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Alexander B. Grannis
Commissioner

SEP - 3 2009

Ms. Catherine Bohan
EIS Document Manager
West Valley Demonstration Project
U.S. Department of Energy
P.O. Box 2368
Germantown, MD 20874

Dear Ms. Bohan:

Re: Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center, dated December 5, 2008

This letter responds to the U.S. Department of Energy's (DOE) and the New York State Energy Research and Development Authority's (NYSERDA) request for comments on the referenced Draft Environmental Impact Statement (DEIS). The enclosed comments are the work product of the New York State Department of Environmental Conservation's (Department) West Valley assigned and non-West Valley assigned staff. A considerable amount of Department staff time was devoted to the evaluation of this DEIS because we recognize the importance and critical nature of proper disposition of both the West Valley Demonstration Project (WVDP) and the Western New York Nuclear Service Center (WNYNSC).

In addition to our review responsibilities as a Cooperating Agency under the National Environmental Policy Act (NEPA), and as an Involved Agency under the State Environmental Quality Review Act (SEQR), part of the basis for Department staff's evaluation was to ascertain the DEIS's utility as a support document for the Department's permitting and corrective action activities that are associated with the disposition of the WVDP and the WNYNSC. The Department's permitting activities need to be supported by a DEIS that has been prepared in accordance with the provisions of 6 NYCRR Part 617, SEQR.

As a result of the Department's evaluation of the 2008 DEIS, we are compelled to address a few issues which are characterized as all encompassing matters that we consider most significant. These issues follow:

1. The DEIS should explain that one ideal of the Phased Decisionmaking Alternative is to work expeditiously to a final decommissioning decision, with every effort to minimize work stoppages or loss of workforce and/or funding.

2. The discussion of the ongoing assessments in Phase 1 needs to be more fully developed. At a minimum, the general anticipated focus on topics such as reducing uncertainty in erosion modeling; additional characterization of contamination levels and areas; performing regular reviews of current advancements in decommissioning procedures and processes; reviewing disposal options for currently orphaned wastes; and refining transportation dose estimates if new shipment containers, regulations, or techniques become available should be explained. The fact that this is an iterative process taking place concurrent to the Phase 1 decommissioning work needs to be clarified. Examples include, but are not limited to, the

need to revise groundwater and erosion models to reflect actual conditions (e.g., installation of groundwater flow barriers, treatment walls, etc.) versus the use of general assumptions made during development of the DEIS; strategies for monitoring and mitigating erosion; reviewing advances in exhumation technologies (both on and offsite).

3. The DEIS should provide a clearer explanation of the public participation process that will be used in determining the ongoing assessment and decision making for Phase 2. DOE and NYSERDA should explore the possibility of enhanced public participation above and beyond what regulations require during Phase 1 in order to more fully inform the public and allow their opinion to be heard.

4. It should be stated in unequivocal language that any waste that may have to be stored on-site due to a current lack of disposal pathway will be removed from the site once disposal options become available.

5. Given the decision by the DOE to no longer consider Yucca Mountain as the likely federal High-Level Waste Repository, the implications for possible long-term on-site storage of the vitrified High-Level Waste glass logs should be clearly spelled out. A similar explanation of the implications for the lack of disposal options for the Greater Than Class C and Non-Defense Transuranic (TRU) waste should be clearly detailed.

The Department expects this EIS process will result in a final approach to site remediation that is in the best interests of the public and environment of the State of New York. We anticipate that the enclosed comments will assist DOE and NYSERDA in developing an informative and comprehensive final environmental impact statement that will satisfy the requirements of both NEPA and SEQR.

If you have any questions regarding these comments please contact Jessie Lynch, of our Bureau of Hazardous Waste and Radiation Management, at (518) 402-8579.

Sincerely,

Edwin Dassatti, P.E.
Director
Division of Solid and Hazardous Materials

Enclosures
Enclosure 1 - NYSDEC West Valley Assigned Staff DEIS Comments
Enclosure 2 - NYSDEC Non West Valley Assigned Staff DEIS Comments

cc: B. Bower, USDOE
P. Bembia, NYSERDA
G. Baker, NYSDOH
J. Reidy, USEPA Region 2
A. Park, USEPA Region 2
P. Giardina, USEPA Region 2
K. McConnell, NRC

Enclosure 1

NYSDEC West Valley Assigned Staff Comments on the Revised Draft *Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center*

NOTE: For any Chapters/Appendices not specifically included below, the Department has no comments.

Chapter/Appendix: General comments

Comment Number	*Page Number*	*Comment*
1	General	Since the DEIS was issued in December 2008 there have been many changes that effect numerous portions of the DEIS. These changes range from political (e.g., change in administration), to economic (e.g., recession, American Recovery and Reinvestment Act) to technical (e.g., recent erosion events, new erosion studies, changes in waste disposition pathways). It is expected that the DEIS will be updated in all applicable sections to reflect these changes and that a discussion of these changes will be included.
2	General	Recent events which no longer make Yucca Mountain a disposal pathway for High-Level Waste should be addressed within the DEIS. The DEIS should be updated to include any changes this may cause including but not limited to cost of each alternative, dose to public, and changes in ongoing monitoring. • At a minimum, a statement recognizing the fact that the canisters would have to remain on the site for an indefinite period of time should be placed in the DEIS.
3	General	Recent Core Team interactions have discussed a myriad of changes that are being made to the DEIS. To the extent possible, DOE and NYSERDA should make every effort to address all aspects of the DEIS that have changed (e.g., erosion events, modeling, Yucca Mountain) since the start of the Public Comment Period in December 2008.
4	General	Apparently as a result of numerous authors for various portions of the document, several different variations of descriptive phrases for the different "areas" of the site are used interchangeably, which can lead to confusion to the reader. • Descriptions of the various parts of the site, WNYNSC, Retained Premises, SDA, Project Premises, etc should be provided in Chapter 1 and then used consistently throughout the document.
5	General	Update references within the text to the "Permeable Reactive Barrier" or "PRB" as DOE has determined that this will not be installed.
6	General	Within "A Summary and Guide for Stakeholders", the first paragraph under "Abstract" on the Cover Sheet lists the site as 66.4-hectare (164-acre) and bullet one of the "Brief History of the Site" text box on Page 1 lists the site as 81-hectare

		(200-acre). Additionally, DOE has recently transferred control of certain property back to NYSERDA for the purpose of establishing a buffer zone around the SDA. The change in size of the WVDP and Retained Premises should be addressed. • Please update the document to reflect the change in acreage and reconcile the hectare (acreage) differences which are found throughout the document.

Chapter/Appendix: A Summary and Guide for Stakeholders

Comment Number	*Page Number*	*Comment*
7	A Summary and Guide for Stakeholders, Page 1; Chapter 2 and Appendix C	The seventh bullet of the "Brief History of the Site" text box state that DOE was directed to "Dispose of low-level radioactive waste and transuranic waste that is produced in the process of solidifying high-level radioactive waste." How is this accomplished if the DOE even remotely considers the Sitewide Close-In-Place Alternative? For example, the zeolite within the columns of the Supernatant Treatment System is low-level radioactive waste produced during the process of solidifying the HLW. To close the columns in place appears to be a direct violation of the West Valley Demonstration Project Act. • Please clearly define how the Sitewide Close-In-Place Alternative is compliant with the directive inherent in the Act
8	A Summary and Guide for Stakeholders, Page 1; Chapter 2 and Appendix C	The eighth bullet of the "Brief History of the Site" text box state that DOE was directed to "Decontaminate...the facilities...and the materials and hardware used in conjunction with the project." Again, how is this accomplished if the DOE even remotely considers the Sitewide Close-In-Place Alternative? For example, the four HLW tanks as well as the zeolite and the columns of the Supernatant Treatment System are all materials and hardware used in conjunction with the project. To close the tanks and columns in place appears to be a direct violation of the West Valley Demonstration Project Act. • Please clearly define how the Sitewide Close-In-Place Alternative is compliant with the directive inherent in the Act
9	Page 2	Under the second full paragraph, this DEIS is also being used to meet the DOE's obligations for a DEIS as required by the New York State Department of Environmental Conservation (NYSDEC) for DOE's Part 373/RCRA Permit Application.
10	Page 6	Under the fourth paragraph in "What Decisions Will Be Made?", DOE fails to specifically mention that they will consider all applicable State and Federal laws and regulations along with mission, policy, cost, and public input. To relegate these to "other relevant factors" would be dismissive of the importance of State and Federal laws and regulations.
11	Page 9, fourth bullet	The NYSDEC's intention behind the use of the tank drying system at the Waste Tank Farm was to dry the residuals already in the tank, not to add wastes from other areas and dry those in place. According to the text of the DEIS, this was DOE's only "intent" as well. • However, DOE may need to include where these intentions have changed and its desire to add liquids to the tanks for in-place drying. NYSDEC has not reached all its conclusions on what may be transferred into the Waste Tank Farm.

12	Page 13, Shaded Text Box	Again, there is a failure to include all applicable State and Federal laws and regulations along with mission, responsibility, environment, economic, and technical considerations. To relegate these to "other factors" would be dismissive of the importance of State and Federal laws and regulations.
13	Table 4	The information under "Phased Decision making Alternative (Phase 1 Only)" appears to be inaccurate and/or misleading. Since there are several removal actions taking place under Phase 1 (i.e., the lagoons, the MPPB, the source of the NPGP) the cost-effectiveness for a Phase 2 removal or in-place closure decision should be evaluated on its own merits at that time and a Supplement to this EIS should be issued for any Phase 2 decisions.

Chapter/Appendix: Chapter 1

Comment Number	*Page Number*	*Comment*
14	Page 1-1, Shaded Box	This box fails to mention SEQRA. The DEIS itself states that the EIS was scoped by NYSERDA and DOE in simultaneous notices on March 13, 2003. Since the notices were published in the Environmental Notice Bulletin and the Federal Register, it appears that the EIS was scoped under and is subject to both NEPA and SEQRA for different aspects.
15	Page 1-1, Section 1.1	Chapter 1 states that the Project Premises is 164 acres while it is listed as 200acres in the "Brief History of the Site" text box on Page 1 of the "Guide to Stakeholders". • Please review and clarify the acreage of the Project Premises.
16	Page 1-3, RCRA Background	The last line of the second paragraph states that Corrective Measures Studies (CMSs) were required for six WVDP SWMUs and that NYSERDA was preparing a CMS for the SDA. The SDA SWMUs (referred to as the SDA) are not a part of the WVDP. • Please reconcile the information regarding the five WVDP and one NYSERDA CMSs required pursuant to the Consent Order.
17	Page 1-3, RCRA Background	Updates should be made to the fifth paragraph. The NYSDEC did send a letter to Mr. Robert Warther, USDOE dated February 3, 2005. The letter stated that the application was deemed incomplete and that an EIS, as well as other items, was required. At the time, the NYSDEC intended to commence its technical review. However, the NYSDEC's review of the 2005 and 2008 PDEISs, its participation in the Core Team and the on-going work at the site has taken precedence. • A revised Part 373/RCRA permit application needs to be submitted to update the facility information and changes. DOE should update the text to reflect the events following submittal of the application in December 2004 as well as the July 2010 submittal date for the revised Part 373/RCRA application.
18	Page 1-8, Section 1.3	Within the last sentence of first paragraph under "***New York State Department of Environmental Conservation***", DOE needs to address that the NYSDEC has responsibility with respect to any permits issued under Part 373/RCRA as well.
19	Page 1-8, Section 1.3	Within the second paragraph under "***New York State Department of Environmental Conservation***", DOE needs to address that the WVDP is also regulated by NYSDEC for hazardous and mixed low-level radioactive waste pursuant to

		the Part 370 series.
20	Page 1-8, Section 1.3	Within "***New York State Department of Environmental Conservation***", DOE should include information regarding the 3008(h) Consent Order, as was included in paragraph two of "***U.S. Environmental Protection Agency***".
21	Page 1-9, Section 1.3	Within "***Regulatory Compliance Processes***", there are two concerns in the fourth paragraph. One, NYSDEC has already required a supporting EIS for the WVDP Part 373/RCRA permit application in February 2005 and is using this EIS to fulfill that requirement. Secondly, nothing analyzed in the DEIS is outside "the scope of the Part 373/RCRA permit application" since NYSERDA owns the entire site and it is the NYSDEC's determination as to what regulatory vehicles and how many are used to ensure compliance with the Part 373/RCRA regulations by both the WVDP and WNYNSC sites.
22	Page 1-10	Suggest that footnote be revised to read: "SEQR specifies that the assessment of environmental impacts should include the growth inducing aspects of a proposed action." Saying that SEQR specifies that the assessment should be focused on growth inducement is not correct.
23	Page 1-10, Section 1.3 and Section 1.5	In the first full paragraph of Section 1.3 on this page and in the second paragraph of Section 1.5, DOE should be advised that EPA may at any time exercise their right to perform a RCRA review of the DEIS, with or without NYSDEC. Additionally, NYSDEC may, at any time, request their assistance with either the DEIS or any other reviews/needs for either of the sites.

Chapter/Appendix: Chapter 2

Comment Number	***Page Number***	***Comment***
24	General	While the document has made tremendous changes to include the necessary hazardous waste Part 373/RCRA information and regulations, there are still areas that are lacking. These include but are not limited to: failure to include whether or not there is hazardous waste/constituents contamination in all of the facilities/units listed under each of the WMA descriptions; failure to include in the descriptions when a unit is subject to RCRA closure or CA regulation (e.g., where CMSs are required, NDA "decommissioning" is also subject to CA requirements); failure to include in their descriptions that each of the alternatives (e.g., Close-in-place, Phased Decisionmaking) are also subject to Part 373/RCRA when actions are taken.
25	Page 2-1, Section 2.1, Bullet 3	This bullet is misleading as it portrays Phase 1 as lasting only 8 years. It should be stated that Phase 1 will continue until Phase 2 is implemented which can take up to 30 years.
26	Page 2-1	The alternatives section does a good job of describing the reasonable alternatives included in the document and provides a sufficient level of detail to permit a comparative assessment by the reader of the alternatives under consideration.

