



**NYSERDA New York State Energy Research and Development Authority**

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April 7, 2010

Mr. Bryan C. Bower, Director  
U.S. Department of Energy  
West Valley Demonstration Project  
10282 Rock Springs Road  
West Valley, NY 14171-9799

Dear Mr. Bower:

**SUBJECT:** New York State Energy Research and Development Authority (NYSERDA) Comments on the *Phase 1 Characterization Sampling and Analysis Plan for the West Valley Demonstration Project*

NYSERDA is providing the enclosed comments on the Department of Energy's (DOE) *Phase 1 Phase 1 Characterization Sampling and Analysis Plan for the West Valley Demonstration Project*, dated February 3, 2010.

NYSERDA respectfully requests that DOE provide a written response to the enclosed comments.

Any questions regarding the enclosed comment package should be directed to Paul L. Piciulo, Ph.D., at (716) 942-9960 extension 4378.

Sincerely,

WEST VALLEY SITE MANAGEMENT PROGRAM

Paul J. Bembia, Director

PLP/amd

Enclosure:

1. NYSERDA Comments on the *Phase 1 Characterization Sampling and Analysis Plan for the West Valley Demonstration Project*

PJB/10amd020.plp

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Messr. Bryan C. Bower

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**NYSERDA Comments on the *Phase 1 Characterization Sampling and Analysis Plan for the West Valley Demonstration Project***

**April 7, 2010**

#	<i>Page/Section/ Paragraph/Line/Bullet.</i>	<i>Comment</i>	<i>Reviewers Proposed Resolution</i> (If your comment is a point of clarification it probably doesn't need a proposed resolution.)
<b>Comments on Chapters</b>			
1.	General Comment	The Characterization Sampling and Analysis Plan (Plan) uses the terms “surface soil,” “surficial soil,” “subsurface soil,” and “buried soil.” The use of the term surface soil in the Plan should be consistent with usage in the Phase 1 Decommissioning Plan (DP). Specifically the DP defines surface soil as the depth interval 0 – 1 m. Care should also be taken when using the term subsurface soil as the DP defines subsurface soil as soil deeper than 1 m, while the Section 6.6 of the Plan defines buried contamination as soil deeper than 1 m. The interchange of the terms can create confusion.	Consistent use of the terms “surface soil,” “surficial soil,” “subsurface soil,” and “buried soil” throughout the Plan will avoid confusion.
2.	5/Sect. 2.1/Para. 1/Line 2	The sentence reads “ <i>The level and vertical/lateral distribution of contamination in Erdman Brook and Franks Creek sediments with the WVDP premises are not known.</i> ” Change the word “with” to “within.”	Correct the typographical error.
3.	6/Bullet #14/Line 5	The text states that if the subsurface contamination data collected as part of the Permeable Treatment Wall (PTW) project “ <i>are considered insufficient for the WMA 1 and WMA 2 barrier wall design, then additional subsurface data will be collected from these areas.</i> ” What criteria will be used to determine whether the data are sufficient (or insufficient) for the barrier-wall design?	Describe the process and/or criteria used to determine whether PTW contamination data are sufficient to support barrier wall designs.
4.	8/Sect. 2.3/Para. 3/First Bullet	The description of Waste Management Area (WMA) 2 refers to the excavation of Lagoons 1, 2 and 3; however, Lagoons 4 and 5 also reside within the scope of Phase 1 decommissioning work.	Add language to the WMA 2 description to more closely follow the scope discussed in the Phase 1 DP.
5.	9/Sect. 2.3/Para. 4/Fourth Bullet	Briefly describe the construction activities planned for the high-level waste canister storage facility within WMA 6.	Insert language pertaining to the construction activities that will take place within WMA 6.
6.	15/Sect. 3.3/Line 1	Will the Quality Assurance Project Plan be provided to NRC for review and comment?	Respond to question.

