



500 E 4<sup>th</sup> Street, Suite 333  
Austin, TX 78701  
[www.quantumloophole.com](http://www.quantumloophole.com)

June 21, 2023

**Via Electronic Delivery**

Mr. Edward Dexter, Chief  
Solid Waste Compliance Division  
Maryland Department of the Environment  
1800 Washington Blvd.  
Baltimore, MD 21230

RE: Industrial Waste Disposal Permit No.: 2014-WIF-0042

Mr. Dexter,

Enclosed is the semiannual summary and interpretive discussion for the sampling event from 1 October 2022 through 31 March 2023 as defined Section 4 of the Closed Landfill Monitoring Plan approved by the Maryland Department of the Environment on 4 August 2006. Quantum Loophole acquired the property from ALCOA on June 28, 2021, and has assumed the monitoring and reporting requirements at the facility per the Environmental Covenant and the Site Management Plan, a component of the Environmental Covenant.

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 the 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 is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact Bill Williams – Chief Operations Officer, if you require additional information or have any questions regarding this report. He can be reached at (703) 505-9378 or via email at [bill@ql.email](mailto:bill@ql.email).

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Williams", with a stylized flourish at the end.

Bill Williams  
Chief Operations Officer

cc: Dustin Moore, Tetra Tech

Quantum Maryland, LLC

# CLOSED SOUTH INDUSTRIAL LANDFILL SEMIANNUAL WATER QUALITY REPORT

(FORMER INDUSTRIAL WASTE DISPOSAL PERMIT NO. 90-IW-0042)



June 2023

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# CLOSED SOUTH INDUSTRIAL LANDFILL SEMIANNUAL WATER QUALITY REPORT

(FORMER INDUSTRIAL WASTE DISPOSAL PERMIT NO. 90-IW-0042)

June 2023

## PRESENTED TO

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**Quantum Maryland, LLC**

500 4<sup>th</sup> E. Street, Suite 333

Austin, Texas 78701

## PRESENTED BY

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**Tetra Tech**

661 Anderson Drive

Foster Plaza 7

Pittsburgh, PA 15220

P +1-412-921-7090

F +1-412-921-4040

tetrattech.com

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- B Historical Groundwater Analytical Data Summary

## 1.0 INTRODUCTION

This Semiannual Water Quality Report was prepared by Tetra Tech, Inc. (Tetra Tech) for Quantum Maryland, LLC (Quantum) to document and evaluate the results of groundwater monitoring activities performed during the first quarter of 2023 semiannual reporting period at the closed South Industrial Waste Landfill (Landfill) at the former Eastalco Works aluminum smelter located in Frederick, Maryland (Figure 1-1). Quantum acquired the property from the Eastalco Aluminum Company on June 28, 2021. The site is now referred to as Quantum Fredrick. Quantum has completed design and permitting for infrastructure of roads, sewer, and water services and has begun the phase-1 construction process for a master planned, first-of-its-kind, clean cloud community campus to be located on the property, while continuing to monitor the groundwater in accordance with the Environmental Covenant (EC) executed on December 12, 2017 (Eastalco, 2017). The monitoring activities were performed in accordance with the Closed Landfill Groundwater Monitoring Plan (Monitoring Plan) (MFG, 2006; Appendix G in Exhibit E of the EC).

## 1.1 OVERVIEW

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The Landfill (formerly referred to as the Closed Aluminum Industrial Waste Landfill) was operated between 1983 and 1994 for the disposal of various types of non-hazardous industrial wastes including fluoridated wastes, carbon wastes, refractory wastes, and miscellaneous trash. The last permit issued by the Maryland Department of the Environment (MDE) for the Landfill prior to its closure in 1994 was Refuse Disposal Permit No. 90-IW-0042 (dated June 12, 1990). Post-closure monitoring and maintenance of the Landfill are required per the regulations set forth in the Code of Maryland (COMAR) 26.04.07.22. Groundwater monitoring as well as routine inspections and maintenance of the Landfill have been performed since it was closed.

The Monitoring Plan (MFG, 2006) was developed to formalize the post-closure monitoring and maintenance program for the Landfill. Groundwater monitoring has continued semiannually. The EC was executed in December 2017 placing restrictions on land and groundwater use as a means of managing contamination and protecting human health and the environment during current and future activities/redevelopment. The Site Management Plan (SMP), a component of the EC, addresses the remediation and future management of known and potential environmental concerns associated with the operations at the former facility, including contaminated groundwater and surface water. In the Activity and Use Limitations (Paragraph 6) of the EC, the property owner, now Quantum, is required to maintain compliance with landfill post-closure care including groundwater monitoring and reporting in accordance with the Monitoring Plan (MFG, 2006), which is attached to the Post-Closure Care Plan as Exhibit E of the EC.

The reports will contain the following:

1. A complete copy of the laboratory data;

2. A comparison of the results against the fluoride Maximum Contaminant Level (MCL);
3. Concentration maps depicting total fluoride concentrations analyzed during the semiannual monitoring event;
4. Graphs showing the concentration of total fluoride at each well;
5. Graphs depicting historical concentration trends for total fluoride;
6. A summary of all groundwater elevations measured at the wells included in the monitoring plan; and
7. A narrative discussion concerning background information, sampling procedures, and results/trends, etc.

This report contains the above items for monitoring performed during the first quarter of 2023.

## **1.2 DOCUMENT ORGANIZATION**

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Section 2 provides a description of the site setting, and Section 3 describes the tasks that were performed to monitor groundwater quality in the vicinity of the Landfill. Section 4 provides results and associated conclusions.

## 2.0 SITE SETTING

### 2.1 TOPOGRAPHY

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The Quantum Frederick site (formerly known as the Eastalco site) is located in the Frederick Valley, a synclinal structure characterized by gently rolling topography. Natural elevations at the site range from approximately 300 feet above sea level in the low areas to about 400 feet in the higher areas (Figure 1-1). The Landfill is located in the southwestern corner of the former plant smelting operations area and is separate from the North Industrial Landfill (North Landfill) as shown on Figure 2-1.

### 2.2 SURFACE WATER

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The site is drained by Tuscarora Creek, a tributary of the Potomac River, located east of the former plant. There is also an unnamed tributary to the west that flows south to join Tuscarora Creek. Tuscarora Creek then flows south into the Potomac River. Several man-made drainage ditches flow into Tuscarora Creek or the unnamed tributary.

### 2.3 GEOLOGY

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#### 2.3.1 Regional Geology

The Quantum Frederick facility is located in the southwest corner of a geologic feature known as the Frederick Valley. The valley is the topographic expression of a subsurface asymmetrical synclinorium composed of folded Cambro-Ordovician carbonates and siltstones of the Araby, Frederick, and Grove Formations. The elongated western limb of the synclinorium is truncated by an angular unconformity and overlain by Triassic "redbed" sedimentary strata of the Newark Group, which includes the New Oxford Formation and the Gettysburg Shale. The eastern limb of the synclinorium is foreshortened and in some cases overturned. It is bounded to the east by Precambrian metasedimentary rocks of the Western Piedmont.

The Quantum property straddles the contact between the Triassic siltstones, sandstones, and shale of the New Oxford Formation and the Cambrian limestone of the Adamstown member of the Frederick Formation. The bedrock surface expression of this contact trends north-northeast by south-southwest and dips west-northwest. On the Quantum property, it is located approximately 200 feet southeast of the North Landfill. From east to west across the Quantum property, the depth to the contact between the New Oxford and Frederick Formations varies from zero feet at the bedrock surface contact to 90 feet beneath the North Landfill. The contact surface is irregular, reflecting the erosional nature of the angular unconformity, which defines the contact between these formations in the subsurface, but, in general, the depth to the contact increases westward.



The Frederick Formation is a thin-bedded, laminated limestone with argillaceous partings and shaley zones. Estimated thickness is approximately 500 feet. The Frederick Formation has been subdivided into three members designated in ascending order: Spring Station, Adamstown, and Lime Kiln. The Adamstown member underlies the south and eastern portion of the former plant site and consists of laminated, fine grained, thinly bedded, argillaceous, dark gray limestone. The beds have a north-northeast strike and dip about 40° to the east.

The New Oxford Formation consists of interbedded red and gray arkosic sandstone, red shale, and siltstone. A distinctive limestone/quartz pebble conglomerate at the base of the unit displays a mottled red and gray texture. Sandstone beds in this formation are lenticular and prone to pinching out over short distances. The total estimated thickness of the unit is 4,500 feet. In the vicinity of Quantum's property, beds of the New Oxford Formation underlie the western and northern portion of the property. The strike of these beds is north to south and dip is to the west at 5°.

### 2.3.2 Site Geology

Based on lithologic logs generated during installation of soil borings and monitoring wells at the facility, unconsolidated materials above bedrock (overburden) are composed of clay and silt with varying amounts of sand, gravel, and angular rock fragments. Near surface materials are composed of reddish orange to reddish brown, dense, compact silty clay, with occasional sandstone and shale fragments, gravel, and cobbles. Poorly graded limestone gravel is present at the surface at some locations.

Site boring logs indicate that deeper unconsolidated materials (weathered bedrock) are composed of reddish brown to yellowish orange silt, clay, and occasional zones of clayey gravel. The logs note relict bedding (inclined 20 to 30 degrees from horizontal), micaceous inclusions, and quartzite fragments. Several past reports identify this unconsolidated residual material as saprolite; however, saprolite is derived from the in-situ weathering of igneous or metamorphic material retaining many of the visual characteristics of the parent rock. The deeper unconsolidated materials at the site retain some of the characteristics of the parent rock; but they are derived from in-situ weathering of limestone. The thickness of this highly weathered limestone, which grades into the overlying silty clay unit, varies but averages about 5 feet.

The Quantum property is located within the northeast-trending Frederick syncline. According to geologic maps prepared by the Maryland Geological Survey (MGS), two bedrock formations are present beneath the site: the New Oxford and Frederick Limestone Formations (MGS, 1968). The New Oxford Formation is composed of interbedded red and gray arkosic sandstone, red shale and siltstone, with a basal conglomerate containing a red and gray calcareous matrix (MGS, 1981). The New Oxford Formation overlies the Frederick Formation. To the northwest of the Substation Area, the New Oxford Formation is reportedly about 90 feet thick (beneath the North Landfill) and thicknesses of the New Oxford increase to the west (Atlantic, 1996). The Upper Cambrian bedrock beneath the

eastern portion of the Site is the Frederick Limestone Formation, which consists of highly jointed and fractured, thinly bedded, argillaceous limestone with minor shale (MGS, 1981).

The Monitoring Plan (MFG, 2006) contains a topographic map of the bedrock surface from the western portion of the former plant to the southern property boundary that was developed based on survey data and logs of existing wells and former construction borings. The undulating bedrock surface slopes from north to south with a bedrock trough that starts north of the Landfill and appears to extend southward to the property boundary.

## **2.4 HYDROGEOLOGY**

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### **2.4.1 Regional Hydrogeology**

Information on the regional hydrogeology was obtained from the Groundwater Atlas of the United States published by the United States Geological Survey (USGS, 1997). In the Frederick Valley area, significant sources of groundwater exist in the carbonate rock aquifers. The Frederick Limestone, which underlies most of the site, has a typical well yield of 120 to 170 gallons per minute (GPM) and can yield up to 275 GPM in some areas. The carbonate rocks of the Piedmont have virtually no primary porosity, and water in these rocks moves through secondary openings such as fractures, bedding planes, joints and faults. Water moving through the secondary openings dissolves the carbonate rock and forms dissolution channels to create an interconnected network of openings, greatly increasing the porosity of the rock. Most of the water obtained from bedrock in this area is found in fractures and dissolution channels.

### **2.4.2 Site Hydrogeology**

The groundwater system beneath the site consists of two water-bearing units: an overburden water bearing zone and a bedrock water-bearing zone. Based on lithologic descriptions of the overburden materials, most groundwater flow likely occurs in the highly fractured zone (weathered bedrock) located directly above the competent bedrock (Atlantic, 1996). Groundwater movement in bedrock beneath the site typically occurs through fractures. In both the overburden and bedrock zones, the general direction of horizontal groundwater flow across the former plant is toward the southeast (MFG, 2006).

