

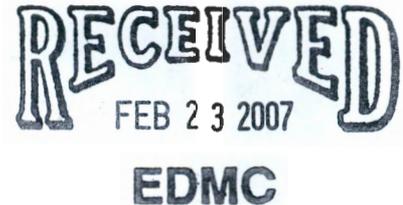


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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99352 • (509) 372-7950

February 8, 2007



Mr. Keith A. Klein, Manager  
Richland Operations Office  
United States Department of Energy  
P. O. Box 550, MSIN: A7-50  
Richland, Washington 99352

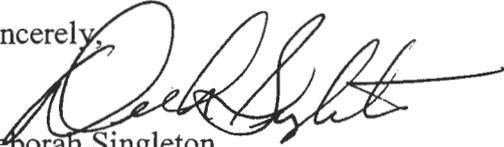
Re: Comments on Revised M-91-03 Interim Milestone *Transuranic (TRU) Mixed/Mixed Low-Level Waste Project Management Plan (PMP)* [HNF-19169, Rev. 2]

Dear Mr. Klein:

The Department of Ecology received the revised M-91 PMP (HNF-19169, Rev. 2) prepared by Fluor Hanford, Inc. You will find Ecology's written comments to the United States Department of Energy (USDOE) enclosed. Ecology expects that USDOE will revise and resubmit the PMP after milestone negotiations are completed and Ecology's enclosed comments are resolved.

Ecology has briefly discussed the PMP with the U.S. Environmental Protection Agency (EPA). EPA will be sending additional comments in the future. If you have any questions, contact Michelle Mandis at 509-372-7970, or me at 509-372-7923.

Sincerely,

  
Deborah Singleton  
Waste Management Project Manager  
Nuclear Waste Program

mm/pll  
Enclosure  
cc w/enc:

Nick Ceto, EPA  
Dave Einan, EPA  
Mark French, USDOE  
Robert Piippo, USDOE  
Greg Sinton, USDOE  
Steven Joyce, FH  
Curtis Stroup, FH

Stuart Harris, CTUIR  
Gabriel Bohnee, NPT  
Russell Jim, YN  
Susan Leckband, HAB  
Ken Niles, ODOE  
**Administrative Record: M-91-03/PMP**  
Environmental Portal



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<b>Document Number(s)/Title(s)</b> M-91 TRU Mixed/Mixed Low Level Waste Project Management Plan (PMP)	<b>Program/Project/Building Number</b> M-91-03	<b>Reviewer:</b> Laura Cusack, Jennifer Ollero, John Roberts, Deborah Singleton, Ron Skinnarland, Michelle Mandis, Steve Szendre, Eric Van Mason	<b>Organization/Group</b> Waste Management Nuclear Waste Program	<b>Location/Phone</b>
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Comment Submittal Approval:

Agreement with indicated comment disposition(s)

Status:

Ron Skinnarland  
Organization Manager (Optional)

2/8/07  
Date

Deborah Singleton  
Reviewer/Point of Contact

2/8/07  
Date

Michelle Mandis  
Author/Originator

Michelle Mandis  
Reviewer/Point of Contact  
Michelle Mandis  
Author/Originator

Item	Page #, Line #, or Section and Paragraph	Comment (s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	Hold Point	Disposition (Provide justification if NOT accepted.)	Status
1.		<b>General Comment:</b> Re-write the PMP to be consistent with all updates from the Project Manager's Tri-Party Agreement (TPA) Negotiations including updated milestone dates, tables, figures, etc. (MYM) (DS)			
2.		<b>General Comment:</b> Editorial comment: Review document to ensure all acronyms are spelled out the first time used prior to subsequent use (i.e., p. 17 NDE). (JFO)			
3.		<b>General Comment:</b> For clarification, include written descriptions of the figures and tables presented throughout the document. Also include additional details and schedules for waste treatment activities. (JFO) (MYM)			
4.		<b>General Comment:</b> In many locations there are open ended, non-verifiable events that have to occur to complete TPA scheduled milestone work. Provide a plan or "schedule of events" required to meet the TPA			

