MACTEC
engineering and constructing a better tomorrow

December 3, 2019

Mr. David Locey
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Subject: **2019 Periodic Review Report**
Buffalo Outer Harbor-Radio Tower Area
NYSDEC Site No. 915026

Dear Mr. Locey:

MACTEC Engineering and Consulting, P.C. (MACTEC) is submitting this Periodic Review Report (PRR) for the Buffalo Outer Harbor-Radio Tower Area (Site) on behalf of the Remedial Party, Honeywell International Inc. (Honeywell).

A completed Site Management PRR Notice - Institutional and Engineering Controls Certification Form is provided herein as Attachment A, which includes a summary of existing covenants and property use restrictions. Supporting Tables, Figures, and Appendices are included herein as Attachment B. The remainder of this document is consistent with the outline presented in New York State Department of Environmental Conservation's (NYSDEC's) 45-day notice letter dated October 16, 2019.

I. Introduction

A. Site Summary:

The Site is located on property owned by Erie Canal Harbor Development Corporation (ECHDC). ECHDC purchased the property from Niagara Frontier Transportation Authority on August 30, 2016. The Site address is 901 Fuhrmann Boulevard in Buffalo, Erie County, New York 14205. The Site consists of a 0.9-acre area where land disposal and fill placement formerly occurred, and soils were found to be contaminated with nitrobenzene exceeding toxicity characteristic leaching procedure (TCLP) hazardous waste thresholds. The Site is located within a larger 6-acre area known as the Radio Tower Area (RTA). A Record of Decision (ROD) was issued by the NYSDEC for the RTA in March 1999; the ROD was modified by an Explanation of Significant Difference in 2003.

Remedial action completed at the Site consisted of in-situ chemical oxidation and stabilization, and in-place capping of the former disposal area. The Site remediation activities were documented in a Remedial Action Completion Report (August 17, 2005),

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Portland, ME 04101 USA
Tel (207) 775-5401
Fax (207) 772-4762

which was approved by NYSDEC in a letter dated November 22, 2005. Institutional controls were also implemented via a Declaration of Covenants and Restrictions that was filed with Erie County in December 2005.

The covenants and restrictions include land use restrictions and the requirement for annual inspection and maintenance of the capped area, as specified in Section 6.0 of the NYSDEC-approved Site Management Plan prepared for Honeywell by Remedial Engineering, P.C. (August 17, 2005). Six groundwater monitoring wells (GW-18R, GW-19, GW-20, GW-21, GW-22, and GW-23) are located adjacent to the capped area.

During the period of 2017 through 2019, the following routine OM&M activities were completed in accordance with the Work Plan for Inspection and Monitoring (referred to hereafter as the Work Plan), prepared by MACTEC (December 19, 2008), as approved, with amendment, by the NYSDEC as indicated in their letter dated July 10, 2009:

- Collection and laboratory testing of groundwater samples from Site wells once every three years (i.e., 2019); and
- Annual inspection and maintenance of the disposal area cap system.

B. Effectiveness Monitoring: The cap system is intact with suitable vegetative cover and no subsidence. Analytical results from the 2019 groundwater monitoring event indicate that nitrobenzene was not detected in groundwater. The reported concentrations for various metals in the 2019 groundwater samples exceeded the NY Class GA groundwater standards. The metals results were consistent with previous Outer Harbor data, as well as data presented in the ROD, which concluded that the concentrations of metals in groundwater may be attributable to “general groundwater quality in the vicinity of the Site”.

C. Compliance: The OM&M activities conducted during the period 2017 through 2019 were performed in accordance with the Work Plan.

D. Recommendations: Implementation of the activities specified in the Work Plan will continue in 2020 through 2022, as described in Section VI of this letter.

II. Site Overview

A. Site Location: The Site is located at 901 Fuhrmann Boulevard in an area known as Buffalo Outer Harbor on Lake Erie. The Site is specifically located near the northern edge of the NFTA terminal parking area and consists of a 0.9-acre capped/remediated former disposal area. The adjacent land to the north has recently been developed as the Lakeside Bike Park. There are six groundwater monitoring wells (GW-18R, GW-19, GW-20, GW-21, GW-22, and GW-23) located adjacent to the capped area.

B. Chronology: A ROD was issued by the NYSDEC for the RTA in March 1999 calling for ex-situ bioremediation of the nitrobenzene-contaminated soils. In 2001, a pilot-study was successfully completed for the in-situ chemical oxidation treatment of the nitrobenzene-contaminated soils. An Explanation of Significant Difference was issued in 2003, accepting an in-situ chemical oxidation remedy. Remedial action was conducted in 2003 and initially consisted of two rounds of in-situ chemical oxidation using potassium permanganate. Subsequently, treatability studies were conducted in support of stabilization of the remaining contamination, and a mixture of Portland cement and

activated carbon was used to stabilize the remaining nitrobenzene-contaminated material. Final restoration activities were completed in 2004 and included removal of approximately 1,680 cubic yards of treated and stabilized soil, which were disposed of at the Alltift Landfill site (NYSDEC site No. 9-15-054), and in-place capping of the remaining treated soils. The cap is a soil cover system that is 24 inches thick and consists of a bottom geotextile liner overlain by 20 inches of clean fill and 4 inches of topsoil. Vegetation was established over the capped area via seeding with local grasses. The Site remediation activities were documented in a Remedial Action Completion Report (August 17, 2005), which was approved by NYSDEC in a letter dated November 22, 2005. Institutional controls were also implemented, including land use restrictions and the requirement for annual inspection and maintenance of the capped area, as specified in Section 6.0 of the NYSDEC-approved Site Management Plan prepared for Honeywell by Remedial Engineering, P.C. (August 17, 2005). A Declaration of Covenants and Restrictions was executed by NYSDEC and filed at the Erie County courthouse on December 27, 2005. Quarterly groundwater monitoring events were completed by MACTEC in 2005-2006, with the results documented in a letter report issued by MACTEC on October 2, 2006. Semi-annual groundwater monitoring events were completed by MACTEC in 2006-2007, with results presented in a letter report issued by MACTEC on March 26, 2008. A Work Plan was prepared by MACTEC in December 2008 that presented requirements for ongoing inspection and monitoring for the Site. This Work Plan was approved, with amendment, by the NYSDEC, as indicated in a letter dated July 10, 2009. On September 30, 2009, MACTEC issued a letter to NYSDEC that presented the 2010 inspection and monitoring schedule for the Site.

III. Evaluation of Remedy Performance, Effectiveness and Protectiveness

A. The performance, effectiveness and protectiveness of the remedy is verified by ensuring that the cap system is intact as constructed and that the remaining nitrobenzene-contaminated soils are not leaching to groundwater.

- Ensuring the cap system is intact as constructed: Annual site inspections are conducted that include monitoring of Site vegetation, ground inspections, and visual checks for evidence of erosion or subsidence. The results from the annual inspections indicate that the integrity of the cap is sound. A copy of the annual inspection reports is included in Attachment B.5.
- Ensuring that the remaining nitrobenzene-contaminated soils are not leaching to groundwater. Beginning in 2010, groundwater samples are to be collected once every three years from the six groundwater monitoring wells located on the Site. The samples will be analyzed for nitrobenzene and Target Analyte List (TAL) metals in accordance with EPA Methods. The 2019 analytical report is included in Attachment B.4 – Data Validation Summary Report.

IV. IC/EC Plan Compliance Report – A separate IC/EC Plan has not been prepared. A description and status of institutional and engineering controls is included in Attachment A of this PRR.

V. Monitoring Plan Compliance Report – A separate Monitoring Plan Compliance Report is not required for this site. Monitoring requirements are addressed in the Work Plan, as approved, with amendment, by the NYSDEC.

VI. Operations and Maintenance Plan Compliance Report

A. Components of the Work Plan – Requirements of the Work Plan, as amended and approved, include the following:

- Triennial Groundwater Sampling and Analysis
- Annual Site Inspections
- Maintenance Activities (annual mowing of cap, repair of areas showing erosion or subsidence, etc.).

B. Summary of OM&M Completed 2017 through 2019: Groundwater sampling and analysis (2019 only), annual site inspection, and annual mowing were completed in accordance with the Work Plan. The following summarizes the activities completed:

- The 2019 groundwater sampling event was completed in September 2019 and included collection of aqueous samples from six monitoring wells; the samples were analyzed for the parameters specified in the Work Plan.
- Annual site inspections were conducted as outlined in the Work Plan.
- Routine maintenance activities were conducted, consisting of annual mowing events.
- At the request of the NYSDEC, emerging contaminant sampling was conducted on behalf of Honeywell International Inc. (Honeywell), by Wood Environment & Infrastructure Solutions, Inc., (Wood E&IS) in October 2018. Results of the emerging contaminants sampling were reported to the NYSDEC under separate cover.

C. OM&M Deficiencies: None identified.

D. Conclusions and Recommendations: The following conclusions were developed based on the data collected during the 2017 through 2019 OM&M period:

- Based on the results of the annual inspection report, which verifies that the integrity of the cap is adequate, vegetation is established, and the remedy remains protective and functions as a barrier that prevents direct contact with underlying waste and impacted soils.
- Based on the results of the 2019 groundwater monitoring event, which indicates that groundwater is not being contaminated by nitrobenzene leaching from the stabilized soils, the remedy is effective at preventing the leaching of contamination to groundwater.

The following recommendations were developed based on the data collected during the 2017 through 2019 OM&M period:

- Concentrations of nitrobenzene were not detected in groundwater samples collected in 2019. Therefore, it is recommended that the next triennial sampling event be conducted in 2022 in accordance with the Work Plan.
- Site inspections should continue on an annual basis.
- Routine OM&M activities should continue, including annual mowing of the capped area, on an annual basis.

- The next PRR submittal should be completed and submitted to NYSDEC by December 31, 2022.

VII. Overall PRR Conclusions

A. Compliance: Inspection, maintenance, and monitoring activities were completed during the period of 2017 through 2019 in accordance with the Work Plan. The Site remains in compliance with applicable covenants and restrictions.

B. Performance and Effectiveness of the Remedy: The condition of the cap system and results of groundwater monitoring well sampling and analysis for nitrobenzene indicate that the remedy is performing effectively.

C. Future PRR submittals: It is anticipated that the next PRR will be submitted by December 30, 2022.

Closing

Please contact Mr. Ryan Belcher at (207) 828-3530 with any questions or comments on this submittal.

Respectfully,

MACTEC Engineering and Consulting, P.C.

Ryan Belcher
Senior Engineer

Mark Stelmack, P.E.
Associate Engineer

W/attachments

cc: David Szymanski (NYSDEC)
E. Christodoulatos (Honeywell) – electronic copy
Chris Catanzaro (ECHDC) – electronic copy

ATTACHMENT A

PRR NOTICE
IC/EC CONTROLS CERTIFICATION FORM

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7**):**

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.

- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 915026

Site Name Buffalo Outer Harbor-Radio Tower Area

Site Address: 901 Fuhrmann Boulevard Zip Code: 14205
City/Town: Buffalo
County: Erie
Site Acreage: 0.900

Reporting Period: November 30, 2016 to November 30, 2019

	YES	NO
1. Is the information above correct?	☑	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☑
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☑

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☑	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative _____ Date _____

SITE NO. 915026

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
portion of 122.17-1-1.1	Erie Canal Harbor Development Corp	Site Management Plan Soil Management Plan Landuse Restriction Ground Water Use Restriction

1. Maintenance of the soil cover in accordance with Site Management Plan
2. Site limited to industrial or commercial use only, excluding day care, child care and medical care uses.
3. Use of groundwater underlying site prohibited without treatment rendering it safe for drinking water or industrial purposes.
4. Annual inspection required to confirm that the remedy (cover) and required restrictions remain in place.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
portion of 122.17-1-1.1	Cover System

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☑	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 915026

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Eric Christodoulatos (print name) at Honeywell 115 Tabor Rd. Morris Plains, NJ 07950 (print business address)

am certifying as Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

12/3/19
Date

IC/EC CERTIFICATIONS

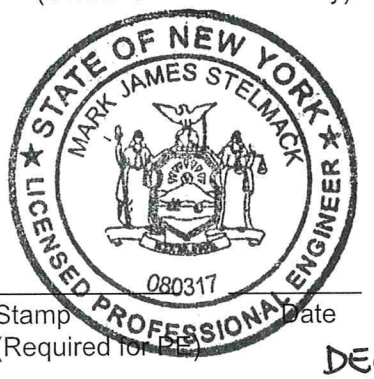
Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I MARK STELMACK (print name) at MACTEC ENGINEERING & CONSULTING, P.C. 511 CONGRESS ST. SUITE 200 PORTLAND, ME 04101 (print business address)

am certifying as a Professional Engineer for the Remedial Party (Owner or Remedial Party)



Mark Stelmack

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

Date: DEC. 2, 2019

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.

D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.

E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
   1. whether all requirements of each plan were met during the reporting period
   2. any requirements not met
   3. proposed plans and a schedule for coming into full compliance.

B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.

C. Future PRR Submittals
   1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
   2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

ATTACHMENT B

SUPPORTING TABLES, FIGURES, AND APPENDICES

ATTACHMENT B.1 SUMMARY OF DEPTH TO WATER MEASUREMENTS

Table 1: Summary of Depth to Water Measurements

			10/14/2015		9/22/2016		11/2/2017		10/5/2018		9/25/2019	
Well ID	**Seam of Cap**	**Top of PVC**	**Depth to Water (ft.)**	**Elevation (ft-msl)**	**Depth to Water (ft.)**	**Elevation (ft-msl)**	**Depth to Water (ft.)**	**Elevation (ft-msl)**	**Depth to Water (ft.)**	**Elevation (ft-msl)**	**Depth to Water (ft.)**	**Elevation (ft-msl)**
GW-18R	588.21	N/A	11.10	-	11.70	-	11.60	-	9.80	-	9.25	-
GW-19	-	587.20	12.40	574.80	13.40	573.80	12.80	574.40	12.40	574.80	9.97	577.23
GW-20		N/A	14.00	-	14.60	-	13.00	-	13.10	-	12.10	-
GW-21	-	586.61	8.90	577.71	9.40	577.21	9.60	577.01	8.30	578.31	7.55	579.06
GW-22	585.89	585.82	10.60	575.22	12.60	573.22	9.30	576.52	9.50	576.32	7.72	578.10
GW-23	586.27	586.00	12.20	573.80	13.10	572.90	12.40	573.60	9.60	576.40	8.65	577.35

Notes:

1) Water level measurements are in units of feet above mean sea level (ft-msl)
2) N/A = elevation of top of PVC casing not established
3) NM = Not measured

Prepared By/Date: RTB 10/31/2019
Checked By/Date: JWF 11/06/2019

ATTACHMENT B.2 SITE LOCATION PLAN

MON WELL
GW-20
GROUND=586.07
TOP OF CAP=588.27

LANDS N/F
NIAGARA FRONTIER TRANSPORTATION AUTHORITY
TMP# 122.17-1-1
L.6434 P.43

N 1041144.28
E 1070954.37

N63°56'28"W
34.66'

N79°26'09"W
106.97'

6' CHAIN LINK FENCE

CC-2
PK NAIL
N: 1041161.17
E: 1071297.92
ELEV.=585.64'

MON WELL
GW-18R
GROUND=585.77
TOP OF CAP=588.55
SEAM OF CAP=588.21

CC-2
PK NAIL
N: 1041098.60
E: 1071109.17
ELEV.=585.70'

S28°58'36"W
179.04'

EDGE OF PAVEMENT

AREA:
39,016 SQ.FT.
0.896± ACRES

N25°14'12"E
121.63'

MON WELL
GW-22
GROUND=583.33
TOP OF CAP=586.24
SEAM OF CAP=585.89

CHA #1
PK NAIL
N 1040999.22
E 1071060.99
ELEV.=585.52'

MON WELL
GW-21
GROUND=584.73
TOP OF CAP=586.94

N21°11'57"W
45.89'

LIGHT

MON WELL
GW-23
GROUND=583.70
TOP OF CAP=586.62
SEAM OF CAP=586.27

LIGHT

EDGE OF PAVEMENT

N43°36'11"E
41.53'

S24°26'10"E
164.87'

N38°46'30"E
45.15'

POINT OF BEGINNING

N49°20'15"E
82.58'

MON WELL
GW-19
GROUND=584.95
TOP OF CAP=587.33

6' CHAIN LINK FENCE

HIGHWAY BOUNDARY LINE
FUHRMANN BOULEVARD

N 1040837.61
E 1070935.97

N20°15'55"W
1115.50'

S20°15'55"E
1.65'

S69°12'31"W
100.31'

CAPPED REBAR
FND.
N 1040172.57
E 1072347.92

993.90'

POINT OF COMMENCEMENT

S69°44'05"W

LEGEND

MON WELL	MONITORING WELL
CAPPED REBAR	PROPERTY MONUMENTATION (CAPPED REBAR)
LIGHT	LIGHT POLE
	HIGHWAY BOUNDARY LINE
	PARCEL BOUNDARY LINE
	CHAIN LINK FENCE
	EDGE OF PAVEMENT

LANDS N/F
FREEZER QUEEN FOOS, INC.
TMP# 132.06-1-1.1
L.9547 P.579

REFERENCES:

1. DEED DESCRIBING THE LANDS N/F OF "NIAGARA FRONTIER PORT AUTHORITY", FILED IN THE ERIE COUNTY CLERK'S OFFICE (E.C.C.O.) IN LIBER 6434 OF DEEDS, PAGE 43.
2. DEED DESCRIBING THE LANDS N/F OF "FREEZER QUEEN FOODS, INC.", FILED IN ERIE COUNTY CLERK'S OFFICE (E.C.C.O.) IN LIBER 9547 OF DEEDS, PAGE 579.
3. NGS MONUMENT INFORMATION.

