LANDFILL MAINTENANCE AND INSPECTION CERTIFICATION FORM

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate that information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true and accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Andy Kandray
Project Manager

I certify that I am a qualified engineer who has received a baccalaureate or post-graduate degree in engineering, and have sufficient training and experience in designing and/or evaluating landfills, as demonstrated by State registration and completion of accredited university courses, that enable me to make sound professional judgment regarding the effectiveness of engineering controls at this Site. I also certify that this report meets the requirements set forth in the Monitoring and Maintenance Plan for the Site. I further certify that this report was prepared by myself or by a subordinate working under my direction.

Tim R. Bricker, P.E.
Georgia P.E. No. 22621

NORTHSIDE DRIVE LANDFILL SITE
FIVE YEAR MONITORING AND MAINTENANCE REVIEW REPORT
(2009-2013)

GEORGIA WORLD CONGRESS CENTER
ATLANTA, GEORGIA

Prepared for:

Georgia Environmental Protection Division
2 Martin Luther King, Jr. Drive, S.E., Suite 1054
Atlanta, Georgia 30334-9000

Prepared by:

Tetra Tech

February 2014

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1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) has prepared this five year review of the Monitoring and Maintenance (M&M) Plan for the Georgia World Congress Center (GWCC) for activities conducted at the Northside Drive Landfill Site, Atlanta, Georgia (also known as the Jones Avenue Site, and hereafter referred to as the Site). This report is being submitted to the Georgia Environmental Protection Division (GA EPD) in partial fulfillment of requirements presented in the M&M Plan for Type 5 Risk Reduction Standards (RRS) for the Northside Drive Landfill Site (GA DNR 2003a).

The Type 5 RRSs allow the use of measures, such as engineering controls, that are designed to control the property where the regulated substances are located. Compliance with Type 5 standards at the Site requires long-tem monitoring and maintenance and also requires that Type I RRSs be met beyond the boundary for which compliance with Type 5 standards are sought once implementation of the remedial measures is complete.

This report evaluates the performance of the remedial alternative implemented in July 2003 as part of the Type 5 RRS of the Georgia Hazardous Site Response Regulations, Chapter 391-3-19-.07 (10) (GA DNR 2003a). This evaluation was supported by groundwater sampling events conducted from 2004 through 2013. The sampling events conducted from 2004 through 2008 were evaluated in the *Northside Drive Landfill Site Five Year Monitoring and Maintenance Review Report,* submitted to GA EPD in December 2009 (Tetra Tech 2009). This review report will evaluate results from the five annual sampling events conducted between December 2009 and December 2013. The purpose of these sampling events was to evaluate the performance of the remedial controls at the Site, and to establish existing conditions and background data that may be used for statistical analysis, if warranted. The performance criteria used to evaluate the remedial controls were the remedial objectives for groundwater outside the limits of the engineering controls at the Site, as provided in the GA EPD Rules for the Type 1 RRSs for regulated substances, Georgia Hazardous Sites Response Regulation, Chapter 391-3-19-.07 (GA DNR 2003a).

1.1 SITE DESCRIPTION

The Site was formerly listed on the State of Georgia's Hazardous Site Inventory pursuant to the Georgia Hazardous Site Response Act, but is now part of the Georgia Voluntary Remediation Program (VRP). Two tax parcels on the south side of John Street owned by the state of Georgia were combined into one tax parcel (tax parcel identification number 14- 0082-006-12-1). Six monitoring wells (MM-02, MWC-3C, MWC-3B, MWC-1A, MWC-1B, and MWC-1C) are located on property owned by the Atlanta Housing Authority on the north side of John Street at tax parcel identification number 14-0082-0006-008-9.

The landfill portions of the Site (also referred to as "landfill") were remediated using engineering and institutional controls, and a conservation easement. The engineering controls involved the installation of a soil-bentonite slurry wall and an engineered cap as illustrated in the approved "Revised As-Built Drawings" dated October 2003 (GA EPD 2003b). The institutional controls that were implemented consisted of a deed notice and a restrictive covenant which included the M&M Plan (GA EPD revised 2003d).

1.2 OBJECTIVES

Two years of quarterly sampling were completed between March 2004 and December 2005, in accordance with the M&M Plan (GA EPD 2003c). Subsequently, the frequency of groundwater sampling was reduced to once annually. In response to the detection of regulated substances in two of the wells (MM-03 and MWC-1A) during the 2011 and 2012 sampling events, supplemental quarterly sampling of the two wells commenced in September 2013. (The results of the quarterly sampling will be compiled at the end of 2014 and included in the Annual Groundwater Sampling Report #9, to be submitted to Georgia DNR in February 2015.)

The specific objectives of the groundwater sampling efforts are to identify and/or evaluate the following potential conditions:

- A release to groundwater of regulated substances from the landfill at concentrations above background and/or the Type 1 RRSs of the Georgia Hazardous Site Response Regulations of Chapter 391-3-19-.07

- Migration of existing concentrations of regulated substances to locations outside of the landfill

The quarterly and annual sampling events also involve the measurement of groundwater levels at site monitoring wells located both inside and outside the slurry wall to evaluate groundwater flow direction.

The specific objectives of this M&M review report are to summarize and evaluate routine inspection and maintenance activities, non-routine activities, and groundwater trends discerned through the previous five years and make recommendations as appropriate.

2.0 GROUNDWATER MONITORING ACTIVITIES

This section describes the applicable regulatory standards, procedures, and methods used by Tetra Tech to collect, analyze, and evaluate the groundwater samples collected during quarterly and annual sampling events over the previous five years. Specific details for each annual sampling event can be found in the respective annual sampling report (Tetra Tech 2010-2014a).

2.1 GROUNDWATER STANDARDS

Based on historical data collected during previous sampling events conducted by GA EPD and others, the regulated substances for the Site include polynuclear aromatic hydrocarbons (PAHs) and metals. The Georgia Type 1 RRS for regulated substances, presented in the Georgia Hazardous Site Response Regulations, Chapter 391-3-19-.07 (GA DNR 2003a) were used to establish the groundwater standards to be maintained for the landfill site. Table 1 lists the regulated substances monitored in groundwater at the Site, the frequency at which they were monitored during the five-year period, the Type 1 RRSs for each substance, and the laboratory analytical methods that were used to measure the concentrations of the analyte in the samples.

2.2 GROUNDWATER SAMPLING LOCATIONS

Water level measurements were collected from the landfill dewatering well, located inside the limits of the slurry wall, and from the nine groundwater monitoring wells located outside the landfill and slurry wall perimeter during quarterly and annual sampling events. The general location of each well is described below, and the locations are also shown on Figure 1:

- MM-04 – the upgradient, background monitoring well for site groundwater. Located on the southeastern corner of the site near the intersection of Bush Street and Gray Street.
- MM-01 – located near the western boundary of the site, along Northside Drive
- MM-02 – located on the northwestern corner of the western end of John Street, near the intersection of Northside Drive and John Street
- MWC-3B, MWC-3C – located just outside the northwestern corner of the site, near the intersection of John Street and Northside Drive
- MM-03 – located on the northern boundary of the site along John Street, midway between Northside Drive and Gray Street

- MWC-1A, MWC-1B, MWC-1C – located on the northeastern corner of the site at the intersection of John Street and Gray Street
- Dewatering well – located within the limits of the engineering controls of the landfill slurry wall near the northwest corner of the landfill

During the five year monitoring period from December 2009 through December 2013, groundwater samples were collected from each of the monitoring wells with the following exceptions:

- No sample was collected from MWC-1A during the December 2009 (Annual #4) sampling event due to insufficient water (≤6 inches) within the well
- No sample was collected from MWC-1A during the December 2010 (Annual #5) sampling event due to insufficient water within the well
- The limited quarterly sampling, which commenced in September 2013, involved sampling from only MM-03 and MWC-1A

To reduce the increased turbidity observed in the groundwater samples during the 2010 (Annual #5) sampling event, Tetra Tech performed redevelopment on all of the wells on-site, with the exception of the dewatering well, in November 2011. Wells were purged using a Waterra Hydrolift II inertial pump (Hydrolift II) until the purged water became clear, then the wells were surged and purged a second time until the purged water became clear again.

