

Material Handling and
Management Plan
Wills Wharf Office Project

Baltimore Works Site
Baltimore, Maryland

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For:
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1.0 INTRODUCTION

Harbor Point Development LLC (HPD or Developer) and its consultants have prepared this Material Handling and Management Plan (MHMP) for the Wills Wharf Office Project (Project). The Project is planned for a portion of the former AlliedSignal Baltimore Works Site (Site), located in Baltimore, Maryland.

This MHMP has been prepared as part of the Detailed Development Plan (DDP) for 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). This SPRP is applicable to development support activities as described in the DDP, and terminates post-construction following completion of the activities identified in the DDP.

1.1 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 (Figure 1). Historical operations at the Site resulted in impacts to soil and groundwater from hexavalent chromium (CrVI). Honeywell International Inc. (Honeywell), which acquired AlliedSignal, is responsible for operating and maintaining an Environmental Remediation System (ERS) that addresses the chromium impacted soil and groundwater at the Site. The Site consists of three Areas:

1. Area 1 is the principal location of the former AlliedSignal (now Honeywell) Baltimore Works Site, which included chromium processing production and support buildings on an area that covered approximately 14 acres;
2. Areas 2 and 3 were used for various industrial and warehousing operations, including chromate ore storage (Area 2) and brass foundry casting, oil blending and storage, coating/plastics production, lumber storage and foundry (Area 3). Areas 2 and 3 currently include the Thames Street Wharf (TSW) Office Building and its associated parking lots, where construction was completed in 2010. The Project will not disturb Area 3 or the TSW Office Building.

The majority of the Project will occur in the western region of Area 2, south of Point Street (formerly Block Street). The construction of Wills

Street as part of the Project will involve a limited area along the southeastern portion of Area 1. The Project will also include other non-designated areas that are outside of Area 1 or Area 2 but within the Project's limits of disturbance (LOD) as defined in the DDP.

1.2 **PURPOSE**

This MHMP addresses the handling and management of solids (e.g., asphalt, stone aggregates, concrete and wood debris and soil) and liquids (storm water, 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 surface immediately below the Multimedia Cap (MMC) synthetic layers inside the Hydraulic Barrier (HB) in Area 1 or the upper geotextile, which was constructed as part of the Layered Soil Cap (LSC) in Area 2.

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 LSC, and the removal of all soil and debris generated by the Project from below the horizon that constitutes intrusive activities (i.e., the MMC inside the HB in Area 1 and the upper geotextile in Area 2). These materials are referred to collectively as "controlled soil/debris."

2.0 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. The Developer's design, construction, and finished improvements shall conform to the requirements of the Consent Decree. Specific requirements include but are not limited to:

- Unless otherwise approved by the Maryland Department of the Environment (MDE), imported material (e.g., common soil backfill, aggregate, etc.) will follow Maryland's guidance for the import of clean fill, a copy of which is found in Appendix A. The import of clean material is discussed later in this MHMP.
- Environmental controls shall be instituted once intrusive activities are being performed, including air monitoring as described in the CAMP, which is a separate document prepared as part of the DDP;
- All MMC and LSC components for Area 1 and Area 2, respectively, must be repaired, restored or replaced in any disrupted or penetrated area, unless otherwise noted on the approved DDP for the Project.

Honeywell International, Inc. (Honeywell) is the generator for hazardous materials removed from Harbor Point, inclusive of Area 1, Area 2, Area 3, and any non-designated areas. As such, Honeywell is responsible for signing hazardous waste profiles and waste manifests for disposal to off-site, permitted facilities approved by Honeywell. Harbor Point Development is the generator for non-hazardous materials removed from Areas 2 and 3 and is responsible for signing non-hazardous waste profiles

and waste manifests for disposal to off-site, permitted facilities approved by Harbor Point Development.

3.0 WILLS WHARF DEVELOPMENT PROJECT

3.1 OVERVIEW

This Project includes the Wills Wharf Office/Hotel building, the underlying parking garage and plaza, general site development (streets, sidewalks, utilities, foundations, etc.), the office plaza extension/construction, a promenade along the southern limits of the Project, and remedy restorations for development of the Project. The Project includes the extension of Wills Street, which is west of the building, and will terminate just north of the new promenade.

The Project building, parking garage and Plaza will be constructed on pile foundations. Wills Street will be constructed as an earthen ramp with retaining walls. Prior to driving piles within 30 feet of the HB, the HB will be reinforced with sheet piles.

The Project will not disturb the TSW Office Building other than to reduce the number of available parking spaces. Additional parking is being considered for an area to the west of the existing parking lots, and traffic will be rerouted around the Project.

3.2 EXCAVATIONS AND PILES

Excavations for the Project will be performed to construct the lowest parking garage level and hotel lobby, prepare for pile installation and construct pile caps, and to install utilities. Excavation will be necessary to remove the existing asphalt pavement and cover soils as needed to install sheet piles, foundation piles, pile caps, utility and storm drainage manholes, vaults and conduit duct banks.

Piles will be driven or drilled, requiring soil excavation in all areas where foundations are constructed. These excavations related to pile installations may include demolition and removal of abandoned foundation and concrete floors (e.g., obstructions left in place below the MMC in Area 1). The excavations will be performed with a sequence and process designed to: 1) minimize stormwater runoff and accumulation in excavations; 2) protect against dust generation; and 3) to eliminate exposure to workers of soil from below the Area 1 MMC and the upper geotextile in Area 2.

The majority of the foundation piles will be driven. Drilled piles will also be installed in certain areas of the Project and only in Area 2. 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.

The piles shall be driven/drilled from existing grade, with only local removal of surface materials (e.g., pavement and subgrade, as needed) to facilitate pile installation. Pre-drilling or pit excavations may be used to proactively evaluate whether obstructions are present in pile driving areas. Surface water will be diverted away from piles and excavations using clean cover soil berms or similar.

The HB will be reinforced in accordance with the 17 April 2015 Minor Modification prepared by Mueser Rutledge Consulting Engineers (MRCE) and approved by the United States Environmental Protection Agency (EPA) and MDE (EPA and MDE are also referred to collectively as the “agencies”). As part of the HB reinforcement, excavation will include the removal of clean cover soil (i.e., soil above the MMC in Area 1) to expose the concrete protective barrier to expose the HB wall.

3.3 *DEWATERING*

The majority of the excavations for the Project will be above EL. +8.5 and should not require dewatering. Localized excavation dewatering is expected for Pile Cap P94 at the south elevator bank (typically EL. +0.7 and higher). These activities reflect a short-term construction condition. The excavation dewatering activities will be of short duration and will require only small-scale lowering of the water table. Dewatering is not expected to be necessary in other areas of the Project, except if significant rainfall accumulates in excavations and requires removal for construction.

3.4 *OBSTRUCTION REMOVAL*

Obstructions, such as remnant concrete floor slabs, footings, asphalt, etc., 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.

Abandoned groundwater wells, if any, exposed during the excavation that present an open annulus (i.e., wells not previously abandoned in place) will be properly abandoned in-place or removed, as required, following Maryland's regulations in COMAR 26.04.04.11 - Abandonment Standards. Appendix C includes a well abandonment form to be completed if a monitoring well is encountered and properly abandoned.

4.0 *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, stabilized construction entrances, and inlet protection as detailed in the drawings in the DDP for the Project. Prior to the initiation of any intrusive activities, the erosion and sediment controls and stormwater management 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.

Erosion and sediment controls as detailed in the drawings in the DDP will be applied to individual excavations made for piles, clean utility corridor, and 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 7 - Water Management.

5.0 *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 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 - Limiting the size of the open area during the excavation sequence at any one time during construction to the extent practical. This will serve two purposes: 1) reduce the area of exposed soil that could be a source of windblown dust; and 2) assist with stormwater management;
2. BMP No. 2 - To the extent practicable, direct load controlled soil/debris into lined, roll-off containers or dump trucks, each with covers (see Section 6.1 for the description of controlled soil/debris) and eventually targeted for off-site disposal;
3. BMP No. 3 - 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 during the excavation sequence 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;
4. BMP No. 4 - 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 re-covered as soon as possible following loading, unloading or shaping activities such that the stockpile is left uncovered for significant periods during

the course of a work day. Limit the area to be uncovered to that area required for the work (i.e., do not uncover the pile in its entirety for a specific work activity);

5. BMP No. 5 – 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;
6. BMP No. 6 – For the area inside the HB in Area 1, excavate controlled soil/debris (defined in Section 6.1 as including materials excavated from below the geomembrane inside the HB in Area 1) and replace in an adjacent area that is also below the geomembrane. This practice will reduce the volume of controlled soil/debris that would be otherwise be disturbed in Area 1 and direct loaded and transported off Site for disposal at a RCRA Subtitle C landfill. This BMP is acceptable under certain conditions as described in Section 6.4.4;
7. BMP No. 7 – For Area 2, excavate controlled soil/debris (defined in Section 6.1) and replace in an adjacent area that is also below the geomembrane. This practice will reduce the volume of controlled soil/debris that would be otherwise be disturbed in Area 2 and direct loaded and transported off Site for disposal.