27	Page 2-2	Waste Classifications Used in the DEIS: A comprehensive description of "Defense Waste" and "Non-Defense Waste", "Defense Determination", and the implications for site waste disposal options should be included in the text box on page 2-2, and a brief description included in the Glossary, for clarification.
28	Page 2-5, Section 2.3.1	The bullet at the bottom of the page only makes reference to Solid Waste Management Units (SWMUs) not to Interim Status Units. Also the reference to "RCRA Closure" could be misconstrued. The NYSDEC understands that you are referring to all unit closures and corrective actions when using this term but within the RCRA-regulated community "RCRA Closure" is specific to the requirement to implement approved closure plans for any Interim Status or permitted operating units.
29	Page 2-5, Section 2.3	Description of WMA 11 does not include scrap metal landfill
30	Page 2-7, Figure 2-3	Figure shows WMA 12 as reservoirs but does not reference "the balance of the site" including roads and parking lots. • Figure should be modified to reflect extent of WMA12.
31	Page 2-8, Figure 2-4	This figure needs to be updated. The Interim Waste Storage Facility foundation in WMA-7 has been removed, it is almost impossible to see Lagoon 1 in WMA 2 (unless you know where to look), and the DOE has recently determined that no Permeable Reactive Barrier will be placed in WMA-4.
32	Page 2-9, Figure 2-5	These figures show the extent of North Plateau Groundwater Plume but no date is given for reference.
33	Page 2-10, Table 2-1 and Page 2-16, Section 2.3.2.1, Paragraph two	The information for WMA-1 lists that the Contact Size-Reduction Facility (including the Master Slave Manipulator Repair Shop) as being demolished to grade with the foundations/slab/pads remaining with the RCRA status being "RCRA Interim Status Unit, subject to RCRA Closure". While the status is correct, NYSDEC understood that this IS unit was not going to be clean closed until the MPPB was removed. • Please provide clarification of DOE's intent for this unit. Should this listing actually be in Table 2-2? Any changes included herein should also be included in Chapter 4 and Appendix C, as may be necessary.
34	Page 2-10, Table 2-1	The information for WMA-5 lists the Waste Packaging Area with the RCRA status being "Clean-closed under RCRA Interim Status". • Is this unit part of Lag Storage Addition #4? Please clarify this in the table.
35	Page 2-10, Table 2-1	The information provided in Footnote "a" is incorrect. The Old Sewage Treatment Plant was not an Interim Status unit and was not "RCRA clean-closed". It is a SWMU that based on the RFI was determined to have "no further action". • Please correct this inaccuracy.
36	Page 2-11, Section 2.3.1, Bullet 3	The liquids from Tank 8D-2 would be process to remove Cesium-137, most of the other radionuclides would remain in the liquids. Even after evaporation these radionuclides would continue to pose hazard to the environment.
37	Page 2-11, Section 2.3.1	The third bullet on this page refers to treated Tank 8D-4 liquids being evaporated in Tank 8D-2. NYSDEC understands that recent DOE changes to Liquid Waste Management have these liquids being solidified and sent off-site for disposal.

		Additionally, DOE has discussed transferring other liquids into Tank 8D-2 for evaporation. While Tank 8D-2 does have tank treatment status under the Part A application, it does not currently have status as an evaporator. While the NYSDEC anticipates that evaporation will be used to dry tank heels, the addition of treated liquids to the tank for evaporation is still under discussion and review by NYSDEC and the Core Team. These discussions need to be completed prior to this action.
38	Page 2-12, Section 2.3.1	The first bullet on this page refers to the "Permeable Reactive Barrier" that the DOE has recently determined will not be implemented. • Please update the text to include this change and add any information consistent with any future plans the DOE may have for this area.
39	Page 2-12, Table 2-2	The NYSDEC has the following comments on this table • WMA-1, Plant Office Building – With what chemical(s) was the subsurface soil contaminated? • WMA-2 – Please include information on any hazardous chemical contamination. • WMA-3, Tanks 8D-1 – 8D-4 – Please clarify the EIS starting point. The tanks currently have residual heels and DOE has expressed a desire to add liquid to the tanks for evaporation. How would this be considered "emptied" if additionally wastes are added? Especially since the evaporative process would not be complete by 2011. See also Page 2-20, Section 2.3.2.3, Paragraph two. • WMA-3, Supernatant Treatment System – Please include information regarding the hazardous chemical contamination. • WMA-4, CDDL – Please include information regarding the hazardous chemical contamination. • WMA-5 – Please include information regarding the hazardous chemical contamination. • WMA-6 – The Equalization Basin and Tank and the Sewage Treatment Plant are subject to corrective action in addition to the CWA. • WMA-8, Mixed Waste Storage Facility – Under the Mixed Waste Conditional Exemption regulation (6 NYCRR Part 374-1.9), this unit is no longer subject to Interim Status closure. Even so, NYSERDA has expressed their desire to close this unit under the RCRA Interim Status requirements. Pending further determination, the unit should be listed as a SWMU. • North Plateau Groundwater Plume – While the NYSDEC has not required action on the NPGP, it should not be construed that the NYSDEC believes that the unit is not subject to regulation. We are currently in the process of reviewing the results of the NPGP RCRA Characterization.
40	Page 2-12, Table 2-2	Rail Spur is listed in Table 2-2 operable and contaminated in WMA6 but Inactive and not contaminated in WMA 12. • This discrepancy should be addressed.
41	Page 2-22 Section 2.3.2.5	The last line of the third paragraph states that the Remote-Handled Waste Facility is "permitted as a mixed low-level radioactive waste treatment and storage containment building". This unit is not permitted but has Interim Status. • Please revise the text accordingly.
42	Page 2-24, Section 2.3.2.7	The third paragraph should contain information regarding the NDA cap and slurry wall that were placed at the NDA as an Interim Measure under the 3008(h) Consent Order.

43	Page 2-27, Section 2.3.2.11	**Waste Management Area 11:** The decision by NYSERDA to exhume the Scrap Material Landfill should be incorporated.
44	Page 2-29, Section 2.4	The "Decommissioning Activities" subsections for each alternative should include that for any regulated unit (be it an operating unit or a SWMU) all decommissioning actions are subject to State and Federal RCRA regulations. The NYSDEC RCRA staff understands the usage of "decommissioning" to encompass any act of closure or corrective action as this DEIS is also being used in support of the WVDP's Part 373/RCRA Permit Application. If this is not the case the entire DEIS will need to be revised to distinguish between these two actions. Keep in mind that NYSDEC can at any time request EPA assistance with any RCRA aspect of the site, thereby possibly requiring a NEPA EIS for RCRA actions.
45	Figures 2-6, 2-7, 2-8 and 2-9	All of these fail to include "Annual Environmental Monitoring" as an activity of the alternative for its duration or in perpetuity as may be required. This may or may not be in addition to "Long-Term Monitoring and Maintenance"
46	Page 2-37, Section 2.4.2.1	Under the first bullet, DOE fails to include that the NDA specifically due to its SWMU status, and in actuality the site as a whole, are subject to the current 3008(h) Consent Order and future Part 373/RCRA permitting and regulation by the NYSDEC. Again, the NYSDEC RCRA staff understands the usage of "decommissioning" to encompass any act of closure or corrective action as this DEIS is being used in support of the WVDP's Part 373/RCRA Permit Application. If this is not the case the entire DEIS will need to be revised to distinguish between these two actions. Keep in mind that NYSDEC can at any time request EPA assistance with any RCRA aspect of the site, thereby possibly requiring a NEPA EIS for RCRA actions. Similar situations occur within Sections 2.4.1.1, 2.4.3.1 and 2.4.4.1. • Please review each of these sections carefully and revise the text of said sections accordingly.
47	Page 2-44	The narrative for **WMA-7** and **WMA -8** refer to a "30-year ongoing assessment period", while there is mention of ongoing studies and analysis of data gathered during decommissioning activities there is no list of specific studies or assessments that would be conducted during this time period or how this information would be used.
48	Page 2-45, Section 2.4.3.1	The first bullet under "**Evaluations to Determine the Phase 2 Approach**" should include residual hazardous contamination as well as the radioactivity.
49	Page 2-45, Section 2.4.3.1	Within the second paragraph under "**Evaluations to Determine the Phase 2 Approach**", the intention of this alternative is to have evaluations at intervals no greater than 5 years long not at "approximately 5-year intervals". Additionally, NYSDEC reiterates its intent to include annual assessments for new technologies within the Part 373 permits for the sites.
50	Page 2-47, Figure 2-8	This figure should include a line for "NDA Geomembrane Replacement". Additionally the Annual Environmental Monitoring should start at Year Zero.
51	Page 2-51, Section 2.6.1.1	Any release of land should include NYSDEC since this action would be subject to our approval and release from the Part A applications or the Part 373 Permits.
52	Page 2-57, Section 2.6.1.5	Under Footnote 3 it is an understatement to say that the estimates are conservative. It is inconceivable that DOE would ship only one railcar with waste per train. The use of this assumption gives the appearance of being disingenuous and an attempt to skew the transportation impacts presented in Table 2-3 to make sitewide removal appear impossible due to the dangers associated with transportation. For the majority of the wastes on-site, this scenario is unreasonable. NYSDEC

		would anticipate that most waste (e.g., contaminated soils) would have several railcars per train. • Please provide a clear explanation of DOE's intention for waste shipments.
53	Page 2-60, Table 2-5	Column Three entitled "Phased Decisionmaking Alternative (Phase 1 Only)" is supposed to contain the discounted cost per avoided person-rem for Phase 1 of the alternative. The Sitewide Alternatives already give the bounding cost numbers, that information does not need to be reiterated. In order to truly compare cost, the discounted cost information for the bounding alternatives to Phase 1, this information should be calculated and presented herein.
54	Page 2-60, Section 2.6.4	Based on the NYSDEC comment above regarding the disingenuousness of the transportation impacts in section 2.6.1.5, the first bullet should be re-evaluated. Additionally, if the Latent Cancer Fatality (LCF) is less than one person for each alternative it appears that each alternative should have a maximum LCF of one person (rounding to the nearest whole number), making them essentially the same. • Please provide a clear explanation of why the numbers are not rounded to reflect a "whole" person.
55	Page 2-60, Section 2.6.4	The text of the third bullet regarding the total impacts of Phase 2, Sitewide Close-In-Place, is confusing. Since certain facilities and contamination would be removed under Phase 1, wouldn't the total impacts of Phase 2 Close-In-Place be less than, but bounded by, the Sitewide Close-in-Place Alternative?
56	Page 2-61, Section2.7, Bullet 3	The narrative states that "Phase 1 of the Phased Decision Making Alternative allows for up to 30 years for collection and analysis of data and information…"; however the DEIS does not include any discussion on what specific studies will be performed nor does it address when or how the decision to proceed with Phase 2 will be made.

Chapter/Appendix: Chapter 3

Comment Number	*Page Number*	*Comment*
57	General	There are several areas within this chapter where the documentation referred to is anywhere from three years to 20, or even 30, years old. Most of the cited reference information appears to be five to ten years old. • Please use the most current documentation for review of and input to all impacts.
58	Page 3-7, Section 3.1.2	The second paragraph discusses the NDA being a "maintained, grassed area" then mentions installation of the NDA cap in 2008. This could be misconstrued that the cap is under a grassy area. This information should be updated.
59	Page 3-8, Section 3.2.1	It is uncertain why the references for National Grid and Niagara Mohawk, in the first sentence, are reversed. If DOE was going to provide the most current information, it would have made more sense to state that National Grid was formerly Niagara Mohawk.
60	Page 3-31, Cesium Prong, Paragraph 2	Narrative states that an offsite study has been conducted but it is unclear whether the study was outside the WVDP or the WNYSC. A better description of the location of the study should be provided
61	Page 3-51,	The last sentence states that sampling was scheduled for 2007. Was this sampling completed and if so why wasn't the

	Section 3.6.1.1, Paragraph 1	data included?
62	Page 3-53, Table 3-10	Table presents surface water exceeding of background but not DOE DCGs for sample points downstream of Franks Creek. The narrative however describes several other surface water sampling points which exceed both which are not displayed in a tabular format. It would be easier to interpret data if it is all displayed in a similar format.
63	Page 3-92, Section 3.11.3	Please provide an explanation of the statement "available information is insufficient for a meaningful estimate of impacts" in paragraph two.
64	Page 3-93, Section 3.11.3	The second full paragraph fails to mention that these hazardous chemicals are products not wastes. This is confusing for any individual who is not familiar with these regulations versus the Part 373/RCRA regulations.
65	Page 3-96, Sections 3.11.5.1 and 3.11.5.2	Please specify which of these releases contained hazardous waste and/or constituents and what chemicals were involved.
66	Page 3-101, Section 3.11.5.3	Please provide information as to which specific lines are referred to in "**Underground Lines that Carried High-Activity Liquid,**" who the lines where installed by and when they were installed.
67	Page 3-102, Section 3.11.5.3	In "**Other Underground Lines**" the results of groundwater monitoring or subsurface soil samples should not be used to assume the integrity of underground lines. These are not all inclusive and may miss contamination. Lines should be integrity tested on a regular basis if they are not double walled, have some type of leak detection and/or are not in a pipe trench with or without leak detection and/or chemical resistant coatings.
68	Page 3-105, Section 3.13.1	Please provide detailed information in regards to the statement in the last paragraph on this page that "Hazardous and mixed low-level radioactive wastes are…disposed on site."
69	Page 3-105, Section 3.13.1	The first full paragraph of this page refers to the scheduled decontamination, demolition and removal of the CPC-WSA by 2010. According to discussions regarding the closure of Interim Status units at the site, the CPC-WSA was not scheduled to be closed for five to seven more years. • Please provide a current status for the closure of the unit.
70	Page 109, Table 3-20	While it is understood that waste would be generated during the Interim End State which would end in 2011 it is unclear what wastes would be generated after this time period that would not be covered by the EIS.

