Area 1, Phase 2 Material Handling and Management Plan Parcel 3 Development

Honeywell Baltimore Works Site

Baltimore, Maryland

Revised January 21, 2022
August 10, 2021

Project No.: 0572981

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

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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
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
LLDPE	Linear Low Density Polyethylene
LOD	Limits of Disturbance
m	Meter
m^3	Cubic Meters

Name	Description
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
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

Name	Description
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 and its consultant(s) have prepared this Material Handling and Management Plan (MHMP) for the Parcel 3 development (Project). The Project is planned on a portion of the former AlliedSignal Baltimore Works Site (Site), located in Baltimore, Maryland. 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 MHMP has been prepared as part of the Detailed Development Plan (DDP) for the Project, and is to be used in conjunction with the Spill Prevention and Response Plan (SPRP), the Storm Water Pollution Prevention Plan (SWPPP), and the Construction Air Monitoring Plan (CAMP) prepared for the Project. This MHMP is applicable to development support activities as described in the DDP, and terminates post-construction. Material handling and management is expected to occur in a manner similar to the procedures implemented on prior projects at Harbor Point with the incorporation of effective and efficient opportunities when applicable.

1.1 Location and Existing Environmental Controls

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 (Figure 1). The Site is surrounded by open water on the west and the south and the Living Classrooms facility to the north along a tidal inlet are referred to as the Back Basin. The Project area is adjacent to prior development projects at the Site, including Thames Street Wharf (completed in 2010) and Wills Wharf (completed in 2020) to the east, 1405 Point (completed in 2018) to the northeast, and the Exelon Tower and Central Plaza and Garage (completed in 2016) to the north. A portion of the Project area currently contains asphalt paved surfaces that are presently being used as active surface parking lots.

This is the site of a former chrome ore processing facility (Baltimore Works) which consisted of production and numerous support buildings on an area that covered approximately 15 acres of original and made-land (this area is referred to as Area 1). For prior environmental remediation purposes, the Site is divided into three Areas (Areas 1, 2, and 3); each Area is comprised of a different environmental remedy including different engineered caps. Area 1 has the most robust environmental remedy and is bounded by Will Street to the east, Dock Street to the north and the Patapsco River to the northwest, west and south. Area 1 has a multimedia cap (MMC) and is referred to as the "on cap" Area. Areas 2 and 3 have soil caps, and are located east of Wills Street.

Area 1 is approximately 15 acres, and is divided into five separate lots/parcels. The first phase of development on Area 1 (i.e., Area 1, Phase 1) was comprised of the Exelon Tower and Central Plaza Garage. Area 1, Phase 1 occupied Parcels 2 and 5, and the project was completed in 2016. This second phase of development on Area 1 (i.e., Area 1, Phase 2 development) is within Parcel 3 of Area 1. This Project is entirely located within Area 1.

An Environmental Remediation System (ERS) for the Site was completed in 1999 by Honeywell pursuant to the 1989 Consent Decree between the U.S. Environmental Protection Agency (USEPA), U.S. Department of Justice (USDOJ), Maryland Department of Environment (MDE), and Allied Signal (Honeywell). The ERS is currently maintained and operated by Honeywell to contain chromium contaminated groundwater and reduce human exposure to impacted soils within the limits of Areas 1, 2, and 3. Area 1 is the focus of this development project, and the principal contaminants of concern identified within Area 1 are hexavalent chromium and polycyclic aromatic hydrocarbons (PAHs). The Area 1 ERS components consist of a Multimedia cap (MMC), a Hydraulic Barrier, a Head Maintenance System (HMS) and an Outboard Embankment. It is anticipated that several Project features may conflict with

components of the existing ERS. However, the Consent Decree requires that the overall Site development must not interfere with the efficacy of the corrective measures or with Honeywell's ability to comply with the performance standards defined in the Consent Decree, including the various media monitoring plans and performance requirements.

The 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, including the CDP, DDP and subsequent minor modifications of the DDP. This Phase 2 development in Parcel 3 incorporates many similar components as implemented in Phase 1, including pile foundations with cap penetrations, MMC repairs, HMS modifications, material management, and air monitoring.

1.2 Applicability

This MHMP addresses the handling and management of solids (e.g., asphalt, stone aggregates, concrete and wood debris and soil) and liquids (stormwater, decontamination water and groundwater) during the intrusive activities for the Project. For the purpose of this MHMP, "intrusive activities" occur any time there is disturbance or exposure of the subsurface materials immediately below the geomembrane layer of the MMC inside the Hydraulic Barrier (HB) in Area 1.

This MHMP provides a description of the methods to be used for material handling, segregation, and storage, and for waste profiling, transportation and disposal. The MHMP will be implemented through the restoration of the MMC, and the removal of all soil and debris generated by the Project from below the horizon that constitutes intrusive activities (i.e., below the MMC geomembrane layer in Area 1).

2. ENVIRONMENTAL REQUIREMENTS

Project development must not interfere with the efficacy of the corrective measures or Honeywell's ability to comply with the performance standards defined in the Consent Decree, the Groundwater Gradient Monitoring Plan, the Surface Water Monitoring Plan, or the Environmental Media Monitoring Plan. The DDP describes the redevelopment improvements and the means and methods that will be implemented to meet the requirements established in the Consent Decree and its Work Plans, as amended, as well as the Owner/Developer covenants. Honeywell retains responsibility for operating the ERS and monitoring environmental media to demonstrate continued attainment of Consent Decree performance criteria. Honeywell's monitoring program under the Consent Decree will continue uninterrupted during construction of the Project.

The Developer must protect the existing ERS and the design, construction, and completed improvements must conform to the requirements of the Consent Decree. Specific requirements include but are not limited to:

1. Unless otherwise approved by the Maryland Department of the Environment (MDE), imported material (e.g., common soil backfill, aggregate, etc.) will follow State of Maryland guidance for the importation of clean soil materials, a copy of which is attached in Attachment 1, and as discussed in this MHMP;
2. Environmental controls will be instituted once intrusive activities are being performed, including air monitoring as described in the CAMP, part of the DDP;
3. All cap components must be repaired, restored or replaced in any disrupted or penetrated area, unless otherwise noted on the approved DDP for the Project;
4. Maintain and preserve the integrity of the ERS;
5. Preserve the efficacy and function of the ERS and its Remedial Components;
6. Preserve Honeywell's access to, and maintenance of the ERS and its Remedial Components;
7. Preserve and protect Honeywell's ability to comply with the Performance Standards of the remedy;
8. Preserve and protect Honeywell's ability to execute Consent Decree Plans; and
9. Prevent an unacceptable level of incremental risk to human health or the environment through exposure to, or release of, contaminants from the site, based upon the requirements of the Consent Decree, Environmental Requirements, Governmental Requirements, and standards, criteria and guidance derived therefrom.

3. PARCEL 3 DEVELOPMENT

The Parcel 3 development project on the Baltimore Works Site includes construction of two seven-story interconnected office buildings with under-structure parking, a restaurant, Point Park with a promenade along the shoreline, and other supporting site development features, such as a drop off area, parking garage, ramps, sidewalks, landscaping, utilities, and other related elements. No new roads are anticipated for the Project.

3.1 Excavations

Excavations for the Project will be performed to construct the lowest parking garage level, and to facilitate installation of pile foundations and construct pile caps for proposed structures for the Parcel 3 development. Excavation will be necessary to remove the existing asphalt pavement and cover soils as necessary to install foundation piles, pile caps, elevation pit, and to facilitate obstructions removal, including abandoned concrete floor slabs, footings, and asphalts from historical operation at the Site.