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 Total Particulate Matter (Total PM) persist after implementing the response measures described in Appendix D Quality Assurance Project Plan (QAPP): Standard Operating Procedures for Responses and Notifications to Action Level Exceedances Wills Wharf Office Project.

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.

As noted previously, the CAMP provides a description of the air monitoring methods to be used 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.

6.0 *HANDLING AND MANAGEMENT OF SOIL, DEBRIS AND AGGREGATE*

Materials generated from the excavations for the Project will include asphalt, CR-6, No. 57 stone, clean soil and controlled soil/debris. Materials will be segregated and managed as described below. Materials may be re-used on Site in accordance with requirements as discussed in this section.

ERM notes that Maryland's Voluntary Cleanup Program (VCP) prohibits the use of any materials excavated from Area 2 or non-designated areas within the footprint of the Project to be reused in a residential setting unless otherwise approved by the VCP. In the event that the Developer contemplates a restricted residential use in accordance with the NFRD and the reuse of excavated soil as part of the Project, the Developer will submit a request for approval to re-use the soil to MDE along with an environmental management plan that would describe how the soil would be managed by the Project under a restricted residential setting.

The Project is not a residential setting but a restricted commercial setting as described by Maryland's VCP. Appendix D contains a copy of the VCP 3 August 2007 No Further Requirements Determination (NFRD) applicable to the Project. " Appendix D was added to the revised MHMP.

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. Specific provisions, e.g. container labeling, secondary containment, inspection, and recordkeeping, will be followed.

6.1 *RE-USE AND STORAGE OF EXCAVATED COVER SOIL AND AGGREGATE*

Cover soil and aggregate (collectively "cover soil/aggregate") refers to the clean material excavated from above the MMC inside the HB in Area 1, above the upper geotextile in Area 2, and soil excavated from above a warning layer (e.g., geotextile or visual warning layer such as an orange snow fence) in the non-designated areas. Cover soil includes the cover soil that was placed over the MMC that runs over the HB and into Wills Street.

If geotechnically suitable, cover soil/aggregate can be re-used as follows:

1. Placed below the MMC in Area 1 or the upper geotextile in Area 2;

2. Placed below impervious surfaces including buildings, roadways, sidewalks, etc.;
3. Restoration of the HB;
4. Temporary ramps to be stabilized with gravel or asphalt for construction traffic; or as
5. Utility backfill.

Cover soil/aggregate may be placed directly as backfill in locations where fill is required, if practical within the construction sequence. This cover soil/aggregate may be placed next to the excavation as a temporary measure until re-used. The temporary stockpile will be covered if it will not be re-used that same day.

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 Engineer. Prior to reuse as structural fill, materials generated from on-site excavations will be sorted to remove deleterious materials, such as organics, wood, etc. Unsuitable materials will be segregated and disposed off-site.

If necessary, cover soil/aggregate will be temporarily stockpiled within a designated Cover Soil Stockpile Area (CSSA). The likely CSSA location is shown in the drawings in the DDP; however, this area may be relocated during construction, due to the tight spatial constraints on the Project. As shown in the DDP drawings, the CSSA will be lined with a non-woven geotextile. For erosion and sediment control, the area will be enclosed with a supersilt fence as shown in the DDP drawing set.

As appropriate, markers showing 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 and Foundation Designer (Mueser Rutledge Consulting Engineers). As a matter of convenience, attached to this document is a certification letter from Mueser Rutledge Consulting Engineers (MRCE) dated 27 March 2015 that discusses the limitations on stockpile heights. This letter has been appended to the revised MHMP as Appendix E.

6.2 CONTROLLED SOIL/DEBRIS SEGREGATION

Unless otherwise specified and approved by the agencies, soil/debris not otherwise designated as clean cover soil/aggregate in Section 6.1 is referred to as controlled soil/debris. Controlled soil/debris also includes drill cuttings generated by pile drilling and obstruction removal (discussed separately in Section 6.4).

Loaded containers that are not transported off-site daily will be sealed prior to temporarily being stored within the sealed container area/decontamination pad. The location of the sealed container area/decontamination pad is shown in the drawings in the DDP. The Contractor has the option of commingling the controlled soil/debris or segregating the controlled soil/debris so as to keep separate hazardous (From Area 1) and potentially non-hazardous waste (from Area 2) as described below in Section 6.3. The commingling of hazardous waste and non-hazardous waste renders the resulting mix hazardous waste.

All suspected contaminated materials must be properly stored (temporarily) and characterized to generate a waste profile as required by the receiving facility. The disposal facility for hazardous waste is to be disposed at a facility acceptable to Honeywell International, Inc. upon acceptance of the material by the facility.

6.3 TRANSPORTATION AND OFF-SITE DISPOSAL OF CONTROLLED SOIL/DEBRIS

Controlled soil/debris shall be managed as hazardous waste unless otherwise determined through waste characterization and profiling as required by the receiving disposal facility. In accordance with COMAR 23.13.03.05E, hazardous waste shall be shipped off-site within 90 days of generation of waste materials to an approved, permitted facility. Specific provisions, e.g. container labeling, secondary containment, inspection and record keeping, will be followed. Materials will be transported off-site for disposal following written approval of acceptance from the RCRA landfill facility's representative.

Controlled soil/debris 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. However, it is uncertain if controlled soil/debris from the remainder of the Project limits (e.g., below the upper geotextile in Area 2) would be profiled as either hazardous waste or non-hazardous waste. The Contractor has the option of commingling the controlled soil/debris

or segregating the controlled soil/debris so as to keep hazardous and potentially non-hazardous waste separate to minimize disposal costs. Note, however, that commingling hazardous waste and non-hazardous waste renders the resulting mix hazardous waste.

Additionally, any soils or other materials that are excavated from non-designated areas of the Project and exhibit evidence of suspected contamination (e.g., with staining, discoloration, odors, etc.) will also be stored in lined roll-off containers for waste profiling and proper management.

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:

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

It is the generator's 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 EPA and MDE. The generator'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.

6.4 OTHER PROVISIONS

6.4.1 *Controlled Soil/Debris Generated from Obstruction Removal*

As noted previously, obstructions, such as remnant concrete floor slabs, footings, asphalt, etc., 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. Obstructions may be broken and sized in the excavation to allow loading directly to lined, sealed roll-off container boxes.

The handling and management of auger spoils (i.e., controlled soil/debris) generated during obstruction removal will follow the Minor Modification from ERM, excluding reference to air monitoring, which was approved by the agencies. Air monitoring for the Project is covered separately in the CAMP. A copy of ERM's Minor Modification and agencies' approvals are found in Appendix B.

6.4.2 *Drilling Spoils and Fluids from Drilling Piles*

Drilled piles will only be installed in Area 2. 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 sealed container area/decontamination pad shown in the DDP drawing set. The containers will be labeled with an accumulation start date, in the event that the materials are identified as hazardous waste.

Drilling spoils, debris, and mud collected from the pile drilling will be sampled and analyzed as appropriate to evaluate whether they should be handled and disposed as hazardous or non-hazardous wastes. However, these wastes shall be managed as hazardous waste unless otherwise

determined through waste characterization and profiling as required by the receiving disposal facility.

In accordance with COMAR 23.13.03.05E, hazardous waste shall be shipped off-site within 90 days of generation of waste materials to an approved, permitted facility. Specific provisions, e.g. container labeling, secondary containment, inspection and record keeping, will be followed. Materials will be transported off-site for disposal following written approval of acceptance from the RCRA landfill facility's representative.

6.4.3 *Abandoning Monitoring Wells*

Ground water monitoring wells, if any, encountered during the Project that present an open annulus (i.e., wells not previously abandoned in place) will be properly abandoned in-place or removed, as required, in accordance with Maryland's regulations in COMAR 26.04.04.34 Well Abandonment and Sealing Standards. The driller shall complete the MDE Water Well Abandonment-Sealing Form (copy is found in Appendix C). Completed abandonment-sealing forms shall be provided to the EPA and MDE at the completion of construction. Abandonment may only be done by a well driller licensed by the Maryland State Board of Well Drillers.

Well construction materials (riser pipe and well screen) shall be disposed as non-hazardous trash. The displacement of groundwater, if any, during well abandonment shall be handled as Contact Water as described in Section 7.0.

6.4.4 *Specific Management Option for Excavated Controlled Soil/Debris in Area 1 and Area 2*

Controlled soil/debris that originates from Area 2 may be placed below the upper geotextile or capillary break in Area 2. This is BMP No. 7 in Section 5.

Under certain conditions, controlled soil/debris that originates from inside the HB in Area 1 may be replaced below the geomembrane in a nearby area (BMP No. 6 in Section 5). The condition under which this BMP applies is outlined in ERM's letter to EPA and MDE dated 1 August 2014. EPA and MDE approved ERM's approach conditionally as noted in their respective approval letters, each dated 11 September 2014. To be clear, this practice is only applicable to the area inside of the HB and in Area 1. A copy of the correspondence and agency approvals is found in Appendix B.

