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

July 15, 2013

Mr. Daniel W. Coyne
President & General Manager
CH2M HILL B&W West Valley, LLC
West Valley Demonstration Project
10282 Rock Springs Road
West Valley, NY 14171-9799

ATTENTION: J. D. Rendall, Regulatory Strategy, AC-EA

SUBJECT: Environmental Checklist WVDP-2013-01, "Replacement Ventilation System for the Main Plant Process Building"

REFERENCE: Letter WD:2013:0298 (360556), R. M. Geimer to R. W. Reffner, "Contract No. DE-EM0001529, Section J-3, Item 105, NEPA Documentation, Transmittal of Environmental Checklist WVDP-2013-01, 'Replacement Ventilation System for the Main Plant Process Building,'" dated July 10, 2013

Dear Mr. Coyne:

I have reviewed the subject Environmental Checklist and agree that the actions described therein are categorically excluded per Title 10, Code of Federal Regulations (CFR) Part 1021, as Amended, Appendix B to Subpart D, CX B.6.3, "Improvements to Environmental Control Systems." Enclosed is a signed environmental checklist form to that effect.

The contents of this correspondence are not intended to impact or modify contract scope and/or cost. If you have any questions, please contact me on Extension 4007.

Sincerely,

Martin P. Krentz
National Environmental Policy Act Compliance Officer
West Valley Demonstration Project

Enclosure: Signed Environmental Checklist

cc: C.A. Biedermann, CHBWV, AC-EA, w/enc.
J. J. Hoch, CHBWV, WV-PL6, w/enc.
J. R. Craig, DOE-EMCBC, Office of the Director, w/enc.
R. E. Holland, DOE-EMCBC, Office of the Director, w/enc.
G. G. Gorsuch, DOE-WVDP, WV-DOE, w/enc.
M. P. Krentz, DOE-WVDP, AC-DOE, w/enc.
M. N. Maloney, DOE-WVDP, AC-DOE, w/enc.
J. S. Kang, DOE-HQ, EM-31, CLOV, w/enc.

MPK:360577 - 451.4

Department of Energy
West Valley Demonstration Project (DOE-WVDP)

ENVIRONMENTAL CHECKLIST

Project/Activity Title: Replacement Ventilation System for the Main Plant Process Building	**NEPA ID Number:** WVDP-2013-01 **Rev. #:** Rev. 0 **Date:** June 19, 2013
Contractor Project Manager: Scott Chase	**Phone Number:** 716-942-2184
Contractor NEPA Coordinator: Charles A. Biedermann	**Phone Number:** 716-942-4333
DOE-WVDP NEPA Document Manager: Martin P. Krentz	**Phone Number:** 716-942-4007

A. BRIEF PROJECT/ACTIVITY DESCRIPTION: Attach a detailed description or statement of work.

B. SOURCES OF IMPACT: Would the action involve, generate, or result in changes to any of the following:

	YES	NO		YES	NO
1. Air Emissions	X		12. Water Use/Diversion		X
2. Liquid Effluents		X	13. Water Treatment		X
3. Solid Waste	X		14. Water Course Modification		X
4. Radioactive Waste/Soil	X		15. Radiation/Toxic Chemical Exposures	X	
5. Hazardous Waste		X	16. Pesticide/Herbicide Use		X
6. Mixed Waste		X	17. High Energy Source/Explosives		X
7. Chemical Storage/Use		X	18. Transportation		X
8. Petroleum Storage/Use		X	19. Noise Level	X	
9. Asbestos		X	20. Workforce Adjustment		X
10. Utilities	X		21. Other		X
11. Clearing or Excavation		X			

In an attachment, qualify and explain each question that you have specifically answered "YES."

