LETTER REPORT

2014 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

Joseph Martens, Commissioner

DIVISION OF ENVIRONMENTAL REMEDIATION
REMEDIAL BUREAU B

URS Corporation
257 West Genesee Street, Suite 400
Buffalo, New York 14202

Final
April 2015
LETTER REPORT

2014 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

APRIL 2015
April 27, 2015

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

Dear Mr. Harrington:

URS Corporation - New York (URS) has prepared this Letter Report to summarize the field activities associated with the 2014 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 2014 Monitoring Well and Soil Vapor Implant Maintenance Effort was completed under NYSDEC Work Assignment No. C007540-3.2.

1.0 INTRODUCTION

The 2014 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 2014 Monitoring Well and Soil Vapor Implant Inspection and Maintenance Effort also included monitoring well and soil vapor implant decommissioning and sidewalk flag replacement activities and are considered to be part of the 2014 effort. Inspection and maintenance activities in 2014 occurred during four separate work periods. The work period activities are described below.

2.0 FIELD ACTIVITIES

The first work period took place between February 4 and May 7, 2014 during the Spic and Span Off-Site Phase III Remedial Investigation (RI). A round of sidewalk flag replacement also took place during this period. Details of the monitoring well and SVI inspection and maintenance and flag replacement efforts between February 4 and May 7, 2014, are described in the Spic and Span Off-Site Phase III Remedial Investigation Letter Report. A copy of the monitoring well and SVI inspection forms and the daily construction reports for flag replacement are included as Attachments 1 and 2, respectively. These field activities included:
• Surface inspections of 35 monitoring wells;
• Surface inspections of 23 soil vapor implants; and
• Restoration of 24 sidewalk flags.

The second work period took place during the Spic and Span On-Site Phase III RI mobilization between May 5 and May 8, 2014 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, as well as the corresponding concrete flags were observed and recorded and are listed on Tables 1 and 2. Additional monitoring well inspections and maintenance activities were conducted between June 16 and July 15, 2014 and are described in the Spic and Span On-Site Phase III Remedial Investigation Report and summarized in Tables 1 and 2. Copies of the monitoring well inspection forms are included as Attachment 3. These field activities included:

• Complete round of surface inspections of monitoring wells and soil vapor implants;
• Additional surface inspections of 81 monitoring wells
• Stenciling 68 monitoring wells with epoxy paint; and
• Stenciling 46 soil vapor implants with epoxy paint.

The third work period took place between July 14 and September 18, 2014 as part of the 2014 Decommissioning and Sidewalk Flag Replacement Effort. Twelve monitoring wells and fifty-three soil vapor implants were decommissioned in 2014. Sidewalk flags were replaced at 58 of the monitoring well and soil vapor implant locations. Details of the well and SVI decommissioning and sidewalk replacement effort were submitted to NYSDEC under separate cover dated November 2014 and titled 2014 Decommissioning and Sidewalk Replacement Effort Letter Report (see Attachment 4). These field activities included:

• Decommissioning of 12 monitoring wells;
• Decommissioning of 53 soil vapor implants;
• Restoration of 58 sidewalk flags; and
• Replacement of the well pad at monitoring well MW-044D.

The fourth work period took place between August 25 and October 10, 2014. Additional field activities included inspection and maintenance of monitoring wells and soil vapor implants that included:

• Surface inspections of 178 monitoring wells;
• Surface inspections of 137 soil vapor implants;
• Stenciling 90 monitoring wells with epoxy paint; and
• Stenciling 107 soil vapor implants with epoxy paint.

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 Tables 3 and 4, and Attachments 2 and 4.
2.1 Monitoring Well Inspection and Maintenance

In 2014, there were four rounds of monitoring well inspections. The first round occurred between February 20 and April 11, 2014 at the former Spic and Span Cleaners and Dyers area. The second round occurred between May 5 and 8, 2014, over the entire site. The third round occurred between July 14 and 15, 2014, at the former Spic and Span Cleaners and Dyers area. The fourth round of inspections occurred between August 26 and October 10, 2014, over the entire site. These 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 (i.e. relabeling, flag replacement, etc.). Completed inspection forms can be found in Attachments 1, 3, and 5.

The maintenance activities that resulted from these inspections ranged from relabeling to decommissioning and flag replacement. Details on the maintenance activities can be found in Tables 1 and 3, and Attachments 1 through 5.

2.2 Soil Vapor Implant Inspection and Maintenance

There were three rounds of soil vapor implant inspections. The first round occurred between February 4 and May 7, 2014, at the former Spic and Span Cleaners and Dyers area. The second round occurred between May 5 and 8, 2014, over the entire site. The third round occurred between August 25 and September 24, 2014, over the entire site. 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 (i.e. relabeling, flag replacement, etc.). Completed inspection forms can be found in Attachments 1 and 5.

The 2014 maintenance activities that resulted from these inspections ranged from relabeling to decommissioning and flag replacement. Details on the maintenance activities can be found in Tables 2 and 4, and Attachments 1, 2, 4, and 5.