Chapter/Appendix: Chapter 4

Comment Number	*Page Number*	*Comment*
71	Page 4-4, Table 4-1	For the Sitewide Close-In-Place Alternative, please provide the amount of time necessary for the decay of the Cesium Prong and nonsource area of the NPGP.

		Additionally provide an estimate herein of when the 1,118 hectares of land would be available for release for unrestricted use.
72	Page 4-5, Section 4.1.1.2	The "**Visual Resources**" paragraph states that the North and South Plateau caps would be rock covered. This could inhibit replacement/repair of said caps. Has consideration been given to the RCRA regulations for repair/replacement of geomembrane layers in caps at certain intervals and have these costs been included in the long-term monitoring and maintenance costs for true cost benefit comparison?
73	Page 4-11, Table 4-3	For more accurate cost comparisons of utility use, DOE should include the total use of each utility per year of decommissioning as well as the total use. On an annual basis the utility uses for the three action alternatives are similar with Sitewide Close-in-Place having the highest utility use during its action phase. Total utility use for each utility after decommissioning should also be included. The total for each utility after decommissioning appears to be highest for the Sitewide Close-In-Place Alternative.
74	Page 4-15, Section 4.1.2.2	Does this DEIS include the utility usage that would be necessary for replacement of the North and South Plateau caps? If not, DOE should update the EIS to include this information prior to final issuance.
75	Page 4-88, Section 4.1.11.2	In addition to the mixed low-level radioactive waste referred to on Page 4-95, hazardous wastes would also need to be treated to meet any associated RCRA land disposal restriction treatment standards prior to disposal.
76	Page 4-90 to 91, Table 4-45 and Page 4-94, Table 4-47	Please provide an explanation for why the summary numbers for **Packaged Waste from Site Monitoring and Maintenance or Long-Term Stewardship** do not match the comparison numbers in table 4-47.
77	Page 4-92 to 93, Table 4-46	Please provide the placement for footnote "b".
78	Page 4-99, Section 4.1.12	It is inconceivable that DOE would ever ship only one railcar with waste per train. The use of this assumption appears disingenuous and as an attempt to skew the transportation impacts presented herein to make sitewide removal appear impossible due to the dangers associated with transportation.
79	Page 4-114, Table 4-53	Column Three entitled "Phased Decisionmaking Alternative (Phase 1 Only)" is supposed to contain the discounted cost per avoided person-rem for Phase 1 of the alternative. The Sitewide Alternatives already give the bounding cost numbers, that information does not need to be reiterated. In order to truly compare cost, the information for the bounding alternative to Phase 1, this information should be calculated and presented herein.
80	Page 4-115, Table 4-54	Please revisit the placement of footnotes "a" and "b" as they do not appear to be accurate. Additionally, please provide the time period for the effective annual costs for monitoring and maintenance (M&M) or long-term stewardship. As Tables 4-55 and 4-56 (footnotes b and e and footnote b, respectively) refer to 1000-year periods for dose and M&M, it would seem that 1000 years of M&M or long-term stewardship costs should be included. At the least, DOE should include the costs until "loss of institutional controls" at 100 years.
81	Page 4-143, Section 4.6.3.1	If the Phase 2 decision is to perform "sitewide removal" after up to 30 years, would that alternative then be considered the longest active phase of the alternatives?

		Also, please provide detailed justification for how restoring the land to its original state as opposed to placing a cap, and possibly rocks, provides a greater impact to the wetlands.
82	Page 4-143, Section 4.6.3.2	DOE fails to mention that monitoring and maintenance would need to be performed in perpetuity following the "short term…of significant onsite decommissioning activities". Again, NYSDEC stresses that close in place is not a viable option without a variance from the State and Federal RCRA regulations.
83	Page 4-144, Section 4.6.3.3	The second section of this paragraph is misleading and possibly inaccurate. Will it take the full eight years to construct the building and move the logs? How is that possible if the MPPB is to be removed within those eight years? Also the intent of the two phases is to allow for the studies to be performed almost from the beginning, not eight years later. DOE should already be trying to determine the types of studies necessary and their implementation so that this can happen as quickly as possible after the issuance of the Record of Decision.

Chapter/Appendix: Chapter 5

Comment Number	*Page Number*	*Comment*
84	Page 5-9, Section 5.2	The last sentence under "***Administrative Order On Consent (RCRA 3008[h])***" should be revised to state that CMSs were required.
85	Page 5-15, Section 5.5	Within the description of "***Resource Conservation…..Parts 370 to 374, 376)***" it should be mentioned that NYS has all the rights and authorities of the Federal regulations for which they are authorized and that NYS' regulations may be more stringent than the federal regulations. Nowhere in this text does it mention that NYS has been given the lead for all RCRA related activities at the site. At a minimum, this section should include the same level of detail as its counterpart under Section 5.2 was provided.
86	Page 5-20, Table 5-1	Be advised that the NYSDEC is working on a replacement document for TAGM 4046. All corrective action work will have to meet the soil cleanup levels in this new document. This information should be revised accordingly.

Chapter/Appendix: Chapter 8

Comment Number	*Page Number*	*Comment*
87	General	DOE may want to consider prefacing this chapter to state that the definitions used herein are not consistent with the definitions within the Part 373/RCRA regulations due to need to show impacts and NOT compliance.
88	General	For any definition that references the federal RCRA regulations, DOE should include the reference to the State

		regulations that parallels said reference.
89	Page 8-3	The definition of "characteristic waste" should include a reference to the state regulations (6 NYCRR 371.3) that parallels the reference to the federal regulations.
90	Page 8-4	The definitions relating to disposal, disposal area and disposal facility are extremely generic and do not appear to relate to hazardous waste management under either the state or federal RCRA program. Again, DOE could alleviate public and regulator's concerns by prefacing the chapter as mentioned in the general comment above.
91	Page 8-5	In the definition of an EIS the citations to Environmental Conservation Law are not correct. They should read "Section 3-0301(1)(b), 3-0301(2)(m) and …
92	Page 8-6	"Hazardous constituent" is more than what is referred to under OSHA. It is recommended that the word "waste" be added and that the definition for "hazardous waste constituent" found under 6NYCRR 370.2(b)(87) be incorporated.
93	Page 8-6	Be advised that unlike the definition of "Hazardous waste" in the federal regulations, New York State regulates certain PCBs as hazardous wastes.
94	Page 8-8	As regards DOE's definition of "interim status facility (under RCRA)". • First, neither "hazardous waste management facility" nor "treatment, storage or disposal facility" are defined elsewhere. • Second, there needs to be references to NYS regulations. • Third, the Part A notification allows a facility to continue operation in accordance with Interim Status standards under **BOTH** the RCRA and the NYS regulations, it is NOT considered a permit. • Lastly, the facility must either close a facility under interim status or show that they filed protectively; they cannot just "withdraw" their interim status.
95	Page 8-9	The definition of "mixed low-level radioactive waste" should include reference to NYS regulations as well. Unlike the federal regulations, New York State regulates certain PCBs as hazardous wastes.
96	Page 8-10	The definition of "polychlorinated biphenyls" should note that certain PCBs are hazardous waste in NYS and should reference the definition of hazardous waste in 6NYCRR 371.3.
97	Page 8-13	The definition of "solid waste" should include reference to NYS regulations as well.
98	Page 8-14	The definitions relating to "storage" and "storage facility" are extremely generic as relates to hazardous waste management under either the state or federal program. Again, DOE could alleviate public and regulator concerns by prefacing the chapter as mentioned in the general comment above. At a minimum, the word "mixed" should be used in place of "radioactive". "Storage" is specifically defined and does not distinguish between greater than and less than 90 days in NYS regulations. This distinction determines whether or not a facility needs a permit or interim status.
99	Page 8-14	Suggest that the definition of State Environmental Quality Review Act be revised to read: "A law promulgated … that requires that all state and local agencies determine whether the actions they directly undertake, fund or approve may have a significant impact on the environment and, if it is determined that the action may have a significant adverse impact, prepare or require the preparation an environmental impact statement.

Chapter/Appendix: Appendix C

Comment Number	*Page Number*	*Comment*
100	General	While the document has made tremendous changes to include the necessary hazardous waste Part 373/RCRA information and regulations, there are still areas that are lacking. These include but are not limited to: failure to include whether or not there is hazardous waste/constituents contamination in all of the facilities/units listed under each of the WMA descriptions; failure to include in the descriptions when a unit is subject to RCRA closure or CA regulation (e.g., where CMSs are required, NDA "decommissioning" is also subject to CA requirements); failure to include in their descriptions that each of the alternatives (e.g., Close-in-place, Phased Decisionmaking) are also subject to Part 373/RCRA when actions are taken; failure to provide chemical concentrations (in ppm or mg/kg) as opposed a total inventory (in kg).
101	Page C-1, Section C.2.1	The second paragraph mentions that the Contact-Size Reduction Facility (CSRF) will have been removed to grade at the starting point of the EIS. Is this accurate? The NYSDEC understood that the CSRF was part of the Main Plant Process Building (MPPB) and its Comprehensive Closure Plan. It was understood that as such the CSRF could not be removed until such time as a Record of Decision (ROD) was issued for the DEIS. • Please clarify this misunderstanding and assure that the DEIS contains accurate information.
102	Page C-14, Section C.2.3	The fourth sentence of the introductory paragraph states that Tanks 8D-1 and 8D-2 will be dry at the "starting point" of the EIS. The "starting point" is expected to be accomplished by 2011. • Please explain how this is possible? The NYSDEC's understanding of this system is that once installed it would take a several years (approximately 3 or 4) to dry the residuals that already reside in the tanks. This does not seem possible since 1) the system will not be installed until early 2010 and 2) DOE has stated within the Liquid Waste Management Plan that they would like to transfer additional liquids from the Main Plant Process Building into these tanks. Please address this situation within the references of this appendix as well as the other chapters or appendices that reference the Tank Drying System.
103	Page C-49, Section C.3.1.1.1	**Relocation of the High-Level Radioactive Waste Canisters**: If there is a defined lifespan to the commercial dry cask storage systems under consideration, the DEIS should acknowledge this and describe how the casks would be replaced, tested for approval for continued use, etc. At present there are no obvious plans in place to address this need, which has arisen since release of the DEIS due to the withdrawal of Yucca Mountain from consideration for permanent disposal of HLRW.
104	Page C-55, Section C.3.1.1.8 and Page C-57, Section C.3.1.1.9	The fifth and sixth paragraphs under "**Removal of Contaminate Soil and Groundwater**" and the second paragraph under Section C.3.1.1.9 make reference to reuse of the soils if they are less than the DCGLs for unrestricted release. DOE would also have to demonstrate to NYSDEC that these soils do not contain hazardous waste/constituent contamination prior to reuse.
105	Page C-57,	The first paragraph states "Confirmatory sampling for constituents of concern would be performed, and remedial actions

	Section C.3.1.1.9	would be based on the results." This sentence fails to take into account whether these confirmatory samples are for Solid Waste Management Units or for Interim Status Operating Units. The requirements for soil cleanup objectives (i.e., chemical concentrations remaining) vary depending on the unit's status. DOE has failed to make this distinction clear for both the regulator and the public or to give it due justice.
106	Page C-79, Section C.3.1.8.1	Under the Mixed Waste Conditional Exemption regulation (6 NYCRR Part 374-1.9), the Mixed Waste Storage Facility is no longer subject to Interim Status closure. Even so, NYSERDA has expressed their desire to close this unit under the RCRA Interim Status requirements. Pending further determination, the unit should be listed as a SWMU.
107	Page C-89, Table C-28 and Section C.3.1.13.2	While the NYSDEC has not required action on the NPGP, it should not be construed that the NYSDEC believes that the unit is not subject to regulation. We are currently in the process of reviewing the results of the NPGP RCRA Characterization.
108	Page C-91, Section C.3.2	While DOE does mention that certain buildings will be removed to grade to eliminate maintenance cost, they fail to mention that monitoring and maintenance would need to be performed in perpetuity under a Part 373/RCRA Post-Closure Permit. Again, NYSDEC stresses that close in place is not a viable option without a variance from the State and Federal RCRA regulations.
109	Page C-130, Section C.4.1	**Interim Storage Facility**: An updated description of the DOE plan to use currently available commercially dry cask storage technology to store the vitrified logs on-site should be included. The fact that these systems are designed to withstand high forces from seismic activity and will be designed to withstand anticipated atmospheric or erosional impacts should be included.

Chapter/Appendix: Appendix E

Comment Number	*Page Number*	*Comment*
110	Page E-77, Section E.4.2.1	**Historical Conditions and Phased Decisionmaking Alternative** – The discussion of how the NDA facility is modeled, with the interim measures installed in 2008, is unclear and limited. Modeling for the ongoing assessment period, should it occur, must take into account the existing cap and slurry wall; how this is taken into account, especially with the offered recharge estimates, is not clear. Further data collection and updating of the model should continue.