A summary of the conditions under which these BMPs can be implemented are as follows. Note that transport of the controlled soil/debris under BMP No. 6 by a truck is prohibited.

1. **Adjacent excavation and backfill locations:** locations that can be accessed by equipment (i.e., excavator) while remaining in the same general location:
 - a. Prior to removing materials from an excavation, poly sheeting will be placed and anchored in the area between the excavation and backfilling locations to capture any material that could be potentially dropped while consolidating the material from one excavation into another. Any material that is dropped will be immediately removed and placed into the designated replacement location;
 - 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;
 - c. For Area 1, the minimum 2-foot soil cover and overlying protective material (i.e., poly sheeting or crushed gravel) will be placed over the backfilled material in accordance with correspondence to EPA and MDE dated 14 July 2014 (Appendix B). For Area 2, the backfilled material need be covered with the at least 6 inches of cover soil, poly sheeting or crushed gravel.

2. **Excavation and backfill locations within near proximity:** excavation and backfill locations that are in the same proximity but cannot be accessed directly by equipment from one location:
 - a. Prior to removing materials from an excavation, poly sheeting will be placed and anchored in the area between the excavation and backfilling locations. All loading, transporting, and unloading activities will be performed over the poly sheeting. This is a BMP to capture any material that could be potentially dropped while consolidating the material from one excavation to another;
 - b. 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. The transfer

activities will be conducted over areas covered with poly sheeting;

- c. The loader will drive across poly sheeting to the backfill location. The material will be replaced in an excavation;
- d. Any material that is dropped on the poly sheeting during loading, transporting, or backfilling will be immediately removed and placed into the designated backfill location;
- e. For Area 1, the minimum 2-foot soil cover and overlying protective material (i.e., poly sheeting or crushed gravel) will be placed over the backfilled material in accordance with correspondence to EPA and MDE dated 14 July 2014 (Appendix B, excluding attachments). For Area 2, the backfilled material need be covered with the at least 6 inches of cover soil, poly sheeting or crushed gravel.

6.4.5 *Foundation Pile Decontamination in the Event of Extraction in Area 1*

In the event that a pile needs to be extracted in Area 1, decontamination will be performed substantively consistent with the approach used for the Exelon Project. 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 7. Controlled soil/debris will be managed as described under Section 6. Copies of these procedures are found in Appendix B.

7.0 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 collected in temporary storage areas such as the sealed container area/decontamination pad;
 - b. Stormwater in excavations that comes into contact with controlled soil/debris material or groundwater;
 - c. Decontamination water used to decontaminate equipment that contacted controlled soil/debris;
 - d. Groundwater from dewatering, including stormwater that collects in excavations where groundwater is also present, or monitoring well abandonment.
2. Non-Contact Water – Non-Contact Water consists of the following:
 - a. Stormwater that is collected in excavations constructed as part of a non-intrusive activity;
 - b. Stormwater that has not come into contact with controlled soil/debris or groundwater 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.

Neither Contact Water nor Non-Contact Water will be discharged to the Baltimore City sanitary sewer unless authorized under a wastewater discharge permit form Baltimore City.

7.1 CONTACT WATER

Water collected and managed as Contact Water and will be pumped to a designated double-walled frac tank. 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.

Contact Water shall be managed as hazardous waste unless otherwise determined through waste characterization and profiling as required by the receiving disposal facility. 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 and will be managed in accordance with COMAR 26.13.03.

Contact Water will be held for analytical testing for waste profiling, as required by the receiving facility, to ensure proper off-site disposal. 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. However, it is uncertain if the Contact Water from the remainder of the Project limits would be profiled as either hazardous waste or non-hazardous waste. The Contractor has the option of commingling the Contact Water from within the Project LOD or segregating the Contact Water so as to keep separate hazardous and potentially non-hazardous waste. Note, however, that commingling hazardous waste and non-hazardous waste renders the resulting mix hazardous waste.

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.

To determine the necessary storage capacities for Contact Water management, both the 25-year storm event and the 100-year storm event were examined. However, the storage requirements were determined based primarily on the 25-year storm event. When a storm event occurs, the entire footprint of the excavation, including the sloped portions, is considered to receive stormwater. The pump(s) required to dewater the excavation zone(s) will be adequately sized to manage stormwater during the peak intensity rainfall rate of a 25-year storm event.

The maximum area open to stormwater, potentially generating Contact Water, is the sheet pile reinforcement excavation planned for the HB as part of this Project. The assumed area open to stormwater is approximately 15 feet by 250 feet (3,750 square feet). The 24-hour rainfall during a 25- year storm event is 6.23 inches, yielding a total volume of 14,600 gallons for this Area 1 excavation. The 24-hour rainfall during a 100-year storm event is 8.60 inches, yielding a total volume of 20,100 gallons.

Based on the calculations above, one frac tank rated at 21,000 gallons will handle the volume generated by more than one 25-year storm event or one 100-year storm events for this Area 1 excavation. In order to provide sufficient storage, two 21,000 gallon capacity frac tanks will be designated for storage of Contact Water.

The frac tanks for Contact Water will be situated in sealed container area/decontamination pad shown in the DDP drawings; however, this area may be relocated during construction, due to the tight spatial constraints on the Project.

7.2 *NON-CONTACT WATER*

Water collected and stored as Non-Contact Water will be collected and pumped to a designated double-walled frac tank. Contact Water and Non-Contact Water will not be commingled.

The Developer will submit an application to MDE for coverage under Maryland's General Permit 11HT: General Permit for Discharges from Tanks, Pipes and Other Liquid Containment Structures at Facilities Other than Oil Terminals (NPDES Permit No. MDG675222) (General Permit No. 11HT). All requirements of General Permit No. 11HT for monitoring and

discharge limits will be followed during the Project. General Permit 11HT must be obtained before starting construction.

Non-Contact Water will be held for analytical testing to determine proper disposal and compliance under General Permit No. 11HT. This Non-Contact Water may be discharged to the Baltimore City storm sewer system if the laboratory analytical results comply with the discharge limits as presented in General Permit No. 11HT. Otherwise, Non-Contact Water will be properly disposed off Site at the Honeywell approved EQ York, Pennsylvania facility, unless otherwise approved by Honeywell.

To determine the necessary storage capacities for Non-Contact Water management, the maximum area open to stormwater and potentially generating Non-Contact Water is assumed to be approximately 1,400 square feet of open pile cap excavations. The 24-hour rainfall during a 25-year storm event is 6.23 inches, yielding a total volume of 5,500 gallons. The 24-hour rainfall during a 100-year storm event is 8.60 inches, yielding a total volume of 7,500 gallons.

Based on the preceding calculations, one frac tank rated at 21,000 gallons will handle the volume generated by more than three 25-year storm events or approximately two 100-year storm events for this scenario. In order to provide sufficient storage, one 21,000 gallon capacity frank tank will be designated for storage of Non-Contact Water

The frac tank for Non-Contact Water will be situated in the sealed container area/decontamination pad shown in the DDP drawings; however, this area may be relocated during construction due to the tight spatial constraints on the Project.

7.3 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.

8.0 IMPORTED SOIL/AGGREGATES

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 Top Soil – Prior to importing top soil, the supplier will provide a completed certification letter attesting to the fact that the top soil is clean (i.e., not contaminated with controlled hazardous substances or petroleum products as a result of a spill, leak, discharge or release into the environment). A blank copy of this letter is found in Appendix A;
2. Imported Quarry Stone, Sand, etc. – 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 found in Appendix A;
3. Imported Soil –
 - a. Imported Soil to be Placed Above the MMC in Area 1, the upper geotextile in Area 2 or in the non-designated areas: The source of soil shall be documented as described in MDE’s *VCP Clean Imported Fill Material* guidance document (Appendix A). 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 requirements of the MDE VCP *Clean Imported Fill Material*, unless otherwise approved by EPA and MDE.
 - b. Imported Soil to be Placed Below the MMC in Area 1 or below the upper geotextile in Area 2: The source of the soil will be certified by the supplier as clean. The certification

will at a minimum meet the intent of the attached template published by MDE (Appendix A). ERM believes that this is consistent with MDE's Guidance, specifically the following statement from the guidance....."*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.*" ERM believes that placement below the MMC synthetic liners constitute pathway elimination.