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7.	24/Table 2	Verify the data presented in "Table 2: ROI Samples Results from Three Locations (pCi/g)." Specifically, the values identified for GP 78 and GP 30 appear to be in error for Sr-90. Also, include the other Geoprobe locations where expanded Radionuclides of Interest (ROIs) exist from the 1998 sampling effort, or provide the technical rationale as to why these data locations were omitted.	Verify and revise the data presented in Table 2. Include other Geoprobe locations where expanded ROI sample results exist.
8.	29/Sect. 6.5/Third Bullet	Section 6.5 discusses the process that will be used to determine the extent of surface soil contamination. Specifically, if areas are identified from the gamma walkover survey (GWS) data that clearly indicate surface contamination above the cleanup guidance (CG) for the entire area/unit (i.e., CG <sub>w</sub> ), additional sampling will be conducted to define the areas of elevated contamination and the lateral extent of this contamination. This bullet states that "very limited sampling" will be conducted to confirm GWS findings.	Clarify the term "very limited sampling." Will samples be collected at 0-15 cm and 0-1 m? Describe how the sampling process will ensure that the extent of contamination exceeding CG <sub>w</sub> has been identified for the area/unit.
9.	30/Sect. 6.5/First Bullet/Line 3	In addition to areas such as hardstands and paved areas, GWS data may be inconclusive in areas where the soil has been reworked or contamination may have been covered by clean soil.	Revise text to read "areas where surface cover limits the utility of GWS such as hardstands, paved areas, <u>and areas where surface soils have been reworked or covered.</u> "
10.	31/Sect. 6.5/Second Bullet/ Line 2	The second line states that exceptions to using the surface soil CG requirements are " <i>well-defined portions of Erdman Brook and Franks Creek within the WVDP premises.</i> " However, the text never provides alternative cleanup criteria for the portions of Erdman Brook and Franks Creek. Presumably, as per the text, the " <i>sediment</i> " CG requirements would apply to these exceptions.	Define the exact cleanup criteria that would apply to the "well-defined portions of Erdman and Franks within the WVDP premises."
11.	31/Sect. 6.5/Para. 2/Second Bullet	The description for drainage features does not address the old sewage treatment drainage that is identified elsewhere in the document.	Clarify how the old sewage treatment drainage would be addressed under the Plan.
12.	31/Sect. 6.5/Para. 2/Second Bullet/Last Line	A "0 - 1 sample" is described without providing any units.	Insert the correct units (meters).
13.	34/Sect. 6.6/Fifth Bullet	This bullet states that ". . . <i>the initial soil samples from a location will be analyzed for all 18 ROIs.</i> " In addition, the	Clarify how "selected cases" are chosen and identify what criteria are used to determine if additional analyses

