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Our ref: HEM-10-104
Date: September 24, 2010

Subject: Alternate Waste Disposal of Building Debris - Submittal of Process Building
Wall Samples Results (License No. SNM-00033, Docket No. 070-00036)

References: 1) Westinghouse (E. K. Hackmann) letter to NRC (Document Control Desk),
HEM-10-47, dated May 14, 2010, "Additional Information and Clarifications
Concerning 10 CFR 20.2002 Alternate Waste Disposal Authorization and
Exemption of Hematite Building Debris Waste"

Reference 1 submitted information concerning the Westinghouse Electric Company LLC
(Westinghouse) request for NRC authorization of the 10 CFR 20.2002 alternate waste disposal
for building debris, and the associated exemption from requirements of 10 CFR 30.3 and §70.3.
That letter indicated that analytical results of sampling of the walls of the process buildings
would be forthcoming. Those results are provided herein.

The locations of the samples taken of the process building walls are described in Attachment 1
Figure 1 herein, "Sampling Locations Within the Process Buildings" (from Reference 1;
Attachment 1, Figure 1; heretofore, mention of Reference 1 refers to its Attachment 1). The
Westinghouse response to NRC Question 4 in the Reference 1 section titled "Responses to NRC
Telephone Request of April 19, 2010" describes how Reference 1 Figure 1 illustrates the
approximate locations of walls and floors selected for sampling (the samples of the floors are not
included in this letter). The Westinghouse response to NRC Comment 5 of the Reference 1
section entitled "Responses to NRC Telephone Request of April 30, 2010," described the 2010
Process Building Wall Sampling Plan which was used to obtain the samples.

Attachment 1 herein provides the analytical results of the walls samples. The "Station Number"
column of the Attachment 1 table herein corresponds to the "Wall Sample" nomenclature of
Figure 1 (i.e., numbers 22 - 30).

The Westinghouse response to NRC Question 1 of the Reference 1 section entitled "Responses
to NRC Telephone Request of April 19, 2010," stated that scaling factors would be modified as
appropriate by the 2010 samples laboratory analysis results. The revised scaling factors would
be applied to measurements of gamma-emitting radionuclides (e.g., U-235) in building debris to
account for radionuclides, such as Tc-99, that are not directly measured by gamma spectroscopy.
Westinghouse will incorporate the results of these 2010 samples into a revision to HDP-TBD-

WM-901, "Scaling Factors for Radioactive Waste Associated with the Process Buildings," to be provided under separate correspondence.

The Westinghouse response to NRC Question 2 of the Reference 1 section entitled "Responses to NRC Telephone Request of April 19, 2010," mentioned that the 2010 sample results would be used to confirm our understanding that Sr-90 is not a contaminant of concern. As can be seen from the results of Attachment 1, only one sample exceeded the minimum detectable concentration (MDC) for Strontium. The low activity of the one Sr-90 result which is greater than MDC (i.e., 0.22 pCi/g result vs. 0.12 pCi/g MDC) confirms that Sr-90 is not a contaminant of concern.

Please contact Mark Michelsen, Acting Licensing Manager of my staff at (314) 810-3376 should you have questions or need any additional information.

Sincerely,



E. Kurt Hackmann
Director, Hematite Decommissioning Project

Attachment: 1) Analytical Results of 2010 Process Building Wall Samples

cc: J. J. Hayes, NRC/FSME/DWMEP/DURLD
J. W. Smetanka, Westinghouse, w/o attachment
J. E. Tapp, NRC Region III/DNMS/MCID, w/o attachment

