Honeywell

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March 25, 2021

Ms. Nicole Smith, P.E.
NYSDEC Division of Materials Management, Region 7
615 Erie Boulevard West
Syracuse, New York 13204

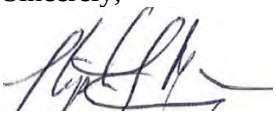
Re: Solvay Wastebeds 9-15 Site, Towns of Camillus and Geddes, Onondaga County, NY
Site No. 73-40-76 (Consent Order Index # D-7-0001-02-03)
Performance Verification Plan
Consent Order Deliverables

Dear Ms. Smith:

In accordance with the referenced Consent Order, Ramboll Americas Engineering Solutions, Inc. (Ramboll) has finalized the Performance Verification Plan on behalf of Honeywell to incorporate the Department's June 25, 2019 comments, in accordance with Honeywell's responses dated October 23, 2019. This plan is a companion document to the Site Closure and Surrounding Affected Area Restoration plans submitted on December 31, 2020, and the Operation and Maintenance Plan submitted on February 19, 2021. Three supporting documents regarding the willow and salt marsh demonstrations, and evaluation of the monitoring data collected since 2012 will be submitted under separate cover.

Please contact Maureen Markert (315 420-7382) at Ramboll or me if you have any questions or comments.

Sincerely,



Stephen J. Miller, P.E.
Syracuse Remediation Program Manager

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Intended for
Honeywell International Inc.

Document type
Report

Date
March 2021

WASTEBEDS 9-15 PERFORMANCE VERIFICATION PLAN CAMILLUS AND GEDDES, NEW YORK

RAMBOLL Bright ideas. Sustainable change.

ESF State University of New York
College of Environmental Science and Forestry

WASTEBEDS 9-15 PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NEW YORK

Project name	**Wastebeds 9-15 Closure**
Project no.	**1163.75018**
Recipient	**Honeywell**
Document type	**Report**
Version	**1**
Date	**March 25, 2021**
Prepared by	**Michael Mellen**
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Description	**Plan for performance verification of Wastebeds 9-15 site closure and surrounding affected area restoration program**

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LIST OF ACRONYMS

Acronym	Definition
ACDR	Alternative Cover Design Report
BAP	Biological Assessment Program
BB&L	Blasland, Bouck, & Lee
C&D	Construction and Demolition
CY	Cubic Yard
DO	Dissolved Oxygen
DMR	Discharge Monitoring Report
EPT	Ephemeroptera–Plecoptera–Trichoptera
ET	Evapotranspiration
FCPS	Former County Pump Station
GPM	Gallons per Minute
GPS	Global Positioning System
HBI	Hilsenhoff Biotic Index
HDPE	High-Density Polyethylene
Honeywell	Honeywell International, Inc.
IM	Interim Measure
JSA	Job Safety Analyses
LCCS	Leachate Collection and Conveyance System
LLPS	Low Lift Pump Station
Metro	Syracuse Metropolitan Wastewater Treatment Plant
NDVI	Normalized Difference Vegetation Index
NMC	Ninemile Creek
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
OBG	O'Brien & Gere
OCDWEP	Onondaga County Department of Water Environment Protection
ORP	Oxidation Reduction Potential
PMA	Percent Model Affinity
PV	Performance Verification
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
SAA	Surrounding Affected Area
SHAW	Simultaneous Heat and Water
SCA	Sediment Containment Area
SMR	Self-Monitoring Report
SPDES	State Pollution Discharge Elimination System
SUNY ESF	State University of New York College of Environmental Science and Forestry

Acronym	Definition
SWSR	Shrub Willow Sustainable Remedy
UAV	Unmanned Aerial Vehicle
USDA	United States Department of Agriculture
WB	Wastebed

1. INTRODUCTION

This Performance Verification (PV) Plan has been prepared for the Wastebeds (WB) 9-15 closure and restoration program to supplement the *Site Closure Plan* (Ramboll 2020a) and the *Off-Site Surrounding Affected Area Restoration Plan* (Ramboll 2020b). The PV Plan has been prepared in accordance with the requirements of 6 NYCRR Part 360-2.15(k)(7) and as set forth in the Order on Consent (Index #D7-0001-02-03, dated December 6, 2010, as amended in December 2014) between the New York State Department of Environmental Conservation (NYSDEC) and Honeywell International Inc. (Honeywell). Revisions and additions to the PV Plan shall be issued as addenda to the document and copies will be provided to Honeywell, NYSDEC, and PV contractors.

- This PV plan details the performance verification of the site closure program and off-site Surrounding Affected Areas (SAA) restoration program

- Issued as separate documents:

  - The *Site Closure Plan* (Ramboll 2020a) discusses the conceptual design and implementation of site closure components.

  - The *Off-Site SAA Restoration Plan* (Ramboll 2020b) describes restoration approaches for off-site SAA.

  - The *Operation and Maintenance (O&M) Plan* (Ramboll 2021) will be implemented in combination with the PV Plan. The O&M Plan discusses the anticipated tasks to operate, inspect, and maintain the closure components related to leachate and storm water management.

1.1 Purpose

The purpose of this PV Plan is to describe the activities and procedures that will be followed during the verification phase of the WB 9-15 closure and restoration program.

1.2 Property Description

WB 9-15 cover approximately 662 acres in the towns of Camillus and Geddes, Onondaga County, New York, in close proximity to Interstate 690, NYS Route 695, State Fair Boulevard, and the New York State Fairgrounds (**Figure 1-1**).

This property received Solvay waste between 1944 and 1985 generated by Allied Chemical via the Solvay Process. A discussion of Solvay waste and historical information regarding WB 9-11 and WB 12-15 is presented in **Section 1.3**. WB 9-11 are separated from WB 12-15 by Ninemile Creek (NMC), which flows immediately adjacent to WB 9-11, a topographically lower area of land, and railroad tracks. Site plans are attached for WB 9-11 and WB 12-15 as **Figures 1 and 2,** respectively. Three public recreational access points to NMC are located in the area of WB 9-15: the Lakeland Canoe and Kayak Launch, adjacent to WB 9/10, the NMC Public Fishing and Recreation Access on Airport Road west of WB 13, and the NMC Amboy access on Thompson Road adjacent to WB 13.

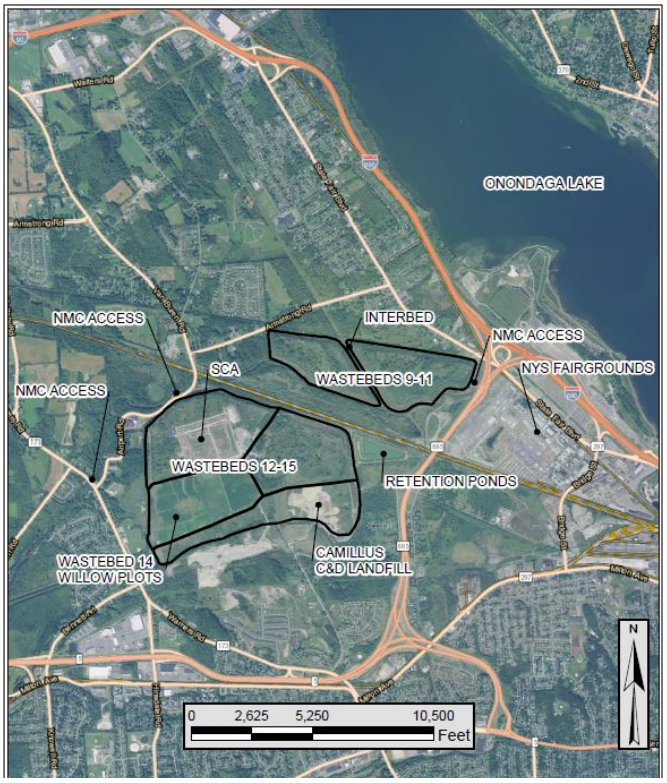

Figure 1-1 WB 9-15 Location

WB 9-11 cover approximately 126 acres and have a height of approximately 70 feet from the base. WB 9/10 are contiguous and separated from WB 11 by a large swale (the Interbed Area). The Interbed Area receives storm water from WB 9-11. WB 9/10 is adjacent to the NMC/Geddes Brook Remedial Site OU 1, and the associated restored wetlands and floodplains.

WB 12-15 cover an area of approximately 536 acres and have a height of approximately 55 feet from the base. Two leachate retention ponds are located east of WB 12 and consist of a 3-acre settling pond (Pond 1) and an 11-acre holding pond (Pond 2). The eastern portion of WB 15 is leased by the Town of Camillus, which operates a construction and demolition debris (C&D) landfill at this location in accordance with a separate consent order. The Sediment Consolidation Area (SCA) associated with the Onondaga Lake Bottom Site remediation is located on WB 13**.** In accordance with an Onondaga Lake Natural Resource Damages Consent Decree signed on March 14, 2018, approximately 105 acres of native grassland bird habitat will be incorporated into the SCA cover and the current and future final covers for the C&D landfill.

WB 9-15 (excluding the SCA and the C&D landfill), the retention ponds, and the Interbed area are collectively defined as the Site in the Consent Order. The off-site surrounding affected area

(SAA) was also defined in the Consent Order, and refined during negotiation of the off-Site SAA Phase 1 scope of work (Honeywell 2009c) to include (see attached **Figure 3**):

- NMC surface water, channel sediment, and floodplain soil/sediment from Amboy Dam to the upstream boundary of NMC Operable Unit 1 (OU1)
- New York State (NYS) wetlands CAM-21 and CAM-26
- Iron Brook and the Outfall 19 ditch
- Gravel pit, and
- Ponded area north of WB 11.

1.3 History

1.3.1 Solvay Waste

Solvay waste was a byproduct of the Solvay Process, which utilized local supplies of salt brine and limestone to produce soda ash (sodium carbonate) in Syracuse between 1881 and 1986 (Blasland, Bouck & Lee [BB&L] 1989). One of the soda ash's uses was to manufacture sodium bicarbonate, ammonium bicarbonate, and sodium sesquicarbonate (PTI 1992).

Solvay waste is a white, chalky, calcite-related material, which is a non-hazardous combination of process residuals, unreacted material, and mineral salts that were deposited as a chloride-rich slurry exhibiting an elevated pH (10 to 12 standard units [SU]). Residual Solvay waste is a sterile, inert, and inorganic accumulation of equigranular, silt-sized particles in brine. The substrate consists of calcium carbonate, calcium sulfate, calcium silicate, and magnesium hydroxide with no hazardous waste characteristics. The primary environmental concerns related to Solvay waste are its elevated pH and the brackish leachate that was originally generated as the wastebeds dewatered and later as precipitation percolated through the wastebeds (BB&L 1989). In terms of physical properties, Solvay waste has a low bearing capacity and a high consolidation ratio.

1.3.2 Wastebeds 9 through 11

Berms were constructed around the perimeter of WB 9-11 prior to filling. The berms were constructed of natural materials, Solvay waste, and cinders (BB&L 1989). Solvay waste was deposited as slurry in the wastebeds from 1944 to 1968. The volume of Solvay waste and other materials placed within WB 9-11 is estimated to be 14,260,000 cubic yards (CY) (BB&L 1989). In addition to receiving Solvay waste, WB 9-11 received smaller amounts of brine purification wastes, boiler bottom ash, and fly ash.

A conveyance system was constructed in the spring of 2005 to facilitate drainage of the Interbed Area. The system includes a mechanical pump and 8-inch conveyance piping. Surface water is removed at the southeastern corner of the Interbed Area, pumped through the conveyance pipe, and discharged into the smaller retention pond, Pond 1, at WB 12-15. This operation was

authorized by the Onondaga County Department of Water Environment Protection (OCDWEP) on February 24, 2005.

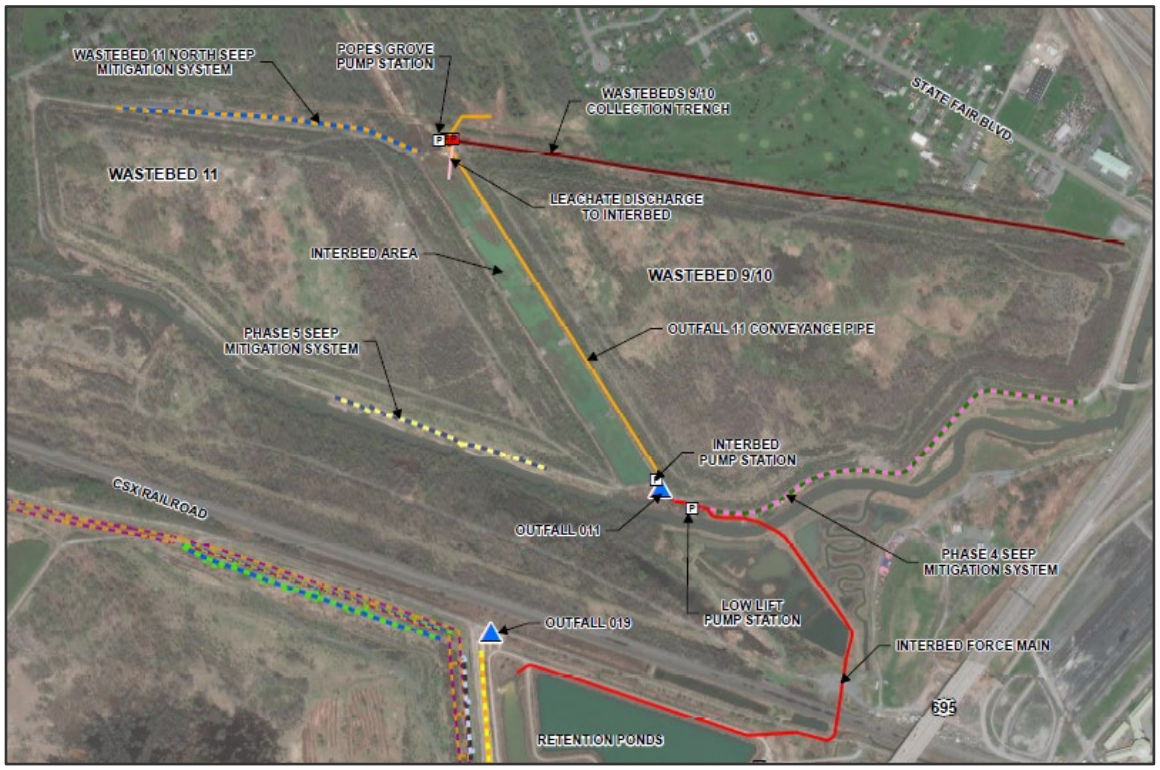

Figure 1-2 WBs 9-11

To improve drainage from off-Site property northeast of the Interbed Area a collection and pumping system was constructed. This system includes a dual chamber pump station and high-density polyethylene (HDPE) conveyance piping. The pump station segregates non-impacted storm water from the property to the north (Pope's Grove) and chloride-impacted water from the northern and western perimeters of WB 9/10. Non-impacted storm water is discharged to NMC via a 24-inch culvert pipe connected to the State Pollution Discharge Elimination System (SPDES)-permitted Outfall 011. The 24-in Outfall 011 pipe was replaced with an HDPE pipe in 2010 as part of the Seep Mitigation Program to reduce groundwater infiltration into the outfall as part of the Phase 3 seepage mitigation work. Discharge from Outfall 011 is currently monitored in accordance with SPDES Permit #NY0002275, issued on September 18, 2003 and most recently updated on March 3, 2020 (**Appendix A**). Impacted water is pumped into the northern end of the Interbed Area.

Along the northern perimeter of WB 9/10, a cobble-filled trench with a 15-inch perforated pipe, installed in 2005, intercepts leachate seeps and discharges to the Pope's Grove Pump Station. The dual-chamber Pope's Grove Pump Station segregates leachate and non-impacted stormwater

from the Pope's Grove property to the north, and discharges leachate to the Interbed Area, and discharges non-impacted stormwater to NMC via SPDES-permitted Outfall-011.

The Interbed Area is periodically pumped, as conditions require, via a conveyance system constructed in the spring of 2005. The system includes a mechanical pump (Interbed Pump Station), which is manually started and shut down by an operator, and an 8-inch conveyance piping (Interbed force main). Water is removed at the southeastern corner of the Interbed Area, pumped through the conveyance pipe, and discharged into the smaller of the two retention ponds (Pond 1) located east of WB 12.

The Phase 4 Seep Mitigation collection system at WB 9/10 was installed along the southern perimeter of WB 9/10 and consists of a leachate collection trench, three interceptor walls, six collection wells, and a lift station brought into operation on April 8, 2013 (OBG 2013a). The leachate collection trench contains a 6-inch diameter perforated leachate collection pipe in an 8-ft deep by 2-ft wide gravel-filled trench. Leachate collected in the system is directed to a 6-ft x 6-ft 17-ft low lift pump station (LLPS) located near the Interbed pump station. The collection system is approximately 2,900 linear ft long. In addition to the leachate collection system, three separate interceptor walls were installed between the leachate collection system and NMC to reduce the groundwater quantity reaching NMC. The interceptor walls are approximately 750 linear ft long for one wall and 100 linear ft long for the other two walls. The two 100-ft long walls were installed to reduce seeps along the banks of NMC. On the northern side of the interceptor walls, a series of six collection wells were installed. Two monitoring wells were also installed on the southern side of the interceptor wall near NMC to measure groundwater elevations and control the collection wells' pumping rates. Each collection well is equipped with a pump that discharges through a force main to the lift station. Groundwater/leachate is pumped from the lift station into the Interbed force main that discharges into the retention ponds. Based on data recorded at the lift station, the flow varies from approximately 20 to 88 gallons per minute (gpm). An extension to this was constructed in 2019 to mitigate a seepage area west of the original Phase 4 Seep Mitigation System limits. The extension consists of the addition of approximately 100-lf of sheet pile interceptor wall, 100-LF of perforated HDPE piping, one collection well, and force main upgrades.

The Phase 5 Seep Mitigation collection system was installed along the southern perimeter of WB 11 and consists of five leachate collection trenches, five collection wells, lift station modifications, and interbed force main modifications brought into operation in June 2015 (OBG 2015). The leachate collection trench contains a 6-in diameter perforated high density polyethylene (HDPE) leachate collection pipe in a 14 to 23 ft deep gravel-filled trench. Leachate collected in the system is directed to the lift station installed as part of the Phase 4 mitigation system construction. The collection system is approximately 1,325 linear ft long. A series of five collection wells were installed as part of the leachate collection system. Two monitoring wells were also installed near NMC to measure groundwater elevations and control the pumping rates of the collection wells. Each collection well is equipped with a pump which discharges through a force main to the lift station. Groundwater/leachate is pumped from the lift station into the

Interbed force main that discharges into the retention ponds. The Phase 4 LLPS was modified to include the installation of a clean out on the force main from the Phase 5 Seep Mitigation collection wells. Piping modifications were conducted near the Interbed pump station building; valves, piping, and fittings were installed to allow for hook-up of a temporary trailer-mounted pump in case the Interbed pump had to be shut down for maintenance or repairs.

A seep mitigation system north of WB 11 was installed in 2018-2019 and consists of two collection trenches and a gravity transfer pipe. The upper collection trench collects leachate at the toe of WB 11, south of the access road. The upper trench is approximately 800 ft of 6-in perforated collection pipe in a 2.5 ft deep gravel-filled trench. This trench is connected via laterals to a lower collection trench which collects leachate prior to reaching the ponded areas. The lower trench is approximately 850 ft of 8-in perforated pipe in a gravel filled collection trench ranging in depth from 5 ft bgs to 10 ft bgs. The lower 8-inch collection trench transitions to a 1,000-ft long 8-in solid wall gravity fed transfer pipe conveying the collected leachate to the Interbed located between WB 9/10 and WB 11. Water from the Interbed is pumped via the Interbed Pump Station to the WB 12-15 retention ponds and then to Metro (Ramboll 2019).

1.3.3 Wastebeds 12 through 15

According to historical reports, figures, and data, WB 12-15 were constructed and used as wastebeds for Solvay waste between 1951 and 1986. The volume of material placed within WB 12-15 is estimated to be 42,190,000 CY (BB&L 1989), with most material being Solvay waste. In addition to Solvay waste, these wastebeds reportedly received smaller amounts of brine purification sediments, treated mercury cell wastewater, boiler water purification sediments, boiler bottom and fly ash, some Willis Avenue Plant wastewater, and asbestos slurry.

During the period of operation, the berms of the active wastebeds were constructed higher as the elevation of the waste material in the wastebeds increased. Construction drawings prepared by Allied detail a gravel drainage layer near the base of each berm, topped with a 6-inch sand filter layer, topped with native soil material (glacial till), to a height of approximately 55 feet from the base elevation. The drainage layer is 1 to 4 feet thick and was designed to drain water infiltrating the wastebeds (leachate) and the liquid portion (supernatant) of the slurry waste material and discharge it to the open perimeter drainage swale. The drainage swale conveyed flows to the two retention ponds located in the northeast corner of the Site. The leachate and storm flow were subsequently pumped from the retention ponds to Metro. The open perimeter drainage swale was replaced by the Leachate Collection and Conveyance System (LCCS) in September 2002, which was designed to intercept water from this drainage layer and from drainage pipes placed within this layer during construction of the beds. A storm water drainage swale was constructed as part of LCCS installation. The LCCS, along with seep mitigation systems installed at WB 12-15, discharges leachate to the retention ponds via the LCCS pump station following pH adjustment.

The retention ponds and associated pump station [Camillus Pump Station, now referred to as Former County Pump Station (FCPS)] were previously owned and operated by the OCDWEP. In the late 1970s, Onondaga County, in cooperation with Allied, constructed the two ponds. The ponds originally collected supernatant flow from the wastebeds, and the flow was pumped to Metro where the high alkalinity and calcium content of the liquids was utilized for tertiary treatment.

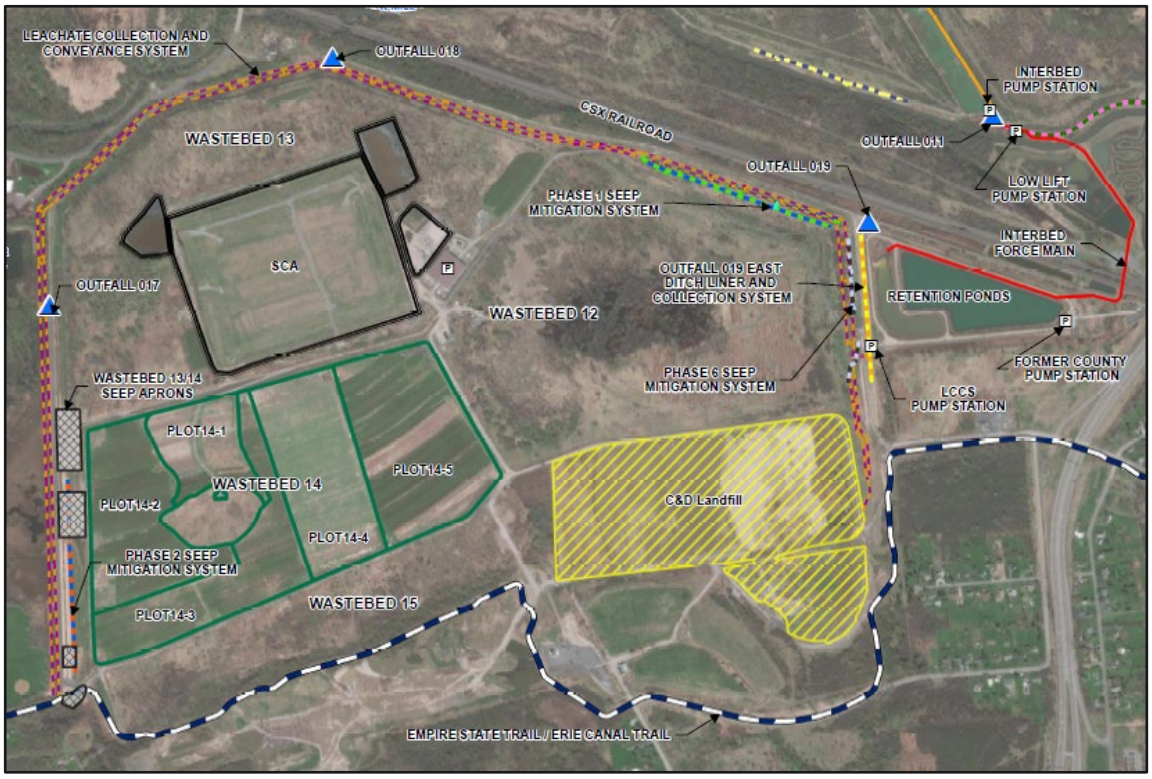

Figure 1-3 WBs 12-15

In accordance with the February 12, 2004 stipulated judgment between Honeywell and the County of Onondaga, Honeywell decommissioned the FCPS, installed new mechanical and control systems, and assumed ownership of the retention ponds, FCPS, and associated 30-inch and 24-inch leachate force mains. Following an Agreement between Honeywell and Onondaga County dated October 27, 2017, Onondaga County reacquired a portion of the force main, consisting of the 24-in force main extending from a location proximate to the Westside Pumping Station to the discharge location at Metro. Honeywell has an Onondaga County Industrial Wastewater Discharge Permit (#801; **Appendix A**), approved on December 28, 2004 (and most recently updated on July 1, 2018), for the discharges to Metro from Wastebeds 9-15.

Surface drainage from the perimeter berms of WB 12-15 is collected in the drainage swale at the toe of the WB and discharges to NMC, Geddes Brook, or the former gravel pit on the northwest side of WB 13. Outfall 017 discharges to the former gravel pit; Outfall 018 discharges to NMC

upstream of the railroad bridge crossing the creek; and Outfall 019 discharges to Geddes Brook (attached **Figure 1**). Discharges from Outfalls 017, 018, and 019 are permitted under SPDES Permit #NY0002275, issued on September 18, 2003 and most recently updated on March 3, 2020 (**Appendix A**). These outfalls are currently sampled monthly and SPDES reports are submitted as required by the Permit #NY0002275.

2. HEALTH AND SAFETY

Personnel working on-site shall follow the Honeywell Syracuse Portfolio Health and Safety Program (Parsons and OBG 2016). The program specific Health and Safety Plan shall be updated on an annual basis, as may be required. Job Safety Analyses (JSA), which outline safety and health requirements, and guidelines developed for specific tasks shall be created and maintained on-site. Tasks outside of previous field efforts shall have a new JSA completed prior to beginning the task.

If a subcontractor is performing activities that require specialized training (*e.g.*, herbicide application, confined space entry, arc flash, excavation or trenching, scaffold use, hazardous waste operations and emergency response, etc.), copies of training certificates shall be provided to site personnel for applicable employees and the supervisors.

Communications

Inquiries from the general public (*e.g.*, media, workers from adjacent properties, etc.) inquiring about the project shall be directed to contact Craig Milburn at Honeywell [(315) 552-9784].

Spill Prevention Program

Spill prevention and reporting programs shall be in compliance with applicable state, federal, and local regulations.

3. FORMS AND REPORTING

Data, inspections, and observations generated during performance verification activities will be documented. The records (which can be in electronic form) shall be kept orderly and in a file form (topic, chronological, alphabetical). The recommended forms to document the performance verification program are provided in **Appendix B**.

3.1 Monitoring and Inspection Forms

The following forms (**Appendix B**) may be used to document inspections and observations noted during collection of data related to performance verification, including:

- Groundwater Sample Log
- Surface Water Sample Log
- Stream Visual Assessment Form
- Field Sheet for the Collection of Biological Monitoring Data
- Surface Leachate Reconnaissance/Field Sample Sheet
- Subsurface Leachate Sample Log
- Site Inspection Data Form
- Groundwater Elevation Log

3.2 Monitoring Data Submittals

Tables summarizing analytical sample data will be provided to NYSDEC within 90 days after each sampling event. Evaluation of sample data will be discussed as part of annual reports described in **Section 3.3**.

3.3 Annual Reports

An annual report summarizing the previous calendar year of performance verification activities at the Site shall be prepared and submitted to NYSDEC. Applicable inspection forms and other records (*i.e.*, media sampling data) generated for the site during the reporting period will be provided to the NYSDEC. This information shall be coupled with the annual report for operations and maintenance (O&M) activities, as described in the *O&M Plan* (Ramboll 2021) and submitted as a single annual report.

The performance verification portion of the annual report shall include the following:

- Description of the performance verification activities performed.
- Copies of field forms completed (*e.g.*, monitoring and inspection forms/logs, photo documentation).
- Summary of observations, conclusions, recommendations, and corrective actions, as necessary.

The annual report shall also include an evaluation of seep mitigation progress, as required by the Order. Additional details regarding the content of annual reports are included in Section 5. During performance verification activities, observations that may warrant corrective action prior to submission of the annual report shall be communicated with NYSDEC.

4. CLOSURE AND RESTORATION COMPONENTS

This section provides an overview of the closure and restoration program components that are included in the performance verification activities. The components include cover systems, berm stabilization and erosion control measures, leachate management, storm water management systems, and SAA restoration areas.

4.1 Site Closure Components

4.1.1 Cover Systems

As described in the *Site Closure Plan* (Ramboll 2020a), the Consent Order allows for use of an approved evapotranspiration (ET) cover as final cover at WB 9-15, as described in the *Alternative Cover Design Report* (ACDR; OBG 2009) and Honeywell Response to Comment letters (Honeywell 2009a, 2009b). Since 2003, Honeywell and OBG have worked with the State University of New York College of Environmental Science and Forestry (SUNY ESF) to research and develop a willow-based ET cover system. Shrub willows have been evaluated at WB 13 and 14 through bench and pilot studies, demonstration, and additional plantings to build out the entirety of WB 14 (approximately 113 acres). A *Shrub Willow Sustainable Remedy (SWSR) Pre-Design Investigation Report* (to be submitted under separate cover) documents findings from the demonstration that the SWSR can be successfully established at the Site, is similarly effective at reducing percolation as a traditional cover, and, in conjunction with leachate collection and berm stabilization and erosion control measures, would function in the same manner as a traditional landfill cover system while offering sustainable and other environmental benefits.

In conjunction with the shrub willow demonstration on WB 14, a 5-acre inland salt marsh was constructed to establish an ET cover system that complements the willow cover in terms of biodiversity and natural heritage value. The *Inland Salt Marsh Interim Measure Report* (to be submitted under separate cover) documents restoration efforts, which were based on using plant communities that naturally occur in settings with similar stresses as those of the project site, resulted in the rapid development of robust community structure comprising globally substantial plant communities and rare species. In addition to the substantial botanical diversity, valuable ET function was also demonstrated, supporting the role of the inland salt marsh as a site closure component.