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		additional 12 potential ROIs will also be analyzed "in selected cases." Define the term "selected cases" and clarify what criteria will be used to determine if additional analyses are performed.	are to be performed. A discussion of the criteria used in the selection process would assist the reviewer in understanding the basis for this statement. For example, are the cases selected based on process knowledge of the activities performed in the area/unit, etc.?
14.	37/Lines 1-4	It is unclear why only one discrete sample will be collected for the stream area extending from the confluence of Erdman Brook and Franks Creek to the WVDP fence line, since the length of that area is about 200 ft long. Also, if the sample yields a result above background, wouldn't it be consistent with the balance of the creek sampling to collect and analyze a sample from the 0 to 1 m depth interval?	Provide the rationale as to why only one discrete sample is being collected as being representative of the sediment contamination in the specified area of the stream, and why a sample would not be collected at depth if the surface sample is above background. Also, clarify the criteria to be used for selecting the sample location, and explain how this sample location is representative of heaviest sediment contamination in the 200-ft-long area.
15.	40/Sect. 6.8/First Bullet	This bullet states that " <i>If buried infrastructure of potential concern is identified that intersects the planned WMA 1 or WMA 2 excavation footprints, one of the trenches used to expose the buried infrastructure will be along the planned excavation boundary and evaluated for the presence of adjacent soil contamination.</i> "	Revise this bullet and expand the lateral/vertical extent of these trenches to outside the WMA 1 or WMA 2 excavation footprint to ensure that all potential contamination along this buried infrastructure has been identified.
16.	40/Sect. 6.8/Para. 1/Line 2	The following sentence is awkward: ". . . contamination does exist <u>of the</u> opposite the excavation footprint for slurry wall footprints."	Correct the typographical error.
17.	41/Sect. 6.10	Contamination status of all soils that may be affected by Phase 1 construction needs to be determined. Specifically, prior to using an area as a soils lay-down area, which would bury the existing land surface, contamination status should be determined and documented for surface soils greater than 15 cm as well as subsurface soils.	Revise this section to include evaluation of subsurface soils and surface soils greater than 15 cm to determine contamination status prior to use as a lay-down area supporting construction needs.
18.	50/Sect. 7.1/Para. 3/Line 1	Provide an approximate slope angle (45 degrees?) for the southern wall of WMA 2 similar to the discussion of the WMA 1 sides.	Provide an approximate slope angle for the southern side of the WMA 2 excavation.
19.	52/Sect. 7.1/Para. 2	This section should include a description of the actions that will be taken if contamination above the cleanup standards is identified in the sloped soil walls of the excavation in WMA 1. Specifically, if contamination is identified, but	Provide language in this section that identifies how lateral contamination, if found in WMA 1 during Phase 1 activities, will be documented for inclusion in the Phase 2 DP process.

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		the full lateral extent of the contamination is unknown and limited due to the sheet pilings, the potential for lateral contamination should be documented and continued in the Phase 2 DP.	
20.	58/Sect. 8.2/Third Bullet; 59/Sect. 8.3/Para. 1	Clarification is needed regarding the 20 composite samples (10 at 15-cm soil depth and 10 at the 1-m depth). Specifically, Section 8.2 identifies that one sample from each of the original sample depth locations will be selected and analyzed at random for the 18 ROIs and the additional 12 ROIs; yet Section 8.3 states that only the 0-15 cm depth discrete sample will be analyzed at random for the 18 ROIs and the additional 12 ROIs.	Revise Section 8.3 to be consistent with Section 8.2, including the 15 cm - 1 m depth discrete random sample for these analyses.
21.	59/Sect. 8.3/Para. 1	This section states that surface soil sample results are considered " <i>inconsistent with background</i> " if the activity concentrations exceed their 95% Upper Tolerance Level (UTL) " <i>by more than three times the reported error associated with the result.</i> " Using the 95% UTL in addition to three times the uncertainty for the anthropogenic surface soil radionuclides, could potentially create much larger background concentration levels for the nonnaturally occurring radionuclides.	Provide the technical rationale for using the 95% UTL in addition to three times the uncertainty for the anthropogenic surface soil radionuclides.
22.	83/Sect. 11.5/First Bullet	Additional information regarding how each control chart is maintained should be included in the text; specifically a description of how biased conditions, trends and out-of-control situations, etc. are documented.	Clarify how each control chart will be maintained and describe what documentation will be included for each detector.
23.	87/Table 5	Target sensitivity values for plutonium are incorrect in the footnotes. The notes state that the reported value in the table is " <i>25% of background for naturally occurring radionuclides.</i> " A naturally occurring background value does not apply to plutonium; the correct footnote should be " <i>2</i> " or 10% of the most restrictive radionuclide-specific cleanup goal.	Amend the references to footnotes for the plutonium values listed in Table 5. Also, parentheses are missing for some footnotes in the Table.
24.	89/Sect. 13	Will management of the characterization data include GIS mapping similar to that described in Section 5.0 for the	Revise the text to more clearly describe characterization data storage/management.

