

**FW: PMR Questions**

Kliphuis, Trais, NMENV

Sent: Tuesday, February 19, 2013 7:21 AM

To: Maestas, Ricardo, NMENV; Holmes, Steve, NMENV; Allen, Pam, NMENV

Attachments: Responses to NMED Questio~1.docx (16 KB) ; Fig C-2 (2-14-13) NEW clean.pdf (22 KB) ; Table C-1(2-14-13) NEW cl~1.docx (13 KB)




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**From:** Basabilvazo, George - DOE [mailto:George.Basabilvazo@wipp.ws]
**Sent:** Tuesday, February 19, 2013 7:18 AM**To:** Kliphuis, Trais, NMENV**Subject:** RE: PMR Questions

Trais,

Attached is our response to the questions and the table and figure you requested.

Best regards,

George T. Basabilvazo  
 Director, Office of Environment, Safety & Health  
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 Carlsbad, New Mexico 88221  
 Ph: (575) 234-7488  
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**From:** Kliphuis, Trais
**Sent:** Thursday, January 31, 2013 4:04 PM**To:** Basabilvazo, George - DOE**Cc:** Cobrain, Dave, NMENV; Maestas, Ricardo, NMENV; Holmes, Steve**Subject:** PMR Questions

Hi George,

Below are a few questions and requests regarding the current Class 2 PMR. Please let me know if you have concerns or questions.

Permit Attachment C, Page B-19:

**C-3b Radiography and Visual Examination**

Radiography and/or VE will be used, when necessary, to examine a waste container to verify the physical form of the waste matches its waste stream description as determined by AK.

Attachment C-7 reads:

**C7-1a Confirmation of a Representative Subpopulation of the Waste**

The Permittees shall confirm that the waste contains no ignitable, corrosive, or reactive waste through radiography (Section C7-1b) or the use of visual examination (Section C7-1c) of a statistically representative subpopulation of the waste.

Waste confirmation encompasses ensuring that the physical characteristics of the TRU mixed waste correspond with its waste stream description and that the waste does not contain liquid in excess of TSDF-WAC limits or compressed gases.

Explanation of Change Table states it is changed to make it consistent with wording changes elsewhere in the Permit as proposed by the PMR. Please explain why this is language doesn't match with C7 and why a change to the original statement is necessary and part of the intent of this PMR.

Permit Section C-3c (C-b/c, p. B-19 of the PMR) midway through already states, "Radiography and/or VE are also able to verify that the physical form of the waste matches its waste stream description (i.e. Homogeneous Solids, Soil/Gravel, or Debris Waste [including uncategorized metals])."

Also, please explain why the proposed language doesn't make the quoted statement above redundant (i.e. a reiteration of the proposed language).

Page B-20 C-3D:

Please provide more explanation as to why you propose to remove the second paragraph that reads "In the CIS for each waste stream, the generator/storage site will be required to document their methods, and the findings from those methods, for determining the physical form of the waste and the presence or absence of prohibited items for both retrievably stored and newly generated waste. Radiography and/or VE may be used to verify the physical form of retrievably stored TRU mixed waste. For newly generated waste, physical form and prohibited items may either be documented during packaging using VE or verified after packaging using radiography or VE"?

Explanation of Change states the section is deleted in its entirety since there is no difference in the characterization requirements between newly generated and retrievably stored waste but there are parts of this section that address characterization requirements for both types.

Page B-37 Table C-5:

Please send a version of Table C-5 that has the changes accepted so that we may review a final version.

Page B-43:

Please send a version of Figure C-2 Waste Characterization Process that has the changes accepted so that we may review a final version.

Page B-155:

Number 30 – last bullet

Requested change deletes the term "physical waste form" and adds the term "verify the waste matches the waste description as determined by AK and to verify" while the explanation of change (page A-9) states "Revised the bullet for radiography and VE to indicate that radiography or VE will be used to verify the physical form of the waste



matches its waste stream description as determined by AK.

It appears that the intent of VE and RTR is changing by this edit (i.e. determine physical form vs. verify waste matches AK waste description). Please explain how this change is part of this PMR and why is it requested.

Page B-163 second bullet – Please explain how addition of this language applies to this PMR.

