



Westinghouse Electric Company  
Nuclear Fuel  
Columbia Fuel Fabrication Facility  
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USA

SCDHEC, BLWM  
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Your ref:  
Our ref: LTR-RAC-22-01

January 6, 2022

Subject: **December** 2021 CA Progress Report

Ms. Kuhn:

In accordance with Item 19 of Consent Agreement (CA) 19-02-HW, this progress report is being submitted to you, including the following requested information:

- (a) a brief description of the actions which Westinghouse has taken toward achieving compliance with the Consent Agreement during the previous month;
- (b) results of sampling and tests, in tabular summary format received by Westinghouse during the reporting period;
- (c) a brief description of all actions which are scheduled for the next month to achieve compliance with the Consent Agreement, and other information relating to the progress of the work as deemed necessary or requested by the Department; and
- (d) information regarding the percentage of work completed and any delays encountered or anticipated that may affect the approved schedule for implementation of the terms of the Consent Agreement, and a description of efforts made to mitigate delays or avoid anticipated delays.

In response to the above requirements, the following is being reported to the Department since the last progress report submitted on **December 8, 2021**. The following progress report is for work occurring from **December 1- 31, 2021**:

- (a) Actions during the previous month:  
Westinghouse began implementation of the Final Remedial Investigation (RI) Work Plan on 6/10/19. To comply with **Item 4** of the CA, the following actions were completed this month.
  - Completed the following to support the **Phase II RI** Work Plan:
    - Developed a schedule with AECOM personnel to complete the RI Report for submission to DHEC no later than August 2022. The schedule is included in this report as **Attachment A**.

- Completed the following to support **Calcium Fluoride (CaF<sub>2</sub>) Pad Restoration** Activities:
  - Rail shipments of CaF<sub>2</sub> continued in December. Seven railcars were shipped per the 3<sup>rd</sup> NRC Alternate Disposal Request (ADR).
  - CaF<sub>2</sub> bagging operations are 100% complete.
- Completed the following to support **Cultural Resources Survey** Activities:
  - Reviewed the first report draft for the cultural resources survey conducted at the site by Brockington and Associates.

(b) Results of sampling and tests:

- **Semi-annual Groundwater Sampling (118 wells)**  
Tabulated results of the semi-annual groundwater sampling campaign conducted in October 2021 are included as **Attachment B**.

(c) Brief description of all actions which are scheduled for the next month:

In accordance with **Item 4** of the CA, Westinghouse will continue to implement the Work Plan to include the following actions:

- Continue CaF<sub>2</sub> railcar shipments.
- Continue working on item #6 of the Consent Agreement, the Remedial Investigation Report.
- Generate plume maps for October 2021 groundwater sampling campaign and submit to Department with January 2022 monthly report.
- Submit the cultural resources survey report conducted at the site by Brockington and Associates to the SHPO for comments.

(d) Percentage of work completed and any delays encountered or anticipated:

- 25% of the RI Report scope is completed.
- 100% of Phase II **field** work scope completed.
- Currently there are no anticipated delays.

Respectfully,



Diana P. Joyner  
Principal Environmental Engineer  
Westinghouse Electric Company, CFFF  
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cc: N. Parr, Environmental Manager  
J. Ferguson, EH&S Manager  
J. Grant, AECOM Project Manager  
ENOVIA Records

**Attachment A:** RI Report Schedule

**Attachment A:** Tabulated Groundwater Wells Analytical Results, October 2021 (118 wells)

# **Attachment A**

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## **RI Report Schedule**



## **Attachment B**

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### **Tabulated Groundwater Wells Analytical Results October 2021 (118 wells)**



