In accordance with the M&M plan, the site monitoring wells were sampled starting with the background well MM-04, and continuing with site monitoring wells MM-01, MM-02, MWC-3C, MWC-3B, MM-03, MWC-1A, MWC-1C and MWC-1B (GA EPD 2005).

2.3 FIELD MEASUREMENTS AND SAMPLE COLLECTION PROCEDURES

Water level measurements, field water quality parameter measurements, and sample collection were all performed in accordance with the requirements of the M&M plan for the Site. Before any field measurements or other activities began, the protective cap and casing cap at each well was removed and the breathing zone was checked for organic vapors using a TVA 1000 Photoionization Detector/Flame Ionization Detector (PID/FID). No elevated readings were observed within the breathing zone during the reporting period. The highest observed reading

within the headspace of the well during the reporting period was 24.6 parts per million (ppm), at MWC-3C during the December 2009 (Annual #4) sampling event.

The depth to groundwater was measured in the landfill dewatering well and in wells MM-04, MM-01, MM-02, MWC-3B, MWC-3C, MM-03, MWC-1A, MWC-1B and MWC-1C using an oil-water interface probe capable of measuring depth to groundwater and detecting the presence of light non-aqueous-phase liquids (LNAPL). For each measurement, a mark or notched point on the top of each well riser was used as the reference point. Groundwater level measurements were recorded to the nearest 0.01 foot. The probe was decontaminated prior to initial use and between wells. Table 2 provides the depth to groundwater for each well, as well as top of casing elevations, groundwater elevations, and water quality readings.

Field measurements of selected groundwater quality parameters were also performed during each groundwater sampling event conducted at the Site. These parameters included pH, temperature, specific conductivity, and turbidity.

Water quality parameters were measured using multi-parameter water quality meters (Horiba U22 in 2009 and 2010; Horiba U10 and LaMotte 2020e turbidity meter in 2011; and a YSI-556 and LaMotte 2020e turbidity meter in 2012 and 2013). The specified water quality parameters (pH, temperature, specific conductivity, and turbidity) were measured in the field initially and during the purging period of each well and the resulting data was recorded in a field logbook. Table 2 presents a summary of the groundwater levels and water quality parameters measured in the field during each sampling event conducted during the reporting period.

Groundwater sampling was performed in accordance with the U.S. Environmental Protection Agency (EPA) Region 4 Field Branch Quality System and Technical Procedures (FBQSTP) *Groundwater Sampling* (EPA 2007) and Section 3.2.2 of the M&M Plan (GA EPD 2003c). (*Groundwater Sampling* underwent two revisions during the reporting period; the appropriate revision was used in all cases). Tubing used in sample collection was certified-clean Teflon™-lined polyethylene tubing. Groundwater generated during well purging was discharged in accordance with M&M Plan requirements.

Collection of samples for laboratory analysis was performed with a low-flow pump after three (3) well casing volumes were purged and water quality parameters stabilized, in accordance with

Section 3.2.2 of the M&M Plan (GA EPD 2003c). During groundwater sampling activities, the depth to the pump intake for each sample was recorded on the Groundwater Sampling Data Sheets. Sample tubing was placed in the water column in accordance with the EPA groundwater sampling procedures, which recommends the pump intake be placed just below the water column when purging via the traditional multiple volume method (EPA 2013).

Samples were collected from all wells except the dewatering well. Sample containers were filled in order of decreasing volatility of the intended analytical parameters and preserved immediately upon collection. Field groundwater measurements, the method of purging and sampling, sampling personnel, the date and time of sample collection, the analytical parameters requested, and other pertinent information were recorded in the field logbook, on the groundwater sampling data sheets, and on the chain of custody forms.

One field duplicate sample was collected during each event. When the field duplicate sample was collected, one full set of sample containers was filled for the most volatile analytical parameter required for that well, and then a second duplicate set of sample containers was also filled for the same analytical parameter. This procedure was repeated, in order of decreasing volatility, until two sets of samples for all analytical parameters were collected.

After collection, sample containers were labeled, preserved, and placed on ice in coolers to maintain their temperature at 4 degrees Celsius. Appropriate EPA-approved chain of custody procedures were followed. Samples were packaged and shipped as specified in the M&M Plan (GA EPD, 2003d).

Groundwater purged from the monitoring wells during each sampling event was placed in 55-gallon drums, which were properly labeled and stored near the maintenance building located on the eastside of the newly constructed parking lot. After the analytical results from the groundwater samples collected from the corresponding monitoring wells established that COC concentrations in the groundwater were below detection limits, the purged water was discharged to the on-site storm water system.

2.4 GROUNDWATER SAMPLE ANALYSIS

Tetra Tech collected groundwater samples from nine monitoring wells during sampling events conducted from December 2011 through December 2013. Only eight wells were sampled during the December 2009 and December 2010 sampling events due to insufficient water (≤6 inches) within well MWC-1A. All groundwater samples were collected and analyzed in accordance with the current version of EPA Region 4 FBQSTP *Groundwater Sampling* and the M&M plan (EPA 2007; GA EPD, 2003d).

Groundwater samples collected during the 2009, 2010, and 2011 sampling events were transported by Tetra Tech to Analytical Environmental Services, Inc. (AES), located in Atlanta, Georgia, for laboratory analysis. Samples collected during the 2012 and 2013 sampling events were shipped via FedEx to Gulf Coast Analytical Laboratories (GCAL), located in Baton Rouge, Louisiana, for laboratory analysis. Each sample was analyzed for regulated substances identified for the Site (see Table 1).

Analytical results for the groundwater samples collected during each sampling event from 2009 through 2013 are summarized in Table 3 (metals) and 4 (PAHs).

3.0 EVALUTION OF GROUNDWATER TRENDS AND ANALYTICAL RESULTS

This section presents the field and laboratory analytical results of the groundwater samples collected during the sampling events conducted at the Site from 2009 through 2013. During these sampling events, no regulated substances established for monitoring at the Site were detected above the applicable remediation goals (RRS). A summary of the analytical results for the six (five annual and one quarterly) sampling events is presented in Table 3 (metals) and Table 4 (PAHs).

In general, groundwater samples collected from the monitoring wells were free of contaminants throughout the reporting period. Trace amounts of PAHs were detected in wells MM-03 and MWC-1A during the December 2011, December 2012, and December 2013 annual sampling events. All concentrations were below the applicable RSSs. Based on the PAH detections, a limited quarterly sampling schedule was implemented for these two wells, beginning in September 2013. The results of the quarterly sampling events will be compiled annually and reported with the annual sampling report, starting with the 9th Annual Groundwater Sampling Report.

