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December 31, 2020

Mr. James Gruppe, 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) Consent Order Deliverables

Dear Mr. Gruppe:

In accordance with the referenced Consent Order, Ramboll Americas Engineering Solutions, Inc. (Ramboll) has finalized the Site Closure Plan and Off-Site Surrounding Affected Area (SAA) Restoration Plan on behalf of Honeywell to incorporate the Department's June 25, 2019 comments, in accordance with Honeywell's responses dated October 23, 2019.

These plans incorporate the significant progress made to date towards closure, including multiple phases of enhanced leachate capture and conveyance, completion of priority berm stabilization and erosion control tasks, and the conclusion that no further action is required in the majority of the off-site SAA wetlands and floodplains. The closure plan also incorporates the approximate 90 acres of shrub willow and 5 acres of rare native inland salt marsh which have been planted on Wastebed 14 in conjunction with the SUNY College of Environmental Science and Forestry. Monitoring of this demonstration has shown that establishment of a robust evapotranspiration cover system in the Solvay waste material is both feasible and practical and is similarly effective at reducing percolation as a traditional cover while providing numerous benefits including carbon sequestration, habitat value and a renewable energy source.

The closure plan also incorporates flexibility for future redevelopment of Wastebeds 9-15, which is important considering the community's recent interest in the property for several uses, including solar energy generation, which is proposed in a separate submittal for piloting on a portion of the site.

The Performance Verification Plan and Operation and Maintenance Plan associated with site closure and SAA restoration will be submitted under separate cover, as will three supporting documents regarding the willow and salt marsh demonstrations, and evaluation of the monitoring data collected since 2012.

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

Enc.

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Document type
Report

Date December 2020

WASTEBEDS 9-15 SITE CLOSURE PLAN CAMILLUS AND GEDDES, NY



WASTEBEDS 9-15 SITE CLOSURE PLAN CAMILLUS AND GEDDES, NY

Project name	Wastebeds 9-15 Closure
Project no.	1163.75018
Recipient	Honeywell
Document type	Report
Version	1
Date	December 31, 2020
Prepared by	Michael Mellen
Checked by	Maureen Markert, PE
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Description	Plan for Closure of Wastebeds 9-15

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LIST OF ACRONYMS

<u>Acronym</u>	Definition	
BB&L	Blasland, Bouck & Lee	
C&D	Construction and Demolition	
C&S	Calocerinos & Spina's Engineers, Inc.	
CCR	Construction Certification Report	
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	
CIR	Closure Investigation Report	
COI	Constituent of Interest	
CSM	Conceptual Site Model	
CY	cubic yard	
EBPs	Environmental Benefit Projects	
ET	Evapotranspiration	
FCPS	Former County Pump Station	
gpm	Gallons per Minute	
HDPE	High Density Polyethylene	
IM	Interim Measure	
Inc.	Incorporated	
LCCS	Leachate Collection and Conveyance System	
Metro	Syracuse Metropolitan Wastewater Treatment Plant	
МН	Manhole	
NMC	Ninemile Creek	
NYCRR	New York Code of Rules and Regulations	
NYS	New York State	
NYSDEC	New York State Department of Environmental Conservation	
OCDWEP	Onondaga County Department of Environmental Protection	
OU	Odor Units	
PDI	Pre-Design Investigation	
<u>Acronym</u>	Defintion	

PVC	Polyvinyl Chloride
SAA	Surrounding Affected Area
SB	Settling Basin
SCA	Sediment Consolidation Area
SMR	Self-Monitoring Report
SPDES	State Pollution Discharge Elimination System
S.U.	Standard Units
SUNY ESF	State University of New York College of Environmental Science and Forestry
SWSR	Shrub Willow Sustainable Remedy
TDS	Total Dissolved Solids
US	United States
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
WB	Wastebed
WeCare	WeCare Organics, LLC

EXECUTIVE SUMMARY

The New York State Department of Environmental Conservation (NYSDEC) and Honeywell International Inc. (Honeywell) entered into an Administrative Consent Order (ID# D-7-0001-02-03) dated December 6, 2010 (NYSDEC 2010), as amended in December 2014 (NYSDEC 2014)]. The Consent Order identifies activities required for the successful closure of Wastebeds (WB) 9-15, located on approximately 662 acres in Camillus and Geddes, New York. The NYSDEC has determined that WB 9-15 do not pose a significant threat to the environment or public health. Therefore, closure is being administered under the NYSDEC's water and solid waste management programs.

Significant progress towards site closure has been made in advance of this closure plan submittal, including:

- Enhanced leachate capture and conveyance through multiple seep mitigation systems and conveyance system improvements
- Completion of berm stabilization/erosion control measures
- Conclusion that no further action is required in the majority of off-site surrounding affected area (SAA) floodplains and wetlands.

Further, for the last decade Honeywell and the SUNY College of Environmental Science and Forestry have conducted demonstration projects to evaluate use of an evapotranspiration (ET) cover as a green technology in the final cover system at WB 9-15 to reduce the amount of water that percolates into the wastebeds. Approximately 113 acres of productive shrub willow have been planted on WB 14, successfully demonstrating that an ET cover can be established on the wastebeds and provide valuable ET function. In conjunction with the SWSR demonstration,



Figure ES-1 Shrub Willow Cover Demonstration WB 14

a 5-acre inland salt marsh was also successfully established on WB 14. Solvay waste provides a unique opportunity for restoration of rare native plant communities with valuable ET function, providing alternative wildlife nesting/feeding and pollinator opportunities.

Recently, the Central New York economic development community has been viewing the large wastebed acreage as a unique asset that exists in Camillus and Geddes. The property is being considered for several uses including solar energy development and the potential as a large commercial/industrial zoned property that has good access to both rail and transportation infrastructure, as well as proximity to the Syracuse urban core. Recent projects, such as the Onondaga County Lakeview Amphitheater, have demonstrated that properties containing Solvay waste can be successfully developed into community assets and economic development catalysts. In 2016, the wastebed properties were considered for several large-scale warehousing opportunities through Empire State Development. As a result of these opportunities, it is important that continued careful consideration be given to how WB 9-15 are closed.

This *Site Closure Plan* describes the integrated closure program for WB 9-15, which includes the following actions:

- Creating a cover system that will minimize the percolation of precipitation into the wastebeds. The closure program provides an opportunity to restore several hundred acres of property to productive use, either through a sustainable ET cover system to generate biomass for the production of renewable energy or through industrial/commercial redevelopment opportunities which may be integrated into overall closure. WB 14 plantings demonstrate that establishment of a robust ET cover system in the Solvay waste material is both feasible and practical and is similarly effective at reducing percolation as a traditional cover while providing numerous benefits including:
 - Elimination of the need to truck and place approximately 3 million cubic yards of borrow soils, conserving borrow sites, topsoil, fossil fuels, and roadways
 - Generation of a carbon-neutral energy source as an alternative to fossil fuels
 - Consistency with state and federal green remediation policies and strategies that aim to minimize the environmental footprint of cleanup actions
 - Enhanced biodiversity and range of habitat structure in conjunction with berm vegetation.

Future cover system designs will be presented in Annual Construction Work Plans and may be comprised of a combination of willow and salt marsh vegetation, or alternate covers aligned with property end uses. Cover construction will be phased over an anticipated 5 to 9 years.

 Mitigating leachate seepage to the environment through collection and management of leachate generated within the wastebeds. Honeywell has installed a network of leachate collection and seep mitigation systems at WB 9-15 which have been successful in reducing the loading of regulated parameters to surface water, as discussed in annual seep mitigation reports. Continued operation and maintenance of the existing systems is described in the *Operation and Maintenance Plan* to be submitted under separate cover, and enhancements may be added as needed to manage wastebed leachate seepage.

- Stabilizing the wastebed berms to minimize potential erosion of wastebed materials. Overall, the wastebed berms are in good structural condition (OBG 2013a). Priority areas needing vegetation were successfully vegetated during the 2015 interim measure (IM), and remaining portions of the berms will be revegetated to mitigate erosion and stabilize the berms while increasing natural habitats.
- Implementing vegetation

maintenance/monitoring and monitoring of groundwater, surface water, and leachate to assess effectiveness of the closure program. Evaluation results for quarterly groundwater,



Figure ES-2 Vegetation Establishment on WB 12 Berm

surface water, and leachate data collected since 2012 were used to focus the future monitoring program presented in the *Performance Verification Plan* to be submitted under separate cover.

The schedule for performance verification tasks will be refined, with NYSDEC approval, as closure components are implemented, additional vegetation is established, end uses are developed, and performance data are collected and evaluated.

1. INTRODUCTION

This document describes the components of the closure program for Wastebeds (WB) 9-15, located in Camillus and Geddes, New York., and satisfies the closure plan submittal requirement in the Administrative Consent Order between the New York State Department of Environmental Conservation (NYSDEC) and Honeywell International Inc. (Honeywell) (ID# D-7-0001-02-03) dated December 6, 2010 (NYSDEC 2010), as amended in December 2014 (NYSDEC 2014)]. The NYSDEC has determined that WB 9-15 do not pose a significant threat to the environment or public health. Therefore, closure of WB 9-15 is being administered under the NYSDEC's water and solid waste management programs.

This closure plan describes the integrated closure program of covers, berm stabilization and erosion control, leachate management, and storm water management, incorporating previously constructed interim measures and cover demonstrations. Post-closure operation, maintenance, and monitoring is addressed in the *Operation and Maintenance Plan* and *Performance Verification Plan* which will be submitted under separate cover. A restoration plan for the off-site surrounding affected area (SAA) has also been developed for concurrent submittal with this plan (Ramboll 2020a).

2. BACKGROUND

2.1 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 2-1**).

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 2.6. 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. A site plan and topographic map are attached 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 AirportFigure 2-1 WB 9-15 LocationRoad west of WB 13, and the NMC Amboy access on Thompson Road adjacent to WB 13.

WB 9-11 cover approximately 126 acres and have a height of approximately 70 feet from the base. Presently, 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). Current use of the retention ponds is discussed

I:\Honeywell.1163\72386.Sb-9-15-2019-De\Docs\Reports\Revised Closure and Restoration Plan Documents\Closure Plan\Revised Per NYSDEC\R37911 SB9-15_2020 Dec_RD_Rev Closure Plan_Final Rpt.docx in **Section 3.4.2**. 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, as discussed in **Section 2.4**. The Sediment Consolidation Area (SCA) associated with the Onondaga Lake Bottom Site remediation is located on WB 13, as discussed in **Section 2.5**. 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.

2.2 Interim Measures

In accordance with the Consent Order, several IMs have been designed and implemented at WB 9-15. These IM's include:

- Seep mitigation systems,
- Improvements to the leachate collection and conveyance system, and
- Berm stabilization and erosion control measures.

The IMs reduced migration of Solvay waste constituents to storm water and the off-Site SAA. IMs are described in the following subsections.

2.2.1 Seep Mitigation IMs

The Department issued a modification to Honeywell's SPDES Permit NY #0002275 on July 11, 2006 to include Special Conditions requiring that specified effluent limits be attained within a defined time frame. In accordance with these Special Conditions, the first three phases of the seep mitigation program were designed and constructed between 2007 and 2010, and included:

• Phase 1 efforts, completed in 2007, consisted of installing 1,700 linear feet of perforated pipe in a gravel-filled trench on the northern berms of WB 12 which discharges to the LCCS. The collection pipe, located in an area where active seeps had been observed, has been effective in eliminating those seeps.

- Phase 2 efforts, completed in 2007, consisted of the installing 1,500 linear feet of perforated pipe in a gravel-filled trench on the western berms of WB 14 which discharges to the LCCS. The collection pipe, located in an area where active seeps had been observed, has been effective in eliminating those seeps.
- Phase 3 efforts, completed in 2010, consisted of the replacement of a 24-inch force main which conveys non-impacted storm water from areas north of WB 9 through 11 via the Popes Grove's Pump Station to permitted Outfall 011 on NMC. This HDPE drain effectively eliminates the infiltration of leachate-impacted groundwater into the system.

In December 2010, a Consent Order was executed, and the schedule for attainment of SPDES permit discharge limitations for pH, total dissolved solids (TDS), and chloride at Outfalls 011, 017, 018, and 019 was linked to the Consent Order. The Consent Order was modified in December 2014 to require, by December 31, 2016, evaluation of the effectiveness of seep mitigation measures and proposal of additional measures, if necessary, to attempt attaining SPDES discharge limits. In accordance with the Consent Order, the following seep mitigation IMs were constructed: Phase 4 in 2012 and 2013, Phase 5 in 2014, and Phase 6 in 2015. Phases 4, 5, and 6 included the following activities:

- The Phase 4 Seep Mitigation IM collection system was installed along approximately 2,900 linear feet of the southern perimeter of WB 9/10 (attached **Figure 1**) and consists of a leachate collection trench, three interceptor walls, six collection wells, and a lift station brought into operation on April 8, 2013 (O'Brien & Gere 2013b). Leachate collected in the system is directed to a lift station located near the Interbed Pump Station. Groundwater/leachate is pumped from the lift station into the Interbed force main that discharges into the retention ponds. An extension to this system was constructed in 2019 to mitigate a seepage area west of the original Phase 4 Seep Mitigation System limits. The extension consisted of the addition of approximately 100-If of sheet pile interceptor wall, 100-LF of perforated HDPE piping, one collection well, and force main upgrades. The Phase 4 system has successfully reduced seepage from WB 9/10.
- The Phase 5 Seep Mitigation IM system along approximately 1,325 linear feet on the southern perimeter of WB 11 (attached **Figure 1**), was commissioned in June 2015 and consists of a leachate collection trench, five collection wells, lift station modifications, and interbed force main modifications (O'Brien & Gere 2015). Leachate collected in the system is directed to the lift station installed as part of the Phase 4 mitigation system construction. Groundwater/leachate is pumped from the lift station into the Interbed force main that discharges into the retention ponds. The Phase 5 system has successfully reduced seepage from WB 11.
- Phase 6 IM efforts, completed in 2015, focused on reducing the seepage impacts to Outfall 019 in the vicinity of WB 12. The Phase 6 Seep Mitigation System IM consisted of a drainage ditch liner replacement, installation of 925 linear feet of new seep collection systems, and existing seep collection system modifications. The IM also included one berm vegetative area in the vicinity of the new seep collection system (OBG 2016a). The Phase 6 system successfully redirects seepage to the LCCS where it drains to the LCCS pump station for pH-adjustment prior to discharge to the leachate retention ponds and subsequent discharge to Metro for treatment via the FCPS.

