GOLDER

November 12, 2019 Project No. 013-6052-014

Debra Rossi, Remedial Project Manager
USEPA Region 3
1650 Arch Street, 3HS21
Philadelphia, PA 19103-2029

RE: MONTHLY PROGRESS REPORT – OCTOBER 2019 REPORTING PERIOD
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

Dear Ms. Rossi:

Golder Associates Inc. (Golder) prepared this monthly progress report on behalf of the Respondents for the Delaware Sand & Gravel (DS&G) Superfund Site (Site) in satisfaction of the requirements of Paragraph 4.1 of the Remedial Design Statement of Work (RD SOW) included as Appendix B of the Administrative Settlement Agreement and Order on Consent for Remedial Design (RD AOC; Docket No. CERCLA-03-2018-0116DC) executed by the United States Environmental Protection Agency (USEPA) on May 22, 2018 and effective May 29, 2018 (Settlement). The following sections provide a summary of the required reporting items under the Settlement for the above-referenced reporting period. For completeness, Section 2 summarizes activities performed during the reporting period under the 1995 Consent Decree for the Site and those anticipated during the next reporting period.

1.0 2018 RD AOC

1.1 Actions Toward Achieving Compliance with Settlement

- Performance of pre-design investigation (PDI) field activities involving drilling and monitoring well installation began on December 4, 2018[1] and concluded on April 13, 2019. Between February 1, 2019 and April 13, 2019, drill water was treated with granular-activated carbon (GAC) prior to use.
- Approval of the RDWP submitted on March 28, 2019 was received from the USEPA on March 28, 2019.
- Approval of the PDI WP and Sampling and Analysis Plan (SAP) submitted on March 28, 2019 was received from the USEPA on April 10, 2019.
- Commencement of groundwater monitoring for existing and newly installed wells began on April 22, 2019 and was completed during the week of May 20, 2019.
- Approval of the Barhole Probe Monitoring and Assessment Report submitted on April 15, 2019 was received from the USEPA on April 24, 2019.

[1] USEPA issued Partial Approval of the Pre-Design Investigation Work Plan [PDI WP] on November 30, 2018 with comments and issued Conditional Approval of the PDI WP and RDWP on February 26, 2019 with comments.

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- Approval of the PDI WP Addendum submitted on July 15, 2019 was received from the USEPA on July 29, 2019.
- Performance of additional PDI field activities involving drilling, monitoring and extraction well installation, as outlined in the PDI WP Addendum, began on September 10, 2019 and is ongoing at this time. Drill water is treated with GAC prior to use.
- Conference call (pursuant to Section VII, Paragraph 13.a.3. of the RD AOC) on October 22, 2019 with USEPA, Project Coordinator, and Supervising Contractor.

1.2 Data Received and/or Generated

- Data associated with the drilling and vertical aquifer profiling (VAP) performed under the Settlement were generated and/or received during the reporting period.

1.3 Deliverables Submitted to USEPA

- No deliverables were submitted during the reporting period.

1.4 Activities Scheduled for Next Six Weeks (through Mid-December 2019)

- Continuation of drilling and well installation activities at the Site as outlined in the PDI WP Addendum. Drilling and well installation activities are anticipated to continue into mid November 2019.
- Performance of aquifer testing program proposed in the PDI WP and its Addendum was initiated in late October 2019 with baseline monitoring of well PW-1(U) operation at approximately 30 gallons per minute (Step 1). Subsequent steps will occur through November and into mid-December 2019, dependent on weather conditions, AWC's Llangollen wellfield operations, and holiday schedules).
- Monthly conference call (pursuant to Section VII, Paragraph 13.a.3. of the RD AOC) on November 8, 2019 with USEPA, Project Coordinator and Supervising Contractor.
- Continued monitoring of transducers in 6 monitoring wells to observe AWC's Llangollen wellfield operations. Eight transducers were relocated in October 2019 to establish a baseline near extraction well PW-1(U) prior to initiating the aquifer testing program proposed in the PDI WP and its Addendum.

1.5 Percentage of Completion, Unresolved Delays Encountered and/or Anticipated and Efforts to Mitigate Those Delays

- Progress toward completion:
  - RDWP (Paragraph 3.1 of RD AOC SOW) – 100% complete and approved by the USEPA on March 28, 2019.
  - PDI WP (Paragraph 3.3(a) of RD AOC SOW) – 100% complete and approved by the USEPA on April 10, 2019.
  - PDI Activities as provided in the PDI WP-Revision 2 and SAP-Revision 2:
    - Phase 1 - Well Installation – approximately 80% complete. Thirty-five monitoring wells have been installed, and one groundwater monitoring event has been performed. Reporting followed by design of extraction wells, preparation of an addendum to the PDI

WP, and installation of five extraction wells and up to 15 additional monitoring wells will occur over approximately the next 1-month-period.