The groundwater elevation data and potentiometric maps prepared during each of the five annual sampling events indicate that the site groundwater flows from the east-southeast (MM-04) toward the west-northwest at a fairly constant hydraulic gradient that appears to be independent of seasonal recharge conditions. A comparison of groundwater elevations in wells set at similar locations, but at different depths (wells MWC-1A, MWC-1B, and MWC-1C) indicates small vertical potentiometric gradients, varying between upward and downward. These conditions appear to persist throughout the study period.

The groundwater level in the landfill dewatering well decreased from December 2009 to December 2012 and then rebounded in 2013. A similar general trend was observed at the other wells and appears to correlate with periods of drought/heavy rain experienced throughout the region.

4.0 QUARTERLY INSPECTIONS

In accordance with Section 4.0 of the M&M Plan (GA EPD 2003c), Tetra Tech made quarterly visits to the site to inspect and maintain the engineering controls at the landfill and concrete cap. The components of these controls include the final cover and grading, drainage system, and groundwater monitoring network. The inspections were performed by a Georgia-certified Professional Engineer with experience in the design and/or evaluation of landfills.

During this reporting period, no major damage was noted at any of the engineering control components. Issues noted throughout the reporting period include: non-locatable granite markers, weathering of asphalt, minor soil erosion, and temporary pooling of water.

Inspection forms were completed for each inspection and submitted with the quarterly and semi-annual (semi-annual reporting of quarterly inspections began with Quarter 26 and 27) landfill maintenance and inspection report. Minor repairs were made by the Georgia World Congress Center Authority in accordance with recommendations noted in each inspection report.

5.0 NON-ROUTINE SITE ACTIVITIES

This section describes non-routine activities that occurred at the site during the reporting period.

5.1 JERSEY BARRIERS AND STEEL PLATES

Demolition activities conducted at the Herndon Homes property threatened to damage the integrity of monitoring wells located north of the landfill. Jersey barriers and steel plates were installed to protect the monitoring wells located on the Herndon Homes property during demolition activities and were removed upon completion of demolition activities in late September 2010. All wells appeared intact following these activities (Tetra Tech 2010-2014).

5.2 SOIL BORINGS AND ENGINEERING CONTROLS REPAIR

In 2013, as part of a due-diligence evaluation of the site for future reuse, Engineering and Environmental Services, Inc. (Langan), on behalf of Icon Venue Group and GWCC, proposed a subsurface investigation at the landfill. The purpose of the investigation was to collect soil and groundwater samples to analyze the landfill contents and to conduct geotechnical samples to better understand the suitability of the site for redevelopment.

Tetra Tech prepared a borehole completion process for Langan to follow to ensure that the integrity of the engineering controls disturbed during the soil investigation would not be compromised.

Langan installed a total of seven soil borings through the landfill cap and liner within the limits of the slurry wall on August 22 and 23, 2013. Soil boring activities were observed by Tetra Tech.

Tetra Tech also prepared a repair procedure to be followed upon completion of soil boring activities, and a Tetra Tech engineer observed all subsequent repair activities. Repairs made to the cap and liner following the subsurface investigation were certified by Tetra Tech that they met or exceeded the landfill's construction specifications (Tetra Tech 2013).

6.0 CONCLUSIONS

As a result of quarterly inspections and maintenance, and properly addressing non-routine activities that could affect the integrity of the engineering controls, the site has been maintained in accordance with the M&M plan.

Compliance with Chapter 391-3-19-.07(6) stipulates that concentrations of regulated substances shall not exceed the background or detection limit concentration (GA EPD 2003a). The PAH detections noted in wells MM-03 and MWC-1A during the December 2011, December 2012, and December 2013 annual sampling events exceed both of these criteria.

Based on professional judgment, Tetra Tech believes that the detection of these regulated substances are not outliers or statistical anomalies, and is currently in the process of collecting data on seasonal water level trends in all wells and seasonal contaminant concentrations in monitoring wells MM-03 and MWC-1A. These inputs will be used to determine the source of the detected PAHs, which may indicate an off-site release or other source unrelated to the Northside Drive Landfill.

Data generated during previous sampling events has established a fairly consistent groundwater flow direction towards the west-northwest throughout the sampling period. This suggests that the source of the PAH detections (located to the north and northeast of the former landfill) is likely off-site. However, all potentiometric data has been generated during December sampling events and may not account for potential seasonal groundwater flow fluctuations that may transport potential on-site regulated substances in an unanticipated direction. The implementation of the quarterly well gauging and sampling schedule is intended to fill this data gap.

If data generated by quarterly and annual sampling does not indicate an on-site PAH source, the most likely off-site PAH source is related to demolition activities at the former Herndon Homes location, just north of the landfill. Demolition and removal activities at Herndon Homes may have altered local groundwater flow conditions or introduced regulated substances into the groundwater itself; either possibility could account for the PAH detections since 2011.

Further data, generated by the current quarterly and annual groundwater sampling schedule, is necessary to identify the source of the PAH detections and ensure the integrity of the engineering controls in-place at the site.

Tetra Tech recommends continuing the on-going inspection plan and monitoring and maintenance plan.

7.0 REFERENCES

Georgia Department of Natural Resources (GA EPD), 2003a. "Type 1 Risk Reduction Standards, Georgia Hazardous Site Response Regulation, Chapter 391-3-19-.07". June.

GA EPD, 2003b. "Revised As-Built Drawings", Northside Drive Landfill Site, HSI Site 10222, Georgia Environmental Protection Division, Hazardous Waste Division". October 2003.

GA EPD 2003c. "Monitoring and Maintenance Plan, Georgia Environmental Protection Division, Hazardous Waste Division". Revised July 2005.

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Tetra Tech, 2009, Northside Drive Landfill Site Five Year Monitoring and Maintenance Review Report. Prepared for: Georgia Department of Natural Resources, Environmental Protection Division, December 2009.

