



Department of Energy
West Valley Demonstration Project
10282 Rock Springs Road
West Valley, NY 14171-9799

November 23, 2020

Mr. Raymond Vaughan
Suite 302
Buffalo, NY 14202

SUBJECT: Clarification/Request for Information Regarding Discussion at October 28, 2020, Citizen Task Force (CTF) Zoom Meeting Regarding Nuclear Regulatory Commission Licensed Disposal Area (NDA) Inventory of Pu-239

REFERENCE: Letter (383474) R. Vaughan to B. C. Bower, "Clarification/Request for Information Regarding Discussion at October 28, 2020 CTF Zoom Meeting Regarding NDA Inventory of Pu-239," dated October 29, 2020

Dear Mr. Vaughan:

The U.S. Department of Energy (DOE) West Valley Demonstration Project (WVDP) appreciates your continued interest in the development of the Supplemental Environmental Impact Statement (SEIS) for the West Valley Site. This letter responds to the concerns expressed in your October 29, 2020, letter (Reference 1), specifically supporting documentation for the review and revision of the NDA radiological inventory in Table C-9 from the 1996 *Draft Environmental Impact Statement (DEIS) for the Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center* (DOE 1996).

The lack of a definitive basis for the reported NDA radionuclide inventories in Table C-9 of the DEIS was the rationale for West Valley Nuclear Services, Inc. (WVNS) to recalculate the estimated radionuclide inventory in the NDA following the public comment period of the 1996 DEIS. Table C-9 of the DEIS indicated that the source of the NDA radionuclide inventory data was from WVDP-EIS-021, Rev. 1, *Characterization Report for the NRC Licensed Disposal Area* (WVNS 1995). However, WVDP-EIS-021, Rev. 1 provides the total 1993 activity of all waste disposed in the NDA, but does not provide activities of individual radionuclides that are documented in Table C-9 of the DEIS. WVNS prepared WVDP-EIS-021 for Science Applications International Corporation (SAIC) to support the development of the DEIS.

The need to recalculate the estimated radionuclide inventory in Table C-9 of the DEIS is documented in both the transmittal letter and Section 1.0, Introduction to the "*Recalculation of Estimated Radionuclide Inventories in the NDA – Data Package, December 1997*," which was transmitted from L. E. Krieger (WVNS) to T. J. Rowland (DOE-WVDP) on December 9, 1997. The following is an excerpt from Section 1.0 of this report:

"The purpose of this data package is to document recalculation of the estimated radionuclide inventory in the NRC-licensed Disposal Area (NDA) at West Valley, New York as of January 1, 2000. This recalculation was performed due to a lack of a definitive basis for Table C-9, "Projected Radionuclide Activities of Nuclear Fuel Services, Inc., and West Valley Demonstration Project Wastes Buried in the NRC-licensed Disposal Area on January 1, 2000" of Draft Environmental Impact Statement (DEIS) for the Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (DOE 1996)."

This report, prepared by Ralph Wild and Lisa Padgett of Dames & Moore, provides estimated 1987 and 2000 total activity and individual radionuclide activities associated with the waste disposed in the NDA. The DOE, New York State Energy Research and Development Authority (NYSERDA), and SAIC reviewed this report. The updated NDA inventories from the December 1997 report were subsequently provided to SAIC for their use in EIS analyses.

The December 1997 NDA Data Package was the basis for the NDA inventory estimates that were published in URS (2000) *Estimated Radionuclide Inventory for the NRC-Licensed Disposal Area at the West Valley Demonstration Project*. The need to revise the estimated radionuclide inventories in Table C-9 of the DEIS was also discussed in the Executive Summary and Section 1.0 Introduction from Volume 1 of URS (2000). The following is an excerpt from the Executive Summary of Volume 1 of URS (2000):

"The need for revision came to light during the review period for the Draft Environmental Impact Statement for the Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center (DOE, 1996). The West Valley DEIS includes Table C-9, Projected Radionuclide Activities of Nuclear Fuel Services, Inc. and the West Valley Demonstration Project Wastes Buried in the NRC-Licensed Disposal Area on January 1, 2000 and indicates that the table was derived from Characterization Report for the NRC Licensed Disposal Area (WVNS, 1995). The details of the derivation were not available. A preliminary review of the NDA characterization report revealed that documentation of its methods and assumptions was insufficient to allow inventory calculations to be repeated or verified."

The need to revise the radionuclide inventories in Table C-9 of the 1996 DEIS became apparent following the public comment period for the DEIS. Options for DEIS comment resolution, including radioactive source term uncertainties, are discussed in a January 7, 1997, correspondence from Patti Swain (SAIC) to Daniel Sullivan (DOE-WVDP). The following recommendation for resolving source term uncertainty in DEIS comment number 98-91 is proposed in the section "Issue Paper #15 – Comments Related to Information Contained in the Environmental Information Documents (EIDs) and Waste Characterization Reports (WCRs)."