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		buried infrastructure inventory?	
25.	92/Sect. 14.0/Para. 1	Clarification of the corrective actions that will be conducted if performance falls outside of expected ranges is needed for this section.	Describe the types of corrective actions that will be undertaken when " <i>performance falls outside of expected ranges.</i> " In addition, how is the definition of performance falling outside of expected ranges being determined?
<b>Comments on Appendices</b>			
26.	General Comment	The CG <sub>w</sub> Sampling protocol presented in the Surface Soil Sampling sections of the appendices appears to be identical for all except WMA 3. Soil samples are collected at two depths (0 – 15 cm and 0 – 1 m) when the GWS results indicate surface soil contamination levels likely exceed surface soil CG <sub>w</sub> . However, when GWS results indicate contamination levels above background but less than CG <sub>w</sub> , and when it is unclear that the contamination levels indicated by the GWS results exceed CG <sub>w</sub> , only a 5-increment composite soil sample from a 0 – 15 cm depth interval is collected. The composite sample from a depth of 0 – 15 cm does not meet the definition of surface soil presented in the DP and Section 6.5 of the Plan. How can you compare the contamination levels of the composite soil sample with the CG <sub>w</sub> values derived for surface soil defined as being the interval from 0 – 1 m? Section 6.5 of the Plan states that the 0 – 15 cm depth sample would be collected to: (1) assess direct exposure dose issues and (2) to limit dilutions; yet it also states that a two-sample per location requirement would apply to all locations except " <i>areas where there is no evidence of historical contamination.</i> " The collection of soil samples from the two-depth intervals would be particularly important in those areas where the surface soil was reworked or where potential contamination may have been covered by clean soil.	Reconcile the fact that surface soil is defined in the Phase 1 DP as the interval from 0-1 m while this Plan calls for locations where only the top 15 cm are sampled. Revise the text to be consistent when applying the two-sample rule – (i.e., where two samples would be collected from the top 15 cm and the interval from 0-1 m). Procedures for sampling in areas where the surface soil was disturbed or covered with clean soil must address soils in the 0 – 1 m depth interval.
27.	General Comment	In Appendices A through J of the Plan (all WMAs), the section entitled Required Laboratory Analyses states: "A	Describe the criteria that will be used to select samples to be analyzed for the 12 radionuclides of potential interest.

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		select portion of the samples . . . may be analyzed for the additional radionuclides of potential interest." What criteria will be used to select the samples for additional analysis? Also, for WMA 1, 2, and 3, the Plan states: "In addition, ten percent of the soil samples ... will also be analyzed for the 12 radionuclides of potential interest..." The requirement for analyzing 10% of soil samples for the 12 radionuclides of potential interest is not included for WMA 4, 5, 6, 7, 9, 10, and 12.	Provide an explanation of why analysis of 10% of soil samples for the 12 radionuclides of potential interest is not required for WMA 4, 5, 6, 7, 9, 10, and 12.
28.	General Comment	For consistency purposes, refer to Section 2.3 of the Phase 1 DP and Chapter 3.11 of the Final Environmental Impact Statement (FEIS) when discussing known or suspected releases in each of the WMAs.	To provide consistent language when discussing known or suspected releases, the Phase 1 DP and the FEIS should be reviewed, and the information contained therein incorporated into this section of the Plan.
<b>Appendix A Comments</b>			
29.	A-1/Sect. A.1/Para. 2	The first sentence states that "Descriptions of the various features of WMA 2 follow and are taken from the Phase 1 DP." This statement should apply to WMA 1, not WMA 2.	Correct the error in the text.
30.	A-4/ Sect. A.4/Para. 2	The statement that "This leak also contributed to sewage treatment system contamination" is misleading. While the Line 7P-240 failure may have contributed to this contamination, the failure of the sanitary sewer line (located south of the Line 7P-240) is the cause of this contamination. There were multiple leaks or spills in the area that likely contributed to the contamination that entered the failed sanitary sewer line.	Revise this statement attributing the sewage treatment system contamination to the failure of the sanitary sewer line.
31.	A-9/Sect. A.9.1/Last Sentence	The last sentence in this paragraph should be amended to state "... wastewater lines as well as buried utilities."	Correct the grammatical error.
32.	A-10/Sect. A.9.3/Second Bullet	For the CG <sub>w</sub> sampling, the analytes are not explicitly identified. Under the previous bullet for Hot Spots (CG <sub>emc</sub> ), the samples are analyzed for the 12 potential radionuclides as well as the 18 ROIs. The description for CG <sub>w</sub> sampling is silent on the appropriate analyte list.	Add additional language under this bullet for the list of radionuclides.
33.	A-10/Sect. A.9.3	Areas in WMA 1 have been reworked or covered with soil. The surface soil sampling protocol should systematically address the 0 – 1 m depth interval (see General Comment	Amend the CG <sub>w</sub> Sampling protocol to assure the collection and analysis of soil samples in the 0 – 1 m depth interval.