NOTES:

1. PLANTIMENTRICS SHOWN HEREON ARE PREPARED BY CLOUGH, HARBOUR & ASSOCIATES, L.L.P FROM AN APRIL 2005 FIELD SURVEY. REF. "ROCH" FB.75, P.67
2. ELEVATIONS ARE BASED ON N.A.V.D. 1988 DATUM REFERENCING NATIONAL GEODETIC SURVEY MONUMENT MONUMENT Q 388, ELEV. = 581.66', USING DIFFERENTIAL LEVELING TECHNIQUES.
3. NORTH ORIENTATION AND COORDINATES SHOWN HEREON BASED ON N.Y.S. PLANE WEST ZONE, NAD 83, REFERENCING MONUMENTS;

BUFFALO R IMPROVEMENT CORP TK	LEHR
N:1040703.604	N:1030094.885
E:1076485.685	E:1076447.880

4. NO BOUNDARY DETERMINATION PERFORMED IN THE PREPARATION OF THIS PLAN.
5. OWNER'S INFORMATION BASED ON TAX INFORMATION.
6. ADDITIONAL FIELDWORK PERFORMED ON JULY 19, 2005. REF. "ROCH" FB.95, P.1

GRAPHIC SCALE

50 0 25 50 100

1 inch = 50 ft.

I HEREBY CERTIFY THAT THIS PLAN WAS COMPLETED ⚠1 ON JULY 21 2005 USING LISTED REFERENCES AND FIELD NOTES FROM AN ACTUAL FIELD SURVEY COMPLETED ON JULY 19, 2005.

DAVID L. STANDINGER NYSPLS. #050107 DATE

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Revisions	Drawn By:	App'd. By:	Date:
1. REVISED DATE (JUNE TO JULY)	DLS		8/25/05
0. MAP ISSUED	DJH	DLS	7/22/05

David L. Standinger NYSPLS # 050107

Plan
showing
INSTITUTIONAL CONTROL AREA
being a portion of property N/F
NIAGARA FRONTIER TRANSPORTATION AUTHORITY
City of Buffalo County of Erie State of New York

Scale: 1"=50' | Date: JULY, 2005 | Sheet 1 OF 1

Dwg: I:\13258\survey\acad\VBASE-132582000.dwg Xref: NONE Dview: NONE CHA Project Number: 13258

ATTACHMENT B.3 FIELD DATA COLLECTION RECORDS

JACOBS

Project Name Honeywell - OUTER HARBOR BUFFALO
Job Number
Field Team JAKE CHURCH + MIKE STOUT
Field Conditions

Sampling Event
Date 9/25/19
Page ___ of ___

Well/Sample Number GW-20
Initial Depth to Water 12.1
Start Time 0815 Finish Time 1019
Measure Point: (PVC) Steel Casing Other:

Purge Method:
Geopump Ded. Pump (Other) PARASTALTIC PUMP
Sample Method: ~~BAILER~~

Sample ID GW-20-092519
Duplicate Sample ID
Split Sample ID

Sample Time
Dupl. Time
Split. Time

Depth to Botton (from meas. pt): 18.2 Min. Purge Volume (gal)/(L) 3 Purge Rate (gpm)/(mLpm) 0.03 gpm

Water Quality Parameter Measurment Technique: flow-thru cell in-situ open container

Time	Vol. Purged gallons / liters	pH (+/-0.1)	Conductivity mS/cm (+/-3%)	Turbidity NTU (+/-10% if >10NTU)	Diss. Oxygen mg/L (+/-10%)	Temp. °C (+/-3%)	Eh / ORP mv +/-10 mV	DTW ft
8:20		START	PURGING	WELL				
0915	3 gal	8.08	1.19	0	3.37	16.57	-107	—
	- HORIBA	PARAMETERS						
0920	Collect	sample	GW-20-092519					
0935	Collect	sample	~~GW-20~~ ~~GW-020~~ GW-20-092519-MS					
0945	Collect	sample	GW-20-092519-MSD					
0955	Collect	sample	GW-20-092519-DUP					

SAMPLE COLLECTION INFORMATION

Parameter	Type of Bottle	Volume	Field Filtered (y/n)	Preservative	pH	Notes
	PLASTIC	250ml	N	HNO_3		GW-20-092519
Not collected	PLASTIC	250ml	N	—		~~GW-20-092519~~
	AMBER	1L	N	—		GW-20-092519
	AMBER	1L	N	—		GW-20-092519
	Plastic	250 mL	N	HNO_3		GW-20-092519-MS
	Amber	1L	N	-		GW-20-092519-MS
	Amber	1L	N	-		GW-20-092519-MS
	Plastic	250 mL	N	HNO_3		GW-20-092519-MSD
	Amber	1L	N	-		GW-20-092519-MSD
	Amber	1L	N	-		GW-20-092519-MSD
	Plastic	250mL	N	HNO_3		GW-20-092519-DUP
	Amber	1L	N	-		GW-20-092519-DUP

Remarks: Purged full 3 gallons of water. Initial yellow tinge, no apparent odor, very slight smell.

JACOBS

Project Name Honeywell - OUTER HARBOR BUFFALO
Job Number
Field Team
Field Conditions JAKE CHUREN & MIKE STOUT

Sampling Event
Date 9-25-19
Page ___ of ___

Well/Sample Number GW-23
Initial Depth to Water 8.65
Start Time ___ Finish Time ___
Measure Point: PVC Steel Casing Other: ___

Purge Method:
Geopump Ded. Pump Other ___
Sample Method: BAILER

Sample ID GW-23-092519 Sample Time ___
Duplicate Sample ID Dupl. Time ___
Split Sample ID Split. Time ___

Depth to Botton (from meas. pt): 22.15 Min. Purge Volume (gal)/(L) 4 gal Purge Rate (gpm)/(mLpm) ___

Water Quality Parameter Measurment Technique: flow-thru cell in-situ open container

Time	Vol. Purged gallons / liters	pH (+/-0.1)	Conductivity mS/cm (+/-3%)	Turbidity NTU (+/-10% if >10NTU)	Diss. Oxygen mg/L (+/-10%)	Temp. °C (+/-3%)	Eh / ORP mv +/-10 mV	DTW ft
1213	Begin purging 4 gallons							
1222	Collecting Parameters (HORIBA)	7.03	1.22	~~3~~ 7.5	1.48	16.84	-189	
1230	Collect sample	GW-23-092519						

SAMPLE COLLECTION INFORMATION

Parameter	Type of Bottle	Volume	Field Filtered (y/n)	Preservative	pH	Notes
	Plastic	250 mL	N	HNO3		GW-23-092519
	Amber	1L	N	-		GW-23-092519
	Amber	1L	N			GW-23-092519

Remarks: ___

JACOBS

Project Name Honeywell - OUTER HARBOR BUFFALO
Job Number
Field Team JAKE CHURCH + MIKE STOUT
Field Conditions

Sampling Event
Date 9-25-19
Page ___ of ___

Well/Sample Number GW-19
Initial Depth to Water 9.97
Start Time ___ Finish Time ___
Measure Point: PVC Steel Casing Other: ___

Purge Method:
Geopump Ded. Pump Other ___
Sample Method: BAILER

Sample ID GW-19-092519
Duplicate Sample ID
Split Sample ID
Sample Time ___
Dupl. Time ___
Split. Time ___

Depth to Botton (from meas. pt): 19.05 Min. Purge Volume (gal)/(L) 5 gal Purge Rate (gpm)/(mLpm) 0.03

Water Quality Parameter Measurment Technique: flow-thru cell in-situ open container

Time	Vol. Purged gallons / liters	pH (+/-0.1)	Conductivity mS/cm (+/-3%)	Turbidity NTU (+/-10% if >10NTU)	Diss. Oxygen mg/L (+/-10%)	Temp. °C (+/-3%)	Eh / ORP mv +/-10 mV	DTW ft
1021	Begin purging 5 gallons							
1027	Collect Parameters (HORIBA)	11.61	1.82	1.4	2.93	15.98	-123	
1035	Collect sample		GW-19-092519					

SAMPLE COLLECTION INFORMATION

Parameter	Type of Bottle	Volume	Field Filtered (y/n)	Preservative	pH	Notes
	Plastic	250 mL	N	HNO3		GW-19-092519
	Amber	1L	N	=		GW-19-092519
	Amber	1L	N	=		GW-19-092519

Remarks:

JACOBS

Project Name Honeywell - OUTER HARBOR BUFFALO
Job Number
Field Team JAKE CHURCH & MIKE STOUT
Field Conditions

Sampling Event
Date 9-25-19
Page ___ of ___

Well/Sample Number GW-21
Start Time ___ Finish Time ___
Initial Depth to Water 7.55 Measure Point: PVC Steel Casing Other: ___

Purge Method:
Geopump Ded. Pump (Other) ___
Sample Method: BAILOR

Sample ID GW-21-092519
Duplicate Sample ID
Split Sample ID

Sample Time ___
Dupl. Time ___
Split. Time ___

Depth to Botton (from meas. pt): 19.25 Min. Purge Volume (gal)/(L) 4 gal Purge Rate (gpm)/(mLpm) ~~0.03~~

Water Quality Parameter Measurment Technique: flow-thru cell in-situ open container

Time	Vol. Purged gallons / liters	pH (+/-0.1)	Conductivity mS/cm (+/-3%)	Turbidity NTU (+/-10% if >10NTU)	Diss. Oxygen mg/L (+/-10%)	Temp. °C (+/-3%)	Eh / ORP mv +/-10 mV	DTW ft
1156	Begin purging	4 gallons						
1202	Collecting Parameters (Initial)	9.80	0.349	7.7	3.78	18.13	-221	
1210	Collect sample	GW-21-092519						

SAMPLE COLLECTION INFORMATION

Parameter	Type of Bottle	Volume	Field Filtered (y/n)	Preservative	pH	Notes
	Plastic	250 mL	N	HNO3		GW-21-092519
	Amber	1L	N	—		GW-21-092519
	Amber	1L	N	—		GW-21-092519

Remarks:

JACOBS

Project Name Honeywell - OUTER HARBOR BUFFALO
Job Number
Field Team JAKE CHURCH + MIKE STOUT
Field Conditions

Sampling Event
Date 9-25-19
Page ___ of ___

Well/Sample Number GW-22
Start Time ___ Finish Time ___
Initial Depth to Water 7.72 Measure Point: PVC Steel Casing Other: ___

Purge Method:
Geopump Ded. Pump (Other) ___
Sample Method: BAILER

Sample ID GW-22-092519
Duplicate Sample ID
Split Sample ID

Sample Time ___
Dupl. Time ___
Split. Time ___

Depth to Botton (from meas. pt): 18.65 Min. Purge Volume (gal)/(L) 5 gal Purge Rate (gpm)/(mLpm) ~~0.03~~

Water Quality Parameter Measurment Technique: flow-thru cell in-situ open container

Time	Vol. Purged gallons / liters	pH (+/-0.1)	Conductivity mS/cm (+/-3%)	Turbidity NTU (+/-10% if >10NTU)	Diss. Oxygen mg/L (+/-10%)	Temp. °C (+/-3%)	Eh / ORP mv +/-10 mV	DTW ft
1335	Begin purging 5 gallons							
	Can only able to yield 4 gallons from well							
1343	Collecting Parameters (Incrib A)	7.01	2.56	57.3	-156	17.19	-157	
1351	Collect sample GW-22-092519							
	NT NTU > 50							

SAMPLE COLLECTION INFORMATION

Parameter	Type of Bottle	Volume	Field Filtered (y/n)	Preservative	pH	Notes
Preserve washed out	PLASTIC	250mL	N	~~HNO3~~		GW-22-092519
	Amber	1 L	N	—		GW-22-092519
	Amber	1 L	N	—		GW-22-092519

Remarks: Only ~~4.5~~ 4 gal purged prior to running dup. NTU > 50, new washed out preservative on account of this.

JACOBS®

Project Name Honeywell - OUTER HARBOR BUFFALO
Job Number
Field Team JAKE CHURCH & MIKE STOUT
Field Conditions

Sampling Event
Date 9-25-19
Page ___ of ___

Well/Sample Number GW-18R
Initial Depth to Water 9.25
Start Time ___ Finish Time ___
Measure Point: PVC Steel Casing Other: ___

Purge Method:
Geopump Ded. Pump (Other)
Sample Method: BAILER

Sample ID GW-18R-092519 Sample Time ___
Duplicate Sample ID Dupl. Time ___
Split Sample ID Split. Time ___

Depth to Botton (from meas. pt): 20.60 Min. Purge Volume (gal)/(L) 4.5 Purge Rate (gpm)/(mLpm) ___
Water Quality Parameter Measurment Technique: flow-thru cell in-situ open container

Time	Vol. Purged gallons / liters	pH (+/-0.1)	Conductivity mS/cm (+/-3%)	Turbidity NTU (+/-10% if >10NTU)	Diss. Oxygen mg/L (+/-10%)	Temp. °C (+/-3%)	Eh / ORP mv +/-10 mV	DTW ft
1400	Begin purging							
1408	Collecting parameters (YSI/IBA)	7.27	1.33	92.4	2.22	18.42	-169	
1416	Collecting sample GW-18R-092519							
>50	NTU							

SAMPLE COLLECTION INFORMATION

Parameter	Type of Bottle	Volume	Field Filtered (y/n)	Preservative	pH	Notes
	Plastic	250 mL	N	-		GW-18R-092519
	Amber	1L	N	-		GW-18R-092519
	Amber	1L	N	-		GW-18R-092519

Remarks: NTU >50, washed out preserve from 250mL plastic

ATTACHMENT B.4 DATA VALIDATION SUMMARY REPORT

DATA VALIDATION SUMMARY REPORT
SEPTEMBER 2019 GROUNDWATER EVENT
HONEYWELL BUFFALO OUTER HARBOR
BUFFALO, NEW YORK

1.0 INTRODUCTION

Data validation was completed on groundwater samples collected by Wood Environment and Infrastructure Solutions, Inc. (Wood) during September 2019. Samples were analyzed by Accutest Laboratories located in Dayton, New Jersey. Sample data are reported under one sample delivery groups (SDG) JC95711. A summary of samples included in this report is presented on Table 1. Samples were analyzed by one or more of the following U.S. Environmental Protection (USEPA) SW-846 (USEPA, 1996) analytical methods were performed:

- Nitrobenzene by USEPA Method SW8270D LL.
- Total and dissolved metals by USEPA Method SW6010D and SW7470A.