## 3.0 MONITORING PROGRAM

### 3.1 MONITORING POINTS AND FREQUENCY

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There are seven monitoring wells that surround the Landfill (Figure 3-1) included in the monitoring program. The wells are: MW-4 to the north; MW-6 to the west; MW-25, -66, -67, and -68 to the south; and MW-26 to the east. The frequency of groundwater quality monitoring (sampling) performed per the Monitoring Plan (MFG, 2006) is semiannually for MW-66, -67, and -68 (first and third calendar year quarters); and annually for MW-4, -6, -25, and -26 (third calendar year quarter). A round of synoptic groundwater level measurements is conducted from all monitoring wells during each sampling event.

For the first semiannual event of 2023, groundwater levels were measured on March 27, 2023, from all wells, and groundwater samples were collected on March 27, 2023, from the three wells sampled semi-annually (MW-66, -67, and -68).

### 3.2 SAMPLING AND ANALYSIS

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Groundwater samples were collected in accordance with the standard operating procedures (SOPs) appended to the Monitoring Plan (MFG, 2006). Field measurements included water level, pH, conductivity, dissolved oxygen, turbidity, oxidation-reduction potential, and temperature.

The samples were submitted to Eurofins Lancaster Laboratories Environmental for the analysis of fluoride with a Practical Quantitation Limit (PQL) set at 0.1 milligrams per liter (mg/L) per the Monitoring Plan.

## 4.0 RESULTS AND CONCLUSIONS

### 4.1 GROUNDWATER FLOW

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Groundwater elevations based on depth to water measurements are provided in Table 4-1. Figure 4-1 is a map depicting groundwater elevations at the Landfill wells based on data recorded during the March 2023 event. In general, groundwater beneath the landfill flows in a southeasterly direction. A detailed evaluation of groundwater flow in the overburden and bedrock zones across the former plant can be found in the Site-Wide Investigation Report (MFG, 2005) which was submitted to MDE in October 2005.

### 4.2 GROUNDWATER QUALITY

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The results of the groundwater field measurements are shown in Table 4-1. The results of the fluoride analyses performed on the groundwater samples collected during the first quarter of 2023 are provided in Table 4-2, and the results are summarized on Figure 4-2. Total fluoride was detected at concentrations above the MCL of 4 mg/L in all three of the wells sampled during the March 2023 sampling event with fluoride concentrations in all wells ranging from 6.0 to 16 (duplicate average) mg/L.

Figure 4-3 shows post-closure temporal total fluoride concentration trends for the Landfill wells as well as trends over the most recent 5 years (2018 to 2023) (the tabulated historical data summary can be found in Appendix B). The post-closure trend chart provides concentrations from 1994 (when the Landfill was closed) to the present. While there are fluctuations in the concentration trends of the downgradient wells, the overall concentrations declined after the Landfill was closed in 1994. Fluoride concentrations at most of the monitored wells have been relatively stable since 2003; whereas the concentrations in MW-68 have slightly declined over the last 5 years. There was a slight increase in the MW-68 concentration during the September 2020 sampling event; however, during the March 2023 sampling event the concentration decreased back to a concentration that is consistent with previous events.

As discussed in the Monitoring Plan (MFG, 2006), a site-wide groundwater investigation concluded that the Landfill is not a significant contributor to the fluoride plume, which is instead related to former upgradient sources (i.e., the former North Pond and possibly the former South Pond which have been removed/backfilled). Sitewide fluoride concentrations will continue to be monitored under the EC.

## 5.0 REFERENCES

Atlantic Environmental Services, Inc., 1996. *Eastalco Aluminum Company, Aquifer Characteristics Investigation*. May.

Eastalco, 2017. Environmental Covenant, 5601 Manor Woods Road, Frederick, Maryland 21701. Deed References: Liber D.D.L. No. 2371, Folio 341; Liber 2531. Folio 347; Tax Parcels: District: 01, Account Number: 000152, 005383, and 005405. December 12.

Maryland Geological Survey (MGS), 1968. *Geologic Maps of Maryland, Frederick County*. Detail 12.

Maryland Geological Survey (MGS), 1981. *A Brief Description of the Geology of Maryland*.

MFG, 2005. *Site-Wide Investigation Report, Alcoa Eastalco Works*. October.

MFG, 2006. *Closed Landfill Groundwater Monitoring Plan. Eastalco Aluminum Company*. May.

United States Geologic Survey (USGS), 1997. *Groundwater Atlas of the United States: Hydrologic Investigations Atlas 730-L*.

## TABLES

**Table 4-1**

**March 2023  
Field Measurements**

Quantum Maryland, LLC  
Closed South Industrial Waste Landfill  
Frederick, Maryland

Well ID	Date of Water Level Measurement	TOC Elevation (ft MSL)	Depth to Water (ft)	Groundwater Elevation (ft MSL)	Sample Date	pH (s.u.)	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Temperature (°C)	ORP (mV)
MW-4	3/27/2023	331.27	15.90	315.37	NI	NA	NA	NA	NA	NA	NA
MW-6	3/27/2023	323.66	11.96	311.70	NI	NA	NA	NA	NA	NA	NA
MW-25	3/27/2023	321.92	15.74	306.18	NI	NA	NA	NA	NA	NA	NA
MW-26	3/27/2023	324.49	15.39	309.10	NI	NA	NA	NA	NA	NA	NA
MW-66	3/27/2023	327.26	19.71	307.55	3/27/2023	7.19	1.26	0.80	0.3	16.72	243
MW-67	3/27/2023	326.74	20.86	305.88	3/27/2023	6.94	0.951	1.05	0.78	15.27	312
MW-68	3/27/2023	328.12	21.61	306.51	3/27/2023	7.35	1.21	0.11	1.20	14.93	312

**Notes:**

- TOC Top of casing
- ORP Oxidation-reduction potential
- ft Feet
- ft MSL Feet above Mean Sea Level
- s.u. Standard units
- mS/cm Millisiemens per centimeter
- NTUs Nephelometric Turbidity Units
- mV Millivolts
- mg/L Milligrams per Liter
- °C Degrees Centigrade
- NI Not included in sampling event
- NA Not applicable

**Table 4-2**  
**March 2023 South Landfill**  
**Groundwater Analytical Results**

Quantum Maryland, LLC  
Closed South Industrial Waste Landfill  
Frederick, Maryland

<b>Well ID</b>	<b>Fluoride (mg/L)</b>
<b>MCL</b> <sup>(1)</sup>	<i>4</i>
MW-66	<b>10</b>
MW-67	<b>6.0</b>
MW-68	<b>16</b>
MW-68 DUP <sup>(2)</sup>	<b>16</b>

Notes:

All results are in milligrams/liter (mg/L).

<sup>(1)</sup> EPA Maximum Contaminant Level

<sup>(2)</sup> Duplicate sample from MW-68

**BOLD** indicates detected value

indicates concentration above MCL






## FIGURES

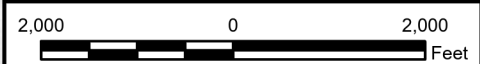
Topographic map provided by ESRI's ArcGIS Online USA Topo Maps map service (© 2013 National Geographic Society, i-cubed).  
Quadrangle shown is Buckeystown.



Quantum Maryland  
Property Boundary

**Legend**

-  New Fence
-  Existing Fence
-  Property Boundary



\\EGSS706GIS\SF51\EGS\PITTSBURGH\GIS\ALCOA\EA\STALCO\MAPDOCS\APRX\QUANTUM\_LOOPHOLE\_N\_LANDFILL\SEM\ANNUAL\_Q1\_2023\APRX - FIG 1-1 SITE LOCATION\_05/04/23\_JAZ



**TETRA TECH**

SITE LOCATION  
QUANTUM MARYLAND  
FREDERICK, MARYLAND

DRAWN BY: J. ZAMUDIO 05/04/23  
CHECKED BY: D. MOORE 05/04/23  
APPROVED BY: D. MOORE 05/04/23

CONTRACT NUMBER: 112C10050

FIGURE NUMBER  
1-1

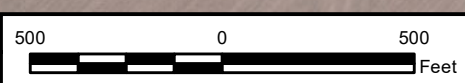
REV  
0

Aerial photograph provided by ESRI's ArcGIS Online MD iMAP, DoIT (© 2020 ESRI and its data suppliers).



**Legend**

- New Fence
- Existing Fence
- Closed Industrial Landfill



LANDFILL LOCATION MAP  
QUANTUM MARYLAND  
FREDERICK, MARYLAND






DRAWN BY: J. ZAMUDIO 06/03/22  
CHECKED BY: M. SIMCIK 06/03/22  
APPROVED BY: D. MOORE 05/31/23  
CONTRACT NUMBER: 112C10050

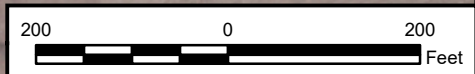
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Aerial photograph provided by ESRI's ArcGIS Online MD iMAP, DoIT (© 2020 ESRI and its data suppliers).



**Legend**

-  Bedrock Monitoring Well
-  Overburden Monitoring Well
-  Overburden/Bedrock Monitoring Well
-  Existing Fence
-  Closed Industrial Landfill



MONITORING WELLS  
SOUTH INDUSTRIAL LANDFILL  
QUANTUM MARYLAND  
FREDERICK, MARYLAND

DRAWN BY: K. MOORE 05/10/23  
CHECKED BY: M. SIMCIK 05/31/23  
APPROVED BY: D. MOORE 05/31/23

CONTRACT NUMBER: 112C10050

FIGURE NUMBER  
3-1

REV  
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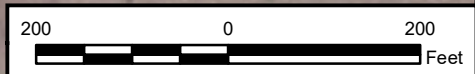
Aerial photograph provided by ESRI's ArcGIS Online MD iMAP, DoIT (© 2020 ESRI and its data suppliers).



**Legend**

- Overburden Monitoring Well
- Bedrock Monitoring Well
- Overburden/Bedrock Monitoring Well
- Existing Fence
- Closed Industrial Landfill

Note: All groundwater elevations are presented as ft msl (feet above mean sea level).



SOUTH INDUSTRIAL LANDFILL  
 MONITORING WELLS GROUNDWATER ELEVATIONS -  
 FIRST QUARTER 2023  
 QUANTUM MARYLAND  
 FREDERICK, MARYLAND




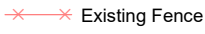
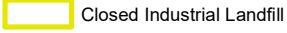
DRAWN BY: K. MOORE 05/10/23  
 CHECKED BY: M. SIMCIK 05/10/23  
 APPROVED BY: D. MOORE 05/10/23  
 CONTRACT NUMBER: 112C10050

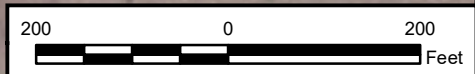
FIGURE NUMBER	REV
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Aerial photograph provided by ESRI's ArcGIS Online MD iMAP, DoIT (© 2020 ESRI and its data suppliers).



**Legend**

-  Overburden Monitoring Well
-  Bedrock Monitoring Well
-  Overburden/Bedrock Monitoring Well
-  Existing Fence
-  Closed Industrial Landfill
- MW-67 Well ID
- 6.0 Fluoride Concentration (mg/L)
- NI Indicates well sample is not included in sampling event.
- \* Duplicate sample collected, average result shown.

