Area 1, Phase 2 Storm Water Pollution Prevention Plan Parcel 3 Development

Honeywell Baltimore Works Site
Baltimore, Maryland

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Project No.: 0572981

Prepared for:
Honeywell International, Inc., U.S. Environmental Protection Agency, Region III
Maryland Department of the Environment

Prepared by:
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ATTACHMENT 1 INSPECTION FORMS

Acronyms and Abbreviations

Name	Description
AST	Aboveground Storage Tank
bgs	Below ground surface
BMPs	Best Management Practices
° C	Degrees Celsius
CAMP	Construction Air Monitoring Plan
CDP	Conceptual Development Plan

Name	Description
CFR	Code of Federal Regulations
CHASP	Contractor Health and Safety Plan
COC	Contaminant of Concern
COMAR	Code of Maryland Regulations
COPR	Chromium Ore Process Residue
CR	Crusher Run
CrVI	Hexavalent Chromium
CSSA	Cover Soil Stockpile Area
DDP	Detail Development Plan
DOT	U.S. Department of Transportation
DW	Deep Well
EC	Emergency Coordinator
EE	Engineering Evaluation
EMMP	Environmental Media Monitoring Plan
EPS	Expanded Polystyrene
ERM	Environmental Resources Management, Inc.
ERP	Emergency Response Plan
ERS	Environmental Remediation System
ESC	Erosion and Sediment Control
EWMI	Environmental Waste Minimization, Inc.
F	Fahrenheit
GCL	Geosynthetic Clay Line
GGMP	Groundwater Gradient Monitoring Plan
H&S	Health and Safety
HASP	Health and Safety Plan
HAZMAT	Hazardous Materials
HAZWOPER	Hazardous Waste Operations and Emergency Response
HB	Hydraulic Barrier
HDPE	High Density Polyethylene
HMS	Head Maintenance System
Honeywell	Honeywell International Inc.
HPD	Harbor Point Development LLC
HSC	Health and Safety Coordinator
HSG	Health and Safety Guidance
HW	Hazardous Waste
IC	Ion Chromatography

Name	Description
LLDPE	Linear Low Density Polyethylene
LOD	Limits of Disturbance
m	Meter
m^3	Cubic Meters
MDE	Maryland Department of the Environment
MDOT	Maryland Department of Transportation
MD SWM	Maryland Stormwater Design Manual
mg	Milligram
MHMP	Material Handling and Management Plan
MLW	Mean Low Water
MMC	Multimedia Cap
MPs	Monitoring Plates
MSDSs	Material Safety Data Sheets
msl	Mean Sea Level
MSS	Master Supervisory Station
MPs	Monitoring Plates
NAAQS	National Ambient Air Quality Standard
NELAP	National Environmental Laboratory Accreditation Program
ng	Nanogram
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OCP	Oil Control Program
OSHA	Occupational Safety and Health Administration
oz/sy	Ounce per square yard
PAHs	Polycyclic Aromatic Hydrocarbons
PAM	Perimeter Air Monitor
PE	Professional Engineer
PELs	Permissible Exposure Limits
PM	Project Manager
PM_{10}	Particulate Matter with aerodynamic diameter < 10 micrometer
PPE	Personal Protection Equipment
psf	Pounds per square foot
PVC	Polyvinyl Chloride
QA	Quality Assurance
QAPP	Quality Assurance Project Plan

Name	Description
QC	Quality Control
RAMs	Real-time Aerosol Monitors
RCRA	Resource Conservation and Recovery Act
RIC	Remote Intelligent Controllers
RQ	Reportable Quantity
S-B	Soil-bentonite
SWP	Solid Waste Program
SPCC	Spill Prevention, Control, and Countermeasure
SPRP	Spill Prevention and Response Plan
SSMP	Surface Soil Monitoring Plan
SSO	Site Safety Officer
SW	Shallow Well
SWM	Stormwater Management
SWPPP	Stormwater Pollution Prevention Plan
µg	Microgram
µg/m^3	Micrograms per cubic meter
USDOJ	U.S. Department of Justice
µm	Micrometer
USEPA	U.S. Environmental Protection Agency
UST	Underground Storage Tank
VCP	Voluntary Clean-up Program

1. INTRODUCTION

Harbor Point Parcel 3 Development LLC (the Developer) and its consultants have prepared this Stormwater Pollution Prevention Plan (SWPPP) for the Harbor Point Parcel 3 Development (Project). The Project is planned for a portion of the former AlliedSignal Baltimore Works Site (Site), located in Baltimore, Maryland. Figure 1 shows the Site location. The Project will consist of constructing two, seven-story Office Buildings, an open space public area referred to as "Point Park", a promenade along the bulkheaded shoreline, and general site development, such as sidewalks, landscaping, a parking garage, a drop-off area, and other ancillary features.

