issued, the client requested dissolved Aluminum analysis of these samples. The results are included in this revised report.
Affected Samples: MW-6 [1406033-004], MW-7 [1406033-005]

Sherri Payne
Vice President & Quality Assurance Officer
Southern Research Laboratories, Inc.

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NELAP Certified
FDOH Cert # : E83484
SRL Lab Ref # : 14-06033
Received Date : 06/27/14

Bridget Morello
Progressive Engineering & Construction, Inc.
3912 West Humphrey Street
Tampa, Florida 33614 (813) 930-0669

Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

EPA Method 8260B 1,4-Dioxane in Water by GC-MS
Method 8260 Purge and Trap using Gas Chromatography/Mass Spectrometry and Selective Ion Monitoring (SIM)

Client ID #	:	**MW-6**	**MW-7**	**DW-1**	**Trip Blank**			
SRL (Lab) ID#	:	1406033-004	1406033-005	1406033-006	1406033-007			
Date Collected	:	06/25/14	06/25/14	06/25/14	06/25/14			
Lab FDOH Certification #	:	E83484	E83484	E83484	E83484			
Date Prepared	:	07/03/14	07/03/14	07/03/14	07/03/14			
Date Analyzed	:	07/03/14	07/03/14	07/03/14	07/03/14	**MDL**	**PQL**	**CAS Number**
1,4-Dioxane		1.0 U	1.0 U	0.5 U	0.5 U	0.5	1.0	123-91-1
Units	:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Dilution Factor (MEDF)	:	**2**	**2**	1	1	1	1	
Surrogate (% Rec)	:					(Surrogate Control Limits)		
Dioxane-d8		125.6%	123.3%	120.0%	117.2%		70-130	

Client ID #	:	**Method Blank**						
SRL (Lab) ID#	:	MB070314						
Date Collected	:	NA						
Lab FDOH Certification #	:	E83484						
Date Prepared	:	07/03/14						
Date Analyzed	:	07/03/14				**MDL**	**PQL**	**CAS Number**
1,4-Dioxane		0.5 U				0.5	1.0	123-91-1
Units	:	ug/L				ug/L	ug/L	
Dilution Factor (MEDF)	:	1				1	1	
Surrogate (% Rec)	:					(Surrogate Control Limits)		
Dioxane-d8		100.0%					70-130	

	% Recovery LCS/MS/MSD	**Acceptable Limits**	**%RPD MS/MSD**	**Acceptable Limits**
1,4-Dioxane	97/93/106	70-130	11	0-30

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FDOH Cert # : E83484
SRL Lab Ref # : 14-06033
Received Date : 06/27/14

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Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

EPA Method 5030/8260B Volatile Organics in Water by GC-MS

Client ID #	**MW-4**	**MW-6**	**MW-7**	**DW-1**			
SRL (Lab) ID#	1406033-001	1406033-004	1406033-005	1406033-006			
Date Collected	06/26/14	06/25/14	06/25/14	06/25/14			
Lab FDOH Certification #	E83484	E83484	E83484	E83484			
Date Prepared	07/01/14	07/01/14	07/01/14	07/01/14			
Date Analyzed	07/01/14	07/01/14	07/01/14	07/01/14			
Units	ug/L	ug/L	ug/L	ug/L	**MDL**	**PQL**	**CAS Number**
Dichlorodifluoromethane	2.0 U	2.0 U	2.0 U	2.0 U	0.5	2.0	75-71-8
Chloromethane	2.0 U	2.0 U	2.0 U	2.0 U	0.5	2.0	74-87-3
Vinyl Chloride	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	75-01-4
Bromomethane	2.0 U	2.0 U	2.0 U	2.0 U	0.5	2.0	74-83-9
Chloroethane	2.0 U	2.0 U	2.0 U	2.0 U	0.5	2.0	75-00-3
Trichlorofluoromethane	2.0 U	2.0 U	2.0 U	2.0 U	1.0	2.0	75-69-4
1,1-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	75-35-4
Methylene Chloride	5.0 U	5.0 U	5.0 U	5.0 U	2.0	5.0	75-09-02
Trans-1,2-Dichloroethene	1.0 U	**0.4 J**	1.0 U	1.0 U	0.2	1.0	156-60-5
Acetone	50 U	50 U	50 U	50 U	25	50	67-64-1
Methyl tert-Butyl Ether	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	1634-04-4
1,1-Dichloroethane	1.0 U	1.0 U	1.0 U	**0.8 J**	0.2	1.0	75-34-3
Cis-1,2-Dichloroethene	1.0 U	**3.0**	1.0 U	0.8	0.2	1.0	156-59-2
2,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	590-20-7
Bromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	74-97-5
Chloroform	1.0 U	1.0 U	**0.4 J**	**0.6 J**	0.2	1.0	67-66-3
Carbon tetrachloride	1.0 U	1.0 U	1.0 U	1.0 U	0.8	1.0	56-23-5
1,1,1-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	71-55-6
1,1-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	563-58-6
2-Butanone (MEK)	10 U	10 U	10 U	10 U	5.0	10	78-93-3
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	71-43-2
1,2-Dichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	107-06-2
Trichloroethene	1.0 U	**2.2**	1.0 U	**3.0**	0.2	1.0	79-01-6
Dibromomethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	74-95-3
1,2-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	78-87-5
Bromodichloromethane	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	75-27-4
Cis-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	10061-01-5
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	108-88-3
Tetrachloroethene	**20**	**0.5 J**	**1.0**	**8.6**	0.2	1.0	127-18-4
4-Methyl-2-Pentanone (MIBK)	10 U	10 U	10 U	10 U	5.0	10	108-10-1
Trans-1,3-Dichloropropene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	10061-02-6
1,1,2-Trichloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	79-00-5
Dibromochloromethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	124-48-1
1,3-Dichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	142-28-9
1,2-Dibromoethane (EDB)	1.0 U	1.0 U	1.0 U	1.0 U	0.1	1.0	106-93-4
2-Hexanone (MBK)	10 U	10 U	10 U	10 U	5.0	10	591-78-6
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	108-90-7
Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	100-41-4
1,1,1,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	630-20-6
m- & p-Xylene	2.0 U	2.0 U	2.0 U	2.0 U	1.0	2.0	108-38-3/106-42-3
o-Xylene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	95-47-6

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FDOH Cert # : E83484
SRL Lab Ref # : 14-06033
Received Date : 06/27/14

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Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

EPA Method 5030/8260B Volatile Organics in Water by GC-MS (cont)

Client ID #	**MW-4**	**MW-6**	**MW-7**	**DW-1**			
SRL (Lab) ID#	1406033-001	1406033-004	1406033-005	1406033-006			
Date Collected	06/26/14	06/25/14	06/25/14	06/25/14			
Lab FDOH Certification #	E83484	E83484	E83484	E83484			
Date Prepared	07/01/14	07/01/14	07/01/14	07/01/14			
Date Analyzed	07/01/14	07/01/14	07/01/14	07/01/14	**MDL**	**PQL**	**CAS Number**
Styrene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	100-42-5
Bromoform	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	75-25-2
Isopropylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	98-82-8
Bromobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	108-86-1
n-Propylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.4	1.0	103-65-1
1,1,2,2-Tetrachloroethane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	79-34-5
2-Chlorotoluene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	95-49-8
1,2,3-Trichloropropane	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	96-18-4
1,3,5-Trimethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	108-67-8
4-Chlorotoluene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	106-43-4
tert-Butylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	98-06-6
1,2,4-Trimethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	95-63-6
sec-Butylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	135-98-8
p-Isopropyltoluene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	99-87-6
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.1	1.0	541-73-1
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.1	1.0	106-46-7
n-Butylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	104-51-8
1,2-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.1	1.0	95-50-1
1,2-Dibromo-3-Chloropropane	3.0 U	3.0 U	3.0 U	3.0 U	1.0	3.0	96-12-8
1,2,4-Trichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.2	1.0	120-82-1
Hexachlorobutadiene	3.0 U	3.0 U	3.0 U	3.0 U	2.0	3.0	87-68-3
Naphthalene	5.0 U	5.0 U	5.0 U	5.0 U	2.0	5.0	91-20-3
1,2,3-Trichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	0.5	1.0	87-61-6
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Dilution Factor (MEDF)	1	1	1	1	1	1	
Surrogate (% Rec)					(Surrogate Control Limits)		
Dibromofluoromethane	102.2%	99.3%	104.1%	94.7%		70-130	
1-2-Dichloroethane-d4	113.2%	107.6%	113.4%	108.1%		70-130	
Toluene-D8	88.8%	89.7%	87.0%	91.5%		70-130	
4-Bromofluorobenzene	97.5%	97.2%	99.5%	97.3%		70-130	