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		Milestones (e.g. begin remote handled (RH) retrieval operations by 2011). (SS) (LC) (MYM)			
5.		<b>General Comment:</b> Use of data and assumptions that date back to 2005 to determine future work estimates and expectations seem unrealistic, because, as we know, there were many surprises and changes made in 2006. (SS)			
6.		<b>General Comment:</b> Update all of the data and assumptions that date back to 2005 to be consistent with the data and assumptions for 2007 and beyond, which include waste volumes treated, retrieved, in storage, generated, and forecasted; transuranic (TRU)/transuranic mixed (TRUM) waste and Mixed Low-Level Waste (MLLW) volume ratios; project assumptions, schedules, and priorities, budget, budget building blocks in respect to the "target case," etc. (SS) (JFO) (MYM) (DS)			
7.		<b>General Comment:</b> No assurance of funding, unreliability of offsite treatment facilities, unverified treatment processes leaves doubt of completing projects on schedule. Contingencies should be better stated. (SS)			
8.		<b>General Comment:</b> Provide detailed schedules and plans for continuing/obtaining commercial treatment for various types of wastes including Land Disposal Requirements (LDR) Treatability Group MLLW #2, #3, #4, #5, #6, #7, #9, #10, and TRUM waste. (MYM) (DS)			
9.	p. i and 1	<b>Comment:</b> As currently written, the document is difficult to follow. Suggest revising Preface and Section 1.0 to include a discussion of what has changed and why suggest linking back to the milestone requirement ["USDOE shall revise the PMP to include plans and schedules for LDR treatment (or certification in lieu of such treatment as provided in M-91-42 and M-91-44) of TRUM waste by 12/28/06."] (JFO)			
10.	p. 1, Section 2.0, 1 <sup>st</sup> paragraph	<b>Comment:</b> There is no mention of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or CERCLA wastes in the description of mixed waste management. (This comment also applies to Section 2.6, Specific Regulatory Requirements.)			

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		<b>Modification needed:</b> Add a section to the document including more information, such as a range of waste volumes generated due to clean-up activities, regardless if CERCLA Records of Decisions (RODs) and Action Memoranda are in place. Specify tentative waste volume ranges per large project and Hanford Site Area (e.g., 200 Area Tank Farms), flagging which decisions have not been made and their tentative dates for RODs or Action Memoranda. (RS) (JFO) (MYM) (DS)			
11.	p. 1, Section 2.0, 1 <sup>st</sup> paragraph	<p><b>Comment:</b> There is no mention of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or CERCLA wastes in the description of mixed waste management. (This comment also applies to Section 2.6, Specific Regulatory Requirements.)</p> <p><b>Modification needed:</b> Include a table of all waste generated and projected to be generated from the Hanford Site clean-up operations. In the table list what project generated the waste, what project is going to process/manage/dispose of the waste, approximate volume ranges of the waste, a tentative schedule of activities, and flag which decisions have not been made. An option may be to take waste volumes from USDOE-RL and USDOE-ORP baselines. (This includes wastes from the River Corridor Contractor for shipment off-site, 200 Area facilities and soil sites, wastes from Fast Flux Test Facility [FFTF] and other Hanford Site-wide activities.) Add their volume ranges in Solid Waste Information Forecasting Tool (SWIFT). Also provide an information tie to the M-16-93 "Implementation Work Plan" document. (RS) (JFO) (MYM) (DS)</p>			
12.	p. 2, Section 2.0	<p><b>Comment:</b> In the sixth sentence of the second paragraph under the <b>Retrievably Stored Waste Containing Transuranic Nuclides</b> there is a duplicate phrase</p> <p><b>Modification needed:</b> Remove a duplicate "rather than" from the sentence. (DS)</p>			