This SWPPP has been prepared as part of the Detailed Development Plan (DDP) for the Project, and is to be used in conjunction with the Material Handling and Management Plan (MHMP), Spill Prevention and Response Plan (SPRP), and the Construction Air Monitoring Plan (CAMP). This SWPPP presents best management practices for managing stormwater runoff during construction activities identified in the DDP. This SWPPP pertains specifically to the Project, and terminates post-construction following completion of the activities identified in the DDP.

1.1 Regulatory Background

SWPPP has been prepared in accordance with the United States Environmental Protection Agency (EPA) and Maryland Department of the Environment (MDE) regulations governing stormwater runoff. The federal requirements regarding stormwater runoff are codified under the National Pollutant Discharge Elimination System (NPDES) regulations, found in Title 40, Part 122, Subpart B of the Code of Federal Regulations (40 CFR 122.26).

USEPA has delegated NPDES authority in the State of Maryland to MDE. The State regulations governing the storm water discharge permit program are codified in the Code of Maryland Regulations in Title 26, Subtitle 08 and Subtitle 17 (COMAR 26.08 and COMAR 26.17). A General Discharge Permit for Stormwater Associated with Construction Activities (General Discharge Permit) will be obtained for the Project. The management activities to be in compliance with the General Discharge Permit are provided in the Project's Erosion and Sediment Control Plan.

This SWPPP was developed in accordance with the requirements of *USEPA's NPDES Multi-Sector General Permits for Storm Water Discharges Associated with Industrial Activities* as published in the Federal Register on October 30, 2000. A copy of this SWPPP must be kept on site at all times.

1.2 Purpose of SWPPP

The purposes of the SWPPP are to:

1. Evaluate potential pollution sources at the Project that could come in contact with stormwater; and
2. Select and implement appropriate measures to mitigate or control the discharge of pollutants in stormwater runoff.

The pollution prevention approach focuses on three objectives:

1. Identify sources of pollution that could potentially affect the quality of stormwater discharges associated with the Project;
2. Describe and outline implementation of practices to minimize and control pollutants in stormwater discharges associated with the Project; and
3. Provide a mechanism for compliance with the terms and conditions of the General Discharge Permit.

This SWPPP describes activities, materials and physical features of the Project that may contribute pollutants to stormwater runoff and the procedures and methods that are used to minimize these impacts. This document is to be revised accordingly if conditions and practices at the Project change.

1.3 Consistency with Other Plans

This SWPPP serves as the site document relevant to stormwater pollution prevention. Special Condition Part IV-C.3 of the General Discharge Permit states that the SWPPP may incorporate parts of other plans or permits that are relevant to stormwater pollution prevention.

This SWPPP is the document relevant to stormwater pollution prevention for the Project, and does not incorporate parts of any other plans or permits. However, other plans that have been prepared to support the Project and its DDP are as follows:

1. The MHMP has been prepared to address the handling and management of solids (asphalt, stone aggregates, concrete and wood debris and soil) and liquids (storm water, decontamination water and groundwater) that may be encountered during the intrusive activities ("intrusive activities" are defined in the MHMP and reiterated below in Section 3 for the reader's convenience) associated with the Project. The MHMP also includes Best Management Practices (BMPs) for dust control measures to minimize dust emissions;
2. The SPRP has been prepared that describes the measures to be implemented by the developer and its Contractors to prevent hazardous material and petroleum product discharges (i.e., spills) from occurring, and to mitigate the effects of a discharge, should one occur; and
3. The CAMP has been prepared that identifies certain air monitoring activities and BMPs related to dust management to protect the health and safety of workers and the public during construction.

1.4 Plan Organization

The remainder of the SWPPP is organized in the manner listed below.

- *Section 2.0* - Project Description. Section 2.0 presents a narrative of the Project location and current stormwater runoff control.
- *Section 3.0* - Identification of Potential Pollution Sources. Section 3.0 describes in more detail potential stormwater pollution sources for the Project.
- *Section 4.0* - Best Management Practices for Stormwater Management Controls. Section 4.0 describes those practices to be implemented to ensure proper stormwater management control.
- *Section 5.0* - Stormwater Pollution Prevention Team and Training. Section 5.0 identifies the pollution prevention team and training to implement the SWPPP.

2. PROJECT DESCRIPTION

2.1 Site Location

The Site is located on a peninsula on the northeast shore of the Patapsco River of the Inner Harbor, in the Fells Point section of Baltimore City, Maryland. The former chromium chemical manufacturing facility consisted of chromium processing production buildings and numerous support buildings on an area that covered approximately 15 acres (this area is referred to as Area 1). Only a portion of Area 1 is incorporated in the Parcel 3 Development Project (see Section 4.2.4 for the area of disturbance). The Site is surrounded by water on the north, west and south, the Living Classrooms facility to the north and by the redevelopment project, Thames Street Wharf Office Building, constructed in 2009, to the east.

