June 24, 2011

Ronnie Lee, P.E.
Remedial Section C
Bureau of Eastern Remedial Action, Room 242
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Re: Site C PRR Memorandum

Dear Mr. Lee:

On behalf of the New York City Economic Development Corporation (NYCEDC), Henningson, Durham & Richardson Architecture and Engineering, P.C., in association with HDR Engineering, Inc. (HDR) was contracted by the New York City Economic Development Corporation (NYCEDC) to satisfy the requirements for the 2010 Periodic Review Report (PRR) for Parcel C Operable Unit One (C OU-1) and Operable Unit Two (C OU-2) in the Bronx, New York. C OU-1 and OU-2 are part of the New York State Department of Environmental Conservation (NYSDEC) Voluntary Cleanup Program (VCP), Site No. V00412-2. In accordance with the VCP, and the Voluntary Cleanup Agreement (VCA), which was entered into by the City of New York and NYSDEC, this PRR package has been completed and executed.

The purpose of this PRR is to certify that the conditions of the Final Engineering Report (FER) and Site Management Plan (SMP) have been upheld over the previous year. Specific considerations include observations during the site reconnaissance as well as the engineering controls and institutional controls in place for C OU-1 and C OU-2 as part of the NYSDEC-approved remedy.

As required by the VCA, an annual inspection has been conducted and this Periodic Review Report (PRR) has been prepared in accordance with NYSDEC DER-10 *Technical Guidance for Site Investigation and Remediation* requirements. This is the first annual PRR prepared for the Site. The report includes the following elements:

- A site overview;
- An evaluation of the site remedy performance, effectiveness, and protectiveness;
- A FER/SMP compliance report; and
- Overall PRR conclusions and recommendations.

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in association with HDR Engineering, Inc.

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The institutional controls and engineering controls for C OU-1 and C OU-2, also known as NYSDEC VCP Site No. V00412-2, have remained in place from the final redevelopment date and continue to exist. This includes the paved surfaces, concrete slabs (building and loading docks), vapor barrier, passive sub slab venting system, and limited vegetated surface cover. None of the controls at Site C have been altered in a way that would constitute a violation or failure to comply with the FER/SMP for the site. The Greenway at C OU-2 has not been completed to final design specifications but has been seeded along most of the eastern portions above a geotextile barrier and 1 foot of NYSDEC approved fill material. There are no recommendations for changes to the SMP or the site reporting requirements.

1.0 SITE OVERVIEW

Parcel C (Site No. V00412-2) is located in the southeast portion of the Hunts Point Food Distribution Center in the Hunts Point neighborhood of the Bronx, New York. It is divided into two operable units, Operable Unit 1 (C OU-1) and Operable Unit 2 (C OU-2). See Figure 1 for a Site Location Map. The property was remediated to commercial use. C OU-1 is now a portion of the Anheuser-Busch New York City Warehouse of Distribution and C OU-2 is a portion of the South Bronx Greenway, South Market Loop, public green space along the waterfront. Site boundaries and parcels are defined and depicted in Figure 2.

The remediation and redevelopment of C OU-1 and C OU-2was completed concurrently under the direction of one Site Management Plan (SMP) approved by NYSDEC in a letter dated July 2, 2008 to NYCEDC.

C OU-1 and C OU-2 were redeveloped as parts of larger developments (Anheuser Busch and the Greenway Park respectively). The following description defines and identifies all parcel subdivisions included in and relevant to the redevelopment project, and Figure 2 shows each of the areas identified and defined below .

- The Project Site (Site) includes a redevelopment area of approximately 12.6 acres. It is bound on the north by the Krasdale Foods parking lot, on the south by the 600 Food Center Drive parking lot, on the west by a New York City-owned rail line and further west by Food Center Drive, and on the east by the East River. All other parcels defined in this section are included in the Site.

- The AB Parcel includes the entire area occupied by the Anheuser-Busch lease. The AB Parcel is approximately 10.6 acres. C OU-1 exists within the AB Parcel. The Non-VCP AB parcel and the Iroquois Gas Easement shown on Figure 2 is the remainder of the AB parcel.

- The GP Parcel is the entire area to be occupied by the South Market Loop of the South Bronx Greenway. It is located along the northern and eastern perimeters of the AB Parcel. C OU-2 exists within the GP Parcel. The Non-VCP GP parcel and

the eastern end of the Iroquois Easement shown on Figure 2 is the remainder of the GP parcel. The GP Parcel is approximately 1.9 acres.

C OU-1 and C OU-2 are included in the VCA metes and bounds for Site V00412-2. The Non-VCP AB Parcel and Non-VCP GP Parcel were not granted a NFA by NYSDEC and NYSDOH, but have been included in the SMP.

The Iroquois Gas Transmission Pipeline VCP Easement (Iroquois Easement) is located along the southern edge of the Project Site. The Iroquois Easement covers approximately 0.5 acre and is addressed under a separate VCA.

The Hunts Point peninsula is the location of a former Con Edison manufactured gas plant (MGP). The plant was constructed between 1924 and 1932 and operated into the early 1960s. The plant was constructed as a coal gasification plant to manufacture oven gas and carbureted water gas. By-products of the coal gasification process included coke, ammonium sulfate, coal tar, water gas tar, and light oil. At one time, there were approximately 46 buildings or structures at the facility involved in gas production. Site C is located in the southeastern portion of the former MGP. Con Edison's historic maps, prepared during the time of facility operations, and aerial photos taken during the facility's operation show the area of the Site was primarily designated for coal storage piles. Former structures located on the Project Site included conveyor machines in the center of C OU-1 and a coal tower at the eastern edge of C OU-1 and C OU-2.

Prior to redevelopment activities, C OU-1 and C OU-2 were primarily vegetated with tall grasses and shrubs and a thin layer of organic soils. During investigation activities an upper layer of fill was observed, consisting of residual coal from the historic MGP operations. The residual coal layer is present over most of C OU-1 and C OU-2 but varies in thickness, with the greatest amount towards the center of C OU-1. Beneath the coal layer is sand mixed with ceramics, glass and other historic fill materials. The sand layer appears similar to dredged material but no documentation has been obtained relating to the actual source of the material. Occasional concrete or brick footings or foundations were also encountered. These footings were more commonly observed in the southern portion of C OU-1. Coal tar impacted areas were also encountered, but these areas were generally small and limited in horizontal and vertical extent. The former Dock Road, part of the non-VCP AB Parcel, bisected the southern half of the AB Parcel. Utilities in the Dock Road right-of-way included a water line, electric distribution lines, storm sewers, and a 72-inch NYCDEP storm water outfall that is still in service.

The remediation of purifier and coal tar wastes, the capping of residual waste with engineering controls, along with additional institutional controls being implemented on the Site have been determined to be protective of public health and the environment. The combination of active remedies in the form of removal, treatment and engineering controlled structures effectively prepared the Site for its occupancy and reuse as a viable and safe facility.

Engineering Controls

To eliminate exposure to fill materials remaining on Site, several engineering controls were put in place to be maintained into the future of the Project Site operation as a commercial facility and passive recreation area. The engineering controls described below have not been limited to C OU-1 and C OU-2; they have been installed across the Site. The engineering controls installed include:

- A concrete or bituminous cap across parking and drivable areas,
- A geotextile fabric overlain by one foot of NYSDEC approved fill in all open spaces (non paved areas),
- A vapor barrier and passive venting system under the building structure, and
- Operation of the building's HVAC system.

Concrete and Bituminous Cap

Prior to construction, the existing condition of the Site allowed infiltration of precipitation through the soil and then percolation downward into the groundwater or overland directly to the East River. All parking, entranceways and driveways on the AB Parcel now have a bituminous pavement or a concrete apron. These surfaces have been designed with a stormwater collection system to catch and direct the precipitation and sheet flow into the system's piping. Directing the precipitation to the stormwater system and moving it away from the Site limit it from contacting the fill. Rain can now only contact Site soils in the landscaped areas of the AB Parcel and on the GP Parcel. The landscaped areas on both parcels have been covered with one foot of topsoil above a geotextile fabric. The stormwater collection and treatment system has been installed in accordance with the NYSDEC-approved SWPPP. The system has been permitted by NYCDEP. The Site wide installation of the bituminous cap (parking lot), building slab, and one foot of topsoil also isolated the fill material from dermal and inhalation contact by workers, patrons, or any other persons present at the Site.

Geotextile Fabric and Topsoil

Under the terms and conditions of the NYSDEC-approved SMP, topsoil was imported to the Site to cap areas not covered by pavement, or buildings. The source of the topsoil imported to the Site was a residential development in Amityville, NY. Analytical samples were collected for every 1,000 cubic yards (cyd) of top soil imported in accordance with the approved SMP. One foot of top soil was spread on any area of the AB Parcel that was not paved or covered by the building slab and over the entire GP Parcel. Prior to topsoil placement, geotextile fabric was laid to serve as a demarcation barrier and to prevent the subsurface fill materials from mixing with the topsoil.

Passive Venting System

A passive sub-slab venting system was installed beneath the floor slab of the buildings in order to significantly reduce the potential for vapor intrusion. The passive venting system includes a 6- to 10-inch layer of compacted gravel placed immediately beneath the concrete slab. An array of 2-inch perforated polyvinyl chloride (PVC) piping was placed within the layer of gravel. The piping extends beneath the entire slab and exits the building foundation at five separate exhaust riser points attached to the outside of the warehouse (shown in Photograph 16). The vent piping, in combination with the vent stacks, prevents vapor accumulation beneath the building foundation by allowing it to vent naturally. The venting further reduces the possibility for vapors to reach the interior of the building.

Five sampling points were installed (one at each exhaust riser) that allow samples to be collected and conditions beneath the slab to be monitored. Baseline sampling was followed by three quarterly sampling events. These baseline and quarterly sampling results indicated that the benzene, toluene, ethlybenzene, xylene (BTEX) and naphthalene concentrations present, do not pose a significant threat to the indoor air quality of the building. In a letter dated May 14, 2010 HDR requested no further sampling of the passive sub-slab venting system (PSSVS) system. NYSDEC approved the request in a letter dated June 17, 2010.

Vapor Barrier

An impermeable vapor barrier was added on top of the permeable gravel layer and PVC vent piping, immediately below the foundation slab. The vapor barrier serves to seal the underside of the building floor slabs, significantly reducing the potential for vapors to enter into the building. The vapor barrier was installed as a continuous layer beneath the floor slabs in accordance with all applicable manufacturers' instructions. Penetrations and terminations of the vapor barrier were sealed and fastened per the manufacturer's specifications to prevent vapors from contacting the floor slab.

Refrigeration and Air Handling

The warehouse portion of the Anheuser-Busch building is fully refrigerated. The air handling equipment required to maintain refrigeration also maintains a positive pressure within the building. The positive pressure in the building is an additional physical mechanism reducing the likelihood of sub-slab vapors, under lower pressure, from penetrating upward into the building space.

Institutional Controls

The following institutional controls are also in place at the Site:

- A site-specific Qualitative Human Health Exposure Assessment (QEA) has been prepared for Parcels C OU-1 and C OU-2,

- Adherence with the SMP and development of a HASP in the event of all further intrusive work to be completed or performed on the AB or GP Parcels that would penetrate the top foot of imported NYSDEC approved fill. The SMP will be followed by the "persons" or Contractor conducting the work as well as a site specific HASP, which was developed by the Contractor. The Plans serve to provide information and outline procedures to be used by workers to protect them from being exposed to contaminants in subsurface material. The Site Plans will be reviewed by the Owner, NYSDEC and NYSDOH prior to the initiation of work. C OU-1 will be the responsibility of the current tenant; C OU-2 will be the responsibility of NYCEDC,

- A Deed Restriction will be attached to the tenant documents and contract. The Deed Restriction will include the requirements set forth in the VCA for C OU-1 and C OU-2. In addition, the Deed Restriction will require that the tenant notify the Owner (City of New York), which in turn will notify NYSDEC of any intrusive work (utility, drainage additions, repairs or modifications) planned on the Site. A Department/Worker Notification Plan is appended to this report in Appendix B. The deed restriction for the site was filed by the City with the Bronx County Clerk on August 2, 2010. The City Register File No. (CRFN) is 2010000257009, and

- Completion of an annual PRR for C OU-1 and C OU-2 with the first review being completed one year following the approval of the FER. This PRR will state whether the cap material is maintained and kept in a condition that will preserve the post construction conditions (i.e., no human contact and no significant infiltration of precipitation to the subsurface).

2.0 EVALUATION OF REMEDY

The remaining contamination on-site in the soil/fill, rock, or groundwater could only be encountered during intrusive activities. Currently, C OU-1 is developed as the Anheuser-Busch Distribution building and a bituminous parking lot used by employees, patrons, and distribution trucks. C OU-2 remains part of the South Bronx Greenway Project, which was not finished at the time of the inspection, but remains covered with a geotextile and one foot of NYSDEC approved fill material. The residual contaminants present in Site fill materials are encapsulated from the public by a cap consisting of bituminous or concrete pavement, a venting system and building slab, or a geotextile and 1 foot of NYSDEC approved fill.

- The property remains in compliance with the requirements of the IC/ECs:

- All Engineering Controls are being operated and maintained as specified in the SMP;

- All Engineering Controls are inspected and certified at a frequency and in a manner defined in the SMP; and

- Data and information pertinent to Site Management is reported at the frequency and in a manner defined in the SMP.

The deed restriction, which formally documents IC/ECs at the Site, was filed on August 2, 2010. The remediation identifies Institutional Controls in the form of Site restrictions. Adherence to the Institutional Controls is required under the Deed Restriction. Site restrictions include:

- *Use of groundwater underlying the Site is prohibited without treatment rendering it safe for the intended use;*

- *All future activities on the Site that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil/materials management provisions in the SMP; and*

- *The owner of the property shall prohibit the Site from ever being used for purposes other than commercial or industrial use provided the long term Engineering and Institutional Controls remain in full force and effect as set forth in the Site Management Plan without express written waiver of such prohibition by the NYSDEC, or the Relevant Agency.*

Site reconnaissance was conducted on March 15, 2010 by HDR. Photographs were taken during the site visit and are included as Appendix A.

The Anheuser-Busch Distribution Center was observed by HDR while being accompanied by Mr. Edward Fitzmaurice, Operations Director of the AB Distribution Center. Per Mr. Fitzmaurice, the Anheuser-Busch Distribution Center has performed no intrusive activities within the bounds of C OU-1 or C OU-2 within the past year. The northeastern and southwestern portion of the leasehold are currently being used for employee parking and patron parking in association with distribution activities, respectively. Loading docks and trailer parking are predominantly along the eastern portion of the Site with some storage in the southwestern portions. Iron fencing surrounds the entirety of C OU-1 with access available through the southwestern gated/attended entrance. In addition, there is a gate to the north that was originally to be used for the office portion of the building but has remained closed and locked since occupancy. Limited areas of unpaved and vegetated land exist at the Site along the perimeters of C OU-1 and near the gated entrances (north and south). Per Mr. Fitzmaurice, no re-landscaping or excavation of this area has taken place and there has been no addition or removal of fill material or soils. Site Photographs, enclosed in Appendix A, illustrate the AB and Greenway portions of Site C.

C OU-2 is also gated in the northwest portion and has cyclone chain-link fencing surrounding the site to the north and south. Currently, the bulkhead areas along the northeast and eastern edges are open with only snow fencing erected. Final construction of the South Bronx Greenway portion is underway. Although the onsite NYCEDC representative provided no immediate timeframe, the representative indicated the project will be completed. Presently, C OU-2 is covered with one foot of NYSDEC approved fill above a geotextile fabric. Per Mr. Fitzmaurice, no re-landscaping or excavation of this area has taken place and there has been no addition or removal of fill material or soils.

Subsurface utilities exist in Site C. However, no maintenance or upgrades requiring subsurface intrusion have been performed on these structures within the past year. A Generic Worker/Department Notification plan has been prepared to provide notification, prior to the commencement of work, to the NYSDEC when intrusive activities are scheduled. This plan is included as Appendix B.

As noted below and documented in this PRR, the ECs and ICs have remained in place and have functioned appropriately over this reporting period.

Exposure to vapors is prevented by an engineered vapor barrier system built on-Site. No current direct contact exposure pathways to possible residual subsurface contamination have been identified for on site workers. No maintenance of the vapor barrier system is required under normal conditions.

3.0 SMP COMPLIANCE REPORT

Based on the annual site inspection of March 15, 2011 and site information reviewed during the reporting period, the engineering controls described in the FER/SMP are in place and functional.

Direct contact exposure to residual subsurface contamination (i.e., on-site soil/fill is prevented by the surrounding concrete and bituminous parking lots and limited open areas capped with geotextile and vegetation at the Site. No major maintenance of the barrier is required under normal conditions. The C OU-2 Greenway portion of the site is still under construction, but has been capped with one foot of NYSDEC approved fill and geotextile . No immediate timeframe has been provided by the onsite NYCEDC representative for the completion of that project.

The annual Site inspection has occurred as part of the PRR process and confirmed that the Site remedies continue to be protective of public health and the environment. The Site remedies are performing as designed.

4.0 CONCLUSIONS & RECOMMENDATIONS

The institutional controls and engineering controls for C OU-1 and C OU-2, also known as NYSDEC VCP Site No. V00412-2, have remained in place from the final redevelopment

dates to date. The engineering controls include paved surfaces, concrete slabs (building and loading dock), vapor barrier, passive venting system, air handling and surface cover. Additionally, the institutional and engineering controls required in the deed restriction remain in place during this reporting period. Site maintenance staff were reminded of SMP requirements after completion of the annual site inspection/reconnaissance. Nothing has occurred that would constitute a violation or failure to comply with the SMP for the controls implemented on C OU-1 and C OU-2. The institutional controls and engineering controls at the Site will continue to be monitored to comply with the annual NYSDEC PRR submission.

If you have any questions, please feel free to call me at (845) 216-4275 (cell) or (845) 735-8300 (office).

If you have any questions, please do not hesitate to contact me at (845) 735-8300.

Sincerely,
Henningson, Durham & Richardson
Architecture and Engineering, P.C.
in association with HDR Engineering Inc.

Angela Martello Stowe
Associate | Project Manager

Aerial Photo Source: © 2011 Google.
Imagery Date: June 18, 2010

NOTE: All site boundaries are approximate.

HDR Henningson, Durham & Richardson Architecture and Engineering, P.C. One Blue Hill Plaza Pearl River, NY 10965	**Site C OU1 and C OU-2 Location** **Hunts Point • Bronx, New York 10474**	**Figure 1**

HDR Henningson, Durham & Richardson Architecture and Engineering, P.C. One Blue Hill Plaza Pearl River, NY 10965	**Site C OU1 and C OU-2 Features** **Hunts Point • Bronx, New York 10474**	**Figure 2**

Appendix A

March 2011 Site Photographs

Photograph No. 1 – The southern entrance to Anheuser-Busch Distribution of Site C OU-1 (looking northeast)

Photograph No. 2 – The southern entrance to Anheuser-Busch Distribution of Site C OU-1 (looking southeast)

Photograph No. 3 – The southern landscaped area of Site C OU-1 (looking south)

Photograph No.4 - Portion of Perimeter Site at entrance into Site C OU-1 (looking east-southeast)

Photograph No. 5 - Iroquois Gas Pipeline monitoring station location on the Perimeter Site and Site C OU-1 (looking southwest)

Photograph No. 6 – Portion of Perimeter Site extending into Site C OU-1 (looking east-southeast)

Photograph No. 7 – Portion of Perimeter Site extending into Site C OU-2,
Rip-rap upon pipe entering river(looking east-southeast)