Data validation was completed using Level II procedures described for Honeywell projects. Level II data quality reviews are completed using laboratory QC summary forms. A summary of QC limits used during data validation is included on Table 2. Data qualifications were completed using the professional judgment of the validation chemist and general procedures specified in USEPA national data validation guidelines (USEPA, 2017a; USEPA, 2017b).

During the Level II data validation the following data quality indicators are reviewed:

- Lab Report Narrative
- Data Completeness and Chain of Custody
- Sample Collection and Holding Times
- QC Blanks
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- Surrogate Spikes
- Field and Laboratory Duplicates
- Reporting Limits
- Electronic Data Verification

Data qualifications were completed if necessary in accordance with the guidelines using the following qualifiers:

U = The target compound was not detected at a concentration greater than, or equal to, the detection limit.
J = The reported concentration is considered an estimated value.
J+ = The reported concentration is considered an estimated value biased high.
J- = The reported concentration is considered an estimated value biased low.

UJ = The target compound was not detected and the reporting limit is considered to be estimated.

R = The reported value is rejected and is considered to be unusable

A Honeywell Level II data validation was completed on the entire data set and data validation findings from the Level II validation are reported in Section 2. Data quality control reviews are completed using laboratory QC summary forms and Earthsoft's Environmental Quality Information System (EQuIS). The EQuIS system has a computerized data validation module that performs data validation for QC checks specified by Honeywell for Level II validation. Sample results and associated QC data are compared to project specific QC limits that are set up by the project chemist prior to running the validation module. The EQuIS assigns validation reason codes to all results that are associated with QC measurements outside project QC goals, and the validation module applies data validation qualifiers to the final results. The data qualification actions are reviewed by the project chemist prior to accepting the final data. The validation qualification actions and associated validation reason codes are presented on Table 3. The following data validation reason codes were applied to one or more sample results:

LCSL =Laboratory control sample recovery less than the lower limit
MSDL=Matrix spike duplicate recovery less than the lower limit
MSL=Matrix spike recovery less than the lower limit
SSL=Surrogate recovery less than lower control limit

Result for non-detects were reported by the laboratory as U qualified results at the method detection limit (MDL). Target analyte results detected at concentrations between the method detection limit (MDL) and Method reporting limits (MRLs) were reported as J qualified estimated values by the laboratory.

Sample results that are not included on Table 3 were interpreted to be usable as reported by the laboratory. A complete summary of final sample results is provided in Table 4. A field duplicate summary is provided in Table 5.

2.0 DATA VALIDATION ACTIONS AND OBSERVATIONS

Quality control (QC) parameters and measurements checked during validation met requirements in the analytical method and/or validation guidelines. Unless specified below, results are interpreted to be usable as reported by the laboratory.

2.1 SVOC - Nitrobenzene

Data were evaluated based on the following parameters:

* Collection and Preservation
* Holding Times
* Data Completeness
* Blank Contamination
  LCS
  MS/MSD
* Field Duplicates
  Surrogate Recoveries
* Reporting Limits

* Criteria were met for this parameter

LCS

The LCS percent recovery for nitrobenzene (39) in analytical batch E2P3988 was less than the QC limit of 50 percent, which may indicate low bias. Nitrobenzene was not detected in associated samples and reporting limits were qualified as estimated (UJ) with reason code LCSL.

MS/MSD

For the MS/MSD analysis of sample GW-20-092519, the MS and MSD percent recoveries for nitrobenzene (39/42) were less than the QC limit of 50, which may indicate low bias. The result for nitrobenzene was not detected in sample GW-20-092519 and its duplicate sample GW-20-092519-D and reporting limits were qualified as estimated (UJ) with reason code MSL and MSDL.

Surrogates

Surrogate recoveries for nitrobenzene-d5, 2-fluorobiphenyl and terphenyl-d14 in samples GW-18R-092519 (30/23/18), GW-19-092519 (46/38/33), GW-20-092519 (46), GW-20-092519-D (31/26/28), GW-21-092519 (48/42/33), GW-22-092519 (43/34/18) and GW-23-092519 (45/36/19) were less than the QC limit of 50, which may indicate low bias. Nitrobenzene result for associated samples were qualified as estimated (UJ) with reason code SSL.

2.2 Metals

Data were evaluated based on the following parameters:

* Collection and Preservation
* Holding Times
* Data Completeness
* Blank Contamination
* LCS
* MS/MSD
* Field Duplicates
* Total and Dissolved metals check
  Reporting Limits

* - Criteria were met for this parameter

Reporting Limits

A subset of samples was analyzed at a dilution. Reporting limits for target compounds in the following samples are elevated due to dilution. Actual detection limits are presented on Table 4

References:

U.S. Environmental Protection Agency (USEPA), 1996. "Test Methods for Evaluating Solid Waste"; Laboratory Manual Physical/Chemical Methods; Office of Solid Waste and Emergency Response; Washington, DC; SW-846; November 1986; Revision 4 -December 1996.

U.S. Environmental Protection Agency (USEPA), 2017a. "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Data Review"; Office of Emergency and Remedial Response; EPA-540-/R-2017-002; January 2017.

U.S. Environmental Protection Agency (USEPA), 2017b. "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review"; Office of Superfund Remediation and Technology Innovation; EPA-540-R-2017-001; January 2017.

Data Validator: Lakshmi Devi

October 16, 2019

Senior Chemist: Chris Ricardi, NRCC-EAC

October 22, 2019

TABLE 1
SAMPLE AND ANALYTICAL SUMMARY
DATA VALIDATION SUMMARY REPORT
SEPTEMBER 2019 GROUNDWATER EVENT
HONEYWELL BUFFALO OUTER HARBOR
BUFFALO, NEW YORK

				Purpose	Nitrobenzene	Metals		Mercury	
				Method	SW8270D LL	SW6010D		SW7470A	
						Total	Dissolved	Total	Dissolved
SDG	Field Sample ID	Location ID	Type	Date					
JC95711	GW-18R-092519	GW-18R	REG	9/25/2019	1		22		1
JC95711	GW-19-092519	GW-19	REG	9/25/2019	1	22		1	
JC95711	GW-20-092519	GW-20	REG	9/25/2019	1	22		1	
JC95711	GW-20-092519-D	GW-20	FD	9/25/2019	1	22		1	
JC95711	GW-21-092519	GW-21	REG	9/25/2019	1	22		1	
JC95711	GW-22-092519	GW-22	REG	9/25/2019	1		22		1
JC95711	GW-23-092519	GW-23	REG	9/25/2019	1	22		1	

Notes:
FD = Field Duplicate
REG = Field Sample
SDG = Sample Delivery Group

Prepared by:Lakshmi Devi 10/16/2019
Checked by:Chris Ricardi 10/22/2019

TABLE 2
PROJECT PRECISION AND ACCURACYGOALS
DATA VALIDATION SUMMARY REPORT
SEPTEMBER 2019 GROUNDWATER
HONEYWELL BUFFALO OUTER HARBOR
BUFFALO, NEW YORK

PARAMETER	QC TEST	ANALYTE	WATER (%R)	WATER (RPD)
Semivolatiles	Surrogate	All BN Compounds	50 - 140	
	LCS	All BN Compounds	50 - 140	
	MS/MSD	All BN Compounds	50 - 140	20
	Field Duplicate	All Target Compounds		50
Inorganics-Metals	LCS	All Target Analytes	80 - 120	
	MS/MSD	All Target Analytes	75 -125	
	Lab Duplicate	All Target Analytes		20
	Field Duplicate	All Target Analytes		20

Notes:
LCS - Laboratory Control Sample
MS/MSD - Matrix spike/ Matrix Spike Duplicate
RPD = Relative Percent Difference
%R = Percent Recovery
QC = Quality Control
QC Limits are based on USEPA Region II Data Validation Guidelines and Project QA/QC Objectives

TABLE 3
VALIDATON ACTIONS SUMMARY
DATA VALIDATION SUMMARY REPORT
SEPTEMBER 2019 GROUNDWATER EVENT
HONEYWELL BUFFALO OUTER HARBOR
BUFFALO, NEW YORK

Field Sample ID	Type	SDG	Method	Parameter	Lab Result	Lab Qual	Val Qual	Reason Codes	Units
GW-18R-092519	REG	JC95711	SW8270	Nitrobenzene	0.32	U	UJ	LCSL,SSL	µg/L
GW-19-092519	REG	JC95711	SW8270	Nitrobenzene	0.32	U	UJ	LCSL,SSL	µg/L
GW-20-092519	REG	JC95711	SW8270	Nitrobenzene	0.32	U	UJ	LCSL,MSL,MSDL,SSL	µg/L
GW-20-092519-D	REG	JC95711	SW8270	Nitrobenzene	0.32	U	UJ	LCSL,MSL,MSDL,SSL	µg/L
GW-21-092519	REG	JC95711	SW8270	Nitrobenzene	0.32	U	UJ	LCSL,SSL	µg/L
GW-22-092519	REG	JC95711	SW8270	Nitrobenzene	0.32	U	UJ	LCSL,SSL	µg/L
GW-23-092519	REG	JC95711	SW8270	Nitrobenzene	0.32	U	UJ	LCSL,SSL	µg/L

Notes:
LCSL= Laboratory control sample recovery less than the lower limit
MSDL= Matrix spike duplicate recovery less than the lower limit
MSL= Matrix spike recovery less than the lower limit
SSL= Surrogate recovery less than lower control limit
U= Undetected
J= Estimated

Prepared by:Lakshmi Devi 10/16/2019
Checked by:Chris Ricardi 10/22/2019

TABLE 4
FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
SEPTEMBER 2019 GROUNDWATER EVENT
HONEYWELL BUFFALO OUTER HARBOR
BUFFALO, NEW YORK

			Field Sample ID	GW-18R-092519	GW-19-092519	GW-20-092519	GW-20-092519-D
			Location	GW-18R	GW-19	GW-20	GW-20
			Sample Date	9/25/2019	9/25/2019	9/25/2019	9/25/2019
			Sample Delivery Group	JC95711	JC95711	JC95711	JC95711
Units	Method	Parameter Name	Fraction				
mg/L	SW6010	Aluminum	D	0.046 U			
mg/L	SW6010	Antimony	D	0.0047 U			
mg/L	SW6010	Arsenic	D	0.0052			
mg/L	SW6010	Barium	D	0.0714 J			
mg/L	SW6010	Beryllium	D	0.0005 U			
mg/L	SW6010	Cadmium	D	0.001 U			
mg/L	SW6010	Calcium	D	230			
mg/L	SW6010	Chromium	D	0.002 U			
mg/L	SW6010	Cobalt	D	0.0028 J			
mg/L	SW6010	Copper	D	0.0059 U			
mg/L	SW6010	Iron	D	0.121			
mg/L	SW6010	Lead	D	0.0018 U			
mg/L	SW6010	Magnesium	D	39.3			
mg/L	SW6010	Manganese	D	0.598			
mg/L	SW6010	Nickel	D	0.0022 J			
mg/L	SW6010	Potassium	D	35.6			
mg/L	SW6010	Selenium	D	0.0049 U			
mg/L	SW6010	Silver	D	0.0019 U			
mg/L	SW6010	Sodium	D	13.4			
mg/L	SW6010	Thallium	D	0.0018 U			
mg/L	SW6010	Vanadium	D	0.0018 U			
mg/L	SW6010	Zinc	D	0.0606			
mg/L	SW7470	Mercury	D	0.000095 U			
mg/L	SW6010	Aluminum	T		0.415	0.046 U	0.046 U
mg/L	SW6010	Antimony	T		0.0047 U	0.0047 U	0.0047 U
mg/L	SW6010	Arsenic	T		0.0209	0.0110	0.0100
mg/L	SW6010	Barium	T		0.0135 J	0.0372 J	0.0352 J

Prepared by:Lakshmi Devi 10/16/2019
Checked by:Chris Ricardi 10/22/2019

TABLE 4
FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
SEPTEMBER 2019 GROUNDWATER EVENT
HONEYWELL BUFFALO OUTER HARBOR
BUFFALO, NEW YORK

			Field Sample ID	GW-18R-092519	GW-19-092519	GW-20-092519	GW-20-092519-D
			Location	GW-18R	GW-19	GW-20	GW-20
			Sample Date	9/25/2019	9/25/2019	9/25/2019	9/25/2019
			Sample Delivery Group	JC95711	JC95711	JC95711	JC95711
Units	Method	Parameter Name	Fraction				
mg/L	SW6010	Beryllium	T		0.0005 U	0.0005 U	0.0005 U
mg/L	SW6010	Cadmium	T		0.001 U	0.001 U	0.001 U
mg/L	SW6010	Calcium	T		28.4	86.7	82.9
mg/L	SW6010	Chromium	T		0.0058 J	0.002 U	0.002 U
mg/L	SW6010	Cobalt	T		0.0026 U	0.0026 U	0.0026 U
mg/L	SW6010	Copper	T		0.0228	0.0059 U	0.0059 U
mg/L	SW6010	Iron	T		0.345	0.0745 J	0.0499 J
mg/L	SW6010	Lead	T		0.0283	0.0042 J	0.0043 J
mg/L	SW6010	Magnesium	T		0.313 J	7.07	6.41
mg/L	SW6010	Manganese	T		0.0014 J	0.0347	0.0309
mg/L	SW6010	Nickel	T		0.0064 J	0.0017 U	0.0017 U
mg/L	SW6010	Potassium	T		441	157	154
mg/L	SW6010	Selenium	T		0.0052 J	0.0049 U	0.0049 U
mg/L	SW6010	Silver	T		0.0333	0.0113	0.0112
mg/L	SW6010	Sodium	T		34.9	41.6	40.4
mg/L	SW6010	Thallium	T		0.0018 U	0.0018 U	0.0018 U
mg/L	SW6010	Vanadium	T		0.0361 J	0.0160 J	0.0154 J
mg/L	SW6010	Zinc	T		0.0069 U	0.0071 J	0.0069 U
mg/L	SW7470	Mercury	T		0.00054	0.000095 U	0.000095 U
µg/L	SW8270	Nitrobenzene	T	0.32 UJ	0.32 UJ	0.32 UJ	0.32 UJ

Notes:
U = Undetected
J = Estimated

Prepared by:Lakshmi Devi 10/16/2019
Checked by:Chris Ricardi 10/22/2019

TABLE 4
FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
SEPTEMBER 2019 GROUNDWATER EVENT
HONEYWELL BUFFALO OUTER HARBOR
BUFFALO, NEW YORK

			Field Sample ID	GW-21-092519	GW-22-092519	GW-23-092519
			Location	GW-21	GW-22	GW-23
			Sample Date	9/25/2019	9/25/2019	9/25/2019
			Sample Delivery Group	JC95711	JC95711	JC95711
Units	Method	Parameter Name	Fraction			
mg/L	SW6010	Aluminum	D		0.046 U	
mg/L	SW6010	Antimony	D		0.0113	
mg/L	SW6010	Arsenic	D		0.0084 U	
mg/L	SW6010	Barium	D		0.0523 J	
mg/L	SW6010	Beryllium	D		0.0005 U	
mg/L	SW6010	Cadmium	D		0.001 U	
mg/L	SW6010	Calcium	D		368	
mg/L	SW6010	Chromium	D		0.002 U	
mg/L	SW6010	Cobalt	D		0.0026 U	
mg/L	SW6010	Copper	D		0.0059 U	
mg/L	SW6010	Iron	D		0.126	
mg/L	SW6010	Lead	D		0.0054 U	
mg/L	SW6010	Magnesium	D		173	
mg/L	SW6010	Manganese	D		0.925	
mg/L	SW6010	Nickel	D		0.0073 J	
mg/L	SW6010	Potassium	D		40.6	
mg/L	SW6010	Selenium	D		0.0049 U	
mg/L	SW6010	Silver	D		0.0028 J	
mg/L	SW6010	Sodium	D		59.6	
mg/L	SW6010	Thallium	D		0.0018 U	
mg/L	SW6010	Vanadium	D		0.0018 U	
mg/L	SW6010	Zinc	D		0.0151 J	
mg/L	SW7470	Mercury	D		0.000095 U	
mg/L	SW6010	Aluminum	T	0.046 U		0.13 J
mg/L	SW6010	Antimony	T	0.0047 U		0.0452
mg/L	SW6010	Arsenic	T	0.0029 J		0.0096
mg/L	SW6010	Barium	T	0.0339 J		0.199 J

Prepared by:Lakshmi Devi 10/16/2019
Checked by:Chris Ricardi 10/22/2019

TABLE 4
FINAL RESULTS
DATA VALIDATION SUMMARY REPORT
SEPTEMBER 2019 GROUNDWATER EVENT
HONEYWELL BUFFALO OUTER HARBOR
BUFFALO, NEW YORK

			Field Sample ID	GW-21-092519	GW-22-092519	GW-23-092519
			Location	GW-21	GW-22	GW-23
			Sample Date	9/25/2019	9/25/2019	9/25/2019
			Sample Delivery Group	JC95711	JC95711	JC95711
Units	Method	Parameter Name	Fraction			
mg/L	SW6010	Beryllium	T	0.0005 U		0.0005 U
mg/L	SW6010	Cadmium	T	0.001 U		0.001 U
mg/L	SW6010	Calcium	T	39.1		197
mg/L	SW6010	Chromium	T	0.002 U		0.0035 J
mg/L	SW6010	Cobalt	T	0.0026 U		0.0026 U
mg/L	SW6010	Copper	T	0.0059 U		0.0305
mg/L	SW6010	Iron	T	0.232		12.9
mg/L	SW6010	Lead	T	0.0020 J		0.113
mg/L	SW6010	Magnesium	T	2.48 J		38.1
mg/L	SW6010	Manganese	T	0.0032 J		0.625
mg/L	SW6010	Nickel	T	0.0017 U		0.0027 J
mg/L	SW6010	Potassium	T	17.5		48.8
mg/L	SW6010	Selenium	T	0.0049 U		0.0049 U
mg/L	SW6010	Silver	T	0.0019 U		0.0037 J
mg/L	SW6010	Sodium	T	12		12.5
mg/L	SW6010	Thallium	T	0.0018 U		0.0018 U
mg/L	SW6010	Vanadium	T	0.0018 J		0.0050 J
mg/L	SW6010	Zinc	T	0.0069 U		0.0657
mg/L	SW7470	Mercury	T	0.000095 U		0.00021
µg/L	SW8270	Nitrobenzene	T	0.32 UJ	0.32 UJ	0.32 UJ

Notes:
U = Undetected
J = Estimated

Prepared by:Lakshmi Devi 10/16/2019
Checked by:Chris Ricardi 10/22/2019

TABLE 5
FIELD DUPLICATE RESULT COMPARISON
DATA VALIDATION SUMMARY REPORT
SEPTEMBER 2019 GROUNDWATER
HONEYWELL BUFFALO OUTER HARBOR
BUFFALO, NEW YORK

Method	Units	Paramerter	GW-20-092216	GW-20-092519-D	RPD	RL	5x RL	both results >5x RL	both results <5x RL within +/- RL	pass/fail
SW6010	mg/L	Aluminum	0.046 U	0.046 U	ND	0.20	1	ND	ND	Pass
SW6010	mg/L	Antimony	0.0047 U	0.0047 U	ND	0.006	0.03	ND	ND	Pass
SW6010	mg/L	Arsenic	0.0110	0.0100	10	0.006	0.03	No	No	Pass
SW6010	mg/L	Barium	0.0372 J	0.0352 J	NA	0.20	1			Pass
SW6010	mg/L	Beryllium	0.0005 U	0.0005 U	ND	0.001	0.005	ND	ND	Pass
SW6010	mg/L	Cadmium	0.001 U	0.001 U	ND	0.003	0.015	ND	ND	Pass
SW6010	mg/L	Calcium	86.7	82.9	4	5.0	25	No	No	Pass
SW6010	mg/L	Chromium	0.002 U	0.002 U	ND	0.01	0.05	ND	ND	Pass
SW6010	mg/L	Cobalt	0.0026 U	0.0026 U	ND	0.05	0.25	ND	ND	Pass
SW6010	mg/L	Copper	0.0059 U	0.0059 U	ND	0.01	0.05	ND	ND	Pass
SW6010	mg/L	Iron	0.0745 J	0.0499 J	NA	0.1	0.5			Pass
SW6010	mg/L	Lead	0.0042 J	0.0043 J	NA	0.006	0.03			Pass
SW6010	mg/L	Magnesium	7.07	6.41	10	5.0	25	No	Yes	Pass
SW6010	mg/L	Manganese	0.0347	0.0309	12	0.015	0.075	No	Yes	Pass
SW6010	mg/L	Nickel	0.0017 U	0.0017 U	ND	0.01	0.05	ND	ND	Pass
SW6010	mg/L	Potassium	157	154	2	10	50	No	Yes	Pass
SW6010	mg/L	Selenium	0.0049 U	0.0049 U	ND	0.01	0.05	ND	ND	Pass
SW6010	mg/L	Silver	0.0113	0.0112	1	0.01	0.05	No	Yes	Pass
SW6010	mg/L	Sodium	41.6	40.4	3	10	50	No	No	Pass
SW6010	mg/L	Thallium	0.0018 U	0.0018 U	ND	0.01	0.05	ND	ND	Pass
SW6010	mg/L	Vanadium	0.0160 J	0.0154 J	NA	0.05	0.25			Pass
SW6010	mg/L	Zinc	0.0071 J	0.0069 U	3	0.02	0.1	NA	ND	Pass
SW7470	mg/L	Mercury	0.000095 U	0.000095 U	ND	0.0002	0.001	ND	ND	Pass
SW8270	ug/L	Nitrobenzene	0.32 UJ	0.32 UJ	ND	0.47	2.35	ND	ND	Pass

Notes:
NA = Not Applicable
ND = Not Detected
RL = Reporting Limit
RPD = Relative Percent Difference

Prepared by:Lakshmi Devi 10/16/2019
Checked by:Chris Ricardi 10/22/2019

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Honeywell International Inc. OMM work

HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

R35116

SGS Job Number: JC95711

Sampling Date: 09/25/19

Report to:

Wood Environment & Infrastructure Soln.
511 Congress Street
Portland, ME 04112
Ryan.Belcher@amecfw.com; HTS-RES-LAB@Honeywell.com

ATTN: Ryan Belcher

Total number of pages in report: 55

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Laura Degenhardt
General Manager

Client Service contact: Kristin Degraw 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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SGS North America Inc.

Sample Summary

Honeywell International Inc. OMM work

Job No: JC95711

HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY
Project No: R35116

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC95711-1	09/25/19	09:20	MS	09/26/19	AQ	Ground Water	GW-20-092519
JC95711-1D	09/25/19	09:45	MS	09/26/19	AQ	Water Dup/MSD	GW-20-MSD-092519
JC95711-1S	09/25/19	09:35	MS	09/26/19	AQ	Water Matrix Spike	GW-20-MS-092519
JC95711-2	09/25/19	09:55	MS	09/26/19	AQ	Ground Water	FDUP-GW-20-092519
JC95711-3	09/25/19	14:16	MS	09/26/19	AQ	Ground Water	GW-18R-092519
JC95711-3F	09/25/19	14:16	MS	09/26/19	AQ	Groundwater Filtered	GW-18R-092519
JC95711-4	09/25/19	10:35	MS	09/26/19	AQ	Ground Water	GW-19-092519
JC95711-5	09/25/19	12:10	MS	09/26/19	AQ	Ground Water	GW-21-092519
JC95711-6	09/25/19	13:51	MS	09/26/19	AQ	Ground Water	GW-22-092519
JC95711-6F	09/25/19	13:51	MS	09/26/19	AQ	Groundwater Filtered	GW-22-092519
JC95711-7	09/25/19	12:30	MS	09/26/19	AQ	Ground Water	GW-23-092519

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL
Metals ND = Not detected above the MDL

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Honeywell International Inc. OMM work	**Job No**	JC95711
Site:	HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, B	**Report Date**	10/11/2019 4:31:46 P

On 09/26/2019, 7 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.7 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC95711 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Semi-volatiles By Method SW846 8270D

Matrix: AQ **Batch ID:** OP23046

- The data for SW846 8270D meets quality control requirements.
- JC95711-3: Confirmation run.
- JC95711-2: Confirmation run.
- JC95711-3 for 2-Fluorobiphenyl: Outside of in house control limits.

Matrix: AQ **Batch ID:** OP23098

- All samples were extracted within the recommended method holding time.
- Sample(s) JC95711-1MS, JC95711-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- JC95711-2 for 2-Fluorobiphenyl: Outside of in house control limits.
- JC95711-7 for Terphenyl-d14: Outside of in house control limits. No associated compounds reported.
- JC95711-3 for Nitrobenzene-d5: Outside of in house control limits.
- OP23098-MB1 for 2-Fluorobiphenyl: Outside of in house control limits. No associated compounds reported.
- JC95711-3 for Terphenyl-d14: Outside of in house control limits.
- JC95711-6 for 2-Fluorobiphenyl: Outside of in house control limits. No associated compounds reported.
- JC95711-6 for Terphenyl-d14: Outside of in house control limits. No associated compounds reported.
- JC95711-7 for 2-Fluorobiphenyl: Outside of in house control limits. No associated compounds reported.
- JC95711-2 for Nitrobenzene-d5: Outside of in house control limits.
- JC95711-3 for 2-Fluorobiphenyl: Outside of in house control limits.
- OP23098-BS1 for 2-Fluorobiphenyl: Outside of in house control limits. No associated compounds reported.

Metals Analysis By Method SW846 6010D

Matrix: AQ **Batch ID:** MP17674

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC95711-1MS, JC95711-1MSD, JC95711-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic, Lead, Aluminum, Antimony, Chromium, Copper, Iron, Nickel, Selenium, Silver, Zinc are outside control limits for sample MP17674-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- Samples(s) JC95711-1, JC95711-2, JC95711-3F, JC95711-4, JC95711-5, JC95711-6F, JC95711-7: New York does not offer 3010A certification for antimony and silver. The laboratory is certified for method 3010A (Acid Digestion for Total Metals) for all other metals and is certified for the associated analytical methods of 6010C (ICP Analysis) and 6020A (ICP-MS Analysis). New York does certify for method 3005A (Acid Digestion for Total Recoverable or Dissolved Metals) for antimony and silver and the laboratory holds that certification, but that provides total recoverable rather than total metals results.
- JC95711-6F for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC95711-1 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC95711-1 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC95711-2 for Arsenic: Elevated detection limit due to dilution required for high interfering element.
- JC95711-2 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JC95711-6F for Lead: Elevated detection limit due to dilution required for high interfering element.

Metals Analysis By Method SW846 7470A

Matrix: AQ **Batch ID:** MP17670

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC95711-1MS, JC95711-1MSD were used as the QC samples for metals.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JC95711
Account: Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY
Collected: 09/25/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC95711-1	**GW-20-092519**					
Arsenic [a]		11.0	6.0	5.6	ug/l	SW846 6010D
Barium		37.2 J	200	13	ug/l	SW846 6010D
Calcium		86700	5000	99	ug/l	SW846 6010D
Iron		74.5 J	100	32	ug/l	SW846 6010D
Lead [a]		4.2 J	6.0	3.6	ug/l	SW846 6010D
Magnesium		7070	5000	140	ug/l	SW846 6010D
Manganese		34.7	15	1.4	ug/l	SW846 6010D
Potassium		157000	10000	200	ug/l	SW846 6010D
Silver		11.3	10	1.9	ug/l	SW846 6010D
Sodium		41600	10000	570	ug/l	SW846 6010D
Vanadium		16.0 J	50	1.8	ug/l	SW846 6010D
Zinc		7.1 J	20	6.9	ug/l	SW846 6010D
JC95711-2	**FDUP-GW-20-092519**					
Arsenic [a]		10.0	6.0	5.6	ug/l	SW846 6010D
Barium		35.2 J	200	13	ug/l	SW846 6010D
Calcium		82900	5000	99	ug/l	SW846 6010D
Iron		49.9 J	100	32	ug/l	SW846 6010D
Lead [a]		4.3 J	6.0	3.6	ug/l	SW846 6010D
Magnesium		6410	5000	140	ug/l	SW846 6010D
Manganese		30.9	15	1.4	ug/l	SW846 6010D
Potassium		154000	10000	200	ug/l	SW846 6010D
Silver		11.2	10	1.9	ug/l	SW846 6010D
Sodium		40400	10000	570	ug/l	SW846 6010D
Vanadium		15.4 J	50	1.8	ug/l	SW846 6010D
JC95711-3	**GW-18R-092519**					
No hits reported in this sample.						
JC95711-3F	**GW-18R-092519**					
Arsenic		5.2	3.0	2.8	ug/l	SW846 6010D
Barium		71.4 J	200	13	ug/l	SW846 6010D
Calcium		230000	10000	200	ug/l	SW846 6010D
Cobalt		2.8 J	50	2.6	ug/l	SW846 6010D
Iron		121	100	32	ug/l	SW846 6010D
Magnesium		39300	5000	140	ug/l	SW846 6010D
Manganese		598	15	1.4	ug/l	SW846 6010D
Nickel		2.2 J	10	1.7	ug/l	SW846 6010D
Potassium		35600	10000	200	ug/l	SW846 6010D
Sodium		13400	10000	570	ug/l	SW846 6010D

Summary of Hits

Job Number: JC95711
Account: Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY
Collected: 09/25/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Zinc		60.6	20	6.9	ug/l	SW846 6010D
JC95711-4	**GW-19-092519**					
Aluminum		415	200	46	ug/l	SW846 6010D
Arsenic		20.9	3.0	2.8	ug/l	SW846 6010D
Barium		13.5 J	200	13	ug/l	SW846 6010D
Calcium		28400	5000	99	ug/l	SW846 6010D
Chromium		5.8 J	10	2.0	ug/l	SW846 6010D
Copper		22.8	10	5.9	ug/l	SW846 6010D
Iron		345	100	32	ug/l	SW846 6010D
Lead		28.3	3.0	1.8	ug/l	SW846 6010D
Magnesium		313 J	5000	140	ug/l	SW846 6010D
Manganese		1.4 J	15	1.4	ug/l	SW846 6010D
Mercury		0.54	0.20	0.095	ug/l	SW846 7470A
Nickel		6.4 J	10	1.7	ug/l	SW846 6010D
Potassium		441000	50000	1000	ug/l	SW846 6010D
Selenium		5.2 J	10	4.9	ug/l	SW846 6010D
Silver		33.3	10	1.9	ug/l	SW846 6010D
Sodium		34900	10000	570	ug/l	SW846 6010D
Vanadium		36.1 J	50	1.8	ug/l	SW846 6010D
JC95711-5	**GW-21-092519**					
Arsenic		2.9 J	3.0	2.8	ug/l	SW846 6010D
Barium		33.9 J	200	13	ug/l	SW846 6010D
Calcium		39100	5000	99	ug/l	SW846 6010D
Iron		232	100	32	ug/l	SW846 6010D
Lead		2.0 J	3.0	1.8	ug/l	SW846 6010D
Magnesium		2480 J	5000	140	ug/l	SW846 6010D
Manganese		3.2 J	15	1.4	ug/l	SW846 6010D
Potassium		17500	10000	200	ug/l	SW846 6010D
Sodium		12000	10000	570	ug/l	SW846 6010D
Vanadium		1.8 J	50	1.8	ug/l	SW846 6010D
JC95711-6	**GW-22-092519**					
No hits reported in this sample.						
JC95711-6F	**GW-22-092519**					
Antimony		11.3	6.0	4.7	ug/l	SW846 6010D
Barium		52.3 J	200	13	ug/l	SW846 6010D
Calcium		368000	15000	300	ug/l	SW846 6010D
Iron		126	100	32	ug/l	SW846 6010D

Summary of Hits

Job Number: JC95711
Account: Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY
Collected: 09/25/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Magnesium		173000	5000	140	ug/l	SW846 6010D
Manganese		925	15	1.4	ug/l	SW846 6010D
Nickel		7.3 J	10	1.7	ug/l	SW846 6010D
Potassium		40600	10000	200	ug/l	SW846 6010D
Silver		2.8 J	10	1.9	ug/l	SW846 6010D
Sodium		59600	10000	570	ug/l	SW846 6010D
Zinc		15.1 J	20	6.9	ug/l	SW846 6010D
JC95711-7	**GW-23-092519**					
Aluminum		130 J	200	46	ug/l	SW846 6010D
Antimony		45.2	6.0	4.7	ug/l	SW846 6010D
Arsenic		9.6	3.0	2.8	ug/l	SW846 6010D
Barium		199 J	200	13	ug/l	SW846 6010D
Calcium		197000	5000	99	ug/l	SW846 6010D
Chromium		3.5 J	10	2.0	ug/l	SW846 6010D
Copper		30.5	10	5.9	ug/l	SW846 6010D
Iron		12900	100	32	ug/l	SW846 6010D
Lead		113	3.0	1.8	ug/l	SW846 6010D
Magnesium		38100	5000	140	ug/l	SW846 6010D
Manganese		625	15	1.4	ug/l	SW846 6010D
Mercury		0.21	0.20	0.095	ug/l	SW846 7470A
Nickel		2.7 J	10	1.7	ug/l	SW846 6010D
Potassium		48800	10000	200	ug/l	SW846 6010D
Silver		3.7 J	10	1.9	ug/l	SW846 6010D
Sodium		12500	10000	570	ug/l	SW846 6010D
Vanadium		5.0 J	50	1.8	ug/l	SW846 6010D
Zinc		65.7	20	6.9	ug/l	SW846 6010D

(a) Elevated detection limit due to dilution required for high interfering element.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: GW-20-092519
Lab Sample ID: JC95711-1 **Date Sampled:** 09/25/19
Matrix: AQ - Ground Water **Date Received:** 09/26/19
Method: SW846 8270D SW846 3510C **Percent Solids:** n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P90108.D	1	10/03/19 16:41	AR	10/02/19 22:00	OP23098	E2P3988
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	0.50 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
98-95-3	Nitrobenzene	ND	1.0	0.32	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	50%		34-128%
321-60-8	2-Fluorobiphenyl	46%		38-119%
1718-51-0	Terphenyl-d14	55%		26-129%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-20-092519
Lab Sample ID: JC95711-1
Matrix: AQ - Ground Water
Date Sampled: 09/25/19
Date Received: 09/26/19
Percent Solids: n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	ND	200	46	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Antimony	ND	6.0	4.7	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Arsenic [a]	11.0	6.0	5.6	ug/l	2	10/03/19	10/04/19	ND	SW846 6010D [3]	SW846 3010A [5]
Barium	37.2 J	200	13	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Beryllium	ND	1.0	0.50	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cadmium	ND	3.0	1.0	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Calcium	86700	5000	99	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Chromium	ND	10	2.0	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cobalt	ND	50	2.6	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Copper	ND	10	5.9	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Iron	74.5 J	100	32	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Lead [a]	4.2 J	6.0	3.6	ug/l	2	10/03/19	10/04/19	ND	SW846 6010D [3]	SW846 3010A [5]
Magnesium	7070	5000	140	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Manganese	34.7	15	1.4	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Mercury	ND	0.20	0.095	ug/l	1	10/02/19	10/02/19	LL	SW846 7470A [1]	SW846 7470A [4]
Nickel	ND	10	1.7	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Potassium	157000	10000	200	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Selenium	ND	10	4.9	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Silver	11.3	10	1.9	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Sodium	41600	10000	570	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Thallium	ND	10	1.8	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Vanadium	16.0 J	50	1.8	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]
Zinc	7.1 J	20	6.9	ug/l	1	10/03/19	10/03/19	ND	SW846 6010D [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA47554
(2) Instrument QC Batch: MA47563
(3) Instrument QC Batch: MA47573
(4) Prep QC Batch: MP17670
(5) Prep QC Batch: MP17674

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	FDUP-GW-20-092519		
Lab Sample ID:	JC95711-2	**Date Sampled:**	09/25/19
Matrix:	AQ - Ground Water	**Date Received:**	09/26/19
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P90109.D	1	10/03/19 17:07	AR	10/02/19 22:00	OP23098	E2P3988
Run #2 [a]	2P90300.D	1	10/10/19 15:57	JC	09/30/19 22:00	OP23046	E2P3997

	Initial Volume	Final Volume
Run #1	1000 ml	0.50 ml
Run #2	1050 ml	0.50 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
98-95-3	Nitrobenzene	ND	1.0	0.32	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	31% [b]	80%	34-128%
321-60-8	2-Fluorobiphenyl	26% [b]	62%	38-119%
1718-51-0	Terphenyl-d14	28%	80%	26-129%

(a) Confirmation run.
(b) Outside of in house control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: FDUP-GW-20-092519
Lab Sample ID: JC95711-2
Matrix: AQ - Ground Water
Date Sampled: 09/25/19
Date Received: 09/26/19
Percent Solids: n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	ND	200	46	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Antimony	ND	6.0	4.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Arsenic [a]	10.0	6.0	5.6	ug/l	2	10/03/19	10/04/19	ND	SW846 6010D [3]	SW846 3010A [5]
Barium	35.2 J	200	13	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Beryllium	ND	1.0	0.50	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cadmium	ND	3.0	1.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Calcium	82900	5000	99	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Chromium	ND	10	2.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cobalt	ND	50	2.6	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Copper	ND	10	5.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Iron	49.9 J	100	32	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Lead [a]	4.3 J	6.0	3.6	ug/l	2	10/03/19	10/04/19	ND	SW846 6010D [3]	SW846 3010A [5]
Magnesium	6410	5000	140	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Manganese	30.9	15	1.4	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Mercury	ND	0.20	0.095	ug/l	1	10/02/19	10/02/19	LL	SW846 7470A [1]	SW846 7470A [4]
Nickel	ND	10	1.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Potassium	154000	10000	200	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Selenium	ND	10	4.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Silver	11.2	10	1.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Sodium	40400	10000	570	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Thallium	ND	10	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Vanadium	15.4 J	50	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Zinc	ND	20	6.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA47554
(2) Instrument QC Batch: MA47563
(3) Instrument QC Batch: MA47573
(4) Prep QC Batch: MP17670
(5) Prep QC Batch: MP17674

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	GW-18R-092519		
Lab Sample ID:	JC95711-3	**Date Sampled:**	09/25/19
Matrix:	AQ - Ground Water	**Date Received:**	09/26/19
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P90110.D	1	10/03/19 17:32	AR	10/02/19 22:00	OP23098	E2P3988
Run #2 [a]	2P90301.D	1	10/10/19 16:22	JC	09/30/19 22:00	OP23046	E2P3997

	Initial Volume	Final Volume
Run #1	1000 ml	0.50 ml
Run #2	1000 ml	0.50 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
98-95-3	Nitrobenzene	ND	1.0	0.32	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	30% [b]	44%	34-128%
321-60-8	2-Fluorobiphenyl	23% [b]	33% [b]	38-119%
1718-51-0	Terphenyl-d14	18% [b]	32%	26-129%

(a) Confirmation run.
(b) Outside of in house control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-18R-092519
Lab Sample ID: JC95711-3F
Matrix: AQ - Groundwater Filtered
Date Sampled: 09/25/19
Date Received: 09/26/19
Percent Solids: n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	ND	200	46	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Antimony	ND	6.0	4.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Arsenic	5.2	3.0	2.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Barium	71.4 J	200	13	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Beryllium	ND	1.0	0.50	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cadmium	ND	3.0	1.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Calcium	230000	10000	200	ug/l	2	10/03/19	10/04/19	ND	SW846 6010D [3]	SW846 3010A [5]
Chromium	ND	10	2.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cobalt	2.8 J	50	2.6	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Copper	ND	10	5.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Iron	121	100	32	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Lead	ND	3.0	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Magnesium	39300	5000	140	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Manganese	598	15	1.4	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Mercury	ND	0.20	0.095	ug/l	1	10/02/19	10/02/19	LL	SW846 7470A [1]	SW846 7470A [4]
Nickel	2.2 J	10	1.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Potassium	35600	10000	200	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Selenium	ND	10	4.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Silver	ND	10	1.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Sodium	13400	10000	570	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Thallium	ND	10	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Vanadium	ND	50	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Zinc	60.6	20	6.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA47554
(2) Instrument QC Batch: MA47563
(3) Instrument QC Batch: MA47573
(4) Prep QC Batch: MP17670
(5) Prep QC Batch: MP17674

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: GW-19-092519
Lab Sample ID: JC95711-4 **Date Sampled:** 09/25/19
Matrix: AQ - Ground Water **Date Received:** 09/26/19
Method: SW846 8270D SW846 3510C **Percent Solids:** n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P90159.D	1	10/04/19 16:41	JC	10/02/19 22:00	OP23098	E2P3990
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	0.50 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
98-95-3	Nitrobenzene	ND	1.0	0.32	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	46%		34-128%
321-60-8	2-Fluorobiphenyl	38%		38-119%
1718-51-0	Terphenyl-d14	33%		26-129%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-19-092519
Lab Sample ID: JC95711-4
Matrix: AQ - Ground Water
Date Sampled: 09/25/19
Date Received: 09/26/19
Percent Solids: n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	415	200	46	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Antimony	ND	6.0	4.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Arsenic	20.9	3.0	2.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Barium	13.5 J	200	13	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Beryllium	ND	1.0	0.50	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cadmium	ND	3.0	1.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Calcium	28400	5000	99	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Chromium	5.8 J	10	2.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cobalt	ND	50	2.6	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Copper	22.8	10	5.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Iron	345	100	32	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Lead	28.3	3.0	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Magnesium	313 J	5000	140	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Manganese	1.4 J	15	1.4	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Mercury	0.54	0.20	0.095	ug/l	1	10/02/19	10/02/19	LL	SW846 7470A [1]	SW846 7470A [4]
Nickel	6.4 J	10	1.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Potassium	441000	50000	1000	ug/l	5	10/03/19	10/04/19	ND	SW846 6010D [3]	SW846 3010A [5]
Selenium	5.2 J	10	4.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Silver	33.3	10	1.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Sodium	34900	10000	570	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Thallium	ND	10	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Vanadium	36.1 J	50	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Zinc	ND	20	6.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA47554
(2) Instrument QC Batch: MA47563
(3) Instrument QC Batch: MA47573
(4) Prep QC Batch: MP17670
(5) Prep QC Batch: MP17674

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: GW-21-092519
Lab Sample ID: JC95711-5 **Date Sampled:** 09/25/19
Matrix: AQ - Ground Water **Date Received:** 09/26/19
Method: SW846 8270D SW846 3510C **Percent Solids:** n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P90112.D	1	10/03/19 18:23	AR	10/02/19 22:00	OP23098	E2P3988
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	0.50 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
98-95-3	Nitrobenzene	ND	1.0	0.32	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	48%		34-128%
321-60-8	2-Fluorobiphenyl	42%		38-119%
1718-51-0	Terphenyl-d14	33%		26-129%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-21-092519
Lab Sample ID: JC95711-5
Matrix: AQ - Ground Water
Date Sampled: 09/25/19
Date Received: 09/26/19
Percent Solids: n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	ND	200	46	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Antimony	ND	6.0	4.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	2.9 J	3.0	2.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	33.9 J	200	13	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	ND	1.0	0.50	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	ND	3.0	1.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Calcium	39100	5000	99	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	ND	10	2.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Cobalt	ND	50	2.6	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Copper	ND	10	5.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Iron	232	100	32	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	2.0 J	3.0	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Magnesium	2480 J	5000	140	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Manganese	3.2 J	15	1.4	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	ND	0.20	0.095	ug/l	1	10/02/19	10/02/19	LL	SW846 7470A [1]	SW846 7470A [3]
Nickel	ND	10	1.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Potassium	17500	10000	200	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	ND	10	4.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	ND	10	1.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Sodium	12000	10000	570	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Thallium	ND	10	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	1.8 J	50	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Zinc	ND	20	6.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA47554
(2) Instrument QC Batch: MA47563
(3) Prep QC Batch: MP17670
(4) Prep QC Batch: MP17674

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: GW-22-092519
Lab Sample ID: JC95711-6 **Date Sampled:** 09/25/19
Matrix: AQ - Ground Water **Date Received:** 09/26/19
Method: SW846 8270D SW846 3510C **Percent Solids:** n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P90113.D	1	10/03/19 18:48	AR	10/02/19 22:00	OP23098	E2P3988
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	0.50 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
98-95-3	Nitrobenzene	ND	1.0	0.32	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	43%		34-128%
321-60-8	2-Fluorobiphenyl	34% [a]		38-119%
1718-51-0	Terphenyl-d14	18% [a]		26-129%

(a) Outside of in house control limits. No associated compounds reported.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-22-092519
Lab Sample ID: JC95711-6F
Matrix: AQ - Groundwater Filtered
Date Sampled: 09/25/19
Date Received: 09/26/19
Percent Solids: n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	ND	200	46	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Antimony	11.3	6.0	4.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Arsenic [a]	ND	9.0	8.4	ug/l	3	10/03/19	10/04/19	ND	SW846 6010D [3]	SW846 3010A [5]
Barium	52.3 J	200	13	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Beryllium	ND	1.0	0.50	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cadmium	ND	3.0	1.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Calcium	368000	15000	300	ug/l	3	10/03/19	10/04/19	ND	SW846 6010D [3]	SW846 3010A [5]
Chromium	ND	10	2.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Cobalt	ND	50	2.6	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Copper	ND	10	5.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Iron	126	100	32	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Lead [a]	ND	9.0	5.4	ug/l	3	10/03/19	10/04/19	ND	SW846 6010D [3]	SW846 3010A [5]
Magnesium	173000	5000	140	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Manganese	925	15	1.4	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Mercury	ND	0.20	0.095	ug/l	1	10/02/19	10/02/19	LL	SW846 7470A [1]	SW846 7470A [4]
Nickel	7.3 J	10	1.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Potassium	40600	10000	200	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Selenium	ND	10	4.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Silver	2.8 J	10	1.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Sodium	59600	10000	570	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Thallium	ND	10	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Vanadium	ND	50	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]
Zinc	15.1 J	20	6.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [5]

(1) Instrument QC Batch: MA47554
(2) Instrument QC Batch: MA47563
(3) Instrument QC Batch: MA47573
(4) Prep QC Batch: MP17670
(5) Prep QC Batch: MP17674

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: GW-23-092519
Lab Sample ID: JC95711-7 **Date Sampled:** 09/25/19
Matrix: AQ - Ground Water **Date Received:** 09/26/19
Method: SW846 8270D SW846 3510C **Percent Solids:** n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2P90114.D	1	10/03/19 19:13	AR	10/02/19 22:00	OP23098	E2P3988
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	0.50 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
98-95-3	Nitrobenzene	ND	1.0	0.32	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	45%		34-128%
321-60-8	2-Fluorobiphenyl	36% [a]		38-119%
1718-51-0	Terphenyl-d14	19% [a]		26-129%

(a) Outside of in house control limits. No associated compounds reported.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GW-23-092519
Lab Sample ID: JC95711-7
Matrix: AQ - Ground Water
Date Sampled: 09/25/19
Date Received: 09/26/19
Percent Solids: n/a
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	130 J	200	46	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Antimony	45.2	6.0	4.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Arsenic	9.6	3.0	2.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Barium	199 J	200	13	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Beryllium	ND	1.0	0.50	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Cadmium	ND	3.0	1.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Calcium	197000	5000	99	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Chromium	3.5 J	10	2.0	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Cobalt	ND	50	2.6	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Copper	30.5	10	5.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Iron	12900	100	32	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Lead	113	3.0	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Magnesium	38100	5000	140	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Manganese	625	15	1.4	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Mercury	0.21	0.20	0.095	ug/l	1	10/02/19	10/02/19	LL	SW846 7470A [1]	SW846 7470A [3]
Nickel	2.7 J	10	1.7	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Potassium	48800	10000	200	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Selenium	ND	10	4.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Silver	3.7 J	10	1.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Sodium	12500	10000	570	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Thallium	ND	10	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Vanadium	5.0 J	50	1.8	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]
Zinc	65.7	20	6.9	ug/l	1	10/03/19	10/04/19	ND	SW846 6010D [2]	SW846 3010A [4]

(1) Instrument QC Batch: MA47554
(2) Instrument QC Batch: MA47563
(3) Prep QC Batch: MP17670
(4) Prep QC Batch: MP17674

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS

GW

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

F

FED-EX Tracking #: 7019 2803-6795, -6738
Bottle Order Control #:
SGS Quote #: HWINJOAM77507
SGS Job #: JC95711

Client / Reporting Information
Company Name: Honeywell International Inc
Street Address: 1563 Willis Ave
City / State / Zip: Syracuse, New York 13204
Project Contact: John Formoza
E-mail: John.formoza@jacobs.com
Phone #: 315-532-5608
Sampler(s) Name(s):
Phone #:

Project Information
Project Name: Honeywell - Buffalo Outer Harbor 37971
Street: 579 Tifft Street
City / State: Buffalo, New York 14220
Project #: R35116- Honeywell
Client Purchase Order #: O&M Program A000001653
Project Manager: Chuck Geadelman

Billing Information (if different from Report to)
Company Name: Honeywell International Inc
Street Address: 115 Tabor Road
City / State / Zip: Morris Plains, NJ 07950
Attention: HTS-RES-LAB@Honeywell.com

Requested Analysis: 6010B, 7470A Total | 6010B, 7470A dissolved (lab filtered) | 8270D-LL 8270C Nitrobenzene

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB-Equipment Blank; RB - Rinse Blank; TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Grab (G) Comp (C)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	6010B, 7470A Total	6010B, 7470A dissolved	8270D-LL	LAB USE ONLY
1	GW-20-MS 092519	1	9/25/19	0935	MS	G	GW	3			1		2				1		2	E74
2	GW-20-MSD 092519		9/25/19	0945	MS	G	GW	3			1		2				1		2	A21
3	FDUP-GW-20-092519	2	9/25/19	0955	MS	G	GW	3			1		2				1		2	C7
4	GW-18R-092519	3F	9/25/19	1416	MS	G	GW	3					3					1	2	
5	GW-19-092519	4	9/25/19	1035	MS	G	GW	3			1		2				1		2	
6	GW-20-092519	1	9/25/19	0920	MS	G	GW	3			1		2				1		2	
7	GW-21-092519	5	9/25/19	1210	MS	G	GW	3			1		2				1		2	
8	GW-22-092519	6F	9/25/19	1351	MS	G	GW	3					3					1	2	
9	GW-23-092519	7	9/25/19	1230	MS	G	GW	3			1		2				1		2	

Turn Around Time (Business Days)
- [x] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

Approved By (SGS PM): / Date:

All data available via lablink
* Approval needed for 1-3 Business Day TAT

Deliverable
- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format
- [ ] DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions
Nitrobenzene MDL needs to be less than .4 ppb

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1 [signature]	9/25/19 14:30	1 FedEx	2 FedEx	9/26/19 0920	2 [signature]
3		3	4		4
5		5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ / Absent; On Ice ☑; Therm. ID:; Cooler Temp. °C 3.5, 3.8°C IR 5

INITIAL ASESSMENT 28

LABEL VERIFICATION________

EHSA-QAC-0023-02-FORM-Dayton - Standard COC.xlsx

5.1

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JC95711: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JC95711 **Client:** WOOD ENVIRONMENT & INFRASTRUCT **Project:** HLAME: OUTER HARBOR, BUFFALO, NY

Date / Time Received: 9/26/2019 9:20:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.5); Cooler 2: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (3.4); Cooler 2: (3.7);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	2	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Test Strip Lot #s: pH 1-12: 229517 pH 12+: 208717 Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

JC95711: Chain of Custody
Page 2 of 2

MS Semi-volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23098-MB1	2P90098.D	1	10/03/19	AR	10/02/19	OP23098	E2P3988

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC95711-1, JC95711-2, JC95711-3, JC95711-4, JC95711-5, JC95711-6, JC95711-7

CAS No.	Compound	Result	RL	MDL	Units	Q
98-95-3	Nitrobenzene	ND	1.0	0.32	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	48%	34-128%
321-60-8	2-Fluorobiphenyl	36%* [a]	38-119%
1718-51-0	Terphenyl-d14	50%	26-129%

(a) Outside of in house control limits. No associated compounds reported.

Blank Spike Summary

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23098-BS1	2P90099.D	1	10/03/19	AR	10/02/19	OP23098	E2P3988

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC95711-1, JC95711-2, JC95711-3, JC95711-4, JC95711-5, JC95711-6, JC95711-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
98-95-3	Nitrobenzene	50	19.3	39	35-118

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	42%	34-128%
321-60-8	2-Fluorobiphenyl	35%* [a]	38-119%
1718-51-0	Terphenyl-d14	40%	26-129%

(a) Outside of in house control limits. No associated compounds reported.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23098-MS	2P90106.D	1	10/03/19	AR	10/02/19	OP23098	E2P3988
OP23098-MSD	2P90107A.D	1	10/03/19	AR	10/02/19	OP23098	E2P3988
JC95711-1	2P90108.D	1	10/03/19	AR	10/02/19	OP23098	E2P3988

The QC reported here applies to the following samples: **Method:** SW846 8270D

JC95711-1, JC95711-2, JC95711-3, JC95711-4, JC95711-5, JC95711-6, JC95711-7

CAS No.	Compound	JC95711-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
98-95-3	Nitrobenzene	ND		50	19.3	39	50	20.8	42	7	28-130/32

CAS No.	Surrogate Recoveries	MS	MSD	JC95711-1	Limits
4165-60-0	Nitrobenzene-d5	42%	45%	50%	34-128%
321-60-8	2-Fluorobiphenyl	35%* [a]	40%	46%	38-119%
1718-51-0	Terphenyl-d14	34%	35%	55%	26-129%

(a) Outside of in house control limits. No associated compounds reported.

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample: E2P3965-DFTPP
Lab File ID: 2P89594.D
Instrument ID: GCMS2P
Injection Date: 09/13/19
Injection Time: 23:43

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	67727	34.1		Pass
68	Less than 2.0% of mass 69	132	0.07	(0.14) [a]	Pass
69	Mass 69 relative abundance	91517	46.1		Pass
70	Less than 2.0% of mass 69	367	0.18	(0.40) [a]	Pass
127	40.0 - 60.0% of mass 198	110840	55.9		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	198443	100.0		Pass
199	5.0 - 9.0% of mass 198	13665	6.89		Pass
275	10.0 - 30.0% of mass 198	52800	26.6		Pass
365	1.0 - 100.0% of mass 198	7569	3.81		Pass
441	Present, but less than mass 443	24248	12.2	(78.8) [b]	Pass
442	40.0 - 100.0% of mass 198	155275	78.2		Pass
443	17.0 - 23.0% of mass 442	30771	15.5	(19.8) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3965-IC3965	2P89595.D	09/14/19	00:07	00:24	Initial cal 100
E2P3965-IC3965	2P89596.D	09/14/19	00:32	00:49	Initial cal 80
E2P3965-ICC3965	2P89597.D	09/14/19	00:57	01:14	Initial cal 50
E2P3965-IC3965	2P89598.D	09/14/19	01:22	01:39	Initial cal 25
E2P3965-IC3965	2P89599.D	09/14/19	01:48	02:05	Initial cal 10
E2P3965-IC3965	2P89600.D	09/14/19	02:14	02:31	Initial cal 5
E2P3965-IC3965	2P89601.D	09/14/19	02:38	02:55	Initial cal 2
E2P3965-IC3965	2P89602.D	09/14/19	03:02	03:19	Initial cal 1
E2P3965-ICV3965	2P89603.D	09/14/19	03:26	03:43	Initial cal verification 50
E2P3965-ICV3965	2P89604.D	09/14/19	03:51	04:08	Initial cal verification 50
E2P3965-ICV3965	2P89605.D	09/14/19	04:15	04:32	Initial cal verification 50
E2P3965-ICV3965	2P89606.D	09/14/19	04:41	04:58	Initial cal verification 50
E2P3965-ICV3965	2P89607.D	09/14/19	05:07	05:24	Initial cal verification 50
E2P3965-ICV3965	2P89608.D	09/14/19	05:32	05:49	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample: E2P3966-DFTPP
Lab File ID: 2P89610.D
Instrument ID: GCMS2P
Injection Date: 09/14/19
Injection Time: 06:06

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	61010	33.5		Pass
68	Less than 2.0% of mass 69	427	0.23	(0.49) [a]	Pass
69	Mass 69 relative abundance	87723	48.1		Pass
70	Less than 2.0% of mass 69	432	0.24	(0.49) [a]	Pass
127	40.0 - 60.0% of mass 198	102605	56.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	182229	100.0		Pass
199	5.0 - 9.0% of mass 198	12460	6.84		Pass
275	10.0 - 30.0% of mass 198	45525	25.0		Pass
365	1.0 - 100.0% of mass 198	5994	3.29		Pass
441	Present, but less than mass 443	20484	11.2	(83.4) [b]	Pass
442	40.0 - 100.0% of mass 198	128352	70.4		Pass
443	17.0 - 23.0% of mass 442	24553	13.5	(19.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3966-IC3966	2P89611.D	09/14/19	06:20	00:14	Initial cal 100
E2P3966-IC3966	2P89612.D	09/14/19	06:46	00:40	Initial cal 80
E2P3966-ICC3966	2P89613.D	09/14/19	07:11	01:05	Initial cal 50
E2P3966-IC3966	2P89614.D	09/14/19	07:37	01:31	Initial cal 25
E2P3966-IC3966	2P89615.D	09/14/19	08:03	01:57	Initial cal 10
E2P3966-IC3966	2P89616.D	09/14/19	08:29	02:23	Initial cal 5
E2P3966-IC3966	2P89617.D	09/14/19	08:54	02:48	Initial cal 2
E2P3966-IC3966	2P89618.D	09/14/19	09:19	03:13	Initial cal 1
E2P3966-ICV3966	2P89619.D	09/14/19	09:45	03:39	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample: E2P3967-DFTPP
Lab File ID: 2P89620.D
Instrument ID: GCMS2P
Injection Date: 09/14/19
Injection Time: 10:06

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	55186	33.0		Pass
68	Less than 2.0% of mass 69	162	0.10	(0.20) [a]	Pass
69	Mass 69 relative abundance	79387	47.4		Pass
70	Less than 2.0% of mass 69	391	0.23	(0.49) [a]	Pass
127	40.0 - 60.0% of mass 198	94280	56.3		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	167427	100.0		Pass
199	5.0 - 9.0% of mass 198	11039	6.59		Pass
275	10.0 - 30.0% of mass 198	43347	25.9		Pass
365	1.0 - 100.0% of mass 198	6208	3.71		Pass
441	Present, but less than mass 443	20543	12.3	(81.0) [b]	Pass
442	40.0 - 100.0% of mass 198	128096	76.5		Pass
443	17.0 - 23.0% of mass 442	25355	15.1	(19.8) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3967-IC3967	2P89621.D	09/14/19	10:18	00:12	Initial cal 100
E2P3967-IC3967	2P89622.D	09/14/19	10:45	00:39	Initial cal 80
E2P3967-ICC3967	2P89623.D	09/14/19	11:10	01:04	Initial cal 50
E2P3967-IC3967	2P89624.D	09/14/19	11:36	01:30	Initial cal 25
E2P3967-IC3967	2P89625.D	09/14/19	12:02	01:56	Initial cal 10
E2P3967-IC3967	2P89626.D	09/14/19	12:28	02:22	Initial cal 5
E2P3967-IC3967	2P89627.D	09/14/19	12:53	02:47	Initial cal 2
E2P3967-IC3967	2P89628.D	09/14/19	13:19	03:13	Initial cal 1
E2P3967-ICV3967	2P89629.D	09/14/19	13:45	03:39	Initial cal verification 50
E2P3967-ICV3967	2P89630.D	09/14/19	14:10	04:04	Initial cal verification 50
E2P3967-ICV3967	2P89631.D	09/14/19	14:36	04:30	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample: E2P3988-DFTPP
Lab File ID: 2P90093.D
Instrument ID: GCMS2P
Injection Date: 10/03/19
Injection Time: 08:59

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	53853	43.2		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	73739	59.1		Pass
70	Less than 2.0% of mass 69	515	0.41	(0.70) [a]	Pass
127	40.0 - 60.0% of mass 198	72523	58.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	124800	100.0		Pass
199	5.0 - 9.0% of mass 198	8590	6.88		Pass
275	10.0 - 30.0% of mass 198	29502	23.6		Pass
365	1.0 - 100.0% of mass 198	3551	2.85		Pass
441	Present, but less than mass 443	12509	10.0	(88.1) [b]	Pass
442	40.0 - 100.0% of mass 198	73571	59.0		Pass
443	17.0 - 23.0% of mass 442	14206	11.4	(19.3) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3988-CC3965	2P90094.D	10/03/19	09:09	00:10	Continuing cal 25
E2P3988-CC3966	2P90095.D	10/03/19	09:34	00:35	Continuing cal 25
E2P3988-CC3967	2P90096.D	10/03/19	09:58	00:59	Continuing cal 25
OP23098-MB1	2P90098.D	10/03/19	10:51	01:52	Method Blank
OP23098-BS1	2P90099.D	10/03/19	11:16	02:17	Blank Spike
OP23079-MB1	2P90100.D	10/03/19	11:58	02:59	Method Blank
ZZZZZZ	2P90101.D	10/03/19	12:24	03:25	(unrelated sample)
ZZZZZZ	2P90102.D	10/03/19	12:49	03:50	(unrelated sample)
ZZZZZZ	2P90103.D	10/03/19	13:14	04:15	(unrelated sample)
ZZZZZZ	2P90104.D	10/03/19	13:39	04:40	(unrelated sample)
ZZZZZZ	2P90105.D	10/03/19	14:04	05:05	(unrelated sample)
OP23098-MS	2P90106.D	10/03/19	14:29	05:30	Matrix Spike
OP23098-MSD	2P90107A.D	10/03/19	15:25	06:26	Matrix Spike Duplicate
JC95327-8	2P90118.D	10/03/19	15:51	06:52	(used for QC only; not part of job JC95711)
JC95711-1	2P90108.D	10/03/19	16:41	07:42	GW-20-092519
JC95711-2	2P90109.D	10/03/19	17:07	08:08	FDUP-GW-20-092519
JC95711-3	2P90110.D	10/03/19	17:32	08:33	GW-18R-092519
JC95711-5	2P90112.D	10/03/19	18:23	09:24	GW-21-092519
JC95711-6	2P90113.D	10/03/19	18:48	09:49	GW-22-092519

Instrument Performance Check (DFTPP)

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample:	E2P3988-DFTPP	**Injection Date:**	10/03/19
Lab File ID:	2P90093.D	**Injection Time:**	08:59
Instrument ID:	GCMS2P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
JC95711-7	2P90114.D	10/03/19	19:13	10:14	GW-23-092519
ZZZZZZ	2P90120.D	10/03/19	19:39	10:40	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample: E2P3990-DFTPP
Lab File ID: 2P90147.D
Instrument ID: GCMS2P
Injection Date: 10/04/19
Injection Time: 10:57

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	44253	42.8		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	61096	59.1		Pass
70	Less than 2.0% of mass 69	314	0.30	(0.51) [a]	Pass
127	40.0 - 60.0% of mass 198	60059	58.1		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	103392	100.0		Pass
199	5.0 - 9.0% of mass 198	7108	6.87		Pass
275	10.0 - 30.0% of mass 198	27285	26.4		Pass
365	1.0 - 100.0% of mass 198	3240	3.13		Pass
441	Present, but less than mass 443	11675	11.3	(83.3) [b]	Pass
442	40.0 - 100.0% of mass 198	71944	69.6		Pass
443	17.0 - 23.0% of mass 442	14008	13.5	(19.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3990-CC3965	2P90148.D	10/04/19	11:15	00:18	Continuing cal 25
E2P3990-CC3966	2P90149.D	10/04/19	11:53	00:56	Continuing cal 25
E2P3990-CC3967	2P90150.D	10/04/19	12:20	01:23	Continuing cal 25
OP23089-MB1	2P90152.D	10/04/19	13:33	02:36	Method Blank
OP23089-BS1	2P90153.D	10/04/19	13:59	03:02	Blank Spike
ZZZZZZ	2P90154.D	10/04/19	14:26	03:29	(unrelated sample)
ZZZZZZ	2P90155.D	10/04/19	14:53	03:56	(unrelated sample)
ZZZZZZ	2P90156.D	10/04/19	15:20	04:23	(unrelated sample)
ZZZZZZ	2P90157.D	10/04/19	15:47	04:50	(unrelated sample)
ZZZZZZ	2P90158.D	10/04/19	16:14	05:17	(unrelated sample)
JC95711-4	2P90159.D	10/04/19	16:41	05:44	GW-19-092519
ZZZZZZ	2P90160.D	10/04/19	17:08	06:11	(unrelated sample)
ZZZZZZ	2P90161.D	10/04/19	17:34	06:37	(unrelated sample)
ZZZZZZ	2P90162.D	10/04/19	18:01	07:04	(unrelated sample)
ZZZZZZ	2P90163.D	10/04/19	18:27	07:30	(unrelated sample)
ZZZZZZ	2P90164.D	10/04/19	18:54	07:57	(unrelated sample)
ZZZZZZ	2P90165.D	10/04/19	19:20	08:23	(unrelated sample)
ZZZZZZ	2P90166.D	10/04/19	19:46	08:49	(unrelated sample)
ZZZZZZ	2P90167.D	10/04/19	20:12	09:15	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample:	E2P3990-DFTPP	**Injection Date:**	10/04/19
Lab File ID:	2P90147.D	**Injection Time:**	10:57
Instrument ID:	GCMS2P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	2P90168.D	10/04/19	20:38	09:41	(unrelated sample)
ZZZZZZ	2P90169.D	10/04/19	21:03	10:06	(unrelated sample)
ZZZZZZ	2P90170.D	10/04/19	21:28	10:31	(unrelated sample)
ZZZZZZ	2P90171.D	10/04/19	21:53	10:56	(unrelated sample)
ZZZZZZ	2P90172.D	10/04/19	22:18	11:21	(unrelated sample)
ZZZZZZ	2P90173.D	10/04/19	22:43	11:46	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample: E2P3997-DFTPP
Lab File ID: 2P90295.D
Instrument ID: GCMS2P
Injection Date: 10/10/19
Injection Time: 14:09

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	77423	44.8		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	108125	62.5		Pass
70	Less than 2.0% of mass 69	470	0.27	(0.43) [a]	Pass
127	40.0 - 60.0% of mass 198	102787	59.4		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	172912	100.0		Pass
199	5.0 - 9.0% of mass 198	11886	6.87		Pass
275	10.0 - 30.0% of mass 198	43973	25.4		Pass
365	1.0 - 100.0% of mass 198	5999	3.47		Pass
441	Present, but less than mass 443	23053	13.3	(87.0) [b]	Pass
442	40.0 - 100.0% of mass 198	136261	78.8		Pass
443	17.0 - 23.0% of mass 442	26504	15.3	(19.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
E2P3997-CC3965	2P90296.D	10/10/19	14:20	00:11	Continuing cal 50
E2P3997-CC3966	2P90297.D	10/10/19	14:44	00:35	Continuing cal 50
E2P3997-CC3967	2P90298.D	10/10/19	15:08	00:59	Continuing cal 50
JC95711-2	2P90300.D	10/10/19	15:57	01:48	FDUP-GW-20-092519
JC95711-3	2P90301.D	10/10/19	16:22	02:13	GW-18R-092519
OP23227-MB1	2P90302.D	10/10/19	16:46	02:37	Method Blank
OP23227-BS1	2P90303.D	10/10/19	17:11	03:02	Blank Spike
OP23227-BSD	2P90304.D	10/10/19	17:35	03:26	Blank Spike Duplicate
ZZZZZZ	2P90305.D	10/10/19	18:00	03:51	(unrelated sample)
ZZZZZZ	2P90306.D	10/10/19	18:24	04:15	(unrelated sample)
ZZZZZZ	2P90307.D	10/10/19	18:49	04:40	(unrelated sample)
ZZZZZZ	2P90308.D	10/10/19	19:13	05:04	(unrelated sample)
ZZZZZZ	2P90309.D	10/10/19	19:37	05:28	(unrelated sample)
ZZZZZZ	2P90310.D	10/10/19	20:02	05:53	(unrelated sample)
ZZZZZZ	2P90311.D	10/10/19	20:26	06:17	(unrelated sample)
ZZZZZZ	2P90312.D	10/10/19	20:50	06:41	(unrelated sample)
ZZZZZZ	2P90313.D	10/10/19	21:14	07:05	(unrelated sample)
ZZZZZZ	2P90314.D	10/10/19	21:38	07:29	(unrelated sample)
OP23227-MS	2P90315.D	10/10/19	22:02	07:53	Matrix Spike

Instrument Performance Check (DFTPP)

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Sample:	E2P3997-DFTPP	**Injection Date:**	10/10/19
Lab File ID:	2P90295.D	**Injection Time:**	14:09
Instrument ID:	GCMS2P		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
OP23227-MSD	2P90316.D	10/10/19	22:27	08:18	Matrix Spike Duplicate
ZZZZZZ	2P90318.D	10/10/19	23:15	09:06	(unrelated sample)
ZZZZZZ	2P90319.D	10/10/19	23:39	09:30	(unrelated sample)

Surrogate Recovery Summary

Job Number: JC95711
Account: HWINJOMM Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

Method: SW846 8270D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
JC95711-1	2P90108.D	50	46	55
JC95711-2	2P90109.D	31* [a]	26* [a]	28
JC95711-2	2P90300.D	80	62	80
JC95711-3	2P90110.D	30* [a]	23* [a]	18* [a]
JC95711-3	2P90301.D	44	33* [a]	32
JC95711-4	2P90159.D	46	38	33
JC95711-5	2P90112.D	48	42	33
JC95711-6	2P90113.D	43	34* [b]	18* [b]
JC95711-7	2P90114.D	45	36* [b]	19* [b]
OP23098-BS1	2P90099.D	42	35* [b]	40
OP23098-MB1	2P90098.D	48	36* [b]	50
OP23098-MS	2P90106.D	42	35* [b]	34
OP23098-MSD	2P90107A.D	45	40	35

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	34-128%
S2 = 2-Fluorobiphenyl	38-119%
S3 = Terphenyl-d14	26-129%

(a) Outside of in house control limits.
(b) Outside of in house control limits. No associated compounds reported.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17670 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/02/19

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.014	.095	0.096	<0.20

Associated samples MP17670: JC95711-1, JC95711-2, JC95711-4, JC95711-5, JC95711-7, JC95711-3F, JC95711-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17670
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 10/02/19

Metal	JC95711-1 Original	MS	Spikelot HGPW3	% Rec	QC Limits
Mercury	0.050	2.1	2	102.5	75-125

Associated samples MP17670: JC95711-1, JC95711-2, JC95711-4, JC95711-5, JC95711-7, JC95711-3F, JC95711-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17670 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/02/19

Metal	JC95711-1 Original	MSD	Spikelot HGPW3	% Rec	MSD RPD	QC Limit
Mercury	0.050	2.0	2	97.5	4.9	20

Associated samples MP17670: JC95711-1, JC95711-2, JC95711-4, JC95711-5, JC95711-7, JC95711-3F, JC95711-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17670 Methods: SW846 7470A
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/02/19

Metal	BSP Result	Spikelot HGPW3	% Rec	QC Limits
Mercury	2.0	2	100.0	80-120

Associated samples MP17670: JC95711-1, JC95711-2, JC95711-4, JC95711-5, JC95711-7, JC95711-3F, JC95711-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 10/03/19

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	46	8.6	<200
Antimony	6.0	1.1	4.7	1.1	<6.0
Arsenic	3.0	1.2	2.8	0.30	<3.0
Barium	200	.2	13	0.10	<200
Beryllium	1.0	.1	.5	0.0	<1.0
Bismuth	20	1.8	4		
Boron	100	1.2	63		
Cadmium	3.0	.2	1	0.10	<3.0
Calcium	5000	3.7	99	-2.2	<5000
Cerium	100				
Chromium	10	.4	2	0.0	<10
Cobalt	50	.3	2.6	0.20	<50
Copper	10	1	5.9	-1.8	<10
Iron	100	2.4	32	0.50	<100
Lead	3.0	1.5	1.8	-0.80	<3.0
Lithium	50	1.5	7.3		
Magnesium	5000	17	140	-2.6	<5000
Manganese	15	.1	1.4	-0.10	<15
Molybdenum	20	.3	3.6		
Nickel	10	.3	1.7	-0.30	<10
Phosphorus	50	2	18		
Potassium	10000	40	200	35.0	<10000
Selenium	10	1.8	4.9	1.3	<10
Silicon	200	.9	100		
Silver	10	.5	1.9	-1.7	<10
Sodium	10000	13	570	35.1	<10000
Strontium	10	.2	1		
Sulfur	50	3.5	45		
Thallium	10	1.6	1.8	-0.80	<10
Tin	10	.6	3.7		
Titanium	10	.6	2.5		
Tungsten	50	1.1	40		
Vanadium	50	.4	1.8	0.10	<50

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/03/19

Metal	RL	IDL	MDL	MB raw	final
Zinc	20	.2	6.9	2.9	<20
Zirconium	10	.2	4.1		

Associated samples MP17674: JC95711-1, JC95711-2, JC95711-4, JC95711-5, JC95711-7, JC95711-3F, JC95711-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 10/03/19

Metal	JC95711-1 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	26.8	25600	25000	102.3	75-125
Antimony	1.6	2210	2000	110.4	75-125
Arsenic	11.0	2050	2000	102.0	75-125
Barium	37.2	2090	2000	102.6	75-125
Beryllium	0.0	2110	2000	105.5	75-125
Bismuth					
Boron					
Cadmium	0.0	2130	2000	106.5	75-125
Calcium	86700	111000	25000	97.2	75-125
Cerium					
Chromium	1.7	2090	2000	104.4	75-125
Cobalt	0.0	2150	2000	107.5	75-125
Copper	1.3	2040	2000	101.9	75-125
Iron	74.5	26700	25000	106.5	75-125
Lead	4.2	2060	2000	102.8	75-125
Lithium					
Magnesium	7070	32800	25000	102.9	75-125
Manganese	34.7	2120	2000	104.3	75-125
Molybdenum					
Nickel	1.0	2210	2000	110.5	75-125
Phosphorus					
Potassium	157000	180000	25000	92.0	75-125
Selenium	2.5	2180	2000	108.9	75-125
Silicon					
Silver	11.3	269	250	103.1	75-125
Sodium	41600	67000	25000	101.6	75-125
Strontium					
Sulfur					
Thallium	0.0	2120	2000	106.0	75-125
Tin					
Titanium					
Tungsten					
Vanadium	16.0	2090	2000	103.7	75-125

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 10/03/19

Metal	JC95711-1 Original	MS	Spikelot MPSPK2	% Rec	QC Limits
Zinc	7.1	2160	2000	107.6	75-125
Zirconium					

Associated samples MP17674: JC95711-1, JC95711-2, JC95711-4, JC95711-5, JC95711-7, JC95711-3F, JC95711-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 10/03/19

Metal	JC95711-1 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Aluminum	26.8	25300	25000	101.1	1.2	20
Antimony	1.6	2200	2000	109.9	0.5	20
Arsenic	11.0	2040	2000	101.5	0.5	20
Barium	37.2	2070	2000	101.6	1.0	20
Beryllium	0.0	2110	2000	105.5	0.0	20
Bismuth						
Boron						
Cadmium	0.0	2120	2000	106.0	0.5	20
Calcium	86700	112000	25000	101.2	0.9	20
Cerium						
Chromium	1.7	2080	2000	103.9	0.5	20
Cobalt	0.0	2130	2000	106.5	0.9	20
Copper	1.3	2060	2000	102.9	1.0	20
Iron	74.5	26500	25000	105.7	0.8	20
Lead	4.2	2050	2000	102.3	0.5	20
Lithium						
Magnesium	7070	32900	25000	103.3	0.3	20
Manganese	34.7	2110	2000	103.8	0.5	20
Molybdenum						
Nickel	1.0	2210	2000	110.5	0.0	20
Phosphorus						
Potassium	157000	182000	25000	100.0	1.1	20
Selenium	2.5	2160	2000	107.9	0.9	20
Silicon						
Silver	11.3	267	250	102.3	0.7	20
Sodium	41600	67100	25000	102.0	0.1	20
Strontium						
Sulfur						
Thallium	0.0	2100	2000	105.0	0.9	20
Tin						
Titanium						
Tungsten						
Vanadium	16.0	2080	2000	103.2	0.5	20

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/03/19

Metal	JC95711-1 Original	MSD	Spikelot MPSPK2	% Rec	MSD RPD	QC Limit
Zinc	7.1	2150	2000	107.1	0.5	20
Zirconium						

Associated samples MP17674: JC95711-1, JC95711-2, JC95711-4, JC95711-5, JC95711-7, JC95711-3F, JC95711-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 10/03/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	24600	25000	98.4	80-120
Antimony	2130	2000	106.5	80-120
Arsenic	2070	2000	103.5	80-120
Barium	2010	2000	100.5	80-120
Beryllium	2090	2000	104.5	80-120
Bismuth				
Boron				
Cadmium	2040	2000	102.0	80-120
Calcium	25800	25000	103.2	80-120
Cerium				
Chromium	2080	2000	104.0	80-120
Cobalt	2090	2000	104.5	80-120
Copper	1990	2000	99.5	80-120
Iron	25900	25000	103.6	80-120
Lead	2070	2000	103.5	80-120
Lithium				
Magnesium	25600	25000	102.4	80-120
Manganese	2060	2000	103.0	80-120
Molybdenum				
Nickel	2160	2000	108.0	80-120
Phosphorus				
Potassium	25400	25000	101.6	80-120
Selenium	2070	2000	103.5	80-120
Silicon				
Silver	246	250	98.4	80-120
Sodium	25000	25000	100.0	80-120
Strontium				
Sulfur				
Thallium	2150	2000	107.5	80-120
Tin				
Titanium				
Tungsten				
Vanadium	2030	2000	101.5	80-120

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 10/03/19

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zinc	2100	2000	105.0	80-120
Zirconium				

Associated samples MP17674: JC95711-1, JC95711-2, JC95711-4, JC95711-5, JC95711-7, JC95711-3F, JC95711-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674
Matrix Type: AQUEOUS

Methods: SW846 6010D
Units: ug/l

Prep Date: 10/03/19

Metal	JC95711-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	26.8	73.2	173.1(a)	0-10
Antimony	1.60	7.30	356.3(a)	0-10
Arsenic	11.0	0.00	100.0(a)	0-10
Barium	37.2	38.0	2.2	0-10
Beryllium	0.00	0.00	NC	0-10
Bismuth				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	86700	88500	2.1	0-10
Cerium				
Chromium	1.70	0.00	100.0(a)	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	1.30	0.00	100.0(a)	0-10
Iron	74.5	98.9	32.8 (a)	0-10
Lead	4.20	0.00	100.0(a)	0-10
Lithium				
Magnesium	7070	7090	0.2	0-10
Manganese	34.7	35.7	2.9	0-10
Molybdenum				
Nickel	1.00	0.00	100.0(a)	0-10
Phosphorus				
Potassium	157000	157000	0.0	0-10
Selenium	2.50	0.00	100.0(a)	0-10
Silicon				
Silver	11.3	6.20	45.1 (a)	0-10
Sodium	41600	41600	0.0	0-10
Strontium				
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Titanium				
Tungsten				
Vanadium	16.0	15.5	3.1	0-10

SERIAL DILUTION RESULTS SUMMARY

Login Number: JC95711
Account: HWINJOMM - Honeywell International Inc. OMM work
Project: HLAME: 37971-Buffalo Outer Harbor, 901 Fuhrmann Boulevard, Buffalo, NY

QC Batch ID: MP17674 Methods: SW846 6010D
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 10/03/19

Metal	JC95711-1 Original	SDL 1:5	%DIF	QC Limits
Zinc	7.10	20.6	190.1(a)	0-10
Zirconium				

Associated samples MP17674: JC95711-1, JC95711-2, JC95711-4, JC95711-5, JC95711-7, JC95711-3F, JC95711-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

ATTACHMENT B.5 SITE INSPECTION FORMS

Site Inspection Form

Site Name: Buffalo Outer Harbor Weather: Sunny
Project Number: 37972 Assessment by: John Formozat
Date: 11/2/17

Yes	No	N/A	
			A. Security
☒	☐	☐	1. Does fence exist? _____
☐	☐	☒	2. Is there a breach in fence? _____
☐	☐	☒	3. Locks on gate? _____
☐	☐	☒	4. Posted signs? _____
☐	☒	☐	5. Signs of trespassers/vandalism? _____
			6. Other _____
			B. General Site Conditions
☐	☒	☐	1. Vegetation stress? _____
☐	☒	☐	2. Mowing required? Mowed 11/1/17
☒	☐	☐	3. Access road drivable? _____
☐	☒	☐	4. Odors? _____
			5. Other _____
			C. Cap Inspection
☐	☒	☐	1. Exposed waste? _____
☒	☐	☐	2. Side slope stable? _____
☐	☒	☐	3. Erosion? _____
☐	☒	☐	4. Leachate seeps (discolored vegetation)? _____
☐	☒	☐	5. Synthetic liner exposed? _____
☐	☒	☐	6. Bare spots? _____
☐	☒	☐	7. Presence of burrowing animals? _____
☐	☒	☐	8. Deep rooted vegetation? _____
☐	☒	☐	9. Cracking? _____
☐	☒	☐	10. Ponding water? _____
☐	☒	☐	11. Evidence of methane seeps? _____
			12. Other Evidence of track hoe crossing cap
			D. Surface Water
☐	☐	☒	1. Obstruction of flow ditches? _____
☐	☐	☒	2. Erosion of ditches? _____
☐	☐	☒	3. Silt & erosion control? _____
☐	☐	☒	4. Culverts in good condition? _____
☐	☐	☒	5. Evidence of overflow or uncontrolled flow? _____
☐	☐	☒	6. Outfalls in good condition? _____
☐	☐	☒	7. Sedimentation basin/ponds secure? _____
			8. Other _____
			E. Methane Gas Control
☐	☐	☒	1. Does one exist? _____

Site Inspection Form

Yes	No	N/A	
☐	☐	☒	2. Is system active or passive? _____
☐	☐	☒	3. Permanent methane gas probes? _____
☐	☐	☒	4. Locks on monitoring wells? _____
☐	☐	☒	5. Vents in working order? _____
☐	☐	☒	6. Well seals in place? _____
☐	☐	☒	7. Methane levels within LEL limits? _____
☐	☐	☒	8. Monitoring reports current?
			9. Other _____

F. Leachate Collection System

☐	☒	☐	1. Does one exist? _____
			2. Collection method:
☐	☐	☒	a. Sump? _____
☐	☐	☒	b. Well point? _____
☐	☐	☒	c. Earthen basin/pond? _____
☐	☐	☒	d. Structure secured? _____
			e. Other _____
			3. Pumping system:
☐	☐	☒	a. Automatic? _____
☐	☐	☒	b. Manual? _____
☐	☐	☒	c. Mechanically operable? _____
☐	☐	☒	d. Leaks/failures? _____
			4. Disposals:
☐	☐	☒	a. Onsite pretreatment/treatment? _____
☐	☐	☒	b. Surface discharge? (NPDES/SPDES) _____
☐	☐	☒	c. POTW – hardpiped?
☐	☐	☒	d. Quick disconnect caps in place? _____
			5. Transportation (if any):
☐	☐	☒	a. Chemicals? _____
☐	☐	☒	b. Filter cake? _____
☐	☐	☒	6. Ancillary equipment in good condition? (Pipes, valves, pumps, vaults, instruments and etc.) _____
☐	☐	☒	7. Monitoring reports current? _____
			8. Other _____

G. Groundwater Monitoring & Recovery Wells (if any)

☒	☐	☐	1. Locks on wells? _____
☒	☐	☐	2. Wells in good condition? _____
☒	☐	☐	3. Well seals in good condition? _____
☒	☐	☐	4. Access to wells? _____
☒	☐	☐	5. Monitoring reports current? _____
			6. Other _____

Site Inspection Form

Yes	No	N/A	
			H. Treatment Plant
☐	☐	☒	1. Building in good condition? (Doors, windows, wells, roof) _____
☐	☐	☒	2. Visual tank inspection performed? _____
☐	☐	☒	3. Visual inspection of pipes, valves, fittings etc.? _____
☐	☐	☒	4. Pump operation/inspection performed? _____
☐	☐	☒	5. Instruments operation/calibration? _____
☐	☐	☒	6. Mixer operation/inspection? _____
☐	☐	☒	7. Proper personal protection equipment? _____
☐	☐	☒	8. Air compressor system functioning properly? _____
☐	☐	☒	9. Filter press inspected? _____
☐	☐	☒	10. Emergency generator functioning properly? _____
			I. Polymeric Marine Mattress (PMM)
☐	☐	☒	1. Damage due to burrowing animals? _____
☐	☐	☒	2. Damage due ice and/or ice flowages? _____
☐	☐	☒	3. Impacts or damage due to the periodic dredging of the Buffalo River? _____
☐	☐	☒	4. Impacts or damage due to navigation activities in the Buffalo River? _____
☐	☐	☒	5. Establishment of woody plant growth causing displacement or stress on the system? _____
☐	☐	☒	6. Areas of settlement or displacement of the system? _____
☐	☐	☒	7. Erosion at the upstream and downstream limits of the system? _____
☐	☐	☒	8. Damage to the stone infill adjacent to Outfall #006 and the concrete wall/sheet pile along the upstream limit of the system? _____
☐	☐	☒	9. Damage to the stone infill within the marine mattresses? _____
☐	☐	☒	10. Damage to the general integrity of the system (Look for splits, cuts and gaps)? _____

J. General Comments

On the day of the inspection Precision was on site marking area for future core drilling.

There is no damage to cap.

Site Inspection Form

Site Name: Buffalo Outer Harbor Weather: Partly Sunny
Project Number: 37972 Assessment by: Michael Stout
Date: 10/17/18

Yes	No	N/A	
			A. Security
☒	☐	☐	1. Does fence exist? _____
☐	☐	☒	2. Is there a breach in fence? _____
☐	☐	☒	3. Locks on gate? _____
☐	☐	☒	4. Posted signs? _____
☐	☒	☐	5. Signs of trespassers/vandalism? _____
			6. Other _____
			B. General Site Conditions
☐	☒	☐	1. Vegetation stress? _____
☐	☒	☐	2. Mowing required? No
☒	☐	☐	3. Access road drivable? _____
☐	☒	☐	4. Odors? _____
			5. Other _____
			C. Cap Inspection
☐	☒	☐	1. Exposed waste? _____
☒	☐	☐	2. Side slope stable? _____
☐	☒	☐	3. Erosion? _____
☐	☒	☐	4. Leachate seeps (discolored vegetation)? _____
☐	☒	☐	5. Synthetic liner exposed? _____
☐	☒	☐	6. Bare spots? _____
☐	☒	☐	7. Presence of burrowing animals? _____
☐	☒	☐	8. Deep rooted vegetation? _____
☐	☒	☐	9. Cracking? _____
☐	☒	☐	10. Ponding water? _____
☐	☒	☐	11. Evidence of methane seeps? _____
			12. Other Evidence of track hoe crossing cap
			D. Surface Water
☐	☐	☒	1. Obstruction of flow ditches? _____
☐	☐	☒	2. Erosion of ditches? _____
☐	☐	☒	3. Silt & erosion control? _____
☐	☐	☒	4. Culverts in good condition? _____
☐	☐	☒	5. Evidence of overflow or uncontrolled flow? _____
☐	☐	☒	6. Outfalls in good condition? _____
☐	☐	☒	7. Sedimentation basin/ponds secure? _____
			8. Other _____
			E. Methane Gas Control
☐	☐	☒	1. Does one exist? _____

Site Inspection Form

Yes	No	N/A	
☐	☐	☒	2. Is system active or passive? _____
☐	☐	☒	3. Permanent methane gas probes? _____
☐	☐	☒	4. Locks on monitoring wells? _____
☐	☐	☒	5. Vents in working order? _____
☐	☐	☒	6. Well seals in place? _____
☐	☐	☒	7. Methane levels within LEL limits? _____
☐	☐	☒	8. Monitoring reports current?
			9. Other _____

F. Leachate Collection System

☐	☒	☐	1. Does one exist? _____
			2. Collection method:
☐	☐	☒	a. Sump? _____
☐	☐	☒	b. Well point? _____
☐	☐	☒	c. Earthen basin/pond? _____
☐	☐	☒	d. Structure secured? _____
			e. Other _____
			3. Pumping system:
☐	☐	☒	a. Automatic? _____
☐	☐	☒	b. Manual? _____
☐	☐	☒	c. Mechanically operable? _____
☐	☐	☒	d. Leaks/failures? _____
			4. Disposals:
☐	☐	☒	a. Onsite pretreatment/treatment? _____
☐	☐	☒	b. Surface discharge? (NPDES/SPDES) _____
☐	☐	☒	c. POTW – hardpiped?
☐	☐	☒	d. Quick disconnect caps in place? _____
			5. Transportation (if any):
☐	☐	☒	a. Chemicals? _____
☐	☐	☒	b. Filter cake? _____
☐	☐	☒	6. Ancillary equipment in good condition? (Pipes, valves, pumps, vaults, instruments and etc.) _____
☐	☐	☒	7. Monitoring reports current? _____
			8. Other _____

G. Groundwater Monitoring & Recovery Wells (if any)

☒	☐	☐	1. Locks on wells? _____
☒	☐	☐	2. Wells in good condition? _____
☒	☐	☐	3. Well seals in good condition? _____
☒	☐	☐	4. Access to wells? _____
☒	☐	☐	5. Monitoring reports current? _____
			6. Other _____

Site Inspection Form

Yes	No	N/A	
			H. Treatment Plant
☐	☐	☒	1. Building in good condition? (Doors, windows, wells, roof) _____
☐	☐	☒	2. Visual tank inspection performed? _____
☐	☐	☒	3. Visual inspection of pipes, valves, fittings etc.? _____
☐	☐	☒	4. Pump operation/inspection performed? _____
☐	☐	☒	5. Instruments operation/calibration? _____
☐	☐	☒	6. Mixer operation/inspection? _____
☐	☐	☒	7. Proper personal protection equipment? _____
☐	☐	☒	8. Air compressor system functioning properly? _____
☐	☐	☒	9. Filter press inspected? _____
☐	☐	☒	10. Emergency generator functioning properly? _____
			I. Polymeric Marine Mattress (PMM)
☐	☐	☒	1. Damage due to burrowing animals? _____
☐	☐	☒	2. Damage due ice and/or ice flowages? _____
☐	☐	☒	3. Impacts or damage due to the periodic dredging of the Buffalo River? _____
☐	☐	☒	4. Impacts or damage due to navigation activities in the Buffalo River? _____
☐	☐	☒	5. Establishment of woody plant growth causing displacement or stress on the system? _____
☐	☐	☒	6. Areas of settlement or displacement of the system? _____
☐	☐	☒	7. Erosion at the upstream and downstream limits of the system? _____
☐	☐	☒	8. Damage to the stone infill adjacent to Outfall #006 and the concrete wall/sheet pile along the upstream limit of the system? _____
☐	☐	☒	9. Damage to the stone infill within the marine mattresses? _____
☐	☐	☒	10. Damage to the general integrity of the system (Look for splits, cuts and gaps)? _____

J. General Comments

It appears GW-20 was hit however the well is still able to be sampled. Outer casing is slightly bent

Site Inspection Form

Site Name: Buffalo Outer Harbor Weather: Partly Sunny
Project Number: 37972 Assessment by: Michael Stout
Date: 10/29/19

Yes	No	N/A	
			A. Security
☒	☐	☐	1. Does fence exist? _____
☐	☐	☒	2. Is there a breach in fence? _____
☐	☐	☒	3. Locks on gate? _____
☐	☐	☒	4. Posted signs? _____
☐	☒	☐	5. Signs of trespassers/vandalism? _____
			6. Other _____
			B. General Site Conditions
☐	☒	☐	1. Vegetation stress? _____
☐	☒	☐	2. Mowing required? No
☒	☐	☐	3. Access road drivable? _____
☐	☒	☐	4. Odors? _____
			5. Other _____
			C. Cap Inspection
☐	☒	☐	1. Exposed waste? _____
☒	☐	☐	2. Side slope stable? _____
☐	☒	☐	3. Erosion? _____
☐	☒	☐	4. Leachate seeps (discolored vegetation)? _____
☐	☒	☐	5. Synthetic liner exposed? _____
☐	☒	☐	6. Bare spots? _____
☐	☒	☐	7. Presence of burrowing animals? _____
☐	☒	☐	8. Deep rooted vegetation? _____
☐	☒	☐	9. Cracking? _____
☐	☒	☐	10. Ponding water? _____
☐	☒	☐	11. Evidence of methane seeps? _____
			12. Other Evidence of track hoe crossing cap
			D. Surface Water
☐	☐	☒	1. Obstruction of flow ditches? _____
☐	☐	☒	2. Erosion of ditches? _____
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☐	☐	☒	7. Sedimentation basin/ponds secure? _____
			8. Other _____
			E. Methane Gas Control
☐	☐	☒	1. Does one exist? _____

Site Inspection Form

Yes	No	N/A	
☐	☐	☒	2. Is system active or passive? _____
☐	☐	☒	3. Permanent methane gas probes? _____
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F. Leachate Collection System

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☐	☐	☒	b. Well point? _____
☐	☐	☒	c. Earthen basin/pond? _____
☐	☐	☒	d. Structure secured? _____
			e. Other _____
			3. Pumping system:
☐	☐	☒	a. Automatic? _____
☐	☐	☒	b. Manual? _____
☐	☐	☒	c. Mechanically operable? _____
☐	☐	☒	d. Leaks/failures? _____
			4. Disposals:
☐	☐	☒	a. Onsite pretreatment/treatment? _____
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☐	☐	☒	c. POTW – hardpiped?
☐	☐	☒	d. Quick disconnect caps in place? _____
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☐	☐	☒	a. Chemicals? _____
☐	☐	☒	b. Filter cake? _____
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			8. Other _____

G. Groundwater Monitoring & Recovery Wells (if any)

☒	☐	☐	1. Locks on wells? _____
☒	☐	☐	2. Wells in good condition? _____
☒	☐	☐	3. Well seals in good condition? _____
☒	☐	☐	4. Access to wells? _____
☒	☐	☐	5. Monitoring reports current? _____
			6. Other _____

Site Inspection Form

Yes	No	N/A	
			H. Treatment Plant
☐	☐	☒	1. Building in good condition? (Doors, windows, wells, roof) _____
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☐	☐	☒	6. Mixer operation/inspection? _____
☐	☐	☒	7. Proper personal protection equipment? _____
☐	☐	☒	8. Air compressor system functioning properly? _____
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☐	☐	☒	10. Damage to the general integrity of the system (Look for splits, cuts and gaps)? _____

J. General Comments