Chapter/Appendix: Appendix F

Comment Number	*Page Number*	*Comment*
111	General	In light of the very recent occurrences of erosional events, both large and small scale, in the vicinity of and at the site (Route 219 erosion/slumping on Cattaraugus Creek, Erdman Brook knickpoint and Frank's Creek knickpoint advancement, respectively, Buttermilk Creek slide reactivation), how is the modeling of erosion at the site to be updated/expanded upon, during the ongoing assessment period? It would appear the real-time events of interest and consequence must be included, and a process in place, to allow for any performance assessment to be accurate, to allow for a decision to be made that is representative. Focus for continued erosion monitoring should not be simply data necessary for model truthing and calibration, but how real-time events are affecting the facilities in question, and whether decision-making must include a long-term model (for anything other than decommisioning performance assessment).
112	Page F-6, Section F.2	**Summary of Site Erosion Measurements** "Observation of other geomorphic processes, including meandering and knickpoint advance, provides perspective but no additional quantitative information for erosion rate estimates." • Please clarify this statement, especially in light of recent (2009) erosional events and observations (e.g. Erdman Brook knickpoint advancement, Buttermilk Creek slide reactivation).
113	Page F-8, Figure F–5 and Page F-9, Table F-1	**North and South Plateau Gully Locations** – These figures/tables need to be updated to show recent changes in the knickpoint location along Erdman Brook, relative to the V-to-U-shaped valley transition.
114	Page F-53, F.3.2.5	**Calibration: Discussion and Interpretation** – "It is also likely that gully extension in this environment is limited by vegetation growth, which can effectively impose a large erosion threshold on the landscape in hollows and ephemeral channels." This statement needs further explanation/exploration, in light of rapid advancement of knickpoints in the vicinity of the SDA along Erdman Brook. These "small perturbations" are of importance for understanding actual impacts to the site in the near-term.

Chapter/Appendix: Appendix J

Comment Number	*Page Number*	*Comment*
115	General	This appendix fails to provide any information regarding the risks of transporting non-radiological waste (i.e., hazardous waste) or a justification for their exclusion.

116	Page J-10, Section J.4.2	It is inconceivable that DOE would ever ship only one railcar with waste per train. The use of this assumption appears disingenuous and as an attempt to skew the transportation impacts presented herein to make sitewide removal appear impossible due to the dangers associated with transportation. While it is recognized that the DEIS does state that the risk per train would increase proportionally based on the number of cars/train, the narrative and subsequent tables are misleading as they give the appearance of only one car/train being transported. It is understood that there will be instances where a single car will be transported per train due to radiological considerations and shipping regulations, but it is expected that the majority of the waste, particularly the contaminated soils, may be transported in trains containing dozens of railcars. • Please provide a clear explanation of DOE's intention for waste shipments.

Chapter/Appendix: Appendix L

Comment Number	*Page Number*	*Comment*
117	Page L-1, First Bullet	In 1978 the State Industrial Hazardous Waste Management Act established the NYS hazardous waste management program by providing regulatory authority to control the transfer, storage and disposal of hazardous waste.
118	Page L-2, Section L.1	Under paragraph two, in-place closure (management) is not typically allowed for container and/or tank storage and/or treatment units. It is usually reserved for land disposal units.

Chapter/Appendix: Appendix M

Comment Number	*Page Number*	*Comment*
119	Page M-3, Section M.2.1	**Floodplains** – In light of recent storm events (August 2009), perhaps reaching the 100-year flood level, and subsequent observed storm damage in the vicinity of the site (i.e. Fox Valley Road washout), this section should be updated.
120	Page M-3, Section M.2.1. Paragraph 4	"The flood inundation area for the 100-year storm (see **Figure M–4**) show that no existing facilities are in the 100-year floodplain." Figure M-4 does not include the water reservoirs and dams, which were impacted by August 2009 storms. This discussion and Figure should be updated to include the southern facilities.

Enclosure 2

NYSDEC Non West Valley Assigned Staff Comments on the Revised Draft Environmental Impact Statement for Decommissioning and/or Long-Term Stewardship at the West Valley Demonstration Project and Western New York Nuclear Service Center

NOTE: For any Chapters/Appendices not specifically included below, the Department has no comments.

Book: *General Comments*

- 6NYCRR Part 750, State Pollutant Discharge Elimination System Permits, Subpart 2.11 outlines Closure Requirements for Disposal System. These requirements shall be complied with for closure of any disposal system.

Book: *A Summary and Guide for Stakeholders*

- Inside of Front Cover: "Cathern" Bohan should be Catherine.
- Cover Sheet, *Location*: West Valley is a mailing zip code and an unincorporated hamlet; the location is the Town of Ashford.
- Page 9, bullet #2: Should some type of handling facility be left in place so that emergencies can be dealt with quickly and effectively? Didn't understand this.
- Page 9, bullet #5: Why is one called a wall and the other a barrier? Are there functional differences that are described later?
- Page 9, bullet #5: Is there the potential for these wall/barriers to be removed in the future as technology advances? Can there be a catastrophic failure that would require action in real time and present the need for handling facilities that have already been removed?
- Page 9, bullet #6: What is the percentage? Why is there a differentiation between non-defense and defense waste? Are there different regulations determining how they are to be handled? Are they the same substances? Are they processed the same way to the same end result?
- Page 12, General Comment: Has there been a review of the failure to come to agreement on cleanup responsibility of the plume and the resultant expansion of the plume? There should be a discussion about what steps will be taken to avert such a circumstance in the future.
- Page 13, bullet #1: What is orphan waste, its composition and the reason that it is called that?

- Page 13, bullet #2: There should be a discussion somewhere in the document as to the result of failure to accept responsibility for the plume and its expansion due to that failure to come to agreement.
- Page 14, Table 1, Row: NRC-licensed Disposal Area (NDA), Column: Sitewide Close-In-Place – If this is done, how hard would it be to remove if a decision is made later to remove it?
- Page 14, Table 1, Footnote [a]: Is the restrictive time frame given in the document?
- Page 18, Socioeconomics, paragraph 1: It depends on the number of man hours needed and the pay grades of those workers needed, not necessarily the duration of the work.
- Page 18, Socioeconomics, paragraph 2: What happens if it is determined that the present day acceptable levels of contamination are discovered to be too high?
- Page 18, Socioeconomics, paragraph 2: Is it reasonable to say that there would be no need for anyone? Is it possible that there might still be a need to do some minimal monitoring no matter what?
- Page 18, Socioeconomics, paragraph 3: How far into the future does this hold? At some point there is going to be a change. Is the reviewer missing the point that the EIS is only looking a certain distance into the future?
- Page 20, Waste Management, paragraph 2: Where does orphan, defense and non-defense waste fit into the list? Should there be a matrix showing relationships?
- Page 20, Waste Management, paragraph 5: Is this the smallest volume of the alternatives? If so, just say it.
- Page 20, General Disposal Options orange graphic, last paragraph: Should it say with regulations existing at the time of disposal or most restrictive?
- Page 27, Long-term Impacts, last word: ("later") – Later than what? Aren't there impacts beyond peak annual dose? When is the predicted peak annual dose?
- Page 28, The Sitewide Close-In-Place Alternative: With the failure of institutional controls, are there problems with small doses to very large populations through contamination of Erie County public water supplies which get water from Lake Erie?
- Page 30, bullet #1: Orphan waste?
- Page 30, bullet #2: But might ultimately have the most risk of contaminating and affecting the most land/water and people.
- Page 31, bullet #1, end of line 3: What does "source terms" mean?

- Page 31, bullet #1, starting on line 9: What is trying to be said here?
- Page 33, Human health: Our understanding and research in the future may alter how specific levels of exposure are viewed. Is this uncertainty considered? Is not considering decay rates enough? Typically, scientific study has indicated that acceptable levels yesterday are too high today.
- Page 34, Long-term human health: Should changes to risks due to increased knowledge of the effects of exposures or the discovered increased risk from "combinations of contaminants" be included?
- Page 34, photo: Include the purpose of the pipes in the photo description.
- Page 40, Appendix E: What does "near-field flow" mean?
- Page 40, Appendix H: Change "assessment results" to "assessment model results".
- Page 47, cesium: Is it still the most electropositive element known? If so, say it.
- Page 47, collective dose: So if you were exposed to things from different sources, the information wouldn't specify the sum total of all exposures and the total dose wouldn't be described anywhere?
- **Page 47: Should there be a description for defense waste (and/or non-defense waste)? Are both types of waste at West Valley? Are they treated differently in procedure, processing or degree of processing based upon their origin, although they are the same contaminant?
- Page 48, hydrofracture: In western New York hydrofracturing is associated with development of oil and natural gas wells.
- Page 48: Should there be a description for non-defense waste (and/or defense waste)? (See comment** above.)
- Page 48, permeability: Add "or gasses" after "The rate at which liquids . . ." Also, should this include contaminants that do not dissolve in water?

Book: *Chapter 1: Introduction and Purpose and Need for Agency Action*

- Page 1-1 to 1-2, last line on pg. 1-1: "The SDA received waste from offsite locations…" Was it the same type of waste? Commercial? Primary waste or waste generated by cleanup operations or both?

- Page 1-10, footnote 1, 1st sentence: "SEQR specifies that the assessment of environmental impacts focuses on the growth-inducing aspects of a Proposed Action." SEQR does not focus on growth-inducing aspects of a proposal.
- Page 1-15, Section 1.6.11, last sentence: *What does "Quality Services" mean?*
- Page 1-16, Section 1.7.2, 4th sentence: "A formal public hearing was conducted in three meetings on August 6, 1996, in West Valley, New York, to receive oral comments." West Valley is an un-incorporated hamlet which is shown on some maps. The project is in the town of Ashford.
- Page 1-18, 5th bullet: Relationship between DOE and NYSERDA. Why can't disagreements and responsibility be a topic for discussion, especially if disagreement causes delay and results in such things as the migration of the plume because there was a disagreement about responsibility?

Book: *Chapter 2*

- Page 2-1, Section 2.1 Introduction stated that "The Phased Decisionmaking Alternative (The Preferred Alternative), under which there would be an initial (Phase 1) 8-year period of removal actions for all facilities except.....and Construction and Demolition Debris Landfill." It should be pointed out that stormwater discharges from construction activity should follow requirements outlined in the most recent version of the "General Permit for Stormwater Discharges from Construction Activity." Current version of this General Permit No. is GP-0-08-001. This is also applied to Page 2-46, Section 2.4.3.2 New Construction and any other section related to this issue.

  Under this Section, it is further stated that "During a period of up to 30 years, DOE and NYSERDA would conduct a variety of activities intended to expand the information available to support later additional decommissioning decision making (Phase 2) for those facilities and areas not address in Phase 1." It is not clear whether within 30 years, the decommissioning for those facilities and area not addressed Phase 1 would be completed or not. If not, what is the proposed schedule for completion of decommissioning. Page 2-47, Figure 2-8 extends to a period of 70 years, but no activities shown beyond 30 years.
- Page 2-2, Section 2.1: HLW or HLRW - What about ½ lives of these substances? What is the relationship to transuranic wastes?

  1st paragraph: "Such term" - Shouldn't it be "such terms include"

  LLRW - Are the criteria for classification given somewhere in terms of ½ life, concentration or some other qualifier?

  Greater than class C - Is it possible to give concentration limits in this document?

C & D debris - Can it have greater than background levels of radioactivity?

- Page 2-3, Section 2.2, 1st paragraph: Does not tell where the "Waste Classifications" text box can be found. What page is it on?

  2nd paragraph: Is the same type of radioactive material handled the same way even if part is from the Defense Department and the other part is non-defense material? Or are the two different types "chemically" mutually exclusive?

- Page 2-3, Section 2.3: Direction & Distance from Buffalo - Straight line distance between the two is about 24.5 miles at their nearest points. Direction is south southwest. Cattaraugus Creek mouth is 23.3 miles southwest of Buffalo at its nearest point.

- Page 2-5, Section 2.3, bullet: WMA 11 - add Scrap Material Landfill to bullet.

- Page 2-7: Hydrofracture test well area part of WMA 11. Same for scrap material landfill and bulk storage warehouse. See title of fig 2-3. Add WMA 11 to labeling on figure for Hydro frac and warehouse as did for the landfill.

- Page 2-11, 2nd bullet, 1st sentence: "An upgradient slurry/barrier wall will be installed and a geomembrane cover will be placed over the NDA as part of the NDA *groundwater* infiltration mitigation measures." The term "mitigation" is again used in a way that is not very descriptive. Much more meaning would be imparted if prevent or reduce were used.

- 3rd bullet: "cesium-137 inventory". The inventory contaminates the absorbent media. How much liquid will be left as a percentage? Why won't the media absorb all the liquid?

- Page 2-12, 1st bullet: What is the difference between a treatment wall and a reactive barrier?

- Page 2-21, Section 2.3.2.3, 2nd paragraph: "Most of the residual contamination in this building is in the two HEPA filters, which could contain as much as 7.5 curies of cesium-137 and much smaller activities of other radionuclides." Activities?

  If defense waste was part of the reason for contamination of equipment does that mean the equipment is handled as defense waste?

- Page 2-21, 7th paragraph: Is the Con-Ed Building, itself contaminated, or is the equipment contaminated or both?

- Page 2-26, Section 2.3.2.9: Drum cell - contaminated or not? Why would anything be assumed?

- Page 2-27, Section 2.3.2.11: If the environmental assessment done previously is not included in this document then it should be stated where it can be found/obtained.

  2nd paragraph: "This waste material was radiologically surveyed, decontaminated as necessary, and released for unrestricted use before it was buried in the trench." Released for unrestricted use? Please explain. Is there a reason that recycling of scrap metals such as aluminum cannot occur?

- Page 2-27, Section 2.3.2.12, 1st paragraph: "…contaminated sediments resulting from regulated releases." So these releases were scheduled and planned? There needs to be a better explanation.