Photograph No. 8 – The southern parking lot of Anheuser-Busch Distribution of Site C OU-1 (looking west)

Photograph No. 9 – Site C OU-1 distribution truck exit drive from warehouse (looking northeast)

Photograph No. 10 – Site C OU-1 distribution truck exit from warehouse (looking southeast)

Photograph No. 11 – Rear loading docks and trailer parking of AB Distribution at Site C OU-1 (looking northeast)

Photograph No. 12 – Rear trailer parking of AB Distribution at Site C OU-1 and Greenway Site C OU-2 (looking southwest)

Photograph No. 13 – Site C OU-1 employee parking and office portion (looking west)

Photograph No. 14 – Site C OU-1 Northwest corner of offices, landscaped area, north locked entrance (looking west)

Photograph No. 15 – Interior AB Distribution at Site C OU-1 concrete slab flooring (looking southwest)

Photograph No. 16 – Southwest corner of warehouse at security entrance, passive sub-slab sampling port (looking northeast)

Photograph No. 17 – Site C OU-2 Greenway entrance (looking east)

Photograph No. 18 – Site C OU-2 Greenway entrance inside gate (looking east)

Photograph No. 19 – Site C OU-2 Greenway with Krasdale trucks and river view (looking east)

Photograph No. 20 – Site C OU-2 Greenway with Krasdale trucks, bulkhead and river view (looking north)

Photograph No. 21 – Site C OU-2 Greenway and river view (looking northeast)

Photograph No. 22 – Site C OU-2 Greenway and river view (looking southwest)

Photograph No. 23 – Portion of Perimeter Site extending into Site C OU-2,
Rip-rap upon pipe entering river (looking south)

Appendix B

Department/Worker Notification Plan

NYCEDC Department/Worker Notification Plan

The New York City Economic Development Corporation (NYCEDC) maintains a comprehensive plan for notifying utilities and City agencies of the subsurface conditions present. Currently under this comprehensive plan, all utility companies have been notified to coordinate planned and emergency subsurface utility work with Rory Melvin (Hunts Point Food Distribution Center Site Manager, NYCEDC's Asset Management Division), who is at the site on a regular basis, and Ms. Kay Zias (Vice President, NYCEDC Planning Division).

At that time, NYCEDC will contact the parties performing the anticipated work about the potential contamination beneath the site and inform them that any soil handling work that is conducted in this area must conform to the approved Site Management Plan (SMP). NYCEDC will instruct their consultant to be present and provide guidance during any subsurface work and to coordinate notifications to the New York State Department of Environmental Conservation (NYSDEC).

Furthermore, all tenant leaseholds within the Food Distribution Center, whether or not they are located on a Voluntary Cleanup Program (VCP) project site, are contractually obligated to abide by the notification systems described above for any invasive work within their leaseholds. Both the approved SMP and Health and Safety Plan (HASP) requirements are appended to all tenant leases.

At least 10 days prior to the start of any activity that is reasonably anticipated to encounter remaining contamination, the site owner or their representative will notify the NYSDEC, or if the NYSDEC shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the state and the health of the state's citizens, hereinafter referred to as "the Relevant Agency". Currently this notification will be made to:

Mr. Ronnie Lee, P.E.
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233-7016
Tel: (518) 402-9768

And

Director, Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233-7010

Notifications to the Relevant Agency will be submitted by:

Ms. Kay Zias
NYCEDC
110 William Street, 6th Floor
New York, NY 10038

Or

Mr. Kevin McCarty
HDR
One Blue Hill Plaza, 12th Floor
P.O. Box 1509
Pearl River, NY 10965

Soils generated during any invasive work will be segregated, and stockpiled based on soil composition, any soils that cannot be reused within the confines of the excavated area will be sampled

for waste characteristic and disposed of in accordance with all applicable state and federal regulations. Excavated soils that exhibit signs of coal tar or purifier waste contamination as described in the approved SMP will be segregated and stocked piled separately, sampled for waste characterization, and then subsequently transported off site for disposal at an appropriately permitted facility.