Piles will be driven only; however, in some areas drilling and excavation may be necessary to clear subsurface obstruction for piles installation. These drilling and excavations related to pile installations may include demolition and removal of abandoned foundation and concrete floors (e.g., obstructions remaining in place below the MMC in Area 1). The excavations will be performed with a sequence and process designed to protect against dust and surface contamination and accumulation and infiltration of precipitation and stormwater runoff entering into the excavation. The excavated surfaces related to pile installations will be covered with geotextile and clean cover soil or crushed stone to prevent human contact and dust generation. Piles will be driven through the crushed stone work surface.

As noted above, the foundation piles will be driven, and drilling may be required in certain areas to clear subsurface obstructions. The drilled piles will use wash-rotary methods, generating drill spoils and drilling fluid. Drilling fluid and spoils will be managed in accordance with this MHMP.

In summary, the excavation planned for the Parcel 3 development, including excavation for slabs, piles and pile caps, and any other excavations through the MMC, will generate: a) clean soil/aggregate from above the MMC geomembrane layer and, b) chromium contaminated material (Impacted soil/aggregate and debris) from below the MMC geomembrane layer.

3.2 Obstruction Removal

Obstructions, such as remnant concrete floor slabs, footings, asphalt, etc., will be encountered during subgrade construction activities for the Project. These obstructions will be removed at pile locations, and where they interfere with pile cap geometry. Pre-drilling or pit excavations may be used to proactively evaluate whether obstructions are present in pile driving areas. The abandoned structures will be removed only to the extent necessary for construction of new foundations. All removed, abandoned structures below the MMC geomembrane will be considered hazardous waste unless otherwise determined through waste characterization and profiling (Section 4.5 for management of removed obstructions). Qualified environmental personnel, familiar with chromium contamination, will be responsible for visually identifying gross chromium contamination present in the form of chromium salts or Chromium Ore Process Residue (COPR). If COPR is encountered, the Contractor will use that opportunity to train field staff to visually recognize this material. Any materials generated in response to such an occurrence of chromium salts or COPR will be managed in accordance with this Plan.

3.3 Erosion and Sediment Controls

Erosion and sediment control at the Project and during construction will be addressed with conventional best management practices, which include silt fence/super silt fence, perimeter berms/swales, and stabilized construction entrances as detailed in the drawings in the DDP for the Project. Prior to the initiation of any intrusive activities, these erosion and sediment controls measures will be installed in accordance with: 1) the permit drawings to be prepared and submitted to the City of Baltimore under separate cover; 2) 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.

Additionally, erosion and sediment controls as detailed in the geotechnical drawings in the DDP will be applied to individual excavations for piles, pile cap and slab installation, including stormwater diversion berms to reduce or limit run-on into open excavations. Runoff water collected in sumps will be pumped to a nearby portable frac tank. Further discussion on water handling is provided in this MHMP in Section 5 – Water Management.

3.4 Dust Control

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 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. These additional measures will be considered based on site-specific conditions in the event that action levels for PM_{10} persist after implementing the response measures described in the CAMP for the Project. The CAMP will

provide a description of the methods to be utilized for real-time particulate and weather data collection, air sample collection, laboratory analytical methods, and reporting to demonstrate the effectiveness of the dust control measures implemented during intrusive activities. The CAMP also describes the action levels and potential response actions that may be implemented to suppress dust. .

A sufficient quantity of potable water will be maintained on the Site for dust control use. Watering equipment will 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.

4. HANDLING AND MANAGEMENT OF SOIL/DEBRIS & EXCAVATED MATERIALS

Materials generated from the excavations for the Project will include asphalt, stone aggregates, concrete, drilling spoils, and soils that may be encountered throughout construction activities including, intrusive activities (below the MMC geomembrane) and construction activities above the MMC geomembrane. Materials will be segregated and managed as described below. Materials may be re-used on the Site in accordance with requirements as discussed in this section. Management of materials generated from excavations for the Project can be separated into four categories:

1. Cover Soil/Aggregate;
2. Impacted Soil/Aggregate;
3. Debris from Obstruction Removal; and
4. Drilling spoils.

4.1 Cover Soil/ Aggregate

4.1.2 Cover Soil/Aggregate Segregation and Storage

Cover soil and aggregate (collectively “cover soil/aggregate”) refers to the clean material excavated from above the geomembrane layer of the MMC. Cover soil/aggregate removed from above the MMC geomembrane layers will be segregated from impacted soil/aggregate removed from below the MMC geomembrane layers. Cover soil/aggregate will be temporarily stockpiled within a designated Cover Soil Stockpile Area (CSSA) indicated on Drawing FO.107 and Figure 1 of DDP. Similar to the Exelon Project cover soil stockpile area, a visual separation barrier (i.e., a 10-oz. non-woven geotextile) will be placed above the existing grade prior to placing the stockpile materials to serve as a warning layer when removing the stockpile soil. In addition, a 4 to 6-inch thick gravel layer will be installed on top of the warning layer to prevent damage to that layer. In lieu of a geotextile overlain by gravel as a base for the CSSA, the contractor may use an asphaltic base course. The stockpile area will have erosion control measures (such as silt fence) to prevent sediment laden runoff from the stockpile area. The stockpile will be covered with a tarp. If the materials are wet, they will be spread in a thin lift across the stockpile to facilitate drying.

As appropriate, markers indicating the maximum allowed height of the clean soil storage piles will be placed and maintained as needed to ensure that the loading of the pile on the geomembrane, drain and other elements of the MMC do not exceed the limits calculated by the Geotechnical Engineer. As a matter of convenience, Attachment B to this MHMP is a letter from the Geotechnical Engineer dated 27 March 2015 that discusses the limitations on stockpile heights.

4.1.3 Cover Soil/Aggregate Re-Use

Similar to the previous Exelon Project (Area 1 Phase 1 project), cover soil/aggregate from above the MMC geomembrane may be re-used as follows:

1. Placement below the MMC geomembrane layer; and
2. Placement above the MCC geomembrane layer only if it meets the MDE Voluntary Cleanup Program (VCP) criteria identified in this section, below.

The stockpile of cover soil and aggregates removed from above the MMC geomembrane layer will be sampled and analyzed prior to re-use following the MDE VCP Clean Imported Fill Material fact sheet Tables 1 and 2 (Attachment 1). The analyses to be performed are the same as those provided in Section

6.0 for Imported Soil/Aggregates. Cover soil and aggregate will only be used above the MMC geomembrane layer if it is found to be in compliance with the MDE VCP criteria for clean fill materials for the residential land use scenario.

Specifications regarding the re-use of these materials and the placement procedures (e.g., moisture content, gradation, lift thicknesses, compaction, etc.) will be assessed by the Field QA Inspectors. Prior to re-use as structural fill, materials generated from on-site excavations will be sorted to remove deleterious materials, such as organics, wood, or debris. Unsuitable materials will be segregated and disposed off-site.

4.2 Impacted Soil/Aggregate

4.2.1 Handling and Management of Impacted Soil/Aggregate

Impacted soil/aggregate refers to contaminated soil/aggregate excavated from below the MMC geomembrane layer. 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 will be transported 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.