As part of the *Site Closure Plan* (Ramboll 2020a) implementation, cover systems will be designed and installed on WB 9-12, on areas of WB 13 outside of the SCA closure, and on areas of WB 15 not closed or targeted for closure as a C&D landfill. The conceptual design for the ET cover system is presented in the *Site Closure Plan.* Final wastebed-specific cover system designs will be presented in annual construction work plans and may include willow vegetation or proposals of alternate cover systems for NYSDEC approval should viable property end uses be identified. Cover construction will be phased over an anticipated 6 to 10 years.

4.1.2 Berm Stabilization and Erosion Control

Berm stabilization and erosion control measures include biotechnical slope protection, repairs to observed erosional features (rills and sloughing), and repairs to sections of exposed geomembrane liner. Measures were installed in 2015 as part of the Berm Stabilization and Erosion Control Interim Measure (IM) (OBG 2016), and in 2018-2019 in accordance with the Berm Stabilization and Erosion Control Phase 2 design documents (OBG 2018a). Berms will be routinely inspected, and future repairs will be made if needed.

4.1.3 Leachate Management

As discussed in the *Site Closure Plan* (Ramboll 2020a), various leachate collection and seep mitigation systems have been installed at WB 9-15 to manage leachate. Systems are depicted on attached **Figures 1 and 2**.

4.1.3.1 Wastebeds 9-11

- WB 9/10 Collection Trenches and Pope's Grove Pump Station
- Interbed Area and Interbed Pump Station
- Phase 4 and Phase 5 Seep Mitigation Systems and Low Lift Pump Station
- WB 11 North Seep Mitigation system

4.1.3.2 Wastebeds 12-15

- LCCS and LCCS Pump Station and Acid Injection System
- Phase 1 and 2 Seep Mitigation Systems
- Phase 6 Seep Mitigation System
- Retention Ponds and Former County Pump Station
- WB 15 Seep Mitigation System
- WB 13/14 Seep Apron
- Outfall 019 East Ditch Collection System

4.1.3.3 Seep Mitigation

Surface seep reconnaissance results are documented in the Closure Investigation Data Evaluation Report (to be submitted under separate cover). The majority of seeps have been addressed with seep mitigation systems. Continued monitoring is recommended to track seep activity and is discussed in Section 5 of this PV Plan. Seep mitigation progress will continue to be evaluated and will be reported annually. Further seep mitigation system enhancements will be considered as closure plan implementation progresses, based on seepage and Site conditions observed during performance verification activities.

4.1.4 Stormwater Management

The storm water management component of Site closure includes: rehabilitating existing storm water drainage systems to mitigate historic Solvay waste impacts to storm water discharges and restore capacity; incorporating storm water management features as part of the phased cover systems, including incorporating a long-term SCA storm water management system into the WB

13 closure design; maintaining storm water drainage systems, and access road drainage improvements.

4.2 SAA Restoration

The path forward for the SAA described in the *SAA Restoration Plan* (Ramboll 2020b) is summarized below in **Table 4-1**.

Table 4-1 Surrounding Affected Area Restoration Path Forward

SAA Component	Path Forward	Rationale
Ninemile Creek (NMC) banks[1]	Vegetative restoration	Restoration of vegetation and erosion control in historic seep-impacted areas
Ponded areas north of WB 11	Vegetative restoration	Restoration of seep-impacted substrate and vegetation following WB 11 north seep mitigation
NYS freshwater wetland CAM-26	No further action[2]	Solvay waste impacts not observed
NMC[3]	Surface water, physical, and biological monitoring	Continued evaluation of SAA conditions during implementation of site closure plan.
Iron Brook	Surface water monitoring	
Outfall 019 drainage ditch		
Former gravel pit		
Groundwater underlying the floodplains	Groundwater monitoring	

[1] Ninemile Creek banks as defined in 6 NYCRR Part 608.1(a)

[2] Surface water quality in CAM-26 was evaluated with four quarters of surface water sampling in accordance with a 2017 work plan approved by NYSDEC on November 17, 2017 (OBG 2017b)

[3] Ninemile Creek, downstream of the Amboy Dam and upstream of Ninemile Creek/Geddes Brook Remedial Site OU 1

5. PERFORMANCE VERIFICATION

Performance indicators for the closure program and performance verification activities for WB 9-15 are summarized in **Table 5-1** and discussed below. A detailed summary of performance verification activities, including locations, parameters or tasks, frequency, field documentation, and reporting, are summarized in attached **Table 1**.

Table 5-1 Performance Indicators and Performance Verification Activities

Performance Indicator	Performance Verification Activity	Site Media or Location
SAA conditions	Water quality monitoring	Groundwater, surface water
	Physical and biological monitoring	NMC
	Restored vegetative area monitoring	NMC banks, Area north of WB 11
Reduced leachate generation and effective leachate management	Elevation monitoring	Groundwater monitoring wells, retention ponds, former gravel pit
	Surface leachate monitoring	Surface seep locations
	Subsurface leachate monitoring	Leachate collection system manholes
	Cover system monitoring and maintenance	ET cover system, inland salt marsh, alternate cover system, as applicable
Effective storm water control	Site inspections	Installed cover system, berms, access roads, drainage swales, outfalls
	Vegetative monitoring	Berms
	Outfall monitoring	Outfalls 011, 017, 018, 019

As discussed in **Section 3.3**, performance verification activities will be documented in annual reports. Refinements to the performance verification activities may be proposed as warranted based on data evaluation findings, identification of end uses for the property, and at the transition from the closure plan implementation phase to the post-closure monitoring phase.

5.1 SAA Conditions Performance Indicator

5.1.1 Water Quality Monitoring

Water quality monitoring will include routine sampling of groundwater, surface water and subsurface leachate. Evaluation of groundwater, surface water, and leachate data collected since 2012, which will be documented in a separate Closure Investigation data evaluation report, was used to identify the following monitoring locations, parameters, and frequencies. A summary of the water quality monitoring program is presented in Table 5-2.

Table 5-2 Water Quality Monitoring Summary

Media	Locations	Frequency	Parameters
Groundwater	13 Shallow fill wells	Semi-annual	Modified expanded (1 event/year) Modified routine (1 event/year)
	27 Shallow native wells		
	13 Intermediate wells		
	21 Deep wells		
	5 Bedrock wells		
Surface water	8 NMC		
	3 Retention ponds		
	1 Interbed		
	Iron Brook		
	Former Gravel Pit		
	Outfalls 011, 017, 018, 019		

Sample locations are indicated on **Figure 4** (groundwater monitoring wells) and **Figure 5** (surface water locations). The modified expanded and routine parameter lists are included as **Tables 2** and **Table 3**, respectively.

A sample summary matrix including analytical methods is provided as **Table 4**. All sample containers will be placed in a cooler containing ice and submitted with an appropriate chain of custody to a New York State-certified laboratory for analyses. Quality assurance and quality control samples (QA/QC) will be collected at a minimum frequency of one in every 20 samples. The QA/QC protocols for the PV plan will be consistent with the Honeywell Syracuse Portfolio Site Investigations Quality Assurance Project Plan (QAPP; OBG 2011).

Analytical data from the laboratory will be received in electronic format. Validated (Modified Expanded) and non-validated (Modified Routine) data will be uploaded to the Earthsoft EQuIS

environmental data management system. The electronic data will be entered into a project database for use in preparation of summary tables. Analytical data summary tables will be provided to NYSDEC semi-annually. Annual reports will document sample locations, sample dates, analyte lists, QA/QC locations, collection methods, and any deviations from the PV Plan. Data evaluation will be presented in annual reports, and monitoring program adjustments may be proposed as warranted based on data evaluation findings.

5.1.1.1 Groundwater Monitoring

The 79 wells to be sampled during each groundwater monitoring round are summarized in **Table 5** and shown on **Figure 4**. Groundwater samples will be collected using low flow purging techniques and purging will occur at a maximum rate of 0.5 L/min. During purging, groundwater levels will be monitored to document stabilization. In addition, groundwater quality parameters including pH, conductivity, temperature, oxidation reduction potential (ORP), turbidity, and dissolved oxygen (DO) will be monitored continuously using an in-line meter. Samples will be collected directly from the tubing once the groundwater quality parameters have stabilized or after the removal of three well volumes. Groundwater quality parameter stabilization criteria are provided below in **Table 5-3**.

Table 5-3 Groundwater Quality Stabilization Criteria

Groundwater Quality Criteria	**Stabilization Criteria**
Temperature	± 3% of measurement
pH	± 0.1 S.U.
Specific conductance	± 3% of measurement
ORP	± 10 mV
DO	± 10% of measurement or .01 ppm
Turbidity	± 10% of measurement

The total water volume purged and the purging time will be recorded. If the hydrogeologic unit will not produce sufficient water to allow for low flow purging, a bailer will be used to purge the well and collect a sample once a sufficient amount of water enters the well. The field parameters collected during the groundwater purging and sampling will be recorded on the Groundwater Sample Log included in **Appendix B** and included in the annual report. Non-dedicated sampling equipment will be decontaminated between wells.

5.1.1.2 Surface Water Monitoring

Surface water sample locations are summarized in **Table 5** and on **Figure 5**. Surface water samples will be collected by using dedicated sampling equipment, including a peristaltic pump and dedicated tubing in the specified body of water and using it to fill the laboratory. Prior to

collection of the surface water samples, the temperature, pH, turbidity, conductivity, ORP, and dissolved oxygen will be measured in the field and recorded on the Surface Water Sample Log included in **Appendix B**.

5.1.2 Physical and Biological Monitoring

PV efforts will be implemented to evaluate the physical and biological condition of NMC within the extent of the SAA. In addition to surface water monitoring previously discussed, assessment activities will include field data collection of benthic macroinvertebrate communities and stream physical habitat conditions every five years, beginning in 2021, until five years after completing the closure plan implementation, at which time a recommendation will be made to either continue, reduce or terminate the monitoring, depending on the data evaluation. Monitoring will incorporate enhanced data interpretation protocols in accordance with state and federal guidance, as described in the following sections.

5.1.2.1 Physical Characterization

NMC physical and habitat conditions will be assessed by utilizing the *Stream Visual Assessment Protocol* (USDA 1998), which was previously used to document the physical conditions of NMC during the SAA assessment performed as part of the *Closure Investigation* (OBG 2018c). This protocol will be conducted for each reach (Reference Reach 1, Reaches A through F; as depicted on **Figure 5**), and will include documentation of channel condition, hydrologic alterations, riparian zones, bank stability, water appearance, barrier to fish movement, instream fish cover, canopy cover (for reaches with active channel width less than 50 ft.), and riffle embeddedness (if riffles are present). For future monitoring events, substrate pebble count will be added to the physical characterization efforts to obtain additional details relevant to the benthic community collections (described below). The Stream Visual Assessment Form (**Appendix B**) will be completed for each sampled reach. Continued application of the USDA protocol discussed above will enable long-term trend evaluations of the physical and habitat conditions of NMC within the SAA, using the previous data from the Closure Investigation as a baseline for comparisons.

5.1.2.2 Biological Characterization

The benthic macroinvertebrate community of NMC will be assessed using protocols established by the NYSDEC Stream Biomonitoring Unit and presented in *Standard Operating Procedures: Biological Monitoring of Surface Waters in New York State* (NYSDEC 2019; SOP 208-19). The methods outlined in SOP 208-19 have been implemented throughout New York State to evaluate trends in water quality based on benthic macroinvertebrate communities. The overall approach as presented in SOP-208-19 is to combine several ecological community metrics (calibrated based on sampling protocol and methodology) to generate an overall numeric score (0 to 10) referred to as the Biological Assessment Profile (BAP), which can be categorized to a general condition of the stream location.

For the PV field efforts, benthic macroinvertebrate samples will be collected as done previously using a D-frame kick net at the left, center, and right sides of the creek along three transects (downstream, midpoint, and upstream end), for a total of nine subsamples per reach; reaches

are depicted on **Figure 5**. Each replicate kick sample will be collected over the course of five minutes. Replicate samples will be composited into one sample representing the entire reach and preserved in 1-Liter bottles with 95% ethanol for transportation to the laboratory. Physical and chemical parameters of each reach, and initial benthic community characterizations will be recorded in the field using the Field Sheet for the Collection of Biological Monitoring Data (**Appendix B**). To obtain species richness data per the SOP, composite samples from each reach will be sent to an approved laboratory for species identification.

Based on the SOP, the following benthic community metrics will be individually quantified and used to calculate a BAP score for each reach:

1. Species richness (SPP) – total number of species found in a sample/reach. Increased number of species is indicative of higher water quality.
2. Hilsenhoff Biotic Index (HBI) – incorporates taxa tolerance values to determine the extent to which a location is impacted by organic pollution. The HBI is calculated by multiplying the number of individuals sampled by an assigned tolerance value, then summing all the values for a sample/reach and dividing by the total number of individuals collected.
3. EPT richness – total number of mayflies (Ephemeroptera), stoneflies (Plecoptera), and caddisflies (Trichoptera) found in a sample/reach. These Orders of benthic macroinvertebrates are considered to be taxa of high-water quality conditions.
4. Percent model affinity (PMA) – determines how similar a sample/reach is to a model, non-impacted community sample.

Individual metrics and associated BAP values will be generated per reach, as well as combined to provide an overall BAP score for NMC within the extent of the SAA.

5.1.3 Restored Vegetative Area Monitoring

Vegetative areas installed as part of the SAA restoration program, including NMC banks and the area north of WB 11, will be monitored annually for five years following installation. Vegetation establishment will be compared to a performance standard of 85% vegetative cover. This performance standard is an annual goal. Adaptive management techniques will be identified and implemented, as needed, to correct potential concerns (*e.g.,* not trending toward attainment of performance standard) and documented in the annual report. The performance standards should be met for a minimum of two consecutive growing seasons by the end of the five-year monitoring period, at which time monitoring will be considered complete.

Field monitoring activities shall be performed during the growing season and will include evaluation of vegetation percent cover. For the restored banks of NMC (see **Figure 10**), areas will also be evaluated for rills, sloughing, and soil deposition at the toe of banks of NMC. A biologist with knowledge of aquatic and terrestrial habitats, vegetation, and biota will be involved throughout the monitoring process. Observations will be recorded on the Site Inspection Data Form included in **Appendix B.** A photograph log will also be prepared to document observations from the vegetation monitoring, using consistent locations for annual comparisons.

The information gathered during the field monitoring events will be documented in the annual report. Contents of the monitoring portion of the annual report will include:

- Photographs showing representative portions of the restoration areas with photo-location map
- Estimated percent cover of dominant vegetative species within the vegetative areas
- Comparison of collected data to performance standards
- An overall qualitative description of the success of the vegetative areas and recommendations to correct problems within the vegetative area, if necessary.

The annual report will summarize the monitoring observations and identify trends in data observed throughout the monitoring program. Proposed corrective actions (*e.g.,* installation of additional plantings) will be reviewed with NYSDEC and shall occur in a timely manner relative to the corrective need.

5.2 Reduced Leachate Generation and Effective Leachate Management Performance Indicator

5.2.1 Elevation Monitoring

Groundwater elevations will be recorded from 127 Site monitoring wells and recorded on the Groundwater Elevations Field Log in **Appendix B**. Elevations will be measured on a quarterly basis to evaluate changes in groundwater elevations over time. Water elevations will be manually collected using a water level probe and measured to the nearest 0.01 ft in each of the locations shown on **Figure 4.** Groundwater specific gravity will be measured in the field via hydrometer when water levels are manually measured and used to characterize the groundwater being sampled. Groundwater elevation measurements will be reported, the elevation data will be plotted, and contour maps will be created in annual reports.

5.2.2 Surface Leachate Monitoring

Surface leachate seep locations at the Site have been monitored quarterly since 2012 for activity and have been sampled when flow is sufficient to allow sample collection. Inactive and active seep locations for Wastebeds 9-11 and 12-15 are shown on **Figure 7** and **8**, respectively. The majority of the active seep locations are captured by seep mitigation systems.

Surface leachate seep reconnaissance will continue to be performed quarterly. An evaluation of previously identified seep areas will be conducted, and areas of new seepage will be identified, if applicable. New seep locations will be staked, marked with a hand-held GPS unit, and photographed.

Surface leachate seep samples will be collected during reconnaissance events from locations with applicable flow, by pumping seep water with a peristaltic pump and dedicated tubing to fill the laboratory containers. Prior to preservation of the seep leachate samples, the temperature, pH, conductivity, ORP, and DO will be measured in the field and recorded on the Surface Leachate

Sample Log in **Appendix B**. Analytical sample data will be managed and reported in the same manner as discussed in **Section 5.1**.

5.2.3 Subsurface Leachate Monitoring

Leachate sample locations are summarized in **Table 5** and on **Figure 9**. Samples will be collected from the two subsurface leachate locations at WB 9-11 (PCP-01 and PCP-02), and ten manhole locations at WB 12-15, which span each wastebed and weir box connection (MH-01, MH-03, MH-04, MH-06, MH-08, MH-10, MH-11, MH-12, MH-15 and MH-18).

Leachate samples will be collected by using dedicated sampling equipment, including a peristaltic pump and dedicated tubing in the specified body of water and using it to fill the laboratory container, prior to being pumped or acid-adjusted. The presence of a sufficient amount of leachate will determine whether a sample can be collected. Prior to preservation of the leachate samples, the temperature, pH, conductivity, ORP, and dissolved oxygen will be measured in the field and recorded on the Subsurface Leachate Sample Log in **Appendix B**.

Consistent with the water quality monitoring program described in **Section 5.1**, samples will be analyzed for the modified expanded parameter list included in **Table 2** one event per year, and the modified routine parameter list included in **Table 3** one event per year. Data management and reporting will be consistent with that described in **Section 5.1**.

5.2.4 Cover System Monitoring and Maintenance

5.2.4.1 Shrub Willow Cover System Monitoring

Monitoring and maintenance tasks for the shrub willow cover system are targeted towards maintaining the overall willow ET cover system as well as towards production of beneficially usable biomass.

Table 5-4 Willow Cover Monitoring Variables

Variable	Sampling scale	Frequency	Parameters
Pest management	Willow cover	Semi-annual	Evidence of pests or pathogens
Site preparation	Newly prepared fields	Summer prior to planting	Mixing depth and consistency, vegetation cover from cover crop
Establishment	Newly planted fields	Year of planting	Willow plant density
Health	Willow cover	Annual	Foliar Normalized Difference Vegetation Index (NDVI)
	Targeted areas based on NDVI		Foliar chemistry
	Targeted areas based on NDVI		Soil chemistry
	Plots to be harvested	Harvest year	Foliar nutrients

Pest Management

The willow pest management program consists of ongoing activities to monitor, prevent, and suppress pests present on the site. Pest monitoring activities consist of semi-annual site walks to survey for and identify site pests or pathogens. Information gleaned from UAV flights will be used to inform priority areas for pest surveys. Ongoing pest prevention activities include:

- Preparing (clearing and incorporating organic amendment) the willow fields during the growing season prior to planting in order to allow time to control competing vegetation without risking impacts to desired vegetation
- Interspersing willow varieties during planting in order to avoid monocultural situations that favor spread of pests
- Using pre-emergent herbicides to suppress weed emergence from the seed bank.

Pest suppression strategies depend on the level of infestation. Suggested pest suppression strategies, according to relative levels of infestation, are summarized in **Table 5-5**.

Table 5-5 Willow Pest Suppression Strategies

Infestation Level	Suppression Strategy			
	Weeds	Insects	Diseases	Deer and other mammals
Low	Mow, disk or rototill	Remove insects by trapping	Manually remove infected plants	Protection of individual plants with tubes or fencing, repellants, prune height
Medium	Spot or stand-wide herbicide application	Spot or stand-wide insecticide application	Spot or stand-wide fungicide application	Exclusion fencing around specific plants/varieties
High	Stand-wide herbicide application	Stand-wide insecticide application	Stand-wide fungicide application	Perimeter exclusion fencing

Pest monitoring, prevention and suppression efforts and outcomes will be described in the annual report and tracked over time to provide a basis for adaptive management.

Site Preparation

During the summer before planting, newly prepared fields will be visually assessed for sufficient mixing depth and consistency. A systematic grid of pits will be excavated to test mixing depth to a minimum depth of two feet in representative portions of the willow fields. Visual assessments will be performed to evaluate the presence of clumps or otherwise heterogenous soil conditions in the soil pits. A minimum mixing depth of 1.6 ft will be evaluated. Each soil pit will be photographed.

Establishment

During the summer of plantings, newly planted fields will be sampled for survivorship. A systematic selection of ten, 20-foot row segments will be censused for living willow cuttings. Sample segments not meeting a plant density of 4,500 plants per acre will be further evaluated to identify stressors and will be replanted to meet this initial plant density.

Health

Overall willow stand health will be evaluated annually via unmanned aerial vehicle (UAV) sensors and development of NDVI maps. NDVI is a visual tool that provides an indicator of leaf "greenness", physiological function and by extension plant health. Willow stand areas with NDVI scores that fall one standard deviation below the typical range of NDVI values will be investigated in the field as follows: A minimum of one 20'x 8.5' plot will be established and willow foliage will be collected and composited, then analyzed for macro- and micronutrients. Foliar chemistry data will be compared to offsite foliar nutrient values from reference locations previously compiled by SUNY ESF. Similarly, ten soil samples each from the 0 to 1' and 1' to 2' depths will be collected, composited, and analyzed for macronutrient concentrations, soil organic matter and pH. The soils and foliar data will be used to prescribe targeted amendments, as needed, to correct apparent nutrient deficiencies. The areas with low NDVI scores will also be assessed for other stressors that may be impacting the health of the willows, such as pests, and appropriate actions will be taken.

5.2.4.2 Shrub Willow Cover System Maintenance

Maintenance of willow plots will be performed based on the results of the monitoring tasks previously described. Where needed maintenance plantings will be performed to maintain sufficient density of healthy willow plots.

The SWSR cover system will be harvested every 3-4 years using a single-pass cut-and-chip forage harvester with a specially designed cutting head for willow. Areas to be harvested will be staggered based on the varying ages of the different plots, allowing a diversity of willow plant height and stem ages across the site. Planting and harvesting activities will be planned and managed such that no more than 1/3 of the established willow acreage is harvested annually without approval from NYSDEC, in order to maintain consistency with the water budget modeling assumptions presented in the *Shrub Willow Pre-Design Investigation Report* (to be submitted under separate cover). Nutrient conditions will be evaluated in harvest years, and the need for fertilizer amendment in the spring will be identified and implemented.

Beneficial use opportunities will be evaluated annually, and arrangements will be made for transport of harvested willow chips to end users. Potential beneficial uses include renewable energy production; pellet production and use as a biofuel for wood-fired boilers; erosion control and stabilization for construction projects, and animal bedding.

5.2.4.3 Inland Salt Marsh Monitoring and Maintenance

During May and June of 2008, approximately 30,000 herbaceous plants (mostly 5 cm diameter plugs) and 450 woody plants were installed within the salt marsh. An additional 15,000 plugs were installed in the early growing seasons of 2009 and 2010. As documented in the *Inland Salt Marsh Interim Measure Report* (to be submitted under separate cover) monitoring data for vegetation structure, survivorship, growth, and ET suggest that the restoration efforts were successful after 5 years of observation. Because the inland salt marsh is beyond the 5-year establishment monitoring period, a qualitative vegetative inspection of the salt marsh will be performed annually during the summer/fall to confirm continued vegetative establishment and will be summarized in the annual report. Observations will be recorded on the Site Inspection Data Form in **Appendix B.**

5.2.4.4 Alternate Cover System Monitoring and Maintenance

Should alternate cover systems be approved and installed at the Site, appropriate monitoring and maintenance tasks will be identified in an updated *Performance Verification Plan* or in an amendment to this plan.

5.2.5 Retention Pond Elevation Monitoring

As discussed in the *Closure Plan* (Ramboll 2020a), continued use of the retention ponds is planned for hydraulic equalization and temporary storage of leachate from WB 9-15, prior to conveyance to Metro. Justification for continued use is based on the findings of the Retention Pond Pre-Design Investigation (OBG 2018d) that the retention ponds are not discharging to groundwater but are gaining shallow groundwater through a small area where the silt and clay is thin or not present. Groundwater flows from the south along the regional groundwater flow direction into the retention ponds through a permeable geologic unit along the southern edge. Groundwater flow out of the ponds to the north is restricted by the silt and clay unit that is present.

The two-fold purpose of performance verification is long-term demonstration that: 1) groundwater discharges into the ponds, and 2) the ponds are continuing to operate as designed. Routine pond maintenance activities such as shutdowns at the Former Camillus Pump Station will not result in pond water discharging into shallow groundwater.

The performance verification objective for the retention ponds is therefore to maintain an upward hydraulic gradient from the shallow groundwater aquifer into the ponds, as well as 2-ft freeboard. The performance verification criterion is a retention pond surface water elevation that is 0.1 feet (minimum) below the groundwater elevation. Hourly operation measurements will be used to generate the performance verification monitoring data, which will consist of the 30-day rolling averages of the groundwater elevation at SB915-MW-03 and the pond elevation at the Former Camillus pump Station wet well. The 30-day rolling averages will be reviewed monthly, to evaluate compliance with the performance criterion over the past month and documented in the annual report. The surface water elevation will be measured at the former Camillus Pump

Station wet well**,** and the groundwater elevation will be measured at monitoring well SB915-MW-03 (**Figure 6**). SB915-MW-03 is an existing monitoring well screened in the sand below the silt and clay unit, making it the appropriate groundwater elevation monitoring point. Other monitoring wells in the vicinity of the retention ponds are screened in the silt and clay unit, till, bedrock, and are not appropriate for performance verification monitoring. Water elevations at each location will be recorded using a pressure transducer set to record hourly elevations. These elevation measurements are the operational data that will be used to adjust the pumping rates and pond levels. The detailed description of the collection and review of the operational data is discussed in the *WB9-15 Operation & Maintenance Plan* (Ramboll, 2021).

The groundwater and pond elevations fluctuate due to seasonal changes. If the groundwater elevation increases, then the surface water elevation may also be allowed to increase, provided the minimum 2-ft freeboard is maintained. If the shallow groundwater elevation decreases, the pond elevations will be lowered to remain below the shallow groundwater elevation. As previously stated, the surface water elevation will be maintained at 0.1 feet (minimum) below the groundwater elevation to prevent surface water flow into the shallow groundwater.

Operational data will be collected and evaluated to refine pond operation, troubleshoot, and schedule maintenance, as necessary. As stated above, hourly operation measurements will be used to generate the performance verification monitoring data, which will consist of the 30-day rolling averages. Non-routine operation and maintenance activities will be noted in the annual report submitted to NYSDEC. After 12 months of operation, and verification of performance, evaluations of the 30-day rolling averages of the monitoring data will occur semi-annually. Operational data will continue to be collected and evaluated to refine the pond operation, troubleshoot, and schedule maintenance, as necessary. If during evaluation of the monitoring data, it is observed that pond elevations exceed the groundwater elevation, or if an unexpected change in the pond elevation occurs due to non-routine operation and maintenance activities, then NYSDEC will be notified of the event with a summary email within one week of the data review. Subsequent to NYSDEC notification, an investigation to evaluate the cause(s) will be initiated and troubleshooting will be performed, as necessary.

5.3 Effective Storm Water Control Performance Indicator

5.3.1 Site Inspections

WB 9-15 will be inspected annually to compare observed conditions to design parameters. The cover system, berms, access roads, drainage swales, and outfalls will be evaluated for evidence of erosion and general conditions. Observations will be recorded on the Site Inspection Data Form included in **Appendix B.** Photograph logs will be prepared and photograph locations recorded to document inspection observations. General inspection observations will be included in the Annual Report. Proposed corrective actions to address observed deficiencies, if any, will be documented in the Annual Report. Measures to correct the cause of the deficiencies will be evaluated and reviewed with NYSDEC, prior to implementation.

5.3.1.1 Berm Inspections

The WB 9-15 berms will be inspected annually for signs of stress or changes in erosion. Annual inspections will include a site-wide evaluation, as well as evaluation of the miscellaneous features targeted for continued monitoring in the *Berm Stabilization and Erosion Control – Interim Measure Report* (OBG 2013b), summarized in **Table 5-6**, and shown on **Figures 10** and **11.** These features did not appear to signify stressed areas of the berms, but represented areas of abnormal shapes, undulations, mounds, or depressions in the berm, and will be evaluated annually for changes and need for repair. Observations will be recorded on the Site Inspection Data Form including in **Appendix B.**

Table 5-6 Berm Anomalies

Wastebed	*Location ID*	*Description*
9/10	Misc-01	Mounding and undulations in berm.
9/10	Misc-02	Large depression in base of berm in area of original separation between WB 9 and 10. No erosion or berm stability issues with depression.
9/10	Misc-04	Bulge with mounding, rill, and culvert/pipe extending from mound on base of eastern berm, likely a WB filling or dewatering point. No flow or erosion associated with pipe.
11	Misc-05	Bulges and depressions.
11	Misc-06	Large bulge with concrete pieces located on the western berm of WB 11, likely a WB filling or dewatering point.
11	Misc-08	Mounding and undulations in berm.

5.3.2 Vegetative Monitoring

Vegetative monitoring for areas of the berms which have been vegetated as part of the Berm Stabilization and Erosion Control IM and Phase 2 installations will be monitored and reported consistent with the process and goals identified in Section 5.1.3. above for the SAA. Observations will be recorded on the Site Inspection Data Form including in **Appendix B.**

5.3.3 Outfall Monitoring

In addition to the water quality monitoring to be performed semi-annually at the four SPDES stormwater outfalls at the site, discussed in **Section 5.1**, Outfalls 011, 017, 018, and 019 will continue to be monitored during monthly storm events in accordance with SPDES permit requirements. SPDES sampling results are reported in monthly discharge monitoring reports (DMRs). Annual reporting will include quantitative data documenting progress to comply with the discharge concentration limits in the SPDES permit. Should closure plan implementation not result in SPDES permit compliance, a plan will be developed in consultation with NYSDEC, which may include track down studies and the need for additional closure measures. Observations will be recorded on the Site Inspection Data Form including in **Appendix B.**

6. PERFORMANCE DATA EVALUATION

Evaluation of performance verification data will be ongoing during the closure performance verification program. Performance verification data discussed in Section 5 will be reviewed to assess the overall effectiveness of the closure program. If needed based on data evaluation, corrective actions to the closure system components (cover system, leachate management, berm stabilization, and stormwater management) will be evaluated, recommended, and implemented as appropriate.