Thanks,

Trais Kliphuis  
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Hazardous Waste Bureau  
New Mexico Environment Department  
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**NMED Question #1:**

**Permit Attachment C, Page B-19:**

**C-3b Radiography and Visual Examination**

Radiography and/or VE will be used, when necessary, to examine a waste container to verify the physical form of the waste matches its waste stream description as determined by AK.

Attachment C-7 reads:

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The Permittees shall confirm that the waste contains no ignitable, corrosive, or reactive waste through radiography (Section C7-1b) or the use of visual examination (Section C7-1c) of a statistically representative subpopulation of the waste.

Waste confirmation encompasses ensuring that the physical characteristics of the TRU mixed waste correspond with its waste stream description and that the waste does not contain liquid in excess of TSDf-WAC limits or compressed gases.

Explanation of Change Table states it is changed to make it consistent with wording changes elsewhere in the Permit as proposed by the PMR. Please explain why this is language doesn't match with C7 and why a change to the original statement is necessary and part of the intent of this PMR.

Permit Section C-3c (C-3c, p. B-19 of the PMR) midway through already states, "Radiography and/or VE are also able to verify that the physical form of the waste matches its waste stream description (i.e. Homogeneous Solids, Soil/Gravel, or Debris Waste [including uncategorized metals])."

Also, please explain why the proposed language doesn't make the quoted statement above redundant (i.e. a reiteration of the proposed language).

***Permittee Response:*** *In addition to Section C-3b, the proposed Permit text revisions reflect this change in the following locations:*

*Section C-4a(1) (Page B-23 of the PMR)*

*Section C3-2 (Page B-95 of the PMR)*

*Section C3-6b(2) (Page B-11 of the PMR)*

*These proposed Permit text revisions were provided simply to clarify what is meant by the use of radiography and/or VE to examine a waste container and "verify its physical form." The "physical form" of the waste is part of the waste's "physical characteristics" and is its Summary Category Group (S3000, S4000, or S5000) per the Permit, Sections C-0a, "Waste Characterization," and C-1b, "Waste Summary Category Groups and Hazardous Waste Accepted at the WIPP Facility." AK is the means by which waste streams are delineated and the waste stream description is developed and determined. Radiography and/or VE is then used to ensure that the observed Summary Category Group matches what has been documented in the AK record. This verification is discussed in the current Permit Section C-3c, and the intent of these proposed text revisions was to make the language that applies to the generator/storage sites consistent throughout the WAP. Since "ensuring that the physical*

*characteristics of the TRU mixed waste correspond with its waste stream description” per Attachment C7 is essentially the same as “verify[ing] the physical form of the waste matches its waste stream description as determined by AK,” Attachment C7 is consistent with the rest of the WAP, and a change to Attachment C7 is not necessary. Although waste confirmation is carried out through the use of radiography and/or VE, it is a process conducted by the Permittees that is separate from the characterization activities conducted at the generator/storage sites.*

*The proposed language in Section C-3b is not redundant with “Radiography and/or VE are also able to verify that they physical form of the waste matches its waste stream description (i.e., Homogenous Solids, Soil/Gravel, or Debris Waste [including uncategorized metals])” because it additionally clarifies that this information comes from the AK record.*

**NMED Question #2:**

**Page B-20 C-3D:**

Please provide more explanation as to why you propose to remove the second paragraph that reads “In the CIS for each waste stream, the generator/storage site will be required to document their methods, and the findings from those methods, for determining the physical form of the waste and the presence or absence of prohibited items for both retrievably stored and newly generated waste. Radiography and/or VE may be used to verify the physical form of retrievably stored TRU mixed waste. For newly generated waste, physical form and prohibited items may either be documented during packaging using VE or verified after packaging using radiography or VE”?

Explanation of Change states the section is deleted in its entirety since there is no difference in the characterization requirements between newly generated and retrievably stored waste but there are parts of this section that address characterization requirements for both types.