APPENDIX A

MDE Fact Sheet

VCP – Clean Imported Fill Material



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

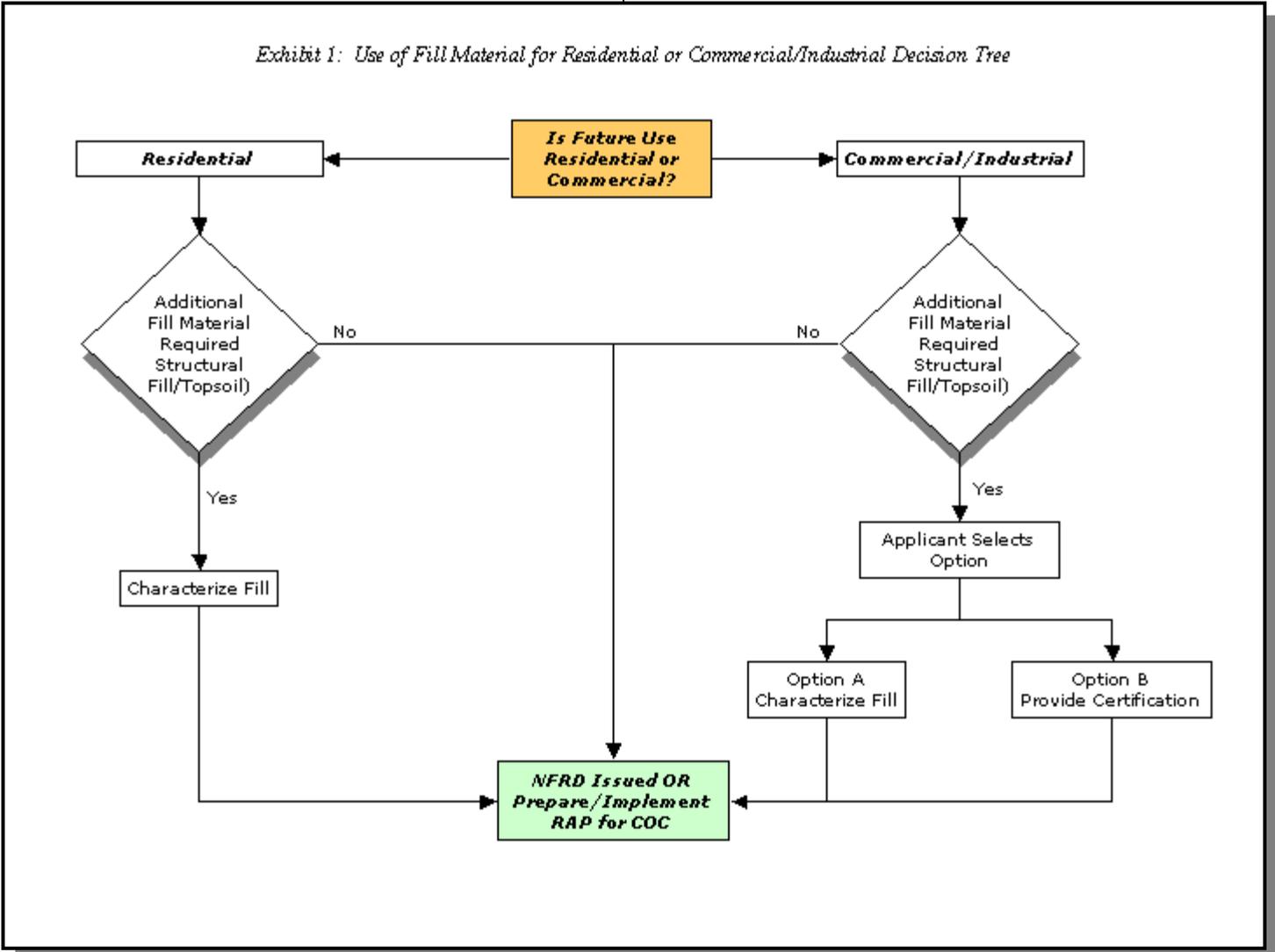
for areas where no pathway will exist between the fill material and the property's end-users. In such circumstances, a Phase I Environmental Site Assessment conducted within a year from the date of scheduled delivery of fill material documenting that no recognized environmental conditions are present 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

<i>Fill Source</i>	<i>Target Compounds/Recommended Analyses*</i>
Land near to an existing highway	<ul style="list-style-type: none"> • Lead (EPA method 6020 [Rev 0 – 9/9]) • PAHs (EPA method 8270C [Rev 3 – 12/96])
Land near a mining area or rock quarry	<ul style="list-style-type: none"> • Heavy Metals (EPA method 6020 [Rev 0 – 9/9]) • Asbestos (polarized light microscopy) • pH
Agricultural land	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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)
<p>*The recommended analyses should be performed in accordance with USEPA SW-846 methods (1996). Other possible analyses include Hexavalent Chromium: EPA method 3060A.</p>	

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

<i>Area of Individual Borrow Area</i>	<i>Sampling Requirements</i>
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
<i>Volume of Borrow Area Stockpile</i>	<i>Samples per Volume</i>
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

APPENDIX B

Handling of Spoils During Obstruction Removal

***Management of Controlled Soil/Debris (includes 14 July 2014
Correspondence with Agencies)***

Pile Decontamination Procedures

Handling of Spoils During Obstruction Removal

Leonard Rafalko

From: Fish, Russell <Fish.Russell@epa.gov>
Sent: Thursday, February 05, 2015 1:51 PM
To: Leonard Rafalko; ed.dexter@maryland.gov; Jonathan Flesher
Cc: adyer@mrce.com; Jeff Boggs; Peter W. Deming; Gina Schoregge; Darren Quillen; greaves, bob; Prince, Ruth; Jim Leizear (Jim.Leizear@Maryland.gov); Fatzinger, Travis T NAP; Richard A DePasquale,; Martowska, Derek M NAP; Eric Charlier; Mark Mank (mark.mank@maryland.gov)
Subject: RE: Harbor Point - Alternative Option to Handle Auger Spoils

Jonathan, EPA has reviewed the proposed alternative option for handling the auger spoils from the obstruction removal process as described in the attachment to ERM's email dated February 3, 2015 and approves this modification with the following conditions:

1. A Dust Trak for particulate monitoring must be deployed downwind of the roll off when the hopper is being emptied into the roll-off. When not in operation the roll off box must remain covered. Response actions established for the project will be applied in the event that we have a dust exceedance of the BTV. However, this requirement is not necessary if the roll-off can be positioned such that the potential for dust generation can also be monitored by the Dust Traks deployed around the auger rig;
2. The maximum height of the spoils in the hopper will be limited to a level that is equivalent to approximately six inches of freeboard below the lowest level of the top of the hopper. The top of the hopper is angled such that the front and back of the hopper are not at the same level.

Please follow up on this approval by providing the required certification consistent with previous minor modifications.

Should you have questions please contact me at the number listed below.

Russell H. Fish
Office of Remediation 3LC20
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029
Phone: (215) 814-3226
FAX: (215) 814-3113
email: fish.russell@epa.gov

From: Leonard Rafalko [<mailto:Leonard.Rafalko@erm.com>]
Sent: Tuesday, February 03, 2015 5:27 PM
To: ed.dexter@maryland.gov; Fish, Russell
Cc: Jonathan Flesher; adyer@mrce.com; Jeff Boggs; Peter W. Deming; Gina Schoregge; Darren Quillen
Subject: Harbor Point - Alternative Option to Handle Auger Spoils

Hi Russ and Ed, attached is a written description of a proposed alternative option for handling the auger spoils from obstruction clearing. I understand that this subject was brought up during the environmental meeting on Friday. Your prompt review and approval is greatly appreciated as we have ceased drilling until the attached is approved. I understood from an earlier discussion with Russ that we may need to certify the attached (Russ is looking into whether it could be just a field condition change to means and methods) but that we would most likely be able to implement in

advance of providing the certification if necessary. This would be great so we can get back to work with obstruction removal.

Thanks for your review and quick turnaround.

Thank You

Leonard (Lenny) Rafalko | Partner | ERM

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Malvern, PA 19355

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Visit our website on www.erm.com

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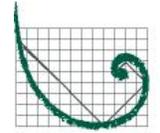
Please visit ERM's web site: <http://www.erm.com>

**Environmental
Resources
Management**

75 Valley Stream Parkway
Suite 200
Malvern, PA 19355
(484) 913-0300
(484) 913-0301 (fax)
www.erm.com

6 February 2015

Mr. Jonathan Flesher
Beatty Development Group, LLC
1300 Thames Street, Suite 10
Baltimore, MD 21231



ERM[®]

Subject: Harbor Point – Attachment A to Plaza Garage Concentric Pile Work Plan

Dear Mr. Flesher:

I, Leonard G. Rafalko, working as Partner of the firm Environmental Resources Management, Inc. (ERM) certify that to the best of my knowledge and in my professional opinion that Attachment A to the Plaza Garage Concentric Pile Work Plan meets the Consent Decree requirements as stated below.

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 Beatty Development Group, LLC. that the improvements described in Attachment A 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.

Sincerely,



Leonard Rafalko
Partner in Charge

Environmental Resources Management

Attachment A

cc: Darren Quillen, Jeff Boggs

Attachment A

Plaza Garage Concentric Pile Work Plan – Auger Spoils Handling Improvement

The proposed improvement as an alternative option to the approved Plaza Garage Concentric Pile Work Plan is the use of a one cubic yard steel hopper for collecting auger spoils in lieu of a 30 cubic yard container. As discussed in more detail below, this option provides several advantages compared to the existing process: reduce potential for spillage of auger spoils onto the ground surface, reduced potential for dust generation, increases worker safety by reducing equipment movement, and flexibility of operations under muddy conditions.

The one cubic yard steel hopper is adequately sized for the placement of the auger spoils and has the capacity to hold the spoils generated from each boring location. As specified at the end of this narrative, the hopper cannot be overfilled. The one cubic yard hopper can be safely located immediately adjacent to the auger rig eliminating repetitive movement by the rig at every borehole to bring spoils to the 30 cubic yard lined roll-off. The one cubic yard steel hopper will be lined with poly-sheeting and excess sheeting will be draped over the spoils and secured to completely enclose the spoils once the boring is completed. Once the auger spoils are enclosed in poly-sheeting, a heavy equipment forklift will be used to dispose of the auger spoils wrapped in poly-sheeting into a 30 cubic yard lined roll-off container set on an asphalt surface with poly-sheeting secured on the adjacent asphalt surfaces. As specified at the end of this narrative, a Dust Trak for particulate monitoring must be deployed downwind of the roll off when the hopper is being emptied into the roll-off.

The one cubic yard hopper will be secured to the forklift allowing the hopper to be tilted into the 30 cubic yard lined roll-off such that the poly sheeting enclosed spoils will readily slide from the one yard container into the 30 cubic yard roll-off. All poly-sheeting used to protect the cover soil surface during auger obstruction removal, to line the steel hopper and enclose the auger spoils and to protect asphalt surfaces will also be disposed into the 30 cubic yard roll-off container.

1. The approved **Plaza Garage Concentric Pile Work Plan** was implemented beginning January 21st. During the performance of the Work Plan, it became evident that the deployment of a 30 cubic yard lined roll-off container within close proximity to the auger rig to be able to remove the auger spoils from the boring meant that the auger rig needed to move on construction mats after each incremental penetration into the subsurface to place the spoils into the roll-off. This movement to remove auger spoils into the 30 cubic yard lined roll-off

container required relocating the auger rig to its original position and re-setting the auger bit into the boring. This process has been repeated six to eight times at each completed boring until the boring depth was achieved, prolonging the auger boring process and requiring visual confirmation that the auger was returned to the prior position.

Additionally, current cover soil conditions within the Plaza Garage work area are very wet (muddy) and in some locations there is standing water as temperatures change from below to above freezing. We anticipate that these conditions will persist through completion of the augering operations. Under these conditions, safely manipulating a 30 cubic yard roll-off container to be adjacent to the auger rig at each plaza garage pile location has been challenging, especially as auger spoils are collected adding additional weight to the roll-off container. The 30 cubic yard roll-off container that was filled after boring six locations took significant effort by large equipment to remove the container from the work area. In addition, constant movement of the roll-off containers in these very muddy conditions could result in damage to the gate seals and tarpaulin cover.

2. The proposed improvement for auger spoils handling will result in more effective auger obstruction efforts as the auger bit can be moved back and forth from the bore hole to the one yard hopper without moving the rig staged on construction mats. The proposed improvement will allow the construction crew to avoid the use of heavy equipment manipulation of a 30 cubic yard roll-off container at each auger boring location on the very wet, sometimes frozen or standing water, cover soil surface that could result in safety concerns and damage to the container.
3. The proposed improvement for auger spoils handling will be more protective of the environment by eliminating the repeated handling of the 30 cubic yard container with hazardous soils, which in turn reduces the potential for dust generation, and increases worker safety by eliminating repetitive movement of the 30-yard container with heavy equipment.

As specified in EPA's email dated 5 February 2015, the implementation of this alternative option requires the following:

1. A Dust Trak for particulate monitoring must be deployed downwind of the roll off when the hopper is being emptied into the roll-off. When not in operation the roll off box must remain covered. Response actions established for the project will be applied in the event that we have a dust exceedance of the

BTV. However, this requirement is not necessary if the roll-off can be positioned such that the potential for dust generation can also be monitored by the Dust Traks deployed around the auger rig;

2. The maximum height of the spoils in the hopper will be limited to a level that is equivalent to approximately six inches of freeboard below the lowest level of the top of the hopper. The top of the hopper is angled such that the front and back of the hopper are not at the same level.

Management of Excavated Controlled Soil/Debris



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Via UPS

September 11, 2014

Jonathan S. Flesher
Senior Development Director
Beatty Development Group, LLC
1300 Thames Street, Suite 10
Baltimore, MD 21231

**Re: Management of Excavated Material - Exelon
Minor Modification**

Dear Mr. Flesher:

Based on the information provided in the August 1, 2014 letter from ERM to the Environmental Protection Agency (EPA), EPA has determined that under certain conditions, moving excavated soils within the Harbor Point RCRA redevelopment project does not trigger RCRA hazardous waste disposal requirements. EPA's determination is consistent with the Area of Contamination (AOC) Policy.

EPA is defining the geographic boundary of the AOC at the Harbor Point RCRA redevelopment project as the discrete area that is bounded by the soil-bentonite wall. Further, EPA's determination is based on the following conditions: the excavated soil will not be treated ex-situ before being backfilled; the excavated soil will not be transported out of the AOC, (unless it is being transported for proper disposal off-site); and, additional waste is not added to the excavated soil. Any excavated material other than soil shall be separated and disposed in accordance with the approved Detail Development Plan (DDP) dated December 3, 2013.

ERM's August 1, 2014 letter proposes three methods to manage excavated soil within the AOC. EPA hereby approves the method identified as "Adjacent excavation and backfill locations" (Method 1). The method identified as "Excavation and backfill locations within near proximity" (Method 2) is hereby approved provided the loader bucket is completely covered while transporting excavated soils and the soils are sufficiently wet to eliminate any particulate emission. The method identified as "Excavation and backfill locations that require transport by a small, on-site truck" (Method 3) is disapproved.

With respect to Method 2, any soil or capillary stone that is dropped on the poly sheeting during loading or unloading will be removed as quickly as possible and placed into the designated backfill location, i.e., the excavation of origin or the excavation for final placement, and below the membrane. Any plastic that needs to be removed as part of this response will be

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disposed off-site as debris, and the poly will be repaired/replaced as appropriate before operations continue. Only soil and capillary stone will be placed below the membrane. Plastic and other debris, including any debris removed during obstruction clearing, will be disposed properly off-site.

The use of Method 1 and Method 2, as conditioned, would require a modification to the currently approved DDP dated December 3, 2013. EPA, in consultation with the Maryland Department of the Environment, hereby approves such modification pursuant to Section IV.19.d of the Agreement and Covenant Not to Sue SBER Harbor Point, LLC and Harbor Point Development, LLC, Docket No.: RCRA-03-2003-0088TH.

Should you have questions or want to discuss the matter further, please do not hesitate to contact me at (215) 814-3226.

Sincerely,



Russell H. Fish
Project Manager
Office of Remediation

cc: E. Dexter (MDE)
C. French (Honeywell)





MARYLAND DEPARTMENT OF THE ENVIRONMENT

Land Management Administration • Solid Waste Program, Suite 605

1800 Washington Boulevard • Baltimore MD 21230-1719

410-537-3315 • 1-800-633-6101, X-3315 • www.mde.state.md.us

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

September 11, 2014

Mr. Jonathan Flesher, Senior Development Director
Beatty Development Group, LLC
1300 Thames Street, Suite 110
Baltimore, MD 21231

Dear Mr. Flesher:

The Maryland Department of the Environment (MDE) has received a copy of a letter to you dated September 11, 2014, from Mr. Russell H. Fish, Remedial Project Manager, USEPA, which conveyed the USEPA's conditional approval of the plans for replacing chromium contaminated soil under the cap at the Exelon/Harbor Point construction site.

The letter approves Methods 1 and 2 of the three that were proposed in a letter proposed by ERM on your behalf in a letter dated August 1, 2014. Method 1 is identified as "Adjacent excavation and backfill locations", and Method 2 is identified as "Excavation and backfill locations within near proximity". Method 3, identified as "Excavation and backfill locations that require transport by a small, on-site truck", was not approved.

The Department conferred with the USEPA in review of this matter, and fully concurs with the approvals and conditions expressed in the referenced letter from USEPA. Please keep us informed of activities that occur during the implementation of these plans. If you have any questions in this matter, please refer them to me at 410-537-3315, or via email at ed.dexter@maryland.gov.

Sincerely,

Edward M. Dexter, P.G., Administrator
Solid Waste Program

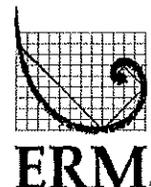
cc: Mr. Russell H. Fish, Remedial Project Manager, USEPA
Mr. Chris French, Remediation Design and Construction Manager, Honeywell International, Inc.
Mr. Horacio Tablada, Director, Land Management Administration, MDE
Matthew Zimmerman, Assistant Attorney-General, Maryland Office of the Attorney-General



August 1, 2014

Mr. Russell H. Fish
Remedial Project Manager
Environmental Protection Agency
1650 Arch Street, Mail Code 3LC20
Philadelphia, PA 19103-2029

Mr. Ed Dexter, P.G., Administrator
Solid Waste Program
Maryland Department of the Environment
1800 Washington Blvd
Baltimore, MD 21230



**RE: Management of Excavated Material
Honeywell Baltimore Works Site-Area 1, Phase 1**

Dear Mr. Fish and Mr. Dexter,

As you are aware, the contractor has been, and is currently, driving foundation pipe piles at the referenced site in accordance with the approved plans, including the Detailed Development Plan (DDP). Prior to pipe pile driving activities, the contractor prepares each pile location in a prescribed manner to: 1) limit the disturbance to the multimedia cap (MMC) and underlying materials; and, 2) clear each location of any potential subsurface obstructions that would prevent the pipe piles from being driven at the designated location. Thereafter, cover materials, primarily consisting of re-used cover soil from the site, are placed in controlled lifts and compacted within the excavation, the pile is driven, and the MMC components restored. The preparation activities are depicted in the approved project plans, including the Detailed Development Plan (DDP).

The general process described above typically requires the removal of approximately five feet of impacted material from below the MMC to assure that all obstructions are properly managed. In some instances, the excavations are deeper to remove the obstruction. The impacted materials are subsequently transported off-site to approved, hazardous waste disposal facilities. This process has been implemented for over 180 piles that have been installed to-date generating approximately 3,000 tons of regulated waste; however, approximately 900 more pipe piles will be installed according to the DDP foundation design. In implementing this process, it has been observed that the volume of impacted materials being transported off-site is significantly greater than anticipated and the process is at times potentially both in-efficient and unnecessary. Harbor Point Development, LLC (HPD) therefore proposes herein an alternative approach such that the materials removed, or a portion thereof, from below the geomembrane are re-placed below the geomembrane prior to restoring the MMC.

In general, the project site is well controlled and the materials are contained within the site boundaries as intended by the remedy. The remedy has been performing successfully for many years, including both the MMC and the hydraulic barrier systems. Further, the implementation of the control plans approved by the regulatory agencies for this project has similarly been successful, and instructional as to requirements dictated by the specific conditions encountered. With this operational knowledge it is possible to enhance the system efficiency and further reduce certain inherent risks associated with the movement and transportation of materials.

Reducing the volume of material managed beyond the site boundaries will minimize the materials being transported on public roadways with the attendant reduction of off-site risks.

The area of contamination (AOC) policy described in an EPA memorandum dated 13 March 1995 clarifies that the movement of hazardous wastes within an AOC is permissible and does not trigger RCRA land disposal restrictions. Since the AOC at the site is defined by the limits of the MMC and hydraulic barrier, movement of materials within the Area 1, Phase 1 boundary complies with the policy. The proposed alternative approach discussed below meets these conditions.

Alternative Approach

The alternative process proposed for managing impacted materials going forward is to excavate the required materials and replace them in an area that is also below the geomembrane. This process complies with the Best Management Practices and air monitoring requirements prescribed in the approved documents. The distance between the excavation and replacement locations for the impacted materials may vary depending on the pipe pile driving schedule. For group piles, the materials could be managed within the same excavation and would not require removal from the limits of the excavation. However, for single pipe pile locations, the surface area of the excavation is minimal, requiring removal of a limited volume of impacted materials from the excavation. In lieu of transporting the full quantity of these materials off-site, the materials, or a portion thereof, would be replaced in another similar, nearby location that has previously been excavated and cleared of any obstructions. The relocation of material from one excavation to another would be performed in the following manner based on the distance between the excavation and replacement location:

- **Adjacent excavation and backfill locations:** locations that can be accessed by equipment (i.e., excavator) while remaining in the same general location:
 - prior to removing materials from an excavation, poly sheeting will be placed and anchored in the area between the excavation and backfilling locations. This is a Best Management Practice (BMP) to capture any material that could be potentially dropped while consolidating the material from one excavation into another. Any material that is dropped will be immediately removed and placed into the designated replacement location.
 - 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.
 - the minimum 2-foot soil cover and overlying protective material (i.e., poly sheeting or crushed gravel) will be placed over the backfilled material in accordance with correspondence to EPA and MDE dated 14 July 2014.
- **Excavation and backfill locations within near proximity:** excavation and backfill locations that are in the same proximity but cannot be accessed directly by equipment from one location:

- prior to removing materials from an excavation, poly sheeting will be placed and anchored in the area between the excavation and backfilling locations. All loading, transporting, and unloading activities will be performed over the poly sheeting. This is a BMP to capture any material that could be potentially dropped while consolidating the material from one excavation to another.
- 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. The transfer activities will be conducted over areas covered with poly sheeting.
- the loader will drive across poly sheeting to the backfill location. The material will be replaced in an excavation.
- any material that is dropped on the poly sheeting during loading, transporting, or backfilling will be immediately removed and placed into the designated backfill location.
- the minimum 2-foot soil cover and overlying protective material (i.e., poly sheeting or crushed gravel) will be placed over the backfilled material in accordance with correspondence to EPA and MDE dated 14 July 2014.
- **Excavation and backfill locations that require transport by a small, on-site truck:** excavation and backfill locations that are not in near proximity to each other such that poly sheeting cannot be continuously placed between the locations:
 - prior to removing materials from an excavation, poly sheeting will be placed and anchored in the loading and unloading areas. All loading and unloading activities will be performed over the poly sheeting. This is a BMP to capture any material that could be potentially dropped while loading/unloading the materials on/from a truck.
 - an excavator will remove material from an excavation and load it into a small, on-site truck. The truck will transport the material to the backfill location.
 - an excavator will unload the material from the truck and place the material in the designated excavation.
 - any material that is dropped on the poly sheeting during loading or unloading will be immediately removed and placed into the designated backfill location.
 - the minimum 2-foot soil cover and overlying protective material (i.e., poly sheeting or crushed gravel) will be placed over the backfilled material in accordance with correspondence to EPA and MDE dated 14 July 2014.

Air monitoring will be performed throughout the process in compliance with the approved Construction Air Monitoring Plan (CAMP). For air monitoring purposes, each excavation and backfill location that are not adjacent will be treated as separate intrusive zones and monitored, accordingly. Following pile driving activities, the geomembrane will be restored over each area, as is the current practice, such that the impacted materials are covered by the geomembrane and associated MMC elements as indicated in the approved DDP.

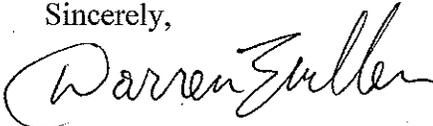
The management of excavated material described herein ensures that the material is not comingled with surface materials, maintains the rigorous air monitoring process, reduces the

Russell Fish
Ed Dexter
August 1, 2014
Page 4

quantity of material that is transported on public roadways, and is consistent with the intent of EPA's AOC policy.

We appreciate your prompt consideration of this matter. If you have a questions or comments, please do not hesitate to contact me at (410) 991-9568, or Jeff Boggs at (443) 803-8495.

Sincerely,

A handwritten signature in cursive script that reads "Darren Quillen". The signature is written in black ink and is positioned above the printed name.

Darren Quillen, P.E.
Senior Project Manager

cc: Bob Greaves, Ed Hammerberg, Jim Leizear, Chris French, Jonathan Flesher, Jeff Boggs

14 July 2014 Correspondence with Agencies (excludes attachments)

BEATTY • DEVELOPMENT

July 14, 2014

Mr. Russell H. Fish
Remedial Project Manager
Environmental Protection Agency
1650 Arch Street, Mail Code 3LC20
Philadelphia, PA 19103-2029

Mr. Ed Dexter, P.G., Administrator
Solid Waste Program
Maryland Department of the Environment
1800 Washington Blvd
Baltimore, MD 21230

**RE: Construction Air Monitoring Modification
Honeywell Baltimore Works Site-Area 1, Phase 1**

Dear Mr. Fish and Mr. Dexter,

Based on construction methodologies and results from the air monitoring program, Harbor Point Development LLC (HPD or the Developer) is requesting a modification to the air monitoring procedure, consistent with considerations conveyed by MDE in Mr. Dexter's email correspondence dated 26 June 2014 (Attachment 1). The air monitoring activities are set forth in the approved Construction Air Monitoring Plan (CAMP) and the Air Monitoring Program Quality Assurance Project Plan (QAPP). In part, the intent of the CAMP and QAPP is to monitor real-time dust emissions during intrusive work activities to mitigate the potential for emissions from exposed chromium impacted materials. As defined in the Sampling and Analysis Plan appended to the QAPP, intrusive activities address disturbance below the geomembrane component of the multi-media cap (MMC). Disturbance below the geomembrane will, for a period of time, expose impacted materials.

To date, it has been observed that pipe pile driving hammer exhaust has contributed significantly to higher dust readings on Work Zone DustTrak monitors. As you are aware, equipment exhaust is not the source of emissions that are the focus of the CAMP. Further, specific measures have been incorporated during construction to limit exposure and emissions of impacted materials. In fact, these protective measures were noted as being in place in Mr. Dexter's email during pipe pile driving on 26 June 2014. Nonetheless, the Work Zone DustTrak reported significantly high TPM readings when in fact soil at the Work Zone was effectively covered with negligible exposure, if any, to create dust. As a result of the exhaust from the pipe pile hammer, alerts were issued by the monitor and an Event Log had to be prepared for this day. A similar occurrence was documented by ERM on 27 June 2014 (Attachment 2). Since there are almost 1,000 pipe piles being driven for the project, HPD believes that this field condition will only be replicated over and over again throughout pipe pile driving.

To address this field condition, MDE's email suggests that Work Zone monitoring be eliminated at pipe pile driving locations when the soil is "fully covered." The Harbor Point Development team concurs with MDE's assessment. As a matter of fact, prior to pile driving, cover soil or other clean materials are placed and compacted over any impacted materials at each pile driving location. Pile driving activities are, therefore, conducted through the surface cover material, thereby, mitigating the potential for emissions of dust from the underlying impacted materials.

As noted in the CAMP, modifications to the air monitoring program may be considered depending on construction, field conditions, and monitoring results. Consequently, Harbor Point Development respectfully requests MDE and EPA's approval to modify the approach as noted in the referenced e-mail found in Attachment 1. Specifically, the modification continues monitoring requirements for activities at open holes, i.e., locations where impacted materials below the geomembrane are exposed to the atmosphere, but monitoring is not required for holes that are covered with cover soil, plastic, or other clean materials during pipe pile driving activities.

In accordance with correspondence via e-mails from EPA on 3 and 10 July 2014 (Attachment 3), the subsections below provide the additional information and details required by EPA for approval of this modification.

Interim Cover for Each Pile Location (Comment a, Attachment 3)

As noted above, cover materials are placed over the impacted materials prior to initiating pile driving activities to mitigate dust emissions from the impacted materials. Consequently, in locations where Work Zone monitoring will not be required per this modification request, a minimum of two feet of clean soil or re-used cover soil from the site will be placed and compacted over the impacted materials at each pile driving location. Thereafter, a slightly different approach will occur for individual (i.e., single) piles versus group piles. For single pile locations, the cover soil backfill will be overlain by plastic sheeting through which the pile will be driven. For group piles, a 6-inch thick lift of crushed gravel (i.e., CR6) will be placed over the cover soil backfill through which the pile will be driven. The crushed gravel provides a suitable platform for the equipment to work from. Plastic sheeting is also placed over the CR6 at the conclusion of work for that day. Sand bags are used to anchor the plastic sheeting to the ground. In accordance with this modification request, Work Zone monitoring will not be required once the materials described in this subsection are in place at a particular pile location.

DDP References Affected by this Modification Request (Comment b 3 July 2014 email, Attachment 3, and Comment 1 10 July 2014 email, Attachment 4)

The elements within the DDP that are amended by this request include, but are not limited to, the sections listed below.

These sections primarily refer to air monitoring during intrusive activities.

- Area 1, Phase 1 Detailed Development Plan
 - Section 7.2.1, Paragraph 1
- Air Monitoring Program, Quality Assurance Project Plan Area 1, Phase 1 Development
 - Section 1.3.7, Paragraph 2
 - Section 3.1.2, Paragraph 2
- QAPP Appendix A: Construction Sampling and Analysis Plan, Area 1, Phase 1 Development
 - Section 1.0, Paragraph 5
 - Section 1.5, Paragraph 1
 - Section 3.2, Final bullet

- Section 4.0, 7th bullet
- QAPP Appendix D: Standard Operating Procedure for Response Actions and Notifications
 - Section 1.1
 - Section 2.1
 - Section 3.0

Construction Activities that Continue to Require Work Zone Monitoring (Comment c 3 July 2014 email, Attachment 3)

The only modification that is requested herein is the elimination of air monitoring during pile driving activities when an interim cover is in place as described above. Air monitoring activities will continue for other construction activities as required in the approved documents. Specifically, the following activities still require air monitoring:

1. Work zone air monitoring will continue for excavation activities conducted below the geomembrane for obstruction removal or otherwise, until such time that the interim cover requirements described above are met. As depicted in the QAPP, Appendix D, Figure 5, depending on the size of the excavation as many as three (3) work zone monitors are deployed 50 feet downwind of the excavation zone, with the monitors spaced approximately 35 feet apart. Smaller, single pile excavations, typically 5 feet by 5 feet by 5 feet, will have one work zone monitor deployed downwind.
2. Whenever the cover soil stockpile is uncovered and intrusive excavation is occurring, the cover soil stockpile area will also be monitored by one unit located approximately 50 feet downwind.

Certain Activities Being Conducted to Maintain the Integrity of the Cover Over the Excavations

The Contractor has installed check dams in critical drainage areas that consist of crushed gravel (i.e., CR-6) wrapped in filter fabric that slows flow and reduces erosion of the stormwater diversion berms. These dams are located in critical drainage areas near the perimeter berm of an excavation to further protect the berm and mitigate the potential for water to flow through or over the diversion berm and into the excavation. Additionally, the contractor has installed eyeholes and guys into the geomembrane dams. A guywire extends from the eyehole and is secured by sand bags to provide additional resistance to sliding in the event that water pressure accumulates behind the dam. Further, clean cover soil is placed in the excavation to cover impacted materials. Any water that runs into the excavation would come from non-contact areas.

Contingency Plans for Maintaining the Integrity of the Cover Over the Excavations
(Comment 2 10 July 2014 email, Attachment 4)

As a contingency plan to ensure stabilization of the interim cover during severe storm events, the Contractor will implement the following:

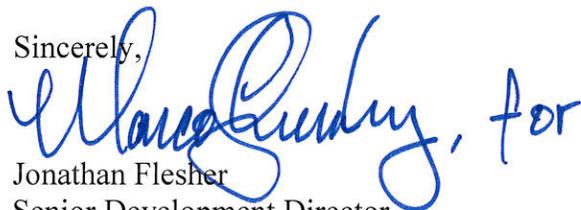
1. Deploy and place additional sand bags to anchor the plastic sheeting at the excavations. The additional weight of the sand bags will further reduce the potential that the plastic sheeting could be displaced by storm water or high winds;
2. During periods of pending storms, the Contractor will monitor weather forecasts to prepare in advance for any severe storm event forecasted for the area. This information will be used to manage deployment of the additional sand bags in a timely manner.

Approval of this Modification (Comment e 3 July 2014 email, Attachment 3)

Approval of this modification is subject to suspension or revocation by EPA or MDE should observations onsite indicate that restoration of monitoring around some, or all, of the pile-driving excavations is necessary to protect public health.

We appreciate your prompt consideration of this matter. If you have a questions or comments, please do not hesitate to contact me at (443) 463-3937. Thank you.

Sincerely,



Jonathan Flesher
Senior Development Director
Harbor Point Development LLC

cc: Ruth Prince
Bob Greaves
Mark Mank
Horatio Tablada
Chris French
John Morris
Darren Quillen
Jeff Boggs
Leonard Rafalko

File Decontamination Procedures

Sheet Pile Decontamination - Alternate Location

It has been determined that a minimum of three (3), approximately 75-foot long sheet piles (EB #'s 60, 61, & 62) must be extracted from the Wills Street SB Barrier. There is not an adequately sized area within the SB Barrier trench to position the sheet piles for power washing (following scraping) to the south of the installed sheet piles as the sanitary sewer crossing, yet to be removed, is located in that area. Tower crane #2 is scheduled to be erected beginning this week, precluding positioning extracted sheet piles north of sheet pile EB # 59. Additionally, frigid temperatures forecasted for the next week will necessarily delay the use of water for power washing.