Under certain conditions, impacted soil/aggregate will be managed on-site as discussed in Section 4.4 below. 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 approved RCRA Landfill. Loaded containers that are not transported off-site daily will be sealed prior to temporarily being stored within the controlled area. The location and design of the controlled areas are shown in Figure 1 and Figure 2 of the DDP, respectively. Specific provisions for RCRA waste, e.g. container labeling, secondary containment, inspection, and recordkeeping, will be followed when handling and managing impacted soil/aggregate. Following the permanent removal of roll-off containers from the controlled area, the controlled area will be decontaminated with a wet sweeper and the temporary impervious surface will be removed and disposed offsite.

4.2.2 Transportation and Off-site disposal of Impacted Soil/Aggregate

The roll-off containers loaded with impacted soil/aggregate from below the MMC geomembrane will be transported off-site for disposal at an approved RCRA Landfill. Honeywell maintains a list of their approved Subtitle C landfill facilities (for hazardous waste disposal) and as such the addition of alternative, proposed disposal facilities must be pre-approved by Honeywell. The following RCRA landfill and treatment facilities are located within reasonable proximity to the Project and be may be considered, as may others with the caveat of Honeywell approval, for off-site disposal of impacted soil/aggregate:

1. Environmental Quality (EQ) [EPA ID: PAD010154045]:
   730 Vogelsong Road, York, Pennsylvania 17404,
   Approximately 60 miles;
2. MAX Environmental Technologies [EPA ID: PAD004835146]:
   233 Max Lane, Yukon, Pennsylvania 15698,
   Approximately 200 miles; and

3. Waste Management Solutions [EPA ID: NYD049836679]:
   1550 Balmer Road Youngstown, New York 14174,
   Approximately 400 miles.

It is the Developer, as the generator, has the responsibility to make the appropriate waste profile determination as well as ensuring that all activities associated with waste disposal comply with State, Federal and local regulations. The Developer or designee will be responsible for maintaining and distributing all documentation regarding waste profiles and shipping manifests for off-site disposal facilities to USEPA and MDE. The Developer's authorized representative will be responsible for reviewing and signing the shipping manifests. The Developer or designee will ensure that the transporter signs a shipping manifest for each load upon leaving the Site; and, ensures that the disposal facility-signed acceptance copy of each manifest is received. A waste disposal tracking log will be maintained utilizing the measured net weight (tons) for each truck or roll-off container load accepted for off-site disposal. Waste disposal documentation including laboratory analyses, if any, waste profiles and waste acceptance documentation will be retained for one year by the Developer or designee following completion of the intrusive activities.

4.3 Specific Management Option for Excavated Impacted Soil/Aggregate

As described previously in the Conceptual Development Plan (CDP), under certain conditions, excavated impacted soil/aggregate may be used as backfill below the MMC geomembrane. These specific conditions (options) are described below. Thus, the excavated impacted soil/aggregated may be managed in one of the following three options. During implementation of any of these options, the excavated impacted soil/aggregate will not be stored; rather the excavated material will be backfilled on the same day:

- **Option 1- Adjacent excavation and backfill locations:**

  a. Excavated impacted soil/aggregate from below the geomembrane may be used as backfill below the geomembrane in an adjacent excavation locations that can be accessed by equipment (i.e., excavator) while remaining in the same general location. The area between excavation and backfill locations will be temporarily lined with poly sheeting prior to removing the materials to capture any material that could be potentially dropped while consolidating the material from one excavation into another. The transfer activities will be conducted only over areas covered with poly sheeting.

  b. An excavator will remove material from an excavation. The excavator will remain in the same general location while moving the arm and bucket to the designated backfill location. The material will be placed into the adjacent excavation by the excavator bucket and compacted with a tamper bucket attachment. Any spilled impacted soil/aggregate on the poly sheeting during transfer activities, including the poly sheeting itself, will be assumed to be hazardous material, and will be loaded in lined, sealed roll-off containers and transported off-site for disposal at an approved RCRA Landfill.

  c. The minimum 2-foot soil cover and overlying protective material (i.e., poly sheeting or crushed gravel) will be placed over the backfilled material.

- **Option 2 – Excavations and backfill locations within near proximity:**

  a. Excavated soil/aggregate from below the geomembrane may be used as backfill below the geomembrane in an excavation that is not adjacent to, but within proximity of, the excavation. The area between excavation and backfill locations will be temporarily lined with poly sheeting prior to removing the materials to capture any material that could be potentially dropped while

consolidating the material from one excavation into another. The transfer activities will be conducted only over areas covered with poly sheeting.

b. The impacted soil/aggregate will be transferred between locations with a loader. An excavator will remove material from an excavation and transfer it to a loader. The loader bucket will only be partially filled to reduce the risk of spillage, and the loaded bucket will be completely covered with poly sheeting during transfer process and the soils will be maintained sufficiently wet to minimize fugitive dust emissions during transport. Any spilled impacted soil/aggregate on the poly sheeting during transfer activities, including the poly sheeting itself, will be assumed to be hazardous material, and will be loaded in lined, sealed roll-off containers and transported off-site for disposal at an approved RCRA Landfill.

c. The minimum 2-foot soil cover and overlying protective material (i.e., poly sheeting or crushed gravel) will be placed over the backfilled material.

- **Option 3 – Excavation and backfill locations within Project footprint:**

a. Excavated soil/aggregate from below the geomembrane may be used as backfill below the geomembrane in an excavation that is not within proximity of the excavation.

b. In such case, the excavated soil/aggregate from below the geomembrane 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. Prior to loading/unloading activities, poly sheeting will be placed and anchored on the ground in both the loading and unloading zone to capture any spillage during the loading/unloading process. The lined container or truck will be covered with a lid or tarp during transport and the soil maintained sufficiently wet to reduce the risk of spillage and minimize fugitive dust emission during transport.

c. The minimum 2-foot soil cover and overlying protective material (i.e., poly sheeting or crushed gravel) will be placed over the backfilled material.

4.4 Debris from Obstruction Removal

As noted previously, obstructions, such as remnant concrete floor slabs, footings, asphalt, and debris, may be encountered during subgrade construction activities for the Project. These obstructions will be removed at pile locations, and where they interfere with pile cap geometry. Pre-drilling or pit excavations may be used to proactively evaluate whether obstructions are present in pile driving areas. When possible, obstructions that do not interfere with construction will be left in place below the future structures.

Obstruction removal may be performed using the auger drilling method approved for the Exelon Project. If necessary, Obstructions will be broken and sized in the excavation to allow loading directly to lined, sealed roll-off container boxes. Debris from obstruction removal from below MMC geomembrane are assumed to be hazardous waste unless otherwise determined through waste characterization and profiling as required by the receiving disposal facility. The obstruction debris will be directly loaded into a lined roll-off container and transported offsite for disposal at an approved hazardous 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 roll-off container for disposal at an approved non-hazardous landfill or Construction Demolition and Debris (CDD) landfill, as appropriate to the waste and the receiving facility permit.

4.5 Drilling Spoils and Fluids from Drilling Piles

Piles will be driven only; however, in some areas drilling may be necessary to clear subsurface obstructions for piles installation. In such a case, drilling will use wash-rotary methods and will generate drill spoils (i.e., drill cuttings) and drilling fluids. The drilling fluid would consist of potable water and, if needed, a commercially available admixture (e.g., bentonite clay, certain polymers, etc.) designed to maintain the borehole integrity while installing the pile.