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Received Date : 06/27/14

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3912 West Humphrey Street
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Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

EPA Method 5030/8260B Volatile Organics in Water by GC-MS

Client ID # : **Trip Blank**
SRL (Lab) ID# : 1406033-007
Date Collected : 06/25/14
Lab FDOH Certification # : E83484
Date Prepared : 07/01/14
Date Analyzed : 07/01/14
Units : ug/L

			MDL	PQL	CAS Number
Dichlorodifluoromethane	2.0	U	0.5	2.0	75-71-8
Chloromethane	2.0	U	0.5	2.0	74-87-3
Vinyl Chloride	1.0	U	0.2	1.0	75-01-4
Bromomethane	2.0	U	0.5	2.0	74-83-9
Chloroethane	2.0	U	0.5	2.0	75-00-3
Trichlorofluoromethane	2.0	U	1.0	2.0	75-69-4
1,1-Dichloroethene	1.0	U	0.2	1.0	75-35-4
Methylene Chloride	* **29**		2.0	5.0	75-09-02
Trans-1,2-Dichloroethene	1.0	U	0.2	1.0	156-60-5
Acetone	50	U	25	50	67-64-1
Methyl tert-Butyl Ether	1.0	U	0.2	1.0	1634-04-4
1,1-Dichloroethane	1.0	U	0.2	1.0	75-34-3
Cis-1,2-Dichloroethene	1.0	U	0.2	1.0	156-59-2
2,2-Dichloropropane	1.0	U	0.2	1.0	590-20-7
Bromochloromethane	1.0	U	0.5	1.0	74-97-5
Chloroform	1.0	U	0.2	1.0	67-66-3
Carbon tetrachloride	1.0	U	0.8	1.0	56-23-5
1,1,1-Trichloroethane	1.0	U	0.2	1.0	71-55-6
1,1-Dichloropropene	1.0	U	0.2	1.0	563-58-6
2-Butanone (MEK)	10	U	5.0	10	78-93-3
Benzene	1.0	U	0.5	1.0	71-43-2
1,2-Dichloroethane	1.0	U	0.2	1.0	107-06-2
Trichloroethene	1.0	U	0.2	1.0	79-01-6
Dibromomethane	1.0	U	0.2	1.0	74-95-3
1,2-Dichloropropane	1.0	U	0.2	1.0	78-87-5
Bromodichloromethane	1.0	U	0.5	1.0	75-27-4
Cis-1,3-Dichloropropene	1.0	U	0.2	1.0	10061-01-5
Toluene	1.0	U	0.5	1.0	108-88-3
Tetrachloroethene	1.0	U	0.2	1.0	127-18-4
4-Methyl-2-Pentanone (MIBK)	10	U	5.0	10	108-10-1
Trans-1,3-Dichloropropene	1.0	U	0.2	1.0	10061-02-6
1,1,2-Trichloroethane	1.0	U	0.2	1.0	79-00-5
Dibromochloromethane	1.0	U	0.2	1.0	124-48-1
1,3-Dichloropropane	1.0	U	0.2	1.0	142-28-9
1,2-Dibromoethane (EDB)	1.0	U	0.1	1.0	106-93-4
2-Hexanone (MBK)	10	U	5.0	10	591-78-6
Chlorobenzene	1.0	U	0.2	1.0	108-90-7
Ethylbenzene	1.0	U	0.5	1.0	100-41-4
1,1,1,2-Tetrachloroethane	1.0	U	0.2	1.0	630-20-6
m- & p-Xylene	2.0	U	1.0	2.0	108-38-3/106-42-3
o-Xylene	1.0	U	0.5	1.0	95-47-6

* Common Laboratory Contaminant

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NELAP Certified
FDOH Cert # : E83484
SRL Lab Ref # : 14-06033
Received Date : 06/27/14

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3912 West Humphrey Street
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Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

EPA Method 5030/8260B Volatile Organics in Water by GC-MS (cont)

Client ID #	**: Trip Blank**			
SRL (Lab) ID#	**:** 1406033-007			
Date Collected	**:** 06/25/14			
Lab FDOH Certification #	**:** E83484			
Date Prepared	**:** 07/01/14			
Date Analyzed	**:** 07/01/14	**MDL**	**PQL**	**CAS Number**
Styrene	1.0 U	0.2	1.0	100-42-5
Bromoform	1.0 U	0.2	1.0	75-25-2
Isopropylbenzene	1.0 U	0.5	1.0	98-82-8
Bromobenzene	1.0 U	0.2	1.0	108-86-1
n-Propylbenzene	1.0 U	0.4	1.0	103-65-1
1,1,2,2-Tetrachloroethane	1.0 U	0.2	1.0	79-34-5
2-Chlorotoluene	1.0 U	0.2	1.0	95-49-8
1,2,3-Trichloropropane	1.0 U	0.2	1.0	96-18-4
1,3,5-Trimethylbenzene	1.0 U	0.5	1.0	108-67-8
4-Chlorotoluene	1.0 U	0.2	1.0	106-43-4
tert-Butylbenzene	1.0 U	0.5	1.0	98-06-6
1,2,4-Trimethylbenzene	1.0 U	0.5	1.0	95-63-6
sec-Butylbenzene	1.0 U	0.5	1.0	135-98-8
p-Isopropyltoluene	1.0 U	0.2	1.0	99-87-6
1,3-Dichlorobenzene	1.0 U	0.1	1.0	541-73-1
1,4-Dichlorobenzene	1.0 U	0.1	1.0	106-46-7
n-Butylbenzene	1.0 U	0.5	1.0	104-51-8
1,2-Dichlorobenzene	1.0 U	0.1	1.0	95-50-1
1,2-Dibromo-3-Chloropropane	3.0 U	1.0	3.0	96-12-8
1,2,4-Trichlorobenzene	1.0 U	0.2	1.0	120-82-1
Hexachlorobutadiene	3.0 U	2.0	3.0	87-68-3
Naphthalene	5.0 U	2.0	5.0	91-20-3
1,2,3-Trichlorobenzene	1.0 U	0.5	1.0	87-61-6
Units	**:** ug/L	ug/L	ug/L	
Dilution Factor (MEDF)	**:** 1	1	1	
Surrogate (% Rec)	**:**	(Surrogate Control Limits)		
Dibromofluoromethane	101.8%		70-130	
1-2-Dichloroethane-d4	111.2%		70-130	
Toluene-D8	90.7%		70-130	
4-Bromofluorobenzene	98.0%		70-130	

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FDOH Cert # : E83484
SRL Lab Ref # : 14-06033
Received Date : 06/27/14

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Project Number/Project Name
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EPA 8015C Non-Halogenated Semivolatile Organics by GC

Client ID #	**MW-6**	**MW-7**	**Method Blank**			
SRL (Lab) ID#	1406033-004	1406033-005	MB070814			
Date Collected	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E82277	E82277	E82277			
Date Prepared	07/08/14	07/08/14	07/08/14			
Date Analyzed	07/08/14	07/08/14	07/08/14	**MDL**	**PQL**	**CAS Number**
Ethylene Glycol	8.7 U	8.7 U	8.7 U	8.7	10	107-21-1
Units	mg/L	mg/L	mg/L			
Dilution Factor (MEDF)	1	1	1			
Surrogate (% Rec)				(Surrogate Control Limits)		
1,3-Butylene Glycol	106.0%	101.0%	105.0%	50-150		

