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Ms. Amanda Killeen
Environmental Analyst 2
Connecticut Department of Energy and Environmental Protection
Bureau of Water Protection and Land Reuse
79 Elm Street
Hartford, CT 06106-5127

RE: Response to July 11, 2014 CTDEEP Comment Letter
School Parcel
379 Bond Street, Bridgeport, CT

Dear Ms. Killeen:

We received your July 11, 2014 letter regarding the Remedial Action Plan School Parcel 379 Bond Street Bridgeport, Connecticut, Leggette, Brashears & Graham, Inc., April 2014 (RAP). We appreciate your diligent and detailed review of the RAP. The letter provided a summary of items discussed during our June 18, 2014 meeting. On behalf of General Electric Company and the City of Bridgeport, We are providing the following summary of revisions made to the RAP and listed Appendices in response to the aforementioned meeting, and select comments identified in your July 11, 2014 letter.

Remedial Action Plan

Comment 1

In Section 3.3.5 Metals and Cyanide, LBG states that arsenic was identified at concentrations greater than the Residential Direct Exposure Criteria (RDEC) on the elevated southeastern portion of the site; however the 95% Upper Confidence Level (UCL) arithmetic mean was less than the RDEC and therefore no remediation is required.

- Submit a detailed explanation which describes how the 95% UCL was calculated for this area. Refer to the Guidance for Calculating the 95% Upper Confidence Level for Demonstrating Compliance with the Remediation Standard Regulations posted at the following link:
http://www.ct.gov/deep/lib/deep/site_clean_up/remediation_regulations/95ucl_guidance.pdf

Response 1

The RAP has been updated to address this comment. A reference to Appendix VI has been added on page 14 of the RAP. Appendix VI provides a detailed explanation of the application and calculation of the 95 percent upper confidence level (UCL) calculation which shows compliance with the RDEC for soils containing arsenic within 4 feet of grade on the southeastern portion of the Site. Calculations were completed in accordance with the afore-referenced CTDEEP guidance.

Comment 2

The **Summaries of Analytical Results Figures (Figures 6-10)** depict the soil sample locations and results for each constituent prior to remediation by excavation. It would be useful to provide figures that illustrate post-remediation conditions.

- To illustrate the post-remediation conditions at the property, provide revised Figures 6-10 that include the excavation limits of remediation that has already occurred.

Response 2

Figures 6 through 10 have been revised to show the completed remedial excavations. In addition, these figures have been revised to show the extent of proposed remedial excavations, which will be completed following the RAP approval.

Comment 3

Approximate Extent of Soils Exceeding the GB PMC (Figure 12) depicts the areas where soil on the property currently contains lead in excess of the GB PMC; however, it does not illustrate the results of the investigation, remediation completed or pending remediation dimensions.

- Provide a revised Figure 12 that includes: (1) the sample locations and corresponding results from the investigation(s) in the areas proposed for excavations; and (2) the proposed excavation limits and previous excavation limits (if applicable) in areas proposed for lead-impacted soil removal.

Response 3

Figure 12 has been revised to include closure sample locations and results. In addition, an additional small proposed excavation has been added to address comment 8 of your July 11, 2014 letter. The area of this proposed excavation also includes closure sample locations and results.

Comment 4

Section 6.2 Sequence of Activities includes "Remove remaining concrete, piping, and asphalt" as a bulleted item. What is the status of the remaining concrete?

Meeting Outcome: *The concrete has been sampled and analyzed for the appropriate constituents of concern. No results were reported above criteria. GE/City of Bridgeport will provide the Department with the concrete sample results and a letter indicating of their intent to reuse the concrete as clean fill. A letter of intent and analytical results will suffice. No approval is necessary for reuse of concrete as clean fill. The Department will review the results and issue a letter of concurrence.*

Response

Attachment 1 of this response includes a figure showing the extent concrete slab sampled, and approximate locations which the samples were collected. Note that some of this slab was removed during various interim remedial actions (i.e., LNAPL remediation) and stockpiled onsite. The attachment also includes tables summarizing the analytical results. While the Remediation Standard Regulations (RSRs) do not apply to concrete, for purposes of determining use of the material, the results were compared to RSR criteria. As shown on the attached tables, all laboratory results were below the applicable RSRs – RDEC and GB PMC. Based on the testing results, the City of Bridgeport intends to crush the concrete and reuse it as clean fill material on the Site.