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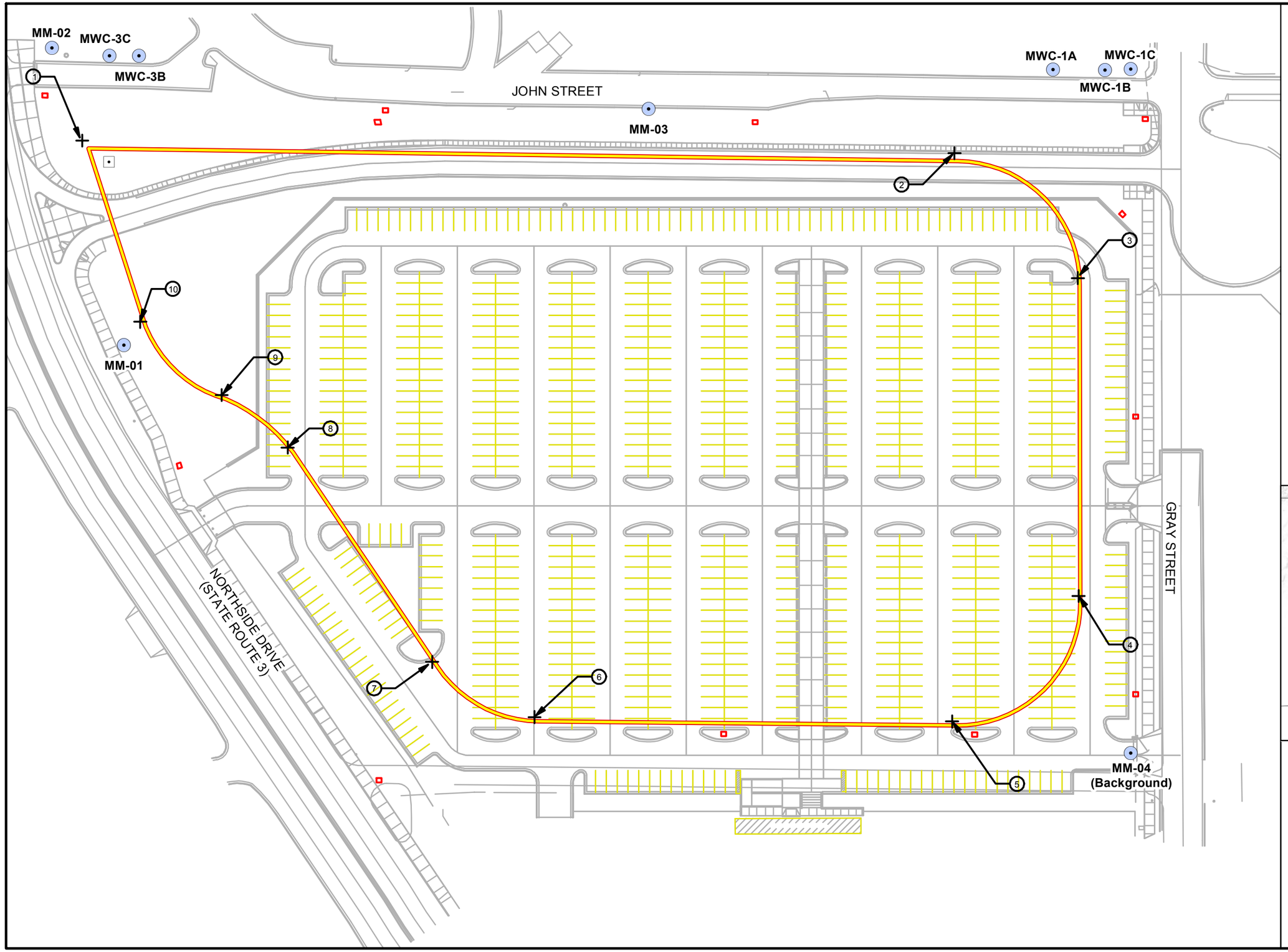
FIGURES



Legend

- Dewatering Well
- Existing Monitoring Well
- Property Monument
- Slurry wall
- (#) Reference Points

N
W E
S

0 40 80
Feet

Map Source:
Modified from Williams-Russell & Johnson, Inc.

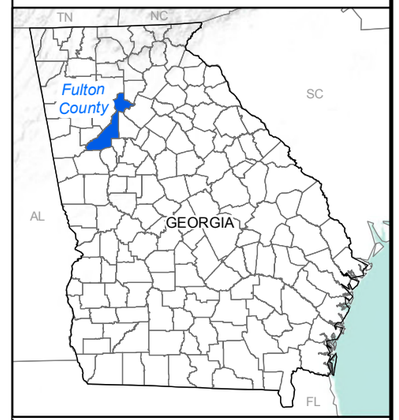


FIGURE 1

Site Location and Layout

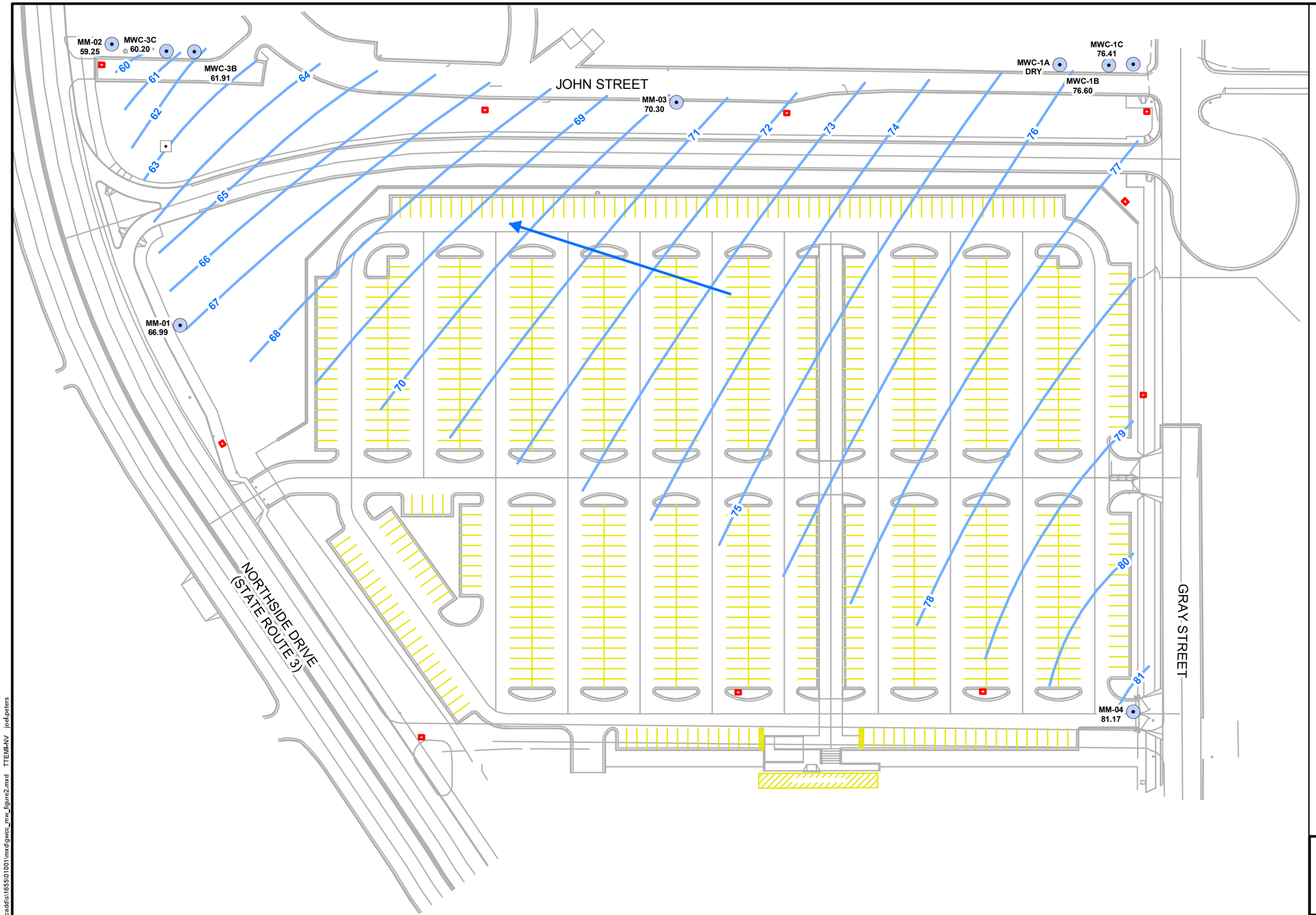
Proj. Name: 5-Year Monitoring and Maintenance Review
February, 2014
Northside Drive Landfill Site

Client: Georgia World Congress Center

City: Atlanta
County: Fulton
State: Georgia

TETRA TECH

Date: 2/9/2014
Analyst: dale.vonbusch



N
W E
S

LEGEND

- Existing Monitoring Well
- Dewatering Well
- Groundwater Contour
- Property Monument
- Groundwater Flow Direction

SOURCE: MODIFIED FROM WILLIAMS-RUSSELL & JOHNSON, INC.