QAQC **Prep Method: No Prep**	**% Recovery LCS/MS/MSD**	**LCS Acceptable Limits**	**MS/MSD Acceptable Limits**	**%RPD MS/MSD**	**Acceptable Limits**
Ethylene Glycol	94/91/89	70-130	70-130	3	0-25

EPA 300.0 Classical Chemistry Parameters

Client ID #	**MW-6**	**MW-7**	**Method Blank**			
SRL (Lab) ID#	1406033-004	1406033-005	MB063014			
Date Collected	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E83182	E83182	E83182			
Date Prepared	06/30/14	06/30/14	06/30/14			
Date Analyzed	06/30/14	06/30/14	06/30/14	**MDL**	**PQL**	**CAS Number**
Fluoride	**0.24**	**0.35**	0.02 U	0.02	0.20	16984-48-8
Units	mg/L	mg/L	mg/L			
Dilution Factor (MEDF)	1	1	1			

QAQC **Prep Method: No Prep**	**% Recovery LCS/MS/MSD**	**LCS Acceptable Limits**	**MS/MSD Acceptable Limits**	**%RPD MS/MSD**	**Acceptable Limits**
Fluoride	101/*83/*85	90-110	90-110	2	0-10

* The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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Metals (total recoverable) by EPA 6000/7000 Series Methods

Client ID #	**MW-6**	**MW-7**	**Method Blank**				
SRL (Lab) ID#	1406033-004	1406033-005	MB070114				
Date Collected	06/25/14	06/25/14	NA				
Lab FDOH Certification #	E82277	E82277	E82277				
Date Prepared	07/01/14	07/01/14	07/01/14				
Date Analyzed	07/02/14	07/02/14	07/02/14	**MDL**	**PQL**	**CAS Number**	
Aluminum	**275**	**339**	86.0 U	86.0	200	7429-90-5	
Antimony	5.65 U	5.65 U	5.65 U	5.65	40.0	7440-36-0	
Arsenic	7.12 U	7.12 U	7.12 U	7.12	10.0	7440-38-2	
Barium	**26.6**	**12.7**	0.630 U	0.630	10.0	7440-39-3	
Boron	**1760**	**109**	6.24 U	6.24	50.0	7440-42-8	
Cadmium	0.170 U	0.170 U	0.170 U	0.170	1.00	7440-43-9	
Chromium	1.30 U	1.30 U	1.30 U	1.30	10.0	7440-47-3	
Copper	0.940 U	0.940 U	0.940 U	0.940	10.0	7440-50-8	
Lead	2.20 U	2.20 U	2.20 U	2.20	10.0	7439-92-1	
Selenium	6.60 U	6.60 U	6.60 U	6.60	40.0	7782-49-2	
Sodium	**12900**	**5250**	56.0 U	56.0	500	7440-23-5	
Tin	**6.23 J**	5.40 U	5.40 U	5.40	40.0	7440-31-5	
Units	ug/L	ug/L	ug/L				
Dilution Factor (MEDF)	1	1	1				

Metals (total recoverable) by EPA 6000/7000 Series Methods

Client ID #	**MW-6**	**MW-7**	**Method Blank**			
SRL (Lab) ID#	1406033-004	1406033-005	MB070714			
Date Collected	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E82277	E82277	E82277			
Date Prepared	07/07/14	07/07/14	07/07/14			
Date Analyzed	07/08/14	07/08/14	07/08/14	**MDL**	**PQL**	**CAS Number**
Mercury	0.0230 U	0.0230 U	0.0230 U	0.0230	0.200	7439-97-6
Units	ug/L	ug/L	ug/L			
Dilution Factor (MEDF)	1	1	1			

Metals (Dissolved) by EPA 6000/7000 Series Methods

Client ID #	**MW-6**	**MW-7**	**Method Blank**			
SRL (Lab) ID#	1406033-004	1406033-005	MB071414			
Date Collected	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E82277	E82277	E82277			
Date Prepared	07/14/14	07/14/14	07/14/14			
Date Analyzed	07/15/14	07/15/14	07/15/14	**MDL**	**PQL**	**CAS Number**
Aluminum	**202**	**322**	86.0 U	86.0	200	7429-90-5

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EPA Method 8270D Semivolatile Organic Compounds by GCMS

Client ID #	**MW-6**	**MW-7**	**Method Blank**			
SRL (Lab) ID#	1406033-004	1406033-005	MB062914			
Date Collected	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E83182	E83182	E83182			
Date Prepared	06/29/14	06/29/14	06/29/14			
Date Analyzed	07/07/14	07/07/14	07/07/14	**MDL**	**PQL**	**CAS Number**
1,2,4-Trichlorobenzene	3.3 U	3.3 U	3.3 U	3.3	10	120-82-1
1,2-Dichlorobenzene	3.2 U	3.2 U	3.2 U	3.2	10	95-50-1
1,3-Dichlorobenzene	3.4 U	3.4 U	3.4 U	3.4	10	541-73-1
1,4-Dichlorobenzene	3.2 U	3.2 U	3.2 U	3.2	10	106-46-7
1-Methylnaphthalene	3.1 U	3.1 U	3.1 U	3.1	10	90-12-0
2,4,5-Trichlorophenol	3.9 U	3.9 U	3.9 U	3.9	10	95-95-4
2,4,6-Trichlorophenol	6.4 U	6.4 U	6.4 U	6.4	10	88-06-2
2,4-Dichlorophenol	6.5 U	6.5 U	6.5 U	6.5	10	120-83-2
2,4-Dimethylphenol	^ 6.4 U	^ 6.4 U	6.4 U	6.4	10	105-67-9
2,4-Dinitrophenol	7.7 U	7.7 U	7.7 U	7.7	10	51-28-5
2,4-Dinitrotoluene	3.2 U	3.2 U	3.2 U	3.2	10	121-14-2
2,6-Dinitrotoluene	2.9 U	2.9 U	2.9 U	2.9	10	606-20-2
2-Chloronaphthalene	3.2 U	3.2 U	3.2 U	3.2	10	91-58-7
2-Chlorophenol	^ 7.4 U	^ 7.4 U	7.4 U	7.4	10	95-57-8
2-Methyl-4,6-dinitrophenol	6.0 U	6.0 U	6.0 U	6.0	10	534-52-1
2-Methylnaphthalene	3.8 U	3.8 U	3.8 U	3.8	10	91-57-6
2-Methylphenol	3.5 U	3.5 U	3.5 U	3.5	10	95-48-7
2-Nitroaniline	3.3 U	3.3 U	3.3 U	3.3	10	88-74-4
2-Nitrophenol	5.2 U	5.2 U	5.2 U	5.2	10	88-75-5
3 & 4-Methylphenol	8.2 U	8.2 U	8.2 U	8.2	10	108-39-4/106-44-5
3,3'-Dichlorobenzidine	^ 3.3 U	^ 3.3 U	3.3 U	3.3	10	91-94-1
3-Nitroaniline	3.3 U	3.3 U	3.3 U	3.3	10	99-09-2
4-Bromophenyl-phenylether	3.3 U	3.3 U	3.3 U	3.3	10	101-55-3
4-Chloro-3-methylphenol	7.3 U	7.3 U	7.3 U	7.3	10	59-50-7
4-Chloroaniline	4.3 U	4.3 U	4.3 U	4.3	10	106-47-8
4-Chlorophenyl-phenylether	3.2 U	3.2 U	3.2 U	3.2	10	7005-72-3
4-Nitroaniline	3.2 U	3.2 U	3.2 U	3.2	10	100-01-6
4-Nitrophenol	7.9 U	7.9 U	7.9 U	7.9	10	100-02-7
Acenaphthene	^ 3.0 U	^ 3.0 U	3.0 U	3.0	10	83-32-9
Acenaphthylene	3.3 U	3.3 U	3.3 U	3.3	10	208-96-8
Anthracene	^ 3.0 U	^ 3.0 U	3.0 U	3.0	10	120-12-7
Benzidine	7.1 U	7.1 U	7.1 U	7.1	10	92-87-5
Benzo(a)anthracene	^ 3.2 U	^ 3.2 U	3.2 U	3.2	10	56-55-3
Benzo(a)pyrene	3.1 U	3.1 U	3.1 U	3.1	10	50-32-8
Benzo(b)fluoranthene	3.4 U	3.4 U	3.4 U	3.4	10	205-99-2
Benzo(g,h,i)perylene	3.7 U	3.7 U	3.7 U	3.7	10	191-24-2
Benzo(k)fluoranthene	3.3 U	3.3 U	3.3 U	3.3	10	207-08-9
Benzoic acid	15 U	15 U	15 U	15	50	65-85-0
Benzyl alcohol	3.9 U	3.9 U	3.9 U	3.9	10	100-51-6
Bis(2-chloroethoxy)methane	^ 3.3 U	^ 3.3 U	3.3 U	3.3	10	111-91-1
Bis(2-chloroethyl)ether	^ 3.8 U	^ 3.8 U	3.8 U	3.8	10	111-44-4