2.2 Site History

For prior environmental remediation purposes, the Site has been divided into Areas 1, 2, and 3. Area 1 is the principal site of Honeywell's (formerly AlliedSignal) Baltimore Works Facility. Chromium ore was processed in Area 1 from 1845 to 1985. The former manufacturing processes resulted in chromium impacts to soil and groundwater. An Environmental Remediation System (ERS) is maintained and operated by Honeywell International Inc. (Honeywell) to contain CrVI-impacted groundwater in Area 1 and control the potential for human exposure to affected soil. The ERS consists of a Multimedia cap (MMC), Hydraulic barrier, Head Maintenance System (HMS), a groundwater storage and transfer system, and Outboard Embankment. The HMS maintains an inward groundwater gradient to mitigate the migration of chromium-impacted groundwater from the Site.

Area 2 was mainly used for coal and raw chromium ore storage. In addition, a fertilizer warehousing and supply company operated in this area for many years. This area was covered with a soil and asphalt cap system.

Area 3 consists of five separate properties all with a history of industrial activity. This industrial activity included brass casing, oil blending and storage, lumber storage and coating/plastics production. This area was covered with a soil cap which has since been paved.

Honeywell purchased the five properties by 1993 prior to which all manufacturing was halted and subsequently all buildings and tanks were removed from these sites. The Parcel 3 Development Project will be the second major construction activity in Area 1, scheduled for commencement of construction in January 2022. The first construction (Phase 1) in Area 1 included the Exelon Tower and Central Plaza that was completed in 2016 in accordance with the USEPA and the MDE approved plans. .

3. IDENTIFICATION OF POTENTIAL POLLUTION SOURCES

The potential pollutant sources are hexavalent chromium in soil and ground water encountered during excavation activities being conducted on this site (primary source), stored groundwater generated by the HMS collected to maintain an inward groundwater gradient to the site (secondary source), and sulfuric acid (90% solution), which is used on an intermittent basis to create pH adjusted water used in the maintenance (cleaning) of the conveyance piping. Hexavalent chromium is expected to be encountered when the liner is exposed and removed to facilitate excavation of foundations. The source of the dissolved chromium is groundwater conveyed via piping to the enclosed permitted, secondarily contained storage tanks. Tanks are emptied via vacuum tanker trucks within the loading area of the Transfer Building. The sulfuric acid is delivered and stored in 1 gallon glass bottles. In the event of a spill, the spilled contents would be contained within the secondarily contained loading area and disposed of in accordance with the Facility SPCC Plan.

There is also the potential for fuel leaks during construction activities, such as during fuel deliveries. This potential pollution source will be discussed in the SPRP.

3.1 Significant Dust or Particulate Generating Process

The Material Handling and Management Plan (MHMP) has been prepared for inclusion in the DDP that describes soil/debris handling practices to be implemented to minimize dust emissions. As described in the MHMP, excavation surfaces during intrusive activities will be covered by geotextile or other suitable material(s) as soon as practical during the excavation sequence to limit wind - blown caused dust emissions. Other soil covering materials such as polyethylene plastic sheeting or foam spray - applied to the slopes of excavation zones may also be utilized. The bottom of the excavation zone will be further covered by installing either a clean, aggregate layer and/or mudmat, thereby allowing general construction trade workers to perform work in a clean zone.

Best management practices (BMPs) that may be implemented separately or in combination for this Project as part of dust control include the following:

1. BMP No. 1 – Perform misting with potable water during potential dust generating activities. The need for misting will be determined based on field conditions and potential for dust generation;
2. BMP No. 2 - Limiting the size of the open area during the excavation sequence at any one time during construction to the extent practical.
3. BMP No. 3 – To the extent practicable, direct load impacted soil/aggregate into lined, roll-off containers or dump trucks, each with covers and eventually targeted for off-site disposal;
4. BMP No. 4 – Prior to active construction within an excavation and as soon as practical during the excavation sequence, cover the excavation surfaces and slopes with geotextile, plastic, foam or other suitable material as soon as practicable to reduce the area of exposed soil that could be a source of windblown dust. These temporary measures will be replaced during construction by installing a mudmat across the bottom and up the slopes of the excavation as shown in the drawings in the DDP to protect workers from potential contact with soil or generation of dust; and
5. BMP No. 5 – Unless being disturbed for loading, unloading or shaping, cover the cover soil stockpile each day with polyethylene plastic sheeting or other suitable material, secured by sand bags as appropriate, to reduce the potential for the stockpile to be a source of windblown dust. The stockpile will be covered as soon as possible following loading, unloading or shaping activities.

Additional corrective actions that may be considered to control a dust release during intrusive activities include establishing a wind curtain by attaching fabric to a temporary fence upwind of the work zone, and by increasing the aerosolized water misting downwind of the intrusive activity.

A sufficient quantity of potable water will be maintained on the Site for dust control use. Watering equipment shall be used to minimize the potential for elevated airborne particulate concentrations and consist of wet, vacuum-sweeper trucks, water tank trucks, or other devices that are capable of applying a uniform spray of water over potential dust-generating surfaces. The use of spray-applied foam to cover an exposed soil surface may be used at locations that are difficult or impracticable to cover with construction plastic or geotextile fabric.