Appendix III: Completed RDEC and GB PMC Soil Remedial Actions

Comment 1

Summary of Areas of Concern (Table 1) has not been updated since the Phase I-III Environmental Site Assessment, March 2013.

- Provide an updated Summary of AOCs Table that reflects the results of investigations, remedial actions completed, remedial actions needed or no further action conclusions for each AOC.

Response 1

Table 1 has been updated to include the information requested.

Comment 2

The blue lines on sample results tables on the Excavation Completed Figures are purposed to denote the sample location relative to the seasonal high water table.

- Provide clarification that the blue line immediately below a sample result does not indicate that the sample was collected at the groundwater interface, but rather that the sample was collected above the groundwater table.
- Provide a groundwater elevation summary for reference.

Response 2

The figures have been revised to address the comments above. In addition to the items requested, we also changed the orientation of key in upper right to match orientation of drawing, and updated the title clarify that the figures were showing closure samples for the remedial excavations.

Comment 3

Soil sample results analyzed by the Synthetic Precipitation Leaching Procedure (SPLP) method can be used to trump Total data results in respect to demonstrating compliance with the PMC. In Appendix III, the SPLP results are presented in a separate table from the Total results. If a sample result meets GB PMC based on the SPLP results, the Total data tables indicate that sample meets the GB PMC even though the Total numerical result exceeds criteria.

- Provide clarification on the Total tables that indicate which samples meet criteria based on the SPLP results.

Response 3

The total data tables have been revised to include a colored font for those samples that were additionally analyzed using the synthetic precipitation leaching procedure (SPLP).

Comment 4

The GB PMC does not apply to soil samples collected from beneath the seasonal high water table. In Appendix III, the data tables present soil samples collected from below the seasonal high water table as in compliance with the GB PMC even though the numerical result does not meet criteria.

- Provide clarification on the tables that indicate which samples meet criteria because the sample was collected from beneath the water table.

Response 4

The tables have been revised to include the extrapolated seasonal high depth to water at for each of the sample locations.

Comment 5

In **Appendix III Section 3.0** AOC-16 is mislabeled in as AOC-15.

- Please revise.

Response 5

The text has been revised.

Comment 6

In **Appendix III Section 12.0** AOC-27 is mislabeled in as AOC-26.

- Please revise.

Response 6

The text has been revised.

Comment 7

Lead (SPLP) was detected above the GB PMC at 1.91 mg/kg in sample B29L-B-2 (0.8-1.7) in the Phase I-III Environmental Site Assessment (ESA) (App XXII AOC-16 Table 7). According to Appendix III Section 3.0 (PMC6) and Figure 4, this area was excavated to a depth of seven feet below grade. If lead was reported above the GB PMC at a depth of less than two feet below grade, why was the final excavation so deep?

Meeting Outcome: GE opted to over-excavate in this area to the groundwater table rather than collect deeper samples to vertically delineate the release area prior to remediation. Excavating to the groundwater table is a commonly used and acceptable method to meet the GB PMC. No confirmation samples are necessary since the GB PMC applies only to soil located above the seasonal high groundwater table.

Response 7

No Response Required

Comment 8

Benzo(a)anthracene exceeded the GB PMC of 0.0006 mg/l in soil sample B33W-B-7 (0.6-2) with a result of 0.00071 mg/l in the Phase I-III ESA (Appendix XXII Table 8 SPLP SVOCs). The result was not highlighted on Table 8 or the Summary of SVOC Results Table 5. It was not addressed in Appendix III or proposed for remediation in the RAP. Please explain why remediation was not proposed at this location.

Meeting Outcome: The total concentration for Benzo(a)anthracene was non-detect in this sample; however, the SPLP result exceeded the GB PMC, and therefore, must be addressed.

- Provide a Data Quality Assessment and Usability Evaluation of the laboratory data to demonstrate that the SPLP result was not reliable, or a revised plan for further investigation, or propose remediation.