Drilling spoils, debris, and mud collected from pile drilling will be stored in labeled, sealed drums or sealed containers, which will be covered and will have secondary containment either at the drilling location (e.g., using a Collapse-A-Tainer, secured plastic with berm) or at the controlled area indicated in the DDP drawing set. Drilling spoils, debris, and mud collected from the pile drilling will be managed as hazardous waste unless otherwise determined through waste characterization and profiling as required by the receiving disposal facility. Materials will be transported off-site for disposal following written approval of acceptance from the RCRA landfill facility's representative. If the spoils are determined through testing to be non-hazardous waste, the spoils will be transported offsite in a roll-off container for disposal at an approved non-hazardous disposal facility.

4.6 Foundation Pile Decontamination in the Event of Extraction

In the event that a pile must be extracted, decontamination will be performed substantively consistent with the approach used for the Exelon Project. For reference, the approach for pile decontamination is provided in Attachment 3. Field conditions may dictate adjustments to these procedures as well as the location of the decontamination procedure. The procedures used for decontamination, if needed, will be documented in the Construction Completion Report for the project, and be protective of human health and the environment. The decontamination water generated during this process will be managed as contact water described in Section 5 below. Soil/debris generated will be managed as hazardous waste and transported off-site for disposal at the RCRA landfill facility.

4.7 Concrete Wash Water

A separate area will be designated for washing and discharging wastes from concrete mixers and trucks to control and contain the runoff of concrete wash water and sediment. Wash water will be directed to a pit/sump as depicted on Figure 2 of the DDP. The approximate location and configuration of the concrete wash area is presented on Figure 1 of the DDP. The wash water collected in the sump will thereafter be stored in drums or containers, and will be transported offsite for recycling or disposal at a non-hazardous liquid disposal facility. Hardened concrete wash will be managed similar to other construction debris, including on-site reuse, recycling or disposal at a construction and demolition debris landfill.

5. WATER MANAGEMENT

To minimize the quantity of water to be actively managed and treated off Site, stormwater will be diverted from excavations by installing the required erosion and sediment controls. This diverted stormwater will be managed through the Erosion and Sediment Control Plan and will not be collected or require management other than as normal uncontaminated stormwater.

Two categories of water, “Contact Water” and “Non-Contact Water”, are anticipated to be managed during intrusive work, as summarized below:

1. Contact water – Contact water consists of the following:
    a. Stormwater that potentially contacts impacted soil/debris material below the MMC geomembrane;
    b. Stormwater collected in temporary storage/collection areas such as the controlled area/ decontamination pad;
    c. Groundwater from below the MMC geomembrane; and
    d. Equipment decontamination water.
2. Non-Contact water – Non-Contact water consists of the following:
    a. Stormwater that is collected in excavations that are part of non-intrusive activities; and
    b. Stormwater that has not contacted 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.

5.1 Contact Water

Contact water will be convey to sumps and pumped to a designated double-walled frac tank. For contingency purposes, a minimum of two 15,000- gallon frac tanks will be provided at the Site. Sump pumps will be operated as needed to convey the collected water. Sumps and conveyance lines will be pumped “dry” to the dedicated frac tanks for contact water. Contact Water will be transferred in double-walled pipes.

Storm water that contacts impacted materials below the MMC geomembrane is referred to as Type 1 Contact Water and will be collected, stored and tested for hazardous waste disposal. Type 1 Contact Water will be held for analytical testing for waste profiling, as required by the receiving facility.

Storm water that is within an excavation that is below the MMC geomembrane but accumulates on top of temporary plastic sheeting (i.e., 10-mil plastic sheet that is not welded) is referred to as Type 2 Contact Water and will be collected, stored and tested separately from Type 1 Contact Water. Type 2 Contact Water will be disposed in accordance with the analytical profile test results. If the Type 2 Contact Water test results indicate that the water is non-hazardous and is accepted by a non-hazardous disposal facility, the Type 2 Contact Water will be managed and disposed at an off-site non-hazardous disposal facility. Otherwise, the Type 2 Contact Water will be disposed at a hazardous disposal facility.

It should be note that the contractor may install a temporary LLDPE cap over excavations to achieve a continuous watertight seal of the MMC geomembrane over the excavation. The temporary cap will be welded and quality control tested. Any stormwater that accumulates on top of temporary LLDPE cap will be managed as non-contact water (See Section 5.2).

Specific provisions, e.g. container labeling, secondary containment, inspection and record keeping, will be followed. Contact Water will be transported off-site for disposal following written approval of acceptance

from the receiving facility's representative. As such, contact water tanks will be labeled appropriately upon placing the water into the tanks. Contact water that is profiled as hazardous waste will be managed in accordance with COMAR 26.13.03. 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.

When off-site disposal is scheduled, the frac tank 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 (or other suitable means) may be used to pump water to a transfer tractor-trailer. Transfer operations associated with contact water from the frac tank to vacuum trucks or similar will occur within an area of secondary containment.

The location of frack tanks for the contact water is indicated on the DDP Figure 1; however, this location may be relocated during construction, due to the tight spatial constraints on the Project.

5.2 Non-Contact Water

Non-contact water collected in excavations and depressions 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.

The location of Modutanks are indicated on the DDP Figure 1; however, this location may be relocated during construction due to the tight spatial constraints on the Project.

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 EE Memo 1.

5.3 Snow and Ice

Snow or ice that collects or is formed consistent with the above criteria defining Contact Water and Non-Contact Water will be handled in the manner provided above for the respective Contact or Non-Contact situation. Snow collected or ice formed outside the limits of the excavation zone will be considered Non-Contact Water. Snow and/or ice will be removed from the area and temporarily stored in lined, sealed containers so that the snow and/or ice can melt. Melted snow and/or ice will be pumped (using double-walled pipes) from the lined containers to the Contact Water or Non-Contact Water frac tanks for testing to determine the appropriate disposal action.

6. IMPORTED SOIL/AGGREGATES

All imported soil and aggregate, including imported topsoil, quarry stone and sand, will be stored in the Material Laydown area depicted on DDP Drawing FO 107. To minimize the potential of introducing unacceptable materials onto the Project, it will be necessary to verify through documentation that imported materials are acceptable for use as part of the Project. These materials may consist of borrow soil, top soil and virgin aggregate such as sand, stone, etc. The process to be followed for these materials is as follows:

1. **Imported Soil, including Topsoil** – The source of soil will be documented as described in the MDE VCP Clean Imported Fill Material guidance document (Attachment 1). If the selected commercial supplier maintains records of the source of the common backfill soil and has implemented a testing program meeting the requirements of the MDE VCP clean imported fill guidance document, a description of the sampling plan and analytical results may be used to meet the imported material requirements of this plan. If there are no analytical results from testing performed by the commercial supplier, and prior to importing soil from any source, the material will be sampled and tested based on the latest requirements of the MDE VCP Clean Imported Fill Material for the residential land use scenario, unless otherwise approved by USEPA and MDE.
2. **Imported Quarry Stone and Sand** – Prior to importing quarry stone, sand, or other virgin materials to be used as fill, sub-base, or similar for the Project, the supplier will provide a completed certification letter attesting to the fact that the material is clean. A blank copy of this letter is presented in Attachment 1.

FIGURES

Figure 1
Site Location Map
Harbor Point
Baltimore, Maryland

Attachment 1 MDE FACT SHEET, "VCP – CLEAN IMPORTED FILL MATERIAL"

MARYLAND
Department of the Environment

Facts About...