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EPA Method 8270D Semivolatile Organic Compounds by GCMS

Client ID #	**MW-6**	**MW-7**	**Method Blank**			
SRL (Lab) ID#	1406033-004	1406033-005	MB062914			
Date Collected	06/25/14	06/25/14	NA			
Lab FDOH Certification #	E83182	E83182	E83182			
Date Prepared	06/29/14	06/29/14	06/29/14			
Date Analyzed	07/07/14	07/07/14	07/07/14	**MDL**	**PQL**	**CAS Number**
Bis(2-chloroisopropyl)ether	3.5 U	3.5 U	3.5 U	3.5	10	108-60-1
Bis(2-ethylhexyl)phthalate	3.5 U	3.5 U	3.5 U	3.5	5.0	117-81-7
Butylbenzylphthalate	^ 5.1 U	^ 5.1 U	5.1 U	5.1	10	85-68-7
Chrysene	^ 3.0 U	^ 3.0 U	3.0 U	3.0	10	218-01-9
Dibenzo(a,h)anthracene	3.8 U	3.8 U	3.8 U	3.8	10	53-70-3
Dibenzofuran	2.8 U	2.8 U	2.8 U	2.8	10	132-64-9
Diethylphthalate	^ 3.0 U	^ 3.0 U	3.0 U	3.0	10	84-66-2
Dimethylphthalate	3.0 U	3.0 U	3.0 U	3.0	10	131-11-3
Di-n-butylphthalate	^ 3.2 U	^ 3.2 U	3.2 U	3.2	10	84-74-2
Di-n-octylphthalate	^ 3.6 U	^ 3.6 U	3.6 U	3.6	10	117-84-0
Fluoranthene	^ 4.0 U	^ 4.0 U	4.0 U	4.0	10	206-44-0
Fluorene	2.9 U	2.9 U	2.9 U	2.9	10	86-73-7
Hexachlorobenzene	3.0 U	3.0 U	3.0 U	3.0	10	118-74-1
Hexachlorobutadiene	4.1 U	4.1 U	4.1 U	4.1	10	87-68-3
Hexachlorocyclopentadiene	3.8 U	3.8 U	3.8 U	3.8	10	77-47-4
Hexachloroethane	3.0 U	3.0 U	3.0 U	3.0	10	67-72-1
Indeno(1,2,3-cd)pyrene	4.1 U	4.1 U	4.1 U	4.1	10	193-39-5
Isophorone	4.5 U	4.5 U	4.5 U	4.5	10	78-59-1
Naphthalene	^ 3.6 U	^ 3.6 U	3.6 U	3.6	10	91-20-3
Nitrobenzene	3.2 U	3.2 U	3.2 U	3.2	10	98-95-3
N-Nitrosodimethylamine	3.8 U	3.8 U	3.8 U	3.8	10	62-75-9
N-Nitroso-di-n-propylamine	4.5 U	4.5 U	4.5 U	4.5	10	621-64-7
N-nitrosodiphenylamine/Diphenylamine	5.4 U	5.4 U	5.4 U	5.4	10	86-30-6/122-39-4
Pentachlorophenol	^ 8.2 U	^ 8.2 U	8.2 U	8.2	10	87-86-5
Phenanthrene	^ 2.8 U	^ 2.8 U	2.8 U	2.8	10	85-01-8
Phenol	5.6 U	5.6 U	5.6 U	5.6	10	108-95-2
Pyrene	^ 4.1 U	^ 4.1 U	4.1 U	4.1	10	129-00-0
Pyridine	3.5 U	3.5 U	3.5 U	3.5	10	110-86-1
Units	ug/L	ug/L	ug/L			
Dilution Factor (MEDF)	1	1	1			
Surrogate (% Rec)				(Surrogate Control Limits)		
2,4,6-Tribromophenol	67%	91%	78%	47-128		
2-Fluorobiphenyl	* 40%	66%	77%	44-102		
2-Fluorophenol	27%	41%	46%	25-79		
Nitrobenzene-d5	* 39%	64%	77%	43-112		
Phenol-d5	23%	31%	32%	14-54		
Terphenyl-d14	* 123%	* 143%	* 135%	65-122		

* Value is outside control limits.

^ The associated laboratory control sample exhibited high bias; since the result is ND, the impact on data quality is minimal.

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TCLP Volatile Organics by 8260-GC-MS

Client ID #	**Soil Preburn**			
SRL (Lab) ID#	1406033-002			
Date Collected	06/25/14			
Lab FDOH Certification #	E83182			
Date Prepared	07/09/14			
Date Analyzed	07/09/14	**MDL**	**PQL**	**CAS Number**
1,1-Dichloroethene	0.09 U	0.09	0.100	75-35-4
1,2-Dichloroethane	0.06 U	0.06	0.100	107-06-2
2-Butanone	0.40 U	0.40	0.500	78-93-3
Benzene	0.07 U	0.07	0.100	71-43-2
Carbon Tetrachloride	0.09 U	0.09	0.100	56-23-5
Chlorobenzene	0.07 U	0.07	0.100	108-90-7
Chloroform	0.08 U	0.08	0.100	67-66-3
Tetrachloroethylene	0.08 U	0.08	0.100	127-18-4
Trichloroethene	0.09 U	0.09	0.100	79-01-6
Vinyl Chloride	0.07 U	0.07	0.100	75-01-4
Units	mg/L	mg/L	mg/L	
Dilution Factor (MEDF)	100	100	100	
Surrogate (% Rec)		(Surrogate Control Limits)		
4-Bromofluorobenzene	88%		41-142	
Dibromofluoromethane	88%		53-146	
Toluene-D	83%		41-146	

Client ID #	**Method Blank**			
SRL (Lab) ID#	MB070914			
Date Collected	NA			
Lab FDOH Certification #	E83182			
Date Prepared	07/09/14			
Date Analyzed	07/09/14	**MDL**	**PQL**	**CAS Number**
1,1-Dichloroethene	0.0009 U	0.0009	0.001	75-35-4
1,2-Dichloroethane	0.0006 U	0.0006	0.001	107-06-2
2-Butanone	0.0040 U	0.0040	0.005	78-93-3
Benzene	0.0007 U	0.0007	0.001	71-43-2
Carbon Tetrachloride	0.0009 U	0.0009	0.001	56-23-5
Chlorobenzene	0.0007 U	0.0007	0.001	108-90-7
Chloroform	0.0008 U	0.0008	0.001	67-66-3
Tetrachloroethylene	0.0008 U	0.0008	0.001	127-18-4
Trichloroethene	0.0009 U	0.0009	0.001	79-01-6
Vinyl Chloride	0.0007 U	0.0007	0.001	75-01-4
Units	mg/L	mg/L	mg/L	
Dilution Factor (MEDF)	1	1	1	
Surrogate (% Rec)		(Surrogate Control Limits)		
4-Bromofluorobenzene	108%		41-142	
Dibromofluoromethane	121%		53-146	
Toluene-D	112%		41-146	

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Project Number/Project Name
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Tampa, FL