Response 8

The total benzo(a)anthracene result for B33W-B-7 (0.6 – 2) was ND<0.0071 mg/kg, while the GB PMC is 1 mg/kg; therefore the sample meets the GB PMC as specified in the RSRs, specifically R.C.S.A. section 22a-133k-2(c)(1). The RSRs also allow the comparison of a sample extracted using the SPLP methodology to 10 times the groundwater protection criteria, which in this case would be 0.00006 mg/l. See R.C.S.A. § GB PMC criteria 22a-133k-2(c)(2)(D)(i)(aa). This alternative was not proposed for this location or this constituent, because the GB PMC was already met. While soil in this area meets the GBPMC and remediation is not required to demonstrate compliance, the RAP has been revised to provide for remediation utilizing soil removal in this location.

Comment 9

ETPH exceeded the Residential Direct Exposure Criteria (RDEC) in sample B33E-B-1 (0.5-0.9) with a concentration of 1,200 mg/kg in the Phase I-III ESA (App XXII Figure 1). According to Appendix III Section 9.0 (RDEC 3), this area was excavated and the RDEC soil was removed. However, adjacent sample B33W-B-8 (0.5-2) also contained ETPH at a concentration of 1,200 mg/kg but this was not remediated. If the final remediation plan is to cover the soils that exceed the RDEC with clean fill, pavement or the building footprint, why was this remediated?

Meeting Outcome: B33E-B-1 was located in an elevated area that is not slated to receive additional fill for development purposes and would not have met the conditions necessary for the inaccessible soil requirements. B33W-B-8 is located in a lower-lying area and will receive either two or four feet of fill or will be beneath the building footprint and deemed inaccessible. This explanation for the RDEC remediation is reasonable.

- Provide clarification for this any other remediation that occurred because of detections within an elevated area.

Response 9

Text has been added to the RAP text, appendices and figures that indicates that remedial excavations RDEC 1 through 4 were completed because the shallow soils (upper 4 feet) in the topographically higher portion of the Site will not be rendered inaccessible as part of the construction of the new high school.

Appendix V: Interim Remedial Action Report for PCB Removal Areas

Comment 1

At Location #1 (Former Courtyard 32) a sidewall sample was not collected from the building side of excavation A that was below criteria (CY32-B-19(0.5-2) 1.1 mg/kg) and a sidewall sample was not collected from the building side of excavation B to delineate CY32-B-8 (0.5-2) 2.9 mg/kg. Please provide an explanation for the omission of confirmation samples from the along the building in these excavations.

Meeting Outcome: *The building slab depth was at four feet below grade and the excavation extended laterally to the slab. Given the relatively low concentrations of PCBs reported and the delineated depth of samples in respect to the building slab depth, no additional samples are necessary here.*

Response 1

No Response Required

Comment 2

At Location #2 (Former Courtyard 30W) PCBs were reported in UST70-B-2 from 8.9 mg/kg (4.5-6) to 620 mg/kg (0.5-2) and in UST70-B-1 (0.5-2) 29 mg/kg and (2-4) 13 mg/kg. Sidewall samples were not collected along building side of the greater-than-40 mg/kg portion of excavation to delineate the above detections. Please provide an explanation for the omission of confirmation samples along the building in this excavation.

Meeting Outcome: *The building slab depth was at four feet below grade and the excavation extended laterally to the slab. Because of the higher concentrations of PCBs detected and the depth of detections in respect to the depth of the building slab, additional confirmation soil samples are required to fully demonstrate that remediation is complete in this location.*

- Please collect confirmation samples in this area from grade to six feet below grade to correspond with the depths of PCB detections.
- Results should be submitted with the revised RAP.

Response 2

Additional samples were collected as requested. One of the sample results was above the RDEC (UST70-B-11 (2 to 3.6) at 3.92 mg/kg); however, concerns were raised about the quality of the sample because the surrogate was biased high beyond the laboratory control limits. Rather than re-sample, GE chose to excavate and dispose of the soils in question and collect additional sidewall and basal closure samples. The Interim Remedial Action Report for the PCB Removal Areas, April 2014/Revised July 2014, Leggette, Brashears & Graham, Inc. has been updated to reflect the additional investigation and remediation activities.

Updates not Associated with Comments

Text and plates of the RAP have been updated to reflect the CTDEEP approval of the January 29, 2014 letter requesting the use of criteria for additional polluting substances.

If you have any questions or comments, please do not hesitate to contact either of us.

Very Truly Yours,



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General Electric Company



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