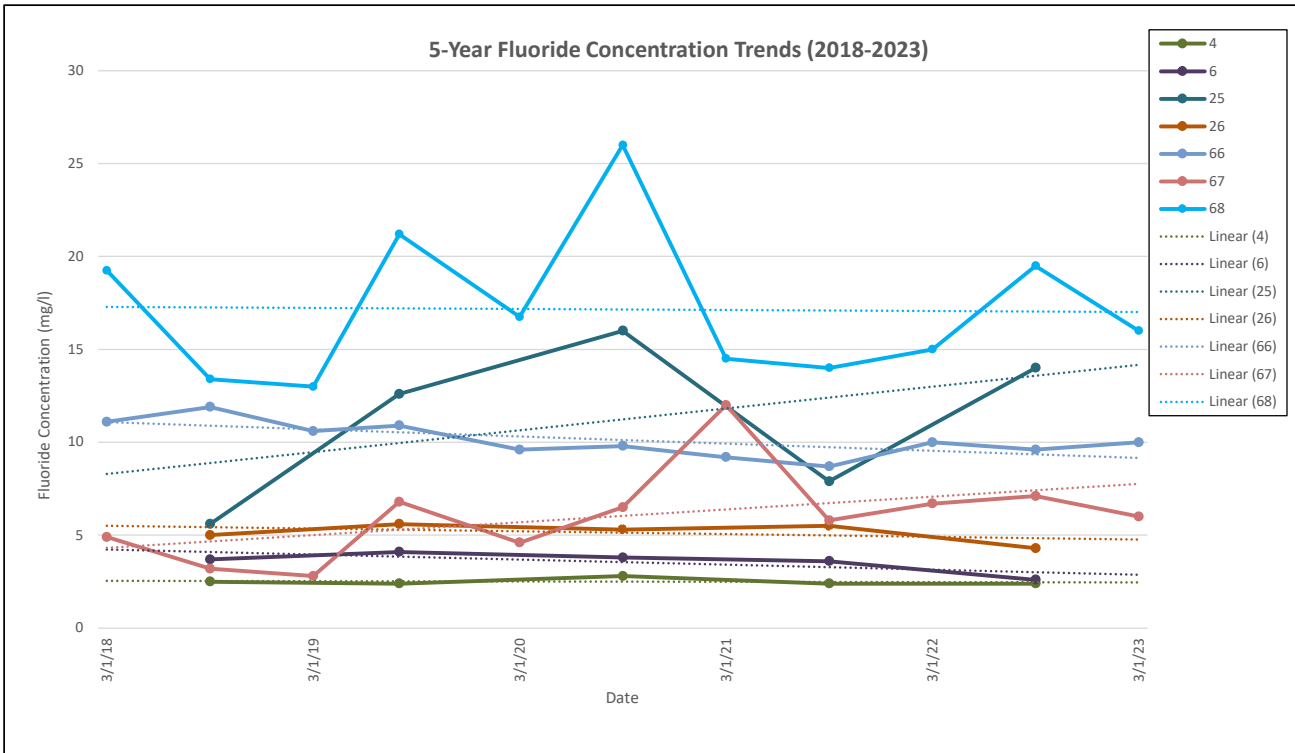
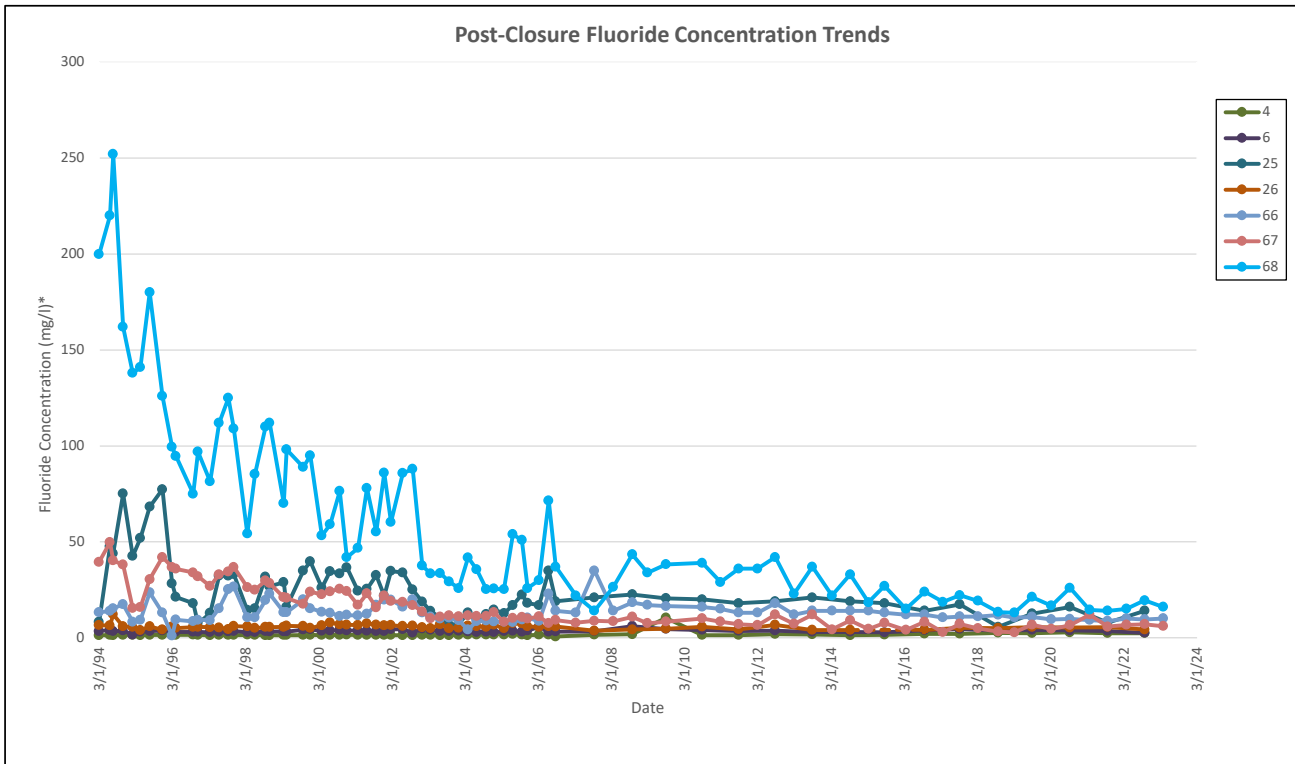


SOUTH INDUSTRIAL LANDFILL  
 MONITORING WELLS FLUORIDE CONCENTRATIONS -  
 FIRST QUARTER 2023  
 QUANTUM MARYLAND  
 FREDERICK, MARYLAND

DRAWN BY: K. MOORE 05/10/23  
 CHECKED BY: M. SIMCIK 05/10/23  
 APPROVED BY: D. MOORE 05/10/23

CONTRACT NUMBER: 112C10050

FIGURE NUMBER	REV
4-2	0



**Figure 4-3**  
**Fluoride Concentration Trends in**  
**South Industrial Waste Landfill Monitoring Wells**  
**Quantum Maryland, LLC**

## APPENDIX A

### GROUNDWATER ANALYTICAL DATA LABORATORY REPORTS



 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Dan Drzik  
Tetra Tech, Inc.  
Foster Plaza VII  
661 Anderson Drive  
Foster Plaza 7 Suite 200  
Pittsburgh, Pennsylvania 15220

Generated 4/7/2023 8:24:44 AM

**JOB DESCRIPTION**

EastAlco WW

**JOB NUMBER**

410-120314-1

## Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

## Authorization



Generated  
4/7/2023 8:24:44 AM

Authorized for release by  
Stephen Gordon, Senior Project Manager  
[Stephen.Gordon@et.eurofinsus.com](mailto:Stephen.Gordon@et.eurofinsus.com)  
(412)525-0071

## Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.



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# Definitions/Glossary

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

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**Job ID: 410-120314-1**

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**Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC**

## Narrative

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**Job Narrative  
410-120314-1**

## Receipt

The samples were received on 3/27/2023 5:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C

## HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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# Detection Summary

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

## Client Sample ID: MW-68

## Lab Sample ID: 410-120314-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	16		2.0	0.90	mg/L	10		EPA 300.0 R2.1	Total/NA

## Client Sample ID: MW-68DUP

## Lab Sample ID: 410-120314-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	16		2.0	0.90	mg/L	10		EPA 300.0 R2.1	Total/NA

## Client Sample ID: MW-66

## Lab Sample ID: 410-120314-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	10		1.0	0.45	mg/L	5		EPA 300.0 R2.1	Total/NA

## Client Sample ID: MW-67

## Lab Sample ID: 410-120314-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	6.0		1.0	0.45	mg/L	5		EPA 300.0 R2.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

**Client Sample ID: MW-68**  
Date Collected: 03/27/23 13:50  
Date Received: 03/27/23 17:20

**Lab Sample ID: 410-120314-1**  
Matrix: Water

**Method: EPA 300.0 R2.1 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	16		2.0	0.90	mg/L			04/04/23 21:09	10

**Client Sample ID: MW-68DUP**  
Date Collected: 03/27/23 00:00  
Date Received: 03/27/23 17:20

**Lab Sample ID: 410-120314-2**  
Matrix: Water

**Method: EPA 300.0 R2.1 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	16		2.0	0.90	mg/L			04/04/23 21:22	10

**Client Sample ID: MW-66**  
Date Collected: 03/27/23 12:10  
Date Received: 03/27/23 17:20

**Lab Sample ID: 410-120314-3**  
Matrix: Water

**Method: EPA 300.0 R2.1 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	10		1.0	0.45	mg/L			04/03/23 23:45	5

**Client Sample ID: MW-67**  
Date Collected: 03/27/23 12:55  
Date Received: 03/27/23 17:20

**Lab Sample ID: 410-120314-4**  
Matrix: Water

**Method: EPA 300.0 R2.1 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	6.0		1.0	0.45	mg/L			04/04/23 00:11	5



# QC Sample Results

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

## Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

**Lab Sample ID: MB 410-360356/5**  
**Matrix: Water**  
**Analysis Batch: 360356**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.20	0.090	mg/L			04/03/23 15:01	1

**Lab Sample ID: LCS 410-360356/3**  
**Matrix: Water**  
**Analysis Batch: 360356**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.750	0.716		mg/L		95	90 - 110

**Lab Sample ID: LCSD 410-360356/4**  
**Matrix: Water**  
**Analysis Batch: 360356**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.750	0.720		mg/L		96	90 - 110	1	20

**Lab Sample ID: MB 410-360842/5**  
**Matrix: Water**  
**Analysis Batch: 360842**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.20	0.090	mg/L			04/04/23 17:12	1

**Lab Sample ID: LCS 410-360842/3**  
**Matrix: Water**  
**Analysis Batch: 360842**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.750	0.751		mg/L		100	90 - 110

**Lab Sample ID: LCSD 410-360842/4**  
**Matrix: Water**  
**Analysis Batch: 360842**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.750	0.751		mg/L		100	90 - 110	0	20

# QC Association Summary

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

## HPLC/IC

### Analysis Batch: 360356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-120314-3	MW-66	Total/NA	Water	EPA 300.0 R2.1	
410-120314-4	MW-67	Total/NA	Water	EPA 300.0 R2.1	
MB 410-360356/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-360356/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-360356/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

### Analysis Batch: 360842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-120314-1	MW-68	Total/NA	Water	EPA 300.0 R2.1	
410-120314-2	MW-68DUP	Total/NA	Water	EPA 300.0 R2.1	
MB 410-360842/5	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 410-360842/3	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
LCSD 410-360842/4	Lab Control Sample Dup	Total/NA	Water	EPA 300.0 R2.1	

# Lab Chronicle

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

**Client Sample ID: MW-68**  
**Date Collected: 03/27/23 13:50**  
**Date Received: 03/27/23 17:20**

**Lab Sample ID: 410-120314-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		10	360842	L4QM	ELLE	04/04/23 21:09

**Client Sample ID: MW-68DUP**  
**Date Collected: 03/27/23 00:00**  
**Date Received: 03/27/23 17:20**

**Lab Sample ID: 410-120314-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		10	360842	L4QM	ELLE	04/04/23 21:22

**Client Sample ID: MW-66**  
**Date Collected: 03/27/23 12:10**  
**Date Received: 03/27/23 17:20**

**Lab Sample ID: 410-120314-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	360356	L4QM	ELLE	04/03/23 23:45

**Client Sample ID: MW-67**  
**Date Collected: 03/27/23 12:55**  
**Date Received: 03/27/23 17:20**

**Lab Sample ID: 410-120314-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	EPA 300.0 R2.1		5	360356	L4QM	ELLE	04/04/23 00:11

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



# Accreditation/Certification Summary

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

## Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Maryland	State	100	06-30-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
EPA 300.0 R2.1		Water	Fluoride