7. PERMITS AND AGREEMENTS

The WB 9-15 Site (**Figure 1 & 2**) is located on property owned entirely by Honeywell, with the exception of a portion of the Interbed area which is owned by National Grid (formerly Niagara Mohawk). Access to the Interbed Area is in compliance with a two-way access agreement between Honeywell and National Grid. Access to all other portions of the WB 9-15 site is covered through access agreements between Honeywell and contractors. Entry onto the property shall be in compliance with each individual access agreement. Permits shall be obtained by contractors, as required.

Honeywell is permitted by NYSDEC for stormwater discharges through four outfalls at the site (Outfalls 011, 017, 018, and 019); SPDES Discharge Permit #NY0002275 is included in **Appendix A.** The schedule for compliance with SPDES discharge limits for pH, chlorides, and total dissolved solids (TDS) at these outfalls is linked to completion of closure activities under the Consent Order, as outlined in the *Site Closure Plan* (Ramboll 2020a).

Honeywell is permitted by Onondaga County for leachate discharges to Metro; Industrial Wastewater Discharge Permit #801 included in **Appendix A**.

8. CONTACTS

The following list includes contacts that are associated with the project.

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TABLES

Table 1 Performance Verification Plan Overview

Performance Indicators	Activity	Locations	Parameters or Tasks	Frequency	Reporting
SAA conditions	Water quality monitoring	79 wells (see Figure 4) 18 surface water locations (see Figure 5)	Revised expanded parameter list one event/year; revised routine parameter list one event/year (see Tables 2 and 3)	Semi-annually	Semi-annual data table submittals Annual Report
	Physical and biological monitoring	8 NMC locations (see Figure 5)	Physical habitat conditions and benthic community metrics	Every 5 years	Annual Report
	Restored vegetative area monitoring	NMC bank restoration areas	Vegetation percent cover composition	Annually	Annual Report
		Ponded area north of WB 11	Vegetation percent cover composition	Annually	Annual Report
	Groundwater elevation monitoring	127 wells (see Figure 6)	Groundwater elevation	Quarterly	Annual Report
Reduced leachate generation and effective leachate management	Surface leachate monitoring	Site-wide	Visual observation of seep activity and sampling of active seeps; revised expanded parameter list one quarter/year; revised routine parameter list three quarters/year (see Tables 2 and 3)	Quarterly	Semi-annual data table submittals Annual Report
	Subsurface leachate monitoring	12 locations (see Figure 9)	Revised expanded parameter list one event/year; revised routine parameter list one event/year (see Tables 2 and 3)	Semi-annually	Semi-annual data table submittals Annual Report
	Cover system monitoring and maintenance	Installed shrub willow cover	Mixing depth and consistency	Prior to planting	Annual Report
			Cover crop establishment	Following plot preparation	Annual Report
			Health (Normalized Difference Vegetation Index (NDVI); foliar chemistry, soil chemistry)	Annual	Annual Report
			Foliar testing for nutrient needs	Each harvest	Annual Report
			Willow plant density; maintenance plantings	Annually, as needed	Annual Report
			Pest management, including weed management	Semi-annual, as needed	Annual Report
			Harvesting	Once each 3-4 years	Annual Report
			Fertilizer application	Following harvest, as needed	Annual Report
		Installed alternate cover	TBD	TBD	Annual Report
Effective storm water control	Retention pond elevation monitoring	Groundwater monitoring well MW-3 and Former County Pump Station wet well	Groundwater, surface water elevations; maintenance of upward hydraulic gradient	Hourly recording; 30-day rolling average evaluation	Annual Report
	Site inspections	Installed cover, berms, access roads, drainage swales, outfalls	Evidence of erosion	Annually	Annual Report
	Vegetative monitoring	Berms	Vegetative Percent Cover Composition	Annually	Annual Report
	Outfall monitoring	Outfalls 011, 017, 018, 019	SPDES parameters	Monthly[1]	Annual Report

[1] In accordance with storm sampling requirement in SPDES permit

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Table 2 Modified Expanded Parameters List

Common Name[1]	CAS RN[2]	Suggested Method	Target QL (ug/L)
Field Parameters:			
Static water level(in wells and sumps)			
Specific Conductance			
Floaters or Sinkers[3]			
Temperature			
pH		9045C/SM4500H&B	0.01 Std units
Eh			
Dissolved Oxygen[4]			
Field Observations[5]			
Turbidity			
Leachate Indicators:			
Total Phenols	-	420.2	10
Alkalinity	-	SM20 2320B	5000
Ammonia	7664-41-7	SM20 4500 NH3-G/ 350.1	20
Biochemical Oxygen Demand (BOD5)	-	SM5210B	2000
Boron	7440-42-8	6010C	20
Bromide	24959-67-9	300.0	200
Chloride	16887-00-6	300.0	500
Nitrate	-	300.0/9056	20
Nitrite	14797-65-0	300.0/9056	0.02
Sulfate	-	300.0	2000
Total Dissolved Solids	-	SM2540C	0
Total hardness as CaCO3	35-50-0	SM20 2340C	2000
Total Kjeldahl Nitrogen	-	351.2	200
Total Organic Carbon (TOC)	-	5310C	
Chemical Oxygen Demand (COD)	-	410.4	
Inorganic Parameters:			
Aluminum	(Total)	6010C	200
Antimony	(Total)	6010C	20
Arsenic	(Total)	6010C	10
Barium	(Total)	6010C	2
Beryllium	(Total)	6010C	2
Cadmium	(Total)	6010C	1
Calcium	(Total)	6010C	500
Chromium	(Total)	6010C	4
Cobalt	(Total)	6010C	4
Copper	(Total)	6010C	10
Cyanide	(Total)	9012A/9012B/9014	10
Iron	(Total)	6010C	50
Lead	(Total)	6010C	5
Magnesium	(Total)	6010C	200
Manganese	(Total)	6010C	3
Mercury	7439-97-6	163116	0.0005
Nickel	(Total)	6010C	10
Potassium	(Total)	6010C	500
Selenium	(Total)	6010C	15
Silver	(Total)	6010C	3
Sodium	(Total)	6010C	1000
Thallium	(Total)	6010C	20
Tin	(Total)	6010C	10
Vanadium	(Total)	6010C	5
Zinc	(Total)	6010C	10
Organic Parameters:			
1,1-Dichloroethane; Ethyldidene chloride	75-34-3	8260	1
1,1-Dichloroethene; Vinylidene chloride	75-35-4	8260	1
1,2,4-Trichlorobenzene	120-82-1	8260	1
1,2-Dichlorobenzene	95-50-1	8260	1
1,2-Dichloroethane; Ethylene dichloride	107-06-2	8260	1
1,3-Dichlorobenzene	541-73-1	8260	1
1,4-Dichlorobenzene	106-46-7	8260	1
1-Naphthylamine	134-32-7	8270	10
2,4,5-Trichlorophenol	95-95-4	8270	5
2,4-Dichlorophenol	120-83-2	8270	5

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Table 2 Modified Expanded Parameters List

Common Name[1]	CAS RN[2]	Suggested Method	Target QL (ug/L)
2,4-Dimethylphenol; m-Xylenol	105-67-9	8270	5
2-Butanone (MEK)	78-93-3	8260	10
2-Chlorophenol	95-57-8	8270	5
2-Hexanone; Methyl butyl ketone	591-78-6	8260	10
2-Methylnaphthalene	91-57-6	8270	10
2-Methylphenol	95-48-7	8270	10
2-Nitrophenol	88-75-5	8270	5
4-Methyl-2-pentanone (MIBK)	108-10-1	8260	10
4-Nitrophenol	100-02-7	8270	10
Acenaphthene	83-32-9	8270	5
Acetone	67-64-1	8260	10
Acetonitrile; Methyl cyanide	75-05-8	8260	40
Anthracene	120-12-7	8270	5
Benzene	71-43-2	8260	1
Benzo[a]anthracene; Benzanthracene	56-55-3	8270	5
Benzo[a]pyrene	50-32-8	8270	5
Benzo[b]fluoranthene	205-99-2	8270	5
Benzo[ghi]perylene	191-24-2	8270	5
Benzo[k]fluoranthene	207-08-9	8270	5
Benzyl alcohol	100-51-6	8270	5
Bis(2-chloroethyl) ether; Dichloroethyl ether	111-44-4	8270	5
Bis(2-ethylhexyl)phthalate	117-81-7	8270	5
Butyl benzyl phthalate; Benzyl butyl phthalate	85-68-7	8270	5
Carbon disulfide	75150	8260	1
Chlorobenzene	108-90-7	8260	1
Chloroform; Trichloromethane	67-66-3	8260	1
Chloromethane	74-87-3	8260	1
Chrysene	218-01-9	8270	5
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	156-59-2	8260	1
Dibenz[a,h]anthracene	53-70-3	8270	5
Dibenzofuran	132-64-9	8270	10
Dichlorodifluoromethane; CFC 12	75-71-8	8260	1
Diethyl phthalate	84-66-2	8270	5
Di-n-butyl phthalate	84-74-2	8270	5
Di-n-octyl phthalate	117-84-0	8270	5
Ethylbenzene	100-41-4	8260	1
Fluoranthene	206-44-0	8270	5
Fluorene	86-73-7	8270	5
Hexachlorobutadiene	87-68-3	8270	5
Indeno(1,2,3-cd)pyrene	193-39-5	8270	5
Isophorone	78-59-1	8270	5
Naphthalene	91-20-3	8270	5
Nitrobenzene	98-95-3	8270	5
Pentachlorophenol	87-86-5	8270	10
Phenanthrene	85-01-8	8270	5
Phenol	108-95-2	8270	5
p-Phenylenediamine	106-50-3	8270	800
Pyrene	129-00-0	8270	5
Tetrachloroethylene; Tetrachloroethene;	127-18-4	8260	1
Toluene	108-88-3	8260	1
trans-1,2-Dichloroethene / trans-1,2-Dichloroethylene	156-60-5	8260	1
Xylene (total)	See Note 15	8260	2

Notes:

[1]Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[2]Chemical Abstracts Service registry number. Where "Total" is entered, all species in the groundwater that contain this element are included.

[3]Any floaters or sinkers found must be analyzed separately for baseline parameters.

[4]Surface water only.

[5]Any unusual conditions (colors, odors, surface sheens, etc.) noticed during well development, purging, or sampling must be reported.

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Table 3 Modified Routine Paramters List

Common Name[1]	CAS RN[2]	Suggested Method	Target QL (ug/L)
Field Parameters:			
Static water level(in wells and sumps)			
Specific Conductance			
Floaters or Sinkers[3]			
Temperature			
pH		9045C/SM4500H&B	0.01 Std units
Eh			
Dissolved Oxygen[4]			
Field Observations[5]			
Turbidity			
Leachate Indicators:			
Total Phenols	-	420.4	10
Alkalinity	-	SM20 2320B	5000
Ammonia	7664-41-7	SM20 4500 NH3-G/ 350.1	20
Biochemical Oxygen Demand (BOD5)	-	SM5210B	2000
Boron	7440-42-8	6010C	20
Bromide	24959-67-9	300.0	200
Chloride	16887-00-6	300.0	500
Nitrate	-	300.0/9056	20
Sulfate	-	300.0	2000
Total Dissolved Solids	-	SM2540C	0
Total hardness as CaCO3	35-50-0	SM20 2340C	2000
Total Kjeldahl Nitrogen	-	351.2	200
Total Organic Carbon (TOC)	-	5310C	
Chemical Oxygen Demand (COD)	-	410.4	
Inorganic Parameters:			
Cadmium	(Total)	6010C	1
Calcium	(Total)	6010C	500
Iron	(Total)	6010C	50
Lead	(Total)	6010C	5
Magnesium	(Total)	6010C	200
Manganese	(Total)	6010C	3
Potassium	(Total)	6010C	500
Sodium	(Total)	6010C	1000

Notes

[1]Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

[2]Chemical Abstracts Service Registry Number. Where "Total" is entered, all species in the groundwater that contain this element are included.

[3]Any floaters or sinkers found must be analyzed separately for baseline parameters.

[4]Surface water only.

[5]Any unusual conditions (colors, odors, surface sheens, etc.) noticed during well development, purging, or sampling must be reported.

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Table 4 Sample Summary Matrix
Wastebeds 9-15 Closure Investigation - Modified Expanded Parameter Analytical Summary

	Method	Samples	MS	MSD	Field Duplicates	Equipment Blanks	Trip Blanks	Total Samples
Surface Water (19 locations; 1 sample per location)								
Total Phenols	420.4	18	2	2	2	0	0	24
TAL Metals	6010C	18	2	2	2	0	0	24
Cyanide	Kelada-01	18	2	2	2	0	0	24
Mercury	163116	18	2	2	2	0	0	24
TCL SVOCs	8270D	18	2	2	2	0	0	24
TCL VOC	8260C	18	2	2	2	0	2	26
TKN	351.2	18	2	2	2	0	0	24
TDS	SM20 2540C	18	2	2	2	0	0	24
Sulfate	300.0	18	2	2	2	0	0	24
Chloride	300.0	18	2	2	2	0	0	24
Bromide	300.0	18	2	2	2	0	0	24
Alkalinity (Total, Carbonate, & Bicarbonate)	SM20 2320B	18	2	2	2	0	0	24
Hardness	SM20 2340C	18	2	2	2	0	0	24
Ammonia	SM20 4500 NH3-G/ 350.1	18	2	2	2	0	0	24
Nitrite	300.0/9056	18	2	2	2	0	0	24
Nitrate	300.0/9056	18	2	2	2	0	0	24
Total Organic Carbon (TOC)	5310C	18	2	2	2	0	0	24
Chemical Oxygen Demand (COD)	410.4	18	2	2	2	0	0	24
Wells (79 locations; 1 sample per location)								
Total Phenols	420.4	76	4	4	4	4	0	92
TAL Metals	6010C	76	4	4	4	4	0	92
Cyanide	9012A/9012B/9014	76	4	4	4	4	0	92
Mercury	163116	76	4	4	4	4	0	92
TCL SVOCs	8270D	76	4	4	4	4	0	92
TCL VOC	8260C	76	4	4	4	4	15	107
TKN	351.2	76	4	4	4	4	0	92
BOD	SM20 5210B	4	1	1	1	4	0	11
TDS	SM20 2540C	76	4	4	4	4	0	92
Sulfate	300.0	76	4	4	4	4	0	92
Chloride	300.0	76	4	4	4	4	0	92
Bromide	300.0	76	4	4	4	4	0	92
Alkalinity (Total, Carbonate, & Bicarbonate)	SM20 2320B	76	4	4	4	4	0	92
Hardness	SM20 2340C	76	4	4	4	4	0	92
Ammonia	SM20 4500 NH3-G/ 350.1	76	4	4	4	4	0	92
Nitrite	300.0/9056	76	4	4	4	4	0	92
Nitrate	300.0/9056	76	4	4	4	4	0	92
Total Organic Carbon (TOC)	5310C	76	4	4	4	4	0	92
Chemical Oxygen Demand (COD)	410.4	76	4	4	4	4	0	92
Aqueous - Subsurface Leachate (12 locations; 1 sample per location)								
Total Phenols	420.4	12	1	1	1	0	0	15
TAL Metals	6010C	12	1	1	1	0	0	15
Cyanide	9012A/9012B/9014	12	1	1	1	0	0	15
Mercury	163116	12	1	1	1	0	0	15
TCL SVOCs	8270D	12	1	1	1	0	0	15
TCL VOC	8260C	12	1	1	1	0	1	16
TKN	351.2	12	1	1	1	0	0	15
BOD	SM20 5210B	2	1	1	1	0	0	5
TDS	SM20 2540C	12	1	1	1	0	0	15
Sulfate	300.0	12	1	1	1	0	0	15

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Table 4 Sample Summary Matrix
Wastebeds 9-15 Closure Investigation - Modified Expanded Parameter Analytical Summary

	Method	Samples	MS	MSD	Field Duplicates	Equipment Blanks	Trip Blanks	Total Samples
Chloride	300.0	12	1	1	1	0	0	15
Bromide	300.0	12	1	1	1	0	0	15
Alkalinity (Total, Carbonate, & Bicarbonate)	SM20 2320B	12	1	1	1	0	0	15
Hardness	SM20 2340C	12	1	1	1	0	0	15
Ammonia	SM20 4500 NH3-G/ 350.1	12	1	1	1	0	0	15
Nitrite	300.0/9056	12	1	1	1	0	0	15
Nitrate	300.0/9056	12	1	1	1	0	0	15
Total Organic Carbon (TOC)	5310C	12	1	1	1	0	0	15
Chemical Oxygen Demand (COD)	410.4	12	1	1	1	0	0	15
Aqueous - Surface Leachate (10 locations; 1 sample per location)								
Total Phenols	420.4	10	1	1	1	0	0	13
TAL Metals	6010C	10	1	1	1	0	0	13
Cyanide	9012A/9012B/9014	10	1	1	1	0	0	13
Mercury	163116	10	1	1	1	0	0	13
TCL SVOCs	8270D	10	1	1	1	0	0	13
TCL VOC	8260C	10	1	1	1	0	1	14
TKN	351.2	10	1	1	1	0	0	13
TDS	SM20 2540C	10	1	1	1	0	0	13
Sulfate	300.0	10	1	1	1	0	0	13
Chloride	300.0	10	1	1	1	0	0	13
Bromide	300.0	10	1	1	1	0	0	13
Alkalinity (Total, Carbonate, & Bicarbonate)	SM20 2320B	10	1	1	1	0	0	13
Hardness	SM20 2340C	10	1	1	1	0	0	13
Ammonia	SM20 4500 NH3-G/ 350.1	10	1	1	1	0	0	13
Nitrite	300.0/9056	10	1	1	1	0	0	13
Nitrate	300.0/9056	10	1	1	1	0	0	13
Total Organic Carbon (TOC)	5310C	10	1	1	1	0	0	13
Chemical Oxygen Demand (COD)	410.4	10	1	1	1	0	0	13

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Table 5 Groundwater, Surface Water, and Subsurface Leachate Monitoring Locations

Groundwater Monitoring Locations

Location ID	Unit	Location ID	Unit
SB915-MW-107D	D	SB915-MW-108S	S
SB915-MW-108D	D	SB915-MW-109S	S
SB915-MW-111D	D	SB915-MW-110S	S
SB915-MW-36D	D	SB915-MW-111S	S
SB915-MW-42D	D	SB915-MW-112S	S
SB915-MW-53D	D	SB915-MW-113S	S
SB915-MW-70D	D	SB915-MW-116S	S
SB915-MW-85D	D	SB915-MW-117S	S
SB915-MW-88D	D	SB915-MW-118S	S
SB915-MW-89D	D	SB915-MW-59S	S
SB915-MW-91D	D	SB915-MW-60S	S
SB915-MW-91I	D	SB915-MW-70S	S
SB915-WB-01L	D	SB915-MW-87S	S
SB915-WB-02L	D	SB915-MW-88S	S
SB915-WB-03L	D	SB915-MW-89S	S
SB915-WB-04L	D	SB915-MW-90S	S
SB915-WB-05L	D	SB915-WB-07U	S
SB915-WB-06	D	SB915-WB-09U	S
SB915-WB-07L	D	SB915-WB-10U	S
SB915-WB-09L	D	SB915-MW-36I	SOLW
SB915-WB-10L	D	SB915-MW-36S	SOLW
SB915-MW-104I	I	SB915-MW-40S	SOLW
SB915-MW-106I	I	SB915-MW-42I	SOLW
SB915-MW-107I	I	SB915-MW-42S	SOLW
SB915-MW-109I	I	SB915-MW-43S	SOLW
SB915-MW-111I	I	SB915-MW-53I	SOLW
SB915-MW-112I	I	SB915-MW-91S	SOLW
SB915-MW-87I	I	SB915-MW-92S	SOLW
SB915-MW-88I	I	SB915-PZ-07D	SOLW
SB915-MW-89I	I	SB915-PZ-07I	SOLW
SB915-MW-90I	I	SB915-PZ-07S	SOLW
SB915-MW-92D	I	SB915-WB-15B/15S	SOLW
SB915-MW-92I	I	SB915-MW-88BR	BR
SB915-WB-05M	I	SB915-MW-90BR	BR
SB915-IMW-02S	S	SB915-MW-111BR	BR
SB915-IMW-05S	S	SB915-MW-115BR	BR
SB915-MW-01	S	SB915-MW-118BR	BR
SB915-MW-03	S		

Table 5 Groundwater, Surface Water, and Subsurface Leachate Monitoring Locations

Groundwater Monitoring Locations

Location ID	Unit	Location ID	Unit
SB915-MW-04	S		
SB915-MW-104S	S		
SB915-MW-106S	S		
SB915-MW-107S	S		

Table 5 Groundwater, Surface Water, and Subsurface Leachate Monitoring Locations

Surface Water Monitoring Locations
Location ID
WB915-GRAVEL PIT
WB915-INTERBED 2
WB915-IRON BROOK
WB915-OUT-011
WB915-OUT-017
WB915-OUT-018
WB915-OUT-019
WB915-REACH A
WB915-REACH B
WB915-REACH C
WB915-REACH D
WB915-REACH E
WB915-REACH F
WB915-REF REACH
WB915-REF REACH 2
WB915-RET POND 1
WB915-RET POND 2-1
WB915-RET POND 2-2

Table 5 Groundwater, Surface Water, and Subsurface Leachate Monitoring Locations

Subsurface Leachate Monitoring Locations
Location ID
SB915-MH-01
SB915-MH-03
SB915-MH-04
SB915-MH-06
SB915-MH-08
SB915-MH-10
SB915-MH-11
SB915-MH-12
SB915-MH-15
SB915-MH-18
SB915-PCP-01
SB915-PCP-02

FIGURES

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LEGEND

- WEIR BOX
- OUTFALL
- P PUMP STATION
- LEACHATE DISCHARGE TO INTERBED
- OUTFALL 011 CONVEYANCE PIPE
- WASTEBEDS 9/10 COLLECTION PIPE
- INTERBED FORCE MAIN
- WASTEBED 11 NORTH SEEP MITIGATION SYSTEM
- PHASE 1 SEEP MITIGATION SYSTEM
- PHASE 4 SEEP MITIGATION SYSTEM
- PHASE 5 SEEP MITIGATION SYSTEM
- PHASE 6 SEEP MITIGATION SYSTEM
- LEACHATE COLLECTION AND CONVEYANCE
- OUTFALL 019 EAST DITCH COLLECTION SYSTEM

0 750 1,500 Feet

SITE PLAN

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 9-11
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

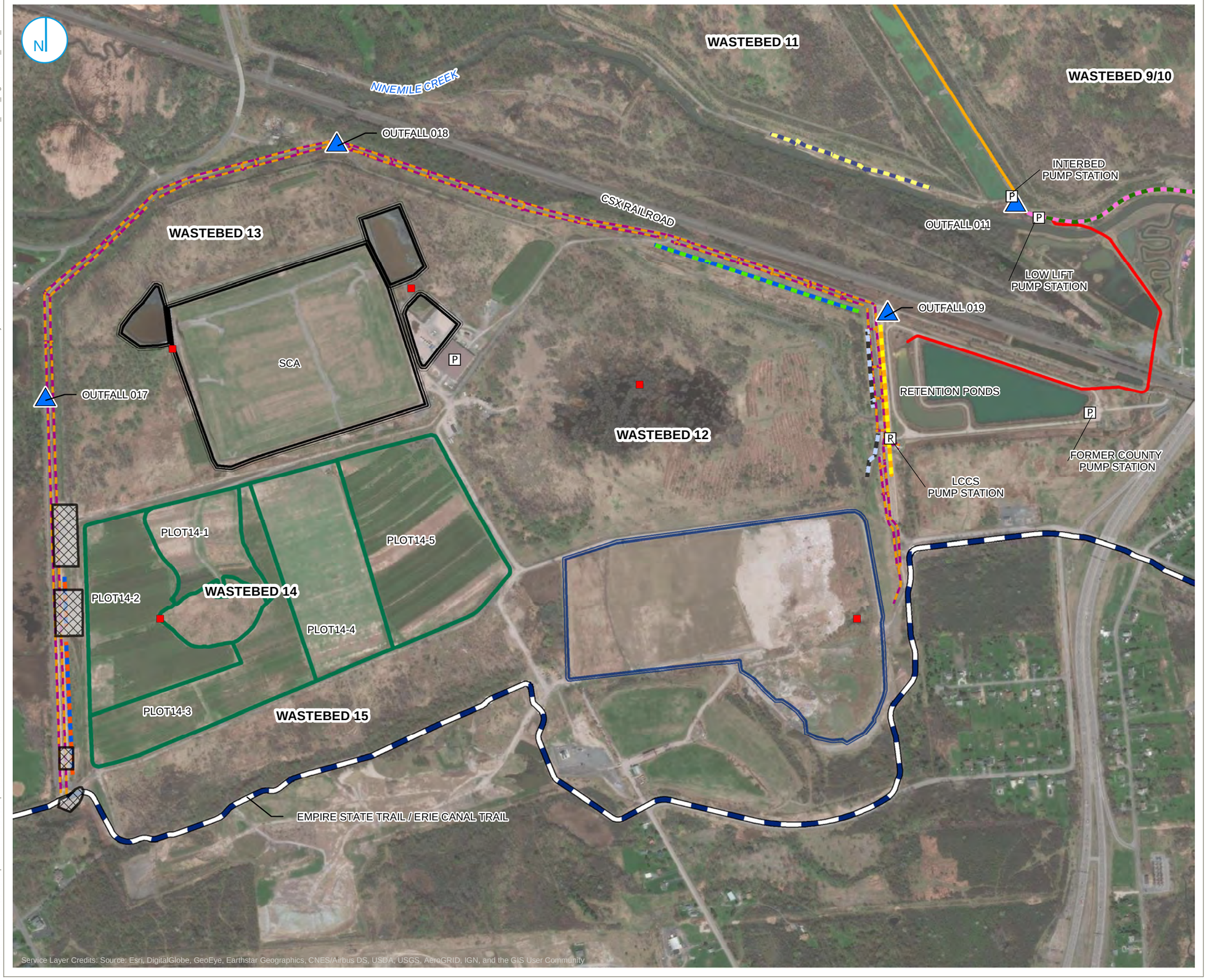
FIGURE 01

MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1163.194007S018 | DATED: 2/25/2021 | DESIGNER: MCCOMBSI



LEGEND

- WEIR BOX
- OUTFALL
- PUMP STATION
- OUTFALL 011 CONVEYANCE PIPE
- INTERBED FORCE MAIN
- PHASE 1 SEEP MITIGATION SYSTEM
- PHASE 2 SEEP MITIGATION SYSTEM
- PHASE 4 SEEP MITIGATION SYSTEM
- PHASE 5 SEEP MITIGATION SYSTEM
- PHASE 6 SEEP MITIGATION SYSTEM
- LEACHATE COLLECTION AND CONVEYANCE
- OUTFALL 019 EAST DITCH COLLECTION SYSTEM
- SEEP APRON
- SCA
- WILLOW PLOTS
- C&D LANDFILL

0 1,000 2,000 Feet

SITE PLAN

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 12-15
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

FIGURE 02

MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

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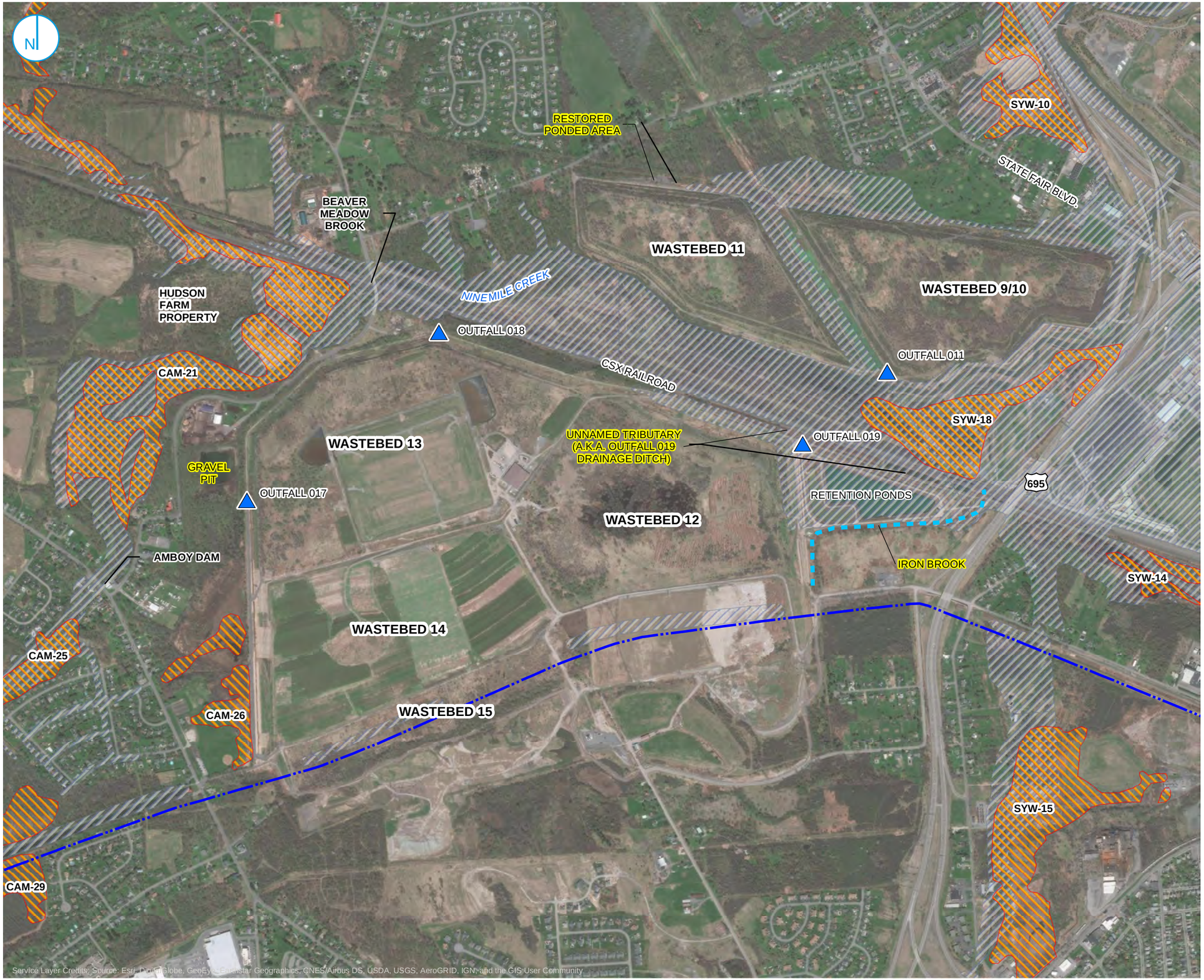
PROJECT: 1163.1940075018 | DATED: 3/23/2021 | DESIGNER: MCCOMBSI