TCLP Metals by 6000/7000 Series Method

Client ID #	:	**Soil Preburn**	**GW De Water**	**Blank-1**			
SRL (Lab) ID#	:	1406033-002	14-06033-003	MB070714			
Date Collected	:	06/26/14	06/26/14	NA			
Lab FDOH Certification #	:	E82277	E82277	E82277			
Date Prepared	:	07/07/14	07/07/14	07/07/14			
Date Analyzed	:	07/09/14	07/09/14	07/09/14			
Units	:	mg/L	mg/L	mg/L	**MDL**	**PQL**	**CAS Number**
Arsenic		0.178 U	0.178 U	0.178 U	0.178	0.250	7440-38-2
Cadmium		0.00425 U	0.00425 U	0.00425 U	0.0043	0.0250	7440-43-9
Chromium		0.0325 U	0.0325 U	0.0325 U	0.0325	0.250	7440-47-3
Lead		0.0550 U	0.0550 U	0.0550 U	0.0550	0.500	7439-92-1

Client ID #	:	**Blank-2**	**Blank-3**	**Blank-4**			
SRL (Lab) ID#	:	MB070714	MB070714	MB070714			
Date Collected	:	NA	NA	NA			
Lab FDOH Certification #	:	E82277	E82277	E82277			
Date Prepared	:	07/07/14	07/07/14	07/07/14			
Date Analyzed	:	07/09/14	07/09/14	07/09/14			
Units	:	mg/L	mg/L	mg/L	**MDL**	**PQL**	**CAS Number**
Arsenic		0.178 U	0.178 U	0.178 U	0.178	0.250	7440-38-2
Cadmium		0.00425 U	0.00425 U	0.00425 U	0.0043	0.0250	7440-43-9
Chromium		0.0325 U	0.0325 U	0.0325 U	0.0325	0.250	7440-47-3
Lead		0.0550 U	0.0550 U	0.0550 U	0.0550	0.500	7439-92-1

QAQC **EPA Method 6010C** **Prep Method: EPA 3010A**	**% Recovery** **LCS/MS/MSD**	**LCS** **Acceptable** **Limits**	**MS/MSD** **Acceptable** **Limits**	**%RPD** **MS/MSD**	**Acceptable** **Limits**
Arsenic	103/102/103	80-120	75-125	1	0-20
Cadmium	101/99/99	80-120	75-125	0.9	0-20
Chromium	101/99/100	80-120	75-125	0.7	0-20
Lead	105/103/103	80-120	75-125	0.3	0-20

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EPA Method 8270D Semivolatile Organic Compounds by GCMS

QAQC (SVOCs) Prep Method: EPA 3510C		% Recovery LCS/MS/MSD	LCS Acceptable Limits	MS/MSD Acceptable Limits	%RPD MS/MSD	Acceptable Limits
1,2,4-Trichlorobenzene		85/51/65	20-95	20-95	24	0-32
1,4-Dichlorobenzene		86/56/66	17-94	17-94	16	0-34
2,4-Dinitrotoluene		105/93/91	63-120	63-120	2	0-23
2-Chlorophenol	*	101/67/74	50-97	50-97	10	0-27
4-Chloro-3-methylphenol		101/61/75	54-108	54-108	22	0-28
4-Nitrophenol		46/40/32	10-129	10-129	20	0-35
Acenaphthene	*	102/64/80	50-95	50-95	22	0-27
N-Nitroso-di-n-propylamine		121/78/85	53-124	53-124	8	0-24
Pentachlorophenol	*	110/101/92	27-100	27-100	10	0-26
Phenol		44/24/25	14-54	14-54	7	0-32
Pyrene	*	135/122/105	61-115	61-115	15	0-28

Metals (total recoverable) by EPA 6000/7000 Series Methods

QAQC EPA Method 6010C Prep Method: EPA 3005A	% Recovery LCS/MS/MSD	LCS Acceptable Limits	MS/MSD Acceptable Limits	%RPD MS/MSD	Acceptable Limits
Aluminum	101/100/102	80-120	75-125	1	0-20
Antimony	102/102/103	80-120	75-125	0.8	0-20
Arsenic	104/103/105	80-120	75-125	2	0-20
Barium	102/102/103	80-120	75-125	1	0-20
Boron	102/102/103	80-120	75-125	1	0-20
Cadmium	105/104/105	80-120	75-125	1	0-20
Chromium	102/102/103	80-120	75-125	1	0-20
Copper	103/103/104	80-120	75-125	1	0-20
Lead	105/104/106	80-120	75-125	1	0-20
Selenium	102/97/98	80-120	75-125	1	0-20
Sodium	103/101/103	80-120	75-125	2	0-20
Tin	102/101/102	80-120	75-125	1	0-20

QAQC Prep Method: EPA 7470A	% Recovery LCS/MS/MSD	LCS Acceptable Limits	MS/MSD Acceptable Limits	%RPD MS/MSD	Acceptable Limits
Mercury	97/94/96	80-120	75-125	1	0-20

* The associated laboratory control sample exhibited high bias; since the result is ND, the impact on data quality is minimal.

Southern Research Laboratories, Inc.
an MBE Environmental Laboratory
2251 Lynx Lane, Suite 1
Orlando, Florida 32804 (407) 522-7100

NELAP Certified
FDOH Cert # : E83484
SRL Lab Ref # : 14-06033
Received Date : 06/27/14

Bridget Morello
Progressive Engineering & Construction, Inc.
3912 West Humphrey Street
Tampa, Florida 33614 (813) 930-0669

Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

TCLP Volatile Organics by 8260-GC-MS

EPA 5030B_MS	% Recovery LCS/LCSD	LCS Acceptable Limits	LCS/LCSD Acceptable Limits	%RPD LCS/LCSD	Acceptable Limits
1,1-Dichloroethene	116/137	65-144	65-144	16	0-16
Benzene	108/112	73-138	73-138	3	0-14
Chlorobenzene	90/95	77-127	77-127	6	0-13
Trichloroethene	96/98	83-133	83-133	2	0-20

Metals (Dissolved) by 6000/7000 Series Method

QAQC EPA Method 6010C Prep Method: EPA 3005A	% Recovery LCS/MS/MSD	LCS Acceptable Limits	MS/MSD Acceptable Limits	%RPD MS/MSD	Acceptable Limits
Aluminum, Dissolved	99/99/97	80-120	75-125	3	0-20

Southern Research Laboratories, Inc.
an MBE Environmental Laboratory
2251 Lynx Lane, Suite 1
Orlando, Florida 32804 (407) 522-7100

NELAP Certified
FDOH Cert # : E83484
SRL Lab Ref # : 14-06033
Received Date : 06/27/14

Bridget Morello
Progressive Engineering & Construction, Inc.
3912 West Humphrey Street
Tampa, Florida 33614 (813) 930-0669

Project Number/Project Name
P9000
City Of Tampa
Tampa, FL

DATA QUALIFIER CODES

Reporting Exceptions and Qualified Data

When quality control results are outside established control limits reanalysis, including re-extraction (if applicable), is preferred. If re-analysis is not viable or desirable, then results may be qualified. Sample results associated with quality control data that exceed acceptance criteria will be qualified with an appropriate comment.

D = Data reported from a dilution and or multiple dilutions.
D5=1/5, D10= 1/10, D20= 1/20, D50= 1/50, D100= 1/100, D200= 1/200, D1= 1/1000

J = Estimated Value, The reported value is between the Laboratory Method Detection Limit (**MDL**) and the Laboratory Practical Quantitation Limit (**PQL**)

L = Off-Scale high; exceeds the linear range or highest calibration standard.

O = Sampled, but analysis lost or not performed

Q = Sample held beyond normal holding time

U = indicates the compound was analyzed for, but not detected. The numerical value preceding the "U" is the limit of detection for that compound based upon the dilution. **MEDF** = **M**atrix **E**ffected **D**ilution **F**actor.

V = Analyte was detected in both the sample and associated Laboratory Method Blank; Laboratory Contamination

Y = The analysis was from an unpreserved or improperly preserved sample. The data may not be accurate

Unless otherwise noted, ug/Kg and mg/Kg denote dry weight.

(SOILS) Actual Reporting Limit will depend on moisture content of sample and the amount of sample received.