# Method Summary

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	ELLE

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



# Sample Summary

Client: Tetra Tech, Inc.  
Project/Site: EastAlco WW

Job ID: 410-120314-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-120314-1	MW-68	Water	03/27/23 13:50	03/27/23 17:20
410-120314-2	MW-68DUP	Water	03/27/23 00:00	03/27/23 17:20
410-120314-3	MW-66	Water	03/27/23 12:10	03/27/23 17:20
410-120314-4	MW-67	Water	03/27/23 12:55	03/27/23 17:20

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# Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 410-120314-1

**Login Number: 120314**

**List Source: Eurofins Lancaster Laboratories Environment Testing, LLC**

**List Number: 1**

**Creator: Jeremiah, Cory T**

<b>Question</b>	<b>Answer</b>	<b>Comment</b>
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable ( $\leq 6^{\circ}\text{C}$ , not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ( $\leq 6^{\circ}\text{C}$ , not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $> 6\text{mm}$ in diameter (none, if from WV)?	N/A	



## APPENDIX B

### SOUTH LANDFILL HISTORICAL GROUNDWATER ANALYTICAL DATA SUMMARY

Appendix B  
Quantum Maryland, LLC  
South Landfill Historical Groundwater Analytical Data Summary

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
1/26/83	Total Fluoride	4	0.69	mg/L
2/16/83	Total Fluoride	4	0.74	mg/L
2/24/83	Total Fluoride	4	0.99	mg/L
3/3/83	Total Fluoride	4	0.86	mg/L
3/15/83	Total Fluoride	4	0.75	mg/L
3/17/83	Total Fluoride	4	0.71	mg/L
3/23/83	Total Fluoride	4	0.67	mg/L
3/24/83	Total Fluoride	4	0.66	mg/L
3/29/83	Total Fluoride	4	0.51	mg/L
3/30/83	Total Fluoride	4	0.48	mg/L
4/5/83	Total Fluoride	4	0.50	mg/L
4/6/83	Total Fluoride	4	0.47	mg/L
4/14/83	Total Fluoride	4	0.45	mg/L
4/19/83	Total Fluoride	4	0.42	mg/L
4/21/83	Total Fluoride	4	0.48	mg/L
4/27/83	Total Fluoride	4	0.47	mg/L
5/6/83	Total Fluoride	4	0.46	mg/L
5/13/83	Total Fluoride	4	0.46	mg/L
5/19/83	Total Fluoride	4	0.57	mg/L
5/27/83	Total Fluoride	4	0.54	mg/L
6/2/83	Total Fluoride	4	0.78	mg/L
6/9/83	Total Fluoride	4	1.13	mg/L
6/17/83	Total Fluoride	4	0.48	mg/L
6/23/83	Total Fluoride	4	0.48	mg/L
7/1/83	Total Fluoride	4	0.39	mg/L
7/6/83	Total Fluoride	4	0.47	mg/L
7/13/83	Total Fluoride	4	0.54	mg/L
7/20/83	Total Fluoride	4	0.43	mg/L
7/27/83	Total Fluoride	4	0.43	mg/L
8/12/83	Total Fluoride	4	0.42	mg/L
8/16/83	Total Fluoride	4	0.47	mg/L
8/23/83	Total Fluoride	4	0.49	mg/L
8/31/83	Total Fluoride	4	0.64	mg/L
9/7/83	Total Fluoride	4	0.61	mg/L
9/13/83	Total Fluoride	4	0.49	mg/L
9/23/83	Total Fluoride	4	0.44	mg/L
9/27/83	Total Fluoride	4	0.46	mg/L
10/6/83	Total Fluoride	4	0.49	mg/L
10/13/83	Total Fluoride	4	0.54	mg/L
10/18/83	Total Fluoride	4	0.65	mg/L
11/2/83	Total Fluoride	4	0.55	mg/L
12/15/83	Total Fluoride	4	0.74	mg/L
2/20/84	Total Fluoride	4	0.36	mg/L
4/3/84	Total Fluoride	4	0.75	mg/L
6/14/84	Total Fluoride	4	0.72	mg/L
7/30/84	Total Fluoride	4	0.89	mg/L
9/6/84	Total Fluoride	4	0.81	mg/L
12/19/84	Total Fluoride	4	0.67	mg/L
3/13/85	Total Fluoride	4	0.56	mg/L
4/17/85	Total Fluoride	4	0.62	mg/L
9/6/85	Total Fluoride	4	0.67	mg/L
12/5/85	Total Fluoride	4	1.03	mg/L
3/17/86	Total Fluoride	4	1.12	mg/L
6/4/86	Total Fluoride	4	0.85	mg/L
9/9/86	Total Fluoride	4	0.87	mg/L
10/28/86	Total Fluoride	4	1.16	mg/L
3/3/87	Total Fluoride	4	0.75	mg/L
3/26/87	Total Fluoride	4	0.84	mg/L
6/5/87	Total Fluoride	4	0.71	mg/L
8/25/87	Total Fluoride	4	0.90	mg/L
10/8/87	Total Fluoride	4	1.01	mg/L
2/15/88	Total Fluoride	4	1.31	mg/L
3/16/88	Total Fluoride	4	1.07	mg/L
5/23/88	Total Fluoride	4	1.04	mg/L
6/21/88	Total Fluoride	4	0.97	mg/L
8/16/88	Total Fluoride	4	1.02	mg/L
10/19/88	Total Fluoride	4	1.04	mg/L
12/9/88	Total Fluoride	4	1.18	mg/L
1/19/89	Total Fluoride	4	1.12	mg/L
4/20/89	Total Fluoride	4	0.87	mg/L
7/11/89	Total Fluoride	4	1.10	mg/L
10/3/89	Total Fluoride	4	1.00	mg/L
3/5/90	Total Fluoride	4	1.10	mg/L
4/10/90	Total Fluoride	4	1.03	mg/L
8/13/90	Total Fluoride	4	1.12	mg/L
10/18/90	Total Fluoride	4	1.19	mg/L
9/9/91	Total Fluoride	4	1.17	mg/L

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
10/10/91	Total Fluoride	4	1.08	mg/L
2/17/92	Total Fluoride	4	1.16	mg/L
5/18/92	Total Fluoride	4	1.14	mg/L
8/17/92	Total Fluoride	4	1.28	mg/L
10/19/92	Total Fluoride	4	1.30	mg/L
1/29/93	Total Fluoride	4	1.30	mg/L
4/19/93	Total Fluoride	4	1.42	mg/L
8/12/93	Total Fluoride	4	0.98	mg/L
11/3/93	Total Fluoride	4	1.18	mg/L
3/1/94	Total Fluoride	4	1.30	mg/L
6/15/94	Total Fluoride	4	1.41	mg/L
7/18/94	Total Fluoride	4	1.31	mg/L
10/26/94	Total Fluoride	4	1.44	mg/L
1/30/95	Total Fluoride	4	1.45	mg/L
4/17/95	Total Fluoride	4	1.28	mg/L
7/19/95	Total Fluoride	4	1.44	mg/L
11/21/95	Total Fluoride	4	1.48	mg/L
2/26/96	Total Fluoride	4	1.58	mg/L
4/5/96	Total Fluoride	4	1.44	mg/L
9/24/96	Total Fluoride	4	1.50	mg/L
11/12/96	Total Fluoride	4	1.40	mg/L
3/11/97	Total Fluoride	4	1.28	mg/L
6/9/97	Total Fluoride	4	1.42	mg/L
9/9/97	Total Fluoride	4	1.34	mg/L
11/4/97	Total Fluoride	4	1.38	mg/L
3/19/98	Total Fluoride	4	1.49	mg/L
6/3/98	Total Fluoride	4	1.36	mg/L
9/15/98	Total Fluoride	4	1.30	mg/L
10/28/98	Total Fluoride	4	1.28	mg/L
3/18/99	Total Fluoride	4	1.39	mg/L
4/14/99	Total Fluoride	4	1.43	mg/L
9/28/99	Total Fluoride	4	1.38	mg/L
12/7/99	Total Fluoride	4	1.46	mg/L
3/31/00	Total Fluoride	4	1.42	mg/L
6/23/00	Total Fluoride	4	1.41	mg/L
9/27/00	Total Fluoride	4	1.47	mg/L
12/5/00	Total Fluoride	4	1.59	mg/L
3/27/01	Total Fluoride	4	1.48	mg/L
6/25/01	Total Fluoride	4	1.44	mg/L
9/25/01	Total Fluoride	4	1.42	mg/L
12/13/01	Total Fluoride	4	1.43	mg/L
2/19/02	Total Fluoride	4	1.34	mg/L
6/18/02	Total Fluoride	4	1.32	mg/L
9/24/02	Total Fluoride	4	1.31	mg/L
12/30/02	Total Fluoride	4	1.37	mg/L
3/21/03	Total Fluoride	4	1.38	mg/L
6/25/03	Total Fluoride	4	1.29	mg/L
9/24/03	Total Fluoride	4	1.28	mg/L
12/29/03	Total Fluoride	4	1.41	mg/L
3/29/04	Total Fluoride	4	1.53	mg/L
6/23/04	Total Fluoride	4	1.50	mg/L
9/29/04	Total Fluoride	4	1.61	mg/L
12/13/04	Total Fluoride	4	1.62	mg/L
3/24/05	Total Fluoride	4	1.65	mg/L
6/21/05	Total Fluoride	4	1.92	mg/L
9/19/05	Total Fluoride	4	1.52	mg/L
11/15/05	Total Fluoride	4	1.29	mg/L
3/9/06	Total Fluoride	4	1.50	mg/L
6/12/06	Total Fluoride	4	1.50	mg/L
8/22/06	Total Fluoride	4	0.63	mg/L
9/12/07	Total Fluoride	4	1.50	mg/L
9/25/08	Total Fluoride	4	1.80	mg/L
8/26/09	Total Fluoride	4	10.40	mg/L
8/24/10	Total Fluoride	4	1.40	mg/L
8/23/11	Total Fluoride	4	1.40	mg/L
8/21/12	Total Fluoride	4	1.90	mg/L
8/27/13	Total Fluoride	4	1.70	mg/L
9/9/14	Total Fluoride	4	1.30	mg/L
8/17/15	Total Fluoride	4	1.50	mg/L
9/22/16	Total Fluoride	4	2.00	mg/L
9/7/17	Total Fluoride	4	2.10	mg/L
9/26/18	Total Fluoride	4	2.50	mg/L
8/29/19	Total Fluoride	4	2.40	mg/L
9/10/20	Total Fluoride	4	2.80	mg/L
9/22/21	Total Fluoride	4	2.40	mg/L
9/27/22	Total Fluoride	4	2.40	mg/L

Appendix B  
Quantum Maryland, LLC  
South Landfill Historical Groundwater Analytical Data Summary