LEGEND

- OUTFALL
- FORMER ERIE CANAL
- IRON BROOK
- NYS FRESHWATER WETLAND - NO FURTHER ACTION UNDER ORDER
- 100-YR FEMA FLOOD ZONE - NO FURTHER ACTION UNDER ORDER (WITH THE EXCEPTION OF WASTEBEDS 9-15, THE RETENTION PONDS, THE INTERBED AREA, AND NINEMILE CREEK BANK AS DEFINED IN 6NYCRR PART 608.1a)
- GRAVEL PIT — INCLUDED IN SURROUNDING AFFECTED AREA

0 1,500 3,000 Feet

WASTEBEDS 9-15 AND SURROUNDING AFFECTED AREAS

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 9-15
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

FIGURE 03

MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

I:\Honeywell.1163\72386.Sb-9-15-2019-Del\Docs\DWG\MXD\PVIPV_Plan_Figure3-_Surrounding_Affected_Areas.mxd

PROJECT: 1163.194007S018 | DATED: 2/25/2021 | DESIGNER: MCCOMBSI

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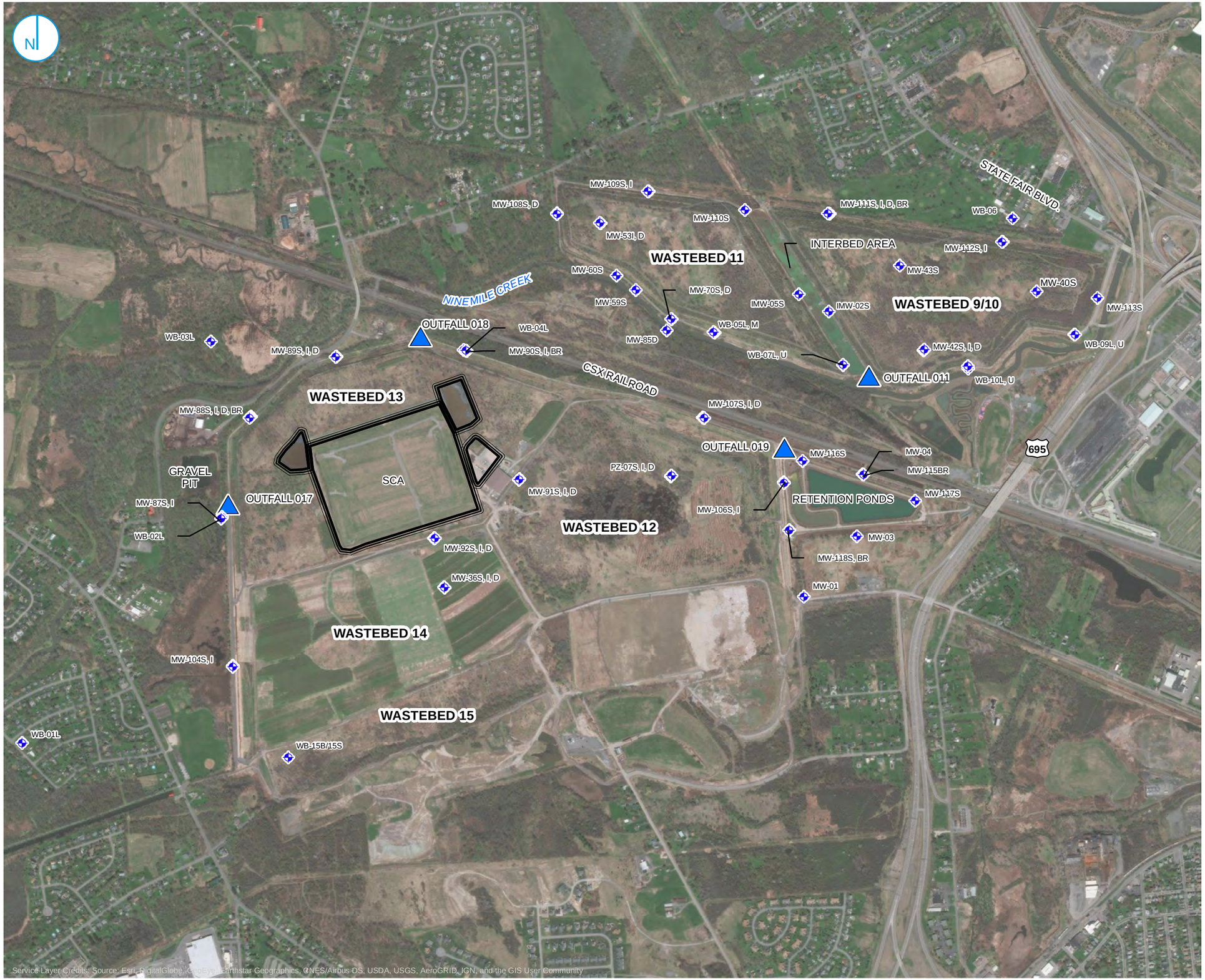


LEGEND

- MONITORING WELL
- OUTFALL
- SCA

0 1,500 3,000 Feet

GROUNDWATER SAMPLE LOCATIONS

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 9-15
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

FIGURE 04

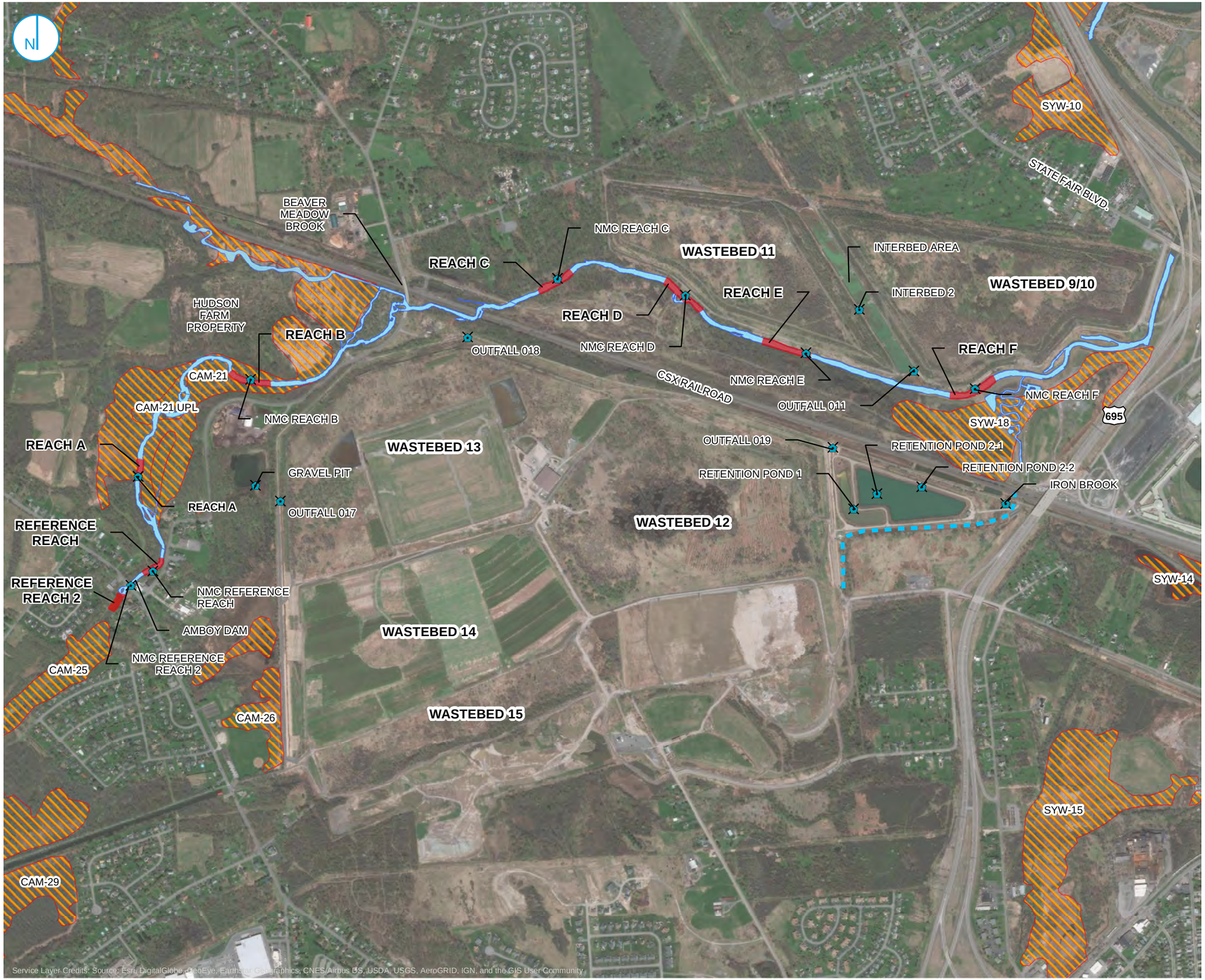
MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1163.1940075018 | DATED: 2/26/2021 | DESIGNER: MCCOMBSI

I:\Honeywell.1163\72386.Sb-9-15-2019-Del\Docs\DWG\MXD\PVI\PV_Plan_Figure5-_SW_Sample_Locations.mxd



LEGEND

- SURFACE WATER SAMPLE
- IRON BROOK
- NYS FRESHWATER WETLAND
- REACH LOCATION

0 1,500 3,000 Feet

SURFACE WATER AND SAMPLE LOCATIONS

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 9-15
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

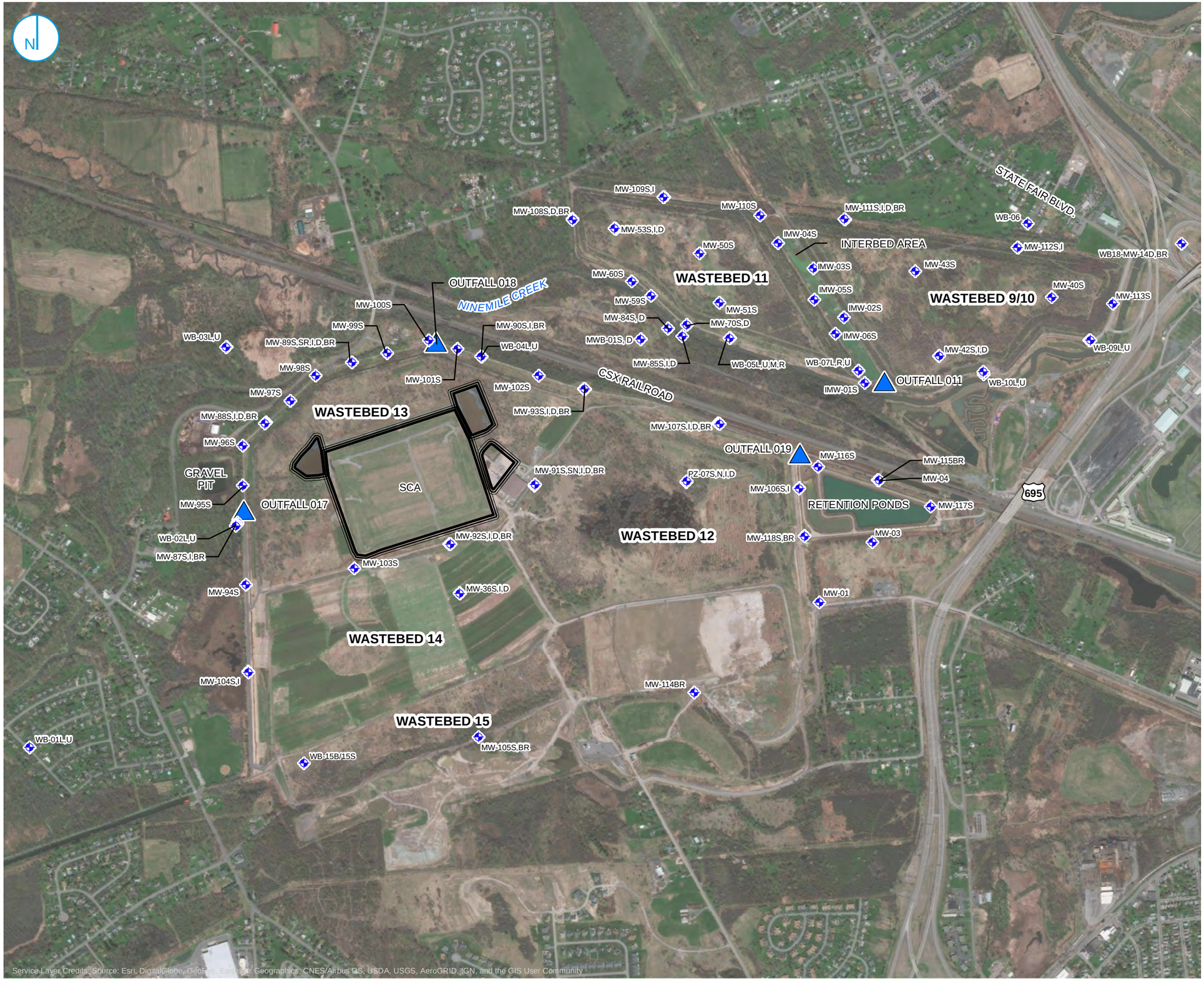
FIGURE 05

MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1163.1940075018 | DATED: 2/26/2021 | DESIGNER: MCCOMBSI



LEGEND

- OUTFALL
- MONITORING WELL
- SCA

0 1,500 3,000 Feet

GROUNDWATER ELEVATION LOCATIONS

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 9-15
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

FIGURE 06

MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

I:\Honeywell.1163\72386.Sb-9-15-2019-Del\Docs\DWG\MXD\PVIP\V_Plan_Figure6-_Groundwater_Elevation.mxd
PROJECT: 1163.1940075018 | DATED: 2/26/2021 | DESIGNER: MCCOMBSI

I:\Honeywell.1163\72386.5b-9-15-2019-DelDocs\DWG\MXD\PVP\V_Plan_Figure7-_Observed_Seep_Locations.mxd

LEGEND

- WEIR BOX
- OUTFALL
- PUMP STATION
- ACTIVE SEEP
- INACTIVE SEEP
- LEACHATE DISCHARGE TO INTERBED
- OUTFALL 011 CONVEYANCE PIPE
- WASTEBEDS 9/10 COLLECTION PIPE
- INTERBED FORCE MAIN
- WASTEBED 11 NORTH SEEP MITIGATION SYSTEM
- PHASE 1 SEEP MITIGATION SYSTEM
- PHASE 4 SEEP MITIGATION SYSTEM
- PHASE 5 SEEP MITIGATION SYSTEM
- PHASE 6 SEEP MITIGATION SYSTEM
- LEACHATE COLLECTION AND CONVEYANCE
- OUTFALL 019 EAST DITCH COLLECTION SYSTEM

0 750 1,500 Feet

OBSERVED SEEP LOCATIONS

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 9-11
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

FIGURE 07

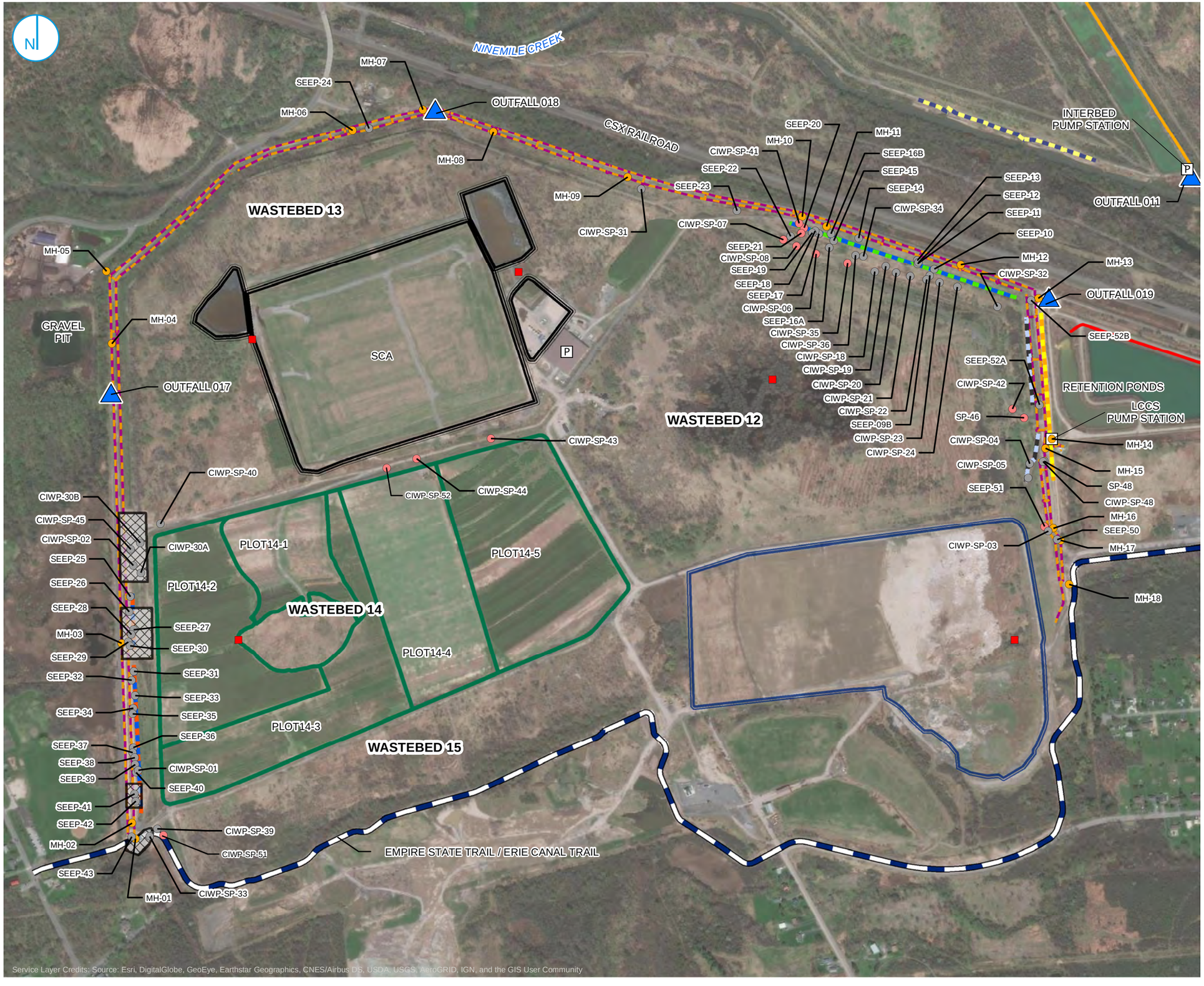
MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1163.1940075018 | DATED: 2/25/2021 | DESIGNER: MCCOMBSI

I:\Honeywell.1163\72386.Sb-9-15-2019-Det\Docs\DWG\MXD\PVP\V_Plan_Figure8-_Observed_Seep_Locations1215.mxd



LEGEND

- WEIR BOX
- OUTFALL
- PUMP STATION
- ACTIVE SEEP
- INACTIVE SEEP
- LCCS MANHOLE
- OUTFALL 011 CONVEYANCE PIPE
- INTERBED FORCE MAIN
- WASTEBED 11 NORTH SEEP MITIGATION SYSTEM
- PHASE 1 SEEP MITIGATION SYSTEM
- PHASE 2 SEEP MITIGATION SYSTEM
- PHASE 5 SEEP MITIGATION SYSTEM
- PHASE 6 SEEP MITIGATION SYSTEM
- LEACHATE COLLECTION AND CONVEYANCE
- OUTFALL 019 EAST DITCH COLLECTION SYSTEM
- SEEP APRON
- SCA
- WILLOW PLOTS
- C&D LANDFILL

0 750 1,500 Feet

OBSERVED SEEP LOCATIONS

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 12-15
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

FIGURE 08

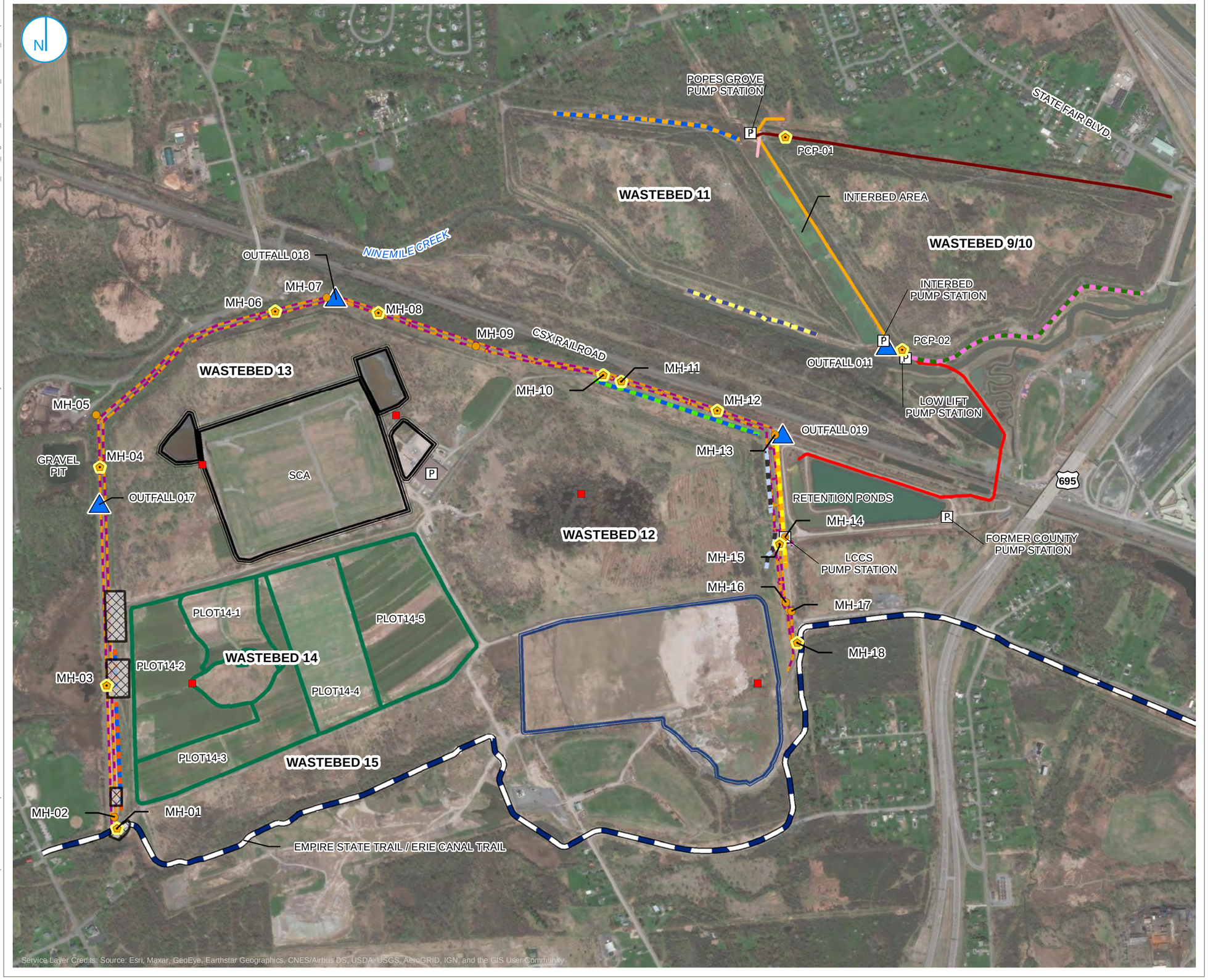
MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1163.1940075018 | DATED: 3/23/2021 | DESIGNER: MCCOMBSJ

I:\Honeywell.1163\72386.5b-9-15-2019-DetDocs\DWGMXD\PVPV_Plan_Figure9-_Subsurface_Leachate_Samples.mxd



LEGEND

- WEIR BOX
- OUTFALL
- P PUMP STATION
- SUBSURFACE LEACHATE SAMPLE LOCATION
- LCCS MANHOLE
- LEACHATE DISCHARGE TO INTERBED
- OUTFALL 011 CONVEYANCE PIPE
- WASTEBEDS 9/10 COLLECTION PIPE
- INTERBED FORCE MAIN
- WASTEBED 11 NORTH SEEP MITIGATION SYSTEM
- PHASE 1 SEEP MITIGATION SYSTEM
- PHASE 2 SEEP MITIGATION SYSTEM
- PHASE 4 SEEP MITIGATION SYSTEM
- PHASE 5 SEEP MITIGATION SYSTEM
- PHASE 6 SEEP MITIGATION SYSTEM
- LEACHATE COLLECTION AND CONVEYANCE
- OUTFALL 019 EAST DITCH COLLECTION SYSTEM
- SEEP APRON
- SCA
- WILLOW PLOTS
- C&D LANDFILL

0 1,000 2,000 Feet

SUBSURFACE LEACHATE SAMPLE LOCATIONS

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 9-15
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

FIGURE 09

MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

PROJECT: 1163.1940075018 | DATED: 3/23/2021 | DESIGNER: MCCOMBSI

LEGEND

- OUTFALL
- BERM 1000ft STATION
- BERM MONITOR FEATURE
- NMC BANK RESTORATION AREA
- COMPLETED BERM STABILIZATION AREAS

0 750 1,500 Feet

VEGETATION MONITORING AREAS

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 9-11
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

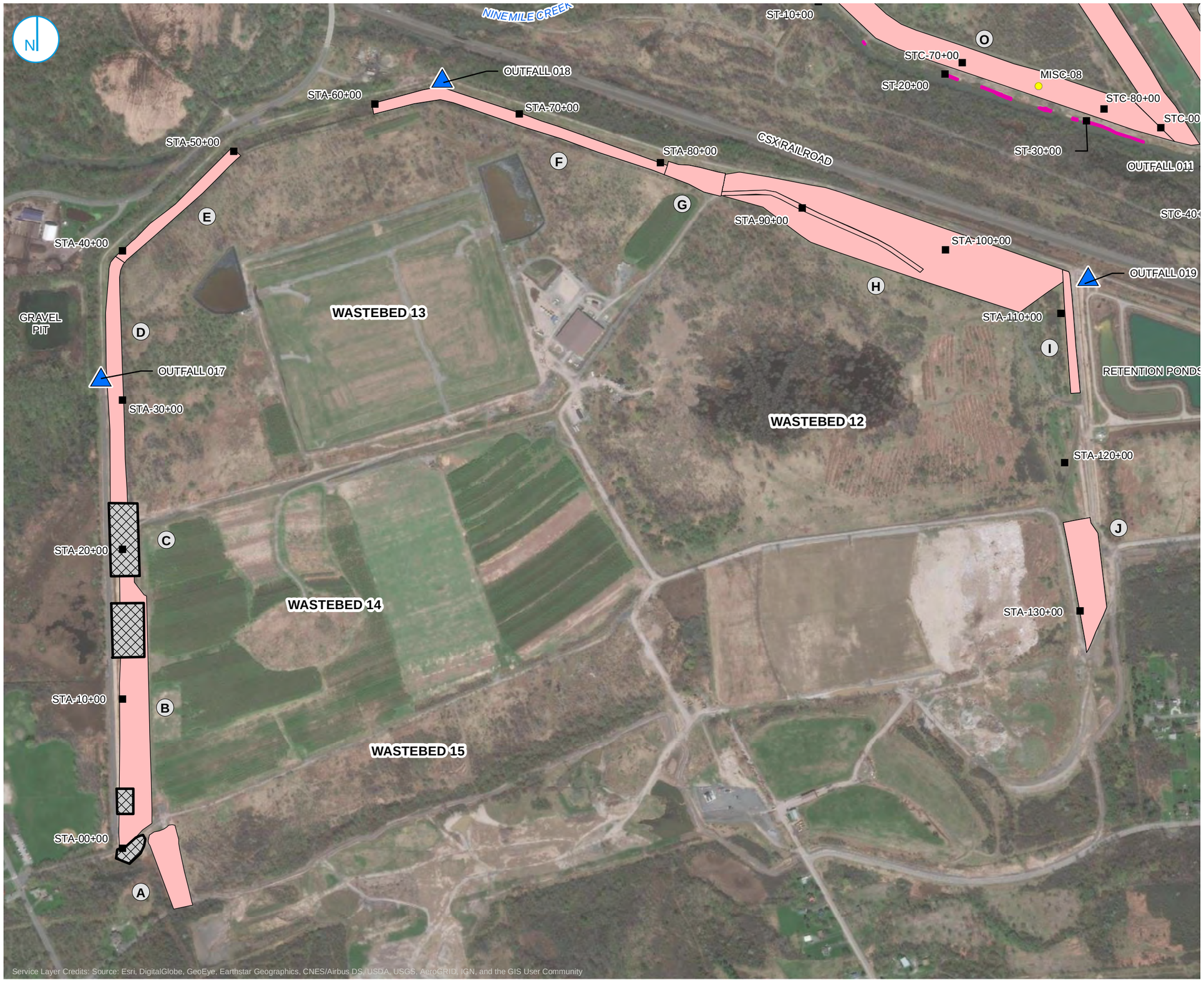
FIGURE 10

MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

I:\Honeywell.1163\72386.Sb-9-15-2019-De\Docs\DWG\MXD\PV\PV_Plan_Figure10-_Berm_Monitoring_Areas_911.mxd
PROJECT: 1163.194007S018 | DATED: 2/25/2021 | DESIGNER: MCCOMBSI



LEGEND

- OUTFALL
- BERM 1000ft STATION
- BERM MONITOR FEATURE
- SEEP APRON
- NMC BANK RESTORATION
- COMPLETED BERM STABILIZATION

0 750 1,500 Feet

VEGETATION MONITORING AREAS

HONEYWELL INTERNATIONAL INC.
WASTEBEDS 12-15
PERFORMANCE VERIFICATION PLAN
CAMILLUS AND GEDDES, NY

FIGURE 11

MARCH 2021

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

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PROJECT: 1163.1940075018 | DATED: 2/25/2021 | DESIGNER: MCCOMBSI

APPENDICES

APPENDIX A
AGREEMENTS AND ORDINANCE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 7
615 Erie Boulevard West, Syracuse, NY 13204-2400
P: (315) 426-7438 | F: (315) 426-7425
www.dec.ny.gov

March 3, 2020

Honeywell International Inc.
301 Plainfield Road, Suite 330
Syracuse, NY 13212

Re: DEC PERMIT NO: 7-3132-00002/00002, SPDES NY0002275
FACILITY NAME: Honeywell International Inc.
LOCATION: V- Solvay, Onondaga County

Dear Permittee:

Enclosed please find the above referenced Industrial SPDES – Surface Discharge permit. Please read this modified permit carefully and note the special conditions that are included in it. The permit is valid for only those activities expressly authorized therein. Work beyond the scope of the permit and the approved project plans may be considered a violation of the law and subject to appropriate enforcement action.