  2nd paragraph: The North Reservoir has a pump house to regulate the water level?

- Page 2-28, Section 2.3.2.13: North Plateau Groundwater Plume - The inability of the two agencies to reach agreement is the reason for the size of the plume. This should be stated explicitly. Somewhere in the document there should be a discussion of future contamination possibilities due to the inability of agencies to agree on something in the future.

- Page 2-29, Section 2.3.2.14: "The cesium prong is the result of uncontrolled releases..."; What does that mean? Was it equipment failure, human error or what?

- Page 2-29 Section 2.4, 1st bullet: "environmental media"? Not in the glossary. How do you decontaminate soils?

  "This alternative would generate waste for which there is currently no offsite disposal location…." Generating waste implies more waste than before. Is the document trying to say, "*Under the sitewide removal option some waste could not be shipped since there is no place to ship it.*"?

  Last sentence: "bounding alternative" ?? Please rephrase.

- Page 2-30, Text Box: Is there defense waste at West Valley?

  General question, what is low level radioactive waste comprised of? And for other types? Or is there no good answer?

  Text Boxes should be labeled in a format like figures.

- Page 2-32, Section 2.4.1.1: "environmental media"; different words please.

- Page 2-33, Section 2.4.1.1, 1st bullet: What is the waste that will be generated during the work? Equipment, soil, water, chemicals?

- Page 2-33, Section 2.4.1.1, 4th bullet: What will be done to "remediate" surface soil and sediment. Will the radioactivity be "removed" from the soil or will the contaminated soil/sediment be separated and removed for disposal at a different location?
- Page 2-33, Section 2.4.1.1, WMA 1, 1st paragraph: What part of the building is contaminated? Knowing that might then explain how it is decontaminated.

  2nd paragraph: What does "completely removed" mean? Everything taken from the site?

  3rd paragraph, last sentence: What about contaminated subsoil? If subsoil is contaminated does that mean they are leaving it? Why isn't "environmental media" which seems to mean anything that is not man-made used?

  WMA 2: 1st paragraph, Lagoons completely removed from the site? The contaminated materials can be removed and the excavations filled.

  WMA 4: What about contaminated subsoil?

  WMA 5: No mention of soil or subsoil. Why not say "all contaminated environmental media"?
- Page 2-35, Section 2.4.1.2, New Construction: Includes "A Leachate Treatment Facility to process contaminated leachate from the NDA and SDA." The SPDES modification application for the proposed discharge from the proposed leachate treatment facility should be submitted to the Region 9 - DEP office for processing. After this permit modification issued, the design engineering report and plans and specifications for the leachate treatment facility should be submitted to Bureau of Water Permits and Region 9 office for review and approval prior to construction. Also see Page 2-64, Section 2.8.2.2 and Appendix C, Page C-138 Leachate treatment facility. The applicant should be familiar with 6NYCRR Part 750, SPDES Permit and Technical and Guidance Series (TOGS) 1.2.1. Industrial Permit Writing in dealing with point source discharges to the water of the state.
- Page 2-38, Section 2.4.2.1, WMA 1: Large boulders may serve as an intrusion barrier, but won't do much for stopping erosion. The boulders may also help to concentrate surface water runoff to specific points (between the boulders) and actually increase the erosion potential.
- Page 2-39 Section 2.4.2.1, WMA 3; last sentence: Large boulders may serve as an intrusion barrier, but won't do much for stopping erosion. See comment above.
- Page 2-39, Section 2.4.2.1, WMA 12: There will have to be a downstream end of the excavating and riprapping. It is this nick point where erosion will start almost immediately. Do the plans identify maintenance of artificial stream channels as a cost?

- Page 2-40, Section 2.4.2.2, Last bullet: How do you construct an erosion control structure around a creek? Poor wording; needs to be explained better.

- Page 2-43, Section 2.4.3.1, last bullet: Removal is determined by depth rather than radioactivity? Once you have opened a hole why not remove the contamination in the bottom of it? What happens if the material below 2 feet is really "hot"?

- Page 2-45, Last Paragraph - States, "The final decision on the Phase 2 decommissioning and long-term management approach would be made within 30 years of the date of issue of the Phase 1 ROD. As new information becomes available during Phase 1, DOE would conduct appropriate NEPA review." From this statement, it seems there is no ending date set for the completion of Phase 2 decommissioning. What would be the reasonable schedule for completion of decommissioning?

- Page 2-46, Section 2.4.3.3, Last paragraph: Is there space to store this "unanticipated" waste?

- Page 2-51, Section 2.6.1, Last sentence: "This approach was performed in such a way that did not bias the comparison of alternatives." Suggested change: <u>This approach was performed in order to attempt to remove bias from the comparison of alternatives.</u>

- Page 2-59, Section 2.6.2, last paragraph: What would be the exposure to everyone drinking public water taken from Lake Erie? If nothing else at least there should be a statement that dilution would be such that there would be nothing measurable above background levels. This may have been addressed later in the document.

- Page 2-62, Section 2.8.1.4, 1st paragraph: "Atlantic Compact" should be explained.

Book: *Chapter 3*

- Page 3-6, Section 3.1.1, 2nd full paragraph: What is an "acreage lot"? Do they mean a small parcel separated from a large parcel to construct a single family residence?

- Page 3-12, Section 3.3.1.1, First paragraph: Elevations are discussed without reference to a datum which is a standard notation. Ex. International Great Lakes Datum (IGLD) 1985

- Figure 3-7: The figure shows orientation of the cross section as west to east. The orientation should be the same as Figure 3-6. The cross section is shown as extending beyond Buttermilk Creek on Figure 3-8 while the cross section itself stops at the creek. This discrepancy should be resolved.

- Figure 3-9: It would be better if the horizontal scales of the cross sections were the same, making it easier to compare.

- Page 3-21, Section 3.3.1.1: Kent Recessional Sequence - "The basal lacustrine sediments were deposited in glacial lakes that formed as glaciers ~~that~~ blocked the northward drainage of streams."

  Sand and gravel was later deposited ~~from deltas formed~~ where streams entered the glacial lakes *forming deltas* and along the floodplains of streams that formed during ice-free episodes.

- Page 3-28, Section 3.3.1.3: There are three types of mineral resources; sand and gravel come from the glaciers, oil mostly from the upper Devonian and gas mostly from the lower Silurian period.

  Mineral district has no meaning in New York State. It is a western term. If the document is trying to identify the location of the resource, it would be more appropriate to use county names.

- Page 3-29, Section 3.3.1: Soil contamination – Give an explanation of an operational incident. Is it limited to human errors?

  2nd paragraph: The primary constituents ~~areas~~ of radiologically contaminated soil are cesium-137 ~~contamination~~ associated with the Cesium Prong area; soils affected by the North Plateau strontium-90 groundwater plume; and radiologically contaminated soil associated with Lagoons 1 through 5 and the Solvent Dike (WMA 2). This needs work. The primary areas (which are locations) can't be a chemical.

- Page 3-30, 1st paragraph: "The low level chemical detections are consistent with ~~anthropogenic~~ human activity and the industrial nature of the site."

- Page 3-30, last paragraph: "Metals concentrations in RCRA facility investigation soil samples from these facility areas slightly exceed background or Technical and Administrative Guidance Memorandum 4046 criteria." Slightly? By what amount?

- Page 3-31: Cesium Prong - "Uncontrolled airborne releases from the Main Plant Process Building ventilation system filters in 1968 released contaminated material through a 60-meter (200-foot) high plant stack". How many releases were there? Why did the releases happen? Mechanical failure? Human failure?

- Page 3-36, 2nd paragraph: the slump blocks are shown in figure 3-16 not 3-15 (two places in paragraph)

- Page 3-48, Figure 3-18. The delineation of a state wetland is typically valid for three years. Part of the process of issuing any NYS Wetland Permits would be verification of the wetland boundary. The document refers to the wetland as a Class IV. DEC never officially determined the classification of the wetland.

- Page 3-49, Section 3.6.1, 2nd paragraph, 2nd to last sentence, "~~Other than~~ *In addition to* the two water supply reservoirs and wastewater treatment lagoons in WMA 2, several small ponds are located across the WNYNSC including former borrow pits (Northern Borrow Pits) located in the northeast corner of the Project Premises (WVNS 2004a, WVNS and URS 2005)."

- Page 3-54, 2nd full paragraph: What are the implications for the general public at the first point accessible given the radiation levels?

  Page 3-54, 3rd full paragraph: No mention is made of testing for radioactivity?

- Page 3-54, Section 3.6.1.2, 1st paragraph: Several of the discharged radionuclides, particularly cobalt-60, strontium-90, cesium-134, and cesium-137, have an affinity to become chemically ~~sorbed~~ attached to silt and accumulate in the streambeds.

  The writer should acknowledge that over time all of the contaminated sediments will leave the site and end up in Cattaraugus Creek and Lake Erie. There have been discussions regarding the removal of the Springville Dam which would then allow a more continuous movement of sediment down the creek. At issue is the sediment behind the dam.

  What does the contamination level of the sediment behind the dam mean? Does the sediment have to be removed to a disposal location or does current regulation allow it to stay in place? Is DOE responsible for removing the sediment?

- Page 3-58, 2nd paragraph: How often is the groundwater pumped to maintain the elevation? If the French drain discharge was plugged what is happening to groundwater elevation and flow?

- Page 3-60, 1st paragraph: Please explain the different types of "biointrusions".

- Page 3-60, 2nd paragraph: "Models for the South Plateau developed by Prudic (Prudic 1986) and by Bergeron (Bergeron and Bugliosi 1988) support only moderate lateral movement through the weathered till until flow become directed downward into the unweathered Lavery till." "flow becomes" or "flows become".

- Page 3-60, 2nd paragraph: "Using these models as a starting point, Kool and Wu (Kool and Wu 1991) examined how ~~changes in the hydraulic conductivity, vertical~~ anisotropy ~~and horizontal anisotropy~~ in the hydraulic conductivity can impact flow through the weathered Lavery till." Anisotropy, different values along different axes; in this case the vertical and horizontal axes. A hard word to use. Suggested change, "Using these models as a starting point, Kool and Wu (Kool and Wu 1991) examined how anisotropic characteristics in hydraulic conductivity impacted flow through the weathered Lavery till." Are they also trying to say that hydraulic conductivity was not constant on any particular axis? The use of the word anisotropism tends to indicate there is one value on a specific axis. If this is not the case the word should be removed and others used.

- Page 3-61, Bedrock Unit: "Wells completing in this zone yield 40 to 60 liters per minute (10.6 to 15.9 gallons per minute) and corresponds to the regional bedrock aquifer." What does "completing" mean? Do they mean wells drawing water from the weathered bedrock?

- Page 3-63, North Plateau Groundwater Contamination, Figure 3-22: There should be a date on the figure.

  Have they gone back and checked to see if the figure was accurate based upon later investigations?

- Page 3-64, figure 3-23: the separate panels should have the elevations reversed. It would be easier to read.

- Page 3-65: What justification was there for reducing the frequency of monitoring?

- Page 3-66, 1st sentence: "In November 1995, a groundwater recovery system was installed to mitigate the movement of strontium-90 contamination in groundwater in the western lobe of the plume and reduce groundwater seepage northeast of the Main Plant Process Building."

  As previously noted, the reader believes the use of the word mitigate in this context should be changed to more explicit. Reduce the expansion or stop the expansion is the way to describe if that is what is being done.

- Page 3-68, last paragraph: "A trench system was previously constructed along the northeast and northwest sides of the NDA to collect groundwater that *was* potentially contaminated with a mixture of n-dodecane and tributyl phosphate."

- Page 3-69, 1st paragraph: "Gross beta and tritium concentrations in samples from location WNNDATR, a sump at the lowest point of the interceptor trench, and from downgradient well 909 screened in the Lavery till continued to be elevated with respect to background monitoring locations on the South Plateau." Is the well "screened" to the entire till unit or does it only provide access to a small portion of the till unit?

- Page 3-70, Section 3.7.1, 2nd paragraph: The difference in elevation between Lake Erie and WNYNSC is not 1,310 feet. Lake Erie's Mean High Water Level is 573.4 IGLD 1985 datum. WNYNSC is at 1,400 feet (the document does not use a datum reference which is a flaw) according to the document. Even allowing for the use of different datums the elevation difference stated is wrong by approximately 483 feet. The correct difference is 827 feet +/-.

- Page 3-74, 2nd paragraph: "The following emissions sources are monitored on a continuous basis for radionuclides: the Main Plant Process Building ventilation stack; the former vitrification heating; ventilation and air conditioning system; the 01-14 building

ventilation stack; the supernatant treatment system ventilation stack; and the Remote-Handled Waste Facility (WVNS and URS 2007)." "the former vitrification heating;" What is that supposed to mean? Should the semi-colon at the end be taken out?

- Page 3-76, Section 3.8.2, 3rd full paragraph: "The state also regulates work within a 30.5-meter (100-foot) ~~buffer zone~~ adjacent area around designated freshwater wetlands."

- Page 3-91, Maximum Dose: What criteria were used for the max dose to an offsite individual? Is the person presumed to be at their location 24 hours per day or did going to work get included in the calculation? If so what about a "stay at home"? Is there a potential for bio-accumulation? If so was it taken into account?

- Page 3-91, Waterborne Releases: Where would the person be who received the max dose? Was bio-accumulation taken into account? Why are these water releases allowed? Is there a way to treat the water and reduce the rates? Seems like a lot of radiation to release over another 30 years. And what about all that has been released already.

- Page 3-92: "**Figures 3–30** and **3–31** show the calculated annual dose to the hypothetical maximally exposed individual and the collective dose to the population respectively over the last 10 years. The overall radioactivity represented by these data confirms the continued inconsequential addition to the natural background radiation dose that the individuals and population around the WNYNSC receive from site activities."