0 40 80
Feet

FIGURE 2
NORTHSIDE DRIVE LANDFILL SITE
DECEMBER 16-17 2009
GEORGIA DOME
ATLANTA, GEORGIA

TETRA TECH

2010-02-02 s:\cadd\s\1655\01001\mxd\gwcc_nw_figure2.mxd TTEMI-NV joel.peters

MWC-3C
60.25
MM-02
58.98
MWC-3B
61.89
MWC-1B
75.82
MWC-1A
75.88
MWC-1C
75.97
JOHN STREET
Not Found
MM-03
70.03
60
61
62
63
64
65
66
67
MM-1
67.25
68
69
70
71
72
73
74
75
76
77
78
79
80
81
MM-04
81.63
NORTHSIDE DRIVE
(STATE ROUTE 3)
GRAY STREET

N
W
E
S

Legend

- Existing Monitoring Well
- Dewatering Well
- Groundwater Contour
- Property Monument

SOURCE: MODIFIED FROM WILLIAMS-RUSSELL & JOHNSON, INC.

0 40 80
Feet

FIGURE 3
POTENTIOMETRIC MAP

NORTHSIDE DRIVE LANDFILL SITE
DECEMBER 13-14, 2010
GEORGIA DOME
ATLANTA, GEORGIA

TETRA TECH

2010-06-25 s:\cadd\s\16655\01001\mxd\gwcc_photo_orientation_061810.mxd TTEMI-NV andrew.dye

MM-02
930.88

MWC-3C
931.92

MWC-3B
934.03

MWC-1A
947.84

MWC-1B
947.77

MWC-1C
947.93

JOHN STREET

MM-03
943.83

MM-01
939.04

931
932
933
934
935
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937
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951
952
953

NORTHSIDE DRIVE
(STATE ROUTE 3)

GRAY STREET

MM-04
(Background)
954.15

Legend

- Dewatering Well
- Existing Monitoring Well
- Groundwater Contour
- Groundwater Flow Direction
- Property Monument
- Slurry wall
- 932 — Groundwater elevations according to height above mean sea level, measured from the well top of casing

N
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S

0 40 80
Feet

Map Source:
Modified from Williams-Russell & Johnson, Inc.

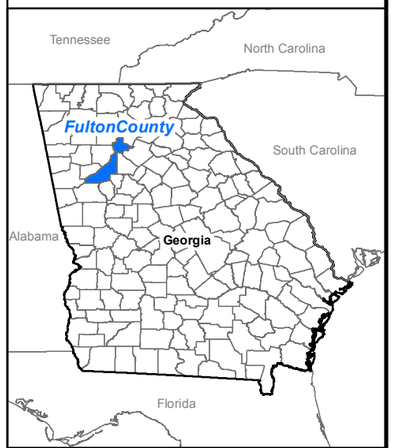

FIGURE 4

Potentiometric Map

Proj. Name: 6th Annual Groundwater Sampling Event
December 14-15, 2011
Northside Drive Landfill Site

Client: Georgia World Congress Center

City: Atlanta
County: Fulton
State: Georgia

TETRA TECH

Date: 2/14/2012
Analyst: eric.turner

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JOHN STREET

MM-02
930.18

MWC-3C
931.36

MWC-3B
932.94

MM-03
941.79

MWC-1A
947.5

MWC-1B
947.35

MWC-1C
947.3

MM-01
938.14

931
932
933
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937
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950
951
952

NORTHSIDE DRIVE
(STATE ROUTE 3)

GRAY STREET

MM-04
(Background)
952.91

Legend

- Dewatering Well
- Existing Monitoring Well
- Groundwater Contour
- Groundwater Flow Direction
- Property Monument
- Slurry wall
- 932 — Groundwater elevations according to height above mean sea level, measured from the well top of casing

N
W E
S

0 40 80
Feet

Map Source:
Modified from Williams-Russell & Johnson, Inc.

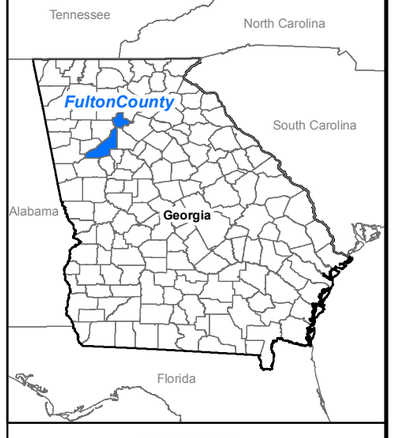


FIGURE 5

Potentiometric Map

Proj. Name: 7th Annual Groundwater Sampling Event
December 12-13, 2012
Northside Drive Landfill Site