A seep mitigation system north of WB 11 was installed in 2019 to reduce leachate migration to areas north of WB 11 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 north of WB11. 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 (Ramboll 2019). Water from the Interbed is pumped via the Interbed Pump Station to the WB 12-15 retention ponds and then to Metro.

2.2.2 Leachate Collection and Conveyance System IM

In accordance with a March 2012 Leachate Collection and Conveyance System – Interim Measure Work Plan (OBG 2012a), a study was performed to evaluate the capacity, efficiency, and effectiveness of the existing LCCS. This evaluation included review of existing system capacities, flow records, and operational records, and evaluation of optimization alternatives. Evaluation findings were summarized in the April 2013 Leachate Collection and Conveyance System Wastebeds 12-15 Report (OBG 2013a), along with recommendations for system enhancements to mitigate surcharging conditions at manholes located on the conveyance system during peak run-off conditions.

The LCCS IM construction included the following components (OBG 2016b): replacement of existing pumps with higher capacity submersible pumps and new suction piping; installation of a new 10-inch force main with cleanouts from the pumps to the retention ponds (Pond 1); installation of cleanouts in the existing 6-inch force main; and installation of a backup generator. The new LCCS Pump Station equipment was brought into operation the week of December 20, 2015 and has been effective at eliminating surcharging conditions at the manholes.

2.2.3 Berm Stabilization and Erosion Control IM

In accordance with a March 2012 *Berm Stabilization and Erosion Control Work Plan* (OBG 2012b), a Site reconnaissance was performed to evaluate the berms surrounding WB 9-15. This survey included the northern bank of NMC within the limits of the SAA. Observed conditions during the reconnaissance were compared to historical information to evaluate if the observed conditions changed or are changing. Overall, the wastebed berms were found to be in good structural condition. Findings of the reconnaissance were summarized in the July 2013 *Berm Stabilization and Erosion Control Report* (OBG 2013a), along with recommendations for mitigating erosion and stabilizing portions of the berms while increasing natural habitats.

Priority tasks identified during the reconnaissance were completed in 2015 as part of the Berm Stabilization and Erosion Control IM (OBG 2016c):

- Drainage improvements, including installation of water bars
- Repairing areas where sloughing was observed
- Filling and revegetating rills
- Decommissioning culverts
- Repairing exposed liner
- Repairing miscellaneous features

• Vegetating along WB 13, WB 15, and NMC bank.



Figure 2-2 Before (Left) and After (Right) Berm Stabilization IM

Remaining berm vegetation tasks were completed in 2018-2019 in accordance with the September 2018 Berm Stabilization and Erosion Control Phase 2 design (OBG 2018b) approved by NYSDEC on October 1, 2018. Remaining tasks are discussed in **Section 3** of this plan, and NMC bank vegetation is discussed in the *Off-Site SAA Restoration Plan* (Ramboll 2020a).

2.3 Evapotranspiration Cover

2.3.1 Shrub Willow Sustainable Remedy

Since 2003, scientists from the State University of New York College of Environmental Science and Forestry (SUNY ESF) in collaboration with Honeywell and OBG have performed studies at the Site to improve understanding of the interaction of a shrub willow ET cover with Solvay waste and how that cover system may be implemented on a larger scale. An overview of these studies is included here.

Following bench-scale studies, a three-year pilot study was initiated in 2003 on a 4-acre portion of WB 13 in accordance with the April 2003 Biomass Pilot Study Work Plan (OBG and SUNY ESF 2003a). The first two sets of willow plots (Plots 1 and 2) were established in spring of 2004 and a third plot (Plot 3) was established in the spring of 2006. The pilot study was designed to identify combinations of plant species and organic amendments that are conducive to growth on the Site and assess the ability of these combinations to reduce percolation. Additionally, the study was designed to facilitate development and calibration of a water budget model that could be used to estimate the water budget cycle for the proposed ET cover. Pilot study results for WB 13 are summarized in semi-annual reports (OBG and SUNY ESF 2003b; OBG 2004a; OBG 2004b; OBG 2005; OBG 2006a; OBG 2007a; OBG 2007c).

Based on the success of the pilot studies, a full-scale demonstration of the ET cover was completed on WB 14 in 2008 in accordance with the *Shrub Willow Sustainable Remedy, Full Scale Demonstration, Settling Basins 9 through 15 Work Plan* (OBG and SUNY ESF 2007). This work included the planting of 10 acres of shrub willows, which were divided into four 2.5-





Figure 2-3 Shrub Willows on WB 14

acre plots, and construction of an approximately 5-acre salt marsh. The full-scale demonstration was designed to supplement knowledge gained in the 2003-2006 pilot studies, provide a venue to experiment with construction techniques, and identify efficient methods for amending the Solvay waste and planting the shrub willows.

I:\Honeywell.1163\72386.Sb-9-15-2019-De\Docs\Reports\Revised Closure and Restoration Plan Documents\Closure Plan\Revised Per NYSDEC\R37911 SB9-15_2020 Dec_RD_Rev Closure Plan_Final Rpt.docx Full-scale demonstration activities included access road construction, application and mixing of organic amendments, and shrub willow planting. Each plot contained a unique composition of organic amendment that varied by organic amendment source and ratio of mixing with existing Solvay waste (1.25:1 and 2.5:1, Solvay waste: organic amendment). The amendments included brewery biosolids supplied by Anheuser-Busch's plant in Baldwinsville, New York, Class A municipal sewage biosolids from WeCare Organics, LLC (WeCare) located in Jordan, New York, and yard waste from the Towns of Geddes and Camillus, New York.

Organic amendments were mixed to a depth of approximately 0.5 meter (1.6 feet) in each of the four plots using excavators with rotating mixing head attachments. Four main shrub willow varieties were planted, along with an additional 20 varieties planted as part of a yield trial. The yield trial was conducted to evaluate willow varieties for use in future phases as a means of maintaining biodiversity and minimizing the risk of potential insect and disease problems. Preparation and planting of the 5-acre salt marsh plot occurred concurrently, with planting of five different plant communities comprising many different species suited to a salt marsh environment.



Figure 2-4 WB 14 Before and After Amendment and Willow Planting

The full-scale demonstration showed that the wastebed surface could be successfully amended and willows grown on a large scale. Additional shrub willows have been planted on WB 14 in separate phases between 2011 and 2015 in accordance with the *Shrub Willow Sustainable Remedy, Phase 2 – Interim Measure Work Plan* (OBG 2012c). In those phases of work, the organic amendment material was a blend of "Stable Peat" (a commercial compost made from horse bedding by Ground Effects of Warners, New York) and Anheuser-Busch biosolids. Specialized mixing equipment has been acquired to improve the performance of the amendment process.

The goal of the additional planting was to continue progress made on previous work to demonstrate that the ET cover will not only satisfy environmental protection criteria, but will ultimately provide energy, economic, and ecosystem benefits to the community. The objectives of this work included evaluation of different varieties of shrub willows to assess performance, with a goal of diversifying the plant community, and evaluation of the use of more robust agricultural equipment for mixing of organic amendments.

A total of approximately 113 acres of shrub willow have been planted on WB 14¹. Detailed discussion of the 2008 demonstration and additional WB 14 plantings is presented in the *Shrub Willow Sustainable Remedy (SWSR) Pre-Design Investigation (PDI)* report under separate cover. SUNY ESF has continued to monitor the health and productivity of the shrub willows and have harvested several plots after 3 or 4 years of growth. As predicted, the willows have grown back without intervention or assistance after the harvest. To date, harvested willow chips from WB 14 have been beneficially used for various purposes at other Honeywell sites in central New York (i.e., to line pedestrian paths and access roads, to construct erosion control barriers in lieu of silt fence, and to stabilize wet soil and fill material). Willow chips were also tested as animal bedding with positive results. Additional uses currently being evaluated for the harvested willow in conjunction with SUNY ESF include a biomass boiler, blended pellet production trial and subsequent boiler test burns; sale to a renewable energy producer. Composting of the harvested willow is another potential end use for production of future organic amendment, and/or as feedstock for local mulch producers.

The results of this demonstration program and other willow plot monitoring demonstrate the willow's effectiveness in enhancing ET. Long-term strategies for establishing, maintaining, and monitoring the shrub willows were developed based on the findings of the demonstration program.

2.3.2 Inland Salt Marsh IM

The Inland Salt Marsh IM is an approximate 5-acre restoration project adjacent to the 10-acre shrub willow sustainable remedy (SWSR) demonstration area discussed in **Section 2.3.1**. The inland salt marsh was designed to introduce plant communities of high conservation value to WB 14 and to enhance ET and ecological diversity. The focal community for the IM was an inland salt marsh - a plant community that once populated the shores of Onondaga Lake. Marl fen, Great Lakes dune, and alvar grassland communities were also targeted in the design.

The project demonstrated that environmental conditions associated with Solvay waste can support the establishment and development of rare native plant communities, creating significant conservation value. The unique conditions at the Site provide an opportunity to restore target plant communities, while also enhancing site-wide ET.



Figure 2-5 Inland Salt Marsh Pre-Planting (Left) and Post-Planting (Right)

¹ One plot on WB 14, Plot 14-4, has not successfully established. Honeywell is evaluating end use options for this plot, including redevelopment or willow re-planting following substrate sampling/analyses and identification of additional amendment needs.

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2.4 Camillus C&D Landfill

Since 2000, Honeywell and the Town of Camillus have collaborated to bring portions of WB 15 to grade with C&D debris. The Town of Camillus leases the eastern and southern portions of WB 15 from Honeywell and operates the C&D landfill. In accordance with Consent Order ID# R7-0058-85-11 dated February 12, 1987, and updated most recently on October 6, 2017, portions of WB 15 will be filled and closed incrementally via construction of a cover system in accordance with 6 NYCRR Part 360.

Approximately 9 acres of the Camillus C&D landfill on WB 15 was closed in 2004 in accordance with the NYSDEC-approved February 2002 Closure Site Investigation and Closure Plan (Barton & Loguidice 2002). Closure of an additional approximately 23 acres of the C&D landfill was completed in 2019 in accordance with the November 2017 Conceptual Closure Plan and Final Closure Plan (Barton & Loguidice 2017a, b), incorporating January 2018 modifications (Barton & Loguidice 2018) approved by NYSDEC on February 14, 2018 (NYSDEC 2018b). Future sections of the C&D landfill will also be closed in accordance with the 2017 Conceptual Closure Plan. C&D landfill operations are active in a 10-acre section, and anticipated for another 10-acre section in the future, which will extend to the



Figure 2-6 C&D Landfill

eastern limit of WB 15 In accordance with an Onondaga Lake Natural Resource Damages Consent Decree signed on March 14, 2018, approximately 50 acres of native grassland bird habitat will be incorporated into the topsoil layer of the current and future conventional Part 360 geomembrane caps for the C&D landfill.

If Honeywell and Camillus decide to use the western portion of WB 15 for C&D landfilling, closure of landfill areas will be in accordance with the 2017 *Conceptual Closure Plan* (Barton & Loguidice 2017a). If an alternate end use is identified for the western portion of WB 15, an alternate closure design will be submitted to NYSDEC for review and approval as part of an annual construction work plan in accordance with the Consent Order.

2.5 Sediment Consolidation Area (SCA)

The SCA associated with the Onondaga Lake Bottom Site remediation is located on WB 13 (attached **Figure 1**). Dredged Onondaga Lake sediments were consolidated in the SCA, which was engineered with a composite (clay/geomembrane) bottom liner and leachate collection system in accordance with the substantive requirements of NYSDEC's 6 NYCRR Part 360 regulations, Section 2.14(a), as specified in the Onondaga Lake Consent Decree between NYSDEC and Honeywell. The SCA was closed in accordance with the May 2016 *Onondaga Lake Sediment Consolidation Area (SCA) Final Cover Design Report* (Parsons and Beech and Bonaparte 2016), which was approved by NYSDEC on May 18, 2017 (NYSDEC 2017a). Closure construction for the SCA was completed in September 2017 and included installation of a multi-layer cover, gas venting, leachate management, and storm water management systems. In accordance with an Onondaga Lake Natural Resource Damages Consent Decree signed on March 14, 2018, the vegetation established for the final SCA cover consists of a native grassland bird habitat.

Post-closure care continues in accordance with the April 2017 *Post-Closure Care Plan* (Parsons and Beech and Bonaparte 2017), which was approved by NYSDEC on April 6, 2017 (NYSDEC 2017b). Post-closure monitoring continues in accordance with the December 2014 *SCA Environmental Monitoring Plan* (OBG 2014), which was approved by NYSDEC on February 11, 2015 (NYSDEC 2015b).

2.6 History

2.6.1 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.

2.6.2 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.



Figure 2-7: WB 9 - 11

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.

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. Discharge from Outfall 011 is currently monitored in accordance with SPDES Permit #NY0002275, issued on September 18, 2003 and most recently updated on August 25, 2016 (**Exhibit A**). Impacted water is pumped into the northern end of the Interbed Area.

Leachate collection and seep mitigation systems were installed along WB 9 - 11 between 2005 and 2019. These systems are described in the leachate management section, **Section 3.4.2**, of this closure plan.

2.6.3 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 waste water, 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. A topographic map based on a 2004 survey is attached as **Figure 2**. 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, discussed in further detail in **Section 3.4.2**, along with seep mitigation systems installed at WB 12-15, discharges leachate to the retention ponds via the LCCS pump station following pH adjustment.



Figure 2-8 WB 12 - 15

I:\Honeywell.1163\72386.Sb-9-15-2019-De\Docs\Reports\Revised Closure and Restoration Plan Documents\Closure Plan\Revised Per NYSDEC\R37911 SB9-15_2020 Dec_RD_Rev Closure Plan_Final Rpt.docx 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.

