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**March 2016 Semi-annual Groundwater Assessment Report
Former Porcelanite, Inc.
20 Victor Street
Lexington, North Carolina
EPA ID #NCD 986 181 451
April 19, 2016**

Prepared For

**Mr. Tony Shaw
Mannington Mills, Inc.
1327 Lincoln Drive
High Point, North Carolina 27260**

Prepared By

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April 19, 2016

Mr. Tony Shaw
Mannington Mills, Inc.
1327 Lincoln Drive
High Point, North Carolina 27260

Reference: March 2016 Semi-annual Groundwater Assessment Report
Former Porcelanite, Inc. Facility
Lexington, North Carolina
EPA ID #NCD 986 181 451
Waters Edge Job No. R1-21

Dear Mr. Shaw:

Waters Edge Environmental, LLC (Waters Edge) is pleased to submit this March 2016 Groundwater Assessment Report for the above-mentioned site located in Lexington, North Carolina. The following report documents the results of the groundwater investigation activities.

Waters Edge appreciates the opportunity to provide environmental consulting services to Mannington. If you have any questions regarding the information contained herein, please do not hesitate to contact our office at 919.859.9987.

Sincerely,

WATERS EDGE ENVIRONMENTAL, LLC

Phillip L Rahn, P.G.
President

16-032/PLR/aht

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Acronym List

BGS	below ground surface
BQL	below quantitation limits
°C	Celsius
COCs	Constituents of Concern
EP	Extraction Procedure
Ft/ft	Foot per foot
mg/kg	milligrams per kilograms or parts per million
HWMU	Hazardous Waste Management Unit
HWS	Hazardous Waste Section
NC	North Carolina
Mannington	Manning Ceramic Tile
NCDENR	North Carolina Department of Environment and Natural Resources
NCDEQ	North Carolina Department of Environmental Quality (formerly NCDENR, and renamed effective September 18, 2015).
NCGS	North Carolina Groundwater Standards
Porcelanite	Porcelanite, Inc.
PVC	Polyvinyl Chloride
SAP	Sampling and Analysis Plan
SIC	Standard Industrial Classification
SWMU	Solid Waste Management Units
TCLP	Toxicity Characteristic Leaching Procedure
USEPA	United States Environmental Protection Agency
Waters Edge	Waters Edge Environmental, LLC

March 2016 Semiannual Groundwater Assessment Report
Former Porcelanite, Inc. Facility
Lexington, North Carolina
April 19, 2016

1.0 EXECUTIVE SUMMARY

Based on the March 2016 groundwater analytical results, we have the following conclusions and recommendations:

- The groundwater flow continues to migrate to the northeast responding to a gradient of approximately 0.033 ft/ft. This is consistent with historic readings.
- During this semiannual sampling event, we have sampled the six groundwater monitoring wells specified in the most recently accepted SAP. Based on these results, there are inorganic exceedances above NCGS for monitoring wells MW-1 (upgradient well for the facility), MW-9D, MW-12, MW-22A, MW-26A-2, and MW-28D with the main constituents being boron, cobalt (detected at upgradient well MW-1 only), manganese, and zinc.
- Most of the monitoring wells are depicting stable to slightly decreasing trends; however, increasing trends for inorganic constituents are noted for the following:
 1. Increasing trend for manganese and zinc for MW-1 (upgradient well)
 2. Widely fluctuating trend for boron (large increases and decreases between sampling events) for MW-26A-2
 3. Increasing trend for boron and manganese in MW-28D.
- Lead was analyzed and was BDL, at NCGS, or below NCGS in all groundwater monitoring wells. The highest value was at the NCGS of 0.015 mg/L in MW-1 which is the upgradient well for the facility.

2.0 SITE INFORMATION

2.1 Site Identification

Date of Report: April 19, 2016

Facility I.D.: NCD 986 181 451

Incident Number (if known): N/A Site Rank: N/A

Site Name: Former Porcelanite Facility

Site Street Address: 20 Victor Street

City/Town: Lexington State: NC Zip Code: 27292 County: Davidson

Description of Geographical Data Point (e.g., dispenser): Intersection of SR 8 and Victor Street

Location Method (GPS, topographical map, other): GPS and topographical map

Latitude: 35 degrees 47' 42" N Longitude: 80 degrees 15' 51" W

2.2 Contact Information

Site Owner: Condumex, Inc.

Address: 2590 114th Street, Suite 200, Grand Prairie, Tx. 75050 Tel.: (817) 455-8019

Operator: None

Property Owner/Occupant: Condumex, Inc.

Address: 2590 114th Street, Suite 200

Tel: Grand Prairie, Tx. 75050

Consultant/Contractor: Waters Edge Environmental - Phil Rahn (Project Manager for Mannington)

Address: 4901 Waters Edge Drive, Suite 201, Raleigh, NC 27606 Tel: 919.859.9987

Analytical Laboratory: R/A Laboratories State Certification No. 37706

Address: 106 Short Street, Kernersville, NC 27284 Tel: 336.996.2841

2.3 Site Characteristics

2.3.1 Site Location

The Former Porcelanite facility is located at 20 Victor Street, Lexington, North Carolina, in Davidson County. The geographical location is latitude 35° 47' 42" N and longitude 80° 15' 51" W. The location of the facility is shown on Figure 1. The Former Porcelanite facility is bounded on the north by the Charles Avenue right of way, the Lexington City Cemetery, and undeveloped wooded property, and on the east by Cotton Grove Road (North Carolina Highway 8). The facility is bounded on the south by Victor Street (State Road 1261) and on the west by the Winston-Salem southbound railway and undeveloped wooded property. The property is located in a relatively rural area but is zoned for light industrial use. The entire Condumex property comprises approximately 7.5 acres and formerly included a 126,000 square foot building used for manufacturing and office space, a small maintenance garage, and a small security building (Booz Allen, 2004). The buildings were demolished in 2014.

2.3.2 Land Use

The Former Porcelanite facility is currently inactive and has not been used for manufacturing activities since the mid-1990s and the building was demolished in 2014. As a result, workers do not regularly occupy the property. According to facility representatives, the only workers who access the property at any time are remediation workers and consultants working on closure activities. In addition, there are no plans to reuse the property in the immediate future (Booz Allen, 2004).

The former Porcelanite facility was a ceramic tile manufacturing facility located at 20 Victor Street in Lexington, North Carolina in Davidson County (see Figure 1). There are no current operations at the facility.

The nearest residences to the facility property are located to the south, across Victor Street. Additionally, a residence and small convenience store is located on the property adjacent to the northeast corner of the facility property. These residences are located approximately 100 feet from

the Ceramic Tile Pile (SWMU 3). All surrounding residences are served by public water supplied by the City of Lexington. A middle school is located across Cotton Grove Road, approximately 750 feet northeast of the Ceramic Tile Pile (SWMU 3) (Booz Allen, 2004).

According to the North Carolina Division of Parks and Recreation, no records of any rare or threatened species or critical habitats have been identified at the site. The closest recreational areas are Washington Park and Pool facility and a golf course located approximately 3,200 feet east of the facility.

2.3.3 Topography and Surface Water

The Davidson County area is characterized by gently rolling hills divided by small streams. The Former Porcelanite property is situated on a hillside, above a small stream called Walltown Drain. The elevation of the site varies from approximately 770 feet above mean sea level (MSL) to approximately 730 feet MSL at the Walltown Drain. Walltown Drain, a creek that flows northward through the eastern portion of the property, was piped in 1992/1993 to prevent surface water runoff from the Ceramic Tile Pile (SWMU 3) from entering the creek. At the same time the piping was installed at Walltown Drain), a permanent 25-foot easement was conveyed to the City of Lexington. A sanitary sewer line and storm sewer lines also run parallel to Walltown Drain northward across the eastern portion of the property and a permanent 25-foot easement for these lines was also conveyed to the City of Lexington.

Runoff from the site discharges primarily to the Walltown Drain. Walltown Drain runs north approximately 0.5 miles to Rat Springs Branch, which flows to the northwest approximately 2 miles to Swearing Creek, a tributary of the Yadkin River. As of 1997, the Winston-Salem Regional Water Quality Office classified Rat Springs Creek as a "C" surface water designation, which is applied to freshwater protected for secondary recreation, fishing, aquatic life propagation and survival, and wildlife. When the Walltown Drain was enclosed in pipe in 1992/1993 under a Nationwide 26

permit from the U.S. Army Corps of Engineers (USACOE), it was determined there were no significant wetlands present at the site (Booz Allen, 2004).

2.3.4 *Geology and Hydrogeology*

The former Porcelanite facility site is located in the Lexington area of Davidson County, North Carolina, which lies within the eastern portion of the Charlotte litho-tectonic belt in the Piedmont Physiographic Province. This is a zone of regionally metamorphosed amphibolite facies igneous rocks, bounded on the east and west sides by shear zones. The site is underlain by Late Proterozoic-aged undivided metavolcanic rocks. Bedrock lithologies at the site consist of massive, quartz-potassium feldspar-muscovite granite to granodiorite that could be associated with the Pennsylvanian to Permian-aged Churchland Pluton or the Devonian-aged Yadkin Pluton. No significant ore deposits have been recognized or mined extensively in the immediate Lexington area. However, silver, lead, cobalt, zinc, gold and copper have been recognized and mined in areas located 5 to 20 miles south and east of the site.

The predominant lithology at the site has been described as pink to tan, silty sand-textured residual soils (saprolite) weathered in place from the underlying bedrock. The saprolite grades from intensely weathered rock near the surface to slightly weathered rock at depth. In some areas, sandy clay and clayey sand soils have developed in the upper 5 to 10 feet of saprolite.

Groundwater occurs in two interconnected zones underlying the site. These zones included the unconsolidated (saprolite) water table aquifer and the underlying fractured bedrock aquifer. Groundwater in the water table aquifer is transmitted in a generally laminar fashion through the B- and C- soil zone horizons. These zones tend to have a fairly uniform porosity and permeability and have a relatively large storage capacity in the regolith overlying fractured bedrock. The two water-bearing zones do not appear to have a confining unit separating them. The saprolite/regolith zone acts as the storage reservoir for the underlying bedrock zone, and recharges the bedrock aquifer in response to water withdrawal. Based on previous site investigations, groundwater saturated soils in

the uppermost aquifer occur at a depth of about 5.5 to 24 feet bgs and extend to the top of the partially weathered rock unit at a subsurface depth of between 27 and 50 feet.

Initially, groundwater monitoring wells were installed in September 1989 in response to a request by NCDENR to investigate possible groundwater contamination. It appears that these wells included MW-1 through MW-6. Prior to May 1992, MW-5 and MW-6 were abandoned. In April 1990, MW-7 and MW-8 were installed and MW-9D through MW-13 were drilled at some point between 1990 and 1992. Well logs indicate that wells MW-14 through MW-26 were installed in August or September 1992. Well MW-28D was installed in June 1993. Wells MW-3A, MW-7A, MW-21A, MW-22A, and MW-23A were installed in September 1998. These wells were installed to replace wells that had been previously abandoned. MW-26-A-2 was installed in May 1999 to replace well MW-26, which was abandoned in 1996 or 1997. Based on conversations conducted during 2011, one additional monitoring well (MW-29- see Figure 2) was installed east of MW-7A due to some groundwater elevation discrepancy to assure the lateral extent of boron groundwater impact had been defined.

Of the eighteen monitoring wells currently on site, fifteen (15) are completed into the saprolite/shallow aquifer and wells MW-9D, MW-11D, MW-19D, and MW-28D are completed in the bedrock/deeper saprolite aquifer. The wells are all 2-inch PVC with 5 to 15 feet of 0.010 slotted PVC screen.