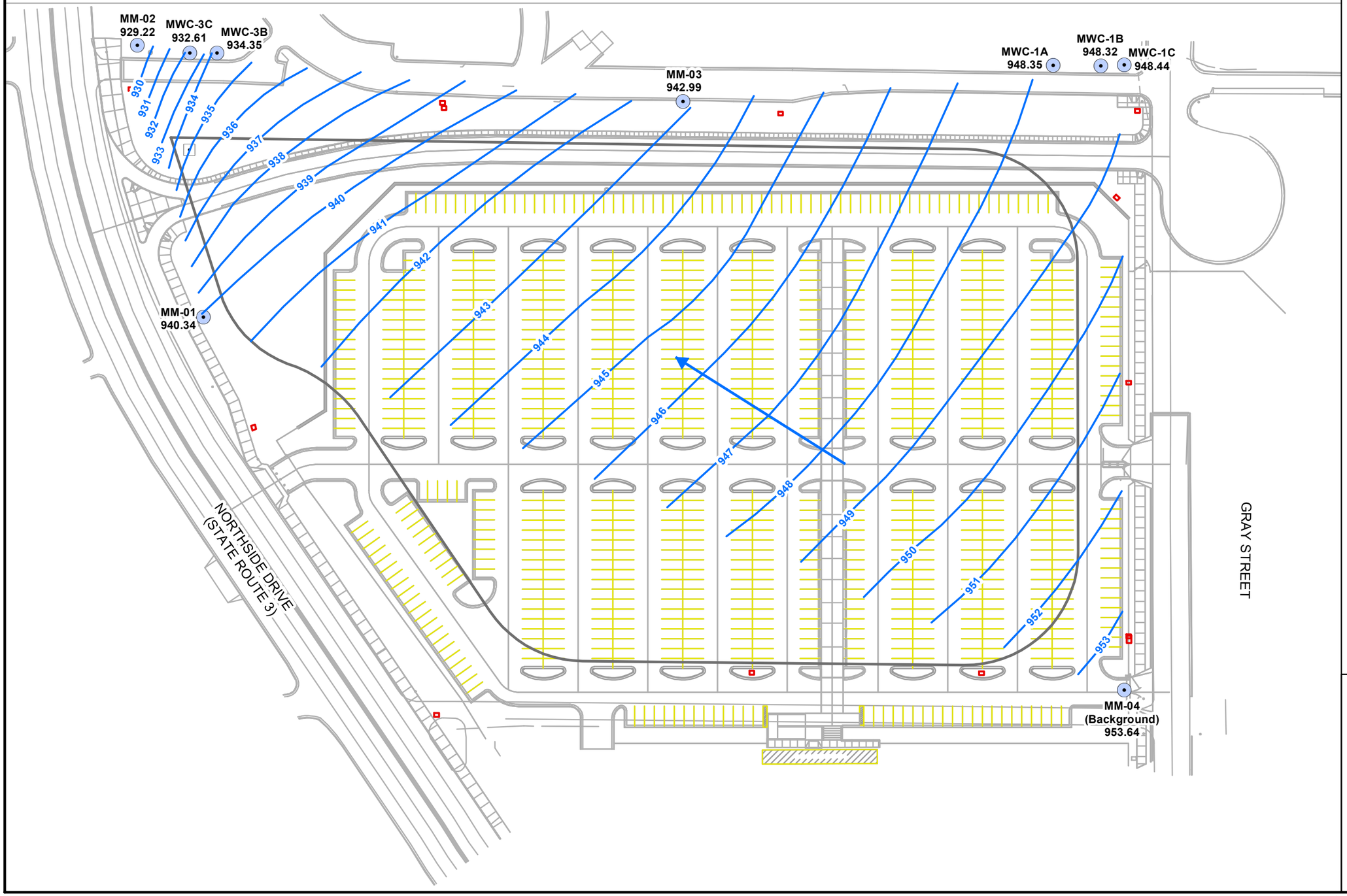
Client: Georgia World Congress Center

City: Atlanta
County: Fulton
State: Georgia

TETRA TECH

Date: 1/03/2013
Analyst: len.tyson

File: X:\TTEMI-103Z202801_GWCC\GIS\MXDs\GWCC_Figure_2_POT_Map_et_TT.mxd



Legend

- Dewatering Well
- Existing Monitoring Well
- Groundwater Contour
- Groundwater Flow Direction
- Property Monument
- Slurry wall
- 932 — Groundwater elevations according to height above mean sea level, measured from the well top of casing

N
W E
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0 40 80
Feet

Map Source:
Modified from Williams-Russell & Johnson, Inc.

FIGURE 6

Potentiometric Map

Proj. Name: 8th Annual Groundwater Sampling Event
December 10-11, 2013
Northside Drive Landfill Site

Client: Georgia World Congress Center

City: Atlanta
County: Fulton
State: Georgia

TETRA TECH

Date: 1/03/2013
Analyst: dale.vonbusch

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TABLES

TABLE 1
MONITORING AND MAINTENANCE REVIEW REPORT
SUMMARY OF GROUNDWATER FIELD PARAMETERS
NORTHSIDE DRIVE LANDFILL SITE

Regulated Substance	Frequency of Groundwater Monitoring (2009-2013)*	Type 1 RRS (mg/L)	Analytical Method
Organics			
Acenaphthene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	2	SW-846 8310
Acenaphthylene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	PQL[a]: 0.023	SW-846 8310
Anthracene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	PQL[a]: 0.0066	SW-846 8310
Benzo(a)anthracene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.00013	SW-846 8310
Benzo(a)pyrene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.00023	SW-846 8310
Benzo(b)fluoranthene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.0002	SW-846 8310
Benzo(k)fluoranthene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	PQL[a]: 0.00017	SW-846 8310
Benzo(g,h,i)perylene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	PQL[a]: 0.00076	SW-846 8310
Chrysene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.0002[b]	SW-846 8310
Dibenz(a,h)anthracene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.0003	SW-846 8310
Fluoranthene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	1	SW-846 8310
Fluorene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	1	SW-846 8310
Indeno(1,2,3-cd)pyrene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.00043	SW-846 8310
Naphthalene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.02	SW-846 8310
Phenanthrene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	PQL[a]: 0.0064	SW-846 8310
Pyrene	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	1	SW-846 8310
Metals			
Beryllium	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.004	SW-846 6010B
Lead	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.015	SW-846 6010B
Mercury	Annually; quarterly in MM-03 and MWC-1A, starting 9/13	0.002	SW-846 7470A

Notes:

*	Frequency of groundwater monitoring may be modified only upon receipt of EPD's approval.
a	The PQL presented is the value provided in SW-846 Method 8310 for a typical groundwater matrix in the absence of interference. Interference may cause the PQL value to increase. As such, this PQL value is provided for guidance and may not always be achieved.
b	The health-based drinking water criterion for this substance/analyte is lower than the lowest currently achievable and available detection limit. Accoring to Rule 391-3-19.07(4)€, the detection limit or background must be the Type I groundwater concentration criterion for this substance/analyte.
mg/L	Milligrams per liter
PQL	Practical quantitation limit
RRS	Georgia Environmental Protection Division Risk Reduction Standards
SW-846	U.S. EPA. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. Including updates I, II, IIA, IIB, III, and IIIA to the Third Edition. September 1986 through 1998.