ATTACHMENT 1

Analytical Results of 2010 Process Building Wall Samples

**Westinghouse Electric Company LLC,
Hematite Decommissioning Project**

Docket No. 070-00036

Sample #	Building	Station Number	Am-241 pCi/g	Am-241 +/-	Am-241 MDC	Th-232 pCi/g	Th-232 +/-	Th-232 MDC	U-238 ¹ pCi/g	U-238 +/-	U-238 MDC
1013-MS-100415-13-1	253	22	-0.05	0.49	0.63	0.14	0.09	0.17	78.40	5.76	5.79
1014-MS-100415-13-1	253	23	1.60	0.60	0.90	0.03	0.17	0.30	715.00	84.10	7.76
1001-MS-100414-13-1	240 Red Room	24	-0.14	0.32	0.36	0.32	0.14	0.18	88.30	4.91	2.99
1002-MS-100414-13-1	240 Grn Room	25	0.01	0.06	0.09	0.11	0.07	0.13	2.87	0.55	0.82
1003-MS-100414-13-1	240 Hall	26	-0.14	0.43	0.49	0.16	0.09	0.13	151.00	8.13	4.29
1012-MS-100415-13-1	240 Main	27	0.03	0.05	0.09	0.19	0.10	0.09	2.09	0.36	0.77
1020-MS-100416-13-1	254	28	0.02	0.09	0.14	0.26	0.07	0.12	9.94	0.93	1.27
1021-MS-100416-13-1	255	29	0.00	0.05	0.09	0.09	0.07	0.12	4.21	0.53	0.77
1022-M2-100416-13-1	255	30	0.02	0.06	0.10	0.14	0.06	0.13	3.89	0.50	0.89

> MDC
BOLD VALUE = <MDC

1. Values for U-238 are based on the measured results for Th-234 which is in equilibrium with U-238.

Sample #	Building	Station Number	U-235 pCi/g	U-235 +/-	U-235 MDC	Ra-226 pCi/g	Ra-226 +/-	Ra-226 MDC	Sr-90 pCi/g	Sr-90 +/-	Sr-90 MDC
1013-MS-100415-13-1	253	22	131.00	8.15	1.52	0.10	0.42	0.88	0.22	0.09	0.12
1014-MS-100415-13-1	253	23	125.00	7.74	1.54	0.25	0.37	0.61	0.07	0.07	0.10
1001-MS-100414-13-1	240 Red Room	24	20.90	1.42	0.66	0.44	0.47	0.65	0.00	0.08	0.12
1002-MS-100414-13-1	240 Grn Room	25	0.59	0.08	0.20	1.09	0.71	0.78	-0.08	0.08	0.14
1003-MS-100414-13-1	240 Hall	26	57.50	3.06	0.95	0.32	0.38	0.58	-0.02	0.08	0.12
1012-MS-100415-13-1	240 Main	27	0.53	0.07	0.19	0.71	0.51	0.24	-0.03	0.08	0.12
1020-MS-100416-13-1	254	28	3.05	0.26	0.28	0.33	0.46	0.76	0.00	0.06	0.12
1021-MS-100416-13-1	255	29	0.95	0.16	0.19	1.11	0.62	0.22	-0.04	0.09	0.15
1022-M2-100416-13-1	255	30	0.89	0.18	0.23	0.30	0.41	0.69	0.01	0.08	0.13

> MDC
BOLD VALUE = < MDC

Sample #	Building	Station Number	Tc-99 pCi/g	Tc-99 +/-	Tc-99 MDC	Np-237 pCi/g	Np-237 +/-	Np-237 MDC	U-234 pCi/g (calculated)
1013-MS-100415-13-1	253	22	1.72	0.61	1.11	1.05	0.46	0.38	2636
1014-MS-100415-13-1	253	23	0.98	0.57	1.13	1.03	0.40	0.30	2284
1001-MS-100414-13-1	240 Red Room	24	3.55	0.78	1.15	0.22	0.16	0.17	379
1002-MS-100414-13-1	240 Grn Room	25	-0.30	0.55	1.18	0.12	0.16	0.24	11
1003-MS-100414-13-1	240 Hall	26	0.04	0.49	1.03	0.25	0.21	0.25	1044
1012-MS-100415-13-1	240 Main	27	-0.05	0.48	1.01	0.00	0.13	0.29	9.6
1020-MS-100416-13-1	254	28	0.04	0.55	1.16	-0.08	0.12	0.36	55
1021-MS-100416-13-1	255	29	0.35	0.66	1.37	0.54	0.34	0.36	17
1022-M2-100416-13-1	255	30	0.01	0.60	1.27	0.00	0.09	0.25	16

 >MDC
BOLD VALUE =<MDC

Figure 1
Sampling Locations within the Process Buildings