In November 1992, single slug tests were conducted on fifteen monitoring wells. Results from the tests indicated a derived aquifer permeability of 0.40 ft/d. Groundwater flow velocity was calculated to range from 0.030 ft/d to 0.054 ft/d. Groundwater flows toward the northeast at an average hydraulic gradient of 0.04 ft/ft (approximately though individual sampling rounds vary slightly). The gradient steepens on the northeastern side of the property as groundwater approaches the tributary stream known as Walltown Drain. Recharge to the water table zone apparently occurs as surface water infiltration over the topographically higher regions southwest of the site.

2.3.5 *Operational History*

Mid-State Tile began operations at the property in approximately 1960. Prior to use by Mid-State Tile, the property was undeveloped, forested land. According to facility representatives, Mannington began operating at the site in 1985. In late 1994, Mannington ceased operations at the Porcelanite site and sold the property to P&M Tile, Inc. P&M Tile, Inc., was later renamed. Condumex is currently the owner of the facility and property; however, Mannington retained responsibility for closure of the Ceramic Tile Pile (SWMU 3) and the Sludge Settling Ponds (SWMU 2). All tile manufacturing operations at the Porcelanite facility were shut down in 1999. Shortly after the operations were terminated by Porcelanite, the tile manufacturing equipment was dismantled, sold, and removed from the property (Booz Allen, 2004).

According to facility representative, the tile manufacturing process conducted at the property began when raw materials, such as clay, silica, feldspar, zinc oxide, limestone, zirconium silicate, and glass frit, were trucked to the site and stored in silos. These materials were then blended in various proportions and sent via belt conveyors to the Ball Mills, where they were mixed with water. After mixing, the materials were transferred to the spray dryer for drying. Using belt conveyors, the materials were then sent to the tile processes where they were formed into various sizes of tile. Three automatic presses for wall tile and as many as twenty small presses for producing trim tile were operated at the facility. After pressing, the green tiles were sent to the spray line to receive color. From the spray lines, the tiles were sent through one of three kilns where they were fired at approximately 2000 degrees Fahrenheit. Tiles removed from the kiln were allowed to cool before being boxed for shipment. The finished products were sold to retail tile outlets. The SIC code listed on the facility's permit application was 3253 and the facility was operated for the production of glazed ceramic floor and wall tile (Booz Allen, 2004). The site has been inactive since 1999 and the building was demolished in 2014.

Historically, the facility generated several waste streams when it was operated by Mid-State Tile, Mannington, and Porcelanite to produce ceramic tile. It should be noted that prior to March 1990,

the glazes used by Mannington and Mid-State Tile in their ceramic tile manufacturing operations contained various metals, primarily lead glaze frit, which was considered hazardous. Several different waste characterizations performed on the waste tile fragments generated by the facility prior to March 1990 confirmed that leachable lead concentrations exceeded regulatory levels for the toxicity characteristic using either the EP Toxicity Test or the TCLP. Therefore, the waste tile fragments were considered characteristic for lead (D008). By March 1990, however, Mannington had modified its processes to utilize lead-free glaze.

2.3.6 Regulatory History

The following is a list of significant regulatory events at the site:

Prior to January 1, 1989, wastewater treatment conducted at the Porcelanite facility consisted of passing wastewater through a series of two Sludge Settling Ponds (SWMU 2), which allowed solids to settle prior to discharge. After wastewater treatment, wastewater was discharged directly into the Rat Spring Branch of the Yadkin-Pee Dee River basin, pursuant to NPDES permit #NC0006459.

On February 26, 1990, Charles T. Main, Inc., performed a preliminary site assessment. Based on the findings of this site assessment and the fact that soil and groundwater at the site had likely been impacted, on June 11, 1990, NCDENR issued a Compliance Order with Administrative Penalty.

On July 5, 1990, Mannington submitted a consolidated Hazardous Waste Permit Application, Part A to EPA. This permit application listed two hazardous waste management units - a 69,300 cubic yard waste pile and a 8,240 cubic yard surface impoundment. Both units were listed as managing D008 wastes, which are wastes that exhibit the toxicity characteristic for lead. These two units are reported to be the Ceramic Tile Pile (SWMU 3) and the Sludge Ponds (SWMU 2), respectively.

On May 29, 1992, Mannington submitted a Hazardous Waste Permit Application, Part A, to EPA. This permit application provided the same information as the previous permit application; however,

it also indicated that Mannington had two other environmental permits. The first permit listed was a publicly owned treatment works (POTW) permit with the City of Lexington. The second permit was Air Permit #5408R5, which was issued the City of Lexington. The permit application also lists a request for change in the air permit requirements.

In May 1992, Mannington submitted a Closure Plan for the Sludge Settling Ponds (SWMU 2) to NCDENR. On August 13, 1992, NCDENR provisionally approved the Closure Plan for the Settling Ponds. In July 1993, closure of the Sludge Settling Ponds (SWMU 2) was completed and a certified closure report was submitted to NCDENR.

In July 1992, Phase I construction work was performed to stabilize the tile pile area/parking area. Phase II work was completed to pipe the Walltown Drain on the Property.

Between 1992 and 1998, numerous investigations of the Ceramic Tile Pile (SWMU 3) were conducted. These included assessments of soil and groundwater, investigation and characterization of the wastes stored in SWMU 3, and performing a treatability study to evaluate possible remediation techniques for the Ceramic Tile Pile (SWMU 3) (Aquaterra, 1997a, 1997b).

According to facility representatives, closure of the Ceramic Tile Pile (SWMU 3) was initiated in 1997 with waste left in place, and was completed in 1999. The closure of SWMU 3 involved installing a RCRA-compliant cap and grading the area around the unit to make it level with the facility parking lot. Mannington received certification of closure from NCDENR on April 26, 2004.

The facility is now in post-closure monitoring with the intent of the sampling program to conform with 40 CFR 265 Subparts F and G. Waters Edge Environmental, consultant to the facility, has currently recommended continuing the semi-annual post-closure monitoring of wells MW-1, MW-9D, MW-12, MW-22A, MW-26A-2, and MW-28D for analysis of boron, chromium, lead, manganese, and zinc. The previous sampling event was in September 2015.

Finally, there is also a draft Administrative Order proposed by NCDENR which is currently under review by Conduxex and Mannington, and the subject of on-going discussions with NCDEQ and Mannington.

3.0 MARCH 2016 SAMPLING EVENT

3.1 March 2016 Groundwater Sampling Event

On March 15, 2016, Waters Edge field personnel sampled monitoring wells MW-1, MW-9D, MW-12, MW-22A, MW-26A-2, and MW-28D (see Figure 2) which are included in the most recently approved SAP. Before well purging and sampling activities were initiated, water level measurements were obtained with an electric water level probe from all the above-mentioned monitoring wells. The measurements were recorded to within 0.01 foot and converted to feet above mean sea level (see Table 1 which includes monitoring well construction data and screen intervals).

Prior to sampling, each well was purged via a dedicated peristaltic pump. All sampling activity data was documented on field log forms.

Groundwater samples were transferred to laboratory provided and preserved containers. The samplers wore new disposable nitrile gloves during sampling procedures and changed gloves between each well. All samples were labeled with a tag identifying the sample number, date, time, location, analysis to be conducted, and sampler's initials. The samples were stored in a cooler and chilled to approximately 4°C. The samples were transported to a North Carolina certified analytical laboratory in accordance with EPA approved chain-of-custody procedures. All samples for the monitoring wells included in the SAP and additional wells were also analyzed for boron, cadmium, chromium, cobalt, lead, manganese, and zinc.

A travel blank and equipment blank were also submitted for analysis.

4.0 RESULTS

4.1 Groundwater Flow and Hydraulic Gradient

The groundwater flow continues to migrate to the northeast responding to a gradient of approximately 0.033 ft./ft. This is consistent with historic readings.

4.2 Analytical Results

The inorganic analytical results had the following exceedances of NCGS:

MW-1 (Upgradient)

Cobalt	detected at	0.026 mg/L	with NCGS	DL
Manganese	detected at	0.498 mg/L	with NCGS	0.05 mg/L

MW-9

Manganese	detected at	0.056 mg/L	with NCGS	0.05 mg/L
Zinc	detected at	1.06 mg/L	with NCGS	1.0 mg/L

MW-12

Boron	detected at	2.25 mg/L	with NCGS	0.7 mg/L
Manganese	detected at	0.121 mg/L	with NCGS	0.05 mg/L

MW-22A

Boron	detected at	1.29 mg/L	with NCGS	0.7 mg/L
Manganese	detected at	0.251 mg/L	with NCGS	0.05 mg/L

MW-26A-2

Boron	detected at	11.0 mg/L	with NCGS	0.7 mg/L
Manganese	detected at	0.152 mg/L	with NCGS	0.05 mg/L
Zinc	detected at	2.92 mg/L	with NCGS	1.0 mg/L

MW-28D

Boron	detected at	0.787 mg/L	with NCGS	0.7 mg/L
Manganese	detected at	0.959 mg/L	with NCGS	0.05 mg/L

DL- Detection Limit since cobalt does not have a NCGS.

These results are consistent with past sampling events. We have provided the following:

- NCGS exceedance map - Figure 3
- Shallow Boron Isopleth map- Figure 4
- Cross-section location map - Figure 5

- Cross-section A-A' boron isopleth map - Figure 6
- Cross-section B-B' boron isopleth map - Figure 7
- Historical results - Table 2
- Laboratory documentation – Appendix A.

4.3 Quality Assurance/Quality Control (QA/QC)

One equipment blank and one trip blank were submitted for QA/QC purposes. These were BDL for all COCs indicating adequate QA/QC exerted by the sampling personnel. All holding times were met.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the March 2016 groundwater analytical results, we have the following conclusions and recommendations:

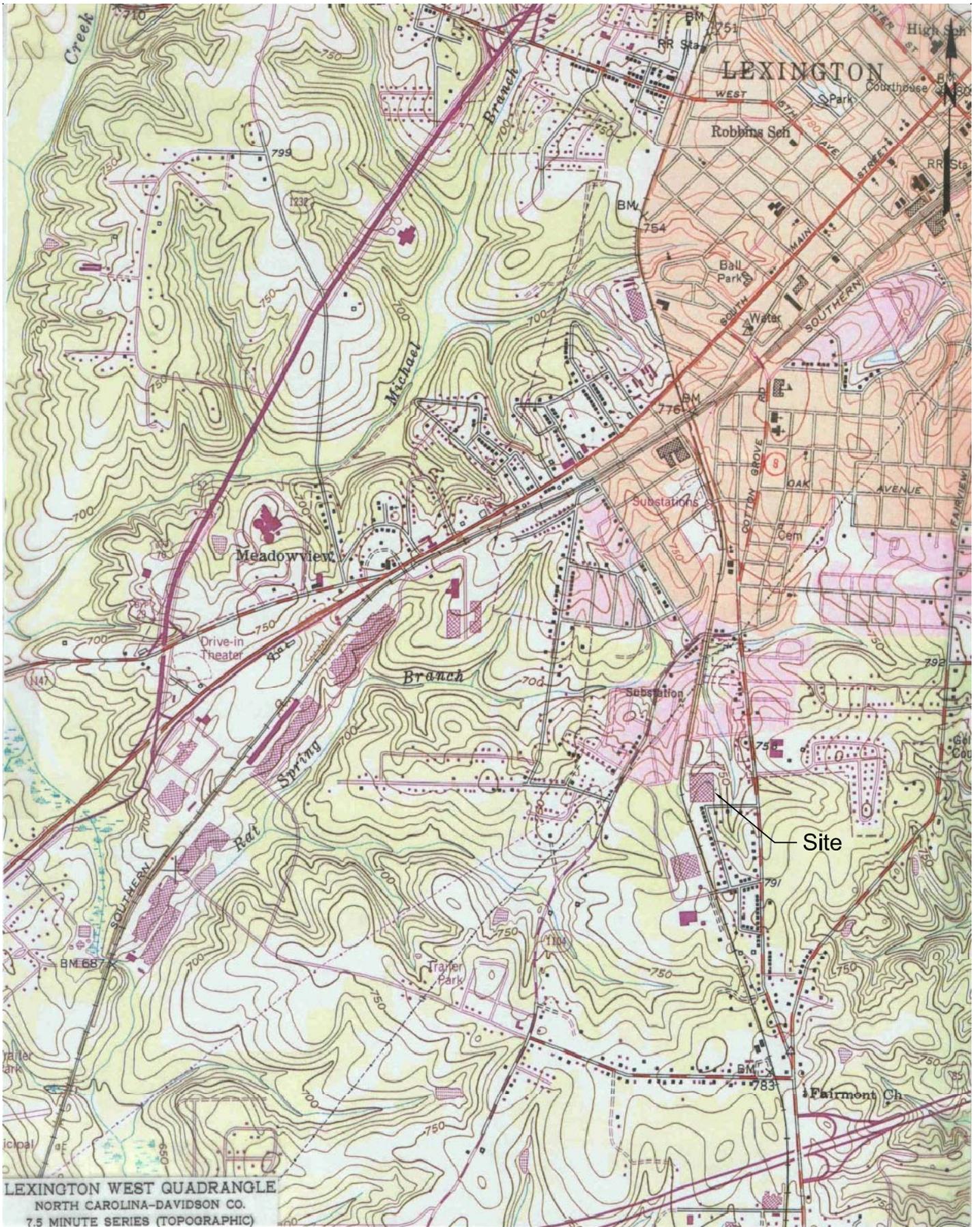
- The groundwater flow continues to migrate to the northeast responding to a gradient of approximately 0.033 ft/ft. This is consistent with historic readings.
- During this semiannual sampling event, we have sampled the six groundwater monitoring wells specified in the most recently accepted SAP. Based on these results, there are inorganic exceedances above NCGS for monitoring wells MW-1 (upgradient well for the facility), MW-9D, MW-12, MW-22A, MW-26A-2, and MW-28D with the main constituents being boron, cobalt (detected at upgradient well MW-1 only), manganese, and zinc.
- Most of the monitoring wells are depicting stable to slightly decreasing trends; however, increasing trends for inorganic constituents are noted for the following:
 1. Increasing trend for manganese and zinc (recent) for MW-1 (upgradient well)
 2. Widely fluctuating trend for boron (large increases and decreases between sampling events) for MW-26A-2
 3. Increasing trend for boron and manganese in MW-28D.

- Lead was analyzed and was BDL, at NCGS, or below NCGS in all groundwater monitoring wells. The highest value was at the NCGS of 0.015 mg/L in MW-1 which is the upgradient well for the facility.

6.0 REFERENCES

Booz Allen, RCRA Facility Assessment, November 8, 2004.

FIGURES



Author	Drawing	Layers	Date	Title
jme	R1-21		1-24-01	Project Location Map
Job No.	Revision	Figure	Scale	Project
R1-21	11-1-02	1	1"=2000'	Conдумex Facility Lexington, North Carolina



MW-24

MW-19D

MW-18

MW-25

CITY OF LEXINGTON
CEMETERY

MW-28D
(723.58)

MW-12
(731.81)

MW-9D
(728.22)

MW-13

MW-11D

MW-10

MW-14

MW-3A

MW-26-A-2
(729.80)

MW-26A
abandoned

CHARLES AVE.
50' R.O.W.

CLOSED SLUDGE POND

PILE CAP

WALL DRAIN
EMBEDDED IN CONCRETE

MW-21A

MW-22A
(734.80)

MW-7A

MW-29

MW-23A

MW-1
(756.90)

Winston-Salem Southbound Railroad
100' R.O.W.

N.C. HWY. 8
60' R.O.W.

VICTOR ST. R.O.W. VARIES

EDNA ST. 30' R.O.W.

PORCELANITE, INC.
FACILITY

735

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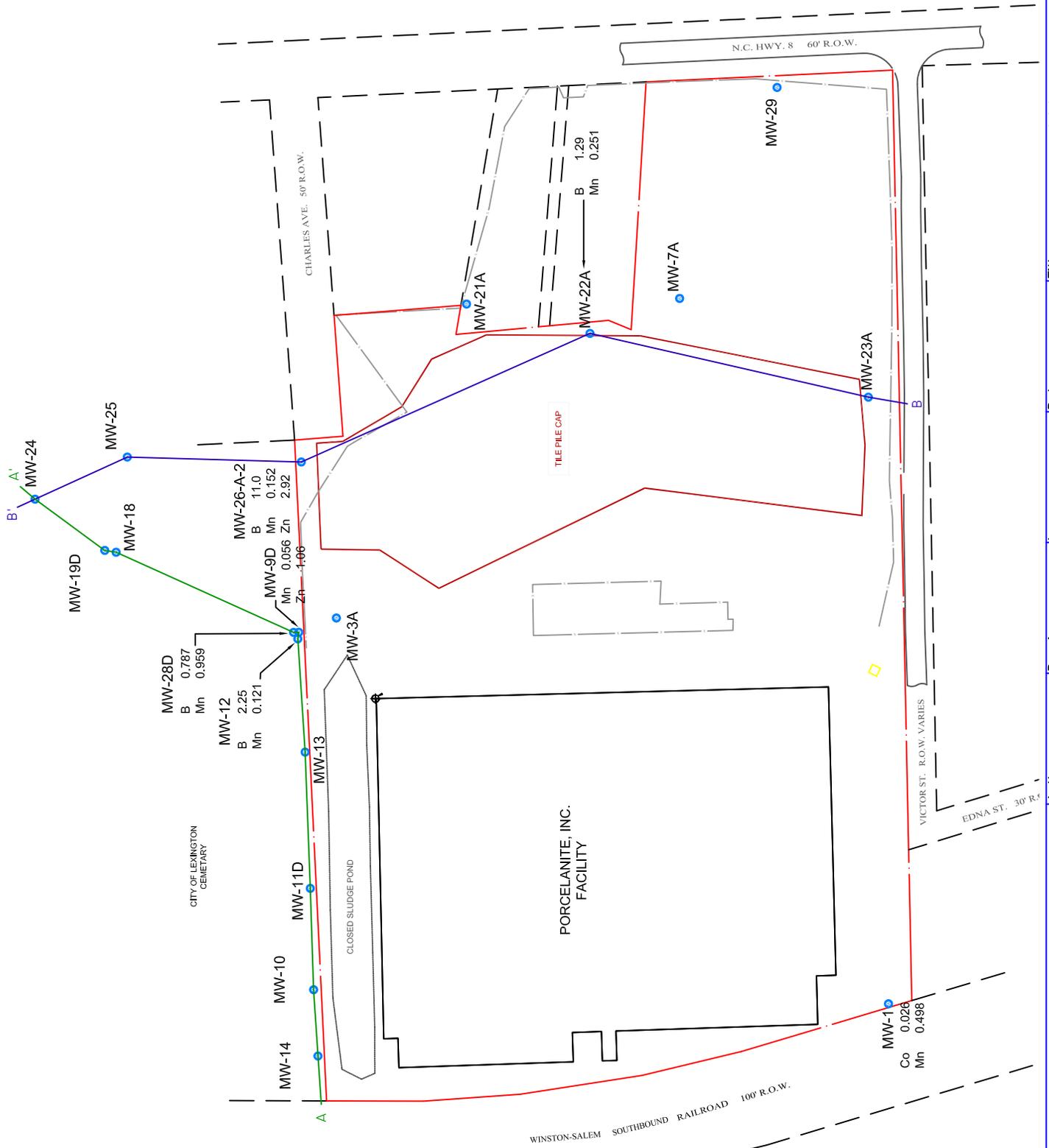
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2050

2055

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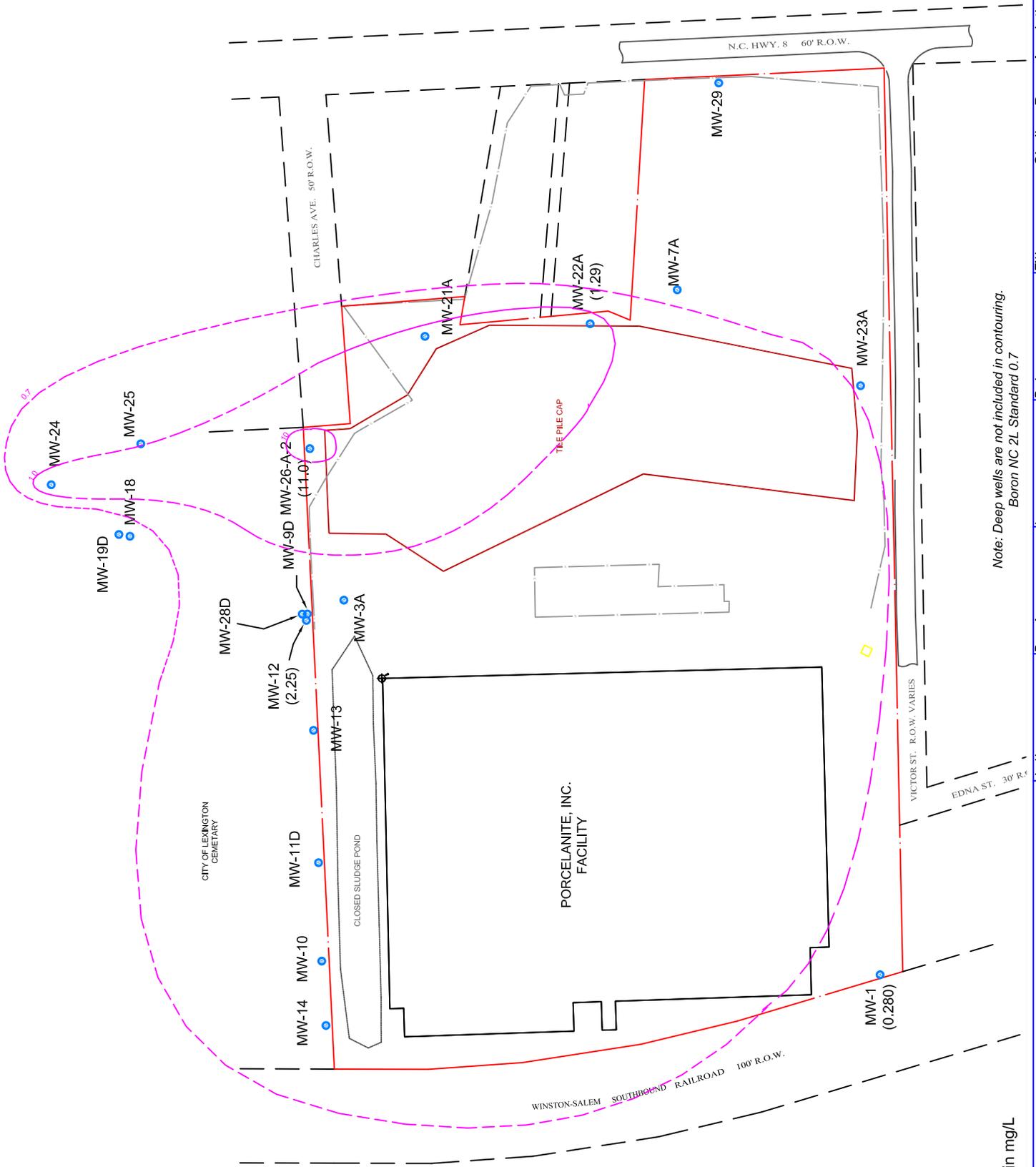
2065