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
1/26/83	Total Fluoride	6	3.30	mg/L
2/16/83	Total Fluoride	6	3.60	mg/L
2/24/83	Total Fluoride	6	2.70	mg/L
3/3/83	Total Fluoride	6	2.80	mg/L
3/15/83	Total Fluoride	6	2.45	mg/L
3/17/83	Total Fluoride	6	2.35	mg/L
3/23/83	Total Fluoride	6	2.30	mg/L
3/24/83	Total Fluoride	6	3.05	mg/L
3/29/83	Total Fluoride	6	2.55	mg/L
3/30/83	Total Fluoride	6	2.45	mg/L
4/5/83	Total Fluoride	6	2.35	mg/L
4/6/83	Total Fluoride	6	2.55	mg/L
4/14/83	Total Fluoride	6	2.00	mg/L
4/19/83	Total Fluoride	6	1.75	mg/L
4/21/83	Total Fluoride	6	2.08	mg/L
4/27/83	Total Fluoride	6	2.46	mg/L
5/6/83	Total Fluoride	6	2.34	mg/L
5/13/83	Total Fluoride	6	1.64	mg/L
5/19/83	Total Fluoride	6	1.84	mg/L
5/27/83	Total Fluoride	6	1.89	mg/L
6/2/83	Total Fluoride	6	2.19	mg/L
6/9/83	Total Fluoride	6	2.12	mg/L
6/17/83	Total Fluoride	6	4.20	mg/L
6/23/83	Total Fluoride	6	2.60	mg/L
7/1/83	Total Fluoride	6	3.34	mg/L
7/6/83	Total Fluoride	6	2.94	mg/L
7/13/83	Total Fluoride	6	3.20	mg/L
7/20/83	Total Fluoride	6	4.05	mg/L
7/27/83	Total Fluoride	6	4.05	mg/L
8/12/83	Total Fluoride	6	4.20	mg/L
8/16/83	Total Fluoride	6	4.10	mg/L
8/23/83	Total Fluoride	6	4.05	mg/L
8/31/83	Total Fluoride	6	4.20	mg/L
9/7/83	Total Fluoride	6	3.90	mg/L
9/13/83	Total Fluoride	6	3.95	mg/L
9/23/83	Total Fluoride	6	4.20	mg/L
9/27/83	Total Fluoride	6	3.95	mg/L
10/6/83	Total Fluoride	6	3.95	mg/L
10/13/83	Total Fluoride	6	3.90	mg/L
10/18/83	Total Fluoride	6	3.80	mg/L
11/2/83	Total Fluoride	6	3.85	mg/L
12/15/83	Total Fluoride	6	2.75	mg/L
2/20/84	Total Fluoride	6	2.65	mg/L
4/3/84	Total Fluoride	6	2.62	mg/L
6/14/84	Total Fluoride	6	2.50	mg/L
7/30/84	Total Fluoride	6	4.05	mg/L
9/6/84	Total Fluoride	6	5.37	mg/L
9/18/84	Total Fluoride	6	4.30	mg/L
12/19/84	Total Fluoride	6	3.80	mg/L
3/13/85	Total Fluoride	6	3.90	mg/L
4/17/85	Total Fluoride	6	3.70	mg/L
9/6/85	Total Fluoride	6	3.70	mg/L
12/5/85	Total Fluoride	6	4.70	mg/L
3/17/86	Total Fluoride	6	3.10	mg/L
6/5/86	Total Fluoride	6	4.30	mg/L
12/8/86	Total Fluoride	6	3.55	mg/L
3/3/87	Total Fluoride	6	2.80	mg/L
3/26/87	Total Fluoride	6	3.25	mg/L
6/5/87	Total Fluoride	6	2.90	mg/L
8/25/87	Total Fluoride	6	3.40	mg/L
10/8/87	Total Fluoride	6	3.60	mg/L
2/15/88	Total Fluoride	6	3.40	mg/L
3/16/88	Total Fluoride	6	3.20	mg/L
5/24/88	Total Fluoride	6	3.30	mg/L
6/21/88	Total Fluoride	6	3.35	mg/L
8/16/88	Total Fluoride	6	3.40	mg/L
10/19/88	Total Fluoride	6	3.75	mg/L
12/9/88	Total Fluoride	6	3.15	mg/L
1/25/89	Total Fluoride	6	3.50	mg/L
4/20/89	Total Fluoride	6	2.90	mg/L
7/12/89	Total Fluoride	6	3.55	mg/L
10/3/89	Total Fluoride	6	3.45	mg/L
3/5/90	Total Fluoride	6	3.25	mg/L
4/10/90	Total Fluoride	6	3.55	mg/L
8/13/90	Total Fluoride	6	2.10	mg/L
10/18/90	Total Fluoride	6	4.70	mg/L
9/10/91	Total Fluoride	6	2.85	mg/L

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
10/10/91	Total Fluoride	6	1.55	mg/L
10/11/91	Total Fluoride	6	1.55	mg/L
2/17/92	Total Fluoride	6	3.80	mg/L
5/18/92	Total Fluoride	6	3.80	mg/L
8/17/92	Total Fluoride	6	4.32	mg/L
10/19/92	Total Fluoride	6	3.97	mg/L
1/29/93	Total Fluoride	6	3.77	mg/L
4/19/93	Total Fluoride	6	3.63	mg/L
8/13/93	Total Fluoride	6	3.50	mg/L
11/3/93	Total Fluoride	6	3.48	mg/L
3/1/94	Total Fluoride	6	3.44	mg/L
6/15/94	Total Fluoride	6	3.99	mg/L
7/19/94	Total Fluoride	6	3.35	mg/L
10/26/94	Total Fluoride	6	3.67	mg/L
11/30/95	Total Fluoride	6	1.63	mg/L
4/17/95	Total Fluoride	6	3.14	mg/L
7/18/95	Total Fluoride	6	3.49	mg/L
11/21/95	Total Fluoride	6	3.66	mg/L
2/26/96	Total Fluoride	6	3.31	mg/L
4/5/96	Total Fluoride	6	3.04	mg/L
9/24/96	Total Fluoride	6	3.10	mg/L
12/18/96	Total Fluoride	6	3.02	mg/L
3/11/97	Total Fluoride	6	2.88	mg/L
6/9/97	Total Fluoride	6	3.09	mg/L
9/12/97	Total Fluoride	6	3.30	mg/L
10/30/97	Total Fluoride	6	3.47	mg/L
3/19/98	Total Fluoride	6	2.91	mg/L
6/3/98	Total Fluoride	6	2.90	mg/L
9/15/98	Total Fluoride	6	3.35	mg/L
10/28/98	Total Fluoride	6	3.16	mg/L
3/18/99	Total Fluoride	6	3.31	mg/L
4/14/99	Total Fluoride	6	3.26	mg/L
9/27/99	Total Fluoride	6	4.17	mg/L
12/7/99	Total Fluoride	6	4.40	mg/L
3/31/00	Total Fluoride	6	3.55	mg/L
6/23/00	Total Fluoride	6	3.69	mg/L
9/27/00	Total Fluoride	6	4.01	mg/L
12/5/00	Total Fluoride	6	3.79	mg/L
3/27/01	Total Fluoride	6	3.70	mg/L
6/25/01	Total Fluoride	6	3.65	mg/L
9/25/01	Total Fluoride	6	3.35	mg/L
12/12/01	Total Fluoride	6	3.36	mg/L
2/19/02	Total Fluoride	6	4.41	mg/L
6/18/02	Total Fluoride	6	4.49	mg/L
9/25/02	Total Fluoride	6	2.56	mg/L
12/30/02	Total Fluoride	6	4.82	mg/L
3/21/03	Total Fluoride	6	4.08	mg/L
6/25/03	Total Fluoride	6	3.36	mg/L
9/24/03	Total Fluoride	6	3.39	mg/L
12/29/03	Total Fluoride	6	3.58	mg/L
3/29/04	Total Fluoride	6	3.22	mg/L
6/23/04	Total Fluoride	6	2.84	mg/L
9/29/04	Total Fluoride	6	3.04	mg/L
12/13/04	Total Fluoride	6	2.95	mg/L
3/24/05	Total Fluoride	6	3.35	mg/L
6/14/05	Total Fluoride	6	3.50	mg/L
9/19/05	Total Fluoride	6	3.12	mg/L
11/15/05	Total Fluoride	6	3.66	mg/L
3/10/06	Total Fluoride	6	5.70	mg/L
6/12/06	Total Fluoride	6	3.10	mg/L
8/22/06	Total Fluoride	6	3.20	mg/L
9/13/07	Total Fluoride	6	3.40	mg/L
9/25/08	Total Fluoride	6	6.00	mg/L
8/26/09	Total Fluoride	6	4.50	mg/L
8/24/10	Total Fluoride	6	4.00	mg/L
8/23/11	Total Fluoride	6	3.60	mg/L
8/21/12	Total Fluoride	6	3.70	mg/L
8/28/13	Total Fluoride	6	3.00	mg/L
9/10/14	Total Fluoride	6	3.00	mg/L
8/19/15	Total Fluoride	6	2.80	mg/L
9/21/16	Total Fluoride	6	3.90	mg/L
9/6/17	Total Fluoride	6	4.60	mg/L
9/26/18	Total Fluoride	6	3.70	mg/L
8/29/19	Total Fluoride	6	4.10	mg/L
9/11/20	Total Fluoride	6	3.8	mg/L
9/23/21	Total Fluoride	6	3.6	mg/L
9/29/22	Total Fluoride	6	2.6	mg/L

Appendix B  
Quantum Maryland, LLC  
South Landfill Historical Groundwater Analytical Data Summary

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
1/26/83	Total Fluoride	25	1.43	mg/L
2/16/83	Total Fluoride	25	7.50	mg/L
2/24/83	Total Fluoride	25	2.80	mg/L
3/3/83	Total Fluoride	25	3.10	mg/L
3/15/83	Total Fluoride	25	1.80	mg/L
3/17/83	Total Fluoride	25	1.70	mg/L
3/23/83	Total Fluoride	25	1.70	mg/L
3/24/83	Total Fluoride	25	2.30	mg/L
3/29/83	Total Fluoride	25	1.60	mg/L
3/30/83	Total Fluoride	25	1.50	mg/L
4/5/83	Total Fluoride	25	1.45	mg/L
4/6/83	Total Fluoride	25	1.55	mg/L
4/14/83	Total Fluoride	25	1.10	mg/L
4/19/83	Total Fluoride	25	1.22	mg/L
4/21/83	Total Fluoride	25	1.44	mg/L
4/27/83	Total Fluoride	25	2.38	mg/L
5/6/83	Total Fluoride	25	0.90	mg/L
5/13/83	Total Fluoride	25	0.81	mg/L
5/19/83	Total Fluoride	25	0.92	mg/L
5/27/83	Total Fluoride	25	1.98	mg/L
6/2/83	Total Fluoride	25	1.14	mg/L
6/9/83	Total Fluoride	25	1.58	mg/L
6/17/83	Total Fluoride	25	2.15	mg/L
6/23/83	Total Fluoride	25	2.74	mg/L
7/1/83	Total Fluoride	25	4.90	mg/L
7/6/83	Total Fluoride	25	4.15	mg/L
7/13/83	Total Fluoride	25	4.35	mg/L
7/20/83	Total Fluoride	25	6.25	mg/L
7/27/83	Total Fluoride	25	6.25	mg/L
8/12/83	Total Fluoride	25	6.35	mg/L
8/23/83	Total Fluoride	25	3.05	mg/L
12/15/83	Total Fluoride	25	5.40	mg/L
2/20/84	Total Fluoride	25	2.60	mg/L
4/3/84	Total Fluoride	25	2.66	mg/L
6/14/84	Total Fluoride	25	6.45	mg/L
7/27/84	Total Fluoride	25	11.30	mg/L
7/30/84	Total Fluoride	25	10.30	mg/L
9/6/84	Total Fluoride	25	11.40	mg/L
9/18/84	Total Fluoride	25	10.80	mg/L
12/19/84	Total Fluoride	25	7.50	mg/L
3/13/85	Total Fluoride	25	9.90	mg/L
4/17/85	Total Fluoride	25	14.70	mg/L
12/5/85	Total Fluoride	25	14.30	mg/L
3/17/86	Total Fluoride	25	11.40	mg/L
12/8/86	Total Fluoride	25	14.90	mg/L
3/3/87	Total Fluoride	25	12.70	mg/L
3/26/87	Total Fluoride	25	13.70	mg/L
6/5/87	Total Fluoride	25	19.25	mg/L
10/8/87	Total Fluoride	25	24.25	mg/L
2/15/88	Total Fluoride	25	20.00	mg/L
3/18/88	Total Fluoride	25	26.25	mg/L
5/23/88	Total Fluoride	25	13.25	mg/L
6/21/88	Total Fluoride	25	15.50	mg/L
10/20/88	Total Fluoride	25	24.75	mg/L
1/19/89	Total Fluoride	25	37.20	mg/L
4/20/89	Total Fluoride	25	22.20	mg/L
7/12/89	Total Fluoride	25	26.00	mg/L
3/6/90	Total Fluoride	25	39.00	mg/L
4/11/90	Total Fluoride	25	26.30	mg/L
8/13/90	Total Fluoride	25	33.00	mg/L
9/21/90	Total Fluoride	25	22.00	mg/L
10/19/90	Total Fluoride	25	33.00	mg/L
2/17/92	Total Fluoride	25	28.20	mg/L
3/5/92	Total Fluoride	25	28.20	mg/L
5/18/92	Total Fluoride	25	31.00	mg/L
8/18/92	Total Fluoride	25	37.80	mg/L
10/20/92	Total Fluoride	25	25.40	mg/L
1/29/93	Total Fluoride	25	28.50	mg/L
4/19/93	Total Fluoride	25	20.50	mg/L