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; **Exhibit B**), approved on December 28, 2004 (and most recently updated on June 12, 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 (**Exhibit A**). These outfalls are currently sampled monthly and SPDES reports are submitted as required by the Permit #NY0002275.

2.7 Closure Investigation

2.7.1 Overview

A closure investigation was completed in accordance with the NYSDEC-approved *Closure Investigation Work Plan* (OBG 2011a). The results of the closure investigation are documented in the Closure Investigation Report (CIR; OBG_2018a) that was approved by the NYSDEC in August 2018 (NYSDEC 2018a). Previous investigations are also summarized in the CIR. The objectives of the closure investigation were to collect data and information to address the following items:

- Evaluate and characterize the nature and extent of Site-related constituents of interest (COIs);
- Evaluate potential migration pathways of Site-related COIs off-Site;
- Evaluate and characterize the SAA; and
- Provide the data necessary to develop a final closure plan that provides protection to human health and the environment.

As part of this investigation, quarterly sampling was completed for the following media throughout 2012 and 2013:

• Groundwater

- Surface water
- Subsurface leachate
- Surface leachate

In addition to the quarterly sampling, quarterly groundwater elevation monitoring, geologic cross sections, groundwater flow maps, an NMC tracer test, a surface water drainage map, and an NMC macroinvertebrate assessment were completed to assist in the evaluation of Site conditions, and to identify and define the potential migration pathways. One round of sediment samples from NMC was collected during the Closure Investigation to evaluate potential impacts to this area.

2.7.2 Conceptual Site Model

A conceptual site model (CSM) was presented in the CIR, based on the data obtained from the closure investigation, the hydrogeological investigation performed for the SCA, and previous investigations. The CSM is summarized as follows.

<u>Hydrogeology</u>

The Site is situated in the NMC Valley, which is a glacially-scoured bedrock channel. WB 9-15 are composed of Solvay waste that was deposited in constructed settling basins, with the thickness of the Solvay waste up to 70 feet in WB 9-11 and 90 feet in WB 12-15. WB 9-15 overlie the native overburden materials that forms the NMC Valley. WB 9-12, 14, and 15 have been constructed on the original ground surface. WB 13 extends to an approximate depth of 35 feet below the original land surface, overlying a former sand and gravel quarry. The overburden deposits overlying the bedrock consist of glacial till, mixed NMC deposits (a sandy silt with variable amounts of gravel and clay), silt with varying amounts of fine-grained silt and clay, glaciolacustrine silt and clay unit (where present), and anthropogenic fill (within the wastebeds).

Site hydrogeology was divided into seven units: (1) Solvay waste/shallow fill unit, (2) glaciolacustrine unit, (3-5) three mixed NMC units (shallow native, intermediate native, and deep native), (6) till unit, and (7) bedrock unit. The shallow fill unit is composed of Solvay waste within the wastebeds. The glaciolacustrine (silt and clay) deposits are discontinuous beneath WB 9-15 and, where present, act as a locally semi-confining unit due to their low hydraulic conductivity. These glaciolacustrine deposits are present along the south and eastern edge of WB 14, to the east of WB 12, underneath the Interbed Area between WB 9-11, and to the northern edge of WB 9-11. The three mixed NMC units are identified as shallow native, intermediate native, and deep native and are linked hydraulically to the Solvay waste/shallow fill unit where the glaciolacustrine deposits are not present. This connection is also limited due to the low hydraulic conductivity of the Solvay waste in the wastebeds, as well as the WB 12-15 LCCS and WB 9/10 collection system. A portion of overburden groundwater likely discharges to NMC between WB 9-11 and WB 12-15.

For the mixed NMC units, groundwater within the shallow native unit is recharged by precipitation infiltrating through the overburden material and, to a limited extent, Solvay waste/shallow fill groundwater discharging from the wastebeds. The former sand and gravel quarry below WB 13 likely acts as a pathway for flow between the Solvay waste/shallow fill and shallow native units. A portion of the shallow native groundwater flow discharges to NMC, a surface water depression near a former

gravel pit, the Interbed Area between WB 9-11, and other ponded surface water areas, as well as the intermediate native unit. The intermediate native and deep native groundwater units are directly connected and predominantly recharged by groundwater within the valley flowing towards the lake.

Due to low hydraulic conductivity, groundwater flow within the bedrock is slow and generally migrates towards Onondaga Lake following the regional flow of the NMC Valley. The bedrock unit is recharged by precipitation falling on the sides of the valley and infiltrating into the bedrock unit where the till unit is absent. The low permeability of the bedrock limits this interaction, and flow from the deep native groundwater is limited due to the low permeability till.

Constituents of Interest (COIs) and Potential Transport Pathways

The wastebeds received predominantly Solvay waste, with much smaller amounts of assorted comingled waste materials, while WB 9-15 were in operation. Historical releases while the wastebeds were in operation impacted Site groundwater, surface leachate, and subsurface leachate, Site and NMC surface water, and NMC sediment. The COIs in Site media and NMC related to the Site are Solvay waste-related constituents including calcium, sodium, potassium, alkalinity, hardness [as calcium carbonate (CaCO₃)], total dissolved solids (TDS), and chloride. The wastebeds are a source of Solvay waste-related (*i.e.*, chloride) dissolved constituents to NMC and the SAA.

Organic constituents were present within leachate and, to a lesser extent, native overburden groundwater at low concentrations, which is likely attributable to historical releases during operation, upstream sources, or anthropogenic sources (*e.g.*, atmospheric deposition). Viable current migration pathways at the Site include:

- Surface water runoff
- Leaching
- Groundwater transport via shallow native and intermediate native groundwater to adjacent water bodies and downward migration into deep native and bedrock groundwater units
- Wind-borne migration of constituents on particles
- Vapor migration

Off-Site Surrounding Affected Areas

No impacts from Solvay waste were observed in the SAA NYS wetlands. Observations of Solvay waste impacts to floodplains were limited to the swale north of WB 9/10 which is a part of the Site leachate collection system. Based on these closure investigation findings, NYSDEC concurred that no further action is warranted for the SAA wetlands and floodplains under the Consent Order, with certain exceptions (NYSDEC 2017c). The locations and/or environmental media that are exceptions are listed below, along with the other remaining off-Site SAA components which are discussed in the *Off-Site SAA Restoration Plan* (Ramboll 2020c):

- NYS wetland CAM-26, located immediately west of WB 14. Surface water quality in CAM-26 was evaluated with four quarters of surface water sampling in accordance with a 2017 work plan (OBG 2017a) approved by NYSDEC (NYSDEC 2017d).
- NMC, downstream of the Amboy Dam and upstream of NMC/Geddes Brook Remedial Site OU 1, including NMC Creek banks as defined in 6 NYCRR Part 608.1(a)

- Iron Brook, Outfall 019 drainage ditch, former gravel pit, and ponded area north of WB 11
- Groundwater underlying the floodplains.

2.7.3 Closure Investigation Monitoring

As required by the Consent Order, quarterly monitoring of groundwater, surface water, subsurface leachate, and surface leachate has continued since completion of the first four quarters summarized in the *Closure Investigation Report*. Monitoring was performed in accordance with the September 2011 *Wastebeds 9-15 Site Closure Investigation Revised Work Plan* (OBG, 2011a), as modified by NYSDEC's letter dated January 14, 2015 approving a reduced list of monitoring parameters (NYSDEC 2015a). Other quarterly tasks performed since 2012 include measurement of groundwater and surface water elevations, and performance of surface leachate/seep reconnaissance.

Evaluation of quarterly monitoring data is presented in a *Closure Investigation Data Evaluation* report under separate cover. Statistical evaluations were performed to evaluate time trends in groundwater, surface water, and subsurface leachate, seasonal trends, and location trends for subsurface leachate. Findings included:

- Statistical time trend tests of concentration data indicated there are no trends of concern at individual sample locations or in the different media and hydrogeologic units.
- ANOVA between quarters indicated that:
 - o constituent concentrations do not significantly vary seasonally
 - concentrations varied between subsurface leachate sample locations, yet are generally consistent in the manholes located along individual wastebeds.
- Results of the statistical evaluation of quarterly of groundwater, subsurface leachate, and surface water data collected from 2012 through 2017 support refinements in the site monitoring program to focus the scope as part of the *Site Closure Plan* and *SAA Restoration Plan*.²
- Field observations provide sufficient information to evaluate active surface seep management in the *Site Closure Plan*

² 44% of the parameters analyzed have either never been detected, or have been detected in less than 5% of the samples at concentrations below standards and at concentrations that do not represent a significant increasing trend.

3. CLOSURE PROGRAM

3.1 Overview

Closure program components are summarized in **Table 1**, and discussed in more detail in the following subsections. Operation and maintenance of closure components are discussed in the *Wastebeds 9-15 Operation and Maintenance Plan* to be submitted under separate cover, and monitoring of closure components and vegetation maintenance are discussed in the *Wastebeds 9-15 Performance Verification Plan* submitted under separate cover.

The Consent Order provides for implementation of this closure plan in phases over multiple years and as detailed in annual construction work plans, the contents of which are described below in **Section 4**. Sequencing of closure construction tasks and areas will be based on several considerations, including end use opportunities, coordination with public recreational access to surrounding areas, and Site conditions. Annual construction plans will also identify berm stabilization/erosion control and leachate management system modifications to be constructed, as necessary. Annual construction work plans will present detailed design information for the closure tasks targeted for construction in the subsequent construction season. Evaluation of redevelopment opportunities for the Site is ongoing, and if a viable end use is identified for one or more portions of the Site, the annual construction work plans will incorporate cover designs for NYSDEC review to facilitate that end use. The annual construction work plans will also incorporate optimizations to the closure system based on lessons learned from prior phases of closure design and construction.

3.2 Cover System

3.2.1 Scope

The cover system tasks to be completed as part of this closure plan consist of installing cover systems 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, and long-term maintenance and monitoring of cover systems on WB 9-15, excluding the SCA and C&D landfill, and including the shrub willow cover in place on WB 14. The Consent Order allows for use of an approved 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). As discussed in Section 2.3, shrub willows have been evaluated at WB 13 and 14 through bench and pilot studies, demonstration, and additional plantings. Findings from the demonstration are documented in a separate report, including that an ET cover 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 sustainability and ecological diversity benefits. Should the NYSDEC determine, however, through inspection, report review, data evaluation or other information, that the alternative cover system is not sufficiently performing, then Honeywell shall implement such additional actions required by the NYSDEC which may include the design, construction and maintenance of a conventional Part 360 landfill final cover system.

The conceptual design for the ET cover system included in this closure plan incorporates the lessons learned from prior demonstrations. Cover system final designs presented in annual construction work plans will differ for specific areas based on the anticipated future use of the property and individual wastebed conditions. As noted above, Honeywell continues to evaluate redevelopment opportunities for the WB 9-15 properties, and alternate cover systems may be proposed for NYSDEC approval should viable end uses be identified. Conceptual design information for the ET cover system and cover system implementation follows.

3.2.2 Conceptual Design

The conceptual design for the ET cover system is described in this closure plan. Conceptual cover designs for potential redevelopment scenarios are not discussed and will be presented to NYSDEC for discussion and review separately if a viable end use is identified for an area of Wastebeds 9-15, such

as industrial or commercial buildings or parking lots, solar array installation, or recreational uses.

The conceptual design for the ET cover system is based on conclusions and recommendations from the SWSR PDI and Inland Salt Marsh IM, which will be documented under separate cover.

The conceptual design discussion includes the following:

- Site preparation
- Planting
- Maintenance and monitoring.

~1.6 ft Amended Solvay Waste ~ 25 - 70 ft Solvay Waste

Figure 3-1 Shrub Willow Cover Cross Section

Shrub Willow Vegetation

Site Preparation

Site preparation tasks will be performed the year prior to

planting, and include PDI, design development, clearing and grubbing, debris management, organic amendment addition, weed control, and cover crop planting. Penetrometer testing will be performed as a PDI task to identify the presence of the hardpan layer at depths less than 0.5 m (1.6 feet) across the Site areas to be covered. Where shallow hardpan is found to be present, alternate closure approaches will be evaluated during design development. During each annual design/annual construction work plan development phase, topography and grades of proposed shrub willow plots will be compared to the water budget modeling assumptions presented in the Shrub Willow PDI Report. Modeling may be updated as needed for specific willow plot designs, and if model predictions indicate the need for reductions in infiltration to achieve equivalent performance to a traditional landfill cover system, design modifications (e.g., regrading) will be evaluated to reduce ponding.

With the exception of any areas targeted for non-disturbance³, the limits of the cover area will be cleared and grubbed. Small trees will be chipped and stockpiled on-Site for potential reuse. Roots, logs, and stumps that cannot be chipped will be removed and placed on WB 15 in the area designated for exempt fill at the C&D landfill.

Clearing and grubbing of vegetation will facilitate incorporation of organic amendment to the Solvay waste for shrub willow planting and contribute to the smoothed surface required for planting.

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³ During development of final designs for annual construction work plans, consideration will be given to maintenance of groups of mature tree stands and incorporation into the ET cover system.

In areas of shrub willow planting, organic amendment will be applied to the Solvay waste using bulldozers. Tractors with specially constructed 42-inch discing attachments will be used to mix the organic amendment into the Solvay waste to a depth of approximately 0.5 m (1.6 ft). The mixing equipment will make multiple passes to complete mixing. After mixing is complete, the shrub willow plot will be tilled to smooth the surface and reduce the size of larger soil clods in preparation for planting.

Organic amendment will be procured from a supplier. Preparation of organic amendment will be performed in consultation with SUNY ESF, and annual construction work plans will provide specifics regarding the sourced organic amendment material. Compost produced by the Onondaga County Resource Agency and other sources is



Figure 3-2 Tractor with Disc Attachment

being considered for the next phase of shrub willow plantings; SUNY ESF will review nutrient content and fertilizer needs. The organic amendment application rate will be specified based on the nutrient content of the selected organic amendment mixture, as well as the wastebed-specific composition evaluated during the PDI phase. The need for odor monitoring will be reviewed based on the selected organic amendment mixture; use of compost and fertilizer is not anticipated to require odor monitoring.

Following amendment incorporation, the amended areas will be sprayed with a NYSDEC-approved herbicide. A cover crop will be planted to stabilize the area until the following growing season.

Vegetation Planting

In spring of the year following Site preparation, the cover crop will be mowed, disced (harrowed), rolled, and/or sprayed with a NYSDEC-approved herbicide to prepare the area for planting. A selection of 4 to 6 of the best performing shrub willow varieties, based on previous Site testing, will be planted in each cover area, incorporating varieties that have consistently grown well within the Solvay waste material during previous SWSR plantings, as well as new varieties. Willow varieties have been carefully screened based on a series of criteria developed by SUNY ESF to select varieties that will effectively perform as an ET cover. Specifically, shrub willow varieties that are fast growing, able to withstand the abiotic stresses associated with the Solvay waste material, and have a natural resistance to pathogens and pests. One of the most effective ways to manage environmental stresses includes the planting of a



Figure 3-3 Step Planter

broad genetic diversity of shrub willows. Shrub willows are a highly diverse species, with natural genetic variation appearing to exist within the species of shrub willows currently planted as part of the SWSR. New varieties of shrub willows will continue to be incorporated into future plantings to maintain diversity as implementation of the SWSR progresses. Specific varieties will be identified in each annual construction work plan.

Consistent with WB 14, the shrub willows will be planted in double rows. The spacing of the double rows will consist of 2.5 feet within the double row, 6 feet between the double rows and 2 feet between plants along the row. This planting design allows access with agricultural equipment for crop management and harvesting. A step planter will be used to plant the shrub willow plots. The step planter requires a tractor with at least 140 horsepower. In areas where soil conditions are too wet or soft to access with the step planter, hand planting may be used.

3.2.3 Implementation

Cover systems will be implemented in a phased approach per the Consent Order. Approximately 30 to 50 acres or more of cover system will be constructed each year. Conceptual wastebed areas to be covered are depicted in attached **Figure 4** and summarized in **Table 3-1**, along with the anticipated number of years of phased construction. Phased boundaries will be finalized during preparation of detailed designs for annual construction plans. The specific implementation schedule for annual cover construction and sequencing of areas will be based on several considerations, including end use opportunities, coordination with public recreational access to surrounding areas, and Site conditions.

Wastebed. ⁴	Approximate Area (acres)	Estimated Closure Phases	Years.⁵
9/10	70	1 - 2	2 – 3
11	50	1	2
12	120	1 - 3	2 - 4
13	80	1 - 2	2 - 3
14	25	1	2
Total	345	5 – 9	6 - 10

Table 3-1 Wastebeds 9-15 Cover Area Summary

The SWSR PDI demonstrated that the following scheduling considerations are critical to willow establishment and SWSR performance:

- Site preparation and organic amendment will be performed the year prior to planting to allow time for the amended soil to reach an equilibrium condition.
- If ripping is needed to break through shallow hardpan, ripping will be performed the year prior to amendment mixing.
- Planting of willow will occur in May or early June depending on when the soil is dry enough to support heavy equipment.
- A pre-emergent herbicide will be applied immediately after planting, before bud break.

The preparation schedule is presented in **Table 3-2**.

⁴ For the purposes of this closure plan, it is assumed that WB 15 will be closed in accordance with the C&D landfill consent order and the November 2017 *Conceptual Closure Plan* (B&L 2017).

⁵ Timeframes reflect an initial year of Site preparation and a subsequent year of planting for each plot. Specific sequencing of cover system installation will be based on several considerations, including end use opportunities, coordination with public recreational access to surrounding areas, and Site conditions.

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Timing	Task
Before mid-July – Year 1 Cover	Clearing and grubbing; organic amendment mixing
August – Year 1	Weed control
September – Year 1	Cover crop planting
Before mid-June – Year 2	Cover crop plowing, discing, willow planting
May/early June – Year 2	Pre-emergent herbicide application

Table 3-2 Wastebeds 9-15 Cover Area Summary

Monitoring and maintenance of the SWSR cover system is described in the *Performance Verification Plan* to be submitted under separate cover, and incudes staggered harvesting of willow plots every 3-4 years. Harvested willow chips are potentially suitable for a variety of uses including biomass energy applications (heat, power), mulch and compost, erosion control, stabilization, and animal bedding. To date, harvested willow chips from WB 14 have been beneficially used at Honeywell construction sites to line pedestrian paths and access roads, to construct erosion control barriers in lieu of silt fence, and to stabilize wet soil and fill material. Willow chips were also tested as animal bedding with positive results. Additional uses currently being evaluated for the harvested willow in conjunction with SUNY ESF include a biomass boiler, a blended pellet production trial and subsequent boiler test burns; sale to a renewable energy producer. Composting of the harvested willow is another potential end use for production of future organic amendment, and/or as feedstock for local mulch producers.

3.3 Berm Stabilization and Erosion Control

3.3.1 Scope

As documented in the Berm Stabilization and Erosion Control - Interim Measure Report (OBG 2013a), historical information regarding the berms was reviewed and a Site reconnaissance was performed in 2012. Overall, the wastebed berms were found to be in good structural condition. Recommendations were developed to address observed erosion and stabilization needs on Site. These remedies were developed to mitigate erosion and stabilize portions of the berm while increasing natural habitats. The use of biotechnical slope protection (e.g., planting native species) is a proven, long-term sustainable solution for erosion control and berm stability at WB 9-15. Priority tasks were completed during the Berm Stabilization and Erosion Control IM (OBG 2016c). Remaining berm vegetation tasks were completed in 2018-2019 in accordance with the September 2018 Berm Stabilization and Erosion Control Phase 2 design (OBG 2018b) approved by NYSDEC on October 1, 2018. Access road stormwater drainage improvement tasks identified in the 2013 report are discussed in Section 3.5, Stormwater Management. Monitoring and maintenance of vegetation and erosion controls, as well as miscellaneous berm conditions targeted for continued monitoring during the original reconnaissance, are addressed in the Performance Verification Plan to be submitted under separate cover.

3.4 Leachate Management

3.4.1 Scope

The leachate management component of Site closure includes continued operation and maintenance of existing leachate collection and conveyance systems, including seep mitigation systems; continued routine inspection of the Site for seepage locations and conditions; and enhancement of seep mitigation systems as needed. Operation and maintenance of the existing leachate collection and conveyance and seep mitigation systems is addressed in the *Operation and Maintenance Plan* to be submitted under separate cover. Continued inspections for seepage locations and conditions is discussed in the *Performance Verification Plan* to be submitted under separate cover. The conceptual design and implementation of leachate management tasks are described in the following sections.

3.4.2 Conceptual Design

As discussed in **Section 2**, various systems have been installed at the Site to manage leachate from Wastebeds 9-15. Systems are depicted on the attached site plan (**Figure 1**) and described in detail in the following sections, along with future enhancements to the leachate management system.

Wastebeds 9-11

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, 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 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 was installed along the southern perimeter of Wastebeds 9/10 in 2013 and consists of a leachate collection trench, three interceptor walls, six collection wells, and a lift station (O'Brien & Gere 2013b). The leachate collection trench contains an 8-feet deep, 6-inch diameter perforated leachate collection pipe in a gravel-filled trench. Leachate collected in the system is directed to a lift station (6 feet x 6 feet x 17 feet deep) located near the Interbed Pump Station. The collection system is approximately 2,900 linear feet long. In addition to the leachate collection system, three separate interceptor walls were installed between the leachate collection system and NMC to reduce the quantity of groundwater reaching NMC. The interceptor walls are approximately 750 linear feet long for one and 100 linear feet long for each of the other two and 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 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 smaller of the two retention ponds (Pond 1). An extension to this system 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-If 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 Wastebed 11 in 2014 and 2015 and consists of a leachate collection trench, five collection wells, lift station modifications, and interbed forcemain modifications (O'Brien & Gere 2015). The leachate collection trench contains a 14-23-feet deep, 6-inch diameter perforated leachate collection pipe in a 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 feet 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 smaller of the two retention ponds (Pond 1).

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 is intended to intercept seepage expressing itself 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 is intended to intercept seepage before it expresses itself in the ponded areas north of WB 11. 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 seepage to the Interbed located between WB 9/10 and WB 11. Water from the Interbed is pumped via the Interbed Pump Station to the Retention Ponds adjacent to the Former Camillus Pump Station.

Two ponded areas north of WB 11 were previously impacted by leachate as a result of a coarse fill drainage layer conveying Wastebed seepage to the ponded areas. Following installation of the WB 11 North Seep Mitigation System, which mitigated flow to these ponded areas, the ponds were restored as described in the *Surrounding Affected Areas Restoration Plan* (Ramboll 2020a)

Wastebeds 12-15

The LCCS was installed in 2002 to intercept water from the wastebed drainage layer and from drainage pipes placed within this layer during construction of the beds. The collection system was installed along the eastern, western, and northern perimeters of Wastebeds 12-15, and consists of 6-inch diameter perforated HDPE pipe placed within a trench and backfilled with crushed stone. The collection trench is lined with a geotextile filter fabric to minimize the migration of fine-grained materials into the trench. A geocomposite drainage net installed near the surface of the wastebed berms and covered with a geomembrane and soil layer extends from the leachate collection trench to about 20 feet above the trench. This drainage layer is designed to intercept and convey surface seeps into the collection trench.

As part of subsequent seep mitigation projects (Phases 1, 2, and 6), additional perforated collection pipes were installed higher on the berms where active seeps had been observed. The Phase 1 effort was completed in June 2007 and consisted of the installation of a 1,700 linear feet collection trench along the northern berm of Wastebed 12. The Phase 2 effort was completed in December 2007 and consisted of the installation trench along the installation of a 1,500 linear feet collection trench along the western berm of Wastebed 14. The Phase 6 effort was completed in December 2015 and included installation of 925 linear feet of new seep collection systems, and existing seep collection system improvements. The leachate collected in the 6-inch perforated pipes (including the seep mitigation systems) flows via gravity into the conveyance system through a series of lateral tie-ins. The conveyance system consists of 12-inch diameter solid-wall HDPE pipe with associated cleanouts and concrete manholes (MH) to permit cleaning and inspection. The conveyance system slopes from the two high points (MH-01 and MH-18) on opposite sides of the system to a common low point (MH-15).

As part of the installation of the LCCS, the discharge pipes from weir boxes located within the wastebeds were also intercepted for collection. Those weir boxes were used when the wastebeds were in active service to drain supernatant from the Solvay waste slurry. Wastewater collected in the weir boxes was conveyed to perimeter drainage swales via the discharge pipes, which are now connected to the LCCS at manholes.

In 2019, seep aprons were installed in two areas at Wastebeds 12-15 to enhance collection of seepage in the LCCS. Seep aprons were installed along the western side of Wastebed 13/14 and Wastebed 15. The seep apron located along the western side of Wastebed 13/14 consists of approximately 3.1 acres of geomembrane-lined seep apron installed to direct seep flow into the existing 6-inch perforated HDPE LCCS collection pipe. The seep apron consists of 6-inches of 4-inch minus washed stone overlaid by 40-mil textured LLDPE geomembrane liner. Approximately 1.1 of the 3.1 acres of seep apron included a layer of uniaxial geogrid installed above the geomembrane liner. The liner is covered in 6-inches of habitat subgrade and 6-inches of topsoil and seed. The seep apron located along the western side of Wastebed 15 consists of approximately 0.25 acres of geomembrane-lined seep apron installed to direct seep flow into the existing 6-inch perforated HDPE LCCS collection pipe. The seep apron consists of 6-inches of 4-inch minus washed stone overlaid by 40-mil textured LLDPE geomembrane geomembrane liner. The liner is covered in 6-inches of topsoil and seed. The seep apron located along the western side of Wastebed 15 consists of approximately 0.25 acres of geomembrane-lined seep apron consists of 6-inches of 4-inch minus washed stone overlaid by 40-mil textured LLDPE geomembrane liner. The liner is covered in 6-inches of habitat subgrade and 6-inches of topsoil. Due to the location of the WB 15 Seep Apron, a Freshwater Wetlands Permit was issued by NYSDEC for this project on June 25, 2019.The Erie Canalways Trail was subsequently constructed over the Wastebed 15 seep apron during Fall 2019.

From the low point (MH-15) of the collection system, leachate flows by gravity through the solid wall 12-inch diameter HDPE conveyance pipe to a 5 feet diameter by 19.5 feet deep wet well at the LCCS Pump Station. As part of the 2015 LCCS Enhancement IM, two new submersible pumps were installed in the wet well with a pumping capacity of 700 gallons per minute (gpm) with one pump operating and 1300 gpm when both pumps are operating. The two prior existing centrifugal Gorman Rupp pumps remain installed/on-line to provide backup; these pumps have a pumping capacity of 400 gpm with one pump operating and 475 gpm with two pumps operating. An emergency generator was also installed as backup during a power outage.

The acid injection system consists of a 5,000-gallon fiberglass hydrochloric acid tank with secondary containment that is located adjacent to the LCCS Pump Station building. The acid is pumped from the storage tank via an acid metering pump, whose speed is proportional to the discharge flow rate from the leachate pumps. Acid is pumped through a double containment polyvinyl chloride (PVC) pipe to the wet well where the acid and leachate are mixed to adjust the pH. The water from the LCCS pump station has a typical pH value of 10 to 11 prior to the acid addition; the target pH following acid addition is 8.5. Measurements are collected with a pH probe located in the adjacent vault. A pH alarm generated by the programmable logic controller is connected to an autodialer that notifies a Honeywell representative when pH readings are not within the specified range of 5.5 to 10.5 standard units (S.U.).

Leachate is conveyed to the smaller of the two retention ponds (Pond 1) via two underground force mains: a 6-inch diameter HDPE force main, and an additional 10-inch diameter HDPE force main installed as part of the LCCS IM in 2015 for added capacity. Flow rates are measured and recorded using an in-line magnetic flow meter located within the vault adjacent to the LCCS Pump Station.

Retention Ponds

As described in Section 2.1.3, leachate from each of the collection systems at WB 9-11 and WB 12-15 is conveyed to the two retention ponds east of WB 12. The retention ponds are used for hydraulic equalization and temporary storage of leachate from WB 9-15, prior to conveyance to Metro. The leachate sources enter Pond 1, which serves as a primary settling pond for suspended solids, and then flows into Pond 2 before entering the FCPS wet well. Leachate is conveyed to Metro for treatment via the FCPS through a system of 24-inch and 30-inch force mains, in accordance with an Onondaga County Industrial Wastewater Discharge Permit (**Exhibit B**). As part of this permit, Honeywell is required to submit quarterly self-monitoring reports (SMRs). The quarterly SMRs contain flow and analytical data collected monthly from the FCPS wet well for volatile organic compounds (VOCs), metals, and certain water quality parameters required by the permit. Discharge volumes from the LCCS pump station to the retention ponds are also included as an attachment to the SMR.

The County can direct Honeywell to discontinue discharging to Metro from the FCPS during periods of heavy precipitation. Historic Metro shutdown events between February 2011 and August 2018 totaled 145.⁶, ranging in duration from 1 to 33 days, and averaging 4 days in duration. A 2015 evaluation of the leachate flow during historic shutdowns indicated a maximum leachate flow of 14.5 MG in April 2011 during a 13-day shutdown associated with a precipitation event (6.3 inches) greater than the 100-yr storm (5.8 inches).

The retention ponds were originally constructed by Onondaga County in cooperation with Allied, to collect supernatant flow from the settling basins for pumping to Metro for use in Metro's tertiary treatment. The original depth of the ponds was approximately 16 feet below existing grade, and the total volume of the ponds as designed was approximately 45 million gallons (CS Consulting Engineers 1991). The retention ponds were constructed into a silt and clay layer, and artesian conditions were encountered during pond construction (CS Engineers 1991). It was concluded from an inflow-outflow study conducted in 1991 that groundwater was flowing into the ponds(CS Engineers 1991).

In order to refine the understanding of retention pond subsurface materials and hydraulics, a PDI was conducted in 2018. PDI activities are described in the *Wastebeds 9-15 Retention Ponds Pre-Design*

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⁶ Based on Willis Avenue Groundwater Treatment Plant records; Metro shutdowns generally consistent for Willis Groundwater Treatment Plant and FCPS.

Investigation Report (OBG 2018c), and included bathymetric and geophysical surveys, as well as direct sensing and direct probing soil borings. Based on the findings of the PDI, hydraulic gradients and geologic conditions indicate that the retention ponds for WB 9-15 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 a low permeable confining geologic unit that is present. Given these findings that the retention ponds are not leaking, continued use of the retention ponds is recommended. Justification for this recommendation is presented in **Appendix A**.

Seep Mitigation

Past 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 incorporated into the *Performance Verification Plan* to be submitted under separate cover.

Seep mitigation progress will continue to be evaluated and reported annually. Further seep mitigation system enhancements will be considered as closure plan implementation progresses, based on seepage and Site conditions observed during the quarterly reconnaissance detailed in the accompanying *Performance Verification Plan* to be submitted under separate cover.

3.4.3 Implementation

Leachate management implementation components of the closure program include the following actions:

- Continued operation and maintenance of existing leachate collection and conveyance and seep mitigation systems, will be performed in accordance with the *Operation and Maintenance Plan* to be submitted under separate cover.
- Continued use of the Retention Ponds for leachate storage as described in detail in **Appendix A**. Monitoring details will be discussed in the *Performance Verification Plan*, and operation and maintenance of the Retention Ponds will be performed in accordance with the *Operation and Maintenance Plan*, both to be submitted under separate cover.
- Continued quarterly inspection for seepage locations and conditions, will be performed in accordance with the *Performance Verification Plan* to be submitted under separate cover.
- Should routine seepage inspections indicate the need for enhancements to seep mitigation measures in the future, necessary PDI tasks will be identified and performed to facilitate design and construction. Design, construction, and reporting will be incorporated into the annual construction work plans and completion reports described in Section 4.

3.5 Storm Water Management

3.5.1 Scope

The storm water management component of Site closure includes: access road stormwater drainage improvements, rehabilitating existing storm water drainage systems to mitigate historic Solvay waste impacts to storm water discharges and restore capacity; modifying the temporary SCA storm water collection and conveyance system to render the system suitable for long-term storm water management; incorporating storm water management features as part of the phased cover systems;

and maintaining storm water drainage systems. The conceptual design and implementation of storm water management tasks are described in the following sections. Maintenance of the storm water drainage systems is addressed in the *Operation and Maintenance Plan* to be submitted under separate cover.

3.5.2 Conceptual Design

The conceptual design approach to WB 9-15 storm water management is discussed in the following sections.

Access Road Storm Water Drainage Improvements

Various sections of access roads were identified for drainage improvements in the *Berm Stabilization and Erosion Control Interim Measure Report* (OBG 2013a), to reduce concentration of storm water on the access roads, and subsequent erosion of the existing roads and adjacent berms. Priority tasks were completed during the Berm Stabilization and Erosion Control IM (OBG 2016c). Access road conditions and recommendations noted in the 2013 report were re-evaluated during an August 2019 reconnaissance. Design documents for the Access Road Drainage Improvements were submitted to NYSDEC on February 20, 2020. Attached **Table 2** presents a summary of the 2015 IM completed work, 2019-2020 completed work, and updated recommendations, which include no further action for some areas. Based on the updated evaluation, **Table 2** and the attached **Figure 5** present the sections of access roads to be addressed during closure plan implementation.

In the 2013 report, water bars were recommended for installation along these access roads to control the storm water discharge points. Water bars were installed in priority areas during the berm stabilization and erosion control IM in 2015. For the remaining areas in **Table 2**, alternate storm water management measures are recommended and presented in **Table 2** (e.g., modification of access road slopes in conjunction with routine access road repair and maintenance to direct storm water flow to adjacent berms, with stabilization of the berm areas receiving the diverted flow with vegetative or physical means.) Stormwater modeling was performed to size stormwater management features appropriately.

Recommendations for several locations identified in the 2013 report were changed to no further action, based on the rationale summarized in attached **Table 2.**

Existing Storm Water Drainage System

Portions of storm water drainage swales were rehabilitated in 2019-2020. Vegetative growth and surficial substrate were removed from the drainage swale upstream of Outfall 019 as a maintenance activity in May 2019. In addition, installation of a geomembrane liner and groundwater collection system within the existing unlined drainage swale located along the east side of WB 12 that discharges to Outfall 019 was installed to mitigate the expression of leachate seepage within the swale, as discussed in a NYSDEC email notification dated October 9,2019. The liner and collection system consist of approximately 1.5-acres of geomembrane liner and 1,600-ft of collection trench installed below the swale liner limits. The collection system will connect to manhole locations 14 and 15 of the existing LCCS and discharge to the retention ponds.

The drainage swale between the southern corner of WB 14 and Outfall 017 was rehabilitated to improve flow paths within the swale and reduce leachate impacts to the swale; design documents were provided to NYSDEC in a separate submittal on December 18,2019. Additional portions of storm water drainage swales may be rehabilitated in the future if needed to remove leachate-impacted substrate and vegetative growth which reduce the capacity of the drainage system. A reconnaissance will be performed during development of the first annual construction work plan to identify if there are targeted areas for removal, and annual construction work plans will identify the limits of leachate-impacted substrate and vegetation to be excavated from the storm water drainage swales leading to Outfalls 011, 017, 018, and 019 and the Interbed Area, and placement of materials in areas of adjacent wastebeds which have not yet been covered/closed. Annual construction work plans will also identify the appropriate restoration plans for each drainage area. Following the rehabilitation, the storm water drainage system will be regularly maintained in accordance with the *Operation and Maintenance Plan* to be submitted under separate cover.

Storm Water Management Associated with SCA

Existing storm water management facilities associated with the SCA include permanent diversion berms, interception berms, and perimeter drainage channels. Storm water is currently directed to two lined basins adjacent to the SCA (East and West Basins) and pumped through overland piping to a drainage swale leading to Outfall 018. As part of the design of the final cover system for WB 13, a permanent storm water discharge configuration will be designed and incorporated into the annual construction work plan addressing WB 13. SCA storm water management facilities are inspected and maintained in accordance with the *Post-Closure Care Plan* for the SCA (Parsons and Beech and Bonaparte 2017).

Storm Water Management Associated with Future Cover Systems

Wastebed cover system designs and access road storm water management area designs will incorporate facilities and features needed to manage storm water in accordance with applicable NYS regulations. Specific storm water management features will depend on the wastebed configuration, modeled storm water flows, and functionality of existing weir boxes. Modifications to existing wooden weir boxes, planting of salt marshes, targeted regrading and placement of soil in low areas, and other drainage mechanisms will be considered during wastebed cover designs. Storm water modeling will be performed as part of cover system designs to estimate post-closure storm water flows, and if needed, modifications to the site storm water management facilities will be designed to meet NYS storm water management requirements. Storm water management facilities will not include infiltration facilities on top of the wastebeds.

The need for a nutrient management plan will be evaluated based on the specific amendment selected for each closure phase, and if needed, provided with the Annual Construction Work Plan submittals. If compost is used as organic amendment, runoff from amended shrub willow plots is not expected to negatively impact storm water quality.

The *Storm Water Pollution Prevention Plan* (SWPPP) developed for the WB 14 shrub willow cover installation will be updated with annual Construction Work Plan submittals to address applicable construction tasks proposed for the upcoming year.

3.5.3 Implementation

Storm water management implementation components of the Site closure program include the following actions:

- Design documents for access road stormwater drainage improvements were submitted to NYSDEC on February 5, 2020, and items noted in Table 2 have been completed . Remaining items were completed in December 2020.
- Rehabilitating storm water drainage swales as needed will be incorporated into annual Construction Work Plans. PDI work will be performed to identify the limits of impacted substrate and vegetation for removal, and removal and restoration details will be specified in annual Construction Work Plans.
- Modifying the temporary SCA storm water collection and conveyance system for long-term storm water management will be incorporated into the design associated with the annual Construction Work Plan(s) for WB 13 closure activities.
- Incorporating storm water management into the designs associated with annual Construction Work Plans for wastebed-specific cover systems.
- Performing routine site inspections and maintenance of storm water drainage system in accordance with the *Operation and Maintenance Plan* to be submitted under separate cover.

3.6 Closure and Post-Closure Operation, Maintenance and Monitoring

Two plans have been developed to describe operation, maintenance and monitoring tasks to provide for the continued effectiveness of the closure components:

- The Operation and Maintenance Plan to be submitted under separate cover addresses operation and maintenance of leachate management and storm water management facilities. The operation and maintenance activities include the inspection, monitoring, maintenance, and/or replacement of the components comprising the pump stations, force mains, leachate collection systems, seep mitigation systems, and storm water management systems.
- The *Performance Verification Plan* to be submitted under separate cover addresses monitoring activities and cover system/vegetation maintenance activities to confirm effective performance of closure components.

Monitoring and maintenance shall continue for a minimum of 30 years after closure

4. **REPORTING**

The following reporting will be performed during phased implementation of the Site Closure Plan.

4.1 Annual Construction Work Plans

The Consent Order requires submittal of the first Annual Construction Work Plan to NYSDEC for the first year of phased closure construction within 30 days after receipt of the NYSDEC's approval of the *Site Closure Plan*. Submittal of Annual Construction Work Plans for subsequent years of closure construction will be due no later than January 15 each year. Annual Construction Work Plans will continue to be submitted until the final cover system is complete.

Each Annual Construction Work Plan will include details for the following aspects of the construction planned for the following year:

- The areas in which closure task construction are to be undertaken, including cover installation, berm stabilization and erosion control measures, leachate management enhancements, if needed, and SAA restoration tasks, as applicable
- The design plans and specifications for the construction tasks
- A schedule for construction; and
- Identification of non-routine maintenance activities that are to be conducted.

4.2 Annual Interim Closure Construction Certification Reports

In accordance with Consent Order requirements, Interim Closure Construction Certification Reports (CCRs) will be submitted to NYSDEC by March 1st of each year until the Final Closure CCR is approved by the NYSDEC. Interim Closure CCRs will detail Site closure and SAA restoration construction activities completed during the previous calendar year. The Annual Interim Closure CCR will be combined with annual reporting described in the *Operation and Maintenance Plan* and *Performance Verification Plan*, both to be submitted under separate cover, and the March quarterly progress report, described below in **Section 4.5**. Annual reporting will include quantitative data to document progress towards compliance with the discharge concentration limits in the SPDES permit.

4.3 Final Closure Construction Certification Report

A Final Closure CCR will be submitted to NYSDEC within 45 days after completion of closure construction activities identified in the approved *Site Closure Plan*. The Final Closure CCR will be prepared to meet the requirements of 6 NYCRR §360-2.15(d)(7), including professional engineering certification that construction activities identified in the approved *Site Closure Plan* were undertaken in accordance with the requirements of the *Site Closure Plan*, and completed in accordance with the requirements of 6 NYCRR §360, the Consent Order, and conditions of NYSDEC approval.

4.4 Monitoring Data Submittals

Tables summarizing analytical sample data collected in accordance with the approved *Performance Verification Plan* will be provided to NYSDEC within 90 days after each sampling event. Evaluation of sample data will be discussed as part of annual reporting described in the *Performance Verification Plan*, to be submitted under separate cover.

4.5 Quarterly Progress Reports

In accordance with the Consent Order, quarterly progress reports will be submitted to NYSDEC to describe Consent Order activities performed, analytical data received, deliverables completed and submitted, comments received, work plan modifications, schedule considerations, and personnel changes during the preceding three months. Quarterly progress reports will be submitted to NYSDEC by the 10th day of March, June, September, and December each year until the Final CCR is submitted, or as agreed otherwise by NYSDEC. As noted in **Section 4.2**, the March quarterly progress report will be combined with other annual construction completion, operation and maintenance, and performance verification reporting.

5. SCHEDULE

Closure construction for WB 9-15 will be phased over several years to address the total acreage and is anticipated to take between 6 and 10 years. The specific implementation schedule for annual closure tasks and sequencing of areas will be based on several considerations, including end use opportunities, coordination with public recreational access to surrounding areas, and Site conditions. Honeywell will keep NYSDEC apprised of potential end use opportunities that may drive closure schedule priorities. The first annual construction work plan will be submitted following closure plan approval, and the first annual phase of closure construction will commence in the construction season following NYSDEC approval of the construction work plan.

Operation and maintenance of leachate and storm water management systems will be ongoing in accordance with the *Operation and Maintenance Plan*, to be submitted under separate cover. The schedule for performance verification and monitoring is detailed in the *Performance Verification Plan*, to be submitted under separate cover. The schedule for performance verification tasks will be refined, as appropriate, with NYSDEC approval as closure components are implemented, vegetation is established, end uses are established, and performance data are collected and evaluated.

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Ramboll - Wastebeds 9-15 Site Closure Plan

TABLES

I:\Honeywell.1163\72386.Sb-9-15-2019-De\Docs\Reports\Revised Closure and Restoration Plan Documents\Closure Plan\Revised Per NYSDEC\R37911 SB9-15_2020 Dec_RD_Closure Plan Final_Draft Report.docx



Table 1 Site Closure Overview

Closure Feature	Component	Locations	Tasks	Document
		WB 14, portion of WB 13	Maintenance, monitoring	Performance Verification (PV) Plan
Cover system	Shrub willow sustainable remedy	WB 9/10, 11, 12, 13 ¹ , 14-4, 15 ²	Design, construction, maintenance, monitoring	Closure Plan, Annual Construction Work Plans, PV Plan
	Alternate cover system	To be determined. ³	Design, construction, maintenance	Annual Construction Work Plans, PV Plan
Porm	Berm vegetation	WB 9/10, 11, 12, 13, 15	Maintenance. ⁴	PV Plan
stabilization/erosion	Access road drainage improvements	WB 9/10, 11, 12, 13, 14	Construction, maintenance. ⁵	Closure Plan, PV Plan
control	Berm reconnaissance	WB 9/10, 11, 12, 13, 15	Site-wide inspection, monitoring of identified potential erosion features	PV Plan
		WB 9/10 Collection Trench and Pope's Grove Pump Station	Operation & maintenance (O&M)	O&M Plan
		WB 12-15 Leachate Collection and Conveyance System (LCCS) and Pump Station	O&M	O&M Plan
		Interbed and Interbed Pump Station	O&M	O&M Plan
	Leachate collection/conveyance and seep mitigation systems	Retention Ponds and Former County Pump Station	0&M	O&M Plan
		WB 12 Phase 1 and 6 Seep Mitigation Systems	O&M	O&M Plan
		WB 12 North Liner Extension	Construction, Monitoring	PV Plan
		WB 13/14 Seep Aprons	Monitoring	PV Plan
Leachate		WB 14 Phase 2 Seep Mitigation System	0&M	O&M Plan
management/seep mitigation		WB 9/10 Phase 4 Seep Mitigation System and Low Lift Pump Station	O&M	O&M Plan
initigation		WB 11 Phase 5 Seep Mitigation System	O&M	O&M Plan
		WB 11 North Seep Mitigation System	O&M	O&M Plan
		Outfall 019 East Ditch Liner and Collection System	O&M	O&M Plan
		Seep Mitigation System enhancements, if needed. ⁶	Design, construction, O&M	Annual Construction Work Plans, O&M Plan updates
		WB 9/10, 11, 12, 13, 14, 15	Inspection	PV Plan
	Surface leachate reconnaissance	Swales draining to Outfalls 011, 017, 018, and 019; Interbed Area	Rehabilitation design, construction, maintenance	Closure Plan, Annual Construction Work Plan, O&M Plan
Chamman	Mitigation of leachate migration via former storm water intake pipe/bedding	WB 13	Design, construction, O&M	Closure Plan, Annual Construction Work Plan, O&M Plan
Storm water management	SCA final storm water collection/conveyance	WB 9/10, 11, 12, 13 ⁷ , 15 ⁸	Design, construction, O&M	Closure Plan, Annual Construction Work Plan, O&M Plan

¹ Excluding Sediment Consolidation Area (SCA)

² Excluding areas used for Camillus C&D Landfill; extent to be determined in the future pending agreements between Town of Camillus and Honeywell.

³ Alternate cover system may be proposed in the event of a viable redevelopment opportunity for a portion of WB 9-15.

⁴ Includes maintenance of vegetation installed during 2015 Berm Stabilization and Erosion Control Interim Measure, and of future constructed vegetation.

⁵ Includes maintenance of access road drainage improvements installed during 2015 Berm Stabilization and Erosion Control Interim Measure, and of future constructed improvements.

⁶ Based on evaluation of seep reconnaissance observations.

⁷ Excluding Sediment Consolidation Area (SCA)

⁸ Excluding areas used for Camillus C&D Landfill; extent to be determined in the future pending agreements between Town of Camillus and Honeywell.

ENVIRONMENT & HEALTH



Table 1 Site Closure Overview							
Closure Feature	Component	Locations	Tasks	Document			
	Cover system storm water management	Various	Monitoring	PV Plan			
Closure and Post-Closure Monitoring	Water quality, leachate, and NMC physical/biological monitoring						



Table 2a – Access Road Stormwater Management Areas

2015 Access Road Stormwater Management Improvements

Wastebed	Location ID	Approximate Length (ft)	Average Slope	Description	2013 Report Recommended Remedy	August 2019 Observations	
WB-14	1	400	13.0%	Main access road ascending berm between Wastebeds 14 and 15.	Rip rap along drainage ditch. Water bars every 75 ft directing drainage.	NA	Ri di
WB-14	2	500	11.2%	Access road ascending berm on western side of Wastebed 14.	water bars every 75 ft directing drainage.	NA	w
WB-14	3	266	13.5%	Access road ascending berm between Wastebeds 13 and 14.	water bars every 75 ft directing drainage.	NA	w
WB-12 and 13	6	900	6.7%	SCA access road ascending berm between Wastebeds 12 and 13.	Rip rap along sides and drainage ditch. Water bars every 100 ft directing drainage.	NA	Ri 1(
WB-9/10	13	330	11.5%	Access road ascending berm on northwestern corner of Wastebed 9/10.	water bars every 75 ft directing drainage.	NA	w
WB-9/10	17	480	12.5%	Access road ascending berm on southern portion of Wastebed 9/10.	water bars every 75 ft directing drainage.	NA	w

1/4

Designed Remedy

Rip rap along drainage ditch. Water bars every 75 ft lirecting drainage.

vater bars every 75 ft directing drainage.

vater bars every 75 ft directing drainage.

Rip rap along sides and drainage ditch. Water bars every LOO ft directing drainage.

vater bars every 75 ft directing drainage.

vater bars every 75 ft directing drainage.



Table 2b – Access Road Stormwater Management Areas

2019 – 2020 Access Road Stormwater Management Improvements

Wastebed	Location ID	Approximate Length (ft)	Average Slope	Description	2013 Report Recommended Remedy	August 2019 Observations	Designed Remedy
WB-13 and 14	4	6,750	0.1%	Access road at top of berm around Wastebeds 13 and 14.	Fortify drainage swales with rip rap where needed, ensure drainage is not being focused down berm at any points.	One low spot directing flow down berm with small rilling down berm. Point added to Collector App.	Filled low point in road to produce sheet flow (50ft x 15ft x 0.5ft). Regraded rill and berm below low spot (20ft x 20ft).
WB-13	5	300	12.7%	Access road ascending berm on northern side of Wastebed 13.	water bars every 75 ft directing drainage.	Road is pitched up berm, however rilling from focused storm water.	Limited space, stone added to raise grade creating swale on up berm side.
WB-12	7	2,000	1.8%	Mid berm Access road running along norther portion, and northeastern corner of Wastebed 12.	Fortify drainage swales with rip rap where needed, ensure drainage is not being focused down berm at any points.	Road in good shape, minus some low spots. East end addressed during initial phase of berm construction with Road 6, west end could be addressed with Road 8.	Regraded and resurfaced with 6- in. of stone over Mirafi 500X.
WB-12	8	700	7.4%	Access road ascending berm on eastern portion of Wastebed 12.	water bars every 100 ft directing drainage.	Some erosion and rills observed. Road currently under heavy use and upkeep during construction activities.	Regraded and pitched road to drain up berm direction. Added 6-in. of stone over Mirafi 500X.
WB-9/10	12	330	9.7%	Access road ascending berm on western side of Wastebed 9/10.	water bars every 100 ft directing drainage.	Significant rilling in both tire lanes. Material being washed out and settling at base of road.	Regraded to filled rills, pitched road to drain up berm direction, resurfaced with 6-in. of stone over Mirafi 500X.
WB-9/10	14	1,300	4.0%	Access road ascending berm on northern side of Wastebed 9/10.	water bars every 125 ft directing drainage.	Deep rills in road ascending berm, begin to grade out above mid berm road. Mid berm road west of 14 appears to have been damaged during regrading, mounding, cracks, and erosion observed.	Adjusted length is approximately 725 ft. Resurfaced and pitched the road with 6-in of stone.
WB-9/10	16	170	16.5%	Access road ascending berm on southern portion of Wastebed 9/10.	water bars every 75 ft directing drainage.	bottom 50-75 ft. have tire burn outs/loose material. Road used to access Phase 4 infrastructure.	Adjusted length is approximately 75 ft. Resurface with 6-in. of stone.
WB-11	22	700	4.9%	Access road ascending the northwestern corner of Wastebed 11.	water bars every 125 ft directing drainage.	Side roads in good shape without erosion. Main road has exposed soil with some slag, little to no erosion observed.	Adjusted length is approximately 350 ft. Resurfaced with 6-in. of stone.
WB-11	23	500	6.0%	Access road ascending the northeastern corner of Wastebed 11.	water bars every 100 ft directing drainage.	Both directions ascending berm have exposed slag and minor rills/erosion.	Resurfaced with 6-in. of stone.

2/4



Table 2c – Access Road Stormwater Management Areas

No Further Action

Wastebed	Location ID	Approximate Length (ft)	Average Slope	Description	2013 Report Recommended Remedy	August 2019 Observations	Recommendation
WB-15	10	650	7.7%	Main access road ascending berm towards southeast corner of Wastebed 15.	Rip rap along drainage ditch. Water bars every 75 ft directing drainage.	Road in good shape, no erosion observed.	Evaluate existing swale for potential rip rap. Ensure road remains pitched up berm towards swale.
WB-9/10	11	4,100	0.6%	Mid berm and top of berm access roads on western portion of Wastebed 9/10.	Fortify drainage swales with rip rap where needed, ensure drainage is not being focused down berm at any points.	Some low spots filled during initial phase. No further actions outside of area around Road 12.	All activities associated with Road 12
WB-9/10	15	1,000	3.4%	Access road ascending berm on northeastern corner of Wastebed 9/10.	water bars every 125 ft directing drainage.	A large portion of the road was resurfaced during site activities.	No further action unless road will see increased traffic.
WB-11	18	1,100	5.3%	Access road ascending berm on southeastern corner of Wastebed 11.	water bars every 100 ft directing drainage.	Vegetated and in good shape. No road or berm erosion observed. Road likely restored after Phase 5 construction.	No further action unless road will see increased traffic.
WB-11	19	720	3.1%	Access road ascending to the northeast on the southern portion of Wastebed 11.	water bars every 125 ft directing drainage.	Vegetated and in good shape. No road or berm erosion observed. Road likely restored after Phase 5 construction.	No further action unless road will see increased traffic.
WB-11	20	1,394	3.3%	Access road ascending to the northwest on the southern portion of Wastebed 11.	water bars every 125 ft directing drainage.	Road in good shape, no signs of erosion on berm or down gradient. Some unvegetated areas near road to be addressed during berm plantings in area.	No further action unless road will see increased traffic.
WB-11	21	450	8.9%	Access road ascending the southwestern corner of Wastebed 11.	water bars every 100 ft directing drainage.	Road in good shape, no signs of erosion on berm or down gradient. Some unvegetated areas near road to be addressed during berm plantings in area.	No further action unless road will see increased traffic.

3/4



Table 2d – Access Road Stormwater Management Areas

			2020 Recommendations			
Wastebed Loca	tion ID Approximat (ft)	e Length Average Slope	Description	2013 Report Recommended Remedy	August 2019 Observations	Recommendation
WB-12	9 800	9.3%	Access road ascending berm towards southeastern corner of Wastebed 12.	water bars every 100 ft directing drainage.	No longer accessible from top or bottom of road. Minimal erosion, 50%-75% Vegetative Cover	3" of mulch and Old Field Successional Planting.
WB-9/10	12 330	9.7%	Access road ascending berm on western side of Wastebed 9/10.	water bars every 100 ft directing drainage.	Significant rilling in both tire lanes. Material being washed out and settling at base of road.	Add culvert to drain swale to interbed.
WB-9/10	14 1,30) 4.0%	Access road ascending berm on northern side of Wastebed 9/10.	water bars every 125 ft directing drainage.	Deep rills in road ascending berm, begin to grade out above mid berm road. Mid berm road west of 14 appears to have been damaged during regrading, mounding, cracks, and erosion observed.	Add culvert to drain swale to WB 9/10 collection system.

Ramboll - Wastebeds 9-15 Site Closure Plan

FIGURES

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HONEYWELL INTERNATIONAL INC. WASTEBEDS 9-15 CLOSURE PLAN

FIGURE 01

RAMBOLL US CORPORATION A RAMBOLL COMPANY







RAMBOLL US CORPORATION A RAMBOLL COMPANY

DECEMBER 2020

FIGURE 02

HONEYWELL WASTEBEDS 9-15 CLOSURE PLAN GEDDES AND CAMILLUS, NY

TOPOGRAPHIC MAP

1,000



2,000 - Feet

— 10-FT



2,000

LEGEND

- ▲ PERMITTED OUTFALLS
- --- FORMER ERIE CANAL
- PORTION OF NINEMILE CREEK WITHIN SAA, INCLUDING POTENTIALLY IMPACTED SEDIMENTS, SURFACE WATER, GROUNDWATER, BANKS, AND FLOODPLAINS
- NYS FRESHWATER WETLAND NO FURTHER ACTION UNDER ORDER¹

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)

NYS FRESHWATER WETLAND CAM-26

WASTEBEDS 9-15 SURROUNDING **AFFECTED AREAS**

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

4,000

FIGURE 03 DECEMBER 2020

RAMBOLL US CORPORATION A RAMBOLL COMPANY









LEGEND

COMPLETED 2109 COMPLETED 2015 MONITOR ONLY

9 ACCESS ROAD LOCATION ID

0 1,000 2,000 L I Feet

ACCESS ROAD STORM WATER MANAGEMENT AREAS

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

FIGURE 05

DECEMBER 2020

RAMBOLL US CORPORATION A RAMBOLL COMPANY



Ramboll - Wastebeds 9-15

APPENDICES

I:\Honeywell.1163\72386.Sb-9-15-2019-De\Docs\Reports\Revised Closure and Restoration Plan Documents\Closure Plan\Revised Per NYSDEC\37911 SB9-15_2020 Nov_RD_Draft_ ClosPln rdin strkt 101420 MSM notes_Ramboll.docx Ramboll - Wastebeds 9-15

APPENDIX A RETENTION PONDS CONTINUING USE JUSTIFICATION



SETTLING BASINS 9-15 RETENTION PONDS CONTINUING USE JUSTIFICATION

Project name	Settling Basins 9-15 Site Closure
Project no.	72386
Recipient	Honeywell
Document type	Appendix
Version	1
Date	December 28, 2020
Prepared by	Robert Trent
Checked by	Maureen S. Markert, P.E.
Approved by	Douglas M. Crawford, P.E.
Description	Appendix to Settling Basins 9-15 Site Closure Plan – Continued use of Retention Ponds

CONTENTS

1.	Introduction	1
2.	Retention Pond Description	1
3.	Environmental Evaluation	2
4.	Economic Evaluation	2

1. Introduction

Wastebeds (WB) 9-15 cover approximately 662 acres in the towns of Camillus and Geddes, Onondaga County, New York (**Figure 1**). Two retention ponds are presently used for hydraulic equalization and temporary storage of leachate, as well as portions of groundwater and stormwater from WB 9-15. Flows from WB 12-15 are gravity fed to the retention ponds, but flow from WB 9-11 is pumped from the Interbed. Flows enter Pond 1 and flow into Pond 2 before entering the Former Camillus Pump Station (FCPS), which conveys the flow to the Metropolitan Syracuse Wastewater Treatment Plant (Metro) through a system of force mains in accordance with an Onondaga County Industrial Wastewater Discharge Permit #801. The primary constituent present in site leachate, regional groundwater, and stormwater is chloride (OBG 2017).

2. Retention Pond Description

The existing on-site 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 ponds were constructed in the late 1970s by Onondaga County in cooperation with Allied Chemical, to collect supernatant flow from the WBs for pumping to the Metro where the high alkalinity and calcium content of the liquids was utilized for tertiary treatment. The original depth of the ponds was approximately 16 feet below existing grade, and the total volume of the ponds, as designed, was approximately 45 million gallons (CS Consulting Engineers, Inc. 1991). As noted below, the retention ponds are proposed to continue to be used; such

use is expected to result in equivalent environmental performance relative to a tank farm and have no significant adverse impact on public health, safety or welfare, the environment or natural resources.

3. Environmental Evaluation

The proposed continued use of the retention ponds is expected to result in equivalent environmental performance and have no significant adverse impact on public health, safety or welfare, the environment or natural resources. The retention ponds and surrounding area are underlined with a silt and clay unit with a low hydraulic conductivity that creates a confined to semi-confined aquifer beneath the silt and clay extent. Hydraulic gradients and geologic conditions of the confined aquifer indicate that the retention ponds are not discharging to groundwater but are gaining groundwater through a small area where the silt and clay is thin or not present. The regional groundwater flow is from the south and the hydraulic potential of the aquifer is up into the retention ponds through the area where the silt and clay is thin along the southern edge (OBG. 2018). Groundwater flow out of the ponds is restricted by the upward gradient from the regional groundwater flow from the south, the low permeability of the silt and clay layer underlining the ponds, and the active management of the pond elevation. Pumping of the retention ponds will be controlled to maintain the upward gradient within the underlying aguifers, further minimizing the potential for leachate to discharge to groundwater, as described in the Operation and Maintenance Plan to be submitted under separate cover. In addition, the pond levels will be maintained with approximately 2-ft freeboard to prevent discharge above the ponds' capacity to surface water. Metro shutdowns are typically 1 to 2 days in duration, and the potential for overfill and release to surface water will be minimized by controlling discharge rates from the Interbed to the retention ponds. The water in the retention ponds does not present a safety or public health risk; total dissolved solids (TDS) is the predominant leachate constituent from chloride (salt), and the average pH of the retention pond water is 8, based on 2018-2019 measurements.

4. Economic Evaluation

A feasibility cost estimate for the engineering, procurement and construction of the storage tank facility and associated infrastructure was prepared with an anticipated accuracy range of minus 15% to plus 20% variability based on limited project definition. The range of the estimate in Year 2019 dollars is \$120 to \$183 million. Further, operation and maintenance of a storage tank facility would be significantly higher than current O&M costs associated with the existing retention ponds. Strict compliance with the landfill regulations (6NYCRR Part 360-2.7) would require up to 80 million gallons (MG) of storage, based on the rolling 90-day total flows from 2018 to present. A tank system of this capacity is estimated to require approximately 20 4-MG nominal capacity tanks which would each be approximately 145-ft in diameter and approximately 36-ft tall. The tanks would be installed with constructed secondary containment and structural pilings over an estimated footprint of approximately 15 to 16 acres. The location of this size tank farm is limited due to the size of the area needed for the tank farm and associated infrastructure. The only area within the site that could potentially accommodate this footprint is the undeveloped property south of the ponds (see attached Figure 2). This area would be visible to the public from Route 695, as well as the Erie Canalways recreational trail currently being constructed (see Figure 2). Transition to a tank farm for leachate storage would subsequently require filling and regrading of the existing retention ponds, which would require sourcing and transport to the site of an estimated 273,000 cu yd of soil.

5. Conclusions and Recommendation

Continued use of the existing retention ponds is recommended due to the low risk of environmental impacts and the estimated land disturbance and aesthetic impacts of a new tank storage facility.

The proposed continuation of use is expected to result in equivalent environmental performance and will have no significant adverse impact on public health, safety or welfare, the environment or natural resource

References

CS Consulting Engineers, Inc. 1991. *Inflow/Outflow Study Allied Lagoons*. October 1991. OBG. 2017. *Wastebeds 9-15 Closure Investigation Report*. November 2017. OBG. 2018. *Wastebeds 9-15 Retention Ponds Preliminary Design Investigation Report*. August 2018. Ramboll - Wastebeds 9-15

EXHIBITS

Ramboll - Wastebeds 9-15

EXHIBIT A SPDES DISCHARGE PERMIT #NY0002275

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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. V- Solvay, Onondaga County LOCATION:

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

CC:

Trendon Choe **Environmental Analyst** Enc Permit 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



Department of Environmental Conservation

SPDES Permit Statement of Basis – Surface Water Discharges

Permittee:Honeywell International Inc.Facility:Honeywell International Inc.SPDES No:NY0002275

Date:February 11, 2020Permit Writer:Steve Wood

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.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 Discharge Class (CL): 01 Toxic Class (TX): Т Major Drainage Basin: 07 Sub Drainage Basin: 02 Water Index Number: Ont. 66-12-12-P154 Compact Area: **IJC**

SPDES Number: DEC Number: Effective Date (EDP): Expiration Date (ExDP): Modification Dates: (EDPM)

NY0002275 7-3132-00002/00002 02/01/2017 01/31/2022 04/01/2020

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").

PERMI	TTEE NAME AND ADDRESS			
Name:	Honeywell International Inc.	Attention: John McAuliffe, Syracuse Prog		ogram
Street:	301 Plainfield Road, Suite 330	Manager		
City:	Syracuse	State: NY	Zip Code: 13212	
is author	ized to discharge from the facility described below:			

FACILITY NAME AND ADDRESS

Name:	Honeywell International Ir	ic.							
Location	Solvay (V)					County: Ono	ndaga		
(C,T,V):									
Facility Address:	1700 Milton Avenue								
City:	Geddes				State:	NY	Zip Code:	13209	-0006
From Outfall	015	at Latituda.	43 °	03 '	55 "	& Longitudo:	76 °	11 '	30 "
No.:		at Latitude.				& Longhude.			
into receiving wat	ers known as: Onondaga La	ake					Class: C		
and:									
Outfall 15	5A – Internal Outfall			Outfall 01	7 – Grou	ndwater. Class	GA		

Outfall 15B – Internal Outfall Outfall 011 – Ninemile Creek, 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.
	201 DI 1 C 11 D 1 C 1/ 220

Street:	301 Plainfield	Road, Suite 330		*
City:	Syracuse		State: NY	Zip Code: 13212
Responsible O	fficial or Agent:	John McAuliffe, Syracuse Program Mana	ager	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: Him n. Bullings-	Date:	03/03/2020

Outfall 018 - Ninemile Creek, Class C

Outfall 019 - Geddes Brook, Class C
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PERMIT LIMITS, LEVELS AND MONITORING DEFINITIONS

OUTFALL		WASTEWATE	R TYPE		RECEIV	NG WAT	ER		EFFECT	IVE	EXPIRING	
	This	s cell describes the type of	wastewat	er authorized	This cell list	This cell lists classified		The	The date this page		The date this page is	
	for o	lischarge. Examples includ	e process	s or sanitary	waters of the	e state to v	vhich	star	ts in effec	t. (e.g.	no long	er in effect.
	was	tewater, storm water, non-c	contact co	ooling water.	the listed ou	tfall disch	arges.	ED	P or EDPI	(M	(e.g. Ex	DP)
							TD	ITC	C () (D)	E EDEO		
PARAMETE	R	MINIMUM		M	AXIMUM		UN	115	SAMPL	E FREQ.	SAN	APLE I YPE
e.g. pH, TRC,		The minimum level that n	ust be	The maximum	m level that n	nay not	SU	, °F,	See	below	s	ee below
Temperature, D	<u>.0.</u>	maintained at all instants i	n time.	be exceeded	at any instant	in time.	mg/	, etc.	<u> </u>			
DAD AN (ETTED	T	FEELUENT LIMIT or	COM	DI LANCE LE		ACTIO	NI I	ΤΓ	NUTC	SAM	א ב	SAMDIE
PARAMETER		EFFLUENT LIMIT OF		PLIANCE LE	VEL/IVIL			U	1113	EDEOU		TVDE
	$\frac{1}{1}$	ALCOLATED LEVEL	D (1)		1		նե	TL:-		E		TITL E
	Lir	nit types are defined	For the	purposes of	compliance	Action		includ	can	Example	S Dalla	Examples
	bel	ow in Note 1. The effluent	assessm	ient, the permit	analytical	Levels	are	merue		2/wool	Dany,	melude
	lim	it is developed based on	the ap	proved EPA	anaryticar	monitori	ng	01 10	ow, pri,	J/WEEK,		grad, 24
	the	more stringent of	detectio	with the low	romulaated	requirem	fined	temp	aratura	2/month		composite
	roo	wired under the Clean	under	10CER Part	136 for the	as uc. below	in	or	Jature,	monthly		and 3 grab
	W	ter Act or New Vork	determi	nation (of the	Note	2	conce	entration	duarterly	2/vr	samples
	Sta	te water quality standards	concent	rations of	narameters	which tr	igger	Exam	nles	and year	lv. All	collected
	Th	e limit has been derived	present	in the san	nole unless	additiona	al	includ	de ug/l.	monitori	ng	over a 6
	bas	ed on existing	otherwi	se specified. I	f a sample	monitori	ng	lbs/d.	etc.	periods	0	hour
	ass	umptions and rules. These	result is	s below the de	tection limit	and po	ermit	,		(quarterl	у,	period.
	ass	umptions include	of the	most sensiti	ve method,	review	when			semianni	ial,	
	rec	eiving water hardness, pH	complia	nce with the	permit limit	exceeded	I.			annual, e	tc) are	
	and	l temperature; rates of this	for that	parameter wa	as achieved.					based up	on the	
	and	l other discharges to the	Monito	ring results the	at are lower					calendar	year	
	rec	eiving stream; etc. If	than th	is level must	be reported,					unless		
	ass	umptions or rules change	but sha	ll not be used t	to determine					otherwis	е.	
	the	limit may, after due	complia	ince with the	e calculated					specified	in .	
	pro	cess and modification of	limit.	This ML can	be neither					this Pern	nit.	
	this	s permit, change.	lowered	I nor raised	without a							
		•	modific	ation of this pe	ermit.							

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)
рН	6.0	9.0	SU	Monthly	Grab	
Temperature		90	°F	Monthly	Grab	

PARAMETER	EFFLUENT CALCULAT Monthly Avg	LIMIT or ED LEVEL Daily Max	COMPLIANCE LEVEL / ML	ACTION LEVEL	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
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			MPV100nL	Quarterly	Grab	
Coliform, Total		Monitor			MPV100nL	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	

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	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	

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 FREOUENCY	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.

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)
рН	6.0	9.0	SU	Monthly	Grab	5

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL			E ACTION LEVEL	^J UNITS	SAMPLE	SAMPLE TYPE	FN
	Monthly Avg	Daily Max	LEVEL/ ML	LEVEL		FREQUENCY	ITE	-
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	

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)
рН	6.5	8.5	SU	Monthly	Grab	5

PARAMETER	EFFLUENT LIMIT or CALCULATED LEVEL		L COMPLIANCE A	E ACTION LEVEL	UNITS	SAMPLE	SAMPLE	FN
	Monthly Avg	Daily Max	Max			FREQUENCY	IYPE	
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	

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)
рН	6.0	9.0	SU	Monthly	Grab	5

						2010/00/00/00/00/00/00/00/00/00/00/00/00/	the second s	
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		v	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	

......

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	E ACTION LEVEL	UNITS	SAMPLE	SAMPLE TYPE	FN
· ·	Monthly Avg	Daily Max	LEVEL/ ML	LEVEL	-	FREQUENCY	1112	
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 <u>11&12</u> 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

<u>Testing Requirements</u> - 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 <u>10</u>:1 for acute, and <u>10</u>: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.

<u>Monitoring Period</u> - WET testing shall be performed at the specified sample frequency during calendar years ending in $\underline{2}$ and 7.

<u>Reporting</u> - 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 $TUc = (TUa) \times (10)$ 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.

<u>WET Testing Action Level Exceedances</u> - 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. <u>Report Mass And Concentration</u>

The permittee must report both the concentration (in mg/L, μ g/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 μ g/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. <u>General</u> 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. <u>Compliance Deadlines</u> 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.
- Facility Review The permittee shall review all facility components or systems (including, but not limited to, material storage 3. 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, crosscontamination 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 NY-2C identified in Tables 6 through 10 of SPDES application Form (available at that are 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. <u>13 Minimum BMPs:</u> 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	6. Security	10. Spill Prevention and Response
2.	Reporting of BMP Incidents	7. Preventive Maintenance	11. Erosion and Sediment Control
3.	Risk Identification and Assessment	8. Good Housekeeping	12. Management of Runoff
4.	Employee Training	9. Materials/Waste Handling, Storage,	13. Street Sweeping
5.	Inspections and Records	and compationity	

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)

- Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater From Construction Activity to 5. 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.
- 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. <u>Spill Cleanup</u> - 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. <u>Discharge Operation</u> - 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. <u>Discharge Screening</u> - 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. <u>Discharge Monitoring</u> - 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. <u>Discharge Reporting</u> - 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. <u>Prohibited Discharges</u> - 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., BOD₅ 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. <u>General</u> - 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. <u>MMP Elements</u> - 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. <u>Monitoring</u> - 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. <u>Control Strategy</u> - 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. <u>Bulk Chemical Evaluation</u> - 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. <u>Semiannual Status Report</u> – 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. <u>MMP Modification</u> - 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 28 th 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
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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
 - 2. Duty to reapply
 - 3. Need to halt or reduce activity not a defense
 - 4. Duty to mitigate
 - 5. Permit actions
 - 6. Property rights
 - 7. Duty to provide information
 - 8. Inspection and entry
- C. Operation and Maintenance
 - 1. Proper Operation & Maintenance
 - 2. Bypass
 - 3. Upset
- D. Monitoring and Records
 - 1. Monitoring and records
 - 2. Signatory requirements
- E. Reporting Requirements
 - 1. Reporting requirements
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 - 4. Monitoring reports
 - 5. Compliance schedules
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 - 7. Other noncompliance
 - 8. Other information
 - 9. Additional conditions applicable to a POTW
 - 10. Special reporting requirements for discharges that are not POTWs

6 NYCRR Part 750-2.1(e) & 2.4 6 NYCRR Part 750-1.16(a) 6 NYCRR Part 750-2.1(g) 6 NYCRR Part 750-2.7(f) 6 NYCRR Part 750-1.1(c), 1.18, 1.20 & 2.1(h) 6 NYCRR Part 750-2.2(b) 6 NYCRR Part 750-2.1(i) 6 NYCRR Part 750-2.1(a) & 2.3

6 NYCRR Part 750-2.8 6 NYCRR Part 750-1.2(a)(17), 2.8(b) & 2.7 6 NYCRR Part 750-1.2(a)(94) & 2.8(c)

6 NYCRR Part 750-2.5(a)(2), 2.5(c)(1), 2.5(c)(2), 2.5(d) & 2.5(a)(6) 6 NYCRR Part 750-1.8 & 2.5(b)

6 NYCRR Part 750-2.5, 2.6, 2.7 & 1.17 6 NYCRR Part 750-2.7(a) 6 NYCRR Part 750-1.17 6 NYCRR Part 750-2.5(e) 6 NYCRR Part 750-1.14(d) 6 NYCRR Part 750-2.7(c) & (d) 6 NYCRR Part 750-2.7(e) 6 NYCRR Part 750-2.1(f) 6 NYCRR Part 750-2.9 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 <u>one (1)</u> month reporting period to the locations specified below. Blank forms are available at the Department's Albany office listed below. The fin reporting period begins on the effective date of this permit and the reports will be due no later than the 28th day of the mon 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 Oper Regional Water Engineer and/or County Hea	ation Report" (form 92-15-7) to the: alth Department or Environmental Control Agency specified below			
	Send the <u>original</u> (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	Send the first <u>copy</u> (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: (518) 402-8177	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 analysis is performed by a certified laboratory or where su shall be included in the calculations and recording of the c	g point(s), or waters of the State than required by the permit, where the analysis is not required to be performed by a certified laboratory, lata on the corresponding DMRs.			
D.	Calculations which require averaging of measurements	shall utilize an arithmetic mean unless otherwise specified in this			

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.

Ramboll - Wastebeds 9-15

EXHIBIT B INDUSTRIAL WASTEWATER DISCHARGE PERMIT #801



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,

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ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION

Brt

Tom Rhoads, P.E. Commissioner

TO/ts

Attachment

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



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.

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Part A:

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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 closedloop 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.

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

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

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.

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
i i	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

Table II: Self-Monitoring Sampling Requirements - Sewer #1
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 2010 Date

Part B:

6

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 publiclyowned 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).
 - 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.

	Discharge Limitation			
Parameter	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		
рН	*****	5.5 – 10.5 S.U.		
Temperature	*****	150°F		
5-Day Biochemical Oxygen Demand (BOD₅)	3	3		
Total Suspended Solids (TSS)	3	3		
Total Kjeldahl Nitrogen (TKN)	3	3		
Total Phosphorus (TP)	3	3		
Total Toxic Organics	0.14	0.14		
Flowrate	Note ⁵	Note ⁵		

Table I: OCDWEP Effluent Limitations

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.

- 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.

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.

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
 - 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 selfmonitoring 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.

<u>METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES</u>, 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 <u>removed or separated</u> 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:

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Self-Monitoring Report Forms

Self-Monitoring Report – Form A							
Period Covered	From:				To:		
Date Due:			Date Su	bmitted:			
Explain Sampling Methods							
Water Usage:				· · · · ·			
Water Use During Reportin	g Perio	d (gallons):					
Source(s) of Water (water)	retailer)						
Water Consumed and No	t Disch	arged to the Co	unty Sev	ver System	n:		
Part of Product:			Boile	er Make-Up:			
			SPD	ES Outrall:			
On-Site Disposal:			Othe	er (specity):			
Total Wastewater Discha	rged To	County Sewer	System:				
Sewer #:							
Gallons:		<u> </u>	Î NI				
Number of Operating Days	:		Num	iber of Emp	loyees	1	
Do the monitoring results s	how ful	compliance? (Y	es/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 Nam	ne:						
Title:							

Form B: Industrial SMR/NOV Data Sheet

Indu	industry: Industry Code:					
UNL	* ALL UNITS ARE IN (mg/l) ESS 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.) BOD₅ TSS TP TKN NH ₃ -N TOTAL CYANIDE (CN-T) AMENABLE CYANIDE (CN-A) PHENOL OIL AND GREASE (O&&G)					
MISC. METALS	SILVER (Ag) CADMIUM (Cd) CHROMIUM (Cr) HEXAVALENT CHROMIUM (Cr-HEX) COPPER (Cu) MERCURY (Hg) NICKEL (Ni) LEAD (Pb) ZINC (Zn) MOLYBDENUM (Mo) FLASHPOINT (°F OR °C) SULFIDES (S=) SULFATE TTO SCAN (EPA #)					
		The Following Lines	Are For OCDDS Use	e Only		
(OCDDS Sample Number	datas	and the second second	Facilities		
Г	ata Forwarded To Lab	date:	and the state of the	Engineer:		
	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.

Date	Average Flow Rate (gpm)	Maximum Flow Rate (gpm)	Daily Wastewater Discharge (gallons)
1			
2			
3			
4		100 M	1211(c) 52539
5			
6			
7			
8			
9			
10			
11			States and the second
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			A VILLE AND A STREET
30			
31			

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Date	pН	Daily Wastewater Discharge (gallons)
1		
2		
3		
4		
5		
6		
7		
8		
9	DELLIS - CL. SI	
10		
11		
12		
13		
14		100 (pc. 3823 m
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		

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

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Form F: Equipment Calibration Summary					
Date of Calibration	Instrument Description	Res	ults of Calibrat	ion	Signature and Title of Representative
	Instrument Type (pH/Flow):	pH 4	As Found	As Left	Who Performed Calibration:
	Location/Description:	рН 7 рН 10			Company:
-		Comments:			Signature:
	Instrument Type (pH/Flow):	nH 4	As Found	As Left	Who Performed Calibration:
	Location/Description:	pH 7 pH 10			Company:
		Comments:			Signature:
	Instrument Type (pH/Flow):		As Found	As Left	Who Performed Calibration:
	Location/Description:	pH 7 pH 10			Company:
		Comments:			Signature:
	Instrument Type (pH/Flow):	nH 4	As Found	As Left	Who Performed Calibration:
er.	Location/Description:	pH 7 pH 10			Company:
		Comments:			Signature:
	Instrument Type (pH/Flow):	pH 4	As Found	As Left	Who Performed Calibration:
	Location/Description:	рН 7 рН 10			Company:
		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	
is in the					

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:

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USEPA Priority Pollutants

USEPA Priority Pollutants

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001	Acenaphthene	068	Di-n-butyl phthalate
002	Acrolein	069	Di-n-octyl phthalate
003	Acrylonitrile	070	Diethyl phthalate
004	Benzene	071	Dimethyl phthalate
005	Benzidine	072	1,2-benzanthracene (Benzo(a) anthracene)
006	Carbon tetrachloride (Tetrachloromethane)	073	Benzo(a)pyrene (3,4-benzo-pyrene)
007	Chlorobenzene	074	3.4-benzofluoranthene (Benzo(b) fluoranthene)
008	1.2.4-trichlorobenzene	075	11.12-benzofiuoranthene Benzo(k) fluoranthene)
009	Hexachlorobenzene	076	Chrysene
010	1 2-dichloroethane	077	Acenaphthylene
011	1 1 1-trichloroethane	078	Anthracene
012	Hexachloroethane	070	1 12-benzonen/lene (Benzo(abi) pen/lene)
012	1 1-dichloroethane	020	Fluorene
013		000	Phoenethrono
014	1,1,2,2 toirablereathere	001	1.2.5.6 dibertanthraeana (Diberta(h) estbraeana)
015		002	1,2,5,0-dipenzantifiacene (Dipenzu(II) antifiacene)
010	Cilioloethalle Ric/2 shlassathul) athas	003	Duceno
010	Bis(2-chioroethyl) ether	004	Pyrene
019	2-chloroethiy vinyl ether (mixed)	085	Tetrachioroethylene
020	2-chioronaphtnaiene	086	Toluene
021	2,4,6-trichlorophenol	087	Irichloroethylene
022	Parachlorometa cresol	088	Vinyl chloride (Chloroethylene)
023	Chloroform (Trichloromethane)	089	Aldrin
024	2-chlorophenol	090	Dieldrin
025	1,2-dichlorobenzene	091	Chlordane (technical mixture and metabolites)
026	1,3-dichlorobenzene	092	4,4-DDT
027	1,4-dichlorobenzene	093	4,4-DDE (p,p-DDX)
028	3,3-dichlorobenzidine	094	4,4-DDD (p,p-TDE)
029	1,1-dichloroethylene	095	Alpha-endosulfan
030	1,2-trans-dichloroethylene	096	Beta-endosulfan
031	2,4-dichlorophenol	097	Endosulfan sulfate
032	1,2-dichloropropane	098	Endrin
033	1,2-dichloropropylene (1,3-dichloropropene)	099	Endrin aldehyde
034	2,4-dimethylphenol	100	Heptachlor
035	2.4-dinitrotoluene	101	Heptachlor epoxide (BHC-hexachlorocyclohexane)
036	2.6-dinitrotoluene	102	Alpha-BHC
037	1.2-diphenvlhydrazine	103	Beta-BHC
038	Ethylbenzene	104	Gamma-BHC (lindane)
039	Fluoranthene	105	Delta-BHC (PCB-polychlorinated biohenvis)
040	4-chlorophenyl phenyl ether	106	PCB-1242 (Arochlor 1242)
041	4-bromophenyl phenyl ether	107	PCB-1254 (Arochior 1254)
042	Bis(2-chloroisonroovl) ether	108	PCB-1221 (Arochior 1221)
043	Bis(2-chloroethoxy) methane	109	PCB-1232 (Arochior 1232)
044	Methylene chloride (Dichloromethane)	110	PCB-1248 (Arochlor 1248)
045	Methylichloride (Chloromethane)	111	PCB-1260 (Arochlor 1260)
045	Methyl bramide (Bramamethane)	112	PCB-1016 (Arochlor 1016)
040	Bromoform (Tribromomethane)	112	Toyoobaga
049	Dishlarahramamathana	114	Antimony
040	Chloradibramamathasa	145	Amonio
051	Househlerehutadiono	110	Arberten
052	Hexachloropulatione	110	Aspesios
053	nexachioromyclopentadiene	117	Beryllium
054	Isophorone	118	
055	Naphthalene	119	Chromium
056	Nitrobenzene	120	Copper
057	2-nitrophenol	121	Cyanide, Total
058	4-nitrophenol	122	Lead
059	2,4-dinitrophenol	123	Mercury
060	4,6-dinitro-o-cresol	124	Nickel
061	N-nitrosodimethylamine	125	Selenium
062	N-nitrosodiphenylamine	126	Silver
063	N-nitrosodi-n-propylamine	127	Thallium
064	Pentachlorophenol	128	Zinc
065	Phenol	129	2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)
066	Bis(2-ethylhexyl) phthalate		
067	Butyl benzyl phthalate		

Appendix C:

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Site Map



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