All units in mg/L

Author		Drawing	Layers	Date	Title
plf	10-032 F03	4,11,16	Figure 3	4,11,16	NCGS Exceedance Map
R1-21	Revision 4,11,16	Scale 1" = 150'			(March 15, 2016 Data)
					Conduemx, Inc Facility
					Lexington, North Carolina





Note: Deep wells are not included in contouring.
Boron NC 2L Standard 0.7

All units in mg/L

Author		Drawing		Layers		Date		Title	
jme	16-032 F04	16-032 F04	4, 11, 16	Shallow Boron Isopleth Map (March 15, 2016 Data)		Project			
Job No. R1-21	Revision 4, 11, 16	Figure 4	Scale 1" = 150'	Conduemex, Inc Facility		Lexington, North Carolina			



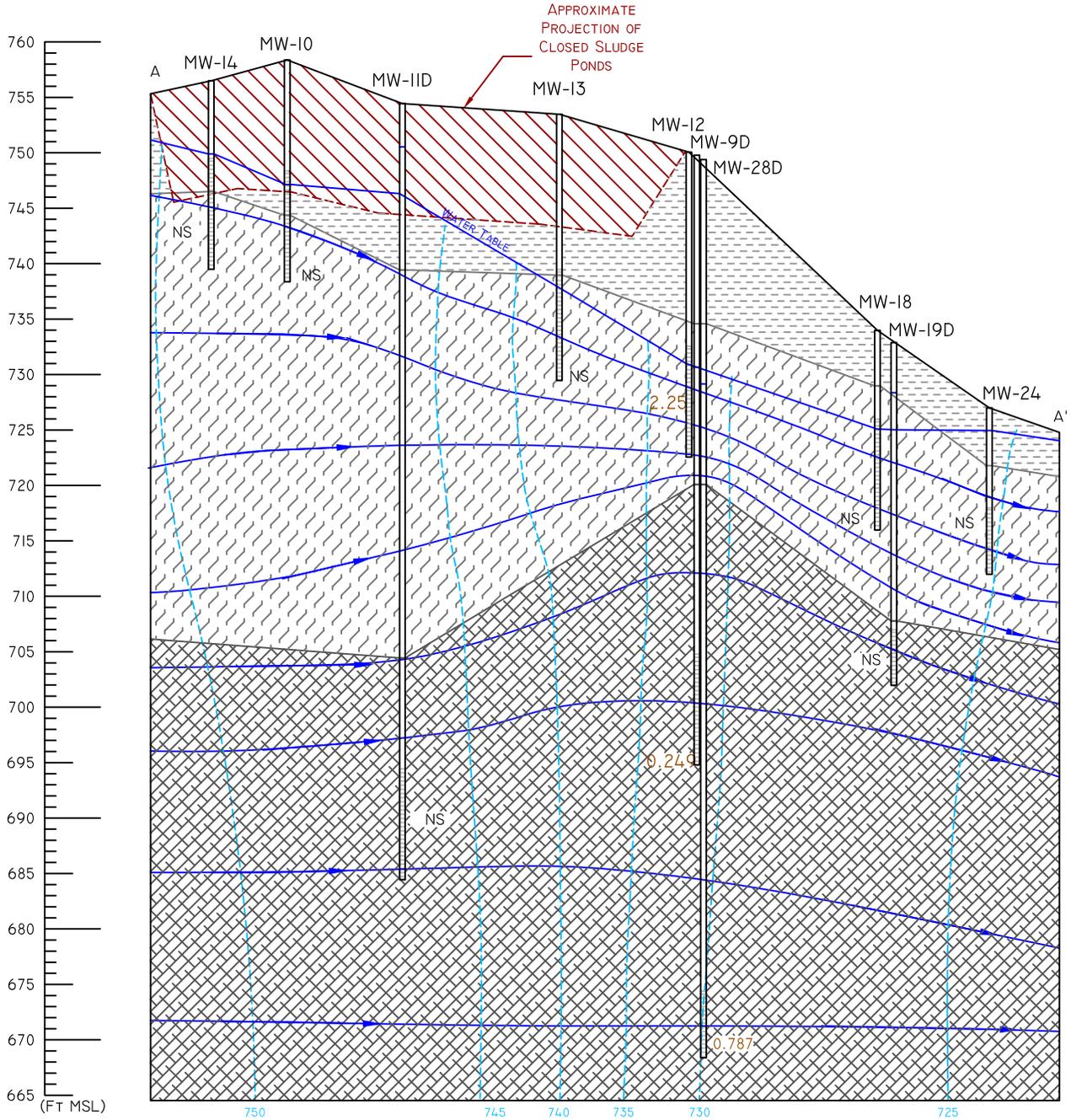


Author		Drawing	Layers	Date	Title
plf	16-032 F05	Figure	4.11.13	Cross Section Location Map	
R1-21	Revision	5	Scale	Project	
	4.12.2016	1" = 150'		Conduemx, Inc Facility Lexington, North Carolina	



LEGEND

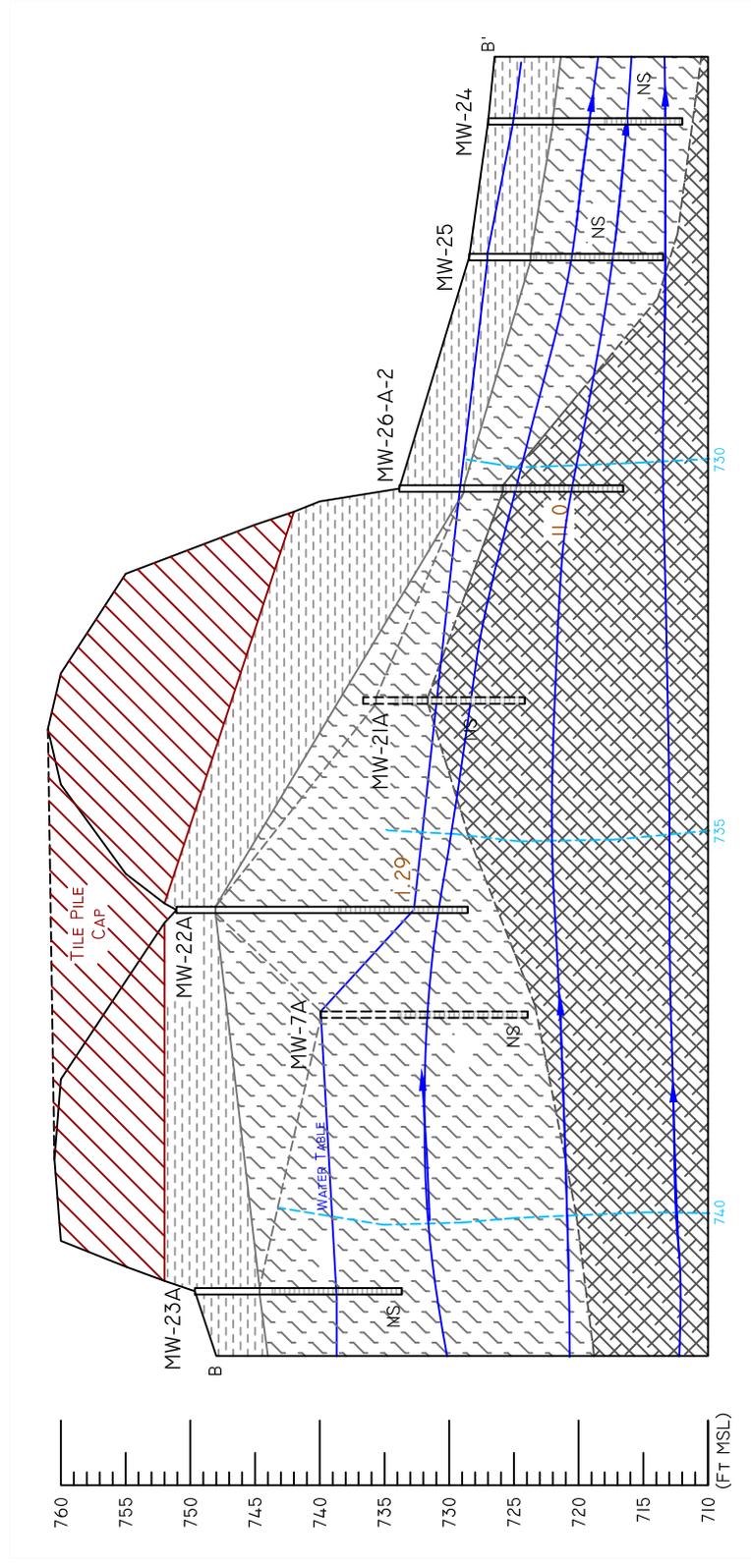
-  CLAYEY SAND SURFICIAL SOILS
-  SILTY SAND SAPROLITE SOILS
-  PARTIALLY WEATHERED GRANODIORITIC BEDROCK
-  CLOSED SLUDGE PONDS
- 1.06 BORON CONCENTRATION (IN MG/L)*
- NS MONITORING WELL NOT SAMPLED
-  EQUIPOTENTIAL LINE
-  GROUND WATER FLOW LINE / DIRECTION



Author plr	Drawing 16-032 F06	Layers	Date 4.11.16	Title Geologic Cross Section and Flow Net A and A' (March 15, 2016)
Job No. R1-21	Revision 4.11.16	Figure 6	Scale 1" = 150' VE = 10x	Project Condumex, Inc Lexington, North Carolina

LEGEND

-  CLAYEY SAND SURFICIAL SOILS
-  SILTY SAND SAPROLITE SOILS
-  PARTIALLY WEATHERED GRANODIORITIC BEDROCK
-  CAPPED TILE PILE
-  BORON CONCENTRATION (IN MG/L)
-  MONITORING WELL NOT SAMPLED
-  EQUIPOTENTIAL LINE
-  GROUND WATER FLOW LINE / DIRECTION



 WATERS EDGE ENVIRONMENTAL, LLC	Author	plf	Drawing	16-032 F07	Layers		Date	4.11.16	Title	Geologic Cross Section and Flow Net B and B'
	Job No.	R1-21	Revision	4.11.16	Figure	7	Scale	1" = 150' VE = 10x	Project	Conduemex, Inc Facility Lexington, North Carolina

TABLES

Table 1
Former Porcelanite, Inc.
March 2016
Groundwater Monitoring Well Data

Monitoring Well Identification	Top of Casing Elevation	Water Level Reading (3.15.16)	Ground Water Elevation	Pump Intake Elevation
MW-1	769.71	12.81	756.9	749.41
MW-7A	742.69	NM	NC	NM
MW-9	749.79	21.57	728.22	699.97
MW-10	757.81	NM	NC	643.42
MW-11	755.10	NM	NC	690.62
MW-12	749.59	17.78	731.81	727.80
MW-13	752.86	NM	NC	736.11
MW-14	756.92	NM	NC	744.54
MW-18	733.44	NM	NC	NM
MW-19	732.4	NM	NC	NM
MW-21A	739.31	NM	NC	NM
MW-22A	753.25	18.45	734.80	730.73
MW-23A	748.57	NM	NC	NM
MW-24	729.42	NM	NC	NM
MW-25	731.59	NM	NC	NM
MW-26A-2	749.44	19.64	729.80	722.44
MW-28	749.39	25.81	723.58	669.72
MW-29	753.19	NM	NC	NM