Be advised, the Uniform Procedures Regulations (6NYCRR Part 621) provide that an applicant may request a public hearing if a permit is denied or contains conditions which are unacceptable to them. Any such request must be made in writing within 30 calendar days of the date of this permit issuance and must be addressed to the Regional Permit Administrator at the letterhead address. A copy should also be sent to the Chief Administrative Law Judge at NYSDEC, 625 Broadway, 1st Floor, Albany, NY 12233-1550.

If this permit is associated with a project that will entail construction of new water pollution control facilities, or is a modification to existing facilities, the plans for the system design must be approved by this Department or if indicated in the permit by either the NYS Department of Health or delegated local Health Department.

If you have any questions on the extent of the work authorized, or your obligations under the permit, please feel free to contact me. This permit must be kept on file at the permitted facility and will expire on **January 31, 2022**.

Sincerely,

Trendon Choe
Environmental Analyst

Enc. Permit
cc: Steven Wood – DOW CO
Valarie Ellis - DOW Syracuse
Cheri Jamison, BWP Albany
Michelle Josilo, USEPA Region 2
Matthew Child, IJC
Nancy Myers, NYSEFC
Onondaga County Health Department
Village of Solvay Supervisor
File

SPDES Permit Statement of Basis – Surface Water Discharges

Permittee:	Honeywell International Inc.	Date:	February 11, 2020
Facility:	Honeywell International Inc.	Permit Writer:	Steve Wood
SPDES No:	NY0002275		

I. SUMMARY OF PROPOSED PERMIT CHANGES

A State Pollutant Discharge Elimination System (SPDES) permit Department-initiated modification is proposed. Following is a summary of the proposed changes in the draft permit as compared to the currently effective permit, the details of these changes are specified below and in the draft permit:

Footnote 5 has been corrected to clarify interim requirements and effective date for final effluent limits for pollutants covered by the Order on Consent. This clarification has been made to reflect the Department's position, as stated in the February 2016 Responsiveness Summary, on the requirements for pH, Chlorides, and Total Dissolved Solids at Outfalls 011, 017, 018, and 019. These parameters should have been required as "Monitor Only" until completion of construction work in the approved Closure Plan required by Honeywell Solvay Wastebeds 9-15 (Site Number 7-34-076) Order on Consent No. D-7-0001-02-03, executed by NYSDEC on December 6, 2010, including any modifications thereof.

Additionally, the permit effective and expiration dates have been updated to reflect the current administrative renewal term and the effective date of this modification.

II. BACKGROUND INFORMATION

As noted throughout this document, SPDES permits are based on both federal and state requirements including laws, regulations, policies, and guidance. These references can generally be found on the internet. Current locations include: Clean Water Act (CWA) *www.epa.gov/lawsregs/laws/index.html#env*; Environmental Conservation Law (ECL) *www.dec.ny.gov/regulations/40195.html*; federal regulations *www.gpo.gov/fdsys/browse/collectionCfr.action? collectionCode=CFR*; state environmental regulations *www.dec.ny.gov/regulations/regulations.html*; NYSDEC water policy *www.dec.ny.gov/regulations/2654.html*.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

State Pollutant Discharge Elimination System (SPDES)
DISCHARGE PERMIT

Industrial Code:	**9999**	SPDES Number:	**NY0002275**
Discharge Class (CL):	**01**	DEC Number:	**7-3132-00002/00002**
Toxic Class (TX):	**T**	Effective Date (EDP):	**02/01/2017**
Major Drainage Basin:	**07**	Expiration Date (ExDP):	**01/31/2022**
Sub Drainage Basin:	**02**	Modification Dates: (EDPM)	**04/01/2020**
Water Index Number:	**Ont. 66-12-12-P154**		
Compact Area:	**IJC**		

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act, as amended, (33 U.S.C. §1251 et.seq.)(hereinafter referred to as "the Act").

PERMITTEE NAME AND ADDRESS

Name: **Honeywell International Inc.** Attention: **John McAuliffe, Syracuse Program Manager**

Street: **301 Plainfield Road, Suite 330**

City: **Syracuse** State: **NY** Zip Code: **13212**

is authorized to discharge from the facility described below:

FACILITY NAME AND ADDRESS

Name: **Honeywell International Inc.**

Location (C,T,V): **Solvay (V)** County: **Onondaga**

Facility Address: **1700 Milton Avenue**

City: **Geddes** State: **NY** Zip Code: **13209-0006**

From Outfall No.: **015** at Latitude: **43 ° 03 ' 55 "** & Longitude: **76 ° 11 ' 30 "**

into receiving waters known as: **Onondaga Lake** Class: **C**

and:

Outfall 15A – Internal Outfall
Outfall 15B – Internal Outfall
Outfall 011 – Ninemile Creek, Class C
Outfall 017 – Groundwater, Class GA
Outfall 018 – Ninemile Creek, Class C
Outfall 019 – Geddes Brook, Class C

in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth in this permit; and 6NYCRR Parts 750-1 and 750-2.

DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS

Mailing Name: **Honeywell International Inc.**

Street: **301 Plainfield Road, Suite 330**

City: **Syracuse** State: **NY** Zip Code: **13212**

Responsible Official or Agent: **John McAuliffe, Syracuse Program Manager** Phone: **315-552-9700**

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the permittee shall not discharge after the expiration date unless this permit has been renewed, or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

DISTRIBUTION:

CO BWP - Permit Coordinator
RWE/RPA
USEPA Region 2
NYSEFC
IJC
NYSDOH District office

Permit Administrator: Kevin Balduzzi

Address: 615 Erie Blvd West
Syracuse, NY 13204

Signature: Kevin Balduzzi Date: **03/03/2020**

TABLE OF CONTENTS

PERMIT LIMITS, LEVELS AND MONITORING DEFINITIONS

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
	This cell describes the type of wastewater authorized for discharge. Examples include process or sanitary wastewater, storm water, non-contact cooling water.	This cell lists classified waters of the state to which the listed outfall discharges.	The date this page starts in effect. (e.g. EDP or EDPM)	The date this page is no longer in effect. (e.g. ExDP)

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQ.	SAMPLE TYPE
e.g. pH, TRC, Temperature, D.O.	The minimum level that must be maintained at all instants in time.	The maximum level that may not be exceeded at any instant in time.	SU, °F, mg/l, etc.	See below	See below

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL	COMPLIANCE LEVEL / ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE
	Limit types are defined below in Note 1. The effluent limit is developed based on the more stringent of technology-based limits, required under the Clean Water Act, or New York State water quality standards. The limit has been derived based on existing assumptions and rules. These assumptions include receiving water hardness, pH and temperature; rates of this and other discharges to the receiving stream; etc. If assumptions or rules change the limit may, after due process and modification of this permit, change.	For the purposes of compliance assessment, the permittee shall use the approved EPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentrations of parameters present in the sample unless otherwise specified. If a sample result is below the detection limit of the most sensitive method, compliance with the permit limit for that parameter was achieved. Monitoring results that are lower than this level must be reported, but shall not be used to determine compliance with the calculated limit. This ML can be neither lowered nor raised without a modification of this permit.	Action Levels are monitoring requirements, as defined below in Note 2, which trigger additional monitoring and permit review when exceeded.	This can include units of flow, pH, mass, temperature, or concentration. Examples include µg/l, lbs/d, etc.	Examples include Daily, 3/week, weekly, 2/month, monthly, quarterly, 2/yr and yearly. All monitoring periods (quarterly, semiannual, annual, etc) are based upon the calendar year unless otherwise specified in this Permit.	Examples include grab, 24 hour composite and 3 grab samples collected over a 6 hour period.

Notes:

1. EFFLUENT LIMIT TYPES:
   a. DAILY DISCHARGE: The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day.
   b. DAILY MAX: The highest allowable daily discharge. DAILY MIN: The lowest allowable daily discharge.
   c. MONTHLY AVG: The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
   d. 7 DAY ARITHMETIC MEAN (7 day average): The highest allowable average of daily discharges over a calendar week.
   e. 30 DAY GEOMETRIC MEAN: The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
   f. 7 DAY GEOMETRIC MEAN: The highest allowable geometric mean of daily discharges over a calendar week.
   g. RANGE: The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.

2. ACTION LEVELS: Routine Action Level monitoring results, if not provided for on the Discharge Monitoring Report (DMR) form, shall be appended to the DMR for the period during which the sampling was conducted. If the additional monitoring requirement is triggered as noted below, the permittee shall undertake a short-term, high-intensity monitoring program for the parameter(s). Samples identical to those required for routine monitoring purposes shall be taken on each of at least three consecutive operating and discharging days and analyzed. Results shall be expressed in terms of both concentration and mass, and shall be submitted no later than the end of the third month following the month when the additional monitoring requirement was triggered. Results may be appended to the DMR or transmitted under separate cover to the same address. If levels higher than the Action Levels are confirmed, the permit may be reopened by the Department for consideration of revised Action Levels or effluent limits. The permittee is not authorized to discharge any of the listed parameters at levels which may cause or contribute to a violation of water quality standards.

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
015	Stormwater Runoff from the Village of Solvay; Cooling Water, Boiler Blowdown, and Groundwater Infiltration; Discharges from the Semet-Willis Remedial Treatment System (Outfall 15A) and Sediment Consolidation Area (Outfall 15B)	Onondaga Lake	2/1/2017	01/31/2022

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	6.0	9.0	SU	Monthly	Grab	
Temperature	-----	90	°F	Monthly	Grab	

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL / ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	-----	Monitor			MGD	Monthly	Instantaneous	
Oil & Grease	-----	Monitor			mg/L	Quarterly	Grab	
Ammonia (as N)	-----	7.5			mg/L	Monthly	Grab	
Chlorides, Net	-----	3100			lb/d	Monthly	Grab	1
Chlorides, Charles Avenue	-----	Monitor			lb/d	Monthly	Grab	1
Chlorides, Outfall 15A	-----	Monitor			lb/d	Monthly	Grab	1
Coliform, Fecal	-----	Monitor			MPN/100mL	Quarterly	Grab	
Coliform, Total	-----	Monitor			MPN/100mL	Quarterly	Grab	
Total Dissolved Solids	-----	Monitor			mg/L	Quarterly	Grab	
Total Suspended Solids	-----	45			mg/L	Quarterly	Grab	
Phosphorus, Total	-----	0.50			mg/L	Monthly	Grab	2
Phosphorus, Soluble Reactive	-----	Monitor			mg/L	Monthly	Grab	2
Aluminum, Total	-----	Monitor			µg/L	Quarterly	Grab	
Arsenic, Total	-----	Monitor			µg/L	Quarterly	Grab	
Chromium, Total	-----	Monitor			µg/L	Quarterly	Grab	
Copper, Total	-----	Monitor			µg/L	Quarterly	Grab	
Iron, Total	-----	Monitor			µg/L	Quarterly	Grab	
Lead, Total	-----	Monitor			µg/L	Quarterly	Grab	

FOOTNOTES: See Page 11&12 of this Permit.

PERMIT LIMITS, LEVELS AND MONITORING (continued)

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
015	Stormwater Runoff from the Village of Solvay; Cooling Water, Boiler Blowdown, and Groundwater Infiltration; Discharges from the Semet-Willis Remedial Treatment System (Outfall 15A) and Sediment Consolidation Area (Outfall 15B)	Onondaga Lake	2/1/2017	01/31/2022

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL / ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Mercury, Total – **Interim**	-----	200			ng/L	Monthly	Grab	3
Mercury, Total – **Final**	-----	50			ng/L	Monthly	Grab	3
Mercury, Total Net - Interim	-----	0.0008			lb/day	Monthly	Grab	7
Mercury, Total Net – Final	-----	Monitor			lb/day	Monthly	Grab	7
Nickel, Total	-----	Monitor			µg/L	Quarterly	Grab	
Zinc, Total	-----	Monitor			µg/L	Quarterly	Grab	
Naphthalene	-----	-----		50	µg/L	Quarterly	Grab	
Chlorobenzene	-----	55			µg/L	Monthly	Grab	
Xylenes, Total	-----	-----		50	µg/L	Quarterly	Grab	
1,2-Dichlorobenzene	-----	Monitor			µg/L	Monthly	Grab	
1,3-Dichlorobenzene	-----	Monitor			µg/L	Monthly	Grab	
1,4-Dichlorobenzene	-----	Monitor			µg/L	Monthly	Grab	
Dichlorobenzenes, Total	-----	50			µg/L	Monthly	Grab	
1,2,4-Trichlorobenzene	-----	-----		50	µg/L	Quarterly	Grab	
Trichlorobenzenes, Total	-----	Monitor			µg/L	Quarterly	Grab	
Chlorinated Phenols, Total	10	-----			µg/L	Quarterly	Grab	

FOOTNOTES: See Page 11&12 of this Permit.

PERMIT LIMITS, LEVELS AND MONITORING (continued)

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
015	Stormwater Runoff from the Village of Solvay; Cooling Water, Boiler Blowdown, and Groundwater Infiltration; Discharges from the Semet-Willis Remedial Treatment System (Outfall 15A) and Sediment Consolidation Area (Outfall 15B)	Onondaga Lake	2/1/2017	01/31/2022

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Whole Effluent Toxicity (WET) Testing								
WET - Acute Invertebrate				3.3	TUa	Monthly	See footnote	4
WET - Acute Vertebrate				3.3	TUa	Monthly	See footnote	4
WET - Chronic Invertebrate				11	TUc	Quarterly	See footnote	4
WET - Chronic Vertebrate				11	TUc	Quarterly	See footnote	4

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
15A	Semet Pond Groundwater, Willis Avenue Groundwater, Wastebed B/Harbor Brook Groundwater, Wastebeds 1 through 8 Groundwater, and I-690 Stormwater	Onondaga Lake	2/1/2017	01/31/2022

The discharge monitoring requirements for this outfall are covered by Order on Consent #D7-0004-01-09, executed by NYSDEC on April 16, 2002.

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
15B	Wastewater from Dredged Sediment Dewatering Operations (i.e., Sediment Consolidation Area)	Onondaga Lake	2/1/2017	01/31/2022

The discharge monitoring requirements for this outfall are covered by Order on Consent #89-CV-815, executed by NYSDEC on January 4, 2007.

FOOTNOTES: See Page 11&12 of this Permit.

PERMIT LIMITS, LEVELS AND MONITORING (continued)

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
011	Stormwater Runoff from 24-inch diversion pipe (and associated eastern and western diversion pipes) between Wastebeds 9 and 10 and Wastebed 11	Ninemile Creek	04/01/2020	01/31/2022

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	6.0	9.0	SU	Monthly	Grab	5

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	-----	Monitor			MGD	Monthly	Instantaneous	
Chlorides, Total		Monitor			mg/L	Monthly	Grab	5
Total Ammonia (as N)	-----	Monitor			mg/L	Monthly	Grab	
Phosphorus, Total	-----	0.50			mg/L	Monthly	Grab	2
Phosphorus, Soluble Reactive	-----	Monitor			mg/L	Monthly	Grab	2
Total Dissolved Solids	-----	500			mg/L	Monthly	Grab	5
Total Suspended Solids	-----	50			mg/L	Monthly	Grab	
Dichlorobenzenes, Total	-----	Monitor			µg/L	Quarterly	Grab	
Mercury, Total	-----	50			ng/L	Monthly	Grab	

FOOTNOTES: See Pages 11&12 of this Permit.

PERMIT LIMITS, LEVELS AND MONITORING (continued)

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
017	Stormwater Runoff from Wastebeds 12 through 15 collected in lined swales above the leachate collection system	Groundwater	04/01/2020	01/31/2022

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	6.5	8.5	SU	Monthly	Grab	5

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	-----	Monitor			MGD	Monthly	Instantaneous	
Chlorides, Total	-----	500			mg/L	Monthly	Grab	5
Phosphorus, Total	-----	Monitor			mg/L	Monthly	Grab	2
Total Dissolved Solids	-----	Monitor			mg/L	Monthly	Grab	5
Total Suspended Solids	-----	50			mg/L	Monthly	Grab	
Total Ammonia (as N)	-----	Monitor			mg/L	Monthly	Grab	
1,2-Dichlorobenzene	-----	3.0			µg/L	Monthly	Grab	
1,3-Dichlorobenzene	-----	3.0			µg/L	Monthly	Grab	
1,4-Dichlorobenzene	-----	3.0			µg/L	Monthly	Grab	
Dichlorobenzenes, Total	-----	Monitor			µg/L	Monthly	Grab	
Benzene	-----	1.0			µg/L	Monthly	Grab	
Chlorobenzene	-----	5.0			µg/L	Monthly	Grab	
Mercury, Total	-----	200			ng/L	Monthly	Grab	

FOOTNOTES: See Page 11&12 of this Permit.

PERMIT LIMITS, LEVELS AND MONITORING (continued)

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
018	Stormwater Runoff from Wastebeds 12 through 15 collected in lined swales above the leachate collection system; Clean stormwater from the Sediment Consolidation Area, WTP Roof Drains, & SCA Paved Areas	Ninemile Creek	04/01/2020	01/31/2022

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	6.0	9.0	SU	Monthly	Grab	5

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	-----	Monitor			MGD	Monthly	Instantaneous	6
Chlorides, Total	-----	Monitor			mg/L	Monthly	Grab	5
Phosphorus, Total	-----	0.50			mg/L	Monthly	Grab	2
Phosphorus, Soluble Reactive	-----	Monitor			mg/L	Monthly	Grab	2
Total Dissolved Solids	-----	500			mg/L	Monthly	Grab	5
Total Suspended Solids	-----	50			mg/L	Monthly	Grab	
Total Ammonia (as N)	-----	Monitor			mg/L	Monthly	Grab	
1,2-Dichlorobenzene	-----	Monitor			µg/L	Monthly	Grab	
1,3-Dichlorobenzene	-----	Monitor			µg/L	Monthly	Grab	
1,4-Dichlorobenzene	-----	Monitor			µg/L	Monthly	Grab	
Dichlorobenzenes, Total	-----	7.5			µg/L	Monthly	Grab	
Mercury, Total	-----	50			ng/L	Monthly	Grab	

FOOTNOTES: See Page 11&12 of this Permit.

PERMIT LIMITS, LEVELS AND MONITORING (continued)

OUTFALL	WASTEWATER TYPE	RECEIVING WATER	EFFECTIVE	EXPIRING
019	Stormwater Runoff from Wastebeds 12 through 15 collected in lined swales above the leachate collection system	Geddes Brook	04/01/2020	01/31/2022

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTES (FN)
pH	6.0	9.0	SU	Monthly	Grab	5

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		COMPLIANCE LEVEL/ ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
	Monthly Avg	Daily Max						
Flow	-----	Monitor			MGD	Monthly	Instantaneous	
Chlorides, Total	-----	Monitor			mg/L	Monthly	Grab	5
Phosphorus, Total	-----	0.50			mg/L	Monthly	Grab	2
Phosphorus, Soluble Reactive	-----	Monitor			mg/L	Monthly	Grab	2
Total Dissolved Solids	-----	500			mg/L	Monthly	Grab	5
Total Suspended Solids	-----	50			mg/L	Monthly	Grab	
Total Ammonia (as N)	-----	Monitor			mg/L	Monthly	Grab	
1,4-Dichlorobenzene	-----	7.5			µg/L	Quarterly	Grab	
Mercury, Total	-----	50			ng/L	Monthly	Grab	

FOOTNOTES: See Page 11&12 of this Permit.

FOOTNOTES:

1. **Net Chloride Limits for Outfall 015**
The permittee shall report the *NET* Chloride loading discharged from Outfall 015, in pounds per day, on their monthly DMR. The chloride load from internal monitoring location 15A, as detailed in the Department's authorization letter dated January 25, 2006, shall be determined and subtracted from the chloride load determined at Outfall 015 to obtain the net chloride load.

   During the months of December through May, the chloride load at monitoring location DI-1, as detailed on Drawing No. 9505-1P of the permittee's April 25, 2003 modification request to this Department, as well as the chloride load from internal monitoring location 15A, as detailed in the Department's authorization letter dated January 25, 2006, shall be determined and subtracted from the chloride load determined at Outfall 015 to obtain the net chloride load. The chloride load at monitoring point DI-1 shall be determined by using the measured chloride concentration and the estimated flow obtained by measuring the depth of the water in the sewer and applying the Manning equation for open channel flow.

2. **Phosphorus Monitoring**
The permittee shall use analytical methods currently approved in 40 CFR Part 136. When more than one method is listed the method selected must be sufficiently sensitive that practical quantification limits and applicable ranges will accurately describe the characteristics and concentrations of monitored constituents at or below water quality criteria and permit limits.

3. **Total Mercury Effluent Limitations**
The interim effluent limitation of 200 ng/L shall be in effect from **10/01/2016** to **10/01/2019**. The final effluent limitation of 50 ng/L shall take effect on **10/01/2019**.

4. **Whole Effluent Toxicity (WET) Testing**
Testing Requirements - WET testing shall consist of **Chronic only**. WET testing shall be performed in accordance with 40CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the Department. The test species shall be *Ceriodaphnia dubia* (water flea - invertebrate) and *Pimephales promelas* (fathead minnow - vertebrate). Receiving water collected upstream from the discharge should be used for dilution. All tests conducted should be static-renewal (two 24-hr. composite samples with one renewal for Acute tests and three 24-hr. composite samples with two renewals for Chronic tests). The appropriate dilution series bracketing the IWC and including one exposure group of 100% effluent should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test is required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing. The ratio of critical receiving water flow to discharge flow (i.e., dilution ratio) is __10__:1 for acute, and __10__:1 for chronic. Discharges which are disinfected using chlorine should be dechlorinated prior to WET testing or samples shall be taken immediately prior to the chlorination system.

   Monitoring Period - WET testing shall be performed at the specified sample frequency during calendar years ending in **2** and **7**.

   Reporting - Toxicity Units shall be calculated and reported on the DMR as follows: TUa = (100)/(48 hr LC50) or (100)/(48 hr EC50) (note that Acute data is generated by both Acute and Chronic testing) and TUc = (100)/(NOEC) when Chronic testing has been performed or TUc = (TUa) x (10) when only Acute testing has been performed and is used to predict Chronic test results, where the 48 hr LC50 or 48 hr EC50 and NOEC are expressed in % effluent. This must be done for both species and using the Most Sensitive Endpoint (MSE) or the lowest NOEC and corresponding highest TUc. Report a TUa of 0.3 if there is no statistically significant toxicity in 100% effluent as compared to control.

   The complete test report including all corresponding results, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation, shall be submitted within 60 days following the end of each test period to the Toxicity Testing Unit, Bureau of Watershed Assessment and Management, 625 Broadway, Fourth Floor, Albany, NY 12233-3502. A summary page of the test results for the invertebrate and vertebrate species indicating TUa, 48 hr LC50 or 48 hr EC50 for Acute tests and/or TUc, NOEC, IC25, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.

   WET Testing Action Level Exceedances - If an action level is exceeded then the Department may require the permittee to conduct additional WET testing including Acute and/or Chronic tests. Additionally, the permittee may be required to perform a Toxicity Reduction Evaluation (TRE) in accordance with Department guidance. If such additional testing or performance of a TRE is necessary, the permittee shall be notified in writing by the Regional Water Engineer. The written notification shall include the reason(s) why such testing or a TRE is required.

5. **Order on Consent Effluent Limitations**
This is a final effluent limit, effective upon completion of construction work in the approved Closure Plan required by Honeywell Solvay Wastebeds 9-15 (Site Number 7-34-076) Order on Consent No. D-7-0001-02-03, executed by NYSDEC on December 6, 2010, including any modifications thereof. The interim requirement shall be "Monitor Only."

6. **Flow, Outfall 018**
The permittee shall control the quantity of this discharge so that the discharge during the construction and implementation of the SCA liner area does not exceed the existing discharge flow rates of 4.8 cubic feet per second (for a 1-year 24 hour storm), 15.3 cubic feet per second (for a 10 year 24-hour storm), or 25.9 cubic feet per second (for a 100 year 24-hour storm). The permittee shall discharge in accordance with the terms and conditions of the Stormwater Pollution Prevention Plan (SWPPP) as accepted by this Department via letter dated August 2, 2010.

7. **Mercury Sampling, Outfall 015**
The discharge from this outfall is a NET limit, and shall be calculated by subtracting the mass loading from Monitoring Point 15A (treated effluent from the Willis Ave./Semet Treatment System) from the mass loading at the Outfall 015 sampling point. The interim effluent limitation of 0.0008 lb/day shall be in effect until the final effluent of limitation of 50 ng/L is effective (10/01/2019). The final effluent limitation of "Monitor Only (lb/day)" shall take effect on 10/01/2019.

PERMIT SPECIAL CONDITIONS

1. **Report Mass And Concentration**
The permittee must report both the concentration (in mg/L, µg/L, or ng/l) and mass loading (in lbs/d) on the Discharge Monitoring Reports for all parameters except flow, pH, temperature, settleable solids, and fecal and total coliform. Conventional and Non-Conventional parameters shall be reported in mg/l and lbs/day. Pesticides and PCBs shall be reported in ng/l and grams/day. All other parameters shall be reported in µg/l and lbs/day.

2. **Annual Effluent Data Summary**
By **March 28th**, the permittee shall submit an annual effluent data summary to the Regional Water Engineer at the address listed in the RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS PAGE and to the Bureau of Water Permits, 4th Floor, 625 Broadway, Albany NY 12233-3505. The summary shall be submitted on a CD-ROM in a spreadsheet format acceptable to the Department showing all analytical results and flow monitoring results for samples collected the previous calendar year.

3. **Outfall 015 Exceedances**
Should any effluent parameter listed for Outfall 015 exceed its effluent limitation for two consecutive months, a contamination trackdown will be required. The trackdown must indicate the location and probable source of the contamination and remediate the source area immediately, if possible. If the source of contamination will require ongoing remediation, the permittee must submit approvable plans to the Region 7 Regional Water Engineer detailing the proposed method of treatment and the ability of this treatment to achieve the effluent limitations of the permit.

Note: The permittee may run a duplicate of this compliance sample to verify the result. Should the duplicate result not verify that the parameter(s) in question exceeds the effluent limitation; the permittee may continue routine monitoring until an additional sample results for that parameter show value(s) that exceed the effluent limitation for that parameter.

4. **Additional Outfalls**
If the permittee determines that there are additional outfalls discharging from their property which are not identified by this permit, the Region 7 Office must be notified.

5. **Additional Parameters**
If any additional parameters are found to be discharging to the permittee's storm sewer drainage line by other tributary industries, those parameters may be added to this permit.

6. **Stormwater Sampling**
All stormwater sampling shall be in accordance with the New York State Department of Environmental Conservation SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity Permit Number GP-0-12-001, which states:

A minimum of one grab sample must be taken from the *stormwater discharge associated with industrial activity* resulting from a storm event with at least 0.1 inch of precipitation (defined as a "measurable" event), providing the interval from the preceding measurable storm is at least 72 hours. The 72-hour storm interval is waived if the preceding measurable storm did not result in a stormwater *discharge* (e.g., a storm event in excess of 0.1 inches may not result in a stormwater *discharge* at some facilities), or if the *owner or operator* is able to document that less than a 72 hour interval is representative for local storm events during the sampling period.

The grab sample must be taken during the first 30 minutes (or as soon thereafter as practical, but not to exceed one [1] hour) of the *discharge*. If the sampled *discharge* commingles with non-stormwater water, the *owner or operator* must attempt to sample the stormwater *discharge* before it mixes. Additional sampling guidelines and exceptions have been detailed and authorized by the Department, within the storm water sampling plan, dated July 15, 2016.

7. **Outfall 015 Sampling**
Outfall 015 sampling results shall be reported on the DMR in accordance to the specified sampling frequencies. Outfall 015 receives both industrial wastewater and storm water associated with industrial activity, thus samples shall be collected in accordance with pages 4-6 of this permit, regardless of stormwater flows. Special Condition 6 for Stormwater sampling also applies to Outfall 015. In the event that Outfall 015 is sampled for stormwater in a given reporting period (i.e. Special Condition 6), the results of the stormwater sampling may be reported for the specified parameters on pages 4-6 of this permit.

SPECIAL CONDITIONS – INDUSTRY BEST MANAGEMENT PRACTICES

1. **General** - The permittee shall develop, maintain, and implement a Best Management Practices (BMP) plan to prevent releases of significant amounts of pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste disposal; and stormwater discharges including, but not limited to, drainage from raw material storage. The BMP plan shall be documented in narrative form and shall include the 13 minimum BMPs and any necessary plot plans, drawings, or maps. Other documents already prepared for the facility, such as a Safety Manual or a Spill Prevention, Control and Countermeasure (SPCC) Plan, may be used as part of the plan and may be incorporated by reference. A copy of the current BMP plan shall be submitted to the Department as required in Item (2.) below, and a copy must be maintained at the facility and shall be available to authorized Department representatives upon request.

2. **Compliance Deadlines** - The initial completed BMP plan shall be submitted **BY 04/01/2017** to the Regional Water Engineer. The BMP plan shall be implemented within six (6) months of submission unless a different time frame is approved by the Department. The BMP plan shall be reviewed annually and shall be modified whenever (a) changes at the facility materially increase the potential for releases of pollutants; (b) actual releases indicate the plan is inadequate, or (c) a letter from the Department identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All BMP plan revisions (with the exception of SWPPPs - see Item (5.) below) must be submitted to the Regional Water Engineer within 30 days. Note that the permittee is not required to obtain Department approval of the BMP plan (or of any SWPPPs) unless notified otherwise. Subsequent modifications to, or renewal of, this permit does not reset or revise these deadlines unless a new deadline is set explicitly by such permit modification or renewal.