C. CATEGORY EVALUATION CRITERIA: Would the proposed action:

		YES	NO
1.	Take place in an area of previous or ongoing disturbance?	X	
2.	Create hazardous, radioactive, or mixed waste for which no disposal is available?		X
3.	Impact a RCRA-regulated unit or facility?	X	
4.	Force a low income or ethnic minority population to shoulder a disproportionate share of the negative environmental impacts of pollution or environmental hazards because of a lack of political or economic strength?		X
5.	Involve air emissions and be located in an air pollutant non-attainment or maintenance area for any criteria pollutants?		X
6.	Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders (i.e., require any federal, state, or local permits, approvals, etc.)?	X	
7.	Disturb hazardous substances, pollutants, or contaminants that pre-exist in the environment such that there would be uncontrolled or unpermitted releases?		X
8.	Require siting, construction, or major expansion of a waste storage, disposal recovery, or treatment facilities, but may include such categorically-excluded facilities?		X
9.	Adversely affect environmentally sensitive resources including, but not limited to: structures of archeological, historic or architectural significance; threatened or endangered species or their habitat; floodplains or wetlands; wildlife refuges, agricultural lands or vital water resources (e.g., sole-source aquifers)?		X
10.	Involve extraordinary circumstances? As specified at 10 CFR § 1021.410(b)(2), extraordinary circumstances are unique situations presented by specific proposed actions, such as scientific controversy about the environmental effects of the action, uncertain effects or effects involving unique or unknown risks, or unresolved conflicts concerning alternate uses of available resources within the meaning of Section 102(2)(E) of NEPA [42 U.S.C. 4332(2)].		X
11.	Be "connected" to other actions with potentially significant impacts, related to other proposed actions with cumulatively significant impacts, and precluded by 40 CFR § 1506.1 or 10 CFR § 1021.211?		X

In an attachment, qualify and explain each question that you have specifically answered "YES."

Department of Energy
West Valley Demonstration Project (DOE-WVDP)

ENVIRONMENTAL CHECKLIST

D. RECOMMENDATION AND DETERMINATION:

DOE-WVDP Director's Recommendation: I find and recommend that this proposed action meets the criteria specified in 10 CFR Part 1021, Subpart D, and/or DOE Policy and Guidance for the following:

[X] Categorical Exclusions (Appendix B, Class of Action B.6.3)
[ ] Actions Within the Scope of Existing NEPA Documentation NEPA Document ID Number)
[ ] *Ongoing Operations* (Standard Operating Procedure OH-6.1.01, Rev. 1, Section 5.2)

Signature: _____ Date 07-10-2013
Director, West Valley Demonstration Project (WVDP),
Department of Energy

DOE-WVDP NEPA Compliance Officer's Determination: Based on my review of the attached information concerning this proposed action, as the WVDP NEPA Compliance Officer (DOE Order 451.1B, Section 5.d.), I have determined that the proposed action fits within the specified class of actions, that the other regulatory requirements identified in Section C are met, and that this proposed action proceed without further NEPA review.

Signature: _____ Date 7/11/2013
DOE-WVDP NEPA Compliance Officer,
West Valley Demonstration Project

OR

[ ] Environmental Assessments (Appendix C, Class of Action _____; or Action not listed in Subpart D)
[ ] Environmental Impact Statements (Appendix D, Class of Action _____)
[ ] Interim Actions (40 CFR Part 1506.1 and 10 CFR Part 1021.211)
[ ] Integrated Documentation for CERCLA/RCRA Actions
[ ] Variances (Emergency Action, 40 CFR Part 1506.11 and 10 CFR Part 1021.34)

DOE-WVDP NEPA Compliance Officer's Concurrence: I concur with the recommendation that this proposed action fits within the specified class of actions.

Signature: _____ Date _____
DOE-WVDP NEPA Compliance Officer,
West Valley Demonstration Project

DOE-WVDP Manager's Determination: Based on my review of the attached information concerning this proposed action, as the Director of the West Valley Demonstration Project (DOE Order 451.1B, Section 5.a.), I have determined that the level of documentation recommended for the proposed action is appropriate.

Signature: _____ Date _____
Director, West Valley Demonstration Project (WVDP),
Department of Energy

SECTION A. BRIEF PROJECT DESCRIPTION

BACKGROUND

Between 1966 and 1972, Nuclear Fuel Services, Inc. (NFS) operated a commercial nuclear fuel reprocessing facility at the Western New York Nuclear Service Center (WNYNSC) near West Valley, New York (Figure 1). Nuclear fuel was reprocessed in the Main Plant Process Building (MPPB), in which uranium and plutonium were recovered from spent fuel assemblies. After operating the facility for 6 years, NFS halted all operations to make modifications, capacity increases, and other facility upgrades. During this period, as a result of new regulations, NFS concluded that it would not be economically viable to continue reprocessing operations. In 1976, NFS informed the State of New York that it was withdrawing from the nuclear fuel reprocessing business and intended to return the West Valley facility to the State.

In 1980, the U.S. Congress passed the West Valley Demonstration Project (WVDP) Act (Public Law 96-368), which directed the U.S. Department of Energy (DOE) to do the following at the WNYNSC:

- Solidify the High Level Waste (HLW) in a form suitable for transportation and disposal;
- Develop containers for the HLW that are suitable for permanent disposal;
- Transport the solidified HLW, in accordance with applicable provisions of law, to an appropriate Federal repository for permanent disposal;
- In accordance with applicable licensing requirements, dispose of Low-Level Radioactive Waste (LLW) and Transuranic (TRU) waste produced as a result of solidifying the HLW; and
- Decontaminate and decommission: (a) the tanks and other facilities of the WNYNSC in which the HLW solidified under the Project is stored; (b) the facilities used in the solidification of the waste; and (c) any material and hardware used in connection with the Project, in accordance with requirements that the U.S. Nuclear Regulatory Commission (NRC) prescribes.

After completion of solidification of the HLW in 2002, the DOE-WVDP shifted its emphasis to waste disposal and decontamination and decommissioning of the facilities, material and hardware, used in the solidification of the waste or otherwise connected with the Project. In 2006, DOE prepared the Environmental Assessment for the Decontamination, Demolition, and Removal of Certain Facilities at the West Valley Demonstration Project. A Finding of No Significant Impact for these actions was subsequently made. Additionally, two EIS's were prepared to review alternatives for completion of the WVDP Act requirements; WVDP Waste Management EIS (DOE/EIS-0337-F) completed in 2003 and the Record of Decision (ROD) was issued in 2005 and the Decommissioning and/or Long-Term Stewardship EIS (DOE/EIS-0226) completed in 2010 and the ROD was issued in 2010.

Although Decommissioning and Demolition of the MPPB (Figure 2) is included in Decommissioning and/or Long-Term Stewardship EIS, the MPPB remains the most contaminated building at the WVDP. Additional decontamination of this structure and its sealed cells used for the fuel reprocessing and subsequently for HLW solidification is needed before the MPPB can be safely demolished in a manner that will not result in any unauthorized or unapproved emissions or releases to the environment.

A.1 Purpose and Need

The purpose of this environmental review is to evaluate the additional decontamination of the MPPB structure and its sealed cells through the implementation of a replacement ventilation system. The purpose of this replacement system is to support MPPB deactivation activities and to update the existing ventilation system so that future actions can be performed safely and in an environmentally sound manner. To accomplish the additional radiological decontamination, the existing MPPB ventilation system will need to be shut down. A replacement system, having multiple discharge points from a series of large Replacement Ventilation Units (RVUs) will be used.

A.2 Objectives

The objective is to shut down the existing MPPB main stack ventilation system [National Emission Standards for Hazardous Air Pollutants (NESHAP) Permit Number WVDP-687-01] and to replace the MPPB ventilation system with multiple large RVUs (4,000 to 8,000 CFM) having approximately four discharge points.

A.3 Type and Scope of Activities

The new alternative ventilation system using RVUs will provide the necessary ventilation controls during pre-demolition activities such as removal of filters from the existing ventilation system, removal of ducting and other highly contaminated components associated with the Head End Ventilation (HEV) and Ventilation Exhaust Cell (VEC).