NC= Not Calculable

NM= Not Measured

Ground surface datum collected on May 15, 1999, August 2000 and September 2008

Waters Edge Environmental Job No. R1-21

Table 1
Former Porcelanite, Inc.
Groundwater Monitoring Well Data
Lexington, North Carolina

MW-1

Parameter	Units	Quantitation Limit	2L Standard	3/28/07	9/12/07	3/18/08	9/17/08	3/25/09	9/29/09	3/23/10	9/21/10
Metals											
Boron	mg/L	0.100	0.7	0.268	0.369	BQL	0.288	0.236	0.322	0.224	0.362
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Cobalt	mg/L	0.025	NS	0.344	0.818	0.222	0.042	0.259	0.295	BQL	BQL
Chromium	mg/L	0.010	0.01	BQL	0.013	BQL	BQL	BQL	BQL	BQL	BQL
Lead	mg/L	0.005	0.015	BQL	0.007	0.012	0.009	0.012	0.018	BQL	BQL
Manganese	mg/L	0.010	0.05	0.102	0.147	0.131	0.034	0.039	0.210	0.086	0.118
Zinc	mg/L	0.020	1.0	0.138	0.381	0.268	0.231	0.283	0.085	0.283	0.096

MW-1 (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/22/11	10/17/11	3/27/12	9/20/12	3/29/13	9/17/13	3/11/14	9/9/14
Metals											
Boron	mg/L	0.100	0.7	0.294	0.314	0.310	0.292	0.266	0.321	0.102	0.302
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Cobalt	mg/L	0.025	NS	0.074	0.056	0.279	0.158	0.124	0.124	BQL	0.062
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Lead	mg/L	0.005	0.015	0.009	0.007	BQL	0.006	0.006	0.007	BQL	0.010
Manganese	mg/L	0.010	0.05	0.086	0.021	0.073	0.023	0.014	0.036	BQL	0.034
Zinc	mg/L	0.020	1.0	0.108	0.208	0.182	0.132	0.330	0.222	0.206	0.096

MW-1 (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/24/15	9/23/15	3/15/16					
Metals											
Boron	mg/L	0.100	0.7	0.293	0.285	0.280					
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL					
Cobalt	mg/L	0.025	NS	0.036	BQL	0.026					
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL					
Lead	mg/L	0.005	0.015	0.005	BQL	0.015					
Manganese	mg/L	0.010	0.05	0.586	0.301	0.498					
Zinc	mg/L	0.020	1.0	0.068	0.105	0.229					

MW-1

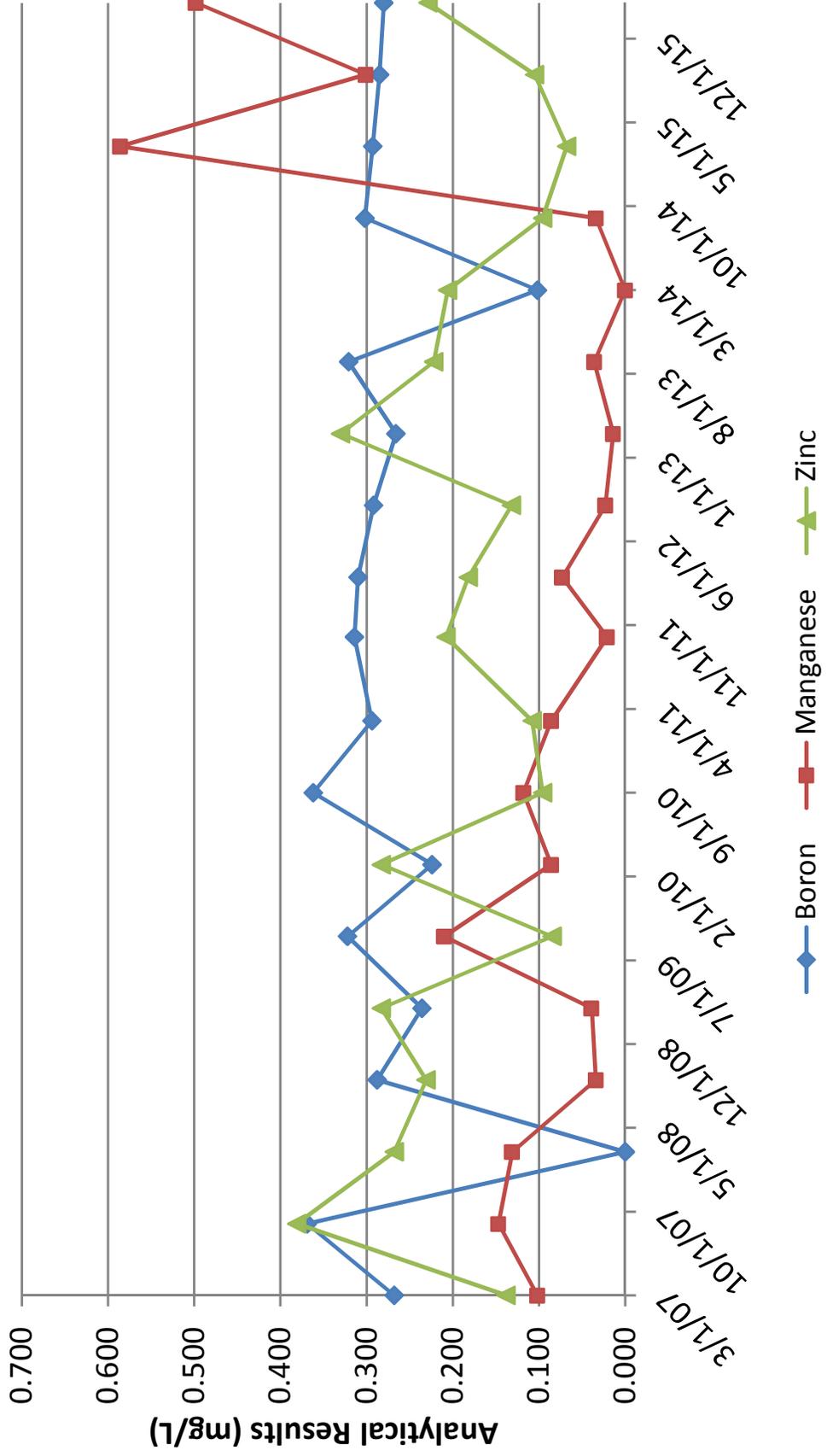


Table 1
Former Porcelanite, Inc.
Groundwater Monitoring Well Data
Lexington, North Carolina

MW-9D

Parameter	Units	Quantitation Limit	2L Standard	3/28/07	9/12/07	3/18/08	9/17/08	3/25/09	9/29/09	3/23/10	9/21/10
Metals											
Boron	mg/L	0.100	0.7	0.578	1.69	BQL	0.738	0.419	0.59	0.332	0.441
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Cobalt	mg/L	0.025	NS	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Lead	mg/L	0.005	0.015	BQL	BQL	BQL	0.006	BQL	BQL	BQL	0.006
Manganese	mg/L	0.010	0.05	0.033	0.412	0.058	0.160	0.035	0.034	0.058	0.043
Zinc	mg/L	0.020	1.0	1.30	2.50	1.5	1.01	1.09	1.10	1.16	1.21

MW-9D (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/22/11	10/17/11	3/27/12	9/20/12	3/29/13	9/17/13	3/11/14	9/9/14
Metals											
Boron	mg/L	0.100	0.7	0.613	0.136	0.527	0.497	BQL	0.385	0.260	0.355
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Cobalt	mg/L	0.025	NS	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Lead	mg/L	0.005	0.015	BQL	0.006	BQL	BQL	0.008	BQL	0.014	0.009
Manganese	mg/L	0.010	0.05	0.142	0.013	0.041	0.10	0.014	0.058	0.070	0.062
Zinc	mg/L	0.020	1.0	0.971	0.473	1.09	1.10	0.48	1.13	1.26	1.13

MW-9D (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/24/15	9/23/15	3/15/16					
Metals											
Boron	mg/L	0.100	0.7	0.266	0.737	0.249					
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL					
Cobalt	mg/L	0.025	NS	BQL	BQL	BQL					
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL					
Lead	mg/L	0.005	0.015	BQL	BQL	BQL					
Manganese	mg/L	0.010	0.05	0.05	0.039	0.056					
Zinc	mg/L	0.020	1.0	0.768	0.996	1.06					

MW-9D

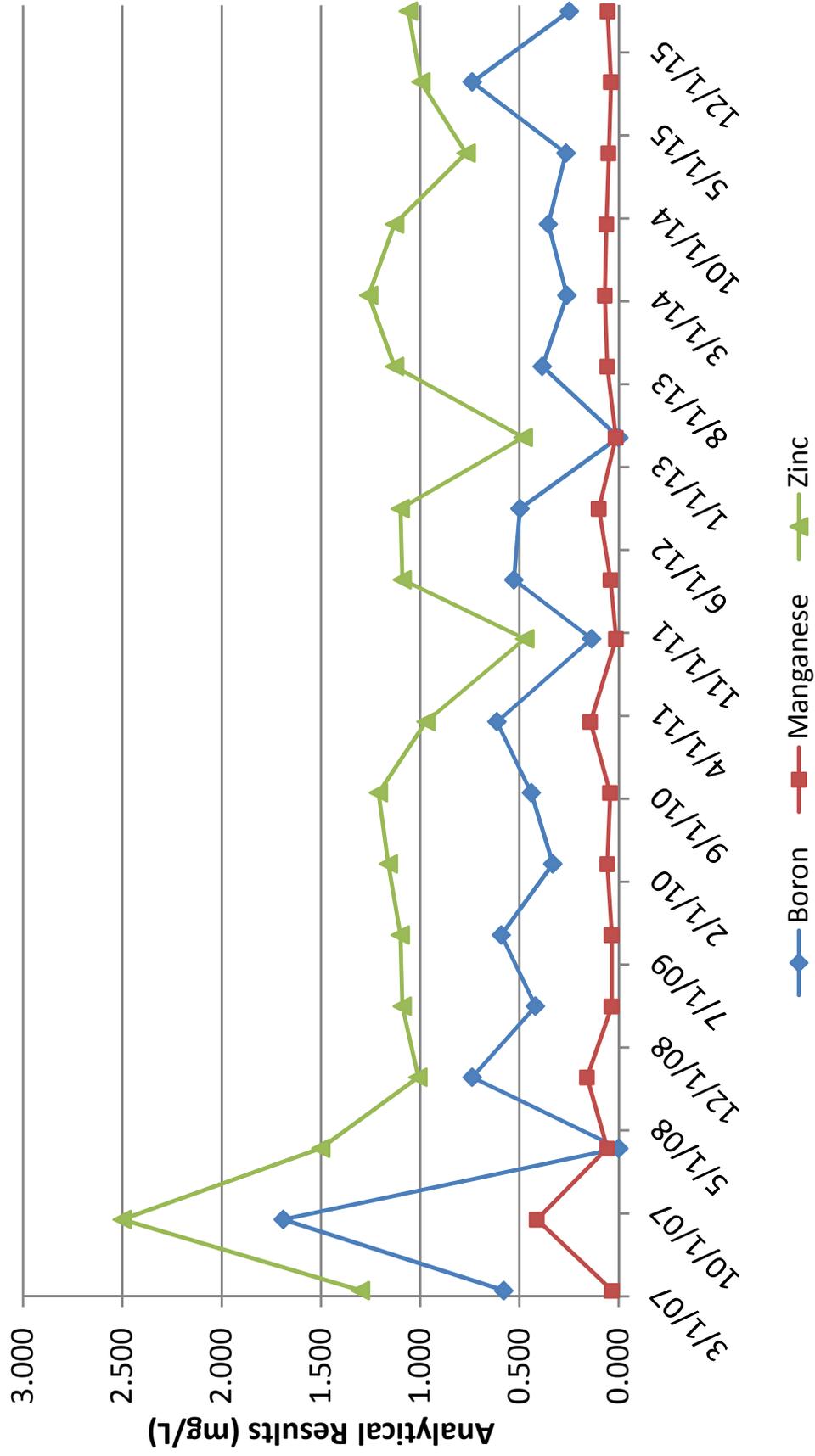


Table 1
Former Porcelanite, Inc.
Groundwater Monitoring Well Data
Lexington, North Carolina