Attachment B

Tabulated Groundwater Wells Analytical Results, October 2021

Westinghouse Columbia Fuel Fabrication Facility, Hopkins, SC

|              |                                      |       |      |       | Well<br>Date<br>Type | W-119<br>10/18/2021 8:58<br>N | W-120<br>10/15/2021 9:04<br>N | W-121<br>10/15/2021 10:10<br>N | W-122<br>10/13/2021 10:56<br>N | W-123<br>10/5/2021 12:02<br>N | W-124<br>10/25/2021 12:55<br>N | W-125<br>10/25/2021 12:15<br>N | W-126<br>10/25/2021 10:16<br>N |
|--------------|--------------------------------------|-------|------|-------|----------------------|-------------------------------|-------------------------------|--------------------------------|--------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Group        | Analyte                              | MCL   | note | Units |                      |                               |                               |                                |                                |                               |                                |                                |                                |
| Radiological | Alpha particles                      | 15    | *    | pCi/L | 2.25 #               | 1.26 #                        | 0 ##                          | 3.49                           | 5.31                           | 0 ##                          | 2.74 #                         | 4.23                           |                                |
| Radiological | Beta particles                       | 50    | *    | pCi/L | 2.00 #               | 3.56 #                        | 5.06                          | 1.45 #                         | 239                            | 1.59 #                        | 6.77                           | 4.02                           |                                |
| Radiological | Tritium                              |       |      | pCi/L |                      |                               |                               |                                |                                |                               |                                |                                |                                |
| Radiological | Technetium-99                        | 900   |      | pCi/L | 0 ##                 | 1.01 #                        | 1.62 #                        | 0.494 #                        | 424                            | 0 ##                          | 1.15 #                         | 0 ##                           |                                |
| Radiological | Uranium-233/234                      |       |      | pCi/L | 0 ##                 | 0.393                         | 0.0102 #                      | 0 ##                           | 0.333                          | 0 ##                          | 0.0880 #                       | 0 ##                           |                                |
| Radiological | Uranium-235/236                      |       |      | pCi/L | 0.0153 #             | 0 ##                          | 0.0118 #                      | 0 ##                           | 0.0432 #                       | 0.0128 #                      | 0.0279 #                       | 0 ##                           |                                |
| Radiological | Uranium-238                          |       |      | pCi/L | 0 ##                 | 0.278 #                       | 0 ##                          | 0 ##                           | 0.421                          | 0.0297 #                      | 0.0250 #                       | 0 ##                           |                                |
| Radiological | Percent Uranium-235                  |       |      | %     | 0 #                  | 0 #                           | 0 #                           | 0 #                            | 0 #                            | 0 #                           | 0 #                            | 0 #                            |                                |
| Radiological | Uranium-234                          |       |      | ug/L  | < 0.0500             | < 0.0500                      | < 0.0500                      | < 0.0500                       | < 0.0500                       | < 0.0500                      | < 0.0500                       | < 0.0500                       |                                |
| Radiological | Uranium-235                          |       |      | ug/L  | < 0.0700             | < 0.0700                      | < 0.0700                      | < 0.0700                       | 0.0118 J                       | < 0.0700                      | < 0.0700                       | < 0.0700                       |                                |
| Radiological | Uranium-238                          |       |      | ug/L  | < 0.200              | 0.623                         | < 0.200                       | < 0.200                        | 1.60                           | < 0.200                       | < 0.200                        | < 0.200                        |                                |
| Radiological | Total Uranium Isotopes               | 30    |      | ug/L  | < 0.200              | 0.623                         | < 0.200                       | < 0.200                        | 1.61                           | < 0.200                       | < 0.200                        | < 0.200                        |                                |
| Chemical     | Fluoride                             | 4     |      | mg/L  | 0.016 J              | 0.083 J                       | 0.057 J                       | 0.056 J                        | 8.13                           | 0.056 J                       | 0.257                          | 0.251                          |                                |
| Chemical     | Nitrate as N                         | 10    |      | mg/L  | 1.5                  | 4.5                           | 2.5                           | < 0.020                        | 120                            | < 0.020                       | 0.073                          | 0.060                          |                                |
| Chemical     | Ammonia as N                         |       |      | mg/L  | 0.0635 J             | 0.0228 J                      | 0.0484 J                      | 0.0248 J                       | 95                             | 0.173                         | 5.42                           | 2.9                            |                                |
| VOCs         | Acetone                              |       |      | ug/L  | < 20                 | < 20                          | < 20                          | < 20                           | < 20                           | < 20                          | < 20                           | < 20                           |                                |