#	Page/Section/ Paragraph/Line/Bullet	Comment	Reviewers Proposed Resolution (If your comment is a point of clarification it probably doesn't need a proposed resolution.)
		#26).	
34.	A-12/Sect. A.9.4/First Bullet	What is the basis for cutting off the subsurface soil sampling under paved areas at 1 m? For reasons already identified in this Plan (e.g., past practices of placing clean fill over construction areas and the spreading of the North Plateau Groundwater Plume), it seems plausible that contamination could be found at depths greater than 1 m beneath paved areas in WMA 1.	Provide the technical rationale for limiting subsurface soil sampling to depths of 1 m in paved areas of WMA 1.
35.	A-12/Sect. A.9.4	Under the section describing subsurface soil sampling, there does not appear to be a defined methodology for sampling the area surrounding the foundation pilings in WMA 1. The Plan discusses subsurface areas below paving, sampling for waste characterization, and subsurface sampling along the boundaries of the excavation, but no methodology is provided for assessing potential contaminants that may have traveled down along the foundation pilings (of the Main Plant), and into the underlying Lavery Till and Kent Recessional. Section A.7 states that the pilings will be evaluated during excavation, but no further details are provided.	Identify the process for assessing the contamination once the foundation pilings are exposed. As with the buried infrastructure, little is known about the pilings until excavation has begun.
36.	A-13/Sect. A.9.4/Second Bullet/Last Sentence	The last sentence states that that these data will be used " <i>to estimate waste stream volumes resulting from the excavation of WMA 2.</i> " Appendix A should be referring to WMA 1 (not WMA 2).	Correct the error in the text.
37.	A-14/Sect. A.9.4/Additional Contingencies	Under the first sub-bullet, the Plan states that " <i>if any 0-15 cm surface soil sample result indicates contamination impacts above background levels and there was not a 0-1 m sample collected from that location, a 0-1 m sample will be collected from that location following the protocols used for the original 0-15 cm surface soil sample.</i> " This statement implies that there could be a scenario where a 0-15 cm sample is collected, and if no contamination is found, then a 0-1 m sample will not be collected. With the extensive historical information regarding reworking of soils for construction activities in WMA 1, this sampling	Explain why it is appropriate to collect samples from the top 15 cm of soil in areas that are clearly disturbed from past construction and soil management activities.

