



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-22-38

July 7, 2022

Subject: **June 2022 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 **June 2, 2022**. The following progress report is for work occurring from **June 1- 30, 2022**:

- (a) Actions during the previous month:
  - Completed the following to support completion of the **RI Report, Item 6** of the CA:
    - Completed the *initial* internal CFFF review of item #6 of the Consent Agreement, the Remedial Investigation Report, for submittal by August 23.
    - Completed the *initial* internal CFFF review of draft Baseline Risk Assessment.

(b) Results of sampling and tests:

- **Semi-annual Groundwater Sampling (118 wells)**

Tabulated results of the semi-annual groundwater sampling campaign conducted in April 2022 are included as Attachment A.

(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:

- Conduct a **final** internal CFFF review of item #6 of the Consent Agreement, the Remedial Investigation Report, for submittal by August 23.
- Conduct a **final** internal CFFF review of the draft Baseline Risk Assessment.

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

- 85% 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  
803.497.7062 (m)

cc : N. Parr, Environmental Manager  
J. Ferguson, EH&S Manager  
J. Grant, AECOM Project Manager  
P. Donnelly, Regulatory Affairs Manager  
ENOVIA Records

**Attachment A:** Tabulated Groundwater Wells Analytical Results, April 2022 (118 wells)

## **Attachment A**

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### **Tabulated Groundwater Wells Analytical Results April 2022 (118 wells)**























Attachment A

Tabulated Groundwater Wells Analytical Results, April 2022  
Westinghouse Columbia Fuel Fabrication Facility, Hopkins, SC

					Well	W-123	W-124	W-125	W-126
					Date	4/4/2022 10:52:00 AM	4/21/2022 11:28:00 AM	4/21/2022 8:10:00 AM	4/21/2022 10:12:00 AM
					Type	N	N	N	N
Group	Analyte	MCL	note	Units					
Radiological	Alpha particles	15	*	pCi/L	10.0	1.82 #	4.08	2.14 #	
Radiological	Beta particles	50	*	pCi/L	291	2.36 #	7.71	6.34	
Radiological	Tritium			pCi/L					
Radiological	Technetium-99	900		pCi/L	442	0 ##	1.77 #	0.912 #	
Radiological	Uranium-233/234			pCi/L	0.437	0 ##	0.00912 #	0.0205 #	
Radiological	Uranium-235/236			pCi/L	0.0321 #	0 #	0 ##	0.0766 #	
Radiological	Uranium-238			pCi/L	0.481	0.127 #	0.101 #	0.103 #	
Radiological	Percent Uranium-235			%	0 #	0 #	0 #	0 #	
Radiological	Uranium-234			ug/L	< 0.0500	< 0.0500	< 0.0500	< 0.0500	
Radiological	Uranium-235			ug/L	< 0.0700	< 0.0700	< 0.0700	< 0.0700	
Radiological	Uranium-238			ug/L	1.37	< 0.200	0.0709 J	< 0.200	
Radiological	Total Uranium Isotopes	30		ug/L	1.37	< 0.200	0.0709 J	< 0.200	
Chemical	Fluoride	4		mg/L	7.4	< 0.10	0.13	0.15	
Chemical	Nitrate as N	10		mg/L	83	0.075	0.077	0.096	
VOCs	Acetone			ug/L	< 20	< 20	< 20	< 20	
VOCs	Benzene	5		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Bromodichloromethane			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Bromoform			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Bromomethane			ug/L	< 2.0	< 2.0	< 2.0	< 2.0	
VOCs	2-Butanone			ug/L	< 10	< 10	< 10	< 10	
VOCs	Carbon disulfide			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Carbon tetrachloride	5		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Chlorobenzene	100		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Chloroethane			ug/L	< 2.0	< 2.0	< 2.0	< 2.0	
VOCs	Chloroform			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Chloromethane			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Cyclohexane			ug/L	< 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	
VOCs	Dibromochloromethane			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,2-Dibromoethane	0.05		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,2-Dichlorobenzene	600		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,3-Dichlorobenzene			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,4-Dichlorobenzene	75		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,1-Dichloroethane			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Dichlorodifluoromethane			ug/L	< 2.0	< 2.0	< 2.0	< 2.0	
VOCs	1,2-Dichloroethane	5		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,1-Dichloroethene	7		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	cis-1,2-Dichloroethene	70		ug/L	1.9	< 1.0	< 1.0	< 1.0	
VOCs	trans-1,2-Dichloroethene	100		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,2-Dichloropropane	5		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	cis-1,3-Dichloropropene			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	trans-1,3-Dichloropropene			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Ethylbenzene	700		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	2-Hexanone			ug/L	< 10	< 10	< 10	< 10	
VOCs	(1-Methylethyl)-Benzene			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Methyl acetate			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Methyl tert-butyl ether			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	4-Methyl-2-pentanone			ug/L	< 10	< 10	< 10	< 10	
VOCs	Methylcyclohexane			ug/L	< 5.0	< 5.0	< 5.0	< 5.0	
VOCs	Methylene chloride	5		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Styrene	100		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,1,2,2-Tetrachloroethane			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Tetrachloroethene	5		ug/L	20	< 1.0	< 1.0	< 1.0	
VOCs	Toluene	1000		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,1,2-Trichloro-1,2,2-trifluoroethane			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,2,4-Trichlorobenzene	70		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,1,1-Trichloroethane	200		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	1,1,2-Trichloroethane	5		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Trichloroethene	5		ug/L	9.6	< 1.0	< 1.0	< 1.0	
VOCs	Trichlorofluoromethane			ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Vinyl chloride	2		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	
VOCs	Xylenes, Total	10000		ug/L	< 1.0	< 1.0	< 1.0	< 1.0	