| VOCs         | Benzene                              | 5     |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Bromodichloromethane                 |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Bromoform                            |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Bromomethane                         |       |      | ug/L  | < 2.0                | < 2.0                         | < 2.0                         | < 2.0                          | < 2.0                          | < 2.0                         | < 2.0                          | < 2.0                          |                                |
| VOCs         | 2-Butanone                           |       |      | ug/L  | < 10                 | < 10                          | < 10                          | < 10                           | < 10                           | < 10                          | < 10                           | < 10                           |                                |
| VOCs         | Carbon disulfide                     |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Carbon tetrachloride                 | 5     |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Chlorobenzene                        | 100   |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Chloroethane                         |       |      | ug/L  | < 2.0                | < 2.0                         | < 2.0                         | < 2.0                          | < 2.0                          | < 2.0                         | < 2.0                          | < 2.0                          |                                |
| VOCs         | Chloroform                           |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Chloromethane                        |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Cyclohexane                          |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,2-Dibromo-3-chloropropane          | 0.2   |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Dibromochloromethane                 |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,2-Dibromoethane                    | 0.05  |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,2-Dichlorobenzene                  | 600   |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,3-Dichlorobenzene                  |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,4-Dichlorobenzene                  | 75    |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,1-Dichloroethane                   |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Dichlorodifluoromethane              |       |      | ug/L  | < 2.0                | < 2.0                         | < 2.0                         | < 2.0                          | < 2.0                          | < 2.0                         | < 2.0                          | < 2.0                          |                                |
| VOCs         | 1,2-Dichloroethane                   | 5     |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,1-Dichloroethene                   | 7     |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | cis-1,2-Dichloroethene               | 70    |      | ug/L  | < 1.0                | 1.3                           | < 1.0                         | < 1.0                          | 1.9                            | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | trans-1,2-Dichloroethene             | 100   |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,2-Dichloropropane                  | 5     |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | cis-1,3-Dichloropropene              |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | trans-1,3-Dichloropropene            |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Ethylbenzene                         | 700   |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 2-Hexanone                           |       |      | ug/L  | < 10                 | < 10                          | < 10                          | < 10                           | < 10                           | < 10                          | < 10                           | < 10                           |                                |
| VOCs         | (1-Methylethyl)-Benzene              |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Methyl acetate                       |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Methyl tert-butyl ether              |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 4-Methyl-2-pentanone                 |       |      | ug/L  | < 10                 | < 10                          | < 10                          | < 10                           | < 10                           | < 10                          | < 10                           | < 10                           |                                |
| VOCs         | Methylcyclohexane                    |       |      | ug/L  | < 5.0                | < 5.0                         | < 5.0                         | < 5.0                          | < 5.0                          | < 5.0                         | < 5.0                          | < 5.0                          |                                |
| VOCs         | Methylene chloride                   | 5     |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Styrene                              | 100   |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,1,2,2-Tetrachloroethane            |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Tetrachloroethene                    | 5     |      | ug/L  | 74                   | 340                           | 82                            | < 1.0                          | 23                             | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Toluene                              | 1000  |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,1,2-Trichlor-1,2,2-trifluoroethane |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,2,4-Trichlorobenzene               | 70    |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,1,1-Trichloroethane                | 200   |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | 1,1,2-Trichloroethane                | 5     |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Trichloroethene                      | 5     |      | ug/L  | 2.3                  | 17                            | 2.4                           | < 1.0                          | 7.7                            | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Trichlorofluoromethane               |       |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Vinyl chloride                       | 2     |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |
| VOCs         | Xylenes, Total                       | 10000 |      | ug/L  | < 1.0                | < 1.0                         | < 1.0                         | < 1.0                          | < 1.0                          | < 1.0                         | < 1.0                          | < 1.0                          |                                |