TABLE 2
MONITORING AND MAINTENANCE REVIEW REPORT
SUMMARY OF GROUNDWATER FIELD PARAMETERS
NORTHSIDE DRIVE LANDFILL SITE

Well ID	Annual Sampling Event Date	TOC Elevation (ft)	Depth to Well Bottom (ft)	Depth to GW (ft)	GW Elevation (ft)	Depth to Sample Intake (ft)	pH (s.u.)	Conductivity (mS/cm)	Temp (°C)	Turbidity (NTU)
MM-04 (Background)	Dec. 16-17, 2009	970.75	45.35	17.47	953.28	NR	5.42	0.14	20.11	24
	Dec. 13-14, 2010	970.75	45.35	17.01	953.74	NR	5.93	0.153	20.30	19.8
	Dec. 14-15, 2011	970.75	45.35	16.60	954.15	35.00	5.84	0.108	21.60	0.00
	Dec. 12-13, 2012	970.75	45.35	17.84	952.91	40.00	5.37	0.155	20.90	0.61
	Dec. 10-11, 2013	970.75	45.35	17.11	953.64	21.94	6.07	0.120	18.01	0.06
MM-01	Dec. 16-17, 2009	957.52	27.53	18.42	939.10	NR	5.91	0.112	19.31	196
	Dec. 13-14, 2010	957.52	27.53	18.16	939.36	NR	6.16	0.339	19.60	104
	Dec. 14-15, 2011	957.52	27.53	18.48	939.04	20.00	5.81	0.294	19.70	1.95
	Dec. 12-13, 2012	957.52	27.53	19.38	938.14	22.00	5.28	0.804	19.33	0.57
	Dec. 10-11, 2013	957.52	27.53	17.18	940.34	23.00	6.03	0.254	18.15	4.45
MM-02	Dec. 16-17, 2009	941.72	16.90	10.36	931.36	NR	6.26	0.359	20.80	158
	Dec. 13-14, 2010	941.72	16.90	10.63	931.09	NR	6.49	0.574	20.00	12.2
	Dec. 14-15, 2011	941.72	16.90	10.84	930.88	13.00	6.31	0.402	19.90	0.05
	Dec. 12-13, 2012	941.72	16.90	11.54	930.18	12.00	6.21	0.426	20.14	0.00
	Dec. 10-11, 2013	941.72	16.90	12.50	929.22	12.50	6.45	0.399	19.20	0.00
MWC-3C	Dec. 16-17, 2009	943.12	29.30	10.81	932.31	NR	6.41	0.402	19.74	106
	Dec. 13-14, 2010	943.12	29.30	10.76	932.36	NR	6.57	0.665	17.60	121
	Dec. 14-15, 2011	943.12	29.30	10.91	932.21	21.00	6.40	0.588	19.70	0.00
	Dec. 12-13, 2012	943.12	29.30	11.76	931.36	24.00	6.32	0.677	19.74	0.71
	Dec. 10-11, 2013	943.12	29.30	10.51	932.61	13.00	6.63	0.557	19.01	0.00
MWC-3B	Dec. 16-17, 2009	944.8	24.88	10.78	934.02	NR	6.80	0.465	20.40	119
	Dec. 13-14, 2010	944.8	24.88	10.80	934.00	NR	7.01	0.739	19.60	5.00
	Dec. 14-15, 2011	944.8	24.88	10.77	934.03	18.00	6.89	0.547	20.20	0.22
	Dec. 12-13, 2012	944.8	24.88	11.86	932.94	20.00	6.88	0.549	20.33	0.71
	Dec. 10-11, 2013	944.8	24.88	10.45	934.35	13.00	7.03	0.599	19.29	0.59
MM-03 & MM-03-DUP	Dec. 16-17, 2009	957.92	30.20	15.51	942.41	NR	5.67	0.185	19.84	101
	Dec. 13-14, 2010	957.92	30.20	15.78	942.14	NR	6.01	0.273	19.80	7.70
	Dec. 14-15, 2011	957.92	30.20	14.09	943.83	24.00	5.89	0.324	19.90	0.53
	Dec. 12-13, 2012	957.92	30.20	16.13	941.79	25.00	5.70	0.362	20.06	1.10
	Sept. 23, 2013	957.92	30.20	14.71	943.21	15.70	5.84	0.212	21.11	1.10
	Dec. 10-11, 2013	957.92	30.20	14.93	942.99	17.00	6.03	0.224	20.00	0.41
MWC-1A	Dec. 16-17, 2009	961.1	12.51	Not sampled due to insufficient water						
	Dec. 13-14, 2010	961.1	13.99	Not sampled due to insufficient water						
	Dec. 14-15, 2011	961.1	13.99	13.26	947.84	13.60	5.54	0.224	19.4	0.04
	Dec. 12-13, 2012	961.1	18.42	13.60	947.50	13.00	5.25	0.279	19.2	0.31
	Dec. 10-11, 2013	961.1	18.42	12.75	948.35	15.00	5.91	0.199	18.48	0.31
MWC-1B	Dec. 16-17, 2009	960.77	55.68	12.06	948.71	NR	5.73	0.227	19.75	31.0
	Dec. 13-14, 2010	960.77	55.68	12.84	947.93	NR	5.89	0.006	20.40	0.50
	Dec. 14-15, 2011	960.77	55.68	13.00	947.77	51.00	5.36	0.419	20.80	1.94
	Dec. 12-13, 2012	960.77	55.68	13.42	947.35	50.00	5.62	0.595	19.92	0.85
	Dec. 10-11, 2013	960.77	55.68	12.45	948.32	19.87	5.90	0.396	18.83	1.59
MWC-1C	Dec. 16-17, 2009	960.38	76.45	11.86	948.52	NR	6.08	0.339	20.99	7.00
	Dec. 13-14, 2010	960.38	76.45	12.30	948.08	NR	5.89	0.617	20.70	0.30
	Dec. 14-15, 2011	960.38	76.45	12.45	947.93	71.00	5.73	0.561	20.60	0.00
	Dec. 12-13, 2012	960.38	76.45	13.08	947.30	71.00	5.79	0.787	20.21	0.16
	Dec. 10-11, 2013	960.38	76.45	11.94	948.44	36.02	6.17	0.591	19.07	0.19
DWW	Dec. 16-17, 2009	951.3	18.90	14.85	936.45	NA	NA	NA	NA	NA
	Dec. 13-14, 2010	951.3	18.90	14.91	936.39	NA	NA	NA	NA	NA
	Dec. 14-15, 2011	951.3	18.90	14.95	936.35	NA	NA	NA	NA	NA
	Dec. 12-13, 2012	951.3	18.90	15.98	935.32	NA	NA	NA	NA	NA
	Dec. 10-11, 2013	951.3	18.90	14.41	936.89	NA	NA	NA	NA	NA

Notes:

°C	degrees Celcius
GW	Groundwater
ft	feet
ID	Identification
mS/cm	Millisiemens per centimeter
NA	Not analyzed
NR	Not recorded
NTU	Nephelometric Turbidity Units
s.u.	Standard Units
TOC	Top of casing, relative to corrected elevation above mean sea level

Depths recorded are measured as depths below TOC
Well redevopment took place Nov 15-16, 2011, contributing to generally lower turbidity values

TABLE 3
MONITORING AND MAINTENANCE REVIEW REPORT
SUMMARY OF METALS ANALYTICAL RESULTS
NORTHSIDE DRIVE LANDFILL SITE

Well ID	Annual Sampling Event Date	Beryllium (µg/L)	Lead (µg/L)	Mercury (µg/L)
RRS		4	15	2
MM-04 (Background)	Dec. 16-17, 2009	< 10.0	< 10.0	< 0.20
	Dec. 13-14, 2010	< 10.0	< 10.0	< 0.20
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20
MM-01	Dec. 16-17, 2009	< 10.0	< 10.0	0.06 J
	Dec. 13-14, 2010	< 10.0	< 10.0	< 0.20
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20
MM-02	Dec. 16-17, 2009	< 10.0	< 10.0	< 0.20
	Dec. 13-14, 2010	< 10.0	< 10.0	< 0.20
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20
MWC-3C	Dec. 16-17, 2009	< 10.0	< 10.0	< 0.20
	Dec. 13-14, 2010	< 10.0	< 10.0	< 0.20
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20
MWC-3B	Dec. 16-17, 2009	< 10.0	< 10.0	< 0.20
	Dec. 13-14, 2010	< 10.0	< 10.0	< 0.20
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20
MM-03	Dec. 16-17, 2009	< 10.0	< 10.0	< 0.20
	Dec. 13-14, 2010	< 10.0	< 10.0	< 0.20
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20
MM-03-DUP	Dec. 16-17, 2009	< 10.0	< 10.0	< 0.20
	Dec. 13-14, 2010	< 10.0	< 10.0	< 0.20
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20
MWC-1A	Dec. 16-17, 2009	Not sampled due to insufficient water		
	Dec. 13-14, 2010	Not sampled due to insufficient water		
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20
MWC-1B	Dec. 16-17, 2009	< 10.0	< 10.0	< 0.20
	Dec. 13-14, 2010	< 10.0	< 10.0	< 0.20
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20
MWC-1C	Dec. 16-17, 2009	< 10.0	< 10.0	0.09 J
	Dec. 13-14, 2010	< 10.0	< 10.0	< 0.20
	Dec. 14-15, 2011	< 1.0	< 1.0	< 0.20
	Dec. 12-13, 2012	< 5.0	< 15	< 0.20
	Dec. 10-11, 2013	< 4.0	< 15	< 0.20

Notes:

J	Estimated value detected below Reporting Limit
<	Less than
µg/L	Micrograms per liter
M&M	Monitoring and maintenance
NA	Analyte not analyzed for
NL	Type 1 RRS not listed
NR	Analyte not reported
RRS	Risk Reduction Standard

TABLE 4
MONITORING AND MAINTENANCE REVIEW REPORT
SUMMARY OF POLYNUCLEAR AROMATIC HYDROCARBONS (PAH) ANALYTICAL RESULTS
NORTHSIDE DRIVE LANDFILL SITE