3.2 Loading and Unloading Operations

Honeywell International is the generator of any hazardous wastes at the site. Honeywell, or its authorized agent will sign manifests for materials that are generated.

Excavation below the MMC will be required for installation of pile foundations and construction of pile caps for proposed structures for the Parcel 3 Development Project. These excavations will generate clean soil/aggregate from above the MMC synthetic layers and chromium contaminated soil/debris. (Impacted soil/aggregate) below MMC synthetic layers. Impacted soil/aggregate from below the MMC geomembrane in Area 1 has previously been profiled as characteristically hazardous waste, specifically D007 – Chromium per EPA 40 CFR 261, Subpart C and Code of Maryland Regulations Title 26, Subtitle 13. In accordance with COMAR 26.13.03.05E, if hazardous waste is generated, it shall be shipped off-site within 90 days of generation of the waste to an approved, permitted facility. Impacted soil/aggregated from below the MMC geomembrane liner will be considered as hazardous waste requiring offsite disposal at an approved and permitted hazardous waste disposal facility.

Abandoned structures and foundations may be encountered during construction activity. The abandoned structures will be removed only to the extent necessary for construction of new foundations. As such, the removed, abandoned structures will be considered contaminated debris unless otherwise determined through waste characterization and profiling as required by the receiving disposal facility. The obstruction debris will be directly loaded into lined roll-off containers and transported offsite for disposal at an approved hazardous waste landfill. If the debris, such as concrete floor slabs, footings, asphalt etc., is determined through testing to be non-hazardous waste, the debris will be transported offsite in a lined roll-off container for disposal at an approved non-hazardous landfill or Construction Demolition and Debris (CDD) landfill, as may be appropriate to the waste characteristics and the receiving facility permit.

Under certain conditions, impacted soil/aggregate will be managed onsite as discussed in the MHMP. Otherwise, impacted soil/aggregate removed from below the MMC geomembrane will be segregated from clean soil/aggregate and loaded directly into lined, sealed roll-off containers and transported off-site for disposal at an approve hazardous waste disposal facility. Loaded containers that are not transported off-site daily will be sealed prior to temporarily being stored within the controlled area. The location of the controlled area is presented on the drawings in the DDP. Specific provisions for hazardous waste; e.g. container labeling, secondary containment, inspection, and recordkeeping, will be followed when handling and managing impacted soil/aggregate.

As described in the MHMP, impacted materials may be reused onsite as backfill below the geomembrane in the following situations

- Adjacent excavation backfill locations - In these situations, the excavator used to remove the material will remain in the same general location as the bucket is moved to place the excavated material into the adjacent excavation below the geomembrane.

- Excavations and backfill locations within near proximity - In these situations, the excavator will remove material from the excavation and transfer it to a loader for transport to the nearby excavation. The loader bucket will only be partially filled to minimize dust generation and will be covered with poly sheeting during transfer of the material to the nearby excavation where the material will be used as backfill below the geomembrane.
- Excavations and backfill locations within Project footprint - In these situations, the material will be loaded into a lined roll-off container or lined truck and transported to another on-site excavation and used as backfill below the geomembrane. The lined container or truck will be covered with a lid or tarp during transport to reduce the risk of spills and minimize dust generation.

In all cases, any spilled material will be handled as hazardous waste.

3.3 Contact and Non-Contact Water

As defined in the MHMP, there are two categories of water, "Contact Water" and "Non‐Contact Water," which are anticipated to be managed during intrusive work, as summarized below:

- Contact Water – Contact Water consists of the following:
  - Stormwater that potentially comes into contact with impacted soil/debris material below the MMC geomembrane;
  - Stormwater collected in temporary storage/collection areas such as the controlled area/ decontamination pad;
  - Groundwater from below the MMC geomembrane; and
  - Equipment decontamination water.
- Non‐Contact Water – Non-Contact Water consists of the following:
  - Stormwater that is collected in excavations constructed as part of a non-intrusive activity; and
  - Stormwater that has not come into contact with controlled soil/debris or groundwater and that ponds on a constructed surface (e.g., mudmat, geotextile supported aggregate) along the bottom and slopes of an excavation constructed as part of an intrusive activity.

Contact water will be collected in on-site storage tanks for profiling and appropriate offsite disposal.

To minimize generation of contact water, management of surface water run-off will be in accordance with and as approved erosion and sediment control plan that will be submitted with the DDP. Stormwater run-of will be diverted away from excavations. Non-contact water that accumulates in a depressed area will be pumped to an on-site storage tank. Non-contact water will be discharged under the General Permit to Discharge Stormwater Associated with Construction Activities (14 GP), to be submitted to MDE Water Management Division under separate cover. If required, the Developer may also apply for supplemental permit such as General Discharge Permit 17HT. Required permits will be obtained from MDE before starting construction to establish discharge requirements.

Concrete wash water collected in the concrete wash area will be transported offsite for recycling or disposal at an approved non-hazardous liquid disposal facility, in accordance with the MHMP.