3. **Facility Review** - The permittee shall review all facility components or systems (including, but not limited to, material storage areas; in-plant transfer, process, and material handling areas; loading and unloading operations; stormwater, erosion, and sediment control measures; process emergency control systems; and sludge and waste disposal areas) where materials or pollutants are used, manufactured, stored, or handled to evaluate the potential for the release of pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, cross-contamination of stormwater by process materials, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. The relative toxicity of the pollutant shall be considered in determining the significance of potential releases. The review shall address all substances present at the facility that are identified in Tables 6 through 10 of SPDES application Form NY-2C (available at http://www.dec.ny.gov/docs/permits_ej_operations_pdf/form2c.pdf) or that are required to be monitored for by the SPDES permit.

4. **13 Minimum BMPs:** Whenever the potential for a release of pollutants to waters of the State is determined to be present, the permittee shall identify BMPs that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider good industry practices and, where appropriate, structural measures such as secondary containment and erosion/sediment control devices and practices. USEPA guidance for development of stormwater elements of the BMP is available in *Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators*, February 2009, EPA 833-B-09-002. At a minimum, the plan shall include the following BMPs:

   1. BMP Pollution Prevention Team
   2. Reporting of BMP Incidents
   3. Risk Identification and Assessment
   4. Employee Training
   5. Inspections and Records
   6. Security
   7. Preventive Maintenance
   8. Good Housekeeping
   9. Materials/Waste Handling, Storage, and Compatibility
   10. Spill Prevention and Response
   11. Erosion and Sediment Control
   12. Management of Runoff
   13. Street Sweeping

   Note that for some facilities, especially those with few employees, some of the above BMPs may not be applicable. It is acceptable in these cases to indicate "Not Applicable" for the portion(s) of the BMP Plan that do not apply to your facility, along with an explanation.

SPECIAL CONDITIONS – INDUSTRY BEST MANAGEMENT PRACTICES (continued)

5. **Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater From Construction Activity to Surface Waters** - As part of BMP #11, a SWPPP shall be developed prior to the initiation of any site disturbance of one (1) acre or more of uncontaminated area. Uncontaminated area means soils or groundwater which are free of contamination by any toxic or non-conventional pollutants identified in Tables 6 through 10 of SPDES application Form NY-2C. Disturbance of any size contaminated area(s) and the resulting discharge of contaminated stormwater is not authorized by this permit unless the discharge is under State or Federal oversight as part of a remedial program or after review by the Regional Water Engineer; nor is such discharge authorized by any SPDES general permit for stormwater discharges. SWPPPs are not required for discharges of stormwater from construction activity to groundwaters. The SWPPP shall conform to the *New York Standards and Specifications for Erosion and Sediment Control* and *New York State Stormwater Management Design Manual,* unless a variance has been obtained from the Regional Water Engineer, and to any local requirements. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity **at least 30 days prior to soil disturbance**. The SWPPP shall also be submitted to the Regional Water Engineer if contamination, as defined above, is involved; and the permittee must obtain a determination of any SPDES permit modifications and/or additional treatment which may be required prior to soil disturbance. Otherwise, the SWPPP shall be submitted to the Department only upon request. When a SWPPP is required, a properly completed *Notice of Intent* (NOI) form shall be submitted (available at www.dec.ny.gov/chemical/43133.html) prior to soil disturbance. Note that submission of a NOI is required for informational purposes; the permittee is not eligible for and will not obtain coverage under any SPDES general permit for stormwater discharges, nor are any additional permit fees incurred. SWPPPs must be developed and submitted for subsequent site disturbances in accordance with the above requirements. The permittee is responsible for ensuring that the provisions of each SWPPP are properly implemented.

6. **Required Sampling for "Hot Spot" Identification** - Development of the BMP plan shall include sampling of waste stream segments for the purpose of pollutant "hot spot" identification. The economic achievability of effluent limits will not be considered until plant site "hot spot" sources have been identified, contained, removed, or minimized through the imposition of site-specific BMPs or application of internal facility treatment technology. For the purposes of this permit condition, a "hot spot" is a segment of an industrial facility (including but not limited to soil, equipment, material storage areas, sewer lines, etc.) which contributes elevated levels of problem pollutants to the wastewater and/or stormwater collection system of that facility. For the purposes of this definition, problem pollutants are substances for which treatment to meet a water quality or technology requirement may, considering the results of waste stream segment sampling, be deemed unreasonable. For the purposes of this definition, an elevated level is a concentration or mass loading of the pollutant in question which is sufficiently higher than the concentration of that same pollutant at the compliance monitoring location so as to allow for an economically justifiable removal and/or isolation of the segment and/or B.A.T. treatment of wastewaters emanating from the segment.

7. **Facilities with Petroleum and/or Chemical Bulk Storage (PBS and CBS) Areas** - Compliance must be maintained with all applicable regulations including those involving releases, registration, handling and storage (6NYCRR Parts 595 through 599 and Parts 612 through 614). Stormwater discharges from handling and storage areas should be eliminated where practical.

   A. Spill Cleanup - All spilled or leaked substances must be removed from secondary containment systems as soon as practical, and for CBS storage areas, within 24 hours; unless written authorization is received from the Department. The containment system must be thoroughly cleaned to remove any residual contamination which could cause contamination of stormwater and the resulting discharge of pollutants to waters of the State. Following spill cleanup, the affected area must be completely flushed with clean water three (3) times, and the water must be removed after each flushing for proper disposal in an on-site or off-site wastewater treatment plant designed to treat such water and permitted to discharge such wastewater. Alternately, the permittee may test the first batch of stormwater following the spill cleanup to determine discharge acceptability. If the water contains no pollutants, it may be discharged. Otherwise it must be disposed of as noted above. See *Discharge Monitoring* below for the list of parameters to be sampled for.

   B. Discharge Operation - Stormwater must be removed before it compromises the required containment system capacity. Each discharge may only proceed with the prior approval of the permittee staff person responsible for ensuring SPDES permit compliance. Bulk storage secondary containment drainage systems must be locked in a closed position except when the operator is in the process of draining accumulated stormwater. Transfer area secondary containment drainage systems must be locked in a closed position during all transfers and must not be reopened unless the transfer area is clean of contaminants. Stormwater discharges from secondary containment systems should be avoided during periods of precipitation. A logbook shall be maintained onsite noting the date, time, and personnel supervising each discharge.

SPECIAL CONDITIONS – INDUSTRY BEST MANAGEMENT PRACTICES (continued)

C. Discharge Screening - Prior to each discharge from a secondary containment system, the stormwater must be screened for contamination*. All stormwater must be inspected for visible evidence of contamination. Additional screening methods shall be developed by the permittee as part of the overall BMP Plan, e.g. the use of volatile gas meters to detect the presence of gross levels of gasoline or volatile organic compounds. If the screening indicates contamination, the permittee must collect and analyze a representative sample** of the stormwater. If the water contains no pollutants, it may be discharged. Otherwise it must either be disposed of in an onsite or offsite wastewater treatment plant designed to treat and permitted to discharge such wastewater, or the Regional Water Engineer can be contacted to determine if it may be discharged without treatment.

D. Discharge Monitoring - Unless the discharge from any bulk storage containment system outlet is identified in the SPDES permit as an outfall with explicit effluent and monitoring requirements, the permittee shall monitor the outlet as follows:

(i) *Bulk Storage Secondary Containment Systems:*

(a) The volume of each discharge from each outlet must be monitored. Discharge volume may be calculated by measuring the depth of water within the containment area times the wetted area and converted to gallons or by other suitable methods. A representative sample shall be collected of the first discharge* following any cleaned up spill or leak. The sample must be analyzed for pH, the substance(s) stored within the containment area and any other pollutants the permittee knows or has reason to believe are present**.

(b) Every fourth discharge* from each outlet must be sampled for pH, the substance(s) stored within the containment area and any other pollutants the permittee knows or has reason to believe are present**.

(ii) *Transfer Area Secondary Containment Systems:*

The first discharge* following any spill or leak must be sampled for flow, pH, the substance(s) transferred in that area and any other pollutants the permittee knows or has reason to believe are present**.

E. Discharge Reporting - Any results of monitoring required above, excluding screening data, must be submitted to the Department by appending them to the corresponding DMR. Failure to perform the required discharge monitoring and reporting shall constitute a violation of the terms of the SPDES permit.

F. Prohibited Discharges - **In all cases, any discharge which contains a visible sheen, foam, or odor, or may cause or contribute to a violation of water quality is prohibited.** The following discharges are prohibited unless specifically authorized elsewhere in this SPDES permit: spills or leaks, tank bottoms, maintenance wastewaters, wash waters where detergents or other chemicals have been used, tank hydrotest and ballast waters, contained firefighting runoff, fire training water contaminated by contact with pollutants or containing foam or fire retardant additives, and unnecessary discharges of water or wastewater into secondary containment systems.

* Discharge includes stormwater discharges and snow and ice removal. If applicable, a representative sample of snow and/or ice should be collected and allowed to melt prior to assessment.

** If the stored substance is gasoline or aviation fuel, then sample for oil & grease, benzene, ethylbenzene, naphthalene, toluene, and total xylenes (EPA method 602). If the stored substance is kerosene, diesel fuel, fuel oil, or lubricating oil; then sample for oil & grease and polynuclear aromatic hydrocarbons (EPA method 610). If the substance(s) are listed in Tables 6-8 of SPDES application form NY-2C, then sampling is required. If the substance(s) are listed in NY-2C Tables 9-10, then sampling for appropriate indicator parameters may be required (e.g., BOD_5 or toxicity testing). Contact the facility inspector for further guidance. In all cases flow and pH monitoring is required.

MERCURY MINIMIZATION PROGRAM – Industrial Facilities

1. **General** - The permittee shall develop, implement, and maintain a Mercury Minimization Program (MMP) for those outfalls which have mercury effluent limits. The MMP is required because the permit limit exceeds the statewide water quality based effluent limit (WQBEL) of 0.70 nanograms/liter (ng/L) for Total Mercury. The goal of the MMP is to reduce mercury effluent levels in pursuit of the WQBEL. Note – the mercury-related requirements in this permit conform to the mercury Multiple Discharge Variance specified in NYSDEC policy *DOW 1.3.10.*

2. **MMP Elements** - The MMP shall be documented in narrative form and shall include any necessary drawings or maps. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP shall include an on-going program consisting of: periodic monitoring; an acceptable control strategy which will become enforceable under this permit; and, submission of periodic status reports.

A. Monitoring - The permittee shall conduct periodic monitoring designed to quantify and, over time, track the reduction of mercury. Wastewater treatment plant influents and effluents, and other outfalls shall be monitored in accordance with the minimum frequency specified on the mercury permit limits page. Additionally, key locations in the wastewater and/or stormwater collection systems, and known or potential mercury sources, including raw materials, shall be monitored at the above frequency during the first year of the MMP. Monitoring of key locations and known/potential sources may be reduced during subsequent years if downstream outfalls have maintained mercury levels less than 50 ng/l during the previous year. Additional monitoring shall be completed as may be required elsewhere in this permit or upon Department request. Monitoring shall be coordinated so that the results can be effectively compared between internal locations and final outfalls.

All permit-related wastewater and stormwater mercury compliance point (outfall) monitoring shall be performed using EPA Method 1631. Use of EPA Method 1669 during sample collection is recommended. Unless otherwise specified, all samples should be grabs. Monitoring at influent and other locations tributary to compliance points may be performed using either EPA Methods 1631 or 245.7. Monitoring of raw materials, equipment, treatment residuals, and other non-wastewater/non-stormwater substances may be performed using other methods as appropriate.

B. Control Strategy - An acceptable control strategy is required for reducing mercury discharges via cost-effective measures, which may include, but is not limited to: source identification; replacement of mercury-containing equipment, materials, and products with mercury-free alternatives where environmentally preferable; more stringent control of tributary waste streams; remediation; and/or installation of new or improved treatment facilities. Required monitoring shall also be used, and supplemented as appropriate, to determine the most effective way to operate the wastewater treatment system(s) to ensure effective removal of mercury while maintaining compliance with other permit requirements.

C. Bulk Chemical Evaluation - For chemicals used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee shall obtain a manufacturer's certificate of analysis and/or a notarized affidavit which describes the substances' mercury concentration and the detection limit achieved. The permittee shall only use bulk chemicals which contain <10 ppb mercury, if available. This requirement is only applicable to chemicals that would impact wastewater effluent.

D. Semiannual Status Report – A semiannual status report shall be submitted to the Regional Water Engineer and to the Bureau of Water Permits, 625 Broadway, Albany, N.Y. 12233-3505, summarizing: (a) all MMP monitoring results for the previous six months; (b) a list of known and potential mercury sources; (c) all action undertaken pursuant to the strategy during the previous six months; (d) actions planned for the upcoming six months; and, (e) progress toward the goal. The first semiannual status report is due six months after the permit is modified to include the MMP requirement and follow-up status reports are due every six months thereafter. A file shall be maintained containing all MMP documentation which shall be available for review by NYSDEC representatives. Copies shall be provided upon request.

3. **MMP Modification** - The MMP shall be modified whenever: (a) changes at the facility or within the collection system increase the potential for mercury discharges; (b) actual discharges exceed 50 ng/L; (c) a letter from the Department identifies inadequacies in the MMP; or (d) pursuant to a permit modification.

DISCHARGE NOTIFICATION REQUIREMENTS

(a) Except as provided in Items (c) and (g) of these Discharge Notification Act requirements, the permittee shall install and maintain identification signs at all outfalls to surface waters listed in this permit. Such signs shall be installed before initiation of any discharge.

(b) Subsequent modifications to or renewal of this permit does not reset or revise the deadline set forth in Item (a) above, unless a new deadline is set explicitly by such permit modification or renewal.

(c) The Discharge Notification Requirements described herein do not apply to outfalls from which the discharge is composed exclusively of stormwater or discharges to groundwater.

(d) The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

The signs shall have **minimum** dimensions of eighteen inches by twenty four inches (18" x 24") and shall have white letters on a green background and contain the following information:

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY_____

OUTFALL No. :____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

Permittee Phone: ( ) - ### - ####

OR:

NYSDEC Division of Water Regional Office Address:

NYSDEC Division of Water Regional Phone: ( ) - ### -####

(e) For each discharge required to have a sign in accordance with Item (a), the permittee shall, concurrent with the installation of the sign, provide a repository of copies of the Discharge Monitoring Reports (DMRs), as required by the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of this permit. This repository shall be open to the public, at a minimum, during normal daytime business hours. The repository may be at the business office repository of the permittee or at an off-premises location of its choice (such location shall be the village, town, city or county clerk's office, the local library or other location as approved by the Department). In accordance with the **RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS** page of your permit, each DMR shall be maintained on record for a period of five years.

(f) The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within three (3) months of inspection.

DISCHARGE NOTIFICATION REQUIREMENTS (continued)

(g) All requirements of the Discharge Notification Act, including public repository requirements, are waived for any outfall meeting any of the following circumstances, provided Department notification is made in accordance with Item (h) below:

(i) such sign would be inconsistent with any other state or federal statute;

(ii) the Discharge Notification Requirements contained herein would require that such sign could only be located in an area that is damaged by ice or flooding due to a one-year storm or storms of less severity;

(iii) instances in which the outfall to the receiving water is located on private or government property which is restricted to the public through fencing, patrolling, or other control mechanisms. Property which is posted only, without additional control mechanisms, does not qualify for this provision;

(iv) instances where the outfall pipe or channel discharges to another outfall pipe or channel, before discharge to a receiving water; or

(v) instances in which the discharge from the outfall is located in the receiving water, two hundred (200) or more feet from the shoreline of the receiving water.

(h) If the permittee believes that any outfall which discharges wastewater from the permitted facility meets any of the waiver criteria listed in Item (g) above, notification (form enclosed) must be made to the Department's Bureau of Water Permits, 625 Broadway, Albany, NY 12233-3505, of such fact, and, provided there is no objection by the Department, a sign and DMR repository for the involved outfall(s) are not required. This notification must include the facility's name, address, telephone number, contact, permit number, outfall number(s), and reason why such outfall(s) is waived from the requirements of discharge notification. The Department may evaluate the applicability of a waiver at any time, and take appropriate measures to assure that the ECL and associated regulations are complied with.

SCHEDULE OF SUBMITTALS

a) The permittee shall submit the following information to the Regional Water Engineer at the address listed on the Recording, Reporting and Monitoring page of this Permit, and to the Bureau of Water Permits, 625 Broadway, Albany NY 12233-3505:

Outfalls	Parameters Affected	Required Action	Due Date
N/A	N/A	The permittee shall submit to NYSDEC its initial semiannual status report for the Mercury Minimization Program on **04/01/2017** The permittee shall submit subsequent semiannual status reports for the Mercury Minimization Program on **10/01/2017, 04/01/2018** and every six (6) months thereafter.	Completed 10/01/2017, 04/01/2018, and so on
N/A	N/A	The permittee shall submit to NYSDEC an updated Best Management Practices plan.	Completed
N/A	N/A	The permittee shall submit to NYSDEC an annual effluent data summary for the previous calendar year.	March 28th every year
015	Nitrite, Amenable-Cyanide, Total Vanadium, Total Selenium, Acenapthene, Anthracene, Fluorene, Phenanthrene, Benzene, Toluene	The permittee shall collect six (6) samples representative of normal discharge conditions over a 4-month period for the identified parameter. The permittee shall use the approved USEPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentrations of parameter listed. The permittee shall submit a summary of the results of the analyses to the addresses listed above.	Completed
011	gamma-BHC	The permittee shall collect six (6) samples representative of normal discharge conditions over a 4-month period for the identified parameter. The permittee shall use the approved USEPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentration of parameter listed. The permittee shall submit a summary of the results of the analyses to the addresses listed above.	Completed
017	gamma-BHC	The permittee shall collect six (6) samples representative of normal discharge conditions over a 4-month period for the identified parameter. The permittee shall use the approved USEPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentration of parameter listed. The permittee shall submit a summary of the results of the analyses to the addresses listed above.	Completed

SCHEDULE OF SUBMITTALS (continued)

019	alpha-BHC, delta-BHC, gamma-BHC	The permittee shall collect six (6) samples representative of normal discharge conditions over a 4-month period for the identified parameters. The permittee shall use the approved USEPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentrations of parameters listed. The permittee shall submit a summary of the results of the analyses to the addresses listed above.	Completed

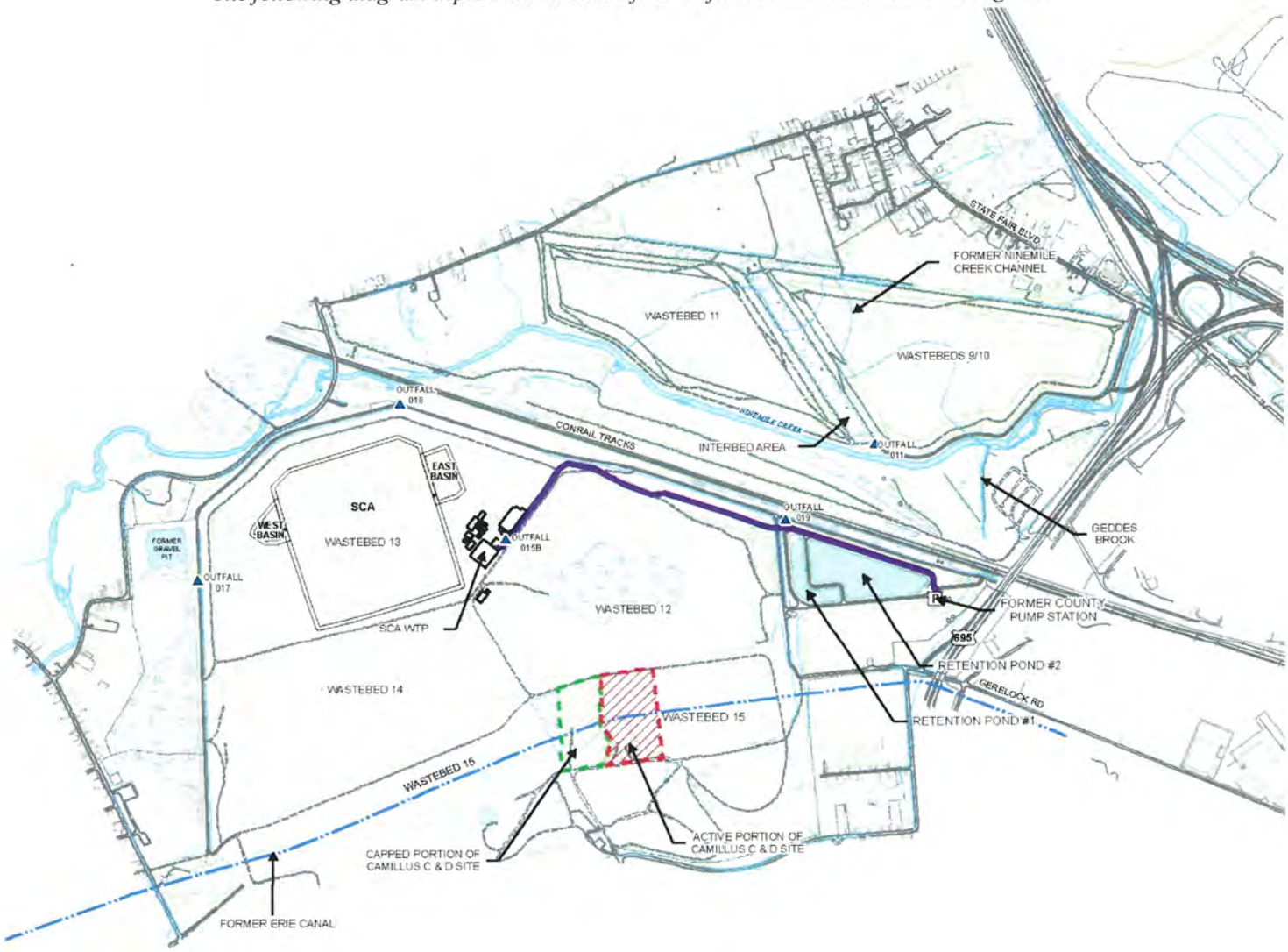
b) Unless noted otherwise, the above actions are one time requirements. The permittee shall submit the results of the above actions to the satisfaction of the Department. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT", the permittee is not required to repeat the above submittal(s), unless noted otherwise. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT".

MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the locations specified below:

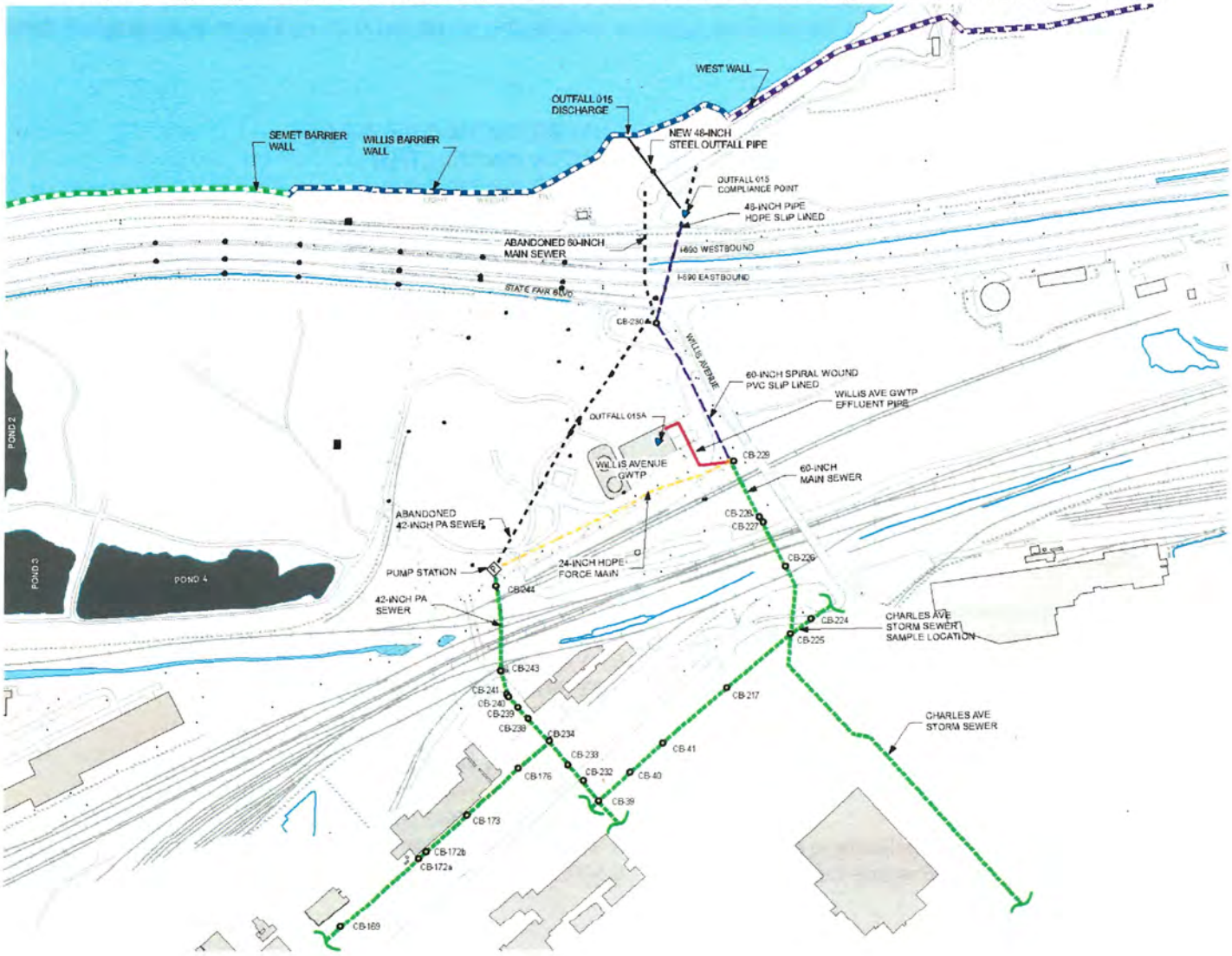
Outfall 011: At the effluent side of the pump where the 24" line discharges to Ninemile Creek.
Outfall 015: At a vault on the Onondaga Lake shoreline.
Outfall 017: At lined swale just prior to discharge to abandoned gravel bed adjacent to Wastebed 13.
Outfall 018: At lined swale just prior to discharge to Ninemile Creek.
Outfall 019: At lined swale just prior to discharge to Geddes Brook.

The following diagram depicts the location of the outfalls within Wastebeds 9 through 15.



MONITORING LOCATIONS (continued)

The following diagram depicts the location of Outfall 015 and the ancillary sampling points associated with the outfall.



GENERAL REQUIREMENTS

A. The regulations in 6NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through J as follows:

B. General Conditions

1. Duty to comply	6 NYCRR Part 750-2.1(e) & 2.4
2. Duty to reapply	6 NYCRR Part 750-1.16(a)
3. Need to halt or reduce activity not a defense	6 NYCRR Part 750-2.1(g)
4. Duty to mitigate	6 NYCRR Part 750-2.7(f)
5. Permit actions	6 NYCRR Part 750-1.1(c), 1.18, 1.20 & 2.1(h)
6. Property rights	6 NYCRR Part 750-2.2(b)
7. Duty to provide information	6 NYCRR Part 750-2.1(i)
8. Inspection and entry	6 NYCRR Part 750-2.1(a) & 2.3

C. Operation and Maintenance

1. Proper Operation & Maintenance	6 NYCRR Part 750-2.8
2. Bypass	6 NYCRR Part 750-1.2(a)(17), 2.8(b) & 2.7
3. Upset	6 NYCRR Part 750-1.2(a)(94) & 2.8(c)

D. Monitoring and Records

1. Monitoring and records	6 NYCRR Part 750-2.5(a)(2), 2.5(c)(1), 2.5(c)(2), 2.5(d) & 2.5(a)(6)
2. Signatory requirements	6 NYCRR Part 750-1.8 & 2.5(b)

E. Reporting Requirements

1. Reporting requirements	6 NYCRR Part 750-2.5, 2.6, 2.7 & 1.17
2. Anticipated noncompliance	6 NYCRR Part 750-2.7(a)
3. Transfers	6 NYCRR Part 750-1.17
4. Monitoring reports	6 NYCRR Part 750-2.5(e)
5. Compliance schedules	6 NYCRR Part 750-1.14(d)
6. 24-hour reporting	6 NYCRR Part 750-2.7(c) & (d)
7. Other noncompliance	6 NYCRR Part 750-2.7(e)
8. Other information	6 NYCRR Part 750-2.1(f)
9. Additional conditions applicable to a POTW	6 NYCRR Part 750-2.9
10. Special reporting requirements for discharges that are not POTWs	6 NYCRR Part 750-2.6

F. Planned Changes

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

   a. The alteration or addition to the permitted facility may meet of the criteria for determining whether facility is a new source in 40 CFR §122.29(b); or
   b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, or to notification requirements under 40 CFR §122.42(a)(1); or
   c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   In addition to the Department, the permittee shall submit a copy of this notice to the United States Environmental Protection Agency at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

GENERAL REQUIREMENTS continued

G. Notification Requirement for POTWs

1. All POTWs shall provide adequate notice to the Department and the USEPA of the following:
   a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; or
   b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
   c. For the purposes of this paragraph, adequate notice shall include information on:
      i. the quality and quantity of effluent introduced into the POTW, and
      ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

POTWs shall submit a copy of this notice to the United States Environmental Protection Agency, at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

H. Sludge Management

The permittee shall comply with all applicable requirements of 6NYCRR Part 360.

I. SPDES Permit Program Fee

The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the Department, and shall comply with all applicable requirements of ECL 72-0602 and 6NYCRR Parts 480, 481, and 485. Note that if there is inconsistency between the fees specified in ECL 72-0602 and 6 NYCRR Part 485, the ECL 72-0602 fees govern.

J. Water Treatment Chemicals (WTCs)

New or increased use and discharge of a WTC requires prior Department review and authorization. At a minimum, the permittee must notify the Department in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The Department will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the Department. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.