Attachment B

Tabulated Groundwater Wells Analytical Results, October 2021

Westinghouse Columbia Fuel Fabrication Facility, Hopkins, SC

| Group | Analyte                     | MCL | note | Well<br>Date<br>Type | W-RW2                 | W-26                  | W-41R                | W-48                  |
|-------|-----------------------------|-----|------|----------------------|-----------------------|-----------------------|----------------------|-----------------------|
|       |                             |     |      |                      | 10/21/2021 10:03<br>N | 10/19/2021 11:53<br>N | 10/21/2021 9:06<br>N | 10/19/2021 13:35<br>N |
| SVOCs |                             |     |      | Units                |                       |                       |                      |                       |
| SVOCs | 1,1'-Biphenyl               |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 2,4,5-Trichlorophenol       |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 2,4,6-Trichlorophenol       |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 2,4-Dichlorophenol          |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 2,4-Dimethylphenol          |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 2,4-Dinitrophenol           |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | 2,4-Dinitrotoluene          |     |      | ug/L                 | < 1.6                 | < 1.6                 | < 1.6                | < 1.6                 |
| SVOCs | 2,6-Dinitrotoluene          |     |      | ug/L                 | < 1.6                 | < 1.6                 | < 1.6                | < 1.6                 |
| SVOCs | 2-Chloronaphthalene         |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 2-Chlorophenol              |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 2-Methylnaphthalene         |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | 2-Methylphenol              |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 2-Nitroaniline              |     |      | ug/L                 | < 1.6                 | < 1.6                 | < 1.6                | < 1.6                 |
| SVOCs | 2-Nitrophenol               |     |      | ug/L                 | < 1.6                 | < 1.6                 | < 1.6                | < 1.6                 |
| SVOCs | 3,3'-Dichlorobenzidine      |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | 3-Nitroaniline              |     |      | ug/L                 | < 1.6                 | < 1.6                 | < 1.6                | < 1.6                 |
| SVOCs | 4,6-Dinitro-2-methylphenol  |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | 4-Bromophenyl phenyl ether  |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 4-Chloro-3-methylphenol     |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 4-Chloroaniline             |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 4-Chlorophenyl phenyl ether |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | 4-Methylphenol              |     |      | ug/L                 | < 1.6                 | < 1.6                 | < 1.6                | < 1.6                 |
| SVOCs | 4-Nitroaniline              |     |      | ug/L                 | < 1.6                 | < 1.6                 | < 1.6                | < 1.6                 |
| SVOCs | 4-Nitrophenol               |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Acenaphthene                |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Acenaphthylene              |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Acetophenone                |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Anthracene                  |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Atrazine                    | 3   |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Benz(a)anthracene           |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Benzaldehyde                |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Benzo(a)pyrene              | 0.2 |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Benzo(b)fluoranthene        |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Benzo(g,h,i)perylene        |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Benzo(k)fluoranthene        |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Bis(2-chloroethoxy)methane  |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Bis(2-chloroethyl)ether     |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Bis(2-chloroisopropyl)ether |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Bis(2-ethylhexyl)phthalate  | 6   |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Butyl benzyl phthalate      |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Caprolactam                 |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Carbazole                   |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Chrysene                    |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Di-n-butyl phthalate        |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Di-n-octyl phthalate        |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Dibenz(a,h)anthracene       |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Dibenzofuran                |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Diethyl phthalate           |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Dimethyl phthalate          |     |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Fluoranthene                |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Fluorene                    |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Hexachlorobenzene           | 1   |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Hexachlorobutadiene         |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Hexachlorocyclopentadiene   | 50  |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Hexachloroethane            |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Indeno(1,2,3-cd)pyrene      |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Isophorone                  |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | N-Nitrosodi-n-propylamine   |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | N-Nitrosodiphenylamine      |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Naphthalene                 |     |      | ug/L                 | < 0.16                | <b>0.33</b>           | < 0.16               | <b>1.1</b>            |
| SVOCs | Nitrobenzene                |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Pentachlorophenol           | 1   |      | ug/L                 | < 4.0                 | < 4.0                 | < 4.0                | < 4.0                 |
| SVOCs | Phenanthrene                |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |
| SVOCs | Phenol                      |     |      | ug/L                 | < 0.80                | < 0.80                | < 0.80               | < 0.80                |
| SVOCs | Pyrene                      |     |      | ug/L                 | < 0.16                | < 0.16                | < 0.16               | < 0.16                |



Notes: MCL - Maximum Contaminant Level  
Concentrations in orange shaded cells exceed their MCL  
\* - site-specific action level

**Bold concentrations indicate detections**

J - Result below reporting limit

NA - not analyzed

# - value is below minimum detectable concentration

## - value shown as zero reported by analytical laboratory as a negative number

pCi/L - picocuries per liter

ug/L - micrograms per liter

mg/L - milligrams per liter

SVOCs - semivolatile organic compounds

VOCs - volatile organic compounds

N - Normal sample

FD - Field duplicate sample