Well ID	Annual Sampling Event Date	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) flouranthene (µg/L)	Benzo(k) flouranthene (µg/L)	Benzo(g,h,i) perylene (µg/L)	Chrysene (µg/L)	Dibenzo(a,h) anthracene (µg/L)	Flouranthene (µg/L)	Flourene (µg/L)	Indeno(1,2,3-cd)pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
RRS		**2,000**	**23**	**6.6**	**0.13**	**0.23**	**0.2**	**0.17**	**0.76**	**0.2**	**0.3**	**1,000**	**1,000**	**0.43**	**20**	**6.4**	**1,000**
MM-04 (Background)	Dec. 16-17, 2009	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 13-14, 2010	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.50	< 0.050	< 0.050
	Dec. 12-13, 2012	< 1.08	< 1.08	< 0.108	< 0.108	< 0.108	< 0.161	< 0.108	< 0.269	< 0.108	< 0.108	< 0.269	< 0.538	< 0.269	< 0.538	< 0.108	< 0.269
	Dec. 10-11, 2013	< 1.18	< 1.18	< 0.118	< 0.118	< 0.118	< 0.176	< 0.118	< 0.294	< 0.118	< 0.118	< 0.294	< 0.588	< 0.294	< 0.588	< 0.118	< 0.294
MM-01	Dec. 16-17, 2009	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 13-14, 2010	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.50	< 0.050	< 0.050
	Dec. 12-13, 2012	< 1.08	< 1.08	< 0.108	< 0.108	< 0.108	< 0.161	< 0.108	< 0.269	< 0.108	< 0.108	< 0.269	< 0.538	< 0.269	< 0.538	< 0.108	< 0.269
	Dec. 10-11, 2013	< 1.25	< 1.25	< 0.125	< 0.125	< 0.125	< 0.188	< 0.125	< 0.313	< 0.125	< 0.125	< 0.313	< 0.625	< 0.313	< 0.625	< 0.125	< 0.313
MM-02	Dec. 16-17, 2009	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 13-14, 2010	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.50	< 0.050	< 0.050
	Dec. 12-13, 2012	< 1.06	< 1.06	< 0.106	< 0.106	< 0.106	< 0.160	< 0.106	< 0.266	< 0.106	< 0.106	< 0.266	< 0.532	< 0.266	< 0.532	< 0.106	< 0.266
	Dec. 10-11, 2013	< 1.05	< 1.05	< 0.105	< 0.105	< 0.105	< 0.158	< 0.105	< 0.263	< 0.105	< 0.105	< 0.263	< 0.526	< 0.263	< 0.526	< 0.105	< 0.263
MWC-3C	Dec. 16-17, 2009	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 13-14, 2010	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.50	< 0.050	< 0.050
	Dec. 12-13, 2012	< 1.06	< 1.06	< 0.106	< 0.106	< 0.106	< 0.160	< 0.106	< 0.266	< 0.106	< 0.106	< 0.266	< 0.532	< 0.266	< 0.532	< 0.106	< 0.266
	Dec. 10-11, 2013	< 1.11	< 1.11	< 0.111	< 0.111	< 0.111	< 0.167	< 0.111	< 0.278	< 0.111	< 0.111	< 0.278	< 0.556	< 0.278	< 0.556	< 0.111	< 0.278
MWC-3B	Dec. 16-17, 2009	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 13-14, 2010	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.50	< 0.050	< 0.050
	Dec. 12-13, 2012	< 1.08	< 1.08	< 0.108	< 0.108	< 0.108	< 0.161	< 0.108	< 0.269	< 0.108	< 0.108	< 0.269	< 0.538	< 0.269	< 0.538	< 0.108	< 0.269
	Dec. 10-11, 2013	< 1.18	< 1.18	< 0.118	< 0.118	< 0.118	< 0.176	< 0.118	< 0.294	< 0.118	< 0.118	< 0.294	< 0.588	< 0.294	< 0.588	< 0.118	< 0.294
MM-03	Dec. 16-17, 2009	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 13-14, 2010	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	**0.20**	< 0.050	**4.4**	**0.31**	< 0.050
	Dec. 12-13, 2012	< 1.09	< 1.09	< 0.109	< 0.109	< 0.109	< 0.163	< 0.109	< 0.272	< 0.109	< 0.109	< 0.272	**< 0.543**	< 0.272	**2.93 J**	**0.302 J**	< 0.272
	Dec. 10-11, 2013	< 1.18	< 1.18	< 0.118	< 0.118	< 0.118	< 0.176	< 0.118	< 0.294	< 0.118	< 0.118	**0.638**	< 0.588	< 0.294	**1.76**	**0.43**	< 0.294
MM-03-DUP	Dec. 16-17, 2009	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 13-14, 2010	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	**0.18**	< 0.050	**4.3**	**0.31**	< 0.050
	Dec. 12-13, 2012	< 1.06	< 1.06	< 0.106	< 0.106	< 0.106	< 0.160	< 0.106	< 0.266	< 0.106	< 0.106	< 0.266	**< 0.532**	< 0.266	**< 0.532 J**	**< 0.106 J**	< 0.266
	Dec. 10-11, 2013	< 1.11	< 1.11	< 0.111	< 0.111	< 0.111	< 0.167	< 0.111	< 0.278	< 0.111	< 0.111	**0.556**	< 0.556	< 0.278	**1.58**	**0.414**	< 0.278
MWC-1A	Dec. 16-17, 2009	Not sampled due to insufficient water															
	Dec. 13-14, 2010	Not sampled due to insufficient water															
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	**3.0**	< 0.10	< 0.050	< 0.50	**0.051**	**1.8**
	Dec. 12-13, 2012	< 1.06	< 1.06	< 0.106	< 0.106	< 0.106	< 0.160	< 0.106	< 0.266	< 0.106	< 0.106	**3.3**	< 0.532	< 0.266	< 0.532	**< 0.106**	**1.62**
	Dec. 10-11, 2013	< 1.18	< 1.18	< 0.118	< 0.118	< 0.118	< 0.176	< 0.118	< 0.294	< 0.118	< 0.118	**0.675**	< 0.588	< 0.294	< 0.588	< 0.118	**0.406**
MWC-1B	Dec. 16-17, 2009	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 13-14, 2010	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.50	< 0.050	< 0.050
	Dec. 12-13, 2012	< 1.05	< 1.05	< 0.105	< 0.105	< 0.105	< 0.158	< 0.105	< 0.263	< 0.105	< 0.105	< 0.263	< 0.526	< 0.263	< 0.526	< 0.105	< 0.263
	Dec. 10-11, 2013	< 1.11	< 1.11	< 0.111	< 0.111	< 0.111	< 0.167	< 0.111	< 0.278	< 0.111	< 0.111	< 0.278	< 0.556	< 0.278	< 0.556	< 0.111	< 0.278
MWC-1C	Dec. 16-17, 2009	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 13-14, 2010	< 1.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 1.0	< 0.50	< 0.20
	Dec. 14-15, 2011	< 0.50	< 1.0	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.50	< 0.050	< 0.050
	Dec. 12-13, 2012	< 1.09	< 1.09	< 0.109	< 0.109	< 0.109	< 0.163	< 0.109	< 0.272	< 0.109	< 0.109	< 0.272	< 0.543	< 0.272	< 0.543	< 0.109	< 0.272
	Dec. 10-11, 2013	< 1.11	< 1.11	< 0.111	< 0.111	< 0.111	< 0.167	< 0.111	< 0.278	< 0.111	< 0.111	< 0.278	< 0.556	< 0.278	< 0.556	< 0.111	< 0.278

Notes:
J The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample
< Less than
RRS Risk Reduction Standard
µg/L Micrograms per liter
BOLD Analytical results above analytical method's practical quantitation limit