The ModuTank containment area is proposed as an alternate location for power washing the extracted sheet piles. The north side of the ModuTank containment area and within the asphalt berm is approximately 180 feet long and 15 feet wide, between the north face of the ModuTanks and the south face of the 18-inch high asphalt berm. Power washing to decontaminate the sheet piles will follow the process as described below:

1. EWMI will use the scraping tools to scrape the extracted sheet piles, and then enclose the scraped sheet piles with poly sheeting as each sheet pile is extracted per the approved sheet pile decontamination plan (email correspondence with agencies on 16 January 2015), which is summarized below:
 - a. 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 sheet is extracted again (i.e., the process is repeated) to a workable elevation for scraping. This is done until the entire sheet is extracted. When completed, the process will result in a fully scraped sheet that is wrapped in plastic;
2. ERM will provide air monitoring by deploying one work zone monitor downwind during sheet pile scraping decontamination;
3. EWMI will provide an approximate 80 foot long x 15 foot wide piece of LLDPE membrane to form a “trough” between the ModuTanks and the asphalt berm. The area will be covered by poly sheeting beyond the limits of the LLDPE trough;
4. Hallaton will weld the ends of LLDPE membrane to form a catchment basin to collect power wash water. The LLDPE trough will have 4-foot sides. The south side of the trough will be supported by the ModuTank north framing, to the height of the ModuTank (~ 4 feet). Framing using 2”x4” lumber will be constructed to support the north sidewall of the trough to the 4-foot height. The bottom width of the LLDPE trough will be ~ 12 feet to support two sheet piles aligned side-by-side; (1) the sheets wrapped in poly sheeting, and (2) the sheet pile being power washed. LLDPE end caps will be welded to enclose the “trough” to contain and pump by sump pump the power wash water to the contact water Frac tank (see Step 10);

5. AHCC will provide six (6) each, 4"x4"x 12 foot long lumber to support and provide a slope for the poly-wrapped sheet piles;
6. Wagman will move the poly-wrapped sheet piles to the decontamination area and will stack the sheets to be power washed at the north face of the ModuTanks. The sheet piles may be stacked here for a short duration until power washing can be done safely and efficiently depending on weather conditions;
7. EWMI will isolate the decontamination area with orange safety fence to prevent unauthorized personnel entry;
8. Wagman will position each sheet pile alongside of the stacked sheet piles (north) and turn each sheet pile over to complete power washing;
9. EWMI will power wash the sheet piles using heated water to reduce the potential for freezing, as temperatures dictate (i.e., heated water may not be used above freezing temperatures);
10. EWMI will transfer the power wash water using a sump pump positioned in the low point of the LLDPE catchment basin (i.e., trough) to the contact water Frac tank, positioned in secondary containment, located outside the western section of the asphalt berm;
11. Wagman will move the clean sheet piles back to the Wills Street SB Barrier area for installation;
12. EWMI will place the used the LLDPE catchment basin in a roll-off container dedicated for synthetic materials disposal.

APPENDIX C

Well Abandonment Form

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
 1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

 WATER WELL ABANDONMENT-SEALING REPORT FORM

SUBMIT COPIES OF COMPLETED FORM TO:

- * COUNTY ENVIRONMENTAL AGENCY (contact MDE, WMA if address needed)
- * WELL OWNER
- * MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: _____ (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) _____

* PERMIT NUMBER OF REPLACEMENT WELL: _____

* PERSON ABANDONING WELL: _____ WELL DRILLER'S LICENSE NUMBER: _____

CIRCLE: MWD / MSD / MGD

* OWNER'S NAME: _____

* WELL LOCATION:

SITE LOCATION MAP

COUNTY: _____
 NEAREST TOWN: _____
 TAX MAP _____ BLOCK _____ PARCEL _____
 SUBDIVISION: _____
 SECTION: _____ LOT: _____
 STREET ADDRESS: _____

LATITUDE 3 _ . _ _ _ _ _

LONGITUDE 7 _ . _ _ _ _ _

* TYPE OF WELL BEING ABANDONED:

- _____ DRILLED _____ JETTED
- _____ BORED _____ HAND DUG
- _____ OTHER (specify) _____

LOG OF SEALING MATERIAL

* USE CODE:

- _____ DOMESTIC _____ MUNICIPAL/PUBLIC
- _____ IRRIGATION _____ INDUSTRIAL
- _____ TEST/OBSERVATION _____ GEOTHERMAL

MATERIAL	FEET	
	FROM	TO
VOLUME OF MATERIAL USED		

* TYPE OF CASING:

- _____ STEEL _____ PLASTIC
- _____ CONCRETE _____ OTHER (specify) _____

SIZE OF CASING: _____ INCHES IN DIAMETER

DEPTH OF WELL: _____ FEET DEEP

WAS ANY CASING REMOVED? ___ YES ___ NO

If yes, length removed, in feet: _____

WAS CASING RIPPED OR PERFORATED? ___ YES ___ NO

 SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE# MWD / MSD / MGS DATE

CIRCLE ONE



APPENDIX E

***Mueser Rutledge Consulting Engineers (MRCE) Certification 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
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Srinivas Yenamandra
Associates

Joseph N. Courtade
*Director of Finance
and Administration*

Martha J. Huguet
Director of Marketing



March 27, 2015

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

Attention: Mr. Jonathan Flesher

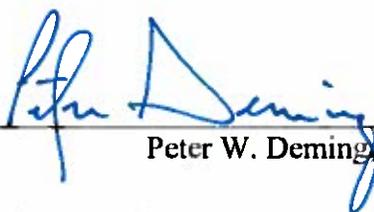
Re: Certification
Stock Pile Location Minor Modification
Exelon Office Tower, Trading Floor Garage, and Central Plaza Garage
Former Allied-Signal, Inc. Baltimore Works (new Harbor Point)
Baltimore, Maryland
MRCE File 11896

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

CS, MD, File # 11896 DDP Certification Letter Stockpile Location



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 Lavalley, 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.

Demarcation 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

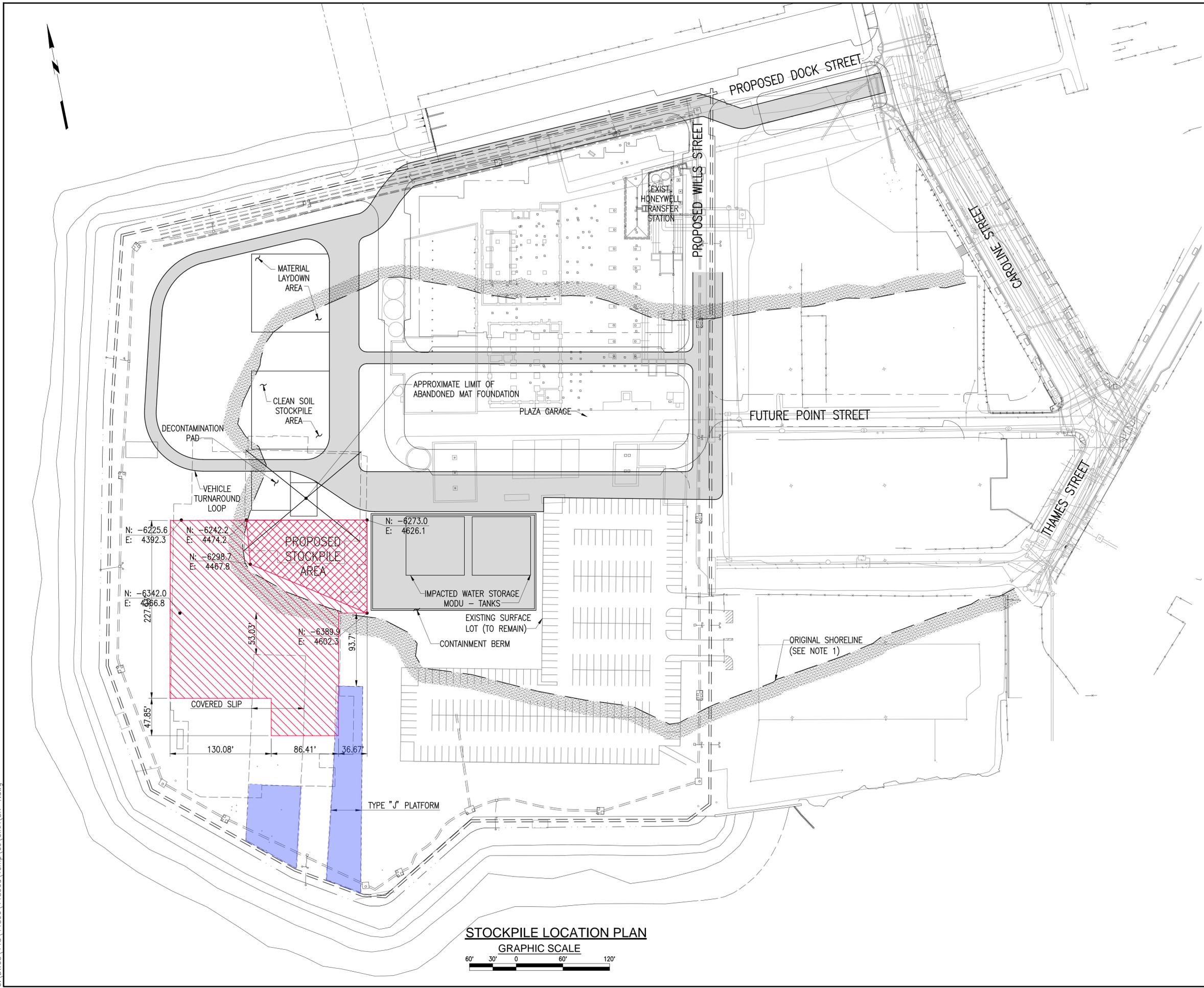
- Clean soil stockpiles should be no higher than 13.5 feet above existing grade inboard former shoreline and 8 feet above existing grade outboard of former shoreline.
- Place visual gage if stockpile height is extended above 8 ft.
- Provide visual demarcation at base of stockpile to prevent over-excavation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

By: _____

Gina Schoregge

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- 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

STOCKPILE LOCATION PLAN
 GRAPHIC SCALE
 60' 30' 0 60' 120'

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