  "inconsequential" is a very subjective word. Find other words that say at the present time we don't think there is any impact.

- Page 3-94, 4th paragraph: "This is the only underground petroleum storage tank currently in use at the site." Are there any tanks not currently in use?

- Page 3-95, Section 3.11.4, 2nd paragraph: Average doses are just numbers. When you start averaging in zeros it quickly starts to hide the high doses. What were the highest doses? Report the top 10% of doses. Is there a graph somewhere showing the doses, a histogram or something?

  What does "contractor's daily limit of 100 millirem" mean? Is that for one person or everyone that works for a contractor?

- Page 3-96, Section 3.11.5.1: Over what period of time is it believed that the release of radioactive nitric acid spill occurred?

- Page 3-103, Section 3.12, Environmental Justice: Why is Canada discussed in this section? Is there a federal requirement? Or NY State requirement?

- Page 3-110, Remote Handled Waste Facility: It is to be dismantled in 2011. So in two to three years there will no longer be a need for it?

- Page 3-111, Section 3.13.2: "The emphasis on good business practices, source reduction, and recycling minimizes the generation of low-level radioactive waste, mixed low-level radioactive waste, hazardous waste, industrial wastes, and sanitary wastes, such as paper, wood, and scrap metal."

  Sanitary waste is not paper, wood or scrap metal. Sanitary waste would be more accurately described as municipal solid waste or putrescible waste.

Book: *Chapter 4*

- 4-1, "Impacts of less significance": Geology and soils should be listed in the section of great significance.
- Page 4-4, Table 4-1, Land Disturbance: Even if the Close-in-Place alternative were chosen, the Cesium prong and the groundwater plume should not be allowed to expand, or leave the site through surface runoff, erosion and/or groundwater movement.
- Page 4-15, 4.1.2.2, 5th paragraph: "Almost all of the waste shipments and construction material deliveries for this alternative would occur over the first 7 years of the implementation period when most decommissioning would take place, and reflect the need for large quantities of soil, sand, gravel, and other materials for NDA and SDA stabilization." The context of the part of the sentence that "other materials" is used in, would lead one to think that other materials is a natural product. Other materials could mean a lot of things. It could be anything from heavy boulders to straw, to silt fencing, to tire chips to slag from a steel plant. Please clarify.
- Page 4-19, 4.1.3.1: "The greatest requirements are for soil, concrete, clay, ~~and~~ sand and gravel."
- Page 4-22, 3rd paragraph: "The impacts of fuel, oil, or lubricant spills could be ~~mitigated~~ minimized by keeping the equipment in good repair and conducting maintenance operations in areas designed for such operations."
- Page 4-23, 2nd paragraph: This paragraph says "Area excavations would be backfilled with clean soils and graded to restore the area to a natural appearance that approximates natural conditions for the site. Over the long term, implementation of the Sitewide Close-In-Place Alternative would have a positive impact on groundwater quality." It is however in 4.1.4.1 Sitewide Removal Alternative
- Page 4-23, 4.1.4.2, 3rd paragraph: **"Surface Water Flow and Quality** - The impacts of fuel, oil, or lubricant spills would be ~~mitigated~~ minimized by keeping the equipment in good repair and conducting maintenance operations in areas designed for such operations."

- Page 4-24, 2nd paragraph: "The Hazard Index for releases from other facilities was at least two orders of magnitude lower (see Appendix H, Table H-32, of this EIS). This analysis suggests that there would be no serious long-term impact to Cattaraugus Creek water quality under the Sitewide Close-In-Place Alternative." But the releases would be two orders of magnitude greater. Doesn't that mean that something is wrong here?

- Page 4-24, 4.1.4.3, 2nd paragraph: "**Surface Water Flow and Quality** - The impacts of fuel, oil, or lubricant spills would be ~~mitigated~~ minimized by keeping the equipment in good repair and conducting maintenance operations in areas designed for such operations."

- Page 4-32, 4.1.5.3, 2nd paragraph: "EPA guidelines identify a 24-hour exposure level of 70 decibels or lower as the level of environmental noise that will prevent any measurable hearing loss over a lifetime. Likewise, levels of 55 decibels outdoors and 45 decibels indoors (or lower) are identified as preventing activity interference and annoyance."

- Page 4-33, 2nd paragraph: "During Phase 2, similar heavy diesel construction equipment operation would be expected. The duration of these activities would be expected to be ~~bounded by~~ the same duration as ~~of~~ the Sitewide Removal Alternative."

- Page 4-33, 3rd paragraph: "This noise would be barely audible above background sound levels in the area. Noise from this activity and other construction-type activities would occur during daytime hours and would not be a source of annoyance to nearby residents." It cannot be stated "what will be an annoyance". It could be said that the impact will be minimal, but the writers have no way of knowing what will be an annoyance. Someone could be working nights, sleeping during the day, have their windows open and find even minimal noise very annoying.

- Page 4-34, Table 4-9: The table states that there will be, "No impacts to Federal or State-listed endangered, threatened, or candidate species."

  This statement is made without caveat for Site-wide Removal Alternative, Site Wide Close-in-Place Alternative or Phased Decision-making Alternative Phase 1 and Phase 2. A categorical statement such as this cannot be made. It implies something of which no one can be certain because it can not be proven. For example, the Northern Harrier, Circus cyaneus is a NYS threatened species that has been recorded in the area. All that can be said is that every effort will be made to avoid any significant impacts to those species.

  The 2008 NYS Breeding Bird Atlas has surveyed this area. The project site falls within Block 1970A and a list of species for the site is provided (see attachment). Of a total of 87 species, there are 29 species which are recorded as Possible Breeding, 16 Probable Breeding, and 42 Confirmed Breeding.

  There will be inevitable disturbance to bird species that will occur through complete removal of the forest trees, and shrub layer. The primary way to minimize this damage,

especially to nesting and breeding resident birds, is to conduct the removal activities beginning no earlier than August 1. Most birds breed throughout May and June, and late-nesters and fledglings require undisturbed habitat throughout July. It is probable that August clearing activities will cause the least impact to resident species.

- However, migration begins in August, and from August through October, birds will be using the forest as a migratory stopover site. There will be no one season where the habitat is unused by wildlife, especially birds. However, in order to minimize the damage caused by clearing activities work should begin no sooner than August 1, and should be completed, or halted by March 15, when spring migrants return to breed.

- Page 4-34, 1st paragraph, Terrestrial Resources: "Wildlife in adjacent habitat could be disturbed by noise and increased human presence, which could cause some animals to temporarily move from the area, while others ~~would adapt~~ are more tolerant of human activities. Proper maintenance of equipment and restricting workers to the work zone would help ~~mitigate~~ minimize this impact."

- Page 4-35, 1st paragraph: What is the depth of topsoil currently in the Cesium Prong? How much contaminated soil will be removed? Will there still be enough top soil to allow vegetation to grow?

- Page 4-35, 1st full paragraph: "Prior to land-clearing operations, the areas to be disturbed would be surveyed for nests of migratory birds in accordance with the Migratory Bird Treaty Act. It might be necessary to undertake clearing operations prior to or after the breeding season to mitigate impacts to migratory birds."

  (This is essentially what we have just explained in the above commentary). Specific dates are necessary, which we have provided in previous comments, but this period of non-disturbance should be March 15-August 1. It is incumbent that specific breeding bird surveys be done by a qualified consultant in order that all known listed species are detected, and a list of all breeding birds is produced. Additionally, bird species using this area as stopover habitat during migration should be listed. Due to the Breeding Bird Atlas, we are aware of what species of birds can be expected, but a current survey should be provided by the applicant.

- Page 4-35, 2nd paragraph: "Impacts of clearing operations associated with the remediation of the undisturbed portion of the Cesium Prong would include the loss of less mobile species (e.g., mice, rabbits, snakes, and squirrels), as well as displacement of other more mobile species (e.g., birds and large mammals)." The statement identifies the loss of less mobile species. This is a very conservative statement. Some of those populations may be reduced, but it is unlikely that they will be eliminated.

- Page 4-35, 2nd paragraph: "It might be necessary to undertake clearing operations prior to or after the breeding season to minimize ~~mitigate~~ impacts to migratory birds. Indirect impacts to wildlife from increased presence of humans and noise could also disturb animals in adjacent habitat. Upon restoration of the site, it would once again be available

to wildlife." The habitat would be changed by the clearing operations so that there would likely be different species with different population sizes. Open fields would not be suitable habitat for squirrels or nesting habitat for most non-ground nesting small birds. Birds such as the Henslow Sparrow and the Short Eared Owl may find it to be suitable nesting habitat where it was not before.

- Page 4-36, 2nd paragraph: "~~Mitigation, including~~ Aappropriate erosion controls, would be installed and best management practices would be implemented to minimize soil erosion and sedimentation. As with the dams and reservoirs, specific requirements for fish management would be developed as part of the approval process prior to any actions taking place."

- Page 4-36, 4.1.6.1, Threatened and Endangered Species: No Federal or State threatened, endangered, or candidate species have been found to reside on the WNYNSC Site (see Chapter 3, Section 3.8.4) thus, there would be no impact to any listed species from the Sitewide Removal Alternative."

  How often has the site been surveyed and when was the last time the site was surveyed? This survey should be provided so that DEC biologists can examine it. Once again, it is somewhat false to state that because no listed species were seen during surveys that they are not present. Cooper's Hawk and Sharp-shinned Hawks are fairly regular denizens of wooded areas, and are both listed as state species of special concern. Northern Harriers have been recorded by the Breeding Bird Atlas as occurring in this block of habitat, and they are threatened. The best that can be said is that impact to all species will be minimized by judicious choice of the period when clearing will occur.

- Page 4-39, 1st paragraph: "On the basis of this screening analysis, it is concluded that long-term releases from the Sitewide Close-In-Place Alternative (assuming no unmitigated erosion) would not result in long-term ecological consequences." Prepositional phrases don't belong at the start of sentences. Same comment about the use of the term mitigation.

  It has been concluded, on the basis of this screening analysis, that long-term releases from the Sitewide Close-In-Place Alternative (assuming active erosion control continues to take place) would not result in long-term ecological consequences.

- Page 4-39, 4.1.6.3, 1st paragraph: Why do new temporary facilities have to be built? Should explain somewhere in the document why. Did not notice anything in document that explains the reason(s).

- Page 4-40, last two paragraphs: This is the correct way to talk about impacts rather than use the word "mitigate".

"These factors, plus the implementation of a site soil erosion and sediment control plan, would minimize potential indirect impacts to the Appalachian tiger beetle and cobblestone tiger beetle."

"If Phase 2 activities are similar to those undertaken under the Sitewide Close-In-Place Alternative, potential impacts to these two species would be minimized through the implementation of the site erosion and the sediment control plan (see Section 4.1.6.2)."

- Page 4-41, Historic Resources: "The possibility ~~to unearth~~ of unearthing previously undetected sites is greater near the banks of streams and rivers, where previous inhabitants tended to establish settlements."
- Page 4-52, Table 4-15: "Doses are peak annual doses coincident with one-time replacement of the permeable treatment wall, if necessary, and include doses conservatively projected from releases from WMAs that are not removed or closed-in-place during Phase 1 actions." Add "s"
- Page 4-52, Maximum Exposed Individual: Have any studies been done in the Cattaraugus Reservation with the Seneca Nation of Indians to determine cancer rates?
- Page 4-63, Top of page: "for the No Action Alternative. The peak annual dose to reasonably foreseeable offsite individuals due to ~~unmitigated~~ uncontrolled erosion would be in the range of about 60 to 130 millirem for both alternatives."
- Page 4-96, 3rd paragraph: The volume of high level radioactive waste (500 cubic meters) if divided into two subcategories does not equal their volume; low-level radioactive waste (210 cubic meters) and transuranic waste (280 cubic meters). Why?
- Page 4-97: "An additional 3.2 cubic meters (110 cubic feet) of Class A low-level radioactive waste would be generated annually during maintenance and surveillance of this orphan waste." What is this additional waste? Contaminated containers, handling equipment, leachate, soil, or what?
- Page 4-98, **Sitewide Close-In-Place Alternative:** Less than 3.2 cubic meters (110 cubic feet) of Class A low-level radioactive waste would be generated annually during maintenance and surveillance of this orphan waste. What is the nature of this additional waste?
- Page 4-98, **"Phased Decisionmaking Alternative:** Less than or equal to 3.2 cubic meters (110 cubic feet) of Class A low-level radioactive waste would be generated annually during maintenance and surveillance of this orphan waste." What is the nature of this additional waste?
- Page 4-101, **"4.1.12.1 Methodology and Assumptions:** Shipping packages containing radioactive materials emit low levels of radiation; the amount of radiation depends on the kind and amount of transported materials. DOT regulations require that shipping packages containing radioactive materials have sufficient radiation shielding to limit the radiation to 10 millirem per hour at a distance of 2 meters (6.6 feet) from the transporter." Is "low level" defined and used in the context of what amount of radiation can get out of a package? Otherwise the first sentence should be removed; just state the regulation.