***Permittee Response:*** *Section C-3 is a discussion of waste characterization methods, which cites Table C-1 as providing a summary of characterization requirements, including methods, to be used. Section C-3d was deleted in its entirety in the proposed revised Permit text because there is no difference in the way retrievably stored and newly-generated wastes are characterized. All of the deleted text is either no longer applicable, with the removal of chemical sampling/analysis requirements, or redundant to other sections within the Permit. For example, the reference in the second paragraph to documentation of waste packaging appears again in Section C1-4, which states, “Waste container packaging records may be used to meet the VE data quality objectives...” Additionally, Section C-3b of the proposed revised Permit text states that VE will be conducted in accordance with Attachment C1. Furthermore, Section C3-6b(2) requires that generator/storage sites include a radiography and/or VE summary in the CIS that documents the findings of those methods along with a justification for the selection of radiography or VE as an appropriate method for characterizing the waste.*

**NMED Question #3:**

**Page B-37 Table C-5:**

Please send a version of Table C-5 that has the changes accepted so that we may review a final version.

**Permittee Response:** Please see attached file. This table has been renamed Table C-1 per the proposed revised Permit text.

**NMED Question #4:**

**Page B-43:**

Please send a version of Figure C-2 Waste Characterization Process that has the changes accepted so that we may review a final version.

**Permittee Response:** Please see attached file. This figure has been revised to be consistent with the revision which will be submitted with the Permittees' comments on the PMR.

**NMED Question #5**

**Page B-155:**

Number 30 – last bullet

Requested change deletes the term “physical waste form” and adds the term “verify the waste matches the waste description as determined by AK and to verify” while the explanation of change (page A-9) states “Revised the bullet for radiography and VE to indicate that radiography or VE will be used to verify the physical form of the waste matches its waste stream description as determined by AK.

It appears that the intent of VE and RTR is changing by this edit (i.e. determine physical form vs. verify waste matches AK waste description). Please explain how this change is part of this PMR and why is it requested.

**Permittee Response:** This is an inconsistency in the proposed Permit text revisions. Item 30 on Table C6-1 should read, “Use radiography or visual examination to verify the physical form of the waste matches its waste stream description as determined by AK and to verify~~determine physical waste form, the absence of prohibited items, and additional waste characterization techniques that may be used based on Summary Category Groups~~” to be consistent with the Table of Changes and the proposed changes to Section C-4a(1).

**NMED Question #6:**

**Page B-163:**

Number 56a – second bullet

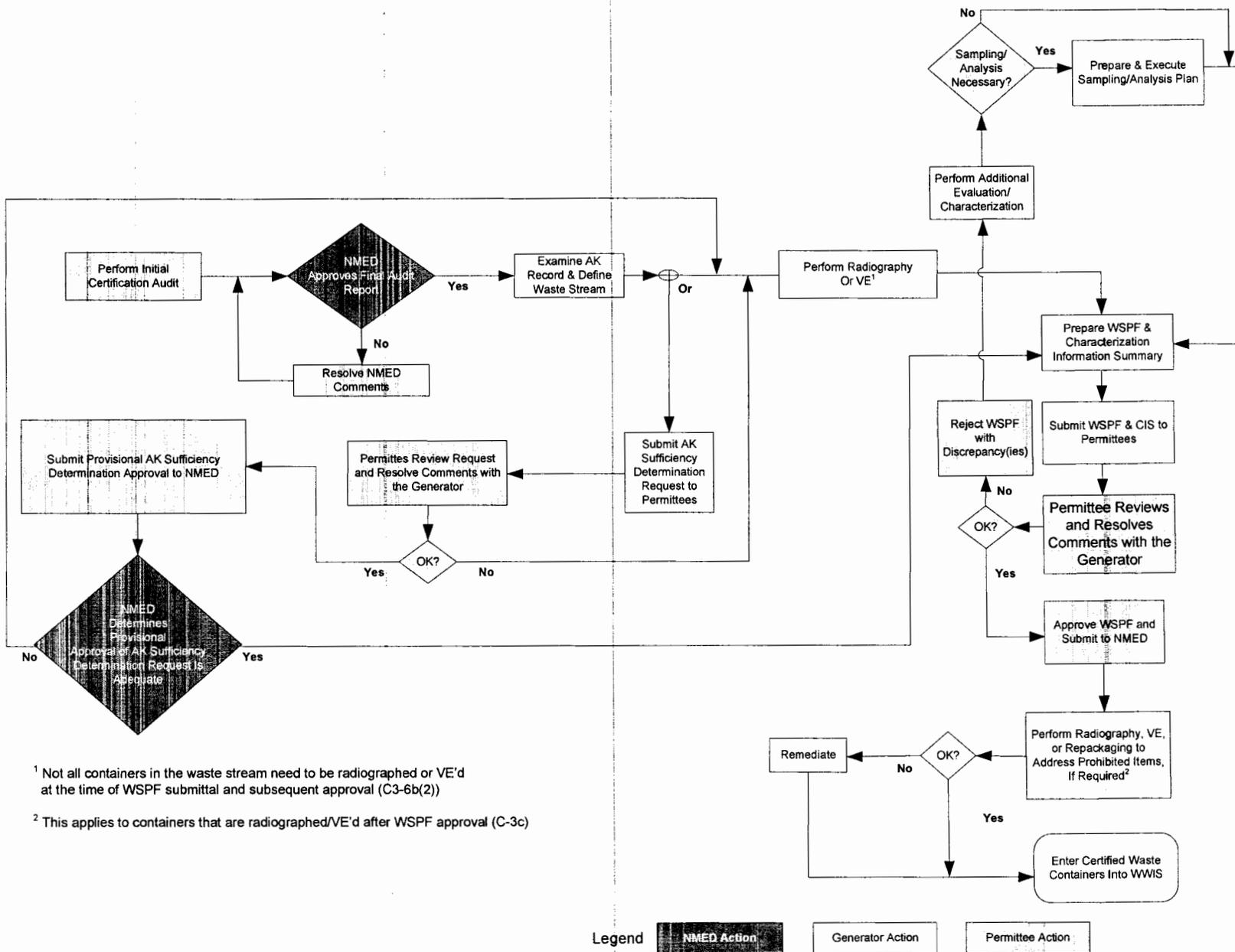
Please explain how addition of this language applies to this PMR.