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13.	p. 3, Section 2.0	<p><b>Comment:</b> There is no mention of how TRU/TRUM waste is addressed.</p> <p><b>Modification needed:</b> Include a definition of how TRUM waste is addressed in this document in Section 1. (JFO)</p>			
14.	p. 3, Section 2.0	<p><b>Comment:</b> No mention of the Environmental Restoration Disposal Facility (ERDF) in the <i>Waste Acceptance Criteria</i> section.</p> <p><b>Justification:</b> ERDF is a presumed disposal option for non TRU/TRUM waste.</p> <p><b>Modification needed:</b> Include ERDF in the section. (JFO)</p>			
15.	p. 3, Section 2.2	<p><b>Comment:</b> The fifth sentence in subsection 2.2 describes internal and external volumes of 55-gallon drums.</p> <p><b>Modification needed:</b> Provide a better description of the difference in internal versus external volumes. (DS)</p>			
16.	p. 3, Section 2.0, Footnote 3	<p><b>Comment/Question:</b> Why is "Increased waste volumes resulting from failed RSW containers" not included, but cite this as a justification for the M-91 milestone change request (Attachment B)?</p> <p><b>Modification needed:</b> Provide specifics on the reasoning behind the increased volume resulting from Retrievably Stored Waste (RSW) containers and its impact to the M-91 project. (JFO)</p>			
17.	p. 3, Section 2.0, Footnote 3	<p><b>Comment:</b> Much of the text included in footnotes (e.g. Footnote 3) would provide clarity to the body of the document.</p> <p><b>Modification needed:</b> Incorporate footnotes into the body of the text to provide more clarity. (DS)</p>			
18.	p. 4, Section 2.0	<p><b>Comment:</b> Waste forecasting is briefly mentioned here, but not explained.</p>			

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		<b>Modification needed:</b> The information presentation seems out of order. Provide a description of waste forecasting. The description of forecasting waste isn't described until page 7. (JFO)			
19.	p. 5	<b>Comment:</b> The last sentence reads "Volumes of Mixed Low Level Waste (MLLW) or waste forecast by Hanford generators that require treatment prior to storage/disposal are <i>not</i> included in MLLW-02 through MLLW-10." (Emphasis added.) I believe this is a mistake.  <b>Justification:</b> I believe these volumes are included in MLLW 2-10.  <b>Modification needed:</b> Remove the "not." (LC)			
20.	p. 8	<b>Comment:</b> The first sentence of Section 2.4 states, "Storage for mixed waste is in accordance with regulatory requirements." However, storage of RSW does not meet regulatory requirements.  <b>Justification:</b> Unlined trenches are not compliant storage for TRUM or MLLW.  <b>Modification needed:</b> Modify the sentence to state, "Above ground storage for mixed waste is in accordance with regulatory requirements." (LC)			
21.	p. 8	<b>Comment:</b> Data used as the basis for this report and USDOE's PMP must be documented. It is unclear if, in the future, the Solid Waste Inventory Tracking System (SWITS) database can be queried to produce the same information on which this report is based. If not, the detail of that and any other data base used as the basis of this report must be documented in detail.  <b>Justification:</b> Data used needs to be documented and traceable.  <b>Modification needed:</b> If the SWIFT and SWITS data bases as of			

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		December 27, 2005, cannot be reproduced for future reference, than that information must be captured in some way. Provide a mechanism to do so. (LC)			
22.	p. 8	<p><b>Comment:</b> Specific contractors and projects should not be identified by name.</p> <p><b>Justification:</b> Names of contractors and projects frequently change.</p> <p><b>Modification needed:</b> Revise the document to eliminate specific contractors listed and refer to projects in general terms. (SS)</p>			
23.	p. 17 and 18	<p><b>Comment:</b> Verify if Waste Receiving and Processing facility (WRAP) and/or new head-end at T Plant currently have the capabilities to overpack RH-MLLW or RH-TRU for treatment or certification and shipment of waste forms that comply with disposal requirements. Also verify that additional treatment or processing is not required.</p> <p><b>Modification needed:</b> Revise document to clearly state the existence or non-existence of this capability. If one or both of these facilities could address RH waste, update the document to discuss when overpacking and disposal or certification of RH-RSW may begin. (MYM)</p>			
24.	p. 19	<p><b>Comment:</b> Basic description of ERDF is provided. However, this section is outdated as a new ROD has been approved.</p> <p><b>Modification needed:</b> Revise the document to better describe ERDF and provide updated information per the ROD approved December 2006. (JFO) (MYM)</p>			
25.	p. 20, Section 3.2	<p><b>Comment:</b> There doesn't appear to be a plan/schedule to address the drums that are deteriorated to the point that they can't be retrieved and stabilized.</p> <p><b>Modification Needed:</b> Provide some language on how these drums will</p>			