VCP - Clean Imported Fill Material

The purpose of the Voluntary Cleanup Program (VCP) is to encourage the cleanup and redevelopment of properties throughout Maryland. In many cases, fill materials are imported onto a property as part of the redevelopment process. As more properties are relying upon the use of imported fill materials, the VCP has prepared this guidance document for assisting participants who anticipate using imported fill material at VCP sites.

Introduction

No one wants to introduce new contamination onto a VCP site through the importation of fill material that is believed to be clean. This document was developed specifically for VCP participants who seek guidance on steps to take to minimize the possibility of importing contaminated fill onto VCP sites.

Overview

Because fill material may come from a variety of sources, it is important to determine that any material brought onto a VCP site not only meets engineering specifications for a particular use, but that it also passes some level of screening to ensure that it is, in fact, clean.

Residential or Commercial / Industrial Scenario

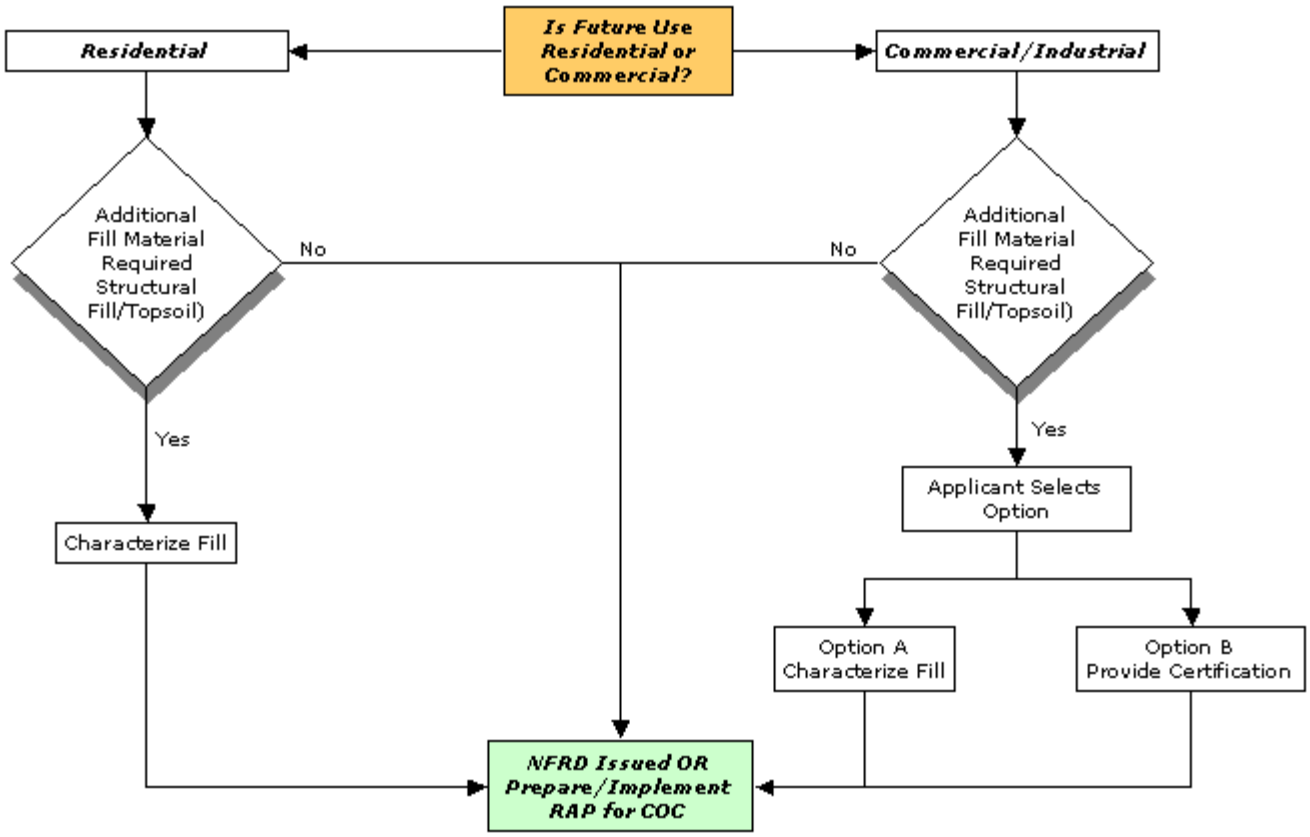
Depending upon the land use scenario, a VCP participant may be required to characterize the fill or provide a certification stating that the imported fill is not contaminated. As indicated in Exhibit 1, all imported fill materials for properties where the land use is determined to be residential must be characterized. In limited circumstances, the VCP may allow a participant to use imported fill material that has not been characterized for areas where no pathway will exist between the fill material and the property's end-users. In such circumstances, a Phase I Environmental Site Assessment conducted within a year from the date of scheduled delivery of fill material documenting that no recognized environmental conditions are present must be submitted to the VCP.

For commercial or industrial land uses, a VCP participant has the option of either characterizing the imported fill material or relying upon an affidavit from the vendor stating that the imported material has not been contaminated by controlled hazardous substances or oil. A template of the affidavit is attached to this guidance.

Selecting Fill Material

In general, the fill source area should be located in non-industrial areas, and not from sites undergoing an environmental cleanup. Non-industrial sites include those that were previously undeveloped, or used solely for residential or agricultural purposes. If the source is from an agricultural area, care should be taken to insure that the fill does not include pesticides, herbicides or metals. Unacceptable sources of fill material include industrial and/or commercial sites where

Exhibit 1: Use of Fill Material for Residential or Commercial/Industrial Decision Tree



hazardous materials were used, handled or stored as part of the business operations, or unpaved parking areas where petroleum hydrocarbons could have been spilled or leaked into the soil. Commercial sites to avoid include former gasoline service stations, retail strip malls that contained dry cleaners or photographic processing facilities, paint stores, auto repair and/or painting facilities, and agricultural supply stores. Industrial facilities to avoid include metal processing shops, manufacturing facilities, aerospace facilities, oil refineries, waste treatment plants, or other similar facilities.

Alternatives to using fill from construction sites include the use of fill material obtained from a commercial supplier of fill material or from soil pits in rural or suburban areas. However, care should be taken to ensure that those materials are also uncontaminated.

Table 1: Potential Contaminants Based on the Fill Source Area	
Fill Source	*Target Compounds/Recommended Analyses**
Land near to an existing highway	• Lead (EPA method 6020 [Rev 0 – 9/9]) • PAHs (EPA method 8270C [Rev 3 – 12/96)
Land near a mining area or rock quarry	• Heavy Metals (EPA method 6020 [Rev 0 – 9/9]) • Asbestos (polarized light microscopy) • pH
Agricultural land	• Pesticides (Organochlorine Pesticides: EPA method 8081A or 8080A; Organophosphorus Pesticides: EPA method 8141A; Chlorinated Herbicides: EPA method 8151A [Rev 1 – 12/96]) • Heavy Metals (EPA method 6020 [Rev 0 – 9/9])
Residential/acceptable commercial land	• VOCs (EPA Method 8260B (Rev 2 - 12/96); Note: The soil and sediment collection method has changed to EPA Method 5035) • SVOCs (EPA method 8270C) • TPH (modified EPA method 8015) • PCBs (EPA method 8082) • Heavy Metals including lead (EPA methods 6010B and 7471A) • Asbestos (OSHA Method ID-191)
*The recommended analyses should be performed in accordance with USEPA SW-846 methods (1996). Other possible analyses include Hexavalent Chromium: EPA method 3060A.	