- Page 4-107, **4.1.12.4, Sitewide Close-In-Place Alternative:** "If train transport was used, the total number of shipments would be about one-half of those made under truck-only transport (about 615 shipments)." Which is which? 1230 vs 615 or 615 vs 307
- Page 4-109, **4.1.12.5, Phased Decisionmaking Alternative:** "If train transport was used, the total number of shipments would be about one-half of those made under truck-only transport (about 6,300 shipments)." *Is 6,300 the bigger number or the smaller number?*
- Page 4-113, **4.1.13.2, Long-term Impacts:** Have any studies been done on cancer rates on the Seneca Nation of Indians reservation?
- Page 4-114, last paragraph: "bounding", Use a different word, maximum, largest, etc?
- Page 4-119, 4.3.4: "The downstream population estimates are also conservative because no credit is taken for radionuclide removal as part of water treatment systems, and it was assumed that in addition to direct water consumption, the water would be used to irrigate a local garden." Please explain how and why a water treatment system takes out radionuclides. What percentage is taken out?
- Page 4-123, 1st paragraph: "Cumulative impacts can also result from spatial (geographic) and/or temporal (time) crowding of environmental perturbations (i.e., concurrent human activities and the resulting impacts on the environment are additive if there is insufficient time for the environment to recover)."

  "Perturbations"! Just say disturbance. The word is more typically used to describe a change in the typical/normal movement of a celestial body. See previous comments about the readability of the document.
- Page 4-123, 3rd bullet: "The construction and operation of these facilities would result in a noticeable addition to local employment." Disagree that the operation of wind powered electrical generation towers would be a noticeable addition to local employment. Construction is short term and specialized so employment of local citizens at a noticeable level is also questioned.
- Page 4-123, 4.5.1: One impact not listed from past actions (or inaction) is the scope of additional contamination that resulted from the failure to clean up the groundwater plume when it was first discovered. The inability of the agencies to agree on cleanup should be discussed in this document. How much smaller would the plume be if remediation had been done in a timely manner? What is the added cost of this failure?
- Page 4-125, 5th bullet: Ellicottville has not issued approvals for the conversion to burning wood chips. The proposal appears to be problematic for Ellicottville.

- Page 4-129, 4.5.8, **Water Resources:** "Decommissioning activities at WNYNSC would not substantially contribute to adverse cumulative impacts to surface water resources, and would generally produce long-term beneficial results after decommissioning." How would long term beneficial results occur? Why is there so much discussion about the construction of Route 219? What exactly does this have to do with West Valley? Where is the relevance?
- Page 4-130, 1st paragraph: "These actions will result in temporary impacts to water resources which will subside once construction activities are complete (USDOT and NYSDOT 2003b)." There will be permanent impacts resulting from the streams being piped (culverted). Culverts are not the natural state of a stream so there will be permanent impacts however minimal.
- Page 4-130, 3rd paragraph: "For example, redirecting the runoff into streams having higher rates of flow will result in the contaminants being more diluted and less likely to impact the overall water quality of the stream." This sounds good but has the review of the 219 plans indicated this will happen? Moving surface water into different "sub-basins" can have long term implications to both the watercourse receiving more water and the one receiving less. The stream dynamics will change for both. So while diluting may have a positive "chemical" aspect there are potentially greater negative impacts such as increased erosion, gradient changes, water temperature changes and habitat changes related to fish migration, spawning, makeup of populations and density.
- Page 4-132, 4.5.10, 5th paragraph: Research has indicated bats do not necessarily have to be struck by rotating blades to be killed. A bat's lung is very delicate and can suffer enough trauma from the change in air pressure around a rotating blade to cause the lung to hemorrage killing the bat. The case does not appear to be the same for even the smallest of birds which have more robust lungs.
- Page 4-137, last paragraph: "Institutional controls are considered an important part of any alternative, and act to ~~mitigate~~ *(reduce or minimize)* potential impacts. However, the unlikely loss of institutional controls would potentially lead to ~~unmitigated~~ *uncontrolled* erosion and/or intruders within site boundaries and would result in radiological dose impacts to humans. The ~~unmitigated~~ *uncontrolled* erosion case would lead to doses approaching or exceeding 500 millirem per year for some individual receptor scenarios.

  There is no mention of invasive species on-site nor a discussion of preventing their occurrence /spread.

Book: *Chapter 5*

- Page 5-11, "***Coalition on West Valley Nuclear Wastes & Radioactive Waste Campaign and DOE Stipulation of Compromise Settlement***": States that an action was filed in 1996 but that they entered into a stipulation in 1987. Is that correct?
- Page 5-14: footnote 2 is not shown at the bottom of the page

Book: *Chapter 6*

- Page 6-6, 6.4, 3rd bullet: "Limit unnecessary idling times on diesel-powered engines." New York State Conservation Law limits the operation of certain on-road heavy duty diesel powered vehicles. Off road vehicles such as earth movers are exempt from the regulation. Over the road trucks that would visit the site would be subject to the regulation.

  6 NYCRR Part 217: Motor Vehicle Emissions
  No person who owns, operates or leases a heavy duty vehicle including a bus or truck, the motive power for which is provided by a diesel or non-diesel fueled engine or who owns, leases or occupies land and has the actual or apparent dominion or control over the operation of a heavy duty vehicle including a bus or truck present on such land, the motive power for which said heavy duty vehicle is provided by a diesel or non-diesel fueled engine, shall allow or permit the engine of such heavy duty vehicle to idle for more than five consecutive minutes when the heavy duty vehicle is not in motion, except as otherwise permitted by section 217-3.3 of this Subpart.

- Page 6-7, 6.5, Ecological Resources: "For example, prior to land-disturbing activities, the proposed site would be surveyed for nests of migratory birds in accordance with the Migratory Bird Treaty Act. Although threatened and endangered species have not been recorded on the site, any mitigation actions deemed necessary through the consultation process regarding state and federally listed threatened and endangered species would be implemented if such species were recorded onsite in the future. (For applicable regulatory requirements, see Chapter 5, Section 5.6.1, Ecological Resources Consultations.)" It is against the law to interfere directly or indirectly with the nesting of any birds covered by the Migratory Bird Treaty Act whether they are threatened or endangered or not.

- Page 6-7 Chapter 6.5, 1st paragraph: "For example, prior to land-disturbing activities, the proposed site would be surveyed for nests of migratory birds in accordance with the Migratory Bird Treaty Act. Although threatened and endangered species have not been recorded on the site, any mitigation actions deemed necessary through the consultation process regarding state and federally listed threatened and endangered species would be implemented if such species were recorded onsite in the future."

  See comments for Page 4-34, Table 4-9. It is imperative that the client must insure that all bird species are protected through the Migratory Bird Treaty Act. Throughout this proposal, it is apparent that the only species given serious consideration are state listed species. However, the MBTA prohibits the destruction, harassment, or overall 'taking' of any bird species. That includes disruption of the nest, the eggs, the nestlings, or the bird itself. In other words, every effort must be made to minimize harassment of the numerous species of birds which occupy the forests in which work is proposed, and all bird species must be considered.

- Page 6-7, 6.5, 2nd paragraph: "Options to mitigate direct impacts to wetlands could range from the reestablishment of affected areas to the creation of new wetlands either on- or off site." *Remove the "-" after the word "on".*

Book: *Chapter 11*

- Senator Clinton and Representative Reynolds no longer hold elective office.

Book: *Glossary*

Comments:

- Page 8.2, "Bedload": definition should read as: *Soil, rock particles or other solid debris moving along the bottom of a stream in traction by rolling, sliding or saltation (jumping) and in general not supported by the water.*
  "…"silt load" carried by suspension." *Both clay and silt are carried by suspension.*

- Page 8.2, "Best Management Practices", first sentence: Structural, nonstructural, and managerial techniques, other than effluent limitations, to prevent or reduce pollution of surface water.

- Page 8.3: *"Clay" should be added to the definitions. Is clay used in containment or other specific ways that should be described? Bentonite?*

- Page 8.5, "Environmental Impact Statement (EIS)", first sentence: "…significantly affecting the quality of the human environment." *Shouldn't it read "...significantly affecting the quality of the environment"?*

- Page 8.5, "Erosion": should read as: *Nature processes which include weathering, dissolution, abrasion, corrosion and transportation, by which material is worn away from the earth's surface.*

- Page 8.8, "Ion Exchange": *Definition not well written.*

- Page 8.9, "Mitigative Measures: Those actions that avoid impacts altogether, minimize impacts, rectify impacts, reduce or eliminate impacts, or compensate for the impact." While this definition may come out of the dictionary and law/regulation is does little to succinctly describe what is occurring in each instance that it used. Specific words should be used: aoid, reduce, replace, etc.

- Page 8.10, "Modified Mercalli Intensity Scale", 2nd sentence, 2nd parenthesis: Damage total. *Should is read as "total damage"?*

- Page 8.10 "orphan waste": Waste that cannot currently be disposed of in an established or planned permanent disposal facility. *Why can't it be disposed of? It is not enough to just say it can't be disposed of.*

- Page 8.11, "Radioactive Waste", 2nd sentence: "Waste material that contains source, special nuclear, or by-product material is subject to regulation as radioactive waste under the Atomic Energy Act." *What does "special nuclear" mean?*

- Page 8.13, "Silt Load": *Clay and silt are carried in the suspended load. The defined word should be "Suspended Load".*

- Page 8.13, "Sole Source Aquifers": *Poorly written. Should be rewritten.*

- Page 8.13, "Solid Waste", 2nd definition: …sludge from a waste treatment plant… *Should read as …sludge from a waste water treatment plant.*

- Page 8.13, "Solvents": *Should include that water is the universal solvent.*

- Page 8.13: *"Special Nuclear" should be added to the list of definitions.*

- Page 8.14, "Stream Terrace": Originally occurring at or below the level of the stream, the stream terrace is exposed as stream downcutting occurs. *How can it occur below the level of the stream? Glaciers are probably the most common cause of streams aggrading. Once the stream bedload returns to non-glacier conditions the stream will cut through the alluvial deposits, degrading. Terraces can then be created.*

- Page 8.15: *Should there be a definition for "Visitor"? – Individuals on site for reasons such as regulatory oversight, as representative of agencies with permit authority for activities on-site.*

Book: *Appendix C*

- There were fourteen references to "clean fill", seventeen to 'clean material" twelve to "other clean material" and twenty two to "appropriate backfill material" found in Appendix C. Please describe exactly what these different items are.

- There are twenty eight references to "contour to grade". In every case will seeding, mulching and erosion control take place? How much time will elapse between the placing of these various items and seeding and mulching? Immediately after, within 24 hours or 48 hours?

- Page C-63, C.3.1.3.1, 3rd paragraph: "The steel shield walls and roof of the STS Valve Aisle would be removed remotely using a telescoping mast equipped with cutting, grappling, and lifting end-effectors."

ef·fec·tor (ĭ-fĕk'tər) n.

1. A muscle, gland, or organ capable of responding to a stimulus, especially a nerve impulse.

2. A nerve ending that carries impulses to a muscle, gland, or organ and activates muscle contraction or glandular secretion.

3. *Biochemistry* A small molecule that when bound to an allosteric site of an enzyme causes either a decrease or an increase in the activity of the enzyme.

4. *Computer Science* A device used to produce a desired change in an object in response to input.

Used 15 times in this appendix. While the reviewer understands what is trying to be said, the word does not seem to really the use that is intended.

- Page C-77, C.3.1.7.6: It is not clear from the description if all the excavated areas would remain open and then all be filled at one time. Are they all under cover until the holes are filled?

- Page C.3.1.12.3, Railroad Spurs: "The removed rails and tracks would be disposed of as construction and demolition debris." Ties typically contain creosote to extend their life. There is no mention of ballast which is used to support the track and provide drainage. Is there ballast, and if so, how will it be disposed of, if at all?

- Page C-134, C.4.4, 1st paragraph: "It would also be capable of receiving wastes in packaged form, decontaminating the packages, if necessary, classifying them, temporarily storing them, and loading them onto trucks or railcars for offsite transport." Could any of these received wastes come from off-site?

- Page C-134, 3rd paragraph: Why would a second floor be created for office space? No piping for potable water? or sewers?

- Page C-137, C.4.4, 1st paragraph: "A receiving dock, separate from the shipping dock would also be provided for reception of process materials, such as empty boxes and drums, and prepackaged wastes." Where would the prepackaged wastes be coming from? Any from offsite?

- Page 138, C.4.4 2nd paragraph: "One component of the waste retrieval process that involves a high level of uncertainty is the retrieval of wastes from the Nuclear Fuel Services deep holes, using primarily a telescoping boom with various end effectors."

  Suggest changing end of sentence to read "…telescoping boom with various attachments/tools at the end."

- Page C-139, C.4.5, 7th paragraph: "In general, *scabling* waste and demolished equipment…" Please use a word that the general public can understand.
- Page C-145, C.4.6.8, 2nd paragraph: This paragraph is also found in C.4.4 on page C-138. Does not seem to belong here.
- Page C-150, C.4.8.3: Plants are tenacious. How will all manner of plants be dealt with when they start growing on top of the cap?
- Page C-155, C.4.13, Erosion Control Structures: All of the man made structures will change the dynamics of the area. What is the projected design life of these structures? Notwithstanding design life things can happen at any time that require attention. How will these structures be maintained as everything around them erodes? If not maintained, diversion ditches will immediately begin to be populated by trees and shrubs. Plant litter will start to fill the ditches which will get wetter. Eventually, the ditches will be overtopped during a storm event with the berms ultimately breaching.

  Straightening a stream entails increasing the gradient and therefore erosional forces.
- Page C-157, Diversion Ditches: What is the "maximum probable flood"? Water Control Structures What is the "maximum probable flood"?
- Page C-159, last sentence: "Finally, the stream flow would be rediverted back to the armored streambed." There is no discussion about diverting the stream before the channel is excavated.

Book: *Appendix D*

- Page D-13, D.3.1.3, **Receptors Inside the Current Western New York Nuclear Service Center Boundary**, 2nd paragraph: "In particular, direct intrusion into buried waste is assumed to not occur in the erosion case, because erosion-driven exposure of the waste involves development of steep slopes and concentrated flow as the area moves within the rim of a creek." Exposure would occur as the creek rim advanced (due to erosion) into/toward the Disposal Area. The disposal area would not move toward the creek rim. The creek rim moves into the Disposal Area.