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
8/16/93	Total Fluoride	25	28.50	mg/L
11/5/93	Total Fluoride	25	19.70	mg/L
3/1/94	Total Fluoride	25	8.22	mg/L
6/15/94	Total Fluoride	25	47.60	mg/L
7/19/94	Total Fluoride	25	44.00	mg/L
10/26/94	Total Fluoride	25	75.10	mg/L
1/30/95	Total Fluoride	25	42.60	mg/L
4/17/95	Total Fluoride	25	51.90	mg/L
7/19/95	Total Fluoride	25	68.30	mg/L
12/6/95	Total Fluoride	25	77.30	mg/L
2/26/96	Total Fluoride	25	28.30	mg/L
4/4/96	Total Fluoride	25	21.20	mg/L
9/24/96	Total Fluoride	25	18.00	mg/L
12/18/96	Total Fluoride	25	7.43	mg/L
3/11/97	Total Fluoride	25	12.90	mg/L
6/9/97	Total Fluoride	25	32.20	mg/L
9/12/97	Total Fluoride	25	32.30	mg/L
10/30/97	Total Fluoride	25	33.10	mg/L
3/19/98	Total Fluoride	25	14.40	mg/L
6/3/98	Total Fluoride	25	15.20	mg/L
9/15/98	Total Fluoride	25	31.70	mg/L
10/29/98	Total Fluoride	25	26.80	mg/L
3/18/99	Total Fluoride	25	28.91	mg/L
4/14/99	Total Fluoride	25	16.14	mg/L
9/28/99	Total Fluoride	25	34.93	mg/L
12/7/99	Total Fluoride	25	39.77	mg/L
3/9/00	Total Fluoride	25	26.12	mg/L
6/23/00	Total Fluoride	25	34.63	mg/L
9/27/00	Total Fluoride	25	33.44	mg/L
12/5/00	Total Fluoride	25	36.66	mg/L
3/27/01	Total Fluoride	25	24.42	mg/L
6/22/01	Total Fluoride	25	25.38	mg/L
9/25/01	Total Fluoride	25	32.57	mg/L
12/28/01	Total Fluoride	25	21.88	mg/L
2/20/02	Total Fluoride	25	34.74	mg/L
6/18/02	Total Fluoride	25	34.01	mg/L
9/25/02	Total Fluoride	25	25.06	mg/L
12/31/02	Total Fluoride	25	18.70	mg/L
3/21/03	Total Fluoride	25	13.86	mg/L
6/30/03	Total Fluoride	25	10.48	mg/L
9/24/03	Total Fluoride	25	6.69	mg/L
12/29/03	Total Fluoride	25	7.26	mg/L
3/29/04	Total Fluoride	25	13.05	mg/L
6/23/04	Total Fluoride	25	9.94	mg/L
9/29/04	Total Fluoride	25	12.23	mg/L
12/13/04	Total Fluoride	25	14.66	mg/L
3/29/05	Total Fluoride	25	12.69	mg/L
6/20/05	Total Fluoride	25	16.98	mg/L
9/19/05	Total Fluoride	25	22.48	mg/L
11/15/05	Total Fluoride	25	18.08	mg/L
3/10/06	Total Fluoride	25	17.00	mg/L
6/12/06	Total Fluoride	25	35.00	mg/L
8/23/06	Total Fluoride	25	19.00	mg/L
9/12/07	Total Fluoride	25	21.00	mg/L
9/25/08	Total Fluoride	25	22.60	mg/L
8/26/09	Total Fluoride	25	20.60	mg/L
8/24/10	Total Fluoride	25	20.00	mg/L
8/23/11	Total Fluoride	25	18.00	mg/L
8/21/12	Total Fluoride	25	19.00	mg/L
8/28/13	Total Fluoride	25	21.00	mg/L
9/9/14	Total Fluoride	25	19.00	mg/L
8/19/15	Total Fluoride	25	18.00	mg/L
9/21/16	Total Fluoride	25	14.00	mg/L
9/7/17	Total Fluoride	25	17.40	mg/L
9/26/18	Total Fluoride	25	5.60	mg/L
8/26/19	Total Fluoride	25	12.60	mg/L
9/11/20	Total Fluoride	25	16.0	mg/L
9/23/21	Total Fluoride	25	7.9	mg/L
9/28/22	Total Fluoride	25	14	mg/L

Appendix B  
Quantum Maryland, LLC  
South Landfill Historical Groundwater Analytical Data Summary

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
1/26/83	Total Fluoride	26	0.46	mg/L
2/16/83	Total Fluoride	26	0.36	mg/L
2/24/83	Total Fluoride	26	0.39	mg/L
3/3/83	Total Fluoride	26	0.71	mg/L
3/15/83	Total Fluoride	26	0.31	mg/L
3/17/83	Total Fluoride	26	0.36	mg/L
3/23/83	Total Fluoride	26	0.46	mg/L
3/24/83	Total Fluoride	26	0.42	mg/L
3/29/83	Total Fluoride	26	0.31	mg/L
3/30/83	Total Fluoride	26	0.40	mg/L
4/5/83	Total Fluoride	26	0.72	mg/L
4/6/83	Total Fluoride	26	0.56	mg/L
4/14/83	Total Fluoride	26	0.75	mg/L
4/19/83	Total Fluoride	26	0.89	mg/L
4/21/83	Total Fluoride	26	1.06	mg/L
4/27/83	Total Fluoride	26	0.92	mg/L
5/6/83	Total Fluoride	26	1.20	mg/L
5/13/83	Total Fluoride	26	1.23	mg/L
5/19/83	Total Fluoride	26	1.07	mg/L
5/27/83	Total Fluoride	26	0.56	mg/L
6/2/83	Total Fluoride	26	2.58	mg/L
6/9/83	Total Fluoride	26	1.50	mg/L
6/17/83	Total Fluoride	26	1.36	mg/L
6/23/83	Total Fluoride	26	1.23	mg/L
7/1/83	Total Fluoride	26	1.34	mg/L
7/6/83	Total Fluoride	26	1.16	mg/L
7/13/83	Total Fluoride	26	1.06	mg/L
7/27/83	Total Fluoride	26	2.11	mg/L
8/12/83	Total Fluoride	26	2.06	mg/L
8/16/83	Total Fluoride	26	1.92	mg/L
8/23/83	Total Fluoride	26	2.58	mg/L
8/31/83	Total Fluoride	26	2.58	mg/L
9/7/83	Total Fluoride	26	3.80	mg/L
9/13/83	Total Fluoride	26	4.20	mg/L
9/23/83	Total Fluoride	26	3.96	mg/L
9/27/83	Total Fluoride	26	3.34	mg/L
10/6/83	Total Fluoride	26	3.95	mg/L
10/13/83	Total Fluoride	26	3.20	mg/L
10/18/83	Total Fluoride	26	4.45	mg/L
11/2/83	Total Fluoride	26	4.35	mg/L
12/15/83	Total Fluoride	26	2.30	mg/L
4/3/84	Total Fluoride	26	3.25	mg/L
6/14/84	Total Fluoride	26	3.30	mg/L
7/30/84	Total Fluoride	26	1.70	mg/L
9/6/84	Total Fluoride	26	2.10	mg/L
9/18/84	Total Fluoride	26	1.60	mg/L
12/19/84	Total Fluoride	26	1.54	mg/L
3/13/85	Total Fluoride	26	1.40	mg/L
4/17/85	Total Fluoride	26	1.40	mg/L
9/6/85	Total Fluoride	26	1.90	mg/L
12/17/85	Total Fluoride	26	2.86	mg/L
3/19/86	Total Fluoride	26	2.60	mg/L
6/5/86	Total Fluoride	26	0.75	mg/L
9/9/86	Total Fluoride	26	1.82	mg/L
10/28/86	Total Fluoride	26	1.88	mg/L
3/3/87	Total Fluoride	26	1.74	mg/L
3/26/87	Total Fluoride	26	2.60	mg/L
6/9/87	Total Fluoride	26	4.00	mg/L
8/25/87	Total Fluoride	26	4.40	mg/L
10/8/87	Total Fluoride	26	2.48	mg/L
2/15/88	Total Fluoride	26	3.94	mg/L
3/18/88	Total Fluoride	26	2.80	mg/L
5/18/88	Total Fluoride	26	3.38	mg/L
6/22/88	Total Fluoride	26	3.10	mg/L
8/17/88	Total Fluoride	26	3.25	mg/L
10/19/88	Total Fluoride	26	3.40	mg/L
11/22/88	Total Fluoride	26	3.50	mg/L
1/18/89	Total Fluoride	26	3.05	mg/L
4/20/89	Total Fluoride	26	3.00	mg/L
7/14/89	Total Fluoride	26	3.88	mg/L
10/3/89	Total Fluoride	26	3.43	mg/L
3/6/90	Total Fluoride	26	6.15	mg/L
4/11/90	Total Fluoride	26	4.15	mg/L
8/13/90	Total Fluoride	26	1.80	mg/L
10/19/90	Total Fluoride	26	4.50	mg/L
9/10/91	Total Fluoride	26	3.43	mg/L

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
10/10/91	Total Fluoride	26	4.00	mg/L
2/17/92	Total Fluoride	26	4.75	mg/L
5/19/92	Total Fluoride	26	5.10	mg/L
8/18/92	Total Fluoride	26	5.57	mg/L
10/19/92	Total Fluoride	26	4.74	mg/L
1/29/93	Total Fluoride	26	5.54	mg/L
4/19/93	Total Fluoride	26	4.89	mg/L
8/12/93	Total Fluoride	26	3.54	mg/L
11/4/93	Total Fluoride	26	4.71	mg/L
3/15/94	Total Fluoride	26	6.57	mg/L
6/15/94	Total Fluoride	26	6.35	mg/L
7/19/94	Total Fluoride	26	12.20	mg/L
10/26/94	Total Fluoride	26	5.84	mg/L
1/30/95	Total Fluoride	26	5.62	mg/L
4/17/95	Total Fluoride	26	3.95	mg/L
7/19/95	Total Fluoride	26	5.90	mg/L
11/21/95	Total Fluoride	26	4.16	mg/L
2/26/96	Total Fluoride	26	5.68	mg/L
4/4/96	Total Fluoride	26	5.03	mg/L
9/24/96	Total Fluoride	26	5.60	mg/L
12/18/96	Total Fluoride	26	5.63	mg/L
3/11/97	Total Fluoride	26	5.49	mg/L
6/9/97	Total Fluoride	26	5.31	mg/L
9/9/97	Total Fluoride	26	4.46	mg/L
10/30/97	Total Fluoride	26	6.00	mg/L
3/19/98	Total Fluoride	26	5.88	mg/L
6/3/98	Total Fluoride	26	5.08	mg/L
9/15/98	Total Fluoride	26	5.59	mg/L
10/28/98	Total Fluoride	26	5.58	mg/L
3/18/99	Total Fluoride	26	5.63	mg/L
4/14/99	Total Fluoride	26	6.27	mg/L
9/28/99	Total Fluoride	26	6.07	mg/L
12/7/99	Total Fluoride	26	5.06	mg/L
3/9/00	Total Fluoride	26	6.48	mg/L
6/23/00	Total Fluoride	26	7.85	mg/L
9/27/00	Total Fluoride	26	6.98	mg/L
12/5/00	Total Fluoride	26	6.81	mg/L
3/27/01	Total Fluoride	26	6.55	mg/L
8/22/01	Total Fluoride	26	7.48	mg/L
9/25/01	Total Fluoride	26	6.78	mg/L
12/13/01	Total Fluoride	26	6.36	mg/L
2/20/02	Total Fluoride	26	6.51	mg/L
6/18/02	Total Fluoride	26	6.05	mg/L
9/24/02	Total Fluoride	26	6.18	mg/L
12/31/02	Total Fluoride	26	5.35	mg/L
3/21/03	Total Fluoride	26	4.92	mg/L
6/30/03	Total Fluoride	26	6.96	mg/L
9/24/03	Total Fluoride	26	4.94	mg/L
12/29/03	Total Fluoride	26	5.14	mg/L
3/30/04	Total Fluoride	26	6.16	mg/L
6/23/04	Total Fluoride	26	5.95	mg/L
9/29/04	Total Fluoride	26	5.57	mg/L
12/13/04	Total Fluoride	26	6.71	mg/L
3/29/05	Total Fluoride	26	4.90	mg/L
6/16/05	Total Fluoride	26	7.63	mg/L
9/19/05	Total Fluoride	26	7.36	mg/L
11/15/05	Total Fluoride	26	5.99	mg/L
3/10/06	Total Fluoride	26	5.60	mg/L
6/12/06	Total Fluoride	26	5.90	mg/L
8/22/06	Total Fluoride	26	5.80	mg/L
9/12/07	Total Fluoride	26	3.60	mg/L
9/25/08	Total Fluoride	26	4.30	mg/L
8/26/09	Total Fluoride	26	4.70	mg/L
8/25/10	Total Fluoride	26	5.70	mg/L
8/23/11	Total Fluoride	26	4.40	mg/L
8/21/12	Total Fluoride	26	6.70	mg/L
8/29/13	Total Fluoride	26	4.10	mg/L
9/10/14	Total Fluoride	26	4.00	mg/L
8/19/15	Total Fluoride	26	52.00	mg/L
9/20/16	Total Fluoride	26	4.10	mg/L
9/7/17	Total Fluoride	26	5.20	mg/L
9/26/18	Total Fluoride	26	5.00	mg/L
8/28/19	Total Fluoride	26	5.60	mg/L
9/11/20	Total Fluoride	26	5.30	mg/L
9/24/21	Total Fluoride	26	5.50	mg/L
9/27/22	Total Fluoride	26	4.30	mg/L