MW-12

Parameter	Units	Quantitation Limit	2L Standard	3/28/07	9/12/07	3/18/08	9/17/08	3/25/09	9/29/09	3/23/120	9/21/10
Metals											
Boron	mg/L	0.100	0.7	3.70	1.79	BQL	1.35	2.34	1.23	2.49	2.65
Cadmium	mg/L	0.005	0.002	BQL							
Cobalt	mg/L	0.025	NS	BQL							
Chromium	mg/L	0.010	0.01	BQL							
Lead	mg/L	0.005	0.015	BQL	BQL	BQL	BQL	BQL	0.005	BQL	BQL
Manganese	mg/L	0.010	0.05	0.269	0.412	0.336	0.243	0.224	2.880	0.116	0.234
Zinc	mg/L	0.020	1.0	1.60	2.49	2.01	1.33	1.34	1.58	0.772	1.26

MW-12 (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/22/11	10/17/11	3/28/12	9/20/12	3/29/13	9/17/13	3/11/14	9/9/14
Metals											
Boron	mg/L	0.100	0.7	1.81	1.77	2.08	1.91	2.32	2.69	2.28	4.41
Cadmium	mg/L	0.005	0.002	BQL							
Cobalt	mg/L	0.025	NS	BQL							
Chromium	mg/L	0.010	0.01	BQL							
Lead	mg/L	0.005	0.015	BQL							
Manganese	mg/L	0.010	0.05	0.242	0.284	0.205	0.229	0.225	0.150	0.135	0.235
Zinc	mg/L	0.020	1.0	1.33	1.49	1.17	1.27	1.39	0.82	0.802	1.15

MW-12 (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/24/15	9/23/15	3/15/16					
Metals											
Boron	mg/L	0.100	0.7	2.31	1.12	2.25					
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL					
Cobalt	mg/L	0.025	NS	BQL	BQL	BQL					
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL					
Lead	mg/L	0.005	0.015	BQL	BQL	BQL					
Manganese	mg/L	0.010	0.05	0.175	0.205	0.121					
Zinc	mg/L	0.020	1.0	0.978	1.2	0.679					

MW-12

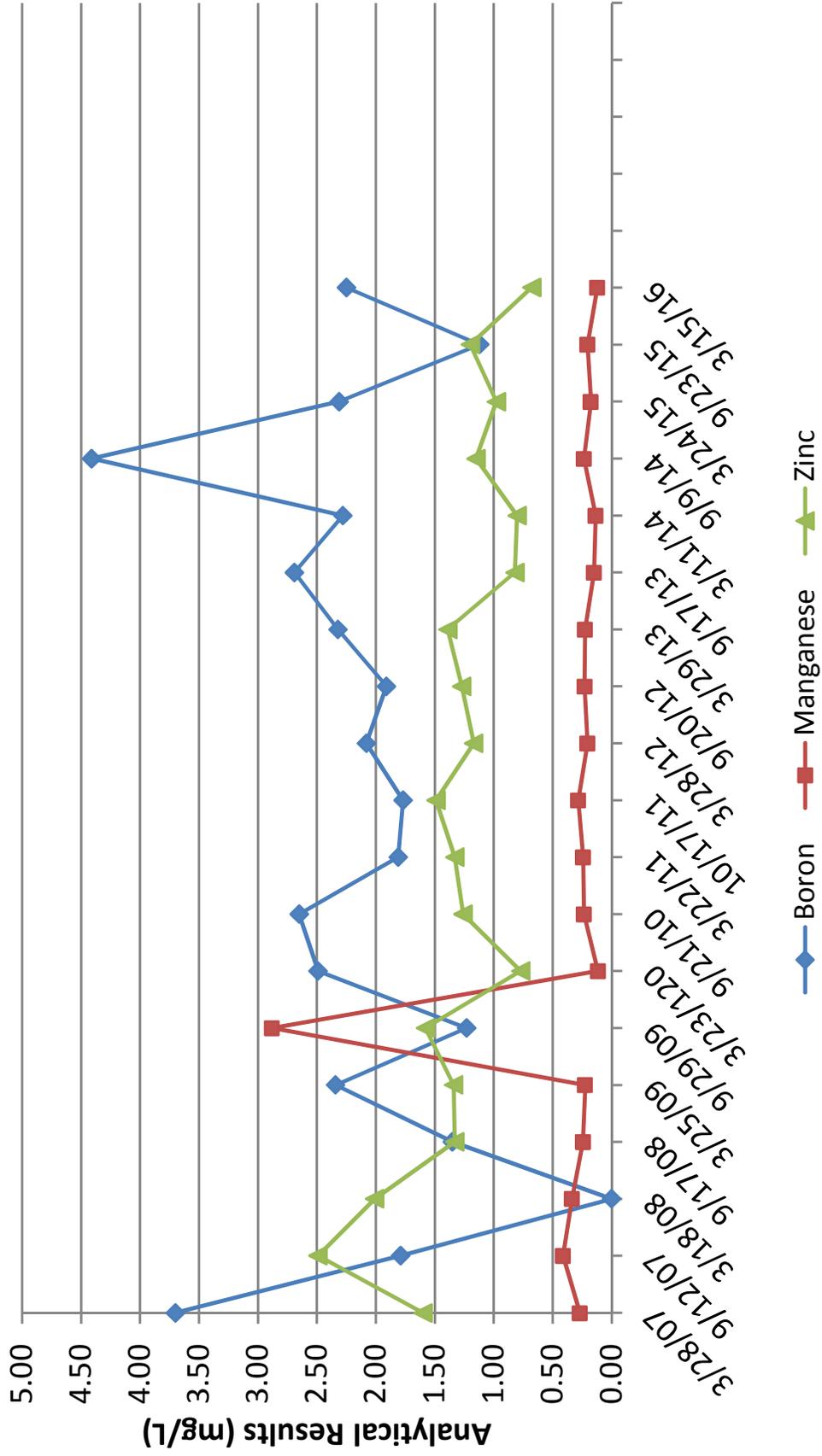


Table 1
Former Porcelanite, Inc.
Groundwater Monitoring Well Data
Lexington, North Carolina

MW-22A

Parameter	Units	Quantitation Limit	2L Standard	3/28/07	9/12/07	3/18/08	9/17/08	3/25/09	9/29/09	3/23/10	9/201/2010
Metals											
Boron	mg/L	0.100	0.7	1.98	11.3	0.187	5.30	1.79	3.28	1.60	2.04
Cadmium	mg/L	0.005	0.002	BQL							
Cobalt	mg/L	0.025	NS	BQL							
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL	0.031	0.022	0.010	BQL	BQL
Lead	mg/L	0.005	0.015	BQL	BQL	BQL	0.015	0.024	0.017	0.006	0.005
Manganese	mg/L	0.010	0.05	0.185	0.345	0.290	0.310	0.218	0.288	0.167	0.225
Zinc	mg/L	0.020	1.0	BQL	0.117	BQL	0.028	0.047	0.033	BQL	0.039

MW-22A (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/22/11	10/17/11	3/27/12	9/20/12	3/29/13	9/17/13	3/11/14	9/9/14
Metals											
Boron	mg/L	0.100	0.7	1.29	2.82	1.08	3.63	2.86	2.03	0.99	2.86
Cadmium	mg/L	0.005	0.002	BQL							
Cobalt	mg/L	0.025	NS	BQL							
Chromium	mg/L	0.010	0.01	BQL							
Lead	mg/L	0.005	0.015	0.008	BQL	BQL	0.008	BQL	0.006	BQL	0.007
Manganese	mg/L	0.010	0.05	0.195	0.254	0.284	0.242	0.248	0.232	0.188	0.256
Zinc	mg/L	0.020	1.0	0.048	BQL	0.042	BQL	BQL	0.020	BQL	BQL

MW-22A (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/24/15	9/23/15	3/15/16					
Metals											
Boron	mg/L	0.100	0.7	1.67	2.74	1.29					
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL					
Cobalt	mg/L	0.025	NS	BQL	BQL	BQL					
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL					
Lead	mg/L	0.005	0.015	BQL	0.006	0.011					
Manganese	mg/L	0.010	0.05	0.216	0.260	0.251					
Zinc	mg/L	0.020	1.0	BQL	0.027	0.025					

MW-22A

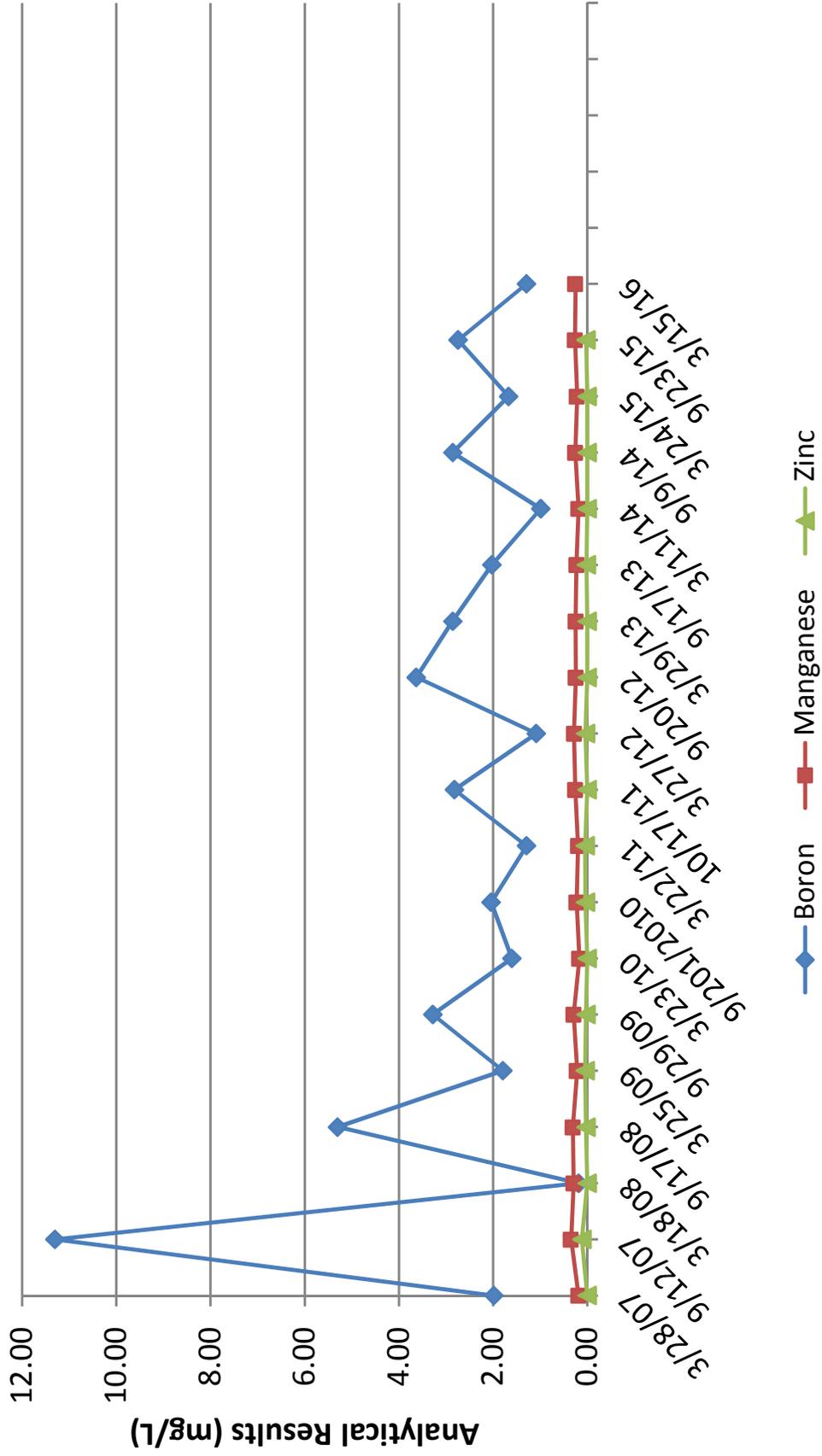


Table 1
Former Porcelanite, Inc.
Groundwater Monitoring Well Data
Lexington, North Carolina

MW-26A-2

Parameter	Units	Quantitation Limit	2L Standard	3/28/07	9/12/07	3/18/08	9/17/08	3/25/09	9/29/09	3/23/10	9/21/10
Metals											
Boron	mg/L	0.100	0.7	18.5	56.6	3,560	64.3	57.1	73.3	1.44	63.5
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Cobalt	mg/L	0.025	NS	0.028	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Lead	mg/L	0.005	0.015	0.126	BQL	BQL	0.008	0.007	BQL	0.010	0.008
Manganese	mg/L	0.010	0.05	0.788	2.24	1.52	1.66	1.27	1.41	1.37	1.57
Zinc	mg/L	0.020	1.0	1.54	0.119	0.102	0.223	1.03	0.367	1.36	0.912

MW-26A-2 (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/22/11	10/17/11	3/28/12	9/20/12	3/29/13	9/17/13	3/11/14	9/9/14
Metals											
Boron	mg/L	0.100	0.7	64.7	30.6	47.0	62.7	17.9	29.2	18.6	66.4
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Cobalt	mg/L	0.025	NS	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Lead	mg/L	0.005	0.015	0.005	0.012	BQL	0.006	BQL	BQL	BQL	BQL
Manganese	mg/L	0.010	0.05	1.84	0.669	1.42	2.43	0.22	0.242	0.271	2.33
Zinc	mg/L	0.020	1.0	0.912	2.73	1.55	0.43	2.97	2.88	2.11	1.56

MW-26A-2 (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/24/15	9/23/15	3/15/16					
Metals											
Boron	mg/L	0.100	0.7	17.6	69.9	11.0					
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL					
Cobalt	mg/L	0.025	NS	BQL	BQL	BQL					
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL					
Lead	mg/L	0.005	0.015	BQL	BQL	BQL					
Manganese	mg/L	0.010	0.05	0.268	2.49	0.152					
Zinc	mg/L	0.020	1.0	1.68	0.754	2.92					

MW-26A

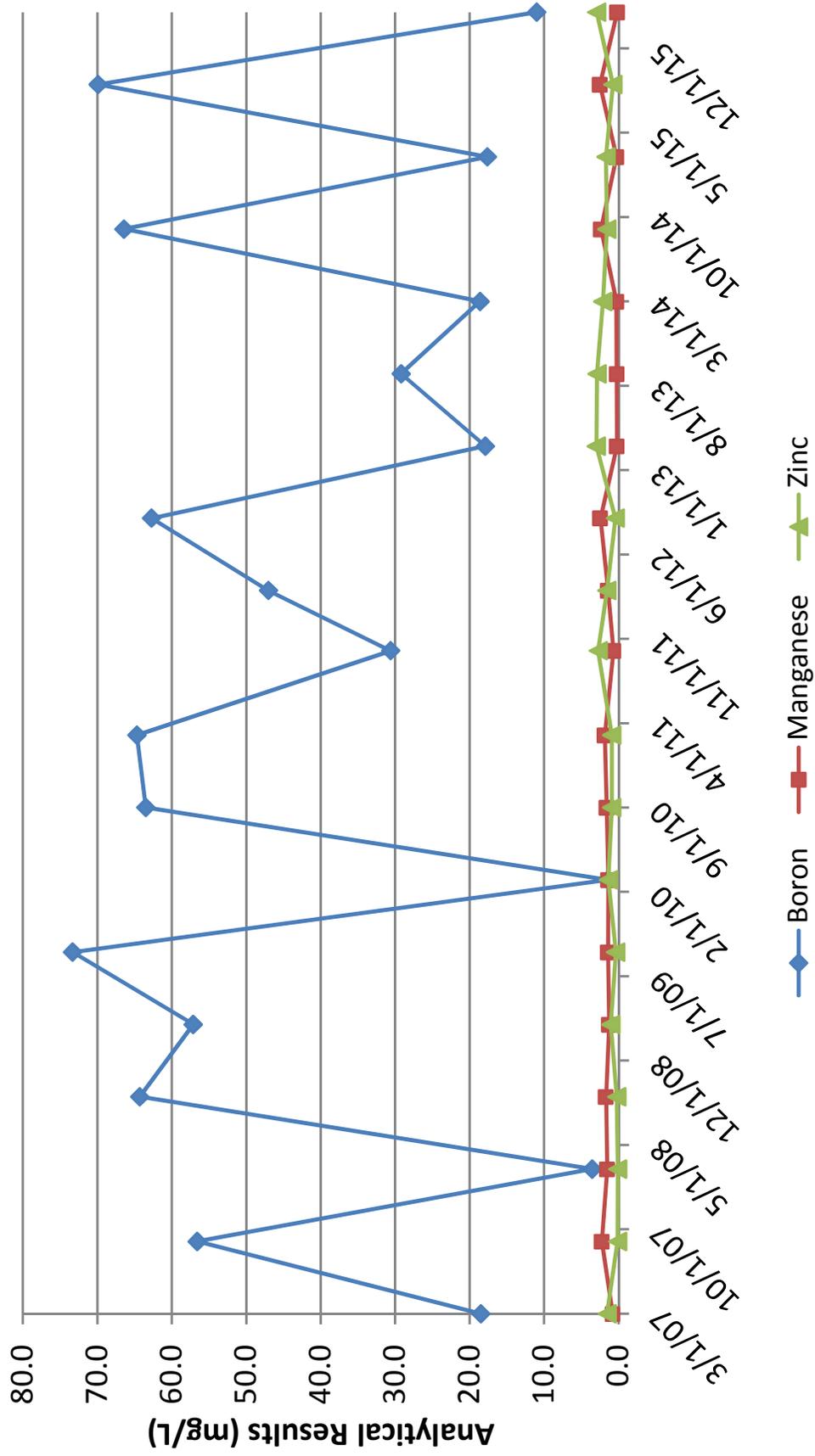


Table 1
Former Porcelanite, Inc.
Groundwater Monitoring Well Data
Lexington, North Carolina

MW-28D

Parameter	Units	Quantitation Limit	2L Standard	3/28/07	9/12/07	3/18/08	9/17/08	3/25/09	9/29/09	3/23/10	9/21/10
Metals											
Boron	mg/L	0.100	0.7	1.09	2.10	BQL	0.186	0.869	1.17	1.24	1.55
Cadmium	mg/L	0.005	0.002	BQL							
Cobalt	mg/L	0.025	NS	BQL							
Chromium	mg/L	0.010	0.01	0.102	BQL	0.016	0.024	0.021	0.023	0.018	0.024
Lead	mg/L	0.005	0.015	BQL	BQL	0.005	BQL	0.010	0.006	0.007	0.019
Manganese	mg/L	0.010	0.05	0.588	0.762	0.566	0.043	0.744	0.797	0.821	0.778
Zinc	mg/L	0.020	1.0	0.092	0.224	0.136	0.140	0.054	0.202	0.235	0.143

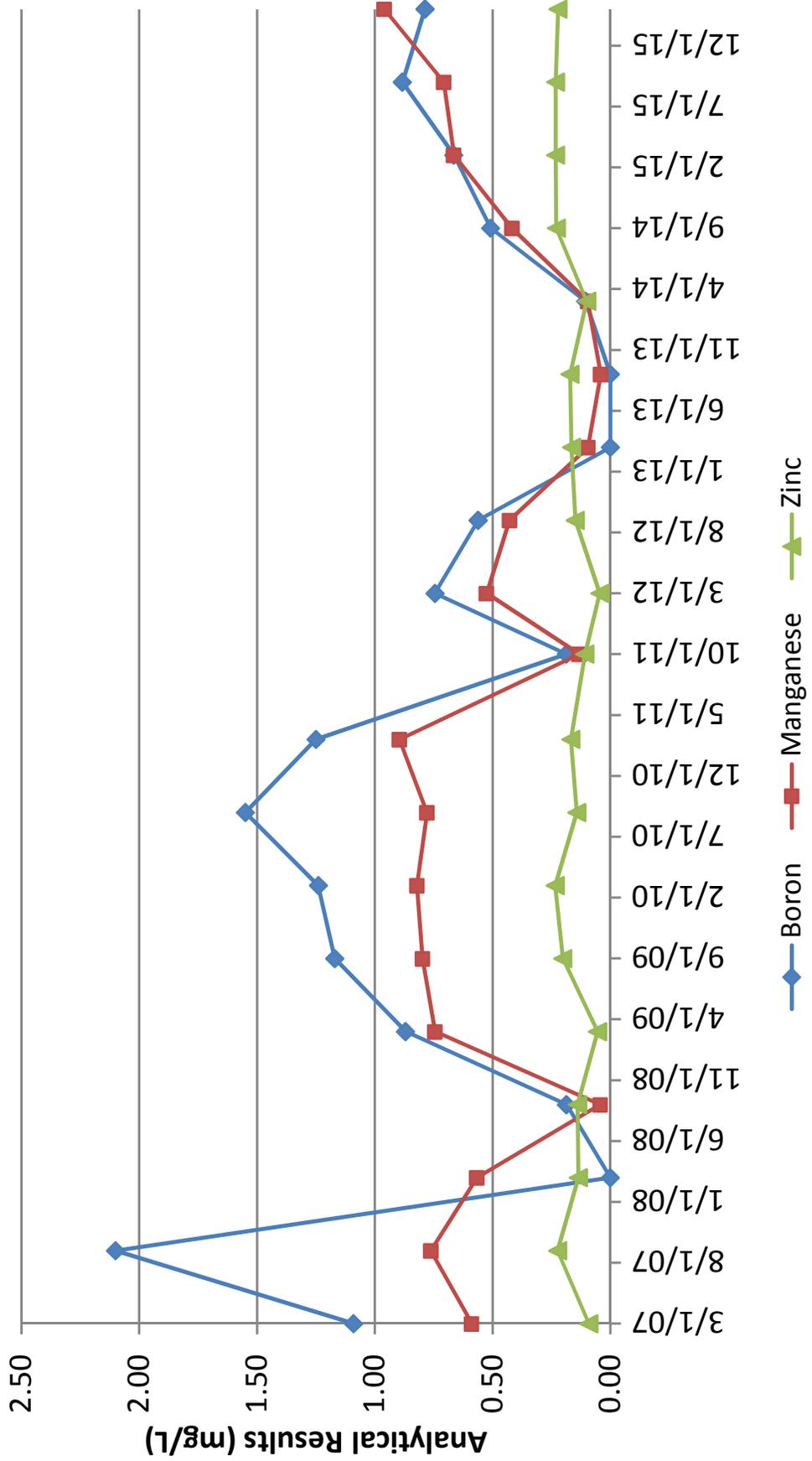
MW-28D (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/22/11	10/17/11	3/28/12	9/20/12	3/29/13	9/17/13	3/11/14	9/9/14
Metals											
Boron	mg/L	0.100	0.7	1.25	0.187	0.745	0.561	BQL	BQL	0.106	0.508
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Cobalt	mg/L	0.025	NS	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chromium	mg/L	0.010	0.01	0.019	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Lead	mg/L	0.005	0.015	0.007	BQL	BQL	BQL	BQL	BQL	BQL	0.007
Manganese	mg/L	0.010	0.05	0.895	0.132	0.525	0.428	0.095	0.041	0.096	0.418
Zinc	mg/L	0.020	1.0	0.168	0.108	0.045	0.149	0.165	0.171	0.101	0.230

MW-28D (cont.)