1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized in writing by the Department.
2. The permittee shall **maintain a logbook** of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used.
3. The permittee shall **submit a completed *WTC Annual Report Form*** each year that they use and discharge WTCs. This form shall be attached to either the December DMR or the annual monitoring report required below.

The *WTC Notification Form* and *WTC Annual Report Form* are available from the Department's website at http://www.dec.ny.gov/permits/93245.html.

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

A. The monitoring information required by this permit shall be summarized, signed and retained for a period of at least five years from the date of the sampling for subsequent inspection by the Department or its designated agent. **Also, monitoring information required by this permit shall be summarized and reported by submitting;**

[X] (if box is checked) completed and signed Discharge Monitoring Report (DMR) forms for each one (1) month reporting period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The first reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the month following the end of each reporting period.

[ ] (if box is checked) an annual report to the Regional Water Engineer at the address specified below. The annual report is due by February 1 each year and must summarize information for January to December of the previous year in a format acceptable to the Department.

[ ] (if box is checked) a monthly "Wastewater Facility Operation Report..." (form 92-15-7) to the:
[ ] Regional Water Engineer and/or [ ] County Health Department or Environmental Control Agency specified below

Send the **original** (top sheet) of each DMR page to:
Department of Environmental Conservation
Division of Water, Bureau of Water Compliance
625 Broadway
Albany, New York 12233-3506

Phone: (518) 402-8177

Send the **first copy** (second sheet) of each DMR page to:
Department of Environmental Conservation
Regional Water Engineer, Region 7
615 Erie Boulevard West
Syracuse, NY 13204-2400

Phone: (315) 426-7500

B. Monitoring and analysis shall be conducted according to test procedures approved under 40CFR Part 136, unless other test procedures have been specified in this permit.

C. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations and recording of the data on the corresponding DMRs.

D. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

E. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.

F. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to Section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.

Onondaga County Department of
WATER ENVIRONMENT PROTECTION

Joanne M. Mahoney, County Executive
Tom Rhoads, P.E., Commissioner
650 Hiawatha Blvd. West
Syracuse, NY 13204-1194
(315) 435-2260 or (315) 435-6820
FAX (315) 435-5023
http://www.ongov.net/wep/

June 12, 2018

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John McAuliffe
Honeywell International
301 Plainville Road, Suite 330
Syracuse, New York 13212

Re: Renewed Industrial Wastewater Discharge Permit #801

Dear Mr. McAuliffe:

Please find enclosed renewed Industrial Wastewater Discharge Permit #801 for Honeywell International's Wastebed Overflow facility. The effective date of this permit is July 1, 2018.

Mr. Thomas Conklin at O'Brien & Gere has reviewed and commented on the draft permit on behalf of Honeywell. Therefore, no additional comment period is offered at this time.

Please note the following changes in Industrial Wastewater Discharge Permit #801:

- Part A-Section II.A. was modified to remove temporary wastestreams from Sediment Containment Area (SCA) construction wastewater and Geddes Brook Wastewater Treatment Plant (CWTP).
- Part A-Section II.A was modified to include storm water from the SCA parking lot and roof as a permitted waste constituent once a plan is in place to relay the wastestream to site.
- Part A-Section III.B.2.c was updated to reflect the removal of Geddes CWTP from flow monitoring efforts.
- Part A-Section III.B.7.a was modified to reflect the removal of Geddes CWTP from Batch Wastewater Discharge flow reporting requirements.
- Part A-Section IV.A and C were updated to reflect the removal of Geddes CWTP and SCA construction wastewater as billable wastestreams.
- Part B-Section II.A. Table I (OCDWEP Effluent Limitations) was modified to bring the all the Honeywell discharges on the same effluent limitation for Total Mercury (Hg) (0.0002 mg/l)
- Part B-Section VI.C. was updated to indicate current contact information for site entry after hours, on the weekend or on a holiday during emergency conditions.

A permit fee is due upon issuance of all new and renewed Industrial Wastewater Discharge Permits. For Significant Industrial Users (SIUs), such as the Wastebed Overflow facility, the permit fee is $500.00. An invoice for the permit fee is enclosed.

Should you have any questions regarding Permit #801, please contact Tim O'Dell of this office.

Sincerely,

ONONDAGA COUNTY DEPARTMENT OF
WATER ENVIRONMENT PROTECTION

Tom Rhoads, P.E.
Commissioner

TO/ts

Attachment

cc: Bonnie Karasinski, Fiscal Office
File #801 – Honeywell International Wastebed Overflow

Onondaga County Department of
WATER ENVIRONMENT PROTECTION

ONONDAGA COUNTY INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NUMBER: 801 **DATE ISSUED:** 7/1/2018

INDUSTRIAL CODE: 801 **EXPIRATION DATE:** 7/1/2021

NAICS: N/A

Pursuant to Article IV, Section 4.01 of the Rules and Regulations Relating to the Use of the Public Sewer System issued by the County of Onondaga, Department of Water Environment Protection,

Honeywell International Inc., Wastebed Overflow

NAME OF COMPANY

is authorized by the Commissioner to discharge industrial wastewater from the industrial facility located at

522 Gere Lock Road, Syracuse, New York 13209

ADDRESS OF COMPANY FACILITY DISCHARGING WASTEWATER

to the **Metropolitan Syracuse Wastewater Treatment Facility**

NAME OF RECEIVING TREATMENT PLANT

in accordance with the conditions contained herein.

Table of Contents

Part A: Special Conditions

Part B: General Conditions

List of Tables

Part A

Part B

Part A:

Special Conditions

I. AUTHORITY

A. This permit is hereby promulgated by the Commissioner of the Onondaga County Department of Water Environment Protection (OCDWEP) to regulate the discharge of wastewater, polluted or unpolluted, to the County sewer system, under the authority of **The Onondaga County Rules and Regulations Relating to the Use of the Public Sewer System** dated September 15, 1983 (the Rules and Regulations) and the **Onondaga County Administrative Code**.

B. Article VII of the Rules and Regulations provides that any violation of this permit may subject the permittee to a fine of one thousand dollars per day per violation. In addition, Articles VI and VII of the Rules and Regulations specify other penalties and procedures the Department may employ for any violation of this permit or the Rules and Regulations.

II. PERMITTED WASTEWATER DISCHARGE

A. The permittee is authorized to discharge the following to the County sanitary sewer system:

1. Wastewater collected from Honeywell Wastebeds #12, 13, 14, and 15, via the closed-loop leachate collection system, pH adjusted and collected in the holding ponds, and discharged via Sewer #1 to the dedicated force main to the Metropolitan Syracuse Wastewater Treatment Plant (Metro).

2. Wastewater collected from Wastebeds #9, 10, 11 conveyed via a pipeline to Wastebed Holding Pond No. 1 and discharged to Metro via Sewer #1.

3. Any precipitation accumulated in the open holding ponds.

4. Stormwater from the SCA parking lot and roof.

5. Discharge shall comply with an OCDWEP approved Flow Management Plan. The discharge of wastewater to the OCDWEP sanitary sewer system may be limited or prohibited when the Metropolitan Syracuse Wastewater Treatment Facility or the sanitary sewer system are experiencing wet weather operating conditions and /or at reduced capacities.

B. The locations of all monitoring facilities are shown in Appendix C – Honeywell International Inc. Wastebed Overflow Site Map.

1. The former County pump station (also known as the Camillus pump station) located at the eastern end of the holding ponds is referred to as Sewer #1. Only monitoring data collected from Sewer #1 shall be used to determine compliance with the effluent limitations contained in this permit (Table I).

2. The Honeywell pump station and pH neutralization facility discharge located at the southwestern end of the wastebed holding ponds is hereby designated as the wastewater monitoring location referred to as Sewer #2.

3. The Honeywell force main discharge point located along the northwestern portion of the County's Metro WWTP property, adjacent to the sludge dewatering facility operations, is hereby designated as Sewer #3.

4. The monitoring location for wastewater discharged from Wastebeds #9 - 11 shall be referred to as Sewer #4.

C. All wastewater discharged to the sanitary sewer system must comply with the effluent limitations set forth in this permit and Article III of the Rules and Regulations, unless otherwise indicated in this permit expressly or by implication.

III. PERMITTEE SELF-MONITORING AND REPORTING REQUIREMENTS

A. Self-Monitoring Reports

1. The permittee shall submit quarterly Self-Monitoring Reports (SMR's) in accordance with the timetable established in Part A - Table I. Failure to submit the SMR by the due date shall subject the permittee to the fines and penalties prescribed under Article VII of the Rules and Regulations.

Table I: Self-Monitoring Report Schedule – Sewer #1

Period Covered		Date Report is Due
Beginning	Ending	
January 1	March 31	April 30
April 1	June 30	July 31
July 1	September 30	October 31
October 1	December 31	January 31

2. The SMR shall be transmitted on the forms provided in Appendix A. Supplemental information, explanations, or clarifications may be provided in addition to the required information. **Official laboratory and calibration reports (or copies thereof) must be included with the SMR.**

B. Self-Monitoring Report Requirements

The permittee must submit a SMR that shall include the following.

1. Laboratory Sample Analyses

   a. Each SMR must include a summary of sampling and analytical methodologies employed on **Form A**. Note that composite samples must be collected at a minimum rate of one sample aliquot every 30 minutes.

   b. Sampling and analyses must be conducted in accordance with the methodologies detailed in 40 CFR 136 and amendments thereto.

   c. Each SMR shall contain the results of independent laboratory analyses of wastewater samples for the required parameters on **Form B**.

   d. Samples to be collected on more than one day per reporting period must be collected on consecutive days typical of normal production.

   e. Copies of official laboratory reports, including chain of custody records, must be included with each SMR.

   f. The contract laboratory must be certified by the New York State Department of Health (NYSDOH) for each parameter to be analyzed.

   g. The concentration and/or loading of any parameter in Part A - Table II shall not exceed the effluent limitations detailed in this permit.

III. PERMITTEE SELF-MONITORING AND REPORTING REQUIREMENTS

h. For the purposes of this permit Total Toxic Organic compounds shall mean the sum of the detectable concentrations of parameters included in USEPA Method 8260. The Permittee is not required to collect a TTO sample during the month when the TCLP test is performed.

i. The County must be notified in writing if any of the USEPA Priority Pollutants listed in Appendix B are to be discharged to the County Sewer System. The County must be notified in order to evaluate the impact of any change in discharge pursuant to the General Conditions of this permit.

j. Additional sampling and flow measurement may be performed by the permittee. Any data collected using certified methods must be submitted to this office with the required self-monitoring data for the corresponding period to evaluate compliance with permit effluent limitations and pretreatment standards. This additional data may be used for computations of the Industrial Wastewater Surcharge.

Table II: Self-Monitoring Sampling Requirements - Sewer #1

Discharge Location	Parameters	Minimum Frequency of Analysis	Type of Sample
Sewer #1	Total Cadmium (Cd)	1 day/quarter	Composite
	Total Chromium (Cr)	1 day/quarter	Composite
	Hexavalent Chromium (Hex-Cr)	1 day/quarter	Composite
	Total Copper (Cu)	1 day/quarter	Composite
	Cyanide, Total (CN-T)	1 day/quarter	Grab
	Total Lead (Pb)	1 day/quarter	Composite
	Total Nickel (Ni)	1 day/quarter	Composite
	Total Silver (Ag)	1 day/quarter	Composite
	Total Zinc (Zn)	1 day/quarter	Composite
	Total Mercury (Hg) - Method 1631	1 day/month	Grab
	Total Phenolic Compounds	1 day/month	Grab
	Total Toxic Organics (TTO's)	1 day/month	Grab
	5-Day Biological Oxygen Demand (BOD5)	1 day/quarter	Composite
	Total Suspended Solids (TSS)	1 day/quarter	Composite
	Total Phosphorus (TP)	1 day/quarter	Composite
	Total Kjeldahl Nitrogen (TKN)	1 day/quarter	Composite
	Flashpoint	Once Annually	Grab
	TCLP	Once Annually	Grab
	pH (S.U.)	Daily	Continuous
	Flow	Daily	Continuous

III. PERMITTEE SELF-MONITORING AND REPORTING REQUIREMENTS

2. Water Usage/Wastewater Effluent Monitoring

   a. The volume of wastewater discharged to the sewer system shall be continuously monitored by the permittee at Sewer #1 and recorded on **Form C**.

   b. Record the daily volume, and average and maximum daily flow rates of wastewater discharged to the holding ponds via Sewer #2 on each day during the reporting period **(Form C).**

   c. Record the daily volume of wastewater discharged from Wastebeds 9 – 11 (Sewer #4) to the holding ponds on **Form D**.

3. Number of Operating Days (Not Applicable)

4. Number of Employees (Not Applicable)

5. Compliance

   a. The permittee must attest that compliance with all applicable effluent limitations was maintained throughout the reporting period on **Form A**. If the permittee fails to maintain compliance, the following requirements must be adhered to.

      (1) The permittee is required to notify the County within 24 hours upon becoming aware of a self-monitoring violation.

      (2) The permittee must repeat sampling for all parameters exceeding applicable discharge limitations. The permittee shall submit the results of the repeat analysis within 30 days of becoming aware of the violation. Note that the results of the repeat analysis may be submitted separately in order to avoid submitting a late SMR.

      (3) The permittee must submit a report to the County that includes a description of the cause of the noncompliance and information as to what additional operation and maintenance and/or pretreatment equipment is necessary to return to and maintain consistent compliance.

      (4) Upon request, the permittee must provide the County with any information relating to the noncompliance that is deemed necessary.

      (5) The results of self-monitoring using certified methods must be submitted to the County as part of the self-monitoring report for the period in which it was conducted.

III. PERMITTEE SELF-MONITORING AND REPORTING REQUIREMENTS

6. Certification Statement

   a. In accordance with Part B - Section XV – Signatory Requirements, the authorized representative of the permitted facility must sign the certification statements on **Form A**.

   b. SMRs submitted without adequate certification will not be accepted.

7. Batch Wastewater Discharges (Form D)

   a. All daily discharge volumes from Wastebeds 9 – 11 must be monitored and recorded with an in-line flow meter. Honeywell shall use Form D, Batch Summary Discharge to report the volumes with the quarterly SMR.

8. Waste Material Disposal

   a. In accordance with the provisions of Part B - Section XI of this permit, each SMR must contain detailed information regarding the handling and disposal of waste material removed or separated from the permittee's wastewater discharges on **Form E.**

9. Wastewater Monitoring Equipment Calibration

   a. Each SMR must include the results of the calibration of equipment used to monitor wastewater discharges to the County Sewer System during the reporting period on **Form F**.

   b. A certified manufacturer's representative (or other qualified third party) must calibrate the wastewater monitoring equipment at least once per quarter for all instrumentation used to monitor the permittee's wastewater discharge. The permittee must conduct regular "bench-top" calibrations per manufacturer's specifications using buffer solutions, etc.

   c. Each calibration summary must contain the written results of the calibration including at least the following:

      (1) The date of calibration;

      (2) The amount of drift detected; and,

      (3) The signature and title of the person performing the calibration and certifying the accuracy of the results.

III. PERMITTEE SELF-MONITORING AND REPORTING REQUIREMENTS

10. Wastewater pH Monitoring

    a. Each SMR must include a summary of pH excursions on **Form G**.

        (1) Include the date, time, and duration of the excursions.

        (2) Include the cause of the excursion and the steps that have been taken to prevent a future recurrence.

    b. pH must be measured daily utilizing a continuously recording pH meter at Sewer #1. Instantaneous pH must be monitored at Sewer #1 at the time of sampling on days of self-monitoring at Sewer #1, and reported on **Form B**.

IV. USER FEES

A. The rate of charge for acceptance of the wastewater from Wastebeds 9 – 11 will be equivalent to the Onondaga County Unit Charge rate. A bill for acceptance and treatment will be generated on a quarterly basis.

B. In accordance with the Stipulated Judgment (Allied-Signal, Inc. vs. County of Onondaga, New York, Civil Action No. 94-CV-390), Honeywell shall pay an annual fee of $350,000 for acceptance and treatment of wastewater from Wastebeds 12 – 15.

C. If when calculated, the potential Unit Charge for the volume of wastewater discharged via Sewer #1 less the wastewater discharged via Sewer #4 and Sewer #6 would exceed $350,000, the County may charge Honeywell the excess fee at the current Onondaga County Unit Charge rate.

V. AUTHORIZATION

A. This permit and the authorization to discharge industrial wastewater into the County Sewer System shall be legally binding upon the permittee.

B. This permit shall expire on July 1, 2021. The permittee shall not discharge after the date of expiration without prior written permission from this office.

C. In order to receive a new permit and continued authorization to discharge wastewater to the County sewer system, the permittee shall have paid all charges owed to the County of Onondaga and submit an up-to-date industrial waste questionnaire and other information as required by this office.

By the authority of

Tom Rhoads, P.E.
Commissioner

6/11/2018
Date

Part B:

General Conditions for Industrial Wastewater Discharge Permits

I. PROHIBITED DISCHARGES

A. In accordance with Article III of the Rules and Regulations, the following shall not be introduced into the County Sewer System:

1. Wastewater constituents that cause pass-through (pursuant to Sections 3.01(d), 3.01(f), and 3.01(g)).
2. Wastewater constituents that cause interference (pursuant to Sections 3.01(b), 3.01(d), 3.01(i), and 3.01(j)).
3. Wastewater that has the potential to create a fire or explosion hazard in the publicly-owned treatment works (POTW), including wastewater having a closed-cup flashpoint less than 140°F (pursuant to Section 3.01(a)).
4. Wastewater that has a pH less than 5.5 or greater than 10.5 S.U. (pursuant to Section 3.01(c)).
5. Wastewater constituents that result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems (pursuant to Sections 3.01(a), 3.01(d), and 3.01(e)).
6. Batch discharges of unpermitted materials without prior written approval from the Commissioner. Any request to discharge such wastewater must be submitted in writing to this office and is subject to approval on a case-by-case basis (see Section XV.B.4).
7. Wastewater that has a temperature greater than 150°F or in a quantity such that the temperature at the headworks of the POTW exceeds 104°F (pursuant to Section 3.01 (1)).
8. Non-contact cooling water and other unpolluted wastewater (pursuant to Section 3.02) other than those explicitly permitted.
9. Wastewater that will subject the receiving POTW to reporting and permitting regulations of the Resource Conservation and Recovery Act (40 CFR 270.1(c) and 270.60(c)).
10. Any other wastewater that is prohibited by the Rules and Regulations.

B. In addition to the above prohibitions, dilution shall not be used as a substitute for pretreatment.

C. Wastewater discharges are prohibited which are sufficient in quantity or concentration to cause an exceedence of any parameter limitation established for the discharge from the County's Treatment Plants under SPDES permits or any modification or revision thereto, established by NYSDEC or USEPA. In the event that the Department determines that the permittee's discharges caused or were the major contributing factor to such an exceedence, the permittee shall become liable to reimburse the Department costs associated with the Department's violation of said limits, including the payment of applicable stipulated penalties. Nothing contained herein shall prohibit the permittee from contesting any determination by the Department that the permittee is the cause and/or major contributing factor to any such exceedance.

II. OCDWEP EFFLUENT LIMITATIONS AND PRETREATMENT STANDARDS

A. The permittee's discharge shall comply with the following effluent limitations at the point where the discharge enters the County Sanitary Sewer System.

Table I: OCDWEP Effluent Limitations

Parameter	Discharge Limitation	
	Daily Allowable (mg/l)[1]	Instantaneous Allowable (mg/l)[2]
Total Cadmium (Cd)	2.0	3.0
Total Chromium (Cr)	8.0	12.0
Hexavalent Chromium (Hex-Cr)	4.0	6.0
Total Copper (Cu)	5.0	7.5
Total Lead (Pb)	1.0	1.5
Total Mercury (Hg)	0.0002	0.0002
Total Cyanide (T-CN)	*****	3.0
Total Nickel (Ni)	5.0	7.5
Total Zinc (Zn)	5.0	7.5
Total Silver (Ag)	1.0	1.5
Total Phenolic Compounds	******	4.5
Total Oil and Grease (O&G)	******	150
pH	******	5.5 – 10.5 S.U.
Temperature	******	150°F
5-Day Biochemical Oxygen Demand (BOD_5)	[3]	[3]
Total Suspended Solids (TSS)	[3]	[3]
Total Kjeldahl Nitrogen (TKN)	[3]	[3]
Total Phosphorus (TP)	[3]	[3]
Total Toxic Organics	0.1[4]	0.1[4]
Flowrate	Note[5]	Note[5]

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1 As determined by a composite sample (as defined by Article II, Section 2.02 of the Rules and Regulations) of the permittee's daily discharge over the operational and/or production period.

2 As determined by a grab sample (as defined by Article II, Section 2.02 of the Rules and Regulations) of the permittee's discharge at any time during the daily operational and/or production period.

3 In accordance with the modifications to the Onondaga County Rules and Regulations (Section 3.07, Special Conditions) approved by the USEPA in February 1998, concentration-based limits will not be established for BOD5, TSS, TP, TKN. An Industrial Wastewater Surcharge will be assessed based upon the pre-established loading charge rates in excess of the threshold concentrations for these parameters in order to recover costs incurred by the POTW for treatment of the wastewater constituents (refer to Article V of the Rules and Regulations). The Commissioner reserves the right to place concentration-based or mass-based limitations upon the discharge of the above wastewater constituents if deemed necessary.

4 Compliance with the TTO limitation shall be determined by the sum of quantities of pollutants at or above the laboratory MDL as measured by USEPA Method 8260.

5 Discharge shall comply with an approved Flow Management Plan.

III. NOTICE OF SLUG OR ACCIDENTAL DISCHARGE

A. In accordance with Article IV, Section 4.10 of the Rules and Regulations, the permittee shall, at its own expense, provide protection from slug or accidental discharge of prohibited materials to the County Sewer System as defined in Part B - Section I of this permit and Article III of the Rules and Regulations.

B. Any wastewater released in accordance with the following conditions shall require the permittee to provide notification in accordance with Part B - Section III.C of this permit:

1. Breakdown of industrial waste pretreatment equipment;

2. Accident caused by human error or mechanical failure; and

3. Other causes, such as acts of nature.

C. Notification Procedures

1. In the event of any slug or accidental discharge (as defined above), the permittee shall **immediately** notify the Commissioner by telephoning pretreatment program personnel at **315-435-2260** between the hours of 8:00 a.m.-4:30 p.m. weekdays or the operator of the Metropolitan Syracuse Wastewater Treatment Facility at **315-435-3142 or 315-435-3182** between the hours of 4:30 p.m.-8:00 a.m. weekdays or all day on weekends and holidays.

2. In accordance with Article IV, Section 4.10, of the Rules and Regulations, following the telephone notification, the Commissioner shall be notified **in writing** within five business days. The written notification shall include the following information.

   a. The cause of the slug or accidental discharge;

   b. A description of the slug or accidental discharge;

   c. Anticipated time the condition is expected to continue, or if such condition has been corrected, the duration of the period of slug or accidental discharge;

   d. Steps taken by the permittee to reduce and/or eliminate the discharge; and

   e. Steps to be taken by the permittee to prevent recurrence of the condition which caused the slug or accidental discharge.

D. Nothing in this section of the permit shall be construed to relieve the permittee from the penalties for noncompliance with this permit or the Rules and Regulations (Article VII Enforcement and Penalties).

IV. CHANGE IN WASTEWATER DISCHARGE

A. In accordance with Article III Section 3.12 of the Rules and Regulations, the permittee shall notify the POTW in advance of any change in the volume or characteristics of wastewater discharge practices not explicitly permitted under Part A - Section II.

B. All discharges authorized herein shall comply with the terms and conditions of this permit.

C. Any industrial facility expansions, production increases or process modifications which result in new, different or increased discharges of pollutants must be reported by submission of a new industrial waste disposal questionnaire pursuant to Article IV, Section 4.02, of the Rules and Regulations.

D. This permit may be modified to specify and limit any new or increased pollutant discharges.

V. TRANSFER OF OWNERSHIP CONTROL

A. At least 30 days prior to any change in the ownership of the industrial facilities (including pretreatment facilities) from which the authorized discharges emanate, the permittee must notify this office in writing of the pending transfer.

B. The current owner shall then notify the succeeding owner or controller of the existence of this permit by letter, with a copy of the permit enclosed. In addition, notification of the impending transfer must be made to this office by a copy of the letter.

C. The new owner must acknowledge receipt of the letter and the conditions and provisions of the discharge permit in writing to the previous owner and to this Department.

D. Once this office is notified of the transfer of the title, the Commissioner will provide written permitting procedures for the new owners.

VI. RIGHT OF ENTRY

A. In accordance with Article IV, Section 4.08, of the Rules and Regulations, the permittee shall allow duly authorized employees or representatives of the County to enter the permittee's premises at all times for the purpose of inspection, observation, flow measurement, sampling and testing.

B. In accordance with Article VII, Section 7.05 of the Rules and Regulations, the permittee shall allow duly authorized employees of the County to enter the permittee's premises without delay for purposes of investigating any condition or activity which in the Commissioner's (or his designee's) judgment presents an imminent danger to the public health, safety or welfare, or to the environment, or is likely to result in damage to the public sewer system.

C. Sewer #1

1. County personnel or their representatives shall be permitted to enter the former County pump station (The Camillus Pump Station) in order to perform sampling at Sewer #1.
2. Prior approval is required for entry to the site after normal business hours, or on weekends and holidays.
3. If emergency conditions require entering the site after hours, on a weekend, or on a holiday, the County will call either Mike Stout (315-558-4018) or John Formoza (315-532-5608).

VII. COUNTY MONITORING

A. The monitoring of each industrial discharge and the recording of quantitative values shall be performed by authorized employees or representatives of the County according to schedules established by this office.

B. The County monitoring effort does not in any way relieve the permittee of any of the self-monitoring requirements contained in Part A - Section III of this permit.

C. Composite and/or grab samples will be collected whenever possible over the production day, including clean-up periods.

D. The flow (in gallons per day) shall be measured during each sampling period. Water use records may be substituted in place of flow measurement.

E. All samples shall be collected in accordance with the procedures set forth by the New York State Department of Health Environmental Laboratory Approval Program (NYSDOH-ELAP) and/or Title 40 Part 136 of the Code of Federal Regulations (40 CFR 136).

F. All analyses shall be performed by a NYSDOH certified laboratory in accordance with USEPA approved analytical methods (40 CFR 136) as stated in the latest approved edition of the following references:

STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, American Public Health Association, New York, New York 10019.

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, Environmental Monitoring and Support Laboratory, Office of Research and Development, March 1983, Environmental Protection Agency, Cincinnati, Ohio 45268.

VIII. PRETREATMENT FACILITIES

A. The permittee shall provide and maintain industrial wastewater pretreatment facilities at its expense pursuant to Article IV, Section 4.09, of the Rules and Regulations.

B. All reports, plans and/or specifications for new or modified pretreatment facilities or changes in method of operation must be approved by the Commissioner or his designee prior to implementation.

IX. PERMIT MODIFICATIONS

A. In accordance with Article IV of the Rules and Regulations this permit may be modified, suspended, or revoked in whole or part during its term for causes including, but not limited to, the following:

1. Violation of any of the terms or conditions of this permit, or the Rules and Regulations;

2. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;

3. A pretreatment, effluent, or toxic effluent standard being established under any local, state, or federal law for any pollutant which is present in the permittee's discharge where said standard or prohibition is more stringent than the limitation for the pollutant in this permit or the Rules and Regulations;

4. Failure to make payments of the Industrial Waste Surcharge; and/or,

5. Failure to supply information to this office in accordance with Article IV, Section 4.03 (Permit Conditions) of the Rules and Regulations.

X. MONITORING FACILITIES

A. In accordance with Article IV, Section 4.07, of the Rules and Regulations, if there are inadequate provisions for the collection of representative wastewater samples and accurate discharge flow measurements, this office may require that an adequate monitoring facility be installed by the permittee at its own expense.

B. The monitoring facility must be approved by this office before installation.

C. The permittee shall be responsible for all maintenance of sampling manholes and calibration of the monitoring equipment.

D. The permittee is hereby required to provide a monitoring facility at Sewer #1 which meets the approval of this office. The monitoring facility shall include provisions for grab and composite sampling as well as continuous flow and pH monitoring by this office.

XI. WASTE MATERIAL DISPOSAL

A. Any screenings, sludges, solids, waste oils, or other waste materials removed or separated from the permittee's authorized discharge or generated as a result of the wastewater treatment process shall be disposed of in such a manner as to prevent entry of such materials into navigable waters, ground water, storm drains, and the County Sewer System.

B. The following information regarding the disposal of waste materials as defined in part A above shall be reported on Form E of the self-monitoring report.

1. List the source(s) of waste materials to be disposed of.

2. Describe the nature of the waste (hazardous or non-hazardous).

   a. If nonhazardous, describe the waste and how it is created.

   b. If hazardous, provide the 40 CFR Part 261, Subpart C designation for the waste removed (i.e. characteristic waste, listed waste or a mixture). If it is listed, provide the F,K,P or U listing for the waste material removed.

   c. List the facility's hazardous waste generator identification number.

3. Include the approximate volumes or weights of each waste material disposed of.

4. Describe the method by which the wastes were removed and transported.

5. Report the company contracted to remove such materials and the final disposal or recovery location.

XII. COMPUTATION AND PAYMENT OF INDUSTRIAL WASTE SURCHARGE

A. The permittee shall pay its proportionate share of the cost of operation and maintenance and local debt retirement of the department treatment system.

B. These charges shall be computed by this office using the formulae in Article V, Section 5.02, of the Rules and Regulations.

C. Payments shall be made to the County of Onondaga by the permittee no less often than annually unless prior written approval has been granted by the Commissioner.

XIII. RECORD KEEPING

A. Records of all information resulting from self-monitoring activities as required above, or any other discretionary self-monitoring, shall be maintained for a minimum of three years. The required record keeping period may be extended during the course of unresolved litigation or by order of this department.

B. Records shall be made available immediately upon request for inspection and copying by the Department of Water Environment Protection as the Control Authority.

XIV. AVAILABILITY OF BUSINESS RECORDS TO DISCLOSURE

A. The New York State Freedom of Information Law (FOIL) provides the public with access to government records, as do subpoenas for County records made relative to litigation. Therefore, information submitted to Onondaga County Department of Water Environment Protection (OCDWEP) by a commercial enterprise may be subject to public disclosure unless it falls within a protected category or is otherwise nondisclosable pursuant to state or federal law.