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		be addressed and when. (JFO)			
26.	p. 22	<p><b>Comment:</b> There doesn't appear to be a plan/schedule for treatment and disposal path of "Unique Wastes" alias MLLW #8?</p> <p><b>Modification Needed:</b> Provide some language on how this waste stream will be addressed and when. (SS) (MYM) (DS)</p>			
27.	p. 22 and 27	<p><b>Comment:</b> The PMP did not list contingencies for finding back-up thermal treatment or additional commercial facilities in the event contracted thermal treatment or additional commercial facilities shut down, can not accept or treat the waste, or can not be found.</p> <p><b>Modification Needed:</b> Provide some language on how additional alternatives (besides thermal or commercial treatment) will be found and utilized to treat waste and when these alternatives will be explored. (SS)</p>			
28.	p. 22, 23, and Appendix G	<p><b>Comment:</b> The retrieval sections did not mention that concurrent retrieval can occur from and all trenches at the four Low Level Burial Grounds (LLBGs) as of April 28, 2006 per the approval of Change Control Form M-91-06-02.</p> <p><b>Modification needed:</b> Revise the document to add this modification and enclosure a tentative schedule of how this modification will be implemented. (MYM)</p>			
29.	p. 23, Section 3.2	<p><b>Comment:</b> <i>Retrieval of RH RSW.</i> This section discusses using the experience obtained from 618-10/11 retrieval activities; however, 618-10/11 doesn't have a contracting path forward and schedule delays are expected. How will these delays impact retrieval of RH wastes in this project?</p> <p><b>Modification Needed:</b> Provide some language on how these waste sites will be addressed and when and present a plan for integration opportunities with the River Corridor Contractor/sub contractors to ensure</p>			

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		that the experience gained from these sites will be relayed to the Central Plateau Contractor/subcontractors or strike this section in the document. (JFO)			
30.	p. 23	<p><b>Comment: Retrieval of RH RSW.</b> This section states that “Engineering studies for obtaining capabilities to retrieve RH waste are planned for 2009.” However, Ecology does not feel that two years to develop new technologies for safe retrieval and sampling and analyses of RH-RSW is an adequate timeframe.</p> <p><b>Modification Needed:</b> Provide some language on how and what will be learned/developed from the Engineering Studies and also provide a schedule of activities, documents, field testing, etc. (MYM)</p>			
31.	p. 24-25	<p><b>Comment:</b> USDOE hopes to move the requirement for the SWPC back to 2016 in the statement “however, wastes that cannot be accepted at a commercial treatment unit, due to having too high a radiological inventory . . . will be treated at the future Solid Waste Processing Center (SWPC).” However, M-91 requires treatment of all backlog waste by 2009. It is unclear if there is a conflict here.</p> <p><b>Modification needed:</b> Clarify if any waste to be treated at the SWPC is part of the contact handled (CH) - backlog waste that is required to be treated by 2009. (LC)</p>			
32.	p. 24	<p><b>Comment:</b> The plan states, “A review of all containers in storage as of December 31, 2006, is planned to identify treatment paths by container... if treatment capability is not available, a regulatory path and schedule will be proposed to meet the M-91-42 2009 schedule.” Ecology is very concerned that USDOE has not done this analysis earlier. (LC)</p>			
33.	p. 26-27	<p><b>Comment:</b> USDOE discusses thermal treatment options that have been explored since 1998, but does not provide a plan (cost and schedule) for thermally treating all the CH MLLW-03 waste required by M-91-42 by 2009 (approximately 780 cubic meters).</p>			

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		<p><b>Justification:</b> M-91-42 requires that all CH-MLLW in storage as of December 31, 2002, be treated to meet LDR requirements by December 31, 2009.</p> <p><b>Modification needed:</b> Revise the plan to provide specific cost and schedule for treating the remaining MLLW-03 waste by 2009. (LC)</p>			
34.	p. 27	<p><b>Comment:</b> The plan discusses limited capabilities with commercial treatment facilities for Hanford's radioactively contaminated elemental mercury waste. The plan does not identify what the capability is or a schedule for treating this waste.</p> <p><b>Justification:</b> M-91-42 requires that all CH-MLLW in storage as of December 31, 2002, be treated to meet LDR requirements by December 31, 2009.</p> <p><b>Modification needed:</b> Revise the plan to provide specific cost and schedule for treating the remaