LETTER REPORT

2015 MONITORING WELL AND SOIL VAPOR IMPLANT MAINTENANCE

WORK ASSIGNMENT C007540-3.2

MEEKER AVENUE PLUME TRACKDOWN
GREENPOINT/EAST WILLIAMSBURG INDUSTRIAL AREA

SITE NO. 224121
KINGS (C), NY

Prepared for:
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 Broadway, Albany, New York
Basil Seggos, Acting Commissioner

DIVISION OF ENVIRONMENTAL REMEDIATION
REMEDIAL BUREAU B

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March 2016
LETTER REPORT

2015 MONITORING WELL AND SOIL VAPOR IMPLANT MAINTENANCE AT THE MEEKER AVENUE PLUME TRACKDOWN SITE

SITE ID NO. 224121
GREENPOINT/EAST WILLIAMSBURG INDUSTRIAL AREA BROOKLYN, NEW YORK

PREPARED FOR:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVISION OF ENVIRONMENTAL REMEDIATION REMEDIAL BUREAU B

WORK ASSIGNMENT NO. C007540-3.2

PREPARED BY:

URS CORPORATION
257 WEST GENESEE STREET, SUITE 400
BUFFALO, NEW YORK 14202

MARCH 2016
March 17, 2016

Mr. David K. Harrington, P.E.
Senior Environmental Engineer
Remedial Bureau B
Division of Environmental Remediation
NYS Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, New York 12233-7016

Re: NYSDEC Standby Contract, Work Assignment No. C007540-3.2
Meeker Avenue Plume Trackdown Site, Site ID No. 224121
Letter Report – 2015 Monitoring Well and Soil Vapor Implant Inspection and Maintenance Effort

Dear Mr. Harrington:

URS Corporation - New York (URS) has prepared this Letter Report to summarize the field activities associated with the 2015 Monitoring Well and Soil Vapor Implant Inspection and Maintenance Effort that was performed at the Meeker Avenue Plume Trackdown Site [New York State Department of Environmental Conservation (NYSDEC) Site Number 224121] in the Greenpoint/East Williamsburg Industrial Area section of Brooklyn, New York (Figure 1). The work associated with the 2015 Monitoring Well and Soil Vapor Implant Maintenance Effort was completed under NYSDEC Work Assignment No. C007540-3.2.

1.0 INTRODUCTION

The 2015 Monitoring Well and Soil Vapor Implant Inspection and Maintenance Effort was completed at the direction of the NYSDEC to conduct a complete round of inspections of all monitoring wells and soil vapor implants installed to date and to perform routine maintenance (if necessary) on the surface completions of the monitoring well and SVI network within the greater Meeker Avenue Plume Trackdown area. The 2015 Monitoring Well and Soil Vapor Implant Inspection and Maintenance Effort also included monitoring well decommissioning and sidewalk flag replacement activities. Inspection and maintenance activities in 2015 occurred during six separate work periods. The work period activities are described below.

2.0 FIELD ACTIVITIES

The first work period took place between April 16 and May 1, 2015 during the Klink Cosmo On-Site Phase III Remedial Investigation (RI). A round of monitoring well and air sparging well inspections and maintenance took place during this period. A copy of the monitoring and air sparging well inspection forms are included as Attachment 1. These field activities included:

- Replaced the well pad on 14 monitoring wells;
- Stenciled identifications of 16 monitoring wells on the concrete;
- Completed surface inspections of 22 monitoring wells; and
• Completed surface inspections of 3 air sparging wells.

In addition, Jersey Boring and Drilling Company, Inc. of Fairfield, New Jersey (Jersey Boring) decommissioned six monitoring wells as part of the Kosciuszko Bridge replacement project. A copy of the decommissioning records can be found in Attachment 2.

The second work period took place between July 27 and August 6, 2015 when a complete round of surface inspections of all existing monitoring wells and soil vapor implants was conducted. The surface conditions of the monitoring wells and soil vapor implants that existed at that time are listed on Tables 1 and 2. Information regarding the conditions of the sidewalk flags is also provided in the tables. Copies of the monitoring well inspection forms are included as Attachment 1. These field activities included:

• Complete round of surface inspections of monitoring wells and soil vapor implants;
• Stenciled identifications of 199 monitoring wells on the concrete with epoxy paint; and
• Stenciled identifications of 147 soil vapor implants on the concrete with epoxy paint.

The third work period took place between August 24 and 26, 2015. Sidewalk flags were replaced at 13 monitoring well, air sparge well, soil vapor extraction well and observation well locations. Details of the sidewalk replacement effort are in the Daily Construction Reports for Flag Replacement (see Attachment 3). These field activities included:

• Restoration of 20 sidewalk flags.

The fourth work period took place between October 5 and 12, 2015. Six monitoring wells were decommissioned. Sidewalk flags were replaced at 19 soil boring and monitoring well locations. Well decommissioning details are in the Monitoring Well Decommissioning Records (see Attachment 2). Details of the sidewalk replacement effort are in the Daily Construction Reports for Flag Replacement (see Attachment 3). These field activities included:

• Decommissioned six monitoring wells.
• Restoration of 20 sidewalk flags.

The fifth work period spanned the months of October, November and December, between the fourth and sixth periods. These field activities included:

• Stenciled identifications of 40 monitoring wells on the concrete with epoxy paint, and,
• Replaced the well pad on seven monitoring wells.