B. Certain business information may be considered confidential if it concerns trade secrets or information which, if disclosed, would injure the competitive position of a business. This information which is obtained by OCDWEP in the course of regulating use of the County Sewer System may be protected from disclosure via FOIL requests. To do so, an assertion of confidentiality must be made at the time information is received by OCDWEP using OCDWEP guidelines. If no such request is made by a commercial enterprise, all information will be made available to the public by OCDWEP upon receipt of a FOIL request. Guidelines for the assertion of a confidentiality claim may be obtained upon request to OCDWEP.

XV. SIGNATORY REQUIREMENTS

A. An authorized representative must sign all reports and correspondence submitted by the permittee in accordance with this permit. The authorized representative of the user shall be an individual who is:

1. A responsible corporate officer if the Industrial User submitting the report is a corporation. For the purpose of this paragraph, a responsible corporate officer means:

   a. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or,

   b. The manager of one or more manufacturing, production, or operation facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. A general partner or proprietor if the Industrial User submitting the report is a partnership, or sole proprietorship, respectively.

3. By a duly authorized representative of the individual designated in paragraph 1 or 2 of this section if :

   a. The authorization is made in writing by the individual described in paragraph 1 or 2 of this section;

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and

   c. The written authorization is submitted to the Department.

4. If an authorization under paragraph 3 of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, a new authorization satisfying the requirements of paragraph 3 of this section must be submitted to the Control Authority prior to or together with any reports to be signed by an authorized representative.

B. The permittee shall notify the Department in writing within three business days of any changes regarding the authorization to sign and certify reports submitted pursuant to this permit.

Appendix A:

Self-Monitoring Report Forms

Self-Monitoring Report – Form A

Period Covered	From:		To:
Date Due:		Date Submitted:	

Explain Sampling Methods

Water Usage:

Water Use During Reporting Period (gallons):	
Source(s) of Water (water retailer):	

Water Consumed and Not Discharged to the County Sewer System:

Part of Product:		Boiler Make-Up:	
Evaporation:		SPDES Outfall:	
Off-Site Disposal:		Other (specify):	

Total Wastewater Discharged To County Sewer System:

Sewer #:						
Gallons:						

Number of Operating Days:		Number of Employees:	

Do the monitoring results show full compliance? (Yes/No):	

If No, please explain:

Was any wastewater pollutant analyzed more frequently than required by the permit using a NYSDOH certified laboratory during this reporting period? If yes, the analytical results must be submitted with the SMR. (Yes/No):	

Certification: I certify under penalty of law that this document and its attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility monetary penalties and/or imprisonment for knowing of such violations. I further certify that sampling, analytical, and equipment calibration methodologies employed during the collection of data required for this submission conform to accepted methods established by the United States Environmental Protection Agency (USEPA) and/or the New York State Department of Health (NYSDOH).

Signature of Authorized Representative:	
Typed or Printed Name:	
Title:	

Form B: Industrial SMR/NOV Data Sheet

Industry:		Industry Code:	

	*** ALL UNITS ARE IN (mg/l) UNLESS OTHERWISE NOTED ***	DAY _____	DAY _____	DAY _____	DAY _____
SAMPLE DATA	S.M.R. OR N.O.V.				
	COMPOSITE OR GRAB				
	START DATE				
	START TIME				
	STOP DATE				
	STOP TIME				
	CONTRACT LAB				
	SEWER NUMBER				
	FLOW (GPD)				
CONVENTIONALS	pH-FIELD (S.U.)				
	BOD_5				
	TSS				
	TP				
	TKN				
	NH_3-N				
	TOTAL CYANIDE (CN-T)				
	AMENABLE CYANIDE (CN-A)				
	PHENOL				
	OIL AND GREASE (O&&G)				
METALS	SILVER (Ag)				
	CADMIUM (Cd)				
	CHROMIUM (Cr)				
	HEXAVALENT CHROMIUM (Cr-HEX)				
	COPPER (Cu)				
	MERCURY (Hg)				
	NICKEL (Ni)				
	LEAD (Pb)				
	ZINC (Zn)				
	MOLYBDENUM (Mo)				
MISC.	FLASHPOINT (°F OR °C)				
	SULFIDES (S=)				
	SULFATE				
	TTO SCAN (EPA # _____)				

The Following Lines Are For OCDDS Use Only				
OCDDS Sample Number				
Data Forwarded To Lab	date:		Engineer:	
Data Entered In Database	date:		DEO:	
Batch Number:				

Refer to the Self-Monitoring Sampling Schedule in Part A for the list of parameters that are required to be sampled and analyzed.

Form C: Water Discharge Data for the Month of _____ for Sewer # _____			
Date	Average Flow Rate (gpm)	Maximum Flow Rate (gpm)	Daily Wastewater Discharge (gallons)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
Monthly Average			

Form D: Batch Discharge Summary for the Month of _____		
Date	pH	Daily Wastewater Discharge (gallons)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
Monthly Total		

Form E: Waste Material Disposal

Date	Location/Source of Waste	Approximate Volume (Gallons)	Method of Disposal

Form F: Equipment Calibration Summary

Date of Calibration	Instrument Description	Results of Calibration			Signature and Title of Representative
	Instrument Type (pH/Flow):		As Found	As Left	Who Performed Calibration:
		pH 4			
	Location/Description:	pH 7			Company:
		pH 10			
		Comments:			Signature:
	Instrument Type (pH/Flow):		As Found	As Left	Who Performed Calibration:
		pH 4			
	Location/Description:	pH 7			Company:
		pH 10			
		Comments:			Signature:
	Instrument Type (pH/Flow):		As Found	As Left	Who Performed Calibration:
		pH 4			
	Location/Description:	pH 7			Company:
		pH 10			
		Comments:			Signature:
	Instrument Type (pH/Flow):		As Found	As Left	Who Performed Calibration:
		pH 4			
	Location/Description:	pH 7			Company:
		pH 10			
		Comments:			Signature:
	Instrument Type (pH/Flow):		As Found	As Left	Who Performed Calibration:
		pH 4			
	Location/Description:	pH 7			Company:
		pH 10			
		Comments:			Signature:

****Attach Official Calibration Reports****

Form G: pH Excursions				
Date of Excursion	Time and Duration of Excursion	Max/Min pH (Limit 5.5-10.5)	Explanation for Excursion	Date/Time County Notified

pH violations must be reported to the County in accordance with the notification procedures contained in the permittee's Industrial Wastewater Discharge Permit. Attach continuous recording pH charts where applicable.

Appendix B:

USEPA Priority Pollutants

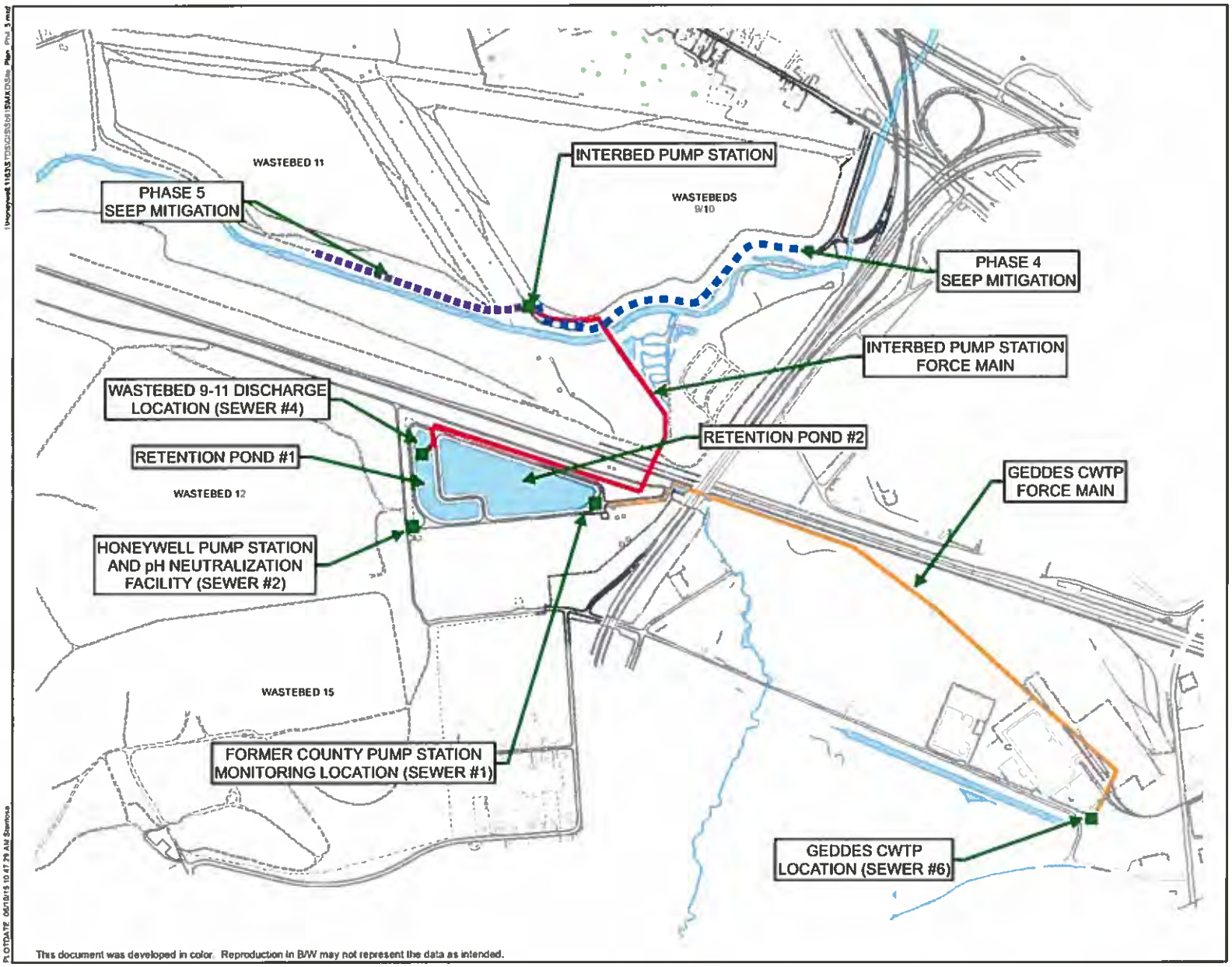
USEPA Priority Pollutants

001 Acenaphthene
002 Acrolein
003 Acrylonitrile
004 Benzene
005 Benzidine
006 Carbon tetrachloride (Tetrachloromethane)
007 Chlorobenzene
008 1,2,4-trichlorobenzene
009 Hexachlorobenzene
010 1,2-dichloroethane
011 1,1,1-trichloroethane
012 Hexachloroethane
013 1,1-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
016 Chloroethane
018 Bis(2-chloroethyl) ether
019 2-chloroethly vinyl ether (mixed)
020 2-chloronaphthalene
021 2,4,6-trichlorophenol
022 Parachlorometa cresol
023 Chloroform (Trichloromethane)
024 2-chlorophenol
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3-dichlorobenzidine
029 1,1-dichloroethylene
030 1,2-trans-dichloroethylene
031 2,4-dichlorophenol
032 1,2-dichloropropane
033 1,2-dichloropropylene (1,3-dichloropropene)
034 2,4-dimethylphenol
035 2,4-dinitrotoluene
036 2,6-dinitrotoluene
037 1,2-diphenylhydrazine
038 Ethylbenzene
039 Fluoranthene
040 4-chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 Bis(2-chloroisopropyl) ether
043 Bis(2-chloroethoxy) methane
044 Methylene chloride (Dichloromethane)
045 Methyl chloride (Chloromethane)
046 Methyl bromide (Bromomethane)
047 Bromoform (Tribromomethane)
048 Dichlorobromomethane
051 Chlorodibromomethane
052 Hexachlorobutadiene
053 Hexachloromyclopentadiene
054 Isophorone
055 Naphthalene
056 Nitrobenzene
057 2-nitrophenol
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
061 N-nitrosodimethylamine
062 N-nitrosodiphenylamine
063 N-nitrosodi-n-propylamine
064 Pentachlorophenol
065 Phenol
066 Bis(2-ethylhexyl) phthalate
067 Butyl benzyl phthalate
068 Di-n-butyl phthalate
069 Di-n-octyl phthalate
070 Diethyl phthalate
071 Dimethyl phthalate
072 1,2-benzanthracene (Benzo(a) anthracene)
073 Benzo(a)pyrene (3,4-benzo-pyrene)
074 3,4-benzofluoranthene (Benzo(b) fluoranthene)
075 11,12-benzofluoranthene Benzo(k) fluoranthene)
076 Chrysene
077 Acenaphthylene
078 Anthracene
079 1,12-benzoperylene (Benzo(ghi) perylene)
080 Fluorene
081 Phenanthrene
082 1,2,5,6-dibenzanthracene (Dibenzo(h) anthracene)
083 Indeno (1,2,3-cd) pyrene (2,3-o-pheynylene pyrene)
084 Pyrene
085 Tetrachloroethylene
086 Toluene
087 Trichloroethylene
088 Vinyl chloride (Chloroethylene)
089 Aldrin
090 Dieldrin
091 Chlordane (technical mixture and metabolites)
092 4,4-DDT
093 4,4-DDE (p,p-DDX)
094 4,4-DDD (p,p-TDE)
095 Alpha-endosulfan
096 Beta-endosulfan
097 Endosulfan sulfate
098 Endrin
099 Endrin aldehyde
100 Heptachlor
101 Heptachlor epoxide (BHC-hexachlorocyclohexane)
102 Alpha-BHC
103 Beta-BHC
104 Gamma-BHC (lindane)
105 Delta-BHC (PCB-polychlorinated biphenyls)
106 PCB-1242 (Arochlor 1242)
107 PCB-1254 (Arochlor 1254)
108 PCB-1221 (Arochlor 1221)
109 PCB-1232 (Arochlor 1232)
110 PCB-1248 (Arochlor 1248)
111 PCB-1260 (Arochlor 1260)
112 PCB-1016 (Arochlor 1016)
113 Toxaphene
114 Antimony
115 Arsenic
116 Asbestos
117 Beryllium
118 Cadmium
119 Chromium
120 Copper
121 Cyanide, Total
122 Lead
123 Mercury
124 Nickel
125 Selenium
126 Silver
127 Thallium
128 Zinc
129 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)

Appendix C:

Site Map

FIGURE 1



HONEYWELL
INTERNATIONAL INC.
WASTEBEDS 9-15
GEDDES AND CAMILLUS, NY

SITE PLAN

0 400 800 1,600
Feet

JUNE 2015
1163

O'BRIEN & GERE

APPENDIX B
FIELD VERIFICATION FORMS

RAMBOLL

Low Flow Groundwater Sampling Log

Well ID: _____

Site Name: WB915 PV / SCA | Sampling Method: _____ | Field Personnel: _____

Site Location: Camillus, NY | Pump Type Used: _____ | Date: _____

Project #: 1163.74008 | Pump/Controller ID#: _____ | Weather: _____

Well information:

Installed Depth of Well: _____ ft. bgs.

Measured Depth of Well*: _____ ft. bmp.

Depth to Water*: _____ ft.

Length of Water Column: _____ ft.

Well Volume Multipliers:

2 in. = 0.163 gal/ft

Well Volume: _____ gal.

Pump Intake Depth: _____ ft. bgs.

*** Measurement Point:**

☐ Well Casing

☐ Protective Casing

☐ Other: _____

Start Purge Time: _____

Initial Observations: *Color:* _____ *Odor:* _____ *Sheen/Free Product:* _____

Indicate units from drop down menu

Elapsed Time (minutes)	Depth to Water (ft bmp)	Temperature (°C)	pH (S.U.)	Specific Conductivity (mS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Flow Rate (mL/min)	Specific Gravity
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	100 ≤ X ≤ 500	

End Purge Time: _____ Total volume of groundwater purged: _____ gallon(s). *Specific Gravity:* _____

Final Observations: *Color:* _____ *Odor:* _____ *Sheen/Free Product:* _____

Field Sample ID: _____ **Sample Time:** _____

Water Quality Equipment Used:

	Manufacturer	Model	Serial # / I.D. #
Water Quality Meter:	In-Situ	smarTROLL	
Turbidity Meter:	LaMotte	2020we	
Other:			

Notes: _____

RAMBOLL

Honeywell SB915

Camillus, NY

WB915 Performance Verification: Surface Water Field Sample Sheet

Investigators: _____

Date(s): _____

Weather: _____

Sys_Loc_Code	Sys_Sample_Code	Lab Analysis	Date	Time	pH (S.U.)	Specific Conductivity (mS/cm)	Temp. (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turb (NTU)	QC *MS | MSD | FD*	Other Observations

Notes: _____

USDA Visual Stream Inspection - Field Assessment

Preliminary Field Data

Date of assessment_____ Weather conditions today_____
(ambient temp.\ % cloud cover)

Weather conditions over past 2 to 5 days: _____.
(No. of days precip/average daytime temp.)

Reach location (UTM or Lat./Long.) _____/_____ Channel type/classification scheme_____/_____

Riparian Cover Type(s): Tree____ % Shrub____% Herbaceous ____% Bare ____%

Bank Profile: Stratified___ Homogeneous____ Cohesive Soil___ Noncohesive Soil ____

Gradient (√ one): Low (0-2%)___ Moderate (>2<4%)___ High (>4%) ___

Bank full channel width _____ft Reach length _____ft Flood plain width_____ft

Average riparian zone width_____ ft Method used (e.g., Range finder): _____

Average height of woody shrubs _____ Method used (e.g., Range finder): _____

Flood plain wetlands, if present _____ acres/reach

Dominant substrate (%): boulder ____ cobble ____ gravel ____ sand____ fine sediments ____
(> 250 mm) (60-250mm) (2-60 mm) (2-.06 mm) (< .06 mm)

Photo Point Locations and Descriptions:

Photo Pt. #	GPS Coordinates/Waypoints	Description
1		
2		
3		

SVAP Start Time/Water Temp: _____/_____SVAP End Time/Water Temp: _____/_____

Notes:

Element Scores

Element	Score	Element	Score
1. Channel Condition		14. Aquatic Invertebrate Community	
2. Hydrologic Alteration		15. Riffle Embeddedness	
3. Bank Condition		16. Salinity	
4. Riparian Area Quantity		**A. Sum of all elements scored**	
5. Riparian Area Quality		**B. Number of elements scored**	
6. Canopy Cover		**Overall score: A/B** _____ 1 to 2.9 Severely Degraded 3 to 4.9 Poor 5 to 6.9 Fair 7 to 8.9 Good 9 to 10 Excellent	
7. Water Appearance			
8. Nutrient Enrichment			
9. Manure or Human Waste			
10. Pools			
11. Barriers to Movement			
12. Fish Habitat Complexity			
13. Aquatic Invertebrate Habitat			

Suspected causes of SVAP scores less than 5 (does not meet quality criteria for stream species)

_____

_____

_____

Recommendations for further assessment or actions:

_____

_____

_____

Riparian wildlife habitat recommendations:

_____

_____

_____

C. Site Diagram: indicate approximate scale, major features, resource concerns, etc.

1 to 2.9 Severely Degraded
3 to 4.9 Poor

Provide notes related to each element scored on back of site diagram, as needed.

18.1 FIELDSHEET FOR THE COLLECTION OF BIOLOGICAL MONITORING DATA

New York State Department of Environmental Conservation

FIELD DATA SHEET **4-letter identifier** _____

STREAM / STATION _____ **CITY/TOWN/VILLAGE** _____
ROUTE NO. _____
DATE _____
TIME : ARRIVAL _____ **UNIQUE FEATURES** _____
DEPARTURE _____
COLLECTORS _____ **SITE TYPE:** **RIBS SCREENING** _____
LATITUDE\ LONGITUDE _____ **RIBS INTENSIVE** _____
MULTI-SITE SURVEY _____

PHYSICAL AND CHEMICAL PARAMETERS

DEPTH (meters) _____ TEMPERATURE (ºC) _____

WIDTH (meters) _____ SPEC. CONDUCT. (µmhos) _____

CURRENT (cm/sec) _____ pH _____

CANOPY (%) 0 10 25 50 75 90 100 D.O. (mg/l; ppm) _____ / sat. %

EMBEDDEDNESS (%) _____ SALINITY _____

SECCHI DISK _____

SUBSTRATE: (%) Rock _____ Rubble _____ Gravel _____ Sand _____ Silt _____

AQUATIC VEGETATION: Algae (suspended) _____ Algae (filamentous) _____

Diatoms (on rocks) (%) _____ Thickness _____ Macrophytes (%) _____

TYPE OF SAMPLE		**OCCURRENCE OF MACROINVERTEBRATES**			
Multiplate	_____	Ephemeroptera	_____	Chironomidae	_____
Kick, sample retained	_____	Plecoptera	_____	Simuliidae	_____
Kick, sample not retained	_____	Trichoptera	_____	Decapoda	_____
Ponar	_____	Coleoptera	_____	Gammaridae	_____
Organisms for toxics	_____	Megaloptera	_____	Mollusca	_____
Photograph	_____	Odonata	_____	Oligochaeta	_____
Microtox sample	_____	Other	_____		_____
Other	_____				

FAUNAL CONDITION: very good _____ good _____ poor _____ very poor _____
Habitat: adequate _____ impoundment _____ headwater _____ sand _____ gravel _____
bedrock _____ low flow _____ other _____
Landuse: Residential _____ Agriculture _____ Commmerical _____ Industrial _____
Forest _____ Recreational _____ Wetland _____

NOTES, OBSERVATIONS	**RIBS SCREENING SITE CRITERIA**
	1. Mayflies (3 or more taxa) _____
	2. Stoneflies (present) _____
	3. Caddisflies (less abund. than mayflies) _____
	4. Beetles (present) _____
	5. Worms (sparse or absent) _____

Honeywell SB915
Geddes, NY
WB915 Performance Verification: Surface Leachate Reconnaissance / Field Sample Sheet

Investigators: ____________________
Date: ____________________
Weather: ____________________

Location	Field Sample ID	Date	Time	pH	Conductivity ( )	Temperature ( )	Dissolved (mg/L)	ORP (mV)	Turbidity (NTU)	QC *MS / MSD / FD*	Seep Flowing (Y/N) (Other Observations)

RAMBOLL

Honeywell SB915

Camillus, NY

WB915 Performance Verification: Subsurface Leachate Field Sample

Investigators: _____

Date(s): _____

Weather: _____

Sys_Loc_Code	Sys_Sample_Code	Date	Sheet Time	pH (S.U.)	Specific Conductivity (mS/cm)	Temp. (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turb (NTU)	QC *MS | MSD | FD*	Other Observations

Notes: _____

_____

RAMBOLL

ENVIRONMENT
& HEALTH

WB 9-15 PERFORMANCE VERIFICATION SITE INSPECTION

DATE/TIME: _____

INSPECTOR(S): _____

PROJECT AREA: _____

SAA RESTORATION COMPONENTS

RESTORED VEGETATIVE AREA MONITORING

Record observations associated with restored portions of **NMC banks** and the **WB-11 Ponded Area**. Observation may include erosion and sedimentation (rills, sloughing, and soil deposition); and areas of poor vegetative establishment. See Section 5.1 of PV Plan.

AREA	LOCATION	OBSERVATIONS	PHOTOGRAPH ID

SITE CLOSURE COMPONENTS

COVER SYSTEM INSPECTION AND OBSERVATIONS

Record observations associated with the **Shrub Willow Cover system**, **Inland Salt Marsh**, and potential **Alternate Cover Systems** to be installed at a later date. Observations may include general conditions, percent vegetative cover, areas of sparse vegetation, etc. See Section 5.2 of PV Plan.

AREA	LOCATION	OBSERVATIONS	PHOTOGRAPH ID

OUTFALLS INSPECTION AND OBSERVATIONS

Record observations associated with the four **SPDES Stormwater Outfalls** listed in the table below. Observations may include general condition, sediment accumulation, obstructions, etc. See Section 5.3 of PV Plan.

LOCATION	OBSERVATIONS	PHOTOGRAPH ID
Outfall 011		
Outfall 017		
Outfall 018		
Outfall 019		

BERMS ANOMALY INSPECTION AND OBSERVATIONS

Record observations associated with the six **Berm Anomalies** listed in the table below. Observations may include general conditions, signs of erosion or stress, or other significant changes to these berm anomalies as well as other potential areas of concern. See Section 5.3 of PV Plan.

AREA	LOCATION	OBSERVATIONS	PHOTOGRAPH ID
WB9/10	Misc-01		
WB9/10	Misc-02		
WB9/10	Misc-04		
WB11	Misc-05		
WB11	Misc-06		
WB11	Misc-08		

WB 9-15 BERM VEGETATIVE COVER OBSERVATIONS

Record observations associated with the wastebed **Berms** that were vegetated as part of the Berm Stabilization and Erosion Control IM and Phase II installations. Observations may include general conditions, percent vegetative cover, areas of sparse vegetation, etc. See Section 5.3 of PV Plan.

AREA	LOCATION	OBSERVATIONS	PHOTOGRAPH ID

DRAINAGE SWALES INSPECTION AND OBSERVATIONS

Record observations associated with **Drainage Swales**. Observations may include general conditions, erosion and sedimentation, obstructions, exposed liners, etc. See Section 5.3 of PV Plan.

AREA	LOCATION	OBSERVATIONS	PHOTOGRAPH ID

ACCESS ROADS INSPECTION AND OBSERVATIONS

Record observations associated with **Access Roads**. Observations may include general conditions, erosion and sedimentation, obstructions, etc. See Section 5.3 of PV Plan.

AREA	LOCATION	OBSERVATIONS	PHOTOGRAPH ID

RAMBOLL

Honeywell: Wastebeds 9-15
Camillus and Geddes, NY
Groundwater Elevation Data

Investigators: _____

Date(s): _____

Weather: _____

Well ID	Measure-ment Point	Depth to Water (ft bmp)	Depth to Bottom (ft bmp)	Specific Gravity (Unitless)	Date	Well Lock Present?	Other Observations
SB915-IMW-01S	PVC		20.05				
SB915-IMW-02S	PVC		20.25				
SB915-IMW-03S	PVC		26.11				
SB915-IMW-04S	PVC		17.84				
SB915-IMW-05S	PVC		18.12				
SB915-IMW-06S	PVC		15.35				
SB915-MW-01	PVC		18.35				
SB915-MW-03	PVC		36.35				
SB915-MW-04	PVC		20.00				
SB915-MW-100S	PVC		33.50				
SB915-MW-101S	PVC		33.80				
SB915-MW-102S	PVC		31.97				
SB915-MW-103S	PVC		81.03				
SB915-MW-104I	PVC		72.70				
SB915-MW-104S	PVC		25.56				
SB915-MW-105BR	PVC		65.08				
SB915-MW-105S	PVC		15.69				
SB915-MW-106I	PVC		44.75				
SB915-MW-106S	PVC		20.00				
SB915-MW-107BR	PVC		131.95				
SB915-MW-107D	PVC		107.48				
SB915-MW-107I	PVC		57.10				
SB915-MW-107S	PVC		22.45				
SB915-MW-108BR	PVC		95.19				
SB915-MW-108D	PVC		64.98				
SB915-MW-108S	PVC		27.15				
SB915-MW-109I	PVC		54.40				
SB915-MW-109S	PVC		15.64				
SB915-MW-110S	PVC		20.05				
SB915-MW-111BR	PVC		142.65				
SB915-MW-111D	PVC		99.15				
SB915-MW-111I	PVC		65.65				
SB915-MW-111S	PVC		24.30				
SB915-MW-112I	PVC		58.55				
SB915-MW-112S	PVC		20.22				
SB915-MW-113S	PVC		29.35				
SB915-MW-114BR	PVC		39.40				
SB915-MW-115BR	PVC		90.13				
SB915-MW-116S	PVC		20.10				
SB915-MW-117S	PVC		24.50				
SB915-MW-118BR	PVC		53.00				
SB915-MW-118S	PVC		15.38				
SB915-MW-36D	PVC		118.65				
SB915-MW-36I	PVC		58.25				
SB915-MW-36S	PVC		19.78				
SB915-MW-40S	PVC		45.09				

Well ID	Measure-ment Point	Depth to Water (ft bmp)	Depth to Bottom (ft bmp)	Specific Gravity (Unitless)	Date	Well Lock Present?	Other Observations
SB915-MW-42D	PVC		133.95				
SB915-MW-42I	PVC		70.90				
SB915-MW-42S	PVC		41.80				
SB915-MW-43S	PVC		46.96				
SB915-MW-50S	PVC		36.20				
SB915-MW-51S	PVC		35.25				
SB915-MW-53D	PVC		124.58				
SB915-MW-53I	PVC		73.30				
SB915-MW-53S	PVC		34.96				
SB915-MW-59S	PVC		21.84				
SB915-MW-60S	PVC		21.00				
SB915-MW-70D	PVC		61.80				
SB915-MW-70S	PVC		26.35				
SB915-MW-84D	PVC		65.98				
SB915-MW-84S	PVC		24.47				
SB915-MW-85D	PVC		79.70				
SB915-MW-85I	PVC		55.35				
SB915-MW-85S	PVC		27.07				
SB915-MW-87BR	PVC		129.65				
SB915-MW-87I	PVC		74.60				
SB915-MW-87S	PVC		36.85				
SB915-MW-88BR	PVC		111.60				
SB915-MW-88D	PVC		69.40				
SB915-MW-88I	PVC		53.52				
SB915-MW-88S	PVC		37.09				
SB915-MW-89BR	PVC		129.85				
SB915-MW-89D	PVC		75.35				
SB915-MW-89I	PVC		55.85				
SB915-MW-89S	PVC		34.50				
SB915-MW-89SR	PVC		DRY				
SB915-MW-90BR	PVC		131.61				
SB915-MW-90I	PVC		56.35				
SB915-MW-90S	PVC		33.00				
SB915-MW-91BR	PVC		211.70				
SB915-MW-91D	PVC		136.87				
SB915-MW-91I	PVC		128.80				
SB915-MW-91S	PVC		43.94				
SB915-MW-91SN	PVC		90.47				
SB915-MW-92BR	PVC		197.20				
SB915-MW-92D	PVC		105.50				
SB915-MW-92I	PVC		81.12				
SB915-MW-92S	PVC		50.36				
SB915-MW-93BR	PVC		155.10				
SB915-MW-93D	PVC		62.68				
SB915-MW-93I	PVC		51.30				
SB915-MW-93S	PVC		35.55				
SB915-MW-94S	PVC		32.48				