Attachment A

Tabulated Groundwater Wells Analytical Results, April 2022  
Westinghouse Columbia Fuel Fabrication Facility, Hopkins, SC

					Well	W-RW2	W-RW2	W-26	W-41R	W-48
					Date	4/14/2022 12:45:00 PM	4/14/2022 12:45:00 PM	4/19/2022 12:30:00 PM	4/15/2022 9:38:00 AM	4/19/2022 1:38:00 PM
					Type	N	FD	N	N	N
Group	Analyte	MCL	note	Units						
SVOCs	1,1'-Biphenyl			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	2,4,5-Trichlorophenol			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	2,4,6-Trichlorophenol			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	2,4-Dichlorophenol			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	2,4-Dimethylphenol			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	2,4-Dinitrophenol			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	2,4-Dinitrotoluene			ug/L	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
SVOCs	2,6-Dinitrotoluene			ug/L	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
SVOCs	2-Chloronaphthalene			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	2-Chlorophenol			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	2-Methylnaphthalene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	2-Methylphenol			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	2-Nitroaniline			ug/L	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
SVOCs	2-Nitrophenol			ug/L	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
SVOCs	3,3'-Dichlorobenzidine			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	3-Nitroaniline			ug/L	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
SVOCs	4,6-Dinitro-2-methylphenol			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	4-Bromophenyl phenyl ether			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	4-Chloro-3-methylphenol			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	4-Chloroaniline			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	4-Chlorophenyl phenyl ether			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	4-Methylphenol			ug/L	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
SVOCs	4-Nitroaniline			ug/L	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
SVOCs	4-Nitrophenol			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Acenaphthene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Acenaphthylene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Acetophenone			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Anthracene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Atrazine	3		ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Benz(a)anthracene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Benzaldehyde			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Benzo(a)pyrene	0.2		ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Benzo(b)fluoranthene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Benzo(g,h,i)perylene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Benzo(k)fluoranthene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Bis(2-chloroethoxy)methane			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Bis(2-chloroethyl)ether			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Bis(2-chloroisopropyl)ether			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Bis(2-ethylhexyl)phthalate	6		ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	4.1
SVOCs	Butyl benzyl phthalate			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Caprolactam			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Carbazole			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Chrysene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Di-n-butyl phthalate			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Di-n-octyl phthalate			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Dibenz(a,h)anthracene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Dibenzofuran			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Diethyl phthalate			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Dimethyl phthalate			ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Fluoranthene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Fluorene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Hexachlorobenzene	1		ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Hexachlorobutadiene			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Hexachlorocyclopentadiene	50		ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Hexachloroethane			ug/L	< 0.80	< 0.80	< 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	< 0.16	< 0.16
SVOCs	Isophorone			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	N-Nitrosodi-n-propylamine			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	N-Nitrosodiphenylamine			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Naphthalene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Nitrobenzene			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Pentachlorophenol	1		ug/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
SVOCs	Phenanthrene			ug/L	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
SVOCs	Phenol			ug/L	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
SVOCs	Pyrene			ug/L	< 0.16	< 0.16	< 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  
[] - Values in square brackets are 2\*Long-term average (LTA) for the well/analyte  
Concentrations in blue text exceed their 2\*LTA  
**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