"Comment 98-91 is referring to different radiological inventory numbers. SAIC staff should work with the appropriate WVNS personnel to ensure that credible inventory numbers have been used for the impact analysis."

Additional documentation for the re-evaluation of the NDA inventory in Table C-9 and WVDP-EIS-021, Rev.1 is suggested in a May 19, 1997, correspondence from B. A. Mazurowski (DOE-WVDP) to L. E. Krieger (WVNS) requesting responses to comments, including source term and activity in NDA (WMA 7), documented in the May 3, 1997, letter "Fifth Letter on Information and Data" from R. C. Vaughan to M. Holland (Clean Sites) and T. Attridge (NYSEDA). WVNS responses to these comments are documented in the October 31, 1997, correspondence from L. E. Krieger (WVNS) to T. J. Rowland (DOE-WVDP). This correspondence includes the following:

"Recognizing that additional work efforts were scheduled that could impact the response to Ray Vaughan's comments, we mutually agreed to wait until the additional verification of the NDA radionuclide source term was completed before responding. This work has since concluded, and our response provides the most up to date information available."

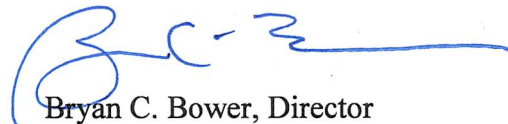
The additional work efforts discussed in this correspondence refer to the "*Recalculation of Estimated Radionuclide Inventories in the NDA – Data Package, December 1997*" which was transmitted from L. E. Krieger (WVNS) to T. J. Rowland (DOE-WVDP) on December 9, 1997.

The documents referenced in this response to your October 29, 2020, letter record the 1997 effort to establish the origin of the radionuclide inventories in Table C-9 of the DEIS and their subsequent recalculation which ultimately resulted in the NDA inventories reported in URS (2000) *Estimated Radionuclide Inventory for the NRC-Licensed Disposal Area at the West Valley Demonstration Project*.

The inventories in Table C-9 of the DEIS are non-verifiable and non-reproducible values, and as such, should not be used in the probabilistic performance assessment (PPA) supporting the development of the Supplemental EIS. Use of such values in the PPA would be inconsistent with generally accepted quality assurance practices.

I thank you for your continued interest in the West Valley Demonstration Project.

Sincerely,



Bryan C. Bower, Director
West Valley Demonstration Project

cc: See Page 4

ZZZ:383549 – 451.2

ec: C. Dayton, CHBWV, AC-PRES, Cynthia.Dayton@chbwv.com
E. A. Lowes, CHBWV, AC-RS, Elizabeth.Lowes@chbwv.com
J. T. Pillittere, CHBWV, AC-PRES, joseph.pillittere@chbwv.com
J. D. Rendall, CHBWV, AC-PRES, John.Rendall@chbwv.com
K. A. Wooley, CHBWV, AC-PRES, Kelly.wooley@chbwv.com
D. Aumick, CTF,
R. Dallas, CTF,
C. Davis, CTF,
C. Drake, CTF,
J. Einach, CTF,
B. Frackiewicz, CTF,
H. Hartley, CTF,
J. Hood, CTF,
L. James, CTF,
B. Lawrence, CTF,
K. McGoldrick, CTF,
A. Memmo, CTF,
J. Patti, CTF,
J. Pfeffer, CTF,
M. Reid, CTF,
P. Townsend, CTF,
E. Wohlers, CTF,
T. D. Zerfas, CTF,
K. Zittel, CTF,
B. C. Bower, DOE-WVDP, AC-DOE, bryan.bower@emcbc.doe.gov
M. P. Krentz, DOE-WVDP, AC-DOE, martin.krentz@emcbc.doe.gov
M. N. Maloney, DOE-WVDP, AC-DOE, moira.maloney@emcbc.doe.gov
C. R. Rieman, DOE-WVDP, AC-DOE, craig.rieman@emcbc.doe.gov
A. S. Seeley, DOE-WVDP, AC-DOE, audrey.seeley@emcbc.doe.gov
L. Della Porta, The Logue Group,
B. Logue, The Logue Group,
P. J. Bembia, NYSERDA, AC-NYS, Paul.Bembia@nyserda.ny.gov
A. M. Dueringer, NYSERDA, AC-NYS, Alita.Dueringer@nyserda.ny.gov
B. M. Frank, NYSERDA, AC-NYS, Brad.Frank@nyserda.ny.gov
L. M. Gordon, NYSERDA, AC-NYS, Lee.Gordon@nyserda.ny.gov
A. L. Mellon, NYSERDA, AC-NYS, Andrea.Mellon@nyserda.ny.gov
J. E. Pietraszek, NYSERDA, AC-NYS, Jane.Pietraszek@nyserda.ny.gov
P. M. Vlad, NYSERDA, AC-NYS, Peter.Vlad@nyserda.ny.gov

ZZZ:383549 – 451.2