The sixth work period occurred between December 7 and 16, 2015, when a round of monitoring well inspections took place during sampling activities at monitoring wells, and the newly installed wells at the Expanded Outreach Area and West of Morgan Area. Copies of the monitoring well inspection forms are included as Attachment 1. These field activities included:

• Surface inspections of 152 monitoring wells.
As shown in Attachment 1, in the Klink-Cosmo area, there were several wells inspected during the sixth work period that exhibited evidence of product, either as a measured thickness of LNAPL of 0.01’, or a sheen. Sheen on the water was determined by an instantaneous audible signal from the oil/water interface probe that could not be measured to 0.01’ (i.e. <0.01’ of product). Table 3 lists all the monitoring wells that exhibited product or sheen during this work period.

Tables 1 and 2 summarize the aforementioned maintenance activities discussed in Sections 2.1 through 2.5 and details on the decommissioning and sidewalk replacement effort can be found in Attachments 2 and 3.

2.1 Monitoring Well Inspection and Maintenance

In 2015, there were three rounds of monitoring well inspections. The inspections documented the conditions of each well’s interior and exterior, such as well pad, label, bolts, lid, curb box, riser, annular space and j-plug. The data from these inspections were used to recommend appropriate monitoring well maintenance activities.

2.2 Soil Vapor Implant Inspection and Maintenance

There was one round of soil vapor implant inspections. These inspections documented the conditions of each implant’s interior and exterior, such as curb box, bolts, pad, label, implant tubing, annular space and tubing cap. The data from these inspections were used to recommend appropriate implant maintenance activities.

2.3 Sidewalk Flag Replacement

There were two rounds of sidewalk flag replacement. AARCO Environmental Services Corporation of Lindenhurst, New York (AARCO) was contracted for the replacement of sidewalk flags where monitoring wells and soil vapor implants were installed/decommissioned. AARCO replaced a total of 37 sidewalk flags during the first and second rounds of sidewalk replacement. The sidewalk flags ranged in size from 4.8-feet by 5-feet to 9.25-feet by 10.4-feet.

Prior to removal of the sidewalk flags, AARCO cut the perimeter of each flag to be replaced using a water-cooled pavement saw to reduce fugitive dust. The flags were demolished, removed and disposed of by AARCO. New flags were replaced in kind with the surrounding flags. All work was performed in general accordance with Section 608 of New York State Department of Transportation (NYSDOT) Standard Specifications of May 6, 2010 specifically all sections which pertain to Portland concrete sidewalks and driveways. At locations where expansion joints were installed, the expansion joints were covered with a non-shrinking/pliable sealant.

2.4 Monitoring Well Decommissioning

On April 20 and 21, 2015, Jersey Boring utilized a grout pump to decommission monitoring wells DEC-093, DEC-093D, DEC-106, DEC-106D, MW-030R and MW-030D at the ACME Steel Areas, as part of the Kosciuszko Bridge replacement project.
On October 12, 2015, Associated Environmental Services Ltd. of Hauppauge, New York (AES) utilized a tow-behind grout pump to decommission monitoring wells DEC-002, DEC-033, DEC-047, DEC-055, DEC-055D and DEC-086.

The 12 decommissioned monitoring well locations are shown on Plate 1. The monitoring wells were decommissioned in accordance with NYSDEC protocol CP-43: Groundwater Monitoring Well Decommissioning Policy.

Each well was sealed in place with cement/bentonite slurry via tremie pipe. The top 5 feet of well risers at DEC-055 and DEC-086 were removed prior to sealing. The cement/bentonite grout mixture used consisted of:

Grout Composition (Percent Weight)
1.5 to 3.0 percent - Bentonite (Quick Gel)
40 to 60 percent - Cement (Portland Type I)
40 to 60 percent – Water

2.5 Soil Vapor Implant Decommissioning

No soil vapor implants were decommissioned in 2015. The status of the soil vapor implants as of December 31, 2015 can be found on Plate 2.

3.0 RECOMMENDATIONS

The following recommendations for maintenance activities in 2016 are offered for consideration by the NYSDEC.

- Monitoring well DEC-051D may need to be replaced.
- Soil vapor implant locations SG-091 and SG-096 should be decommissioned.
- The sidewalk flags at monitoring well locations DEC-120D, DEC-124D and DEC-146 through DEC-155D need to be replaced.
- The sidewalk flag at soil vapor implant location SG-166 should be replaced.
- The well pad should be replaced at soil vapor implant SG-114.
- Stenciling of monitoring well/soil vapor implant locations should be performed as warranted.

4.0 TABLES, FIGURES, AND ATTACHMENTS

The following tables, figures, and attachments are included as part of this letter report:

**Tables** (following Text)

| Table 1 | Summary of 2015 Monitoring Well Inspections/Maintenance Activities |
| Table 2 | Summary of 2015 Soil Vapor Implant Inspections/Maintenance Activities |
| Table 3 | Wells Showing Product/Sheen During Synoptic Water Level Measurements on 12/7/2015 |
**Figures** (following Tables)

Figure 1    Site Location

**Plates** (following Figures)

Plate 1    Monitoring Well Locations/Status as of 12/31/2015  
Plate 2    Soil Vapor Implant Locations/Status as of 12/31/2015

**Attachments** (following Plates)

Attachment 1    Monitoring Well and Soil Vapor Implant Inspection Forms  
Attachment 2    Monitoring Well Decommissioning Records  
Attachment 3    Daily Construction Reports for Flag Replacement

**Closing**

Please contact me at 716-856-5636 if you have any questions or comments. It was a pleasure to serve the NYSDEC with this challenging and interesting project.

Sincerely,

**URS Corporation**

Michael Gutmann  
Project Manager

cc:    File: 11176389 (R-1)  
                  George Kisluk URS