Southern Research Laboratories, Inc.
Quality Assurance/Quality Control Report

Client: **Progressive Engineering & Construction, Inc.** SRL# 1406033
Project: **P9000** QC07011404.D
City Of Tampa MSQC070114 18-19.D
Tampa, FL Parent Sample 07011417.D (DW-1)

VOC Analytes	Method Blank Value	LCS Obs. Value	LCS True Value	LCS % Rec.	Sample Value	Spike Amount Added	MS Value	MSD Value	MS % Rec.	MSD % Rec.	% Rec. Control Lower Limit	% Rec. Control Upper Limit	% RPD	RPD Control Limits
1,1-Dichloroethene (8)	0	28.2	25.0	113	0	25.0	30.2	30.6	121	122	70	130	1.3	30
Trans-1-2-Dichloroethene (11)	0	27.2	25.0	109	0	25.0	27.8	28.9	111	116	70	130	3.9	30
Chloroform (19)	0	24.5	25.0	98	0.6	25.0	26.5	25.8	103	101	70	130	2.6	30
Benzene (25)	0	22.5	25.0	90	0	25.0	23.1	23.4	92	94	70	130	1.5	30
Trichloroethene (28)	0	25.1	25.0	100	3.0	25.0	28.7	28.9	103	104	70	130	0.6	30
1,2-Dichloropropane (31)	0	22.5	25.0	90	0	25.0	22.8	23.3	91	93	70	130	2.3	30
Toluene (35)	0	24.6	25.0	98	0	25.0	25.1	24.0	100	96	70	130	4.4	30
Tetrachloroethene (36)	0	26.7	25.0	107	8.6	25.0	34.1	33.2	102	98	70	130	2.4	30
Chlorobenzene (44)	0	22.0	25.0	88	0	25.0	22.3	20.6	89	83	70	130	7.7	30
Ethylbenzene (45)	0	25.6	25.0	102	0	25.0	26.1	24.3	104	97	70	130	6.9	30
o-Xylene (48)	0	23.3	25.0	93	0	25.0	23.3	21.6	93	86	70	130	7.4	30
Surrogates:														
Dibromofluoromethane	101	9.9	10	98.9	94.7	10	10.5	10.9	105	109	70	130	3.4	30
1.2-Dichloroethane-D4	107	10.6	10	106	108	10	10.9	11.3	109	113	70	130	3.9	30
Toluene-D8	90.5	9.2	10	92.2	91.5	10	9.0	9.8	90.2	98.4	70	130	8.7	30
4-Bromofluorobenzene	97.3	9.7	10	96.6	97.3	10	9.2	9.8	92.4	98.0	70	130	5.9	30

07011402.D

SRL Quality Assurance Officer

Chain of Custody

[redacted] Page of

Project Manager: Bridget Morello	Southern Research Laboratories, Inc. 2251 Lynx Lane, Suite #1 Orlando, Florida 32804 (407) 522-7100 Toll Free 1 (888) 420-TEST Fax: (407) 522-7043	Project Name: City of Tampa
Company: Progressive Engineering & Construction Inc.		
Address: 3912 West Humphrey Street		Project Location: Tampa, FL
City, State, Zip: Tampa, Florida 33614		
Phone: +1 (813) 930-0669 Fax: +1 (813) 930-9809		

Sampled by [Print Name(s)] / Affiliation: C. Nichols / PEC

Sampler(s) Signature(s): [signature]

Project Number: P9000

REQUESTED DUE DATE: Std.

Sampling QAP No.:

Approval Date:

	Sample Identification	Sampled Date:	Sampled Time:	Grab or Composite	Matrix: (see codes)	Total Number of Containers	1,4 Dioxane	VOC - 8260	ethylene glycol	metals - total	metals - dissolved	Fluride	SVOC	TCLP - metals 4-RCRA	TCLP - VOC	Comments: 1406033
Preservatives (see codes)							I	H	I	N	N	I	I	I	I	
1	MW-4	6/26/14	854	G	GW	1+1		① *and Vial only						4 Fullt		* hold dissolved -001
2	Soil Preburn	6/26/14	915	C	S	2								①	①	metals samples -002
3	GW Des. Water	6/26/14	910	C	GW	2								①	①	until results of -003
4	MW-6	6/25/14	1134	G	GW	12	②	②	3	①	①	①	②		*	TOTAL metals is -004
5	MW-7	6/25/14	912	G	GW	12	②	②	③	①	①	①	②			avail. N. Tyner to -005
6	DW-1	6/25/14	1040	G	GW	4	②	②								approve running. -006
7	Trip Blank	6/25/14		G	DI	2	~~②~~	②	Cooler			X412				-007
~~8~~	~~Tcp~~															

Shipment Method:		Relinquished by: / Affiliation:	Date:	Time:	Accepted by: / Affiliation:	Date:	Time:
Out: / /	Via:	Wendy Turner	6-17-14	12:30		6/17/14	1230
Returned: / /	Via:	[signature]	6/26/14	11:00	[signature]	6.27.14	1410

Additional Comments: Cooler temp X412 = 0.9°
HW Drawater lender for TCLP VOC
* Will re-collect in Proper Container X

Cooler No.(s) / Temperature(s) (°C): X412 X316 X40

Sampling Kit No.: 6347

Equipment ID No.:

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water(Blanks) HW = Potential Haz Waste O = Other(Specify:)

Preservative Codes: H = Hydrochloric Acid & Ice I = Ice Only N = Nitric Acid & Ice S = Sulfuric Acid & Ice X = Sodium Hydroxide & Ice O = Other(Specify)

Southern Research Laboratories, Inc.

2251 Lynx Lane, Suite 1
Orlando, Florida 32804
(407) 522-7100 Fax (407) 522-7043
Toll Free 1 (888) 420-Test

Thank you **Ms. Bridget Morello** for the opportunity to be of service to you and your company; we **S**incerely **A**ppreciate **Y**our **B**usiness. SRL certifies these **Laboratory Results** were produced in accordance with NELAC Standards. Hold times and preservation requirements were met for all analytes unless specifically noted in the report. Results relate only to the samples as received.

Client Name: **Progressive Eng. & Construction, Inc.**	Date(s) Collected: 06/30/14
Contact Name: **Bridget Morello**	Date Received: 07/01/14
Project Name: Tampa-East Hanna Avenue	Time Received: 11:45
Project Number: P2324	Date Reported : 07/14/14
Phone Number: (813) 930-0669	Date Emailed : 07/14/14
Fax Number: (813) 930-9809	SRL Work Order # 14-07001

SRL WO #	Clients #	Matrix	Analysis Requested
14-07001-001	Purge Barrel	Liquid	TCLP VOCs

Sherri Payne
Vice President & Quality Assurance Officer
Southern Research Laboratories, Inc.

Southern Research Laboratories, Inc.
an MBE Environmental Laboratory
2251 Lynx Lane, Suite 1
Orlando, Florida 32804 (407) 522-7100

NELAP Certified
FDOH Cert # : E83484
SRL Lab Ref # : 14-07001
Received Date : 07/01/14

Bridget Morello
Progressive Engineering & Construction, Inc.
3912 West Humphrey Street
Tampa, Florida 33614 (813) 930-0669

Project Number/Project Name
P2324
Tampa-East Hanna Avenue
Tampa, FL

TCLP Volatile Organics by 8260-GC-MS

Client ID # : **Purge Barrel**
SRL (Lab) ID# : 14-07001-001
Date Collected : 06/30/14
Lab FDOH Certification # : E83182
Date Prepared : 07/09/14
Date Analyzed : 07/09/14

		MDL	PQL	CAS Number
1,1-Dichloroethene	0.09 U	0.09	0.100	75-35-4
1,2-Dichloroethane	0.06 U	0.06	0.100	107-06-2
2-Butanone	0.40 U	0.40	0.500	78-93-3
Benzene	0.07 U	0.07	0.100	71-43-2
Carbon Tetrachloride	0.09 U	0.09	0.100	56-23-5
Chlorobenzene	0.07 U	0.07	0.100	108-90-7
Chloroform	0.08 U	0.08	0.100	67-66-3
Tetrachloroethylene	0.08 U	0.08	0.100	127-18-4
Trichloroethene	0.09 U	0.09	0.100	79-01-6
Vinyl Chloride	0.07 U	0.07	0.100	75-01-4
Units : mg/L		mg/L	mg/L	
Dilution Factor (MEDF) : 100		100	100	
Surrogate (% Rec) :		(Surrogate Control Limits)		
4-Bromofluorobenzene	108%		41-142	
Dibromofluoromethane	115%		53-146	
Toluene-D	110%		41-146	