3.4 Outdoor Storage Activities

Non-contact and contact water removed from excavations during construction will be pumped to two separate tanks and tested prior to disposal. Contact water will be stored in the Frac tanks until the appropriate disposal classification is determined. Non-contact water will be stored in a Modutank. Contact water and non-contact water will not be comingled.

Honeywell maintains a list of their approved Subtitle C landfill facilities and as such the addition of alternative, proposed disposal facilities must be pre-approved. The following RCRA landfill facilities are located within reasonable proximity to the Site and be may be considered, as may others with the caveat of Honeywell approval, for off-site disposal:

- Environmental Quality (EQ) [EPA ID: PAD010154045];
  730 Vogelsong Road
  York, PA 17404
  Approximately 60 miles
- MAX Environmental Technologies [EPA ID: PAD004835146]; and
  233 Max Lane
  Yukon, PA 15698
  Approximately 200 miles
- Waste Management Solutions [EPA ID: NYD049836679]
  1550 Balmer Road
  Youngstown, NY 14174
  Approximately 400 miles.

4. BEST MANAGEMENT PRACTICES FOR STORMWATER MANAGEMENT CONTROLS

Best Management Practices (BMPs) for stormwater management control are described in this section. The BMPs were developed using EPA's publication Storm Water Management for Industrial Activities (October 1992) as a guidance.

Baseline BMPs are employed across the entire Project and are not necessarily associated with any specific source of significant materials. The BMPs described below are consistent with the conditions of the General Permit to ensure proper management of storm water runoff.

4.1 Existing BMPs

Area 1 currently has a drainage system in place. A MMC with linear low-density polyethylene (LLPDE) liner with a composite drainage net covers Area 1 and is sloped to drain water to a perimeter drain. The perimeter drain is perforated polyvinyl chloride (PVC) pipe on the landward perimeter and HDPE drain tubing at the waterfront perimeter. The tubing was placed in a stone-filled trench at the perimeter of the geomembrane outboard of the hydraulic barrier. The perimeter drain was placed around the entire perimeter. The perimeter drain allows stormwater infiltration within the cap drainage layer (i.e., above the synthetic layers of the cap) to drain to the harbor.

The other existing BMP is a riprap waterside perimeter embankment. This embankment helps to mitigate the potential erosion of the slope into the river.

4.2 During Construction

This SWPPP addresses best management practices for managing stormwater runoff during construction activities. Stormwater will be diverted from excavation zones by installing the required erosion and sediment controls as shown in drawings in the DDP.

4.2.1 Contact Water

Contact Water testing and disposal requirements are provided in the MHMP. Contact water will be collected in on-site storage tanks for profiling and appropriate offsite disposal either at hazardous disposal facility or non-hazardous disposal facility as discussed in Section 5.1 of the MHMP.

As described in the MHMP, two 15,000 gallon frac tanks will be onsite for use by the Project to store Contact Water. Contact Water tanks will be labeled appropriately upon placing the water into the tanks. Contact water that has been profiled as hazardous waste will be managed in accordance with Code of Maryland Regulations (COMAR) 26.13.03, inclusive of provisions for container labeling, secondary containment, inspection and record keeping.

Contact Water will be transported offsite for disposal following written approval of acceptance from the receiving facility's representative. Transfer operations from the frac tanks to vacuum trucks for offsite disposal will occur within an area of secondary containment.

Contact Water will be collected and conveyed through double-walled pipes, or alternatively pipes located in secondary containment, from the pump location to the designated frac tank. Double-walled conveyance pipes will drain back to the excavation for recovery. When off-site disposal is scheduled, the frac tanks will be emptied using a vacuum tanker truck (or other suitable equipment), which will then transport the liquid to the disposal facility. In the event that a vacuum truck is not available, a centrifugal transfer pump may be used to pump water to a transfer tractor-trailer.

Contact water that is profiled as hazardous waste will be disposed at the Honeywell approved EQ York, Pennsylvania facility, unless otherwise approved by Honeywell or directed by the facility. In accordance with COMAR 23.13.03.05E, hazardous waste shall be shipped off - site within 90 days of generating the wastes to an approved, permitted facility. Specific provisions (e.g. container labeling, secondary containment, inspection and record keeping) will be followed.

Contact Water generated from Area 1 has previously been profiled as characteristically hazardous waste, specifically D007 – Chromium per EPA 40 CFR 261, Subpart C and Code of Maryland Regulations Title 26, Subtitle 13.

When off-site disposal is scheduled, the frac tanks will be emptied using a vacuum tanker truck (or other suitable equipment), which will then transport the liquid to the disposal facility. In the event that a vacuum truck is not available, a centrifugal transfer pump may be used to pump water to a transfer tractor-trailer.

Visual inspections will be routinely performed of all joints, elbows, and similar fittings to detect leaks. Drip pans or other means to prevent the escape of liquids during connection and disconnection of hoses at joints, elbows or similar fittings must be employed.

