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Your ref:

Our ref: LTR-RAC-21-18

February 8, 2021

SUBJECT: Request for Alternate Disposal Approval and Exemption for Specific Columbia Fuel
 Fabrication Waste
 (Docket No. 70-1151, Material License SNM-1107)

- REFERENCE: 1) NRC letter to Westinghouse, 12/9/2020, "Westinghouse Electric Company, LLC-
 Amendment 25 to Material License SNM-1107, Exemption for Alternate Disposal of
 Specific Waste (Enterprise Project Identifier L-2020-LLL-0009) (ML20302A084)
 2) Westinghouse letter to NRC, LTR-RAC-20-45, 5/8/2020, "Request for Alternate
 Disposal Approval and Exemption for Specific Columbia Fuel Fabrication Waste"
 (ML20129J934)

Westinghouse Electric Company, LLC (Westinghouse) requested NRC approval for alternate disposal of specified low-activity radioactive materials from the Columbia Fuel Fabrication Facility (CFFF), License No. SNM-1107, for certain waste containing byproduct material and special nuclear material (SNM) (Reference 2). That request was approved by the NRC on December 9, 2020 via NRC letter to Westinghouse (Reference 1).

In section 3.2 of Enclosure 1 to Reference 2, Westinghouse estimated there was 50,400 ft³ of Calcium Fluoride (CaF₂) sludge previously dredged from the Calcium Fluoride Lagoons stored in a segregated area of the CaF₂ storage pad. However, after moving the segregated pile of CaF₂ it was discovered that the actual volume of material was less than the 50,400 ft³ assumed. Due to this discrepancy, Westinghouse cannot generate the waste aggregation characterized for disposal as described in Reference 2.

Following the submittal of Reference 2, lagoon dredging on site has continued and a second pile ("Operations Pile") of CaF₂ has been stored on the CaF₂ storage pad separate from the previously segregated pile ("Approved Pile"). Material dredged from the lagoon has excess water removed via press. Two to three samples are taken per day of the material following water removal and are tested for moisture and Uranium content. Thirty-one radiological samples for Total Uranium were collected throughout the dredging operation from the material that makes up the Operations Pile and are representative of the contents of the pile. The sample results of the Operations Pile are included in Enclosure 1 to this letter. Westinghouse performed a statistical analysis of the results and has concluded that the Uranium content of the Operations Pile is bound by the sample

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results of the Approved Pile and, therefore, the analysis of the aggregated waste dose assessment characterized in Reference 2.

Westinghouse is therefore requesting approval to dispose of a portion of the Operations Pile such that, when combined with the CaF_2 from the Approved Pile, a total of approximately 50,400 ft^3 of CaF_2 can be added to the waste material to meet the approved waste aggregation as characterized in section 4.0 of Enclosure 1 to Reference 2. The estimated volume of material required from the Operations pile is 25,900 ft^3 . This request incorporates by reference and is otherwise bound by the information provided to the NRC in support of Safety Condition S-11 of SNM-1107 as described in Reference 1. Westinghouse requests a decision to this alternate disposal request and exemption by March 15, 2021 to support the planned material transport schedule.

Please contact me at (803) 647-2046 should you have questions or need any additional information.

Elise Malek

[Elise Malek \(Feb 8, 2021 14:50 EST\)](#)

Elise Malek
Regulatory Affairs Manager
Westinghouse Columbia Fuel Fabrication Facility
Docket 70-1151 License SNM-1107

Enclosure 1: CaF_2 PILE RADIOLOGICAL DATA SET (1 Page)

cc:

Mr. Thomas Vukovsky
Mr. David Tiktinsky

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Enclosure 1

CaF₂ PILE RADIOLOGICAL DATA SET

Sample results of the Operations Pile of CaF₂ material generated following dredging operations in 2020.

Sample #	ppmU	pCi/g U
1	11.31	31.78
2	11.50	32.32
3	12.30	34.56
4	13.13	36.90
5	13.22	37.15
6	13.75	38.64
7	14.00	39.34
8	15.26	42.88
9	15.30	42.99
10	15.63	43.92
11	17.14	48.16
12	18.23	51.23
13	18.28	51.37
14	18.35	51.56
15	18.60	52.27
16	18.79	52.80
17	20.91	58.76
18	21.15	59.43
19	21.29	59.82
20	21.75	61.12
21	21.82	61.31
22	22.77	63.98
23	23.10	64.91
24	23.82	66.93
25	24.12	67.78
26	24.24	68.11
27	24.49	68.82
28	25.06	70.42
29	26.30	73.90
30	30.51	85.73
31	34.33	96.47
Standard Deviation	5.5	15.4
Mean	19.7	55.3