

**Resolution Table for Report HDP-RPT- FSS-109, Data Summary Report for Combined Reuse Stockpile 4-7
(License No. SNM-00033, Docket No. 070-00036)**

Page No.	Issues	Discussion Points	Proposed Resolution
All	Common aspects to all reuse piles should be pulled out and put into Chapter 1 of Volume 2.	Document was Volume 2, Chapter 4. Various aspects of Chapter 4 would seem to be common to most of the Chapters of Volume 2. Those aspects of Chapter 4 which seemed common appeared in the following: Background (1.0), Purpose of the Report (2.0) Reuse Soil Criteria (4.0), Survey Design (5.0), Survey Implementation (6.0), ISO-Pacific Soil Screening (7.3), Quality Control (8.0), Selection of Personnel (8.1), Instrumentation Operation and Daily Quality Control (8.2), Laboratory Quality Control Measurements (8.4) and Data Quality Assessment (Items 2-5 of 9.0)	Develop Chapter 1 of Volume 2 to include information that will be common for Chapters 2- ? of Volume 2.
Page 3, 1st Paragraph	The uniform approach is described as being more conservative of the CSMs. However, both CSMs correspond to 25 mrem/yr., so neither approach is more or less conservative.	Neither the uniform nor three-layer approach is more conservative – both correspond to 25 mrem/yr. The DCGL values for each of the three layers are less than those for the uniform CSM. However, because the sum of fractions must be used in the three-layer approach, the activity remaining in each layer must be a fraction of the DCGL if there is activity present in multiple layers.	Revise the discussion of the three layer and uniform CSMs to clarify that the uniform CSM is not more conservative.
Page 3, Last Paragraph, Figure 6-1	Figure 6-1 (and supporting text in the body of the document) is incomplete.	Fig. 6-1 does not incorporate all the process steps described in the last paragraph on pg. 3 nor does it include decisions regarding the MIL comparison. It also does not include the S3 sorter step. The flowchart should provide additional decision/requirement paths. In particular, the first “Primary Disposition” requirement should include additional Evaluation of Results decision paths, once the Tc-99 data are received. The current flowchart ends and the text does not provide a discussion of disposition of those soil loads identified with Tc-99 concentrations greater than the MIL.	In this report and reports for future reuse stockpiles, articulate better how the decision is made for waste to be diverted. When completing Volume 2 Chapter 1 of the FSSR, include a revised Figure 6-1 detailed such that it matches the process description and the complete set of outcomes for where soil will be used or diverted for disposal (e.g., if the

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		<p>The Figure suggests that decisions are made per truckload (e.g., that certain truckloads are segregated based on sample results). This was not the case with Combined Reuse Stockpile 4-7). The Figure should clarify if decisions are made per truckload or per some average for the entire stockpile.</p> <p>Additionally, this chart lacks clarity on what occurs if a truck fails the SOF for Uniform DCGL but passes the Excavation DCGL. Would this material go to USEI, to be used only in the Deep stratum? Alternatively, would it be used in the Deep and Surface stratum?</p>	SOF <= 1 for Uniform and >Tc-99 MIL, etc.)
4	Revision numbers are needed when referencing procedures.	Page 4 lists the procedures that were used to conduct the survey. It is known that many procedures have been revised at the site. Some of the revisions were based on problems identified during the implementation of a specific procedure. Therefore, the document should include which procedure revision was used to ensure the NRC an adequate survey was completed.	Update document to include the correct revision of the procedures used to survey the reuse piles.
Sections 7.1 and 7.2, Last Paragraph on Page 6 and Second Paragraph on Page 9	Use of MIL is only for Tc-99	Pages 6 and 9 discuss the use of Tc-99 Uniform MIL to identify Tc-99 hot spots. All radionuclides of concern, when assessed via composite sampling, should typically have an associated MIL to identify a DCGL hot spot of concern unless other surveys are used. It is understood that the gamma walkover surveys and ISO-Pacific Soil Screening are intended to identify locations that could present a DCGL hot spot concern for all radionuclides of concern except for Tc-99. For completeness, the document should “tie together” the two requirements.	When completing Volume 2 Chapter 1 of the FSSR, include justification for the reasons why a MIL is only being used to identify a DCGL hot spot of concern for Tc-99. Additionally, describe and justify what surveys HDP is proposing to utilize to identify hot spots of concern for the other radionuclides of concern.