4.2.2 Non-Contact Water

Water collected and managed as Non-Contact Water will be pumped to a designated Modutank. For contingency purposes, two Modutanks will be provided at the Site. Each Modutank will be 50 feet square and 4 feet deep. Contact water and Non-contact water will not be commingled.

Non-contact water will be discharged under the General Permit to Discharge Stormwater Associated with Construction Activities (14 GP), and/or supplemental permit such as General Discharge Permit 17HT, if required. Required permits will be obtained from MDE before starting construction to establish discharge requirements. Any testing required by these permits will be conducted in accordance with the permits.

4.2.3 Stormwater Management System

In the event of an extreme storm one of the Modutank may be used for storage of Contact Water. Based on a high intensity short duration (1-day) 100 year rain event or a low intensity long duration (2-day) 100 year rain event with a maximum catchment area below the Geomembrane of 7,250 square feet, one Modutank for contact water and one Modutank for non-contact will be required for management of storm water. After the rain event, the Modutank used to temporarily store contact water will be decontaminated for re-use with non-contact stormwater. For details of rain event, catchment, and storage calculations, refer to DDP Engineering Evaluation (EE) Memorandum 1.

When a storm event occurs, the only water that will come in contact with soil below the membrane will be storm water falling directly into an excavation. All water that falls outside of the excavations will be treated as surface runoff because it will be deflected away from open excavations by diversion berms. Infiltration through the cover soil into the drainage net was assumed to not occur because the drainage net will be flapped-up the slope of the excavation and anchored at the edge of the excavation to divert storm water from entering into the excavation zone. The bottom of each excavation is open to soil below the membrane, so that any storm water collected in the excavation may be impacted.

Each excavation will be sloped and a sump will be installed in each excavation to collect storm water to prevent it from rising above the capillary break gravel at the down-slope side of the excavation. Excavations will be covered with plastic overnight or in the event of work stoppage to minimize the generation of contact water in the event of rainfall before the excavation is complete. Completed excavations will be covered with geotextile fabric and a 6-inch thickness of clean cover soil will be placed across the excavation footprint in preparation for pile driving. Contact and non-contact water testing and

proper disposal procedures are described in the Material Handling and Management Plan project control document.

4.2.4 Sediment and Erosion Control

The area of disturbance is approximately 8.5 acres. Erosion and sediment controls and stormwater management features will be installed in accordance with the permit drawings to be prepared and submitted to the City of Baltimore under separate cover, and in accordance with the General Permit to Discharge Stormwater Associated with Construction Activities, to be submitted to MDE Water Management Division under separate cover.

Erosion and sediment control will be addressed with conventional best management practices, which include silt fence/super silt fence, perimeter berms/swales, stabilized construction entrances, and inlet protection as detailed in the DDP for the Project. Erosion and sediment controls as detailed on the DDP will be applied to individual excavations made for pipe piles, clean utility corridors, and pile cap and slab installation, including stormwater diversion berms to reduce or limit run-on into open excavations, details are provided in the DDP drawings.

4.2.5 Spill Prevention and Response Procedures

The SPRP, prepared as a separate document for the DDP, outlines spill prevention and control measures and should be reviewed for more detail. The following measures will be implemented upon discovery of a release:

- Control and contain the release, to the extent possible;
- Clean up the impacted area as soon as possible;
- Assess the risk;
- Implement the construction SPRP based on the source of the release;
- Report the release to management and government agencies as specified in the SPRP; and
- Follow up with preventive measures and any necessary documentation.

The Contractor will commit manpower, equipment, and materials to prevent a spill, if any, from reaching waterways, shorelines, or sewers.

4.2.6 Good Housekeeping

Good housekeeping practices are designed to maintain a clean and orderly work environment. Good housekeeping practices to be used during construction activities are the following:

- Maintain clean vehicle access roads;
- Keep all paved and vegetated areas clean of litter and debris and properly maintained.
- Maintain regular refuse pick-up and disposal;
- Spill response equipment is properly located, in adequate supply and working order, and the location(s) are known to all employees;
- Promptly clean up spills and leaks and properly dispose of recovered material;
- Keep walkways and passageways easily accessible and free of protruding objects, materials, and equipment;

- Make sure all trucks which entered any disturbed area, have gone through decontamination procedures for tires, prior to leaving the site; and
- Discuss and promote good housekeeping practices with employees.

Good housekeeping elements are covered in the storm water inspections and throughout the Facility's storm water management process.

Workers should be familiar with and have access to the SPRP, for specific procedures and protocols regarding spills and leaks. On-site training will be conducted prior to the start of work to orient workers with plan requirements. Each worker receiving training will be required to sign an attendance log confirming their participation.

4.2.7 Visual Inspections

Stormwater inspections will be conducted at this facility as required. At a minimum, authorized personnel will perform a monthly inspection of the Project. The trained inspector will perform the inspections consistent with the requirements of the General Discharge Permit and MHMP. A copy of the General Discharge Permit will be provided to MDE. The inspection form is provided in Attachment 1 of this document.