Documentation and Analysis

In order to minimize the potential of introducing unacceptable fill material onto a site, it is necessary to verify through documentation that the fill source is appropriate and/or to have the fill material analyzed for potential contaminants based on the location and history of the source area. Fill documentation should include detailed information on the previous use of the land from where the fill is taken, whether an environmental site assessment was performed and its findings, and the results of any testing performed. It is recommended that an environmental professional, as defined by ASTM, should sign any such documentation. If such documentation is not available or is inadequate, samples of the fill material should be chemically analyzed. Analysis of the fill material should be based on the source of the fill and knowledge of the prior land use. The Department recommends using the analytical methods in Table 1 to determine whether potential contaminants are present in fill source areas.

Detectable amounts of compounds of concern within the fill material should be evaluated for risk in accordance with the *Soil and Groundwater Cleanup Guidance Document, August 2001*. A standard laboratory data package, including a summary of the QA/QC (Quality Assurance/Quality Control) sample results should also accompany all analytical reports. When possible, representative samples should be collected at the borrow area while the potential fill material is still in place, and analyzed prior to removal from the borrow area. In addition to performing the appropriate analyses of the fill material, an appropriate number of samples should also be determined based on the approximate volume or area of soil to be used as fill material. Table 2 can be used as a guide to determine the number of samples needed to adequately characterize the fill material when sampled at the borrow site.

Alternative Sampling

A Phase I environmental site assessment may be conducted prior to sampling to determine whether the borrow area may have been impacted by previous activities on the property. After the property has been evaluated, any sampling that may be required can be determined during a meeting with MDE. However, if it is not possible to analyze the fill material at the borrow area or determine that it is appropriate for use via a Phase I, it is recommended that the participant use Table 2 to determine the fill material sampling schedule. (See chart on Potential Contaminants Based on the Fill Source Area for appropriate analyses).

This sampling frequency may be modified upon consultation with the MDE if all of the fill material is derived from a common borrow area. However, fill material that is not characterized at the borrow area will need to be stockpiled either on or off-site until the analyses have been completed. In addition, should contaminants exceeding the criteria in *Soil and Groundwater Cleanup Guidance Document, August 2001* be identified in the stockpiled fill material, that material will be deemed unacceptable and new fill material will need to be obtained, sampled and analyzed. Therefore, MDE recommends that all sampling and analyses should be completed prior to delivery to the site to ensure the soil is free of contamination, and to eliminate unnecessary transportation charges for unacceptable fill material.

Composite sampling for fill material characterization may or may not be appropriate, depending on quality and homogeneity of source/borrow area, and compounds of concern. It is not acceptable to composite samples for volatile and semi-volatile constituents. Composite sampling for heavy metals, pesticides, herbicides or PAH's from unanalyzed stockpiled soil is also unacceptable, unless it is stockpiled at the borrow area and originates from the same source area. In addition, if samples are composited, they should be from the same soil layer, and not from different soil layers.

When very large volumes of fill material are anticipated, or when larger areas are being considered as borrow areas, MDE recommends that a Phase I be conducted on the area to ensure that the borrow area has not been impacted by previous activities on the property. After the property has been evaluated, any sampling that may be required can be determined during a meeting with MDE.

Table 2: Recommended Fill Material Sampling Schedule

Area of Individual Borrow Area	*Sampling Requirements*
2 acres or less	Minimum of 4 samples
2 to 4 acres	Minimum of 1 sample every 1/2 acre
4 to 10 acres	Minimum of 8 samples
Greater than 10 acres	Minimum of 8 locations with 4 sub samples per location
Volume of Borrow Area Stockpile	*Samples per Volume*
Up to 1,000 cubic yards	1 sample per 250 cubic yards
1,000 to 5,000 cubic yards	4 samples for first 1000 cubic yards +1 sample per each additional 500 cubic yards
Greater than 5,000 cubic yards	12 samples for first 5,000 cubic yards + 1 sample per each additional 1,000 cubic yards

[*Prepare letter on Seller's Company Letterhead*]

[Name of Purchaser]
[Address]
[City], [State] [Zip Code]

Subject: "Clean" Quarry Stone Certification

Dear [Purchaser's Designated Representative}:

This letter serves to certify that the [*Quantity*] of quarry stone sold to [*Name Of Purchaser*] on [*Date Of Sale*] and delivered to [*Property Address*] on [*Date of Delivery*], is to my knowledge not contaminated with controlled hazardous substances or petroleum products as a result of a spill, leak, discharge or release into the environment.

Sincerely,

Company Representative Date

Company

[*Prepare letter on Seller's Company Letterhead*]

[Name of Purchaser]
[Address]
[City], [State] [Zip Code]

Subject: "Clean" Top Soil Certification

Dear [Purchaser's Designated Representative}:

This letter serves to certify that the [*Quantity*] of top soil sold to [*Name Of Purchaser*] on [*Date Of Sale*] and delivered to [*Property Address*] on [*Date of Delivery*], is to my knowledge not contaminated with controlled hazardous substances or petroleum products as a result of a spill, leak, discharge or release into the environment.

Sincerely,

Company Representative Date

Company

Attachment 2 MUSER RUTLEDGE CONSULTING ENGINEERS (MRCE) LETTER DATED 27 MARCH 2015

Mueser Rutledge Consulting Engineers

14 Penn Plaza · 225 West 34th Street · New York, NY 10122
Tel: (917) 339-9300 · Fax: (917) 339-9400
www.mrce.com

March 27, 2015

Beatty Development Group, LLC
1300 Thames Street, Suite 10
Baltimore, MD 21231

Attention: Mr. Jonathan Flesher

Re: Certification
Stock Pile Location Minor Modification
Exelon Office Tower, Trading Floor Garage, and Central Plaza Garage
Former Allied-Signal, Inc. Baltimore Works (new Harbor Point)
Baltimore, Maryland
MRCE File 11896

I, Peter Deming, a licensed professional Engineer in the State of Maryland, working as Partner of the firm Mueser Rutledge Consulting Engineers, certify that to the best of my knowledge and in my professional opinion, the design revision set forth in the attached February 3, 2015 Stockpile Location on Area 1 including Stockpile Location Plan and stockpile control criteria meets the Consent Decree requirements as stated below.

Certification

Pursuant to the Consent Decree by and between the United States Environmental Protection Agency, the Maryland Department of the Environment and Allied- Signal Baltimore Works, as amended, Article V, Paragraph 16, I certify on behalf of Harbor Point Development LLC that the improvements shown in the enclosed Detailed Design Plan documents will not: a) Interfere with the efficacy of the corrective measures or Honeywell's ability to comply with the Performance Standards, the Groundwater Gradient Monitoring Plan, the Surface Water Monitoring Plan, the Environmental Media Monitoring Plan, and the Surface Soil Monitoring Plan, or any other monitoring plan in effect. b) Increase risks to health or the environment from the conditions at the site.