Client ID # : **Method Blank**
SRL (Lab) ID# : MB070914
Date Collected : NA
Lab FDOH Certification # : E83182
Date Prepared : 07/09/14
Date Analyzed : 07/09/14

		MDL	PQL	CAS Number
1,1-Dichloroethene	0.0009 U	0.0009	0.001	75-35-4
1,2-Dichloroethane	0.0006 U	0.0006	0.001	107-06-2
2-Butanone	0.0040 U	0.0040	0.005	78-93-3
Benzene	0.0007 U	0.0007	0.001	71-43-2
Carbon Tetrachloride	0.0009 U	0.0009	0.001	56-23-5
Chlorobenzene	0.0007 U	0.0007	0.001	108-90-7
Chloroform	0.0008 U	0.0008	0.001	67-66-3
Tetrachloroethylene	0.0008 U	0.0008	0.001	127-18-4
Trichloroethene	0.0009 U	0.0009	0.001	79-01-6
Vinyl Chloride	0.0007 U	0.0007	0.001	75-01-4
Units : mg/L		mg/L	mg/L	
Dilution Factor (MEDF) : 1		1	1	
Surrogate (% Rec) :		(Surrogate Control Limits)		
4-Bromofluorobenzene	108%		41-142	
Dibromofluoromethane	121%		53-146	
Toluene-D	112%		41-146	

Southern Research Laboratories, Inc.
an MBE Environmental Laboratory
2251 Lynx Lane, Suite 1
Orlando, Florida 32804 (407) 522-7100

NELAP Certified
FDOH Cert # : E83484
SRL Lab Ref # : 14-07001
Received Date : 07/01/14

Bridget Morello
Progressive Engineering & Construction, Inc.
3912 West Humphrey Street
Tampa, Florida 33614 (813) 930-0669

Project Number/Project Name
P2324
Tampa-East Hanna Avenue
Tampa, FL

TCLP Volatile Organics by 8260-GC-MS

EPA 5030B_MS	% Recovery LCS/LCSD	LCS Acceptable Limits	LCS/LCSD Acceptable Limits	%RPD LCS/LCSD	Acceptable Limits
1,1-Dichloroethene	90/86	65-144	65-144	4	0-16
Benzene	95/87	73-138	73-138	8	0-14
Chlorobenzene	91/84	77-127	77-127	7	0-13
Trichloroethene	121/110	83-133	83-133	10	0-20

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Bridget Morello
Progressive Engineering & Construction, Inc.
3912 West Humphrey Street
Tampa, Florida 33614 (813) 930-0669

Project Number/Project Name
P2324
Tampa-East Hanna Avenue
Tampa, FL

DATA QUALIFIER CODES

Reporting Exceptions and Qualified Data

When quality control results are outside established control limits reanalysis, including re-extraction (if applicable), is preferred. If re-analysis is not viable or desirable, then results may be qualified. Sample results associated with quality control data that exceed acceptance criteria will be qualified with an appropriate comment.

D = Data reported from a dilution and or multiple dilutions.
D5=1/5, D10= 1/10, D20= 1/20, D50= 1/50, D100= 1/100, D200= 1/200, D1= 1/1000

J = Estimated Value, The reported value is between the Laboratory Method Detection Limit (**MDL**) and the Laboratory Practical Quantitation Limit (**PQL**)

L = Off-Scale high; exceeds the linear range or highest calibration standard.

O = Sampled, but analysis lost or not performed

Q = Sample held beyond normal holding time

U = indicates the compound was analyzed for, but not detected. The numerical value preceding the "U" is the limit of detection for that compound based upon the dilution. **MEDF** = **M**atrix **E**ffected **D**ilution **F**actor.

V = Analyte was detected in both the sample and associated Laboratory Method Blank; Laboratory Contamination

Y = The analysis was from an unpreserved or improperly preserved sample. The data may not be accurate

Unless otherwise noted, ug/Kg and mg/Kg denote dry weight.

(SOILS) Actual Reporting Limit will depend on moisture content of sample and the amount of sample received.

Chain of Custody

[redacted]

Page 1 of 1

Project Manager: CHERYL NICHOLS
Company: Progressive Engineering & Construction Inc.
Address: 3912 West Humphrey Street
City, State, Zip: Tampa, Florida 33614
Phone: +1 (813) 990-0680 Fax: +1 (813) 990-0689

Southern Research Laboratories, Inc.
2251 Lynx Lane, Suite #1
Orlando, Florida 32804
(407) 522-7100
Toll Free 1 (888) 420-TEST
Fax: (407) 522-7043

Project Name: TAMPA - EAST HANNA AVENUE
Project Location: TAMPA, FL

Sampled by [Print Name(s)] / Affiliation: ANTHONY BUTCHER/PEC
Sampler(s) Signature(s):

Project Number: P2324 [redacted]

REQUESTED DUE DATE: STD.

Sampling QAP No.:
Approval Date:
Comments:

Sample Identification	Sampled Date:	Sampled Time:	Grab or Composite	Matrix: (see codes)	Total Number of Containers	Preservatives (see codes)	Analyses Requested: TCLP-VOC							
						I								
PURGE BARREL	6/30/14	16:00	G	GW	2		X							1407001-001

Shipment Method:		Relinquished by: / Affiliation:	Date:	Time:	Accepted by: / Affiliation:	Date:	Time:
Out: 6/30/14	Via: Fedex	[redacted]	6/20/14	16:05	A. Butcher/PEC	6/30/14	12:00
Returned: / /	Via:	/PEC	6/30/14	16:15	(Via Fedex)	7-1-14	11:45

Additional Comments:

Cooler No.(s)/Temperature(s) (°C): Amb
Sampling Kit No.: 6347
Equipment ID No.:

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water(Blanks) HW = Potential Haz Waste O = Other(Specify:)

Preservative Codes: H = Hydrochloric Acid & Ice I = Ice Only N = Nitric Acid & Ice S = Sulfuric Acid & Ice X = Sodium Hydroxide & Ice O = Other(Specify)

ATTACHMENT E

Cost Estimate Letter

PROGRESSIVE
ENGINEERING & CONSTRUCTION, INC.

July 18, 2014

Mr. Dan Fahey
City of Tampa
Department of Solid Waste & Environmental Management
4010 W. Spruce Street
Tampa, FL 33607

Re: Limited Phase 2 Investigation, Cost Estimates for Assessment & Remediation
2515 East Hanna Avenue Property, Tampa, Florida

Dear Mr. Fahey:

As you know, Progressive Engineering & Construction, Inc. (Progressive) completed a Limited Phase 2 Investigation at the subject site June 16-30, 2014. Based upon field screening of soil samples collected during drilling, we installed one shallow, four intermediate, and two deep wells as shown on Figure 1.

The most impacted groundwater sample was collected from the deep (50 ft) well DW-2 located on the southwest corner of the main manufacturing building. The concentration of tetrachloroethene (PCE) here was 310 ug/L, which is 100 times the Groundwater Cleanup Target Level (GCTL) of 3 ug/L, and slightly above the natural attenuation default concentration (NADC) of 300 ug/L. The groundwater data show that the groundwater contamination near the former rail spur has decreased in the 35 ft zone since 2011, and the deeper 50 ft zone is only impacted with concentrations slightly above Florida's GCTLs. The direction of groundwater flow in the intermediate (35 ft) zone and the deep (50 ft) zone appears to be generally to the west (with a relatively low gradient).

Progressive has evaluated the data collected during the Limited Phase 2 investigation and offers the following range of costs to complete the site assessment and remediate the site to meet the FDEP's closure criteria under Chapter 62-780, F.A.C. The reasonable "Best" and "Worst" case scenarios and assumptions are described below.