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<p align="center">Page 6 and 30</p>	<p>It is unclear how soil volumes that are intended for a specific stratum are controlled/tracked so they are placed in the correct specific stratum.</p>	<p>Because the soil that exceeded the criteria to be used in any stratum was not separated from the soil that failed the criteria, the entire stockpile is reserved for the deep or surface stratum. Pg. 30 states, "the soil comprising Combined Reuse Stockpile 4-7 will be restricted for use as backfill within the deep stratum or surface stratum". It is unclear if this will be the same approach intended for other reuse piles. In addition, it is unclear how the Combined Reuse Stockpile 4-7 will be appropriately segregated from other soils that are intended for the entire Uniform stratum.</p> <p>If soil that fails the Uniform SOF is then sent through the S3 sorter with other waste that passed the Uniform SOF, how can the licensee know that certain waste is destined for only the excavation or surface stratum?</p> <p>For future stockpiles, does Westinghouse always plan to reserve an entire stockpile for the Excavation Stratum if any truckload fails the Uniform SOF or Tc-99 MIL? In addition, will Westinghouse plan to use any soil that is reserved for the excavation layer in the surface layer also? The logistics of that scenario seem complicated. Are there procedures which discuss how placing soil in the Deep and Surface layers (but not the Root) layer will be accomplished?</p>	<p>When completing Volume 2 Chapter 1 of the FSSR, include details about how soil that is destined for a specific stratum is tracked once it has been sampled. For example, how is it marked/separated when sent through the S3 sorter and stored before reuse?</p>

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<p>Page 10, Last Paragraph, pg. 30, 4th Paragraph</p>	<p>Clarify the ultimate metric for reuse of soil within any stratum (i.e., the Uniform stratum).</p>	<p>Page 10 states, "...the ultimate metric for backfill reuse within any stratum is a weighted average SOF less than unity, as evaluated against the Uniform DCGL_{ws} – and in this respect, the original Reuse Stockpile 7 soil volume is compliant."</p> <p>The sentence can readily be interpreted to mean that control of the material exceeding the SOF was not maintained and dilution was then an acceptable means for demonstrating compliance. Is this the intent of the statement? If the ultimate metric is the weighted average SOF, will this allow for some truckloads that fail the Uniform DCGL SOF test to be used in all stratum? Will this also allow for truckloads that fail the Tc-99 MIL for Uniform to be placed in any stratum? Is this the intent of the statement?</p> <p>Pg. 30 states that since 29 truckloads exceeded the Tc-99 MIL, the whole stockpile will be reserved for the deep and surface stratum. This explanation should occur earlier in the document. The ultimate metric that Westinghouse relies on is ambiguous. It could easily be misunderstood how Westinghouse is using the MIL comparison.</p>	<p>When completing Volume 2 Chapter 1 of the FSSR, clarify the ultimate metric for reuse of soil within any stratum. If the metric is a weighted average SOF, include details about the maximum volume over which the weighted average SOF will be calculated.</p>
<p>Sections 7, 9, and 10</p>	<p>In several places, you show data histograms with a normal distribution super-imposed. It is apparent from the diagrams that the data is most likely log-normally distributed but summary statistics and discussion appear to assume normal distribution methods.</p>		<p>Clarify that statistical tests show the data is normally distributed with greater than 90 percent confidence. Alternatively, perform log transforms of the data before generating summary statistics and confidence intervals.</p>

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<p align="center">General</p>	<p>It is unclear exactly what the disposition of this soil will be. Specifically, it appears that the soil may be utilized in several places/strata. While the data show the whole pile will likely pass a onetime statistical comparison, what if only part of a pile is used in multiple areas/strata/survey units. Will the dispositioned soil be sampled again? How will the data for the soil that is moved be maintained to reflect accurately the final dispositioning?</p>	<p>Because contamination ranges significantly, it is unclear how the soil that is used (if only a part is used) will be tabulated within the survey unit under consideration. For example, will all soil taken from the pile be considered to be at the 95 percent upper confidence limit for the pile? Is resampling after being dispositioned planned to generate "as left" data?</p>	<p>Either the soil will have to be resampled after being dispositioned, a conservative assumption made for the contamination levels, or else only dispositioned in one place/manner.</p>