Appendix B  
Quantum Maryland, LLC  
South Landfill Historical Groundwater Analytical Data Summary

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
10/15/90	Total Fluoride	66	11.00	mg/L
8/19/91	Total Fluoride	66	47.00	mg/L
10/21/91	Total Fluoride	66	72.00	mg/L
2/24/92	Total Fluoride	66	46.00	mg/L
5/19/92	Total Fluoride	66	18.00	mg/L
8/17/92	Total Fluoride	66	20.70	mg/L
10/19/92	Total Fluoride	66	21.70	mg/L
1/29/93	Total Fluoride	66	13.50	mg/L
4/19/93	Total Fluoride	66	11.90	mg/L
8/12/93	Total Fluoride	66	17.60	mg/L
11/4/93	Total Fluoride	66	22.30	mg/L
2/25/94	Total Fluoride	66	13.30	mg/L
6/15/94	Total Fluoride	66	13.90	mg/L
7/18/94	Total Fluoride	66	15.30	mg/L
10/26/94	Total Fluoride	66	17.38	mg/L
1/30/95	Total Fluoride	66	8.29	mg/L
4/17/95	Total Fluoride	66	9.18	mg/L
7/18/95	Total Fluoride	66	23.60	mg/L
11/21/95	Total Fluoride	66	13.10	mg/L
2/26/96	Total Fluoride	66	1.01	mg/L
4/4/96	Total Fluoride	66	9.39	mg/L
9/24/96	Total Fluoride	66	8.60	mg/L
11/12/96	Total Fluoride	66	9.30	mg/L
3/11/97	Total Fluoride	66	9.11	mg/L
6/10/97	Total Fluoride	66	15.30	mg/L
9/9/97	Total Fluoride	66	25.20	mg/L
10/30/97	Total Fluoride	66	26.60	mg/L
3/19/98	Total Fluoride	66	10.50	mg/L
6/3/98	Total Fluoride	66	10.60	mg/L
9/15/98	Total Fluoride	66	19.60	mg/L
10/28/98	Total Fluoride	66	22.90	mg/L
3/18/99	Total Fluoride	66	13.30	mg/L
4/14/99	Total Fluoride	66	13.24	mg/L
9/28/99	Total Fluoride	66	19.90	mg/L
11/17/99	Total Fluoride	66	15.29	mg/L
3/9/00	Total Fluoride	66	13.47	mg/L
6/23/00	Total Fluoride	66	12.97	mg/L
9/27/00	Total Fluoride	66	11.30	mg/L
12/5/00	Total Fluoride	66	11.86	mg/L
3/27/01	Total Fluoride	66	11.51	mg/L
6/22/01	Total Fluoride	66	12.34	mg/L
9/25/01	Total Fluoride	66	17.15	mg/L
12/12/01	Total Fluoride	66	19.80	mg/L
2/20/02	Total Fluoride	66	19.68	mg/L
6/18/02	Total Fluoride	66	16.12	mg/L
9/24/02	Total Fluoride	66	20.00	mg/L
12/31/02	Total Fluoride	66	13.02	mg/L
3/21/03	Total Fluoride	66	10.87	mg/L

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
6/30/03	Total Fluoride	66	9.96	mg/L
9/24/03	Total Fluoride	66	10.37	mg/L
12/29/03	Total Fluoride	66	9.02	mg/L
3/30/04	Total Fluoride	66	4.27	mg/L
6/23/04	Total Fluoride	66	8.66	mg/L
9/29/04	Total Fluoride	66	8.86	mg/L
12/14/04	Total Fluoride	66	8.33	mg/L
3/29/05	Total Fluoride	66	8.23	mg/L
6/16/05	Total Fluoride	66	8.14	mg/L
9/20/05	Total Fluoride	66	9.40	mg/L
11/15/05	Total Fluoride	66	10.38	mg/L
3/10/06	Total Fluoride	66	8.70	mg/L
6/13/06	Total Fluoride	66	23.00	mg/L
8/23/06	Total Fluoride	66	14.00	mg/L
3/12/07	Total Fluoride	66	13.00	mg/L
9/13/07	Total Fluoride	66	35.00	mg/L
3/19/08	Total Fluoride	66	14.00	mg/L
9/25/08	Total Fluoride	66	18.40	mg/L
2/23/09	Total Fluoride	66	17.10	mg/L
8/26/09	Total Fluoride	66	16.50	mg/L
8/25/10	Total Fluoride	66	16.00	mg/L
2/22/11	Total Fluoride	66	15.00	mg/L
8/23/11	Total Fluoride	66	13.00	mg/L
2/27/12	Total Fluoride	66	13.00	mg/L
8/21/12	Total Fluoride	66	18.00	mg/L
2/26/13	Total Fluoride	66	12.00	mg/L
8/27/13	Total Fluoride	66	14.00	mg/L
3/11/14	Total Fluoride	66	14.00	mg/L
9/9/14	Total Fluoride	66	14.00	mg/L
3/11/15	Total Fluoride	66	14.00	mg/L
8/19/15	Total Fluoride	66	13.00	mg/L
3/18/16	Total Fluoride	66	12.00	mg/L
9/22/16	Total Fluoride	66	12.00	mg/L
3/22/17	Total Fluoride	66	10.60	mg/L
9/6/17	Total Fluoride	66	11.10	mg/L
3/6/18	Total Fluoride	66	11.10	mg/L
9/26/18	Total Fluoride	66	11.90	mg/L
3/5/19	Total Fluoride	66	10.60	mg/L
8/29/19	Total Fluoride	66	10.90	mg/L
3/11/20	Total Fluoride	66	9.60	mg/L
9/10/20	Total Fluoride	66	9.80	mg/L
3/26/21	Total Fluoride	66	9.20	mg/L
9/22/21	Total Fluoride	66	8.70	mg/L
3/29/22	Total Fluoride	66	10.00	mg/L
9/27/22	Total Fluoride	66	9.60	mg/L
3/27/23	Total Fluoride	66	10.00	mg/L

Appendix B  
Quantum Maryland, LLC  
South Landfill Historical Groundwater Analytical Data Summary

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
10/15/90	Total Fluoride	67	55.00	mg/L
8/19/91	Total Fluoride	67	38.00	mg/L
10/21/91	Total Fluoride	67	37.50	mg/L
2/24/92	Total Fluoride	67	32.00	mg/L
5/19/92	Total Fluoride	67	43.00	mg/L
8/17/92	Total Fluoride	67	45.30	mg/L
10/19/92	Total Fluoride	67	45.20	mg/L
1/29/93	Total Fluoride	67	46.70	mg/L
4/19/93	Total Fluoride	67	36.80	mg/L
8/12/93	Total Fluoride	67	43.20	mg/L
11/4/93	Total Fluoride	67	39.80	mg/L
2/25/94	Total Fluoride	67	39.50	mg/L
6/15/94	Total Fluoride	67	49.70	mg/L
7/18/94	Total Fluoride	67	40.20	mg/L
10/26/94	Total Fluoride	67	38.10	mg/L
1/30/95	Total Fluoride	67	15.40	mg/L
4/17/95	Total Fluoride	67	15.90	mg/L
7/19/95	Total Fluoride	67	30.50	mg/L
11/21/95	Total Fluoride	67	42.00	mg/L
2/26/96	Total Fluoride	67	36.80	mg/L
4/4/96	Total Fluoride	67	35.90	mg/L
9/24/96	Total Fluoride	67	34.00	mg/L
11/12/96	Total Fluoride	67	32.00	mg/L
3/11/97	Total Fluoride	67	26.90	mg/L
6/10/97	Total Fluoride	67	33.00	mg/L
9/9/97	Total Fluoride	67	34.50	mg/L
10/30/97	Total Fluoride	67	36.80	mg/L
3/19/98	Total Fluoride	67	26.30	mg/L
6/3/98	Total Fluoride	67	25.00	mg/L
9/15/98	Total Fluoride	67	29.70	mg/L
10/28/98	Total Fluoride	67	28.40	mg/L
3/18/99	Total Fluoride	67	21.06	mg/L
4/14/99	Total Fluoride	67	20.72	mg/L
9/28/99	Total Fluoride	67	17.56	mg/L
11/17/99	Total Fluoride	67	24.00	mg/L
3/9/00	Total Fluoride	67	22.60	mg/L
6/23/00	Total Fluoride	67	24.16	mg/L
9/27/00	Total Fluoride	67	25.48	mg/L
12/5/00	Total Fluoride	67	24.19	mg/L
3/27/01	Total Fluoride	67	17.05	mg/L
6/22/01	Total Fluoride	67	23.01	mg/L
9/25/01	Total Fluoride	67	15.81	mg/L
11/26/01	Total Fluoride	67	21.88	mg/L
2/20/02	Total Fluoride	67	19.01	mg/L
6/18/02	Total Fluoride	67	18.64	mg/L
9/24/02	Total Fluoride	67	17.00	mg/L
12/31/02	Total Fluoride	67	13.62	mg/L
3/21/03	Total Fluoride	67	10.08	mg/L

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
6/23/03	Total Fluoride	67	10.88	mg/L
9/24/03	Total Fluoride	67	11.52	mg/L
12/29/03	Total Fluoride	67	11.02	mg/L
3/30/04	Total Fluoride	67	11.52	mg/L
6/23/04	Total Fluoride	67	11.32	mg/L
9/29/04	Total Fluoride	67	11.29	mg/L
12/14/04	Total Fluoride	67	13.17	mg/L
3/29/05	Total Fluoride	67	8.25	mg/L
6/16/05	Total Fluoride	67	10.23	mg/L
9/20/05	Total Fluoride	67	10.78	mg/L
11/15/05	Total Fluoride	67	9.99	mg/L
3/10/06	Total Fluoride	67	11.00	mg/L
6/13/06	Total Fluoride	67	7.60	mg/L
8/23/06	Total Fluoride	67	9.20	mg/L
3/12/07	Total Fluoride	67	7.80	mg/L
9/13/07	Total Fluoride	67	8.80	mg/L
3/19/08	Total Fluoride	67	8.50	mg/L
9/25/08	Total Fluoride	67	10.90	mg/L
2/23/09	Total Fluoride	67	7.60	mg/L
8/26/09	Total Fluoride	67	8.40	mg/L
8/25/10	Total Fluoride	67	10.00	mg/L
2/22/11	Total Fluoride	67	8.40	mg/L
8/23/11	Total Fluoride	67	7.00	mg/L
2/28/12	Total Fluoride	67	6.50	mg/L
8/21/12	Total Fluoride	67	12.00	mg/L
2/26/13	Total Fluoride	67	7.20	mg/L
8/27/13	Total Fluoride	67	12.00	mg/L
3/12/14	Total Fluoride	67	4.30	mg/L
9/9/14	Total Fluoride	67	9.00	mg/L
3/10/15	Total Fluoride	67	4.60	mg/L
8/19/15	Total Fluoride	67	7.70	mg/L
3/18/16	Total Fluoride	67	4.00	mg/L
9/22/16	Total Fluoride	67	8.30	mg/L
3/22/17	Total Fluoride	67	2.90	mg/L
9/6/17	Total Fluoride	67	7.20	mg/L
3/6/18	Total Fluoride	67	4.90	mg/L
3/6/18	Total Fluoride	67	4.90	mg/L
3/5/19	Total Fluoride	67	2.80	mg/L
8/29/19	Total Fluoride	67	6.80	mg/L
3/11/20	Total Fluoride	67	4.60	mg/L
09/10/20	Total Fluoride	67	6.50	mg/L
03/26/21	Total Fluoride	67	12.00	mg/L
9/22/21	Total Fluoride	67	5.80	mg/L
3/29/22	Total Fluoride	67	6.70	mg/L
9/27/22	Total Fluoride	67	7.10	mg/L
3/27/23	Total Fluoride	67	6.00	mg/L

Appendix B  
Quantum Maryland, LLC  
South Landfill Historical Groundwater Analytical Data Summary

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
10/15/90	Total Fluoride	68	505.00	mg/L
8/19/91	Total Fluoride	68	490.00	mg/L
10/21/91	Total Fluoride	68	485.00	mg/L
2/24/92	Total Fluoride	68	415.00	mg/L
5/19/92	Total Fluoride	68	380.00	mg/L
8/17/92	Total Fluoride	68	385.00	mg/L
10/19/92	Total Fluoride	68	360.00	mg/L
1/29/93	Total Fluoride	68	246.00	mg/L
4/19/93	Total Fluoride	68	204.00	mg/L
8/12/93	Total Fluoride	68	314.00	mg/L
11/4/93	Total Fluoride	68	330.00	mg/L
3/1/94	Total Fluoride	68	199.80	mg/L
6/15/94	Total Fluoride	68	220.00	mg/L
7/18/94	Total Fluoride	68	252.00	mg/L
10/26/94	Total Fluoride	68	162.00	mg/L
1/30/95	Total Fluoride	68	138.00	mg/L
4/17/95	Total Fluoride	68	141.00	mg/L
7/19/95	Total Fluoride	68	180.00	mg/L
12/6/95	Total Fluoride	68	126.00	mg/L
3/4/96	Total Fluoride	68	99.40	mg/L
4/4/96	Total Fluoride	68	94.70	mg/L
9/24/96	Total Fluoride	68	75.00	mg/L
10/31/96	Total Fluoride	68	97.00	mg/L
11/12/96	Total Fluoride	68	104.00	mg/L
12/31/96	Total Fluoride	68	87.71	mg/L
1/31/97	Total Fluoride	68	116.00	mg/L
2/28/97	Total Fluoride	68	111.00	mg/L
3/11/97	Total Fluoride	68	81.50	mg/L
4/30/97	Total Fluoride	68	111.00	mg/L
5/29/97	Total Fluoride	68	125.00	mg/L
6/3/97	Total Fluoride	68	112.00	mg/L
12/9/97	Total Fluoride	68	109.00	mg/L
1/26/98	Total Fluoride	68	51.10	mg/L
2/25/98	Total Fluoride	68	66.50	mg/L
3/19/98	Total Fluoride	68	54.20	mg/L
4/28/98	Total Fluoride	68	66.20	mg/L
5/27/98	Total Fluoride	68	69.10	mg/L
6/3/98	Total Fluoride	68	85.30	mg/L
7/20/98	Total Fluoride	68	109.00	mg/L
8/26/98	Total Fluoride	68	108.00	mg/L
9/15/98	Total Fluoride	68	110.00	mg/L
10/8/98	Total Fluoride	68	108.00	mg/L
11/25/98	Total Fluoride	68	112.00	mg/L
12/4/98	Total Fluoride	68	118.00	mg/L
1/28/99	Total Fluoride	68	76.12	mg/L
2/3/99	Total Fluoride	68	91.20	mg/L
3/17/99	Total Fluoride	68	70.12	mg/L
4/15/99	Total Fluoride	68	51.50	mg/L
5/26/99	Total Fluoride	68	96.58	mg/L
6/18/99	Total Fluoride	68	98.18	mg/L
7/14/99	Total Fluoride	68	96.00	mg/L
8/27/99	Total Fluoride	68	86.54	mg/L
9/23/99	Total Fluoride	68	89.00	mg/L
10/29/99	Total Fluoride	68	89.97	mg/L
11/17/99	Total Fluoride	68	95.55	mg/L
12/7/99	Total Fluoride	68	94.89	mg/L
1/31/00	Total Fluoride	68	93.45	mg/L
2/29/00	Total Fluoride	68	44.75	mg/L
3/24/00	Total Fluoride	68	53.22	mg/L
3/31/00	Total Fluoride	68	56.11	mg/L
4/6/00	Total Fluoride	68	51.53	mg/L
4/14/00	Total Fluoride	68	54.21	mg/L
4/14/00	Total Fluoride	68	141.15	mg/L
4/20/00	Total Fluoride	68	59.67	mg/L
4/26/00	Total Fluoride	68	54.46	mg/L
5/10/00	Total Fluoride	68	59.09	mg/L
7/28/00	Total Fluoride	68	87.96	mg/L
8/30/00	Total Fluoride	68	91.05	mg/L
9/22/00	Total Fluoride	68	76.44	mg/L
10/30/00	Total Fluoride	68	85.65	mg/L
11/17/00	Total Fluoride	68	89.23	mg/L
12/18/00	Total Fluoride	68	41.95	mg/L
1/31/01	Total Fluoride	68	58.22	mg/L
2/27/01	Total Fluoride	68	74.50	mg/L
3/27/01	Total Fluoride	68	46.79	mg/L
5/29/01	Total Fluoride	68	74.14	mg/L
6/22/01	Total Fluoride	68	77.99	mg/L
7/31/01	Total Fluoride	68	74.84	mg/L
8/30/01	Total Fluoride	68	83.01	mg/L
9/26/01	Total Fluoride	68	55.27	mg/L
10/25/01	Total Fluoride	68	78.08	mg/L
11/15/01	Total Fluoride	68	91.68	mg/L
12/12/01	Total Fluoride	68	85.69	mg/L
1/29/02	Total Fluoride	68	84.49	mg/L
2/20/02	Total Fluoride	68	93.75	mg/L
3/28/02	Total Fluoride	68	60.22	mg/L

DATE	ANALYSIS	WELL ID	RESULTS	UNIT
4/25/02	Total Fluoride	68	71.18	mg/L
5/23/02	Total Fluoride	68	71.61	mg/L
6/18/02	Total Fluoride	68	85.73	mg/L
7/30/02	Total Fluoride	68	83.57	mg/L
8/22/02	Total Fluoride	68	84.06	mg/L
9/24/02	Total Fluoride	68	88.00	mg/L
10/29/02	Total Fluoride	68	66.61	mg/L
11/26/02	Total Fluoride	68	30.96	mg/L
12/31/02	Total Fluoride	68	37.52	mg/L
1/29/03	Total Fluoride	68	44.32	mg/L
2/24/03	Total Fluoride	68	47.55	mg/L
3/24/03	Total Fluoride	68	33.45	mg/L
4/29/03	Total Fluoride	68	54.07	mg/L
5/27/03	Total Fluoride	68	32.67	mg/L
6/23/03	Total Fluoride	68	33.66	mg/L
7/22/03	Total Fluoride	68	60.95	mg/L
8/29/03	Total Fluoride	68	33.30	mg/L
9/24/03	Total Fluoride	68	29.22	mg/L
10/28/03	Total Fluoride	68	33.67	mg/L
11/24/03	Total Fluoride	68	28.01	mg/L
12/12/03	Total Fluoride	68	25.83	mg/L
1/24/04	Total Fluoride	68	39.64	mg/L
2/27/04	Total Fluoride	68	50.14	mg/L
3/30/04	Total Fluoride	68	41.85	mg/L
4/29/04	Total Fluoride	68	30.22	mg/L
5/27/04	Total Fluoride	68	48.45	mg/L
6/23/04	Total Fluoride	68	35.52	mg/L
7/27/04	Total Fluoride	68	51.99	mg/L
8/31/04	Total Fluoride	68	63.00	mg/L
9/29/04	Total Fluoride	68	25.32	mg/L
10/27/04	Total Fluoride	68	55.12	mg/L
11/23/04	Total Fluoride	68	50.45	mg/L
12/14/04	Total Fluoride	68	25.51	mg/L
1/26/05	Total Fluoride	68	35.43	mg/L
2/28/05	Total Fluoride	68	41.41	mg/L
3/29/05	Total Fluoride	68	25.28	mg/L
4/28/05	Total Fluoride	68	41.23	mg/L
5/27/05	Total Fluoride	68	53.87	mg/L
6/16/05	Total Fluoride	68	53.86	mg/L
7/11/05	Total Fluoride	68	33.07	mg/L
8/22/05	Total Fluoride	68	51.26	mg/L
9/20/05	Total Fluoride	68	50.86	mg/L
10/31/05	Total Fluoride	68	33.00	mg/L
11/15/05	Total Fluoride	68	51.52	mg/L
12/27/05	Total Fluoride	68	25.81	mg/L
1/3/06	Total Fluoride	68	28.68	mg/L
3/10/06	Total Fluoride	68	30.00	mg/L
6/13/06	Total Fluoride	68	71.50	mg/L
8/23/06	Total Fluoride	68	37.00	mg/L
3/12/07	Total Fluoride	68	22.00	mg/L
9/13/07	Total Fluoride	68	14.00	mg/L
3/19/08	Total Fluoride	68	26.50	mg/L
9/25/08	Total Fluoride	68	43.40	mg/L
2/23/09	Total Fluoride	68	33.90	mg/L
8/26/09	Total Fluoride	68	38.20	mg/L
8/25/10	Total Fluoride	68	39.00	mg/L
2/22/11	Total Fluoride	68	29.00	mg/L
8/23/11	Total Fluoride	68	36.00	mg/L
2/28/12	Total Fluoride	68	36.00	mg/L
8/21/12	Total Fluoride	68	42.00	mg/L
2/26/13	Total Fluoride	68	23.00	mg/L
8/27/13	Total Fluoride	68	37.00	mg/L
2/11/14	Total Fluoride	68	22.00	mg/L
9/9/14	Total Fluoride	68	33.00	mg/L
3/10/15	Total Fluoride	68	18.50	mg/L
8/19/15	Total Fluoride	68	27.00	mg/L
3/18/16	Total Fluoride	68	15.00	mg/L
9/22/16	Total Fluoride	68	24.00	mg/L
3/22/17	Total Fluoride	68	18.65	mg/L
9/6/17	Total Fluoride	68	22.15	mg/L
3/7/18	Total Fluoride	68	19.25	mg/L
8/29/19	Total Fluoride	68	21.20	mg/L
3/6/19	Total Fluoride	68	13.00	mg/L
8/29/19	Total Fluoride	68	21.20	mg/L
3/11/20	Total Fluoride	68	16.75	mg/L
09/10/20	Total Fluoride	68	26.00	mg/L
03/26/21	Total Fluoride	68	14.50	mg/L
9/22/21	Total Fluoride	68	14.00	mg/L
3/29/22	Total Fluoride	68	15.00	mg/L
9/27/22	Total Fluoride	68	19.50	mg/L
3/27/23	Total Fluoride	68	16.00	mg/L