The inspections will be performed to detect evidence of potential common problems that may occur during construction. At the completion of each inspection, the inspector will review the SWPPP to determine if any observation may require revisions to the SWPPP. Any suggested revisions to the SWPPP will be brought to the attention of the Developer to determine if revisions are necessary. No changes to the SWPPP may be implemented without prior MDE approval.

In addition to the monthly inspections, the proposed outfalls will be inspected quarterly and after major storm events. The inspections will be performed to detect evidence of potential stormwater blockage or pollution.

An Emergency generators with a day tank will also likely be used for the Project with a capacity of approximately 250 gallons. Piping connected with a storage tank will be placed aboveground for easy access and visual monitoring during use. The piping will either be double walled or placed in secondary containment. The total volume of petroleum stored during the Project, including the generator day tank and small AST, is anticipated to be between 500 and 750 gallons.

5. STORMWATER POLLUTION PREVENTION TEAM AND TRAINING

5.1 Project Specific Team Members and Responsibilities

The members of the Storm Water Pollution Prevention Team are listed below:

Facility Coordinator during Construction: Jonathan Flesher: 443-463-3937; and

Resident Site Manager: Bryn Hansen: 410-404-9111.

The above-listed persons are trained to implement the SWPPP.

Mr. Flesher will designate an inspector for the SWPPP responsible for monthly inspections and documentation as well as assurance that appropriate BMPs are in place. The Facility Coordinator has the overall responsibility for ensuring plan adherence, updated training, and authorizing the resources necessary to implement the SWPPP, including inspections and corrective measures. Honeywell's on-site consultant, Jacobs, represented by the Resident Site Manager, will monitor compliance with procedures for inspections and preventative maintenance at this facility during construction. During construction, the Developer's Field Representative will perform the necessary inspections. Additional team members will provide support on an as needed basis.

5.2 Training Requirements

Members of the pollution prevention team are responsible for conducting employee training programs. The employee training programs are designed to inform personnel at all levels of responsibility of the components and goals of the SWPPP. Training sessions, including initial orientation training discussed in Section 4.2.6, will address topics such as spill prevention and response, preventive maintenance, good housekeeping, storage practices, visual inspections, and recordkeeping and reporting. At a minimum, formal training sessions shall be conducted annually. Topics discussed in the training session and a roster of employees who attend the training sessions are to be recorded and retained in the SWPPP file. Informal training in the form of one-on-one communications with personnel on the importance of pollution prevention should occur during visual inspections by members of the pollution prevention team. This will allow members of the pollution prevention team to point out potential pollutants to employees and to verify that the information addressed in the training sessions has been communicated effectively to them.

The information described in the plan regarding potential pollution sources (Section 3.0) and storm water management controls/BMPs (Section 4.0) is distributed to all employees whose work influences storm water or includes a potential pollution source. At a minimum, this includes maintenance personnel, equipment and vehicle operators, and anyone who handles or oversees the transfer of fuel or other granular or liquid materials into and out of the facility. Employee training includes these four core subjects.