2.3 Sidewalk Flag Replacement

There were two rounds of sidewalk flag replacement. The first round occurred between April 8 and May 7, 2014, during the Spic and Span Off-Site Phase III RI. The second round occurred between July 21 and August 5, 2014, as part of the 2014 Decommissioning and Sidewalk Flag Replacement Effort. 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 82 sidewalk flags during the first and second rounds of sidewalk replacement. The sidewalk flags ranged in size from 4-feet by 5-feet to 11.5-feet by 15-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 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.
Copies of the Daily Construction Reports from the Spic and Span Off-Site Phase III RI are provided in Attachment 2. A copy of the 2014 Decommissioning and Sidewalk Replacement Effort Letter Report is provided in Attachment 4.

### 2.4 Monitoring Well Decommissioning

Between July 14 and 17, 2014, as part of the 2014 Decommissioning and Sidewalk Flag Replacement Effort, Summit Drilling, Inc. of Bridgewater, New Jersey (Summit) utilized a truck-mount Geoprobe 6600 direct-push/hollow stem auger (HSA) rig to decommission the 12 monitoring wells listed on Table 3. Table 3 also lists all monitoring wells decommissioned to date. The 12 monitoring well locations decommissioned are shown on Plate 1. The monitoring wells were decommissioned in accordance with NYSDEC protocol CP-43: Groundwater Monitoring Well Decommissioning Policy.

At DEC-021, 25 feet of the well string was removed, the well riser broke while attempting to pull the well string, the remainder of the well string was left in place, and a cement/bentonite slurry was installed via tremie pipe. At DEC-021D, the entire well string was removed and a cement/bentonite slurry was installed via tremie pipe. 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

At the remainder of the monitoring wells, the top 1.5-10 feet of well riser was removed because an attempt to pull the well string was not successful. At most locations, the well riser was unthreaded and removed by hand. If the well risers could not be removed by hand, the top 5 foot interval was overdrilled and removed using 4 1/4-inch inside diameter (ID) HSAs. Prior to removal of the top of the well riser, either by hand or over drilling, the wells were backfilled with bentonite chips.

A copy of the 2014 Decommissioning and Sidewalk Replacement Effort Letter Report is provided in Attachment 4.

### 2.5 Soil Vapor Implant Decommissioning

Between July 21 and September 18, 2014, as part of the 2014 Decommissioning and Sidewalk Flag Replacement Effort, AARCO and URS, decommissioned the 53 soil vapor implants listed on Table 4. Table 4 also lists all soil vapor implants decommissioned or destroyed to date. The 53 soil vapor implant locations decommissioned in 2014 are shown on Plate 2. At each location, the soil vapor implant was removed and either the flush-mount protective casings was removed during sidewalk flag replacement or the flush-mount protective casings was backfilled with concrete and will be removed at a later date.

A copy of the 2014 Decommissioning and Sidewalk Replacement Effort Letter Report is provided in Attachment 4.
3.0 **RECOMMENDATIONS**

The following recommendations for maintenance activities in 2015 are offered for consideration by the NYSDEC.

- Seven (7) additional monitoring well locations that are no longer necessary for any on-going investigations at the Site are recommended for future decommissioning. These wells are listed on Tables 1 and 3 and shown on Plate 1.
- Monitoring wells MW-017, MW-051D, and MW-079 may be replaced.
- The sidewalk flags at monitoring well locations DEC-006, DEC-014, DEC-031, DEC-031D, DEC-077, DEC-092D, and DEC-117 through DEC-135, need to be replaced.
- The sidewalk flag at soil vapor implant location SG-166 should be replaced.
- Well pads should be replaced at 29 well locations and 5 soil vapor implant locations.
- The well lid/curb box for DEC-074 and DEC-110D should be replaced.
- Missing/damaged security bolts should be replaced at monitoring wells DEC-001R and DEC-051.
- The expansion joints for the sidewalk flag at monitoring well DEC-078 should be resealed.
- The PVC riser at monitoring well DEC-088 should be shortened to properly fit the well lid.
- Monitoring well DEC-019 should be redeveloped.
- The wells and soil vapor implants installed between October and November 2014 need to be labeled/stenciled.

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 2014 Monitoring Well Inspections/Maintenance Activities
Table 2 Summary of 2014 Soil Vapor Implant Inspections/Maintenance Activities
Table 3 Summary of 2014 Monitoring Well Decommissioning and Sidewalk Flag Replacement
Table 4 Summary of 2014 Soil Vapor Implant Decommissioning and Sidewalk Flag Replacement

**Figures** (following Tables)

Figure 1 Site Location

**Plates** (following Figures)

Plate 1 Monitoring Well Locations/Status as of 12/31/2014
Plate 2 Soil Vapor Implant Locations/Status as of 12/31/2014
Attachments (following Plates)

Attachment 1  Monitoring Well and Soil Vapor Implant Inspection Forms (Between February 20 and May 7, 2014)
Attachment 2  Daily Construction Reports for Flag Replacement (Between April 8 and May 7, 2014)
Attachment 3  Monitoring Well Inspection Forms (July 14 and 15, 2014)
Attachment 4  Letter Report, 2014 Decommissioning and Sidewalk Flag Replacement Effort (CD-ROM)
Attachment 5  Additional 2014 Monitoring Well and Soil Vapor Implant Inspection Forms (Between August 25 and October 10, 2014)

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

[Signature]

Michael Gutmann
Project Manager

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