A.4 Scheduling and Timing

The installation and operation of the proposed ventilation system will be implemented this summer or/fall after the Environmental Protection Agency (EPA) has authorized the WVDP Request for Approval. Work will be conducted in a phased approach.

SECTION B. SOURCES OF IMPACT

1. Air Emissions – The purpose of this project is to install a system of large RVUs that would facilitate additional decontamination of the MPPB and the MPPB existing ventilation system, to provide needed ventilation controls during pre-demolition activities, and to provide necessary ventilation flow and radiological contamination and emissions controls since both the HEV and VEC systems have exceeded their design lives and are no longer cost effective to maintain.

The RVUs will be installed and implemented so as to maintain air flows from areas of less potential radiological contamination towards areas of greater radiological contamination. The systems shall be operated with a system of roughing filters and High Efficiency Particulate Air (HEPA) filters so as to limit environmental releases to As Low As Reasonably Achievable (ALARA) and within EPA limits. Sampling and monitoring of radioactive releases downstream of the filtration system shall be performed to meet EPA requirements found in 40 Code of Federal Regulations Part 61, Subpart H, National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities. Monitoring and sampling shall follow the ANSI N13.1-1999 Sampling and Monitoring Releases of Airborne Radioactive Substances from the Stacks and Ducts of Nuclear Facilities, graded approach for new point sources, as required.

3. Solid Waste – Typical construction debris solid waste may be generated as a result of installation of the new large RVUs. This waste is transported to a certified recycler or a properly permitted solid waste landfill for disposal.

An active program to minimize waste generation is in place at the WVDP. The waste minimization program includes both source reduction and recycling. Waste Minimization and Pollution Prevention Opportunities are also an integral part of the work review process. Pollution prevention opportunities are under consideration for identifying waste minimization approaches for construction and decontamination.

4. Radioactive Waste/Soil – Installation of the large RVUs to provide ventilation to radioactive areas of the MPPB will result in the generation of radioactive construction debris. Additionally, subsequent decontamination activities for the HEV and VEC will generate radioactive waste ducting and filters. Other typical waste types would include anti-contamination clothing, rags, radiation enclosures and barriers, contaminated materials and components, and potentially, demolition debris (asphalt and concrete), HEPA filters, and contaminated absorbents. These materials will be packaged and stored in existing on site storage facilities pending shipment for disposal at an off-site, permitted facility.

In an effort to reduce the quantity of radioactive waste that is generated, segregation of clean debris from radioactively contaminated debris is undertaken. Radioactively contaminated tools are kept in contaminated areas and reused.

10. Utilities – Existing utilities and readily available site power sources will be used to power the RVUs. WVDP standard operating and engineering procedures are used to connect power sources to the new ventilation units and to track and document configuration changes in utility lines.

15. Radiation /Toxic Chemical Exposure - This project will require work in radiologically controlled areas. Individual exposures will depend on the duration of the activity and the proximity to the source of the radiation. All exposures will be maintained to ALARA levels and in compliance with applicable state and federal regulations and DOE orders and implemented by the WVDP Radiological Controls Manual, the WVDP industrial Hygiene and Safety Manual and Standard Operating Procedures. Radiation dose limits to WVDP employees will be maintained to within the Administrative Control Levels specified in the Radiation Controls Manual.

19. Noise Level – Construction actions such as cutting, grinding, welding, and hammering may result in increased noise levels near the activity. These noise levels will be of short duration and are expected to be below 85 dB. Noise levels generated by the large RVUs should not be above 85 dB in personnel access areas. Hearing protection will be required per Occupational Health and Safety Administration requirements and DOE Orders during activities expected to generate elevated noise levels.

SECTION C. CATEGORY EVALUATION CRITERIA

1. Take place in an area of previous or on-going disturbance? Yes.
Installation of the replacement ventilation system shall occur solely within areas of previous or ongoing disturbance within and in the immediate vicinity of the MPPB.

2. Create hazardous, radioactive or mixed waste for which no disposal is available? No.

3. Impact a RCRA-regulated unit or facility? Yes
Installation of the alternative ventilation system will impact the following RCRA interim status hazardous waste management units: the Analytical and Process Chemistry Hot Cells, the Liquid Waste Treatment System, and the High Level Waste Interim Storage Facility. However, the replacement ventilation system will support decontamination and eventual RCRA closure of these units. In the interim, all RCRA interim status units in the MPPB will continue to operate in compliance with the interim status standards and with New York State Department of Environmental Conservation agreements. Activities will not impact the regulatory status of these units or result in an increase in authorized storage or treatment capacities. They will not require siting, construction or major expansion of RCRA units. Nor will these activities disturb pollutants, contaminants, petroleum and natural gas products that may exist in the environment.

4. Force a low income or ethnic minority population to shoulder a disproportionate share of the negative environmental impacts? No.

5. Involve air emissions and be located in an air pollutant non-attainment or maintenance area for any criteria pollutants? No.

6. Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders? Yes
Installation of the alternative ventilation system will require review and approval by the EPA under the NESHAP requirements found in 40 Code of Federal Regulations Part 61, Subpart H, National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities. An EPA NESHAP permit will be required for construction of the alternative ventilation system and before the system can become operational.

7. Disturb hazardous substances, pollutants or contaminants that pre-exist in the environment such that there would be uncontrolled or unpermitted releases? No.

8. Require siting, construction, or major expansion of a waste storage, disposal, recovery, or treatment facilities, but may include such categorically-excluded facilities? No.

9 Adversely affect environmentally sensitive resources? No.

10. Involve extraordinary circumstances? No.

11. Be "connected" to other actions with potentially significant impacts, related to other proposed actions with cumulatively significant impacts, and precluded by 40 CFR 1506.1 or 10 CFR 1021.211? No.

SECTION D. RECOMMENDATION AND DETERMINATION

A categorical exclusion is recommended for the proposed action. The installation and operation of a replacement ventilation system for the Main Plant Process Building described in this environmental checklist falls within the classes of action described in Title 10 Code of Federal Regulations Part 1021, as Amended, Subpart D, Appendix B, CX 2.5, Facility Safety and Environmental Improvements and CX 6.3, Improvements to Environmental Control Systems. It is recommended that CX 6.3, Improvements to Environmental Control Systems be considered as the more appropriate categorical exclusion.

REFERENCES

U. S. Congress, "National Environmental Policy Act," 42 U.S.C. 4321 *et seq.,* as Amended, dated January 1, 1970

U.S. Congress, "Public Law 96-368 West Valley Demonstration Project Act (S.2443)", dated October 1, 1980

U.S. Department of Energy, "West Valley Demonstration Project Waste Management Environmental Impact Statement," DOE/EIS-0337-F, dated December 2003

U.S. Department of Energy, "West Valley Demonstration Project Waste Management Activities, Record of Decision," dated June 9, 2005

U.S. Department of Energy, "Environmental Assessment for the Decontamination, Demolition, and Removal of Certain Facilities at the West Valley Demonstration Project," DOE/EA-l552, dated September 14, 2006

U.S. Department of Energy, "Finding of No Significant Impact Proposed Decontamination, Demolition, and Removal of Certain Facilities at the West Valley Demonstration Project," dated September 14, 2006

U.S. Department of Energy, "Final Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration project and Western New York Nuclear Service Center," DOE/EIS -0226, dated January 2010

U.S. Department of Energy, "Record of Decision: Final Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration project and Western New York Nuclear Service Center," dated April 14, 2010

U.S. Department of Energy, "National Environmental Policy Act Implementing Procedures; Final Rule," 10 CFR 1021, dated October 13, 2011

U. S. Environmental Protection Agency, 40 Code of Federal Regulations Part 61, Subpart H "National Emission Standards for Hazardous Air Pollutants, National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities," September 9, 2002

Figure 1. Location of Western New York Nuclear Service Center and West Valley Demonstration Project.

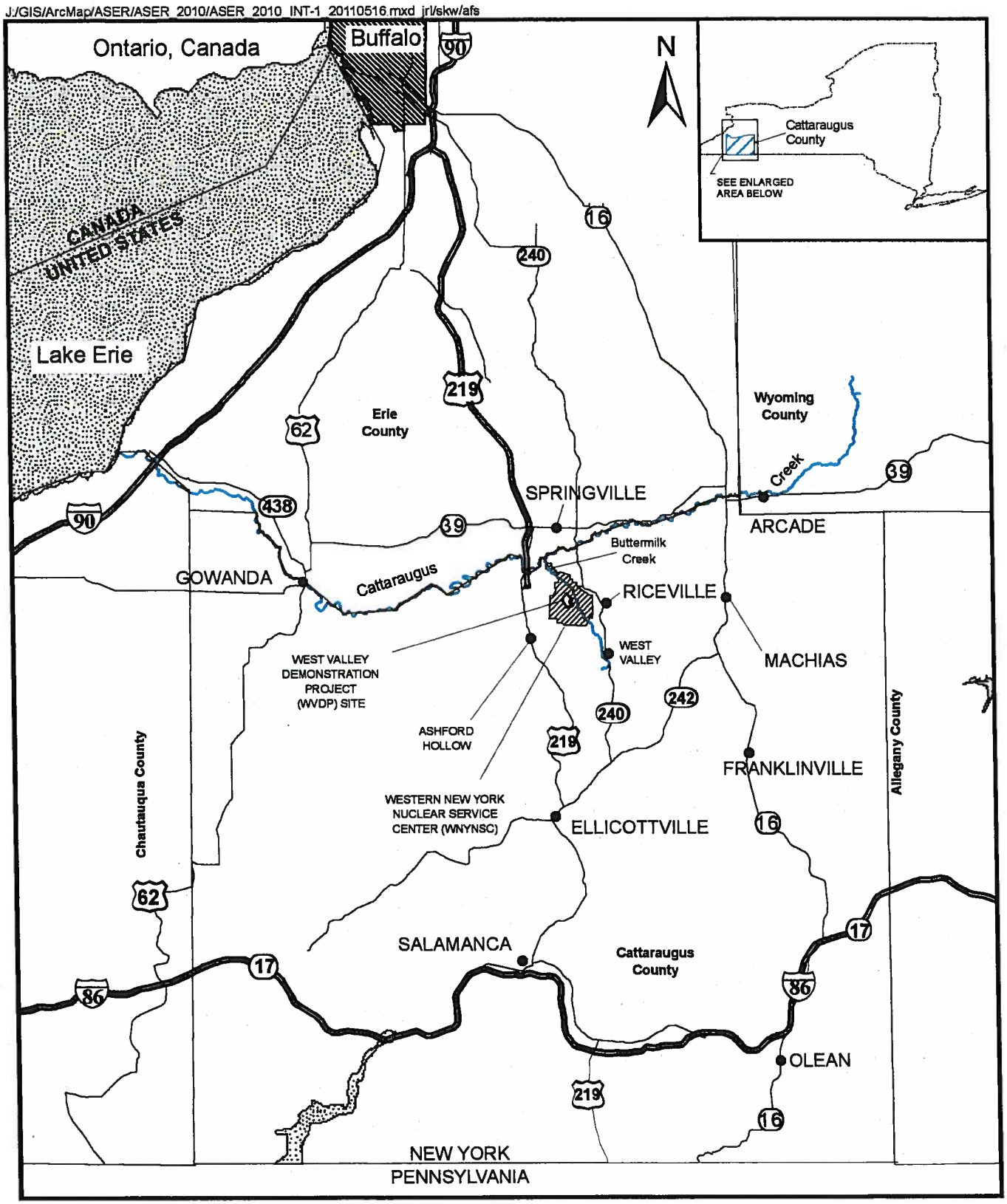

Figure 2. Location of the Main Plant Process Building