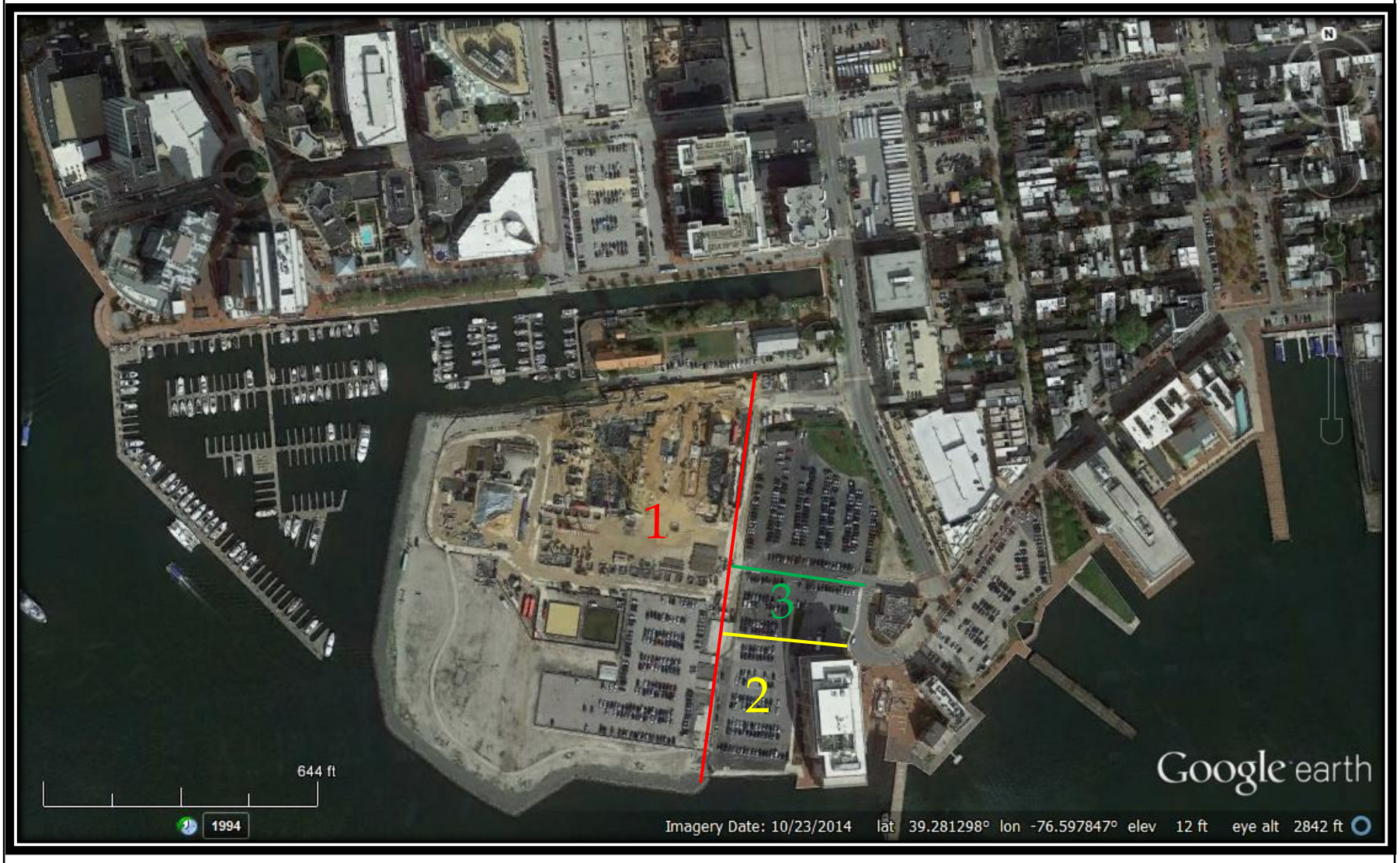
- *Good Housekeeping* - Employees are required to maintain a clean and orderly work environment. The routine sweeping of floors and the prompt cleanup of spilled material is discussed. The location of shovels, brooms, absorbents, and any other spill response equipment are identified. Employees are informed to regularly check for leaks, and spills. Housekeeping issues are addressed during regular safety meetings.
- *Spill Prevention and Response* - Employees are made aware of potential spill areas, drainage routes, and to whom a spill should be reported. Specific material handling procedures to avoid spills and response procedures in the event of a spill are also discussed.

- *Loading and Unloading Procedures* - Employees are instructed to provide constant supervision during all outdoor fuel transfer and material handling operations and to ensure that all containers are properly sealed prior to handling.
- *Preventive Maintenance* – Employees are instructed to provide constant care when using equipment to ensure that the equipment is maintained properly.

No other types of materials other than petroleum products and materials associated with the Transfer Station and general housekeeping products are anticipated to be maintained/used on site.

FIGURE

Figure 1
Site Location Map
Harbor Point
Baltimore, Maryland



1 – Area 1: Exelon Headquarters
2 – Area 2: Thames Street Wharf and Wills Wharf Office Buildings
3 – Area 3: Point Street Apartments

ATTACHMENT 1 INSPECTION FORMS

STORMWATER INSPECTION FORM

Project No. 0572981 **Date:**
Project Name: Parcel 3 Development **Day:**
Location: Baltimore, MD **Weather:**

ERM Staff	Title/Role

Type of Work in Progress

Stormwater Inspection Summary

Subject	Status	Corrective Action Needed and Notes
Overall condition of perimeter stormwater controls	□ Acceptable □ Unacceptable	
Is there evidence of discharge of significant amounts of sediments to surface waters or systems leading to surface waters?	□ Yes □ No	
Stormwater inlet conditions	□ Acceptable □ Unacceptable	
Evidence of Earth slides or mud flows?	□ Yes	
Evidence of Concentrated flows of stormwater (rills, rivulets, channels) that cause unfiltered erosion?	□ Yes □ No	
Evidence of turbid flows of stormwater that are not filtered, settled, or otherwise treated to reduce turbidity?	□ Yes □ No	
Evidence of on-site sediment deposits in areas that drain to unprotected stormwater inlets or catch basins?	□ Yes □ No	
Evidence of sediment deposits in the public or private streets outside the permitted construction activity	□ Yes □ No	
Evidence of sediment deposits on adjacent properties outside the permitted construction activity	□ Yes □ No	
Condition of stockpile areas (e.g., soil, gravel, stone, etc.) relative to stormwater discharge	□ Acceptable □ Unacceptable	
Condition of liquid storage areas (e.g., frac tanks, totes, etc.) relative to stormwater discharge	□ Acceptable □ Unacceptable	
Condition of vehicle and equipment storage, fueling, maintenance areas	□ Yes □ No	
Evidence of trash and debris that could enter stormwater flow	□ Yes □ No	
Other:_____ _____	□ Yes/Acceptable □ No/Unacceptable	

ADDITIONAL NOTES

Completed by Name: **Reviewed By:**
Signature/Initials: **Signature/Initials:**