Very truly yours,
MUESER RUTLEDGE CONSULTING ENGINEERS

By: _____
Peter W. Deming, PE

Mueser Rutledge
Consulting Engineers
14 Penn Plaza · 225 West 34th Street · New York, NY 10122
Tel: (917) 339-9300 · Fax: (917) 339-9400
www.mrce.com

MEMORANDUM

Date:	February 3, 2015 (Revised March 30, 2015)
To:	Office
From:	Gina Schoregge
Re:	Stockpile Location on Area 1 Exelon Tower, Trading Floor Garage & Plaza Garage, Baltimore, MD
File:	11896A

MRCE has reviewed the proposed location for soil stockpile addition. The location is acceptable, as summarized below. This memorandum summarizes stockpile control criteria, and makes recommendation for stockpile control.

Exhibits

We have attached the following to illustrate our analyses:

Attachment 1	Drawing No. I-1 - "Criteria for Interim Use Harbor Point Site Area 1 West of Wills St." Dated: September 10, 2003.
Attachment 2	SK-1 - Potential Stockpile Area

References

1. Black and Veatch Harbor Point Project Memorandum from Christian Lavallee, P.E., to Gary Snyder, P.E. "Response to Requested Design Criteria for the Multimedia Cap and Hydraulic Barrier", dated January 30, 2004.

Multimedia Cap and Underlying Materials

The soil cover on Area 1 is 30" above the MMC synthetic layers. The top 6" is a crushed stone (CR-6) and the underlying materials are sand and gravel aggregates (Cover Soil). The Geomembrane is protected by a Drainage Net and Cover Geotextile above, and by a GCL and Cushion Geotextile below. The synthetic layers are underlain with compacted crushed stone (capillary break) and controlled shaping fill. Soil stockpile heights are restricted to application of 2,000 psf overburden at the Drainage Net layer to prevent squeezing the Drainage Net and reducing its water transmissivity. The cover and cushion geotextiles, drainage net and GCL layers are designed to prevent puncture of the geomembrane.

A typical earth fill weighs 125 pcf. Approximately 16 feet of earth fill will apply 2 kips per square foot (ksf). Given the 30" of soil cover now in place, earth fill should be limited to 13.5 ft. A visual gage for observation of stockpile height is recommended if the stockpile is raised above 8 ft.

Subgrade Support

The proposed stockpile area identified on SK-1 placed inboard of the former shoreline and partially on an existing mat foundation to guard against cap settlement. In the additional area identified for proposed stockpile outboard of the original shoreline, a limiting height of 8 feet is recommended due to the potential that some areas of the former building 23 had slab on grade.

Vehicles operating on the cover soil surface should be limited to 15 cubic yard (cy) concrete truck ("Design Truck"); standard trucks permitted on the highway (HS-20, triaxle dump trucks, and tractor trailers) weigh less than that maximum. This allowance was based on the distribution of wheel loads to stresses below 2 ksf at the 30" depth of the synthetic layers.

Demarkation at Base of Soil Stockpile

The base of the stockpile should be identified with a physical demarcation layer similar to the warning layer which is 12" above the synthetic layers of the MMC (brightly colored snow fence or other product). The demarcation is intended to prevent over-excavation on stockpile removal. Excavation should cease at the demarcation layer. Perimeter sediment control around the stockpile are included in the original DDP.

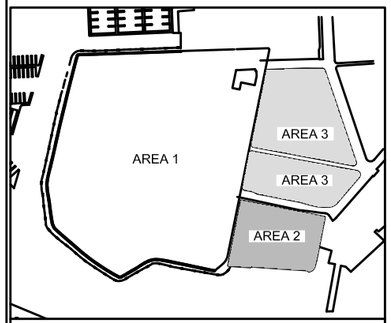
Summary

- Clean soil stockpiles should be no higher than 13.5 feet above existing grade inboard former shoreline and 8 feet above existing grade outboard of former shoreline.
- Place visual gage if stockpile height is extended above 8 ft.
- Provide visual demarcation at base of stockpile to prevent over-excavation on stockpile removal.
- Perimeter sediment control around the stockpile are included in the original DDP.

By: Gina Marie Schoregge

Gina Schoregge

GS:PWD\11896A-40\Stock Pile Memo



PROJECT PHASE PLAN SCALE: 1"=200'

INTERIM USE NOTES FOR PROTECTION OF EXISTING SITE INFRASTRUCTURE

1. Physical Protection:

   Areas and items below are to be physically protected against damage. Protection will be by traffic barriers, concrete block, self-contained free-standing planters, or similar items:

   - HMS vaults which extend above ground surface
   - Gas Vent
   - Lightweight geofoam fill area over Covered Slip outboard of former Building 23.

   Protection by means other than physical barriers are required for the following:

   - Covers to wells and equipment at all locations, shall be locked or tightly bolted closed to protect against tampering.
   - Place 4" parking blocks along edge of pavement to keep vehicular traffic on paved surface. Emergency vehicle access shall not be impeded.

2. Allowable Applied Load Intensity

   The maximum allowable applied load intensity (static or dynamic) on the multimedia cap is 2,000 psf. For traffic limitation, see Note 8.

3. Preservation Of Site Sampling And Monitoring Points

   Maintain availability of site monitoring locations, sampling locations and survey points. Interim use construction and paving over survey points is prohibited, unless replaced in kind or extended through the paving, as approved by Honeywell. Survey monitoring point elevations immediately before and after replacement.

INTERIM SITE IMPROVEMENTS

4. Shallow Trenching and Excavations

   Shallow trenches or local excavations within the cover soil are permitted for installing drainage chases, water lines, utilities, or constructing slabs flush with the pavement surface, etc. All trenching and excavation shall be approved by Honeywell. Excavations over the Multimedia Cap shall be limited in depth to twelve inches below the bottom of the crushed stone cover, or shallower if the visual barrier is encountered. The visual barrier shall not be penetrated. All excavations shall be inspected, and documented in depth and extent and transmitted to Honeywell.

   - Excavations are to be performed by smooth bucket equipment (no plate welded across teeth), under the direct observation of a person approved by Honeywell or designated representative.
   - Remove the stone cover down to the geotextile. Cut and fold back the geotextile. Replace geotextile upon completion.
   - Excavation spoils shall be stockpiled on heavy duty plastic tarps, and removed from the site, or returned to the excavation and compacted to 95% Standard Proctor maximum density.

5. Paving Site Areas

   Parking areas and access roads shall be paved. Concrete and asphalt pavement may be placed directly on the crushed stone surface. The paved areas shall be designed to provide storm drainage by sheet flow off cap without causing erosion of cover materials. Crushed stone or concrete water flow diffusers shall be located in area of erosion as needed. Manholes, other flush mounted access openings, settlement plates and equipment shall be raised with the asphalt pavement as approved by Honeywell. Surveys shall be performed before and after raising settlement plates and resets shall be indicated in the O & M records. All well covers in paved areas shall be designed to accommodate the design traffic load and exclude surface water.

6. Lights

   Light poles may be installed on the cap provided the limitations on excavation and bearing intensity are met, and the light poles are stable. Light poles may be fixed to concrete blocks, or flush mounted slabs as desired. Foundation designs for poles shall be approved by Honeywell.

7. Waterfront Improvements

   Not applicable for interim use.

USE LIMITATIONS

8. Vehicles shall typically operate on paved areas. Occasional use on unpaved areas is permitted. Vehicles are limited to a fully loaded 15 cubic yard capacity concrete truck. Highway permitted HS 20 trucks weigh less than that maximum, and are therefore permitted. Concrete trucks shall not clean out or wash down equipment on Area 1, 2, or 3 Cap. Crane pads shall be supported on mats to limit loads in accordance with Note 2.

9. Plants, bushes, trees, etc. shall be set in planters with sides and bottoms impenetrable to roots.

10. Permanent and semi-permanent generators or other motorized equipment requiring refueling shall be placed on pre-cast or cast-in-place concrete pads with a perimeter lip to retain spilled fuel. During refueling, temporary equipment on asphalt shall be surrounded by a sorbent coil appropriate for the type of fuel used. Temporary equipment requiring refueling on unpaved areas shall be placed on a temporary petroleum resistant plastic or concrete containment with perimeter lip, during refueling. Should a spill of any measurable quantity occur, the spill shall be fully cleaned using sorbent towels and other measures as necessary. Honeywell shall be notified of spills. Used sorbent materials shall be disposed of properly. Fuel containers shall be stored on paved areas with containment berms. LPG bottles have no storage or use limitations.

11. Stakes or spikes which will be driven into the ground shall be no longer than 12 inches. Fence posts shall not be driven into the ground, but must be supported by concrete block bases or other

12. Periodic inspections shall be made by Honeywell or designated representative to verify compliance with these criteria.

LEGEND

- MULTIMEDIA CAP
- DOUBLE - LAYER SYNTHETIC DRAINAGE COMPOSITE
- INFILTRATION TRENCH
- METHANE GAS VENT
- SETTLEMENT PLATE
- TOE DRAIN COLLECTION PIPING
- RIP-RAP
- SOIL-BENTONITE BARRIER
- SETBACK FROM SOIL/BENTONITE AND HMS COMPONENTS
- PIEZOMETER SYSTEM
- MANHOLE JUNCTION
- VAULT JUNCTION WITH PUMPING WELL
- APPROX. LIMIT OF BUILDINGS
- CAP COVER SOIL SAMPLING LOCATION
- DRAINAGE LAYER SAMPLING LOCATION
- 4" PARKING BLOCKS
- EXISTING UNPAVED SERVICE ROAD
- PROPOSED PAVED PARKING/ROAD WAY
- APPROX. LIMIT OF AREAS OF KNOWN OR POTENTIAL SETTLEMENT CONCERN
- APPROX. LIMIT OF AREAS OF DREDGED CHANNEL
- PROPERTY BOUNDARY
- FENCE LINE

GENERAL NOTES:

1. Base drawing provided from available information compiled by Parsons Engineering Science, Inc., acting for Honeywell International Inc.
2. Site use areas shown provide clearance for minor discrepancies in actual locations of buried utilities. Locations of visible utilities shall be confirmed for protection before site work commences.

GRAPHIC SCALE

80' 40' 0 80' 160'

HARBOR POINT
(FORMER HONEYWELL BALTIMORE WORKS)
BALTIMORE MARYLAND

STRUEVER BROTHERS
ECCLES & ROUSE, INC.
BALTIMORE MARYLAND

MUESER RUTLEDGE CONSULTING ENGINEERS
14 PENN PLAZA – 225 W. 34TH STREET, NY, NY 10122

SCALE	MADE BY I.Y. DATE 9-10-03	FILE NO.
GRAPHIC	CH'KD BY P.W.D. DATE 9-10-03	9487

CRITERIA FOR INTERIM USE
HARBOR POINT SITE AREA 1
WEST OF WILLS ST.

DRAWING NO. I-1

PROPOSED DOCK STREET

PROPOSED WELLS STREET

CAROLINE STREET

THAMES STREET

EXIST. HONEYWELL TRANSFER STATION

MATERIAL LAYDOWN AREA

CLEAN SOIL STOCKPILE AREA

DECONTAMINATION PAD

VEHICLE TURNAROUND LOOP

APPROXIMATE LIMIT OF ABANDONED MAT FOUNDATION

PLAZA GARAGE

FUTURE POINT STREET

PROPOSED STOCKPILE AREA

N: −6225.6
E: 4392.3

N: −6242.2
E: 4474.2

N: −6298.7
E: 4467.8

N: −6342.0
E: 4366.8

227.3'

53.03'

93.7'

N: −6389.9
E: 4602.3

N: −6273.0
E: 4626.1

IMPACTED WATER STORAGE MODU – TANKS

EXISTING SURFACE LOT (TO REMAIN)

CONTAINMENT BERM

ORIGINAL SHORELINE (SEE NOTE 1)

COVERED SLIP

47.85'

130.08'

86.41'

36.67'

TYPE "J" PLATFORM

STOCKPILE LOCATION PLAN

GRAPHIC SCALE

60' 30' 0 60' 120'

NOTES:

1. Compressive Deposits are known to exist outboard of the original shoreline.
2. Extending the stockpile area beyond limits shown requires a detailed understanding of the of the pile supported abandoned structures below existing grade.
3. Clean soil stockpiles should be no higher than 13.5 feet above existing grade.
4. Place visual gage if stockpile height is extended above 8 ft.
5. Provide visual demarcation at base of stockpile to prevent over–excavation on stockpile removal.
6. Base of Stockpile dimensions shown on drawing. Stockpile shall be placed so the side slopes are stable and protected from unravelling.

LEGEND:

– STOCKPILE MAX. 8 FT HEIGHT

– STOCKPILE MAX. 13.5 FT HEIGHT

EXELON BLDG. & PLAZA GARAGE

MUESER RUTLEDGE CONSULTING ENGINEERS
14 PENN PLAZA – 225 WEST 34TH STREET, NEW YORK, NY 10122

MADE BY: E.C. CH'KD BY: G.S. DATE: 02–03–2015

FILE NUMBER: 11896 DRAWING NUMBER: SK–1

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Attachment 3 PILE DECONTAMINATION PROCEDURE

Pile Decontamination

As discussed in DDP, building foundations will utilize driven piles. Any piles observed to be damaged will be cutoff and filled with concrete a minimum of 12 inches below the restored Geomembrane. In the event that a pile needs to be extracted, decontamination will be performed in accordance with the procedure described herein which is substantively consistent with the approach used for the Exelon Project. The controlled area and equipment decontamination pad (Figure 2 of the DDP) is proposed as a location for power washing the extracted piles. Power washing to decontaminate the driven pipe piles will follow the process as described below:

1. Use Scraping tools to scrape the extracted piles, and then enclose thescraped piles with poly sheeting as each pile is extracted. The pile will be extracted high enough such that the workers in Level D PPE can scrape the material back into the excavation from which it is being extracted. Once scraped, the sheet will be wrapped in plastic and then the pile will be extracted again (i.e., the process is repeated) to a workable elevation for scraping. This is done until the entire pile is extracted. When completed, the process will result ina fully scraped sheet that is wrapped in plastic;
2. Monitor air by deploying one work zone monitor downwind duringpile scraping decontamination;
3. The poly-wrapped extracted pile will be moved to the decontamination pad. The decontamination area is a lined containment area with a lined sump to collected wash water. The design of decontamination pad is shown on Figure 2 of the DDP. During pile decontamination procedure, the area will be available for pile decontamination only, i.e., no roll-off will be parked in the area.
4. Power wash the piles using heated water to reduce the potential forfreezing, as temperatures dictate (i.e., heated water may not be used above freezing temperatures);
5. Power wash water will drain and collect in the sump located in the low point of the decontamination pad area. The wash water from the sump will be pumped by a sump pump and conveyed to the contact water double-walled Frac tank;