<u>Best Case Scenario</u>
Our best case scenario is based on the following assumptions:

- Groundwater contamination near DW-2 represents the highest concentration on the site.
- Contamination in this aquifer zone decreases over a relatively limited distance (either before the property boundary is reached or not too far off-site).
- Contamination is limited to this aquifer zone (i.e., the contamination does not extend vertically to deeper zones of the Upper Floridan aquifer).

3912 W. HUMPHREY STREET, TAMPA, FLORIDA 33614 TEL. 813-930-0669 FAX. 813-930-9809 www.progressiveec.com

- Completing the Site Assessment Report will involve installation of three deep (50 ft) wells and one deeper (80 ft) well, and only very limited soil sampling.
- The site will be remediated through the use of monitored natural attenuation monitoring (NAM) (i.e., no active groundwater treatment), which will include preparation and approval of a NAM Plan that includes six monitoring wells sampled semiannually.

Worst Case Scenario

Our worst case scenario is based on the following assumptions:

- Groundwater contamination near DW-2 extends to depths of up to 100 ft below land surface in the Floridan Aquifer and is significantly higher at depths greater than 50 ft.
- Contamination in this aquifer zone has resulted in a plume that is relatively large and extends far off-site.
- Contamination is of sufficient magnitude (concentration and extent) that active remediation of the source of contamination on-site is necessary.
- Completing the Site Assessment Report will involve installation of up to five 50 ft deep wells, three 80 ft deep wells, and two 100 ft deep wells.
- Remediation of the site will require a combination of source area groundwater treatment and NAM that includes preparation and agency approval of a Remedial Action Plan (RAP).
- Source remediation would involve chemical oxidation or bioremediation via injections into the subsurface to depths of at least 50 ft.
- Off-site remediation would include NAM for an extended period of time after on-site source reduction.
- Because of the concentrations and extent of groundwater contamination, remediation monitoring will likely take at least 10 years and maybe longer to reach closure criteria.

The cost estimates for these two scenarios are as follows:

Scenario	SAR	RAP/ NAMP	Implementation	Monitoring (Years 1 – 5)	Monitoring (Years 5-10)	Total Cost Estimate
Best Case	$75,000	$7,500	--	$100,000	--	$182,500
Worst Case	$140,000	$30,000	$200,000	$150,000	$100,000	$620,000

Note these cost estimates exclude the following:

- Obtaining a Brownfield Designated Area or a Brownfield Site Rehabilitation Agreement (BSRA).
- Completion and execution of a deed restriction for a conditional closure.
- Post-closure maintenance costs for the paved areas (engineered control).
- Excavation of soils that are not capped, should that be necessary.

The full report on our investigation will be completed next week and we will forward it to you as soon as it is done. Please let us know if we can be of further assistance.

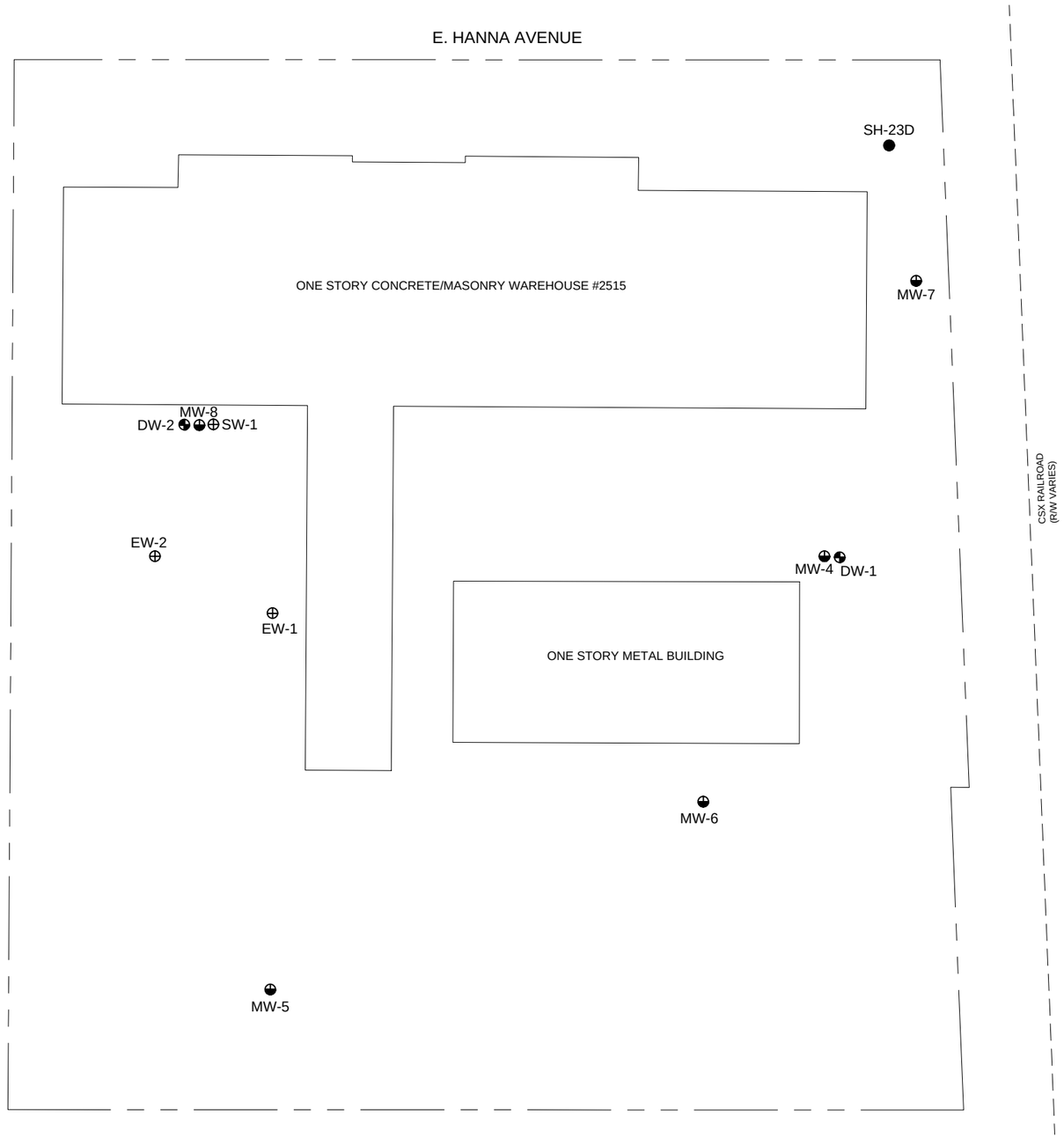
Sincerely,
Progressive Engineering & Construction, Inc.

Bridget S. Morello, P.E.
Principal Engineer

G. Nell Tyner, Ph.D., P.G.
Senior Scientist

Enclosures

cc: John Fernandez

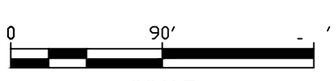


LEGEND

- ⊕ SHALLOW MONITORING WELL
- ◒ INTERMEDIATE MONITORING WELL
- ◒ DEEP MONITORING WELL
- — — PROPERTY LINE

NOTES:

1. SITE IMAGE OBTAINED FROM CITY OF TAMPA
2. WELL LOCATIONS RELATIVE TO OTHER SITE FEATURES ARE APPROXIMATE.



SCALE

PROGRESSIVE ENGINEERING & CONSTRUCTION, INC.
3912 W. Humphrey Street, Tampa, Florida 33614
Phone: (813) 930-0669 Fax: (813) 930-9809
Web Site: http://www.progressiveec.com

NO.	REVISION DETAILS	DATE
1		
2		
3		
4		
5		

MONITOR WELL LOCATIONS

CITY OF TAMPA
2515 EAST HANNA AVENUE, TAMPA, FL 33610

FILE PATH: G:\PROJECTS\Tampa - East Hanna Avenue\Drawings\2014\Monitor Well Locations_NEW.dwg

SCALE: 1" = 100'

DATE: 07/17/14

DRAWN BY: KWC

APPROVED BY: GNT

DRAWING NUMBER: 1