- Phase 2 – Aquifer Testing and Data Reduction – 0% complete. This phase was initiated in late October 2019.
- Phase 3 – Groundwater Model Updates - 0% complete. This phase will be initiated after completion of Phase 2.
- Phase 4 – Additional Investigation - 0% complete. If necessary, this phase will be initiated after completion of Phase 3.

- PDI Evaluation Report (Paragraph 3.3(b) of RD AOC SOW) - 0% complete. Report will be prepared and submitted to the USEPA after completion of Phase 3.
- Preliminary (30%) RD (Paragraph 3.4 of RD AOC SOW) – 0% complete. Report will be prepared and submitted to the USEPA after the USEPA's approval of the PDI Evaluation Report.
- Pre-final (95%) RD (Paragraph 3.5 of RD AOC SOW) – 0% complete. Report will be prepared and submitted to the USEPA after the USEPA's approval of the Preliminary (30%) RD.
- Final (100%) RD (Paragraph 3.6 of RD AOC SOW) – 0% complete. Report will be prepared and submitted to the USEPA after the USEPA's approval of the Pre-final (95%) RD.

- No delays were encountered and/or are anticipated at this time which may affect the future schedule.

1.6 Proposed and/or Approved Modifications to Work Plans and/or Schedules[2]

- Comments from the USEPA dated October 24, 2018, November 30, 2018 and February 26, 2019 and from DNREC dated October 22, 2018 with responses prepared by Golder on behalf of the DS&G Trust dated November 16, 2018 and December 7, 2018 resulted in modification of the PDI WP and SAP (both revised and submitted to the USEPA on March 28, 2019 as Revision 2 of these documents). The USEPA requested addition of well P-5U to the list of wells for cation and anion analysis in their email dated April 10, 2019. During the monthly call with the USEPA on April 25, 2019, the USEPA requested that Table A-6C be updated with this information and the final monitoring well identifications and screen intervals. The revised table was provided to the USEPA as part of the Analytical Data Summary for the April-May 2019 Groundwater Monitoring Event dated July 31, 2019.
- Comments from the USEPA dated July 29, 2019 result in minor modifications to the PDI WP Addendum dated July 15, 2019. A revised document will not be prepared.
- Comments from the USEPA dated October 24, 2018 and February 26, 2019 resulted in modification of the RDWP (revised and submitted to the USEPA on March 28, 2019 as Revision 2 of this document).

[2] Per Paragraph 4.2 of the RD SOW, "If the schedule for any activity described in the Progress Reports, including activities required to be described under Paragraph 4.1(d), changes, Respondents shall notify EPA of such change at least seven days before performance of the activity."

- There are no proposed or approved modifications to the RD SOW schedule at this time.

1.7 Community Involvement Plan[3] (CIP) Activities

- At this time, the USEPA has not requested the participation of the Respondents in community involvement activities.

2.0 ACTIVITIES UNDER 1995 CONSENT DECREE

The groundwater monitoring program performed under 1995 Consent Decree was revised as part of the SAP prepared and submitted with the PDI WP. The SAP (Revision 2; March 28, 2019) was submitted to the USEPA on March 28, 2019 with the PDI WP-Revision 2 and approved by the USEPA on April 10, 2019 with minor revisions to Table A-6C as noted above.

The USEPA has requested that the DS&G groundwater monitoring events be performed coincident with the Army Creek Landfill (ACL) groundwater monitoring events. The events were coincident in October 2019 at which time both Sites collected samples for per- and poly-fluorinated alkyl substances (PFAS) and cation/anion analyses.

2.1 Performed During Reporting Period

2.1.1 Groundwater Monitoring

- Performance of the Second (October) 2019 Semi-Annual Groundwater Monitoring Event

2.1.2 Landfill Inspections, LFG Monitoring and Mitigation System OM&M

- Preparation of the Third Quarter 2019 Inspection and Landfill Gas Monitoring Event report
- OM&M of direct-venting system

2.2 Scheduled for Next Reporting Period (November 2019)

2.2.1 Groundwater Monitoring

- Initial review of data from the Second (October) 2019 Semi-Annual Groundwater Monitoring Event

2.2.2 Landfill Inspections, LFG Monitoring and Mitigation System OM&M

- OM&M of direct-venting system
- Submittal of the Third Quarter 2019 Inspection and Landfill Gas Monitoring Event report

[3] Per Paragraph 2.1(a) of the RD SOW: "In 1984, EPA developed a Community Involvement Plan (CIP) for the Site; EPA updated the CIP in 2017. Pursuant to 40 C.F.R. § 300.435(c), EPA shall review the existing CIP and determine whether it should be revised to describe further public involvement activities during the Work that are not already addressed or provided for in the existing CIP."

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If there are any questions regarding this progress report, please do not hesitate to contact the undersigned.

Very truly yours,
Golder Associates Inc.

Theresa A. Miller

Theresa A. Miller, LSP, PG
Senior Consultant

cc: (via email) P. Boettcher, DNREC
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S. Mays, DS&G Trust

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