**Permittee Response:** The intent of the proposed Permit text revisions to both Section C3-6 and Item 56a of Table C6-1 was to ensure consistency with the data quality objectives for

*radiography and VE. The proposed Permit text revision to Table C6-1, however, is inconsistent with the Table of Changes and the proposed text revision to Section C3-6. Item 56a should read, "Radiography and visual examination summary to document that all prohibited items are absent in the waste and to verify that the physical form of the waste matches its waste stream description as determined by AK (if applicable)".*

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Figure C-2  
Waste Characterization Process



<sup>1</sup> Not all containers in the waste stream need to be radiographed or VE'd at the time of WSPF submittal and subsequent approval (C3-6b(2))

<sup>2</sup> This applies to containers that are radiographed/VE'd after WSPF approval (C-3c)

Legend

NMED Action

Generator Action

Permittee Action

**Table C-1  
Summary of Parameters, Characterization Methods, and Rationale for Transuranic Mixed Waste**

Waste Matrix Code Summary Categories	Waste Matrix Code Groups	Characterization Parameter	Method	Rationale
S3000-Homogeneous Solids	<ul style="list-style-type: none"> <li>• Solidified inorganics</li> <li>• Salt waste</li> <li>• Solidified organics</li> </ul>	Physical waste form	Acceptable knowledge, radiography and/or visual examination	<ul style="list-style-type: none"> <li>• Determine waste matrix</li> <li>• Demonstrate compliance with waste acceptance criteria (e.g., no liquid in excess of TSDF-WAC limits, no incompatible wastes, no compressed gases)</li> </ul>
S4000-Soil/Gravel	<ul style="list-style-type: none"> <li>• Contaminated soil/debris</li> </ul>			
S5000-Debris Waste	<ul style="list-style-type: none"> <li>• Uncategorized metal (metal waste other than lead/cadmium)</li> <li>• Lead/cadmium waste</li> <li>• Inorganic nonmetal waste</li> <li>• Combustible waste</li> <li>• Graphite waste</li> <li>• Heterogeneous debris waste</li> <li>• Composite filter waste</li> </ul>	Hazardous constituents <ul style="list-style-type: none"> <li>• Listed</li> <li>• Characteristic</li> </ul>	Acceptable knowledge	