Parameter	Units	Quantitation Limit	2L Standard	3/24/15	9/23/15	3/15/16					
Metals											
Boron	mg/L	0.100	0.7	0.664	0.883	0.787					
Cadmium	mg/L	0.005	0.002	BQL	BQL	BQL					
Cobalt	mg/L	0.025	NS	BQL	BQL	BQL					
Chromium	mg/L	0.010	0.01	BQL	BQL	BQL					
Lead	mg/L	0.005	0.015	BQL	BQL	BQL					
Manganese	mg/L	0.010	0.05	0.664	0.707	0.959					
Zinc	mg/L	0.020	1.0	0.232	0.232	0.222					

MW-28D



APPENDIX A

Waters Edge Environmental
4901 Waters Edge Dr. Suite 201
Raleigh, North Carolina 27606
Attention: Accounts Payable (Phil Rahn)

TERMS: NET 30
"PAST DUE INVOICES ACCRUE
INTEREST AT 1 1/2 % INTEREST PER
MONTH UNTIL PAID
SHOULD COLLECTION BE REQUIRED,
CUSTOMER AGREES TO PAY
ALL EXPENSES INCURRED INCLUDING
ATTORNEY'S FEES"

**RESEARCH & ANALYTICAL
LABORATORIES, INC.**

RE: _____

Post Office Box 473

INVOICE NO. 92

Phone: 336/998-2841

P.O.# Not Available
Project Number: R1-21
Project Name: Porcelanite
Samples collected 03/15/16

STANDARD TURN AROUND TIME FOR MONITORING WELL SAMPLES

Analysis of eight (8) samples for

Boron, Total	
@ \$25.00/sample	\$200.00
Cadmium, Total	
@ \$12.00/sample	\$96.00
Chromium, Total	
@ \$12.00/sample	\$96.00
Cobalt, Total	
@ \$12.00/sample	\$96.00
Lead, Total	
@ \$12.00/sample	\$96.00
Manganese, Total	
@ \$12.00/sample	\$96.00
Zinc, Total	
@ \$12.00/sample	\$96.00

Total Invoice \$776.00

(reports enclosed)



RESEARCH & ANALYTICAL LABORATORIES, INC.

Report of Analysis

3/30/2016

For: Waters Edge

4901 Waters Edge Drive Suite 201
Raleigh, NC 27606

Attn: Phil Rahn



Client Sample ID: Porcelanite MW-1

Lab Sample ID: 16322-01

Site: Waters Edge Env

Collection Date: 3/15/2016 10:45

<u>Parameter</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Rep Limit</u>	<u>Analyst</u>	<u>Analysis Date/Time</u>
Boron, Total	EPA 200.7	0.280	mg/L	0.1	AA	3/29/2016
Cadmium, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Chromium, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Cobalt, Total	EPA 200.7	0.026	mg/L	0.025	JC	3/18/2016
Lead, Total	EPA 200.7	0.015	mg/L	0.005	JC	3/18/2016
Manganese, Total	EPA 200.7	0.498	mg/L	0.01	JC	3/18/2016
Zinc, Total	EPA 200.7	0.229	mg/L	0.02	JC	3/18/2016

NA = not analyzed



RESEARCH & ANALYTICAL LABORATORIES, INC.

Report of Analysis

3/30/2016

For: Waters Edge

4901 Waters Edge Drive Suite 201
Raleigh, NC 27606

Attn: Phil Rahn



Client Sample ID: Porcelanite MW-22A

Lab Sample ID: 16322-02

Site: Waters Edge Env

Collection Date: 3/15/2016 11:30

<u>Parameter</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Rep Limit</u>	<u>Analyst</u>	<u>Analysis Date/Time</u>
Boron, Total	EPA 200.7	1.29	mg/L	0.1	AA	3/29/2016
Cadmium, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Chromium, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Cobalt, Total	EPA 200.7	<0.025	mg/L	0.025	JC	3/18/2016
Lead, Total	EPA 200.7	0.011	mg/L	0.005	JC	3/18/2016
Manganese, Total	EPA 200.7	0.251	mg/L	0.01	JC	3/18/2016
Zinc, Total	EPA 200.7	0.025	mg/L	0.02	JC	3/18/2016

NA = not analyzed



RESEARCH & ANALYTICAL LABORATORIES, INC.

Report of Analysis

3/30/2016

For: Waters Edge

4901 Waters Edge Drive Suite 201

Raleigh, NC 27606

Attn: Phil Rahn



Client Sample ID: Porcelanite MW-26A

Lab Sample ID: 16322-03

Site: Waters Edge Env

Collection Date: 3/15/2016 12:30

<u>Parameter</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Rep Limit</u>	<u>Analyst</u>	<u>Analysis Date/Time</u>
Boron, Total	EPA 200.7	11.0	mg/L	0.1	AA	3/29/2016
Cadmium, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Chromium, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Cobalt, Total	EPA 200.7	<0.025	mg/L	0.025	JC	3/18/2016
Lead, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Manganese, Total	EPA 200.7	0.152	mg/L	0.01	JC	3/18/2016
Zinc, Total	EPA 200.7	2.92	mg/L	0.02	JC	3/21/2016

NA = not analyzed



RESEARCH & ANALYTICAL LABORATORIES, INC.

Report of Analysis

3/30/2016

For: Waters Edge

4901 Waters Edge Drive Suite 201
Raleigh, NC 27606

Attn: Phil Rahn



Client Sample ID: Porcelanite MW-12

Lab Sample ID: 16322-04

Site: Waters Edge Env

Collection Date: 3/15/2016 13:30

<u>Parameter</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Rep Limit</u>	<u>Analyst</u>	<u>Analysis Date/Time</u>
Boron, Total	EPA 200.7	2.25	mg/L	0.1	AA	3/29/2016
Cadmium, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Chromium, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Cobalt, Total	EPA 200.7	<0.025	mg/L	0.025	JC	3/18/2016
Lead, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Manganese, Total	EPA 200.7	0.121	mg/L	0.01	JC	3/18/2016
Zinc, Total	EPA 200.7	0.679	mg/L	0.02	JC	3/18/2016

NA = not analyzed



RESEARCH & ANALYTICAL LABORATORIES, INC.

Report of Analysis

3/30/2016

For: Waters Edge

4901 Waters Edge Drive Suite 201
Raleigh, NC 27606

Attn: Phil Rahn



Client Sample ID: Porcelanite MW-28

Lab Sample ID: 16322-05

Site: Waters Edge Env

Collection Date: 3/15/2016 14:30

<u>Parameter</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Rep Limit</u>	<u>Analyst</u>	<u>Analysis Date/Time</u>
Boron, Total	EPA 200.7	0.787	mg/L	0.1	AA	3/29/2016
Cadmium, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Chromium, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Cobalt, Total	EPA 200.7	<0.025	mg/L	0.025	JC	3/18/2016
Lead, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Manganese, Total	EPA 200.7	0.959	mg/L	0.01	JC	3/18/2016
Zinc, Total	EPA 200.7	0.222	mg/L	0.02	JC	3/18/2016

NA = not analyzed



RESEARCH & ANALYTICAL LABORATORIES, INC.

Report of Analysis

3/30/2016

For: Waters Edge

4901 Waters Edge Drive Suite 201
Raleigh, NC 27606

Attn: Phil Rahn



Client Sample ID: Porcelanite MW-9

Lab Sample ID: 16322-06

Site: Waters Edge Env

Collection Date: 3/15/2016 15:15

<u>Parameter</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Rep Limit</u>	<u>Analyst</u>	<u>Analysis Date/Time</u>
Boron, Total	EPA 200.7	0.249	mg/L	0.1	AA	3/29/2016
Cadmium, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Chromium, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Cobalt, Total	EPA 200.7	<0.025	mg/L	0.025	JC	3/18/2016
Lead, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Manganese, Total	EPA 200.7	0.056	mg/L	0.01	JC	3/18/2016
Zinc, Total	EPA 200.7	1.06	mg/L	0.02	JC	3/18/2016

NA = not analyzed



RESEARCH & ANALYTICAL LABORATORIES, INC.

Report of Analysis

3/30/2016

For: Waters Edge

4901 Waters Edge Drive Suite 201
Raleigh, NC 27606

Attn: Phil Rahn



Client Sample ID: Porcelanite Trip Blank

Lab Sample ID: 16322-07

Site: Waters Edge Env

Collection Date: 3/15/2016 14:00

<u>Parameter</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Rep Limit</u>	<u>Analyst</u>	<u>Analysis Date/Time</u>
Boron, Total	EPA 200.7	<0.1	mg/L	0.1	AA	3/29/2016
Cadmium, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Chromium, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Cobalt, Total	EPA 200.7	<0.025	mg/L	0.025	JC	3/18/2016
Lead, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Manganese, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Zinc, Total	EPA 200.7	<0.02	mg/L	0.02	JC	3/18/2016

NA = not analyzed



RESEARCH & ANALYTICAL LABORATORIES, INC.

Report of Analysis

3/30/2016

For: Waters Edge

4901 Waters Edge Drive Suite 201
Raleigh, NC 27606

Attn: Phil Rahn



Client Sample ID: Porcelanite Equipment Blank

Lab Sample ID: 16322-08

Site: Waters Edge Env

Collection Date: 3/15/2016 14:15

<u>Parameter</u>	<u>Method</u>	<u>Result</u>	<u>Units</u>	<u>Rep Limit</u>	<u>Analyst</u>	<u>Analysis Date/Time</u>
Boron, Total	EPA 200.7	<0.1	mg/L	0.1	AA	3/29/2016
Cadmium, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Chromium, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Cobalt, Total	EPA 200.7	<0.025	mg/L	0.025	JC	3/18/2016
Lead, Total	EPA 200.7	<0.005	mg/L	0.005	JC	3/18/2016
Manganese, Total	EPA 200.7	<0.01	mg/L	0.01	JC	3/18/2016
Zinc, Total	EPA 200.7	<0.02	mg/L	0.02	JC	3/18/2016

NA = not analyzed



RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations



Quality Control Summary Results for Project Identified as Porcelanite, Inc. (A Water's Edge Environmental Project #R1-21, collected 15 March 2016)

<u>Parameter</u>	<u>Prep Blank</u>	<u>ICV % Recovery</u>	<u>Spike % Recovery</u>	<u>Duplicate % Difference</u>
Boron, Total	BDL	96	98	1
Cadmium, Total	BDL	99	105	3
Chromium, Total	BDL	101	100	2
Cobalt, Total	BDL	105	109	2
Lead, Total	BDL	107	103	3
Manganese, Total	BDL	107	113	3
Zinc, Total	BDL	101	110	3

COMMENTS:

Corresponding Sample Numbers: 16322-01-08

% = Percent

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

LCS = Laboratory Control Sample

N/A = Not Applicable