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		method, which may be suitable for undisturbed portions of the site in WMAs 4, 10 and 12, seems inappropriate for WMA 1.	
38.	A-15/Sect. A.9.5/First bullet	The first sentence under this bullet should be amended as follows: <i>“Three locations <u>along each piece of buried infrastructure....”</u></i>	Correct grammatical error.
39.	A-43/Figure A.23	While soil core locations for the Sheet Piling Footprint Characterization are depicted in Figure A.23, there is no similar depiction of the soil core locations for the Slurry Wall Footprint Characterization on the northern and eastern sides of WMA 1.	Since a description of the Slurry Wall Footprint Characterization is included in Section A.9.4, revise Figure A.23 to show sampling locations for the Slurry Wall.
<b>Appendix B Comments</b>			
40.	B-2/Sect. B.1/First Bullet	Clarify that the materials exhumed from WMA 5 (i.e., the Old Hardstand) were used as fill for Lagoon 1. Specifically, add contaminated asphalt to the debris description that was used as fill in Lagoon 1.	Include contaminated asphalt in the description of the materials used to fill Lagoon 1.
41.	B-2/Sect. B.1/Second Bullet	To be consistent with the descriptions provided for Lagoons 1 and 3, include language that Lagoon 2 was fed directly by Lagoon 1 and contains contaminated sediments from the 1984 Lagoon 1 Closure.	Amend the language describing Lagoon 2.
42.	B-6/Sect. B.1/ Continued Bullet	Include language related to the current use of the leachate transfer pipeline. Specifically, that the pipeline currently transfers liquids collected in the NRC-Licensed Disposal Area (NDA) Interceptor Trench to Lagoon 2 for treatment.	Append the text to include language specifying the current use of the leachate transfer pipeline.
43.	B-14/Sect. B.9.1/Last Sentence	The last sentence in this paragraph should be rewritten as follows: <i>“This infrastructure would include wastewater lines as well as buried utilities.”</i>	Correct the grammatical error.
44.	B-16/Sect. B.9.3	Areas in WMA 2 have been reworked or backfilled with soil as stated in Section B.3. The surface soil sampling protocol should systematically address the 0 – 1 m depth interval (see General Comment #26).	Amend the CG <sub>w</sub> Sampling protocol to assure the collection and analysis of soil samples in the 0 – 1 m depth interval.
45.	B-17/Sect. B.9.4	Expand the sampling efforts to include the soils surrounding Lagoon 1 to define the lateral and vertical extent of contamination around Lagoon 1. This sampling	Provide details within the document describing additional subsurface sampling of the soils surrounding Lagoon 1.

#	Page/Section/ Paragraph/Line/Bullet	Comment	<i>Reviewers Proposed Resolution</i> (If your comment is a point of clarification, it probably doesn't need a proposed resolution.)
		will identify any potential migration of contaminants from Lagoon 1 or the fill placed in Lagoon 1.	
46.	B-18/Sect. B.9.4/First Bullet	In assessing the 1.7 acres in the western area of WMA 2, what is the basis for collecting a sample to a depth of 1 m? Given the reworking of soils in the area and spreading of the North Plateau Groundwater Plume, it would seem plausible that contamination could exist below 1 m.	Provide a technical basis for subsurface sampling down to 1 m.
47.	B-21/Sect. B.9.6/First Bullet	Modify the first sentence under this bullet to read: " <i>Three locations along each piece of buried infrastructure that is of concern within WMA 2 will be trenched.</i> "	Correct the grammatical error.
<b>Appendix C Comments</b>			
48.	C-10/Sect. C.9.3/First Bullet	In describing the analytes for the samples collected to assess hot spots, the text states that the 0-15 cm samples will be analyzed for the 12 potential radionuclides as well as the 18 ROI. The text does not mention the target analytes for the 0-1 m samples.	Provide a list of analytes for the 0-1 m samples.
49.	C-11/Sect. C.9.5/First Bullet	Reword the first sentence under this bullet to state: " <i>Three locations along each piece of buried infrastructure that is of concern within WMA 3 will be trenched.</i> "	Correct the grammatical error.
<b>Appendix D Comments</b>			
50.	D-2/Sect. D.3	The area history, as conveyed through a description of the various aerial photographs, doesn't capture the fact that disposal operations at the Construction and Demolition Debris Landfill (CDDL) began as early as 1963, and continued through 1981 (under Nuclear Fuel Services) and 1984 (under the U.S. Department of Energy).	Provide additional details on the operational history of the CDDL.
51.	D-8/Sect. D.9.2	Areas in WMA 4 have been reworked or backfilled with soil and have been impacted by groundwater contamination that has surfaced into drainage areas. The surface soil sampling protocol should systematically address the 0 – 1 m depth interval (see General Comment #26).	Amend the CG <sub>w</sub> Sampling protocol to assure the collection and analysis of soil samples in the 0 – 1 m depth interval.
<b>Appendix E Comments</b>			
52.	E-3/Second and Third Bullets	The two bullets make one sentence.	Correct the grammatical error.
53.	E-12; Sect. E.9.3	As stated in Section E.2, the soils in WMA 5 have been	Amend the CG <sub>w</sub> Sampling protocol to assure the

#	Page/Section/ Paragraph/Line/Bullet	Comment	Reviewers Proposed Resolution (If your comment is a point of clarification it probably doesn't need a proposed resolution.)
		reworked at least once since the inception of the site. The surface soil sampling protocol should systematically address the 0 – 1 m depth interval (see General Comment #26).	collection and analysis of soil samples in the 0 – 1 m depth interval.
54.	E-16/Sect. E.9.5/First Bullet	Reword the first sentence under this bullet to state: “ <i>Three locations along each piece of buried infrastructure that is of concern within WMA 3 will be trenched.</i> ”	Correct the grammatical error.
<b>Appendix F Comments</b>			
55.	F-1/Sect. F.1	This section should include a description of the Old Sewage Treatment Plant (STP), the area surrounding the Old STP and the current radiological condition of this area.	Amend the text accordingly.
56.	F-2/Sect. F.1	Clarify if any actions are planned for the North Waste Tank Farm Test Tower Foundation. Will this foundation also be removed during the Phase 1 activities?	Describe any proposed actions for the North Waste Tank Farm Test Tower Foundation.
57.	F-12/Sect. F.9.3	Areas in WMA 6 have been reworked or backfilled with soil (e.g., Old Sewage Treatment Plant drainage channel). The surface soil sampling protocol should systematically address the 0 – 1 m depth interval (see General Comment #26).	Amend the CG <sub>w</sub> Sampling protocol to assure the collection and analysis of soil samples in the 0 – 1 m depth interval.
58.	F-17/Sect. F.9.6/First Bullet	Reword the first sentence under this bullet to state: “ <i>Three locations along each piece of buried infrastructure that is of concern within WMA 3 will be trenched.</i> ”	Correct the grammatical error.
<b>Appendix G Comments</b>			
59.	G-12/Sect. G.9.3	Areas outside the geomembrane cover (in WMA 7) have been reworked or backfilled with soil. The surface soil sampling protocol should systematically address the 0 – 1 m depth interval (see General Comment #26).	Amend the CG <sub>w</sub> Sampling protocol to assure the collection and analysis of soil samples in the 0 – 1 m depth interval.
60.	G-14/Sect. G.9.5/First Bullet	Under the first bullet, the text states that ditch sampling along the eastern boundary will include samples representing a 0-1 m depth interval. It is unclear why other drainage locations would not require samples from the 0-1 m depth interval.	Explain why the northern boundary drainage features do not require samples of a greater depth interval. Again, it is unclear why application of the two-sample approach is inconsistent in those areas where soils are reworked or active sediment deposition is occurring.
61.	G-15/Sect. G.9.6/First Bullet	Reword the first sentence under the first bullet to state that “ <i>Three locations along each piece of buried</i>	Correct the grammatical error.

#	Page/Section/ Paragraph/Line/Bullet.	Comment	Reviewers Proposed Resolution (If your comment is a point of clarification it probably doesn't need a proposed resolution.)
		infrastructure..."	
62.	G-20/Table G.2	Table G.2 "Sample Number Estimates," identifies that there are no biased sediment samples for the 0-1 m discrete depth interval, yet in Section G.9.5, 0-1 m, discrete depth interval samples are taken of the NDA Eastern Ditch Boundary. Verify the information, and be consistent in the data presented in Section G.9.5 and Table G.2.	Verify that information presented in Section G.9.5 and Table G.2 is both accurate and consistent.
<b>Appendix H Comments</b>			
63.	H-3/Sect. H.4/Line 1	The first sentence in this section should be revised to read: <i>"The Drum Cell is the only building in WMA 9 and is targeted for removal during Phase 1."</i>	Correct the grammatical error.
64.	H-7/Sect. H.9.2	The statement is made that <i>"If GWS results indicate no evidence of contamination impacts above background levels, no additional surface soil sampling will be required other than to address areas too wet to perform a gamma walkover survey."</i> Given that both the Subcontractor Maintenance Area and the NDA Trench Soil Container area have had soils and gravel placed on top of them, it seems unwise to eliminate these areas based on a walkover survey. The surface soil sampling protocol should systematically address the 0 – 1 m depth interval (see General Comment #26).	Amend the CG <sub>w</sub> Sampling protocol to assure the collection and analysis of soil samples in the 0 – 1 m depth interval.
65.	H-7/Sect. H.9.2/Second Bullet/Last sentence	The last sentence under this bullet states that <i>"...contamination exceeding surface soil CG<sub>w</sub> requirements are along the boundary between WMA-10 and WMA 1, 3, and 5."</i> This appendix applies to WMA 9 and should not refer to WMA 10.	Correct the text accordingly.
<b>Appendix I Comments</b>			
66.	I-10/Sect. I.9.3	Section I.4 states that surface soils may have become contaminated from airborne releases. There are areas within WMA 10 where trailers were installed and later removed, and the surface soils were reworked. The surface soil sampling protocol should systematically address the 0 – 1 m depth interval (see General Comment #26).	Amend the CG <sub>w</sub> Sampling protocol to assure the collection and analysis of soil samples in the 0 – 1 m depth interval.

#	Page/Section/ Paragraph/Line/Bullet	Comment	Reviewers Proposed Resolution (If your comment is a point of clarification it probably doesn't need a proposed resolution.)
<b>Appendix J Comments</b>			
67.	J-2/Sect. J.3/Para. 3	Figure J.3 shows WMA 12 in 1966, and identifies a "soils push-out" area being visible from WMA 2 into WMA 12. Further, this section states that " <i>This push-out area is of significance because it corresponds to elevated direct gamma reading collected in 1990-1991.</i> " Since the push-out area was created prior to the 1968 air stack release, have other potential sources of the contamination been detected?	Verify the source of the contamination.
68.	J-5/Sect. J.7	Provide data to support the statement that " <i>No environmental releases of contamination within WMA 12 are believed to have occurred.</i> " This statement seems to contradict Figures J.5 and J.6, and should be resolved for consistency.	Provide data to support that there have been no environmental releases of contamination within WMA 12, or amend this language to be consistent with Figures J.5 and J.6.
69.	J-9/Sect. J.9.2	Areas in WMA 12 have been reworked or backfilled with soil (e.g., the soils push-out area near WMA 2 and areas north of WMA 7). The surface soil sampling protocol should systematically address the 0 – 1 m depth interval (see General Comment #26).	Amend the CG <sub>w</sub> Sampling protocol to assure the collection and analysis of soil samples in the 0 – 1 m depth interval.
70.	J-13/Sect. J.9.5	Section J.9.5 states that " <i>Figure J.13 identifies those portions of Erdman Brook and Franks Creek where sediment CG requirements apply.</i> " The western areas of Erdman Brook are not included in the sampling areas shown in J.13. There is known sediment contamination present in the Old STP Drainage Channel, which extends from WMA 6 into WMA 12. Additionally, the tributary of Erdman Brook that extends northwest toward WMAs 2 and 6 are not included in the sampling areas. Figures J.5 and J.6 suggest contamination in that stream area.	Provide the rationale for not performing sediment sampling on the identified portions of WMA 12 to confirm the lateral extent of contamination and areas of potential remediation.
<b>Appendix K Comments</b>			
71.		No comments	