  Children/teenagers who lived in the house where the excavation took place would likely be more exposed than their residential farmer farther. Aren't children more susceptible to the effects of radiation/chemicals than adults?

Book: *Appendix E*

- Page E-33, E.3.4.1, Thick-bedded Unit, 2nd paragraph: "These estimates employed artificial neural network methods. Data from locations with both hydraulic conductivity measurements and soil textures were used to train a Radial Basis Network or RBN network Soil texture data from locations without conductivity determinations were run then through the trained network to produce estimates for those locations.

  Should there be a period to end a sentence after "RBN network"?
- Page E-33, E.3.4.1, 2nd paragraph, last sentence: "The soil textures used for training the network and subsequently predict addition hydraulic conductivities consisted of both laboratory determines textures extended by estimates from site geologists using boring log descriptions (Cohen 2006)." Sentence not well written. The use of the word "both" does not seem correct. Should "determines" be determined?

- Page E-37, E.3.4.1, 1st paragraph: "Well locations are scattered about the site, mostly on the South Plateau and the average distance between locations is hundreds of feet—likely exceeding the scale of spatial any structure in the unit."

  Spatial any structure? Should it be *exceeding the scale of any spatial structure in the unit*?

- Page E-37, E.3.4.1, 1st paragraph: "Although not completely optimal, sensitivity of model results to changes in the parameter value appears low and the initial input value has not been changed." Should it say, "…even though the initial input value has not been changed."? Confusing.

- Page E-37, E.3.4.1, Slack-water Sequence, 2nd sentence: Do they mean that only 12 locations were used after 1999 or were some of the wells plugged?

- Page E-37, E.3.4.1, Slack-water Sequence, 2nd paragraph, 1st sentence: Are they talking about data from 12 wells? or 12 pieces of data?

- Page E-46, E.3.5, Automated Calibration, 3rd paragraph, 2nd sentence: "The automated-calibrated model yielded the a head RMSE of 4.2 meters and a seeps RMSE of 1.04 kilogram per second, but weighted RMSEs were 5.2 meters and 1.11 kilograms per second, respectively" Should "the" be removed in, "yielded the a head RMSE"?

- Page E-51, E.3.7.1, last paragraph, 2nd last word on page: "Unperturbed" poor word usage given generally accepted meanings. A much better choice would be "Undisturbed".

- Page E-53, E.3.7.1, 3rd paragraph, 4th sentence: "unperturbed" see immediately above for comment on word definition. Is the author in this case trying to say a model based upon natural conditions where there are no human constructed facilities or disturbances on the site?

- Page E-74, E.4.1.2, 1st paragraph: "To represent these features the hydraulic conductivities of the tanks and sediments of Lagoons 2 and 3 are assigned values of hydraulic conductivity of 1×10 centimeters per second while the combined ~~affects~~ *effects* of barriers at Lagoon 1 ~~is~~ *are* represented by assignment of a value of 1×10 centimeters per second to the material at Lagoon 1."

  The phrase "Waste Tank Farm Tanks" was used 9 times in Appendix E. the second use of "tanks" didn't seem to fit well in several cases. It would be better to leave it out.

- Page E-76, E.4.1.3, 1st paragraph: "The cross-sectional structure of the aquifer is ~~that~~ represented in Figures E–33 through E–36 with the same vertical discretization as the historical conditions case."

- Page E-76, E.4.1.3: "Flow balances predict flow from the ~~prior area of the~~ location of the removed Main Plant Process Building through the slurry wall to the west, that is, towards the Waste Tank Farm and from the area of the lagoons both to the east towards Erdmann Brook and to the west through the slurry wall towards the northern extension of the North Plateau Plume." This sentence is too long. It should be turned into at least two sentences.

Book: *Appendix F*

- Pg 53, F.3.2.5, 2nd paragraph: "One element that would likely be improved by a more ~~through~~ *thorough* calibration approach is the degree of landscape dissection." Wrong word.

Book: *Appendix G*

- Page G-4, G.2: "Cumulative impacts of a mixture of radionuclides are estimated as the sum of dose or risk…" Has any thought been given to the likelihood that when several "contaminants" are mixed together the impact is greater than the sum or has this been disproved in studies?

- Page G-20, G.3.2.2, 1st sentence: "…include a tumulus covering an above-ground…" Tumulus – an artificial hillock or mound (as over a grave) esp: an ancient grave.

- Page G20, G.3.2.2: "The primary features of the tumulus are soil, drainage, and clay layers designed to minimize flow rate of water reaching the wasteform." *…designed to minimize the amount of water penetrating the cover* or *..reaching the waste..*

- Page G-23, G.3.2.3: Why will groundwater flow through the tanks? Is this because the time period is so long that the tanks have failed or that holes for piping in the tanks have failed?

- Page G-39, G.4 Intruder Scenario Models: Is an intruder by definition a human? Did not find "intruder" in glossary. Why use the hiker who comes once or twice? That seems like

a minimal exposure. Why not children playing in the "neighborhood" who are the children of the resident farmer, riding dirt bikes, atvs, and other types of play? Are children more impacted by radiation and chemical exposures? Children are also drawn to water, to play in, build dams, etc.

Shouldn't largest accident dose be from a terrorist attack? Or is that not considered in accident category? Is there a listing for intentional vandalism/terrorism?

What about "dumpster divers" looking for resources?

Book: *Appendix H*

- Page H-25, H.2.2.1, 1st paragraph, last sentence: "While decrease in retention of elements on cement with degradation has been reported (Bradbury and Sarott 1995), high retention of actinide elements is reported for even for degraded cements." This sentence needs to be rewritten.

- Page H-25, H.2.2.1, 2nd paragraph, 2nd sentence: "Characterization of grouted materials has established that cesium and strontium are retained ~~primary~~ *primarily* on the aggregates used in the concrete *(add "," or end sentence here)* while other elements are retained both on the aggregate and on the calcium silicate hydrogel matrix of the concrete (Stinton et al. 1984)"

- Page H-25, H.2.2.1, 3rd paragraph: Prepositional phrases at the beginning of sentences make them awkward and harder to understand.

- Page H-26, H.2.2.2.1, Total Effective Dose Equivalent, 2nd paragraph, 2nd sentence: "There is an earlier, subsidiary SDA peak occurring at about 1,000 years, and a few minor peaks associated with the." The sentence needs to be finished.

- Page H-33, H.2.2.2.1, Hazard Index, footnote 7, 3rd sentence: "*If the hazard quotient for an individual chemical or the hazard quotient for a group of chemicals exceeds unity, the chemical(s) may produce and adverse effect, but normally this will require a hazard index or quotient of several times unity.*" The word "and" should be changed to "an".

- Page H-35, H.2.2.2.2, 2nd sentence: What does a Seneca Nation of Indian receptor mean? Is the receptor a member of the Seneca Nation? There are Cayuga Nation members that live on Seneca Nation land. Please see all other "Seneca Nation of Indians receptor".

- Page H-35, H.2.2.2.2, 1st paragraph, 2nd sentence: The use of the word "raised" means that someone/something has taken an active role in at least part of the life cycle of the fish that are being consumed. Fish are not normally raised in Cattaraugus Creek. Fish found in Cattaraugus Creek typically are raised in a hatchery and then stocked or are native to the creek. The word should be changed to "living and or stocked". The word "raised" is used seven times in this appendix.

- Page H-51, H.2.2.3.3, Total Effective Dose Equivalent, 3rd paragraph, 1st sentence: "The results presented in Table H–47 show that the total peak annual dose to the Cattaraugus Creek receptor due to groundwater releases would s be below 25 millirem per year for both alternatives." Remove single letter "s".

- Page H-53, H.2.2.3.3, 1st sentence: No period at the end of the sentence.

- Page H-54, H.2.2.3.3, Controlling Nuclides and Pathways, 1st paragraph, 1st sentence: The sentence starts "It is of interest…." It is of importance or necessary to understand.

- Page H-57, H.2.2.3.3, Hazard Index, Table H-52, footnote a: Why does the, "limited information …. suggest…."? What is this based on? Lack of information means you should plan for worst case.

- Page H-58, H.2.2.3.3, Table H-53, footnote b: Same comment as immediately above about "limited information".

- Page H-61, H.2.2.3.3, last sentence: "For the No Action Alternative, the principal difference from Cattaraugus Creek is that the dominant nuclides and pathways for the principal contributor (the Waste Tank Farm) is now strontium-90 via fish rather than via drinking water."

  "Difference from Cattaraugus Creek"?? Is it supposed to mean the dominant pathway for strontium-90 in Cattaraugus Creek is now fish rather than drinking water?

Book: *Appendix I*

- Page I-13, I.4.3.2, 1st sentence: "Source term(s) (that is, the quantities of radioactive material released to the environment over a given period) for the No Action Alternative normal operational releases were based on release quantities identified in Annual Site Environmental Reports, which can be found on the Internet at www.wv.doe.gov and are summarized in a technical report (WSMS 2008e)." This is one sentence. It states that Annual Site Environment Reports can be found on the internet and that they are summarized in WSMS 2008e. The single sentence is misleading since one would expect everything in the sentence to be on the internet. Since the summary is not on the net it should tell the reader where to get it.

- Page I-18, I.4.3.5: The paragraph states that an MEI is a member of the Seneca Nation of Indians. The statement should also identify the possibility that it could be a member of the Cayuga Nation who reside on Seneca Nation land. Not all Native Americans living on Seneca Nation land are Senecas.

- Page I-20, I.4.3.6, 1st full paragraph: same comment as immediately above regarding Cayuga Nation members

- Page I-22, I.5.3: Why does the list only identify structural failures from seismic activity? Were other weather related events such as heavy snow load or high winds or possibly tornadoes considered?

- Page I-23, I.5.3: "Chemicals at the WVDP ~~or~~ intended for decommissioning activities are not capable of reaction with chemicals already at the WVDP or with each other in such a way that could initiate any accident releasing radionuclides."

- Page I-23, I.5.3, 3rd paragraph: "The seismic event is also assumed to fail any isolating or confinement covers around the high-level radioactive waste tanks."

  Rewrite to read: The seismic event is also assumed to cause any isolating or confinement covers around the high-level radioactive waste tanks to fail.

  or:

  The seismic event is also assumed to compromise any isolating or confinement covers around the high-level radioactive waste tanks.

- Page I-41, I.5.8, last paragraph, 5th line: "For the chemicals listed in Table I-26:"- Should be Table I-28

Book: *Appendix J*

- Page J-33, J.11.4, last paragraph, 1st sentence: What does "State-of-the-art computer codes" mean? Codes for what?

Book: *Appendix K*

- Page K-1, K.1, 1st paragraph, 2nd sentence: "Air quality impacts were assessed by estimating <u>onsite and offsite concentrations of criteria</u> and toxic air pollutants of environmental concern and comparing them to Federal and State health-based ambient air quality standards." What does the underlined mean?

Book: *Appendix M*

- Page M-17 M.4.2 2nd to last paragraph: The word mitigate is used in the broad sense. A much better choice would be "minimize".

- Page M-12, M.3.1.2: The word "buffer", while it may be descriptive, is not used in the regulations. The proper term is "adjacent area", which is used in the regulation, 6 NYCRR Part 663.2(b). The adjacent area is at least 100 feet wide but may be broader where necessary to protect and preserve a wetland. The word "buffer" was used six times in this appendix. Five of those usages were with regard to NYS freshwater wetlands and should be corrected.

- Page M-14, M.3.2.1, Last sentence: "Additionally, the loss of institutional controls leading to unmitigated erosion of the NDA and SDA (i.e., no credit is taken for monitoring and maintenance of erosion control structures) is analyzed in Appendix H." Is the sentence intended to say "uncontrolled" erosion?

- It is not clear if the section states that Corps Permits would be required for federal wetland disturbances (when they are not state wetlands). Additionally, the Corps may require Water Quality Certification be issued by New York State if the activity has not been pre-certified by the DEC.

- Page M-16, M.4.1, 4th paragraph, 2nd sentence: "These measures include adherence to the State Pollutant Discharge Elimination System (SPDES) General Permit for construction activities occurring in an area of five acres or greater." The area subject to regulation under this program is now one acre or greater.

- Page M-17, M.4.2, 1st paragraph: "A Sitewide Stormwater Pollution Prevention Plan for controlling runoff and pollutants from the site during and after construction activities would be required to obtain permit coverage under NYSDEC's General Permit (~~GP-02-01~~) for Stormwater Discharges from Construction Activities." Replace with GP-0-08-001

- Page M-17, M.4.2, 2nd paragraph: "Prior to the disturbance of any wetland, a Section 404 permit would be acquired from the U.S. Army Corps of Engineers along with a Section 401 Water Quality Certificate from the State of New York." This statement is misleading. In cases where a Corps Nationwide Permit has been pre-certified by New York State an individual Water Quality Certification is not required.

Book: *Appendix N*

- Page N-1, N.2: Explosive devices are discussed but it is not clear if a scenario with a fire is part of any of the on-site scenarios. (Fires are discussed in transportation situations) Would a fire that could not be controlled by water (phosphorous?) with a resulting smoke plume disperse more material over a greater area?

Book: *Appendix P*

- Page P-2, P.3, recreational hiker: Why was this class of individual chosen? Was it for the type of activity or for the location that the activity takes place? If it was for the activity one would think the exposure was minimal and why bother except to show the small amount of exposure. If the attempt was to find some type of individual that would be in a specific location then there is a better choice. Children/youths would likely be in the same area and could have potentially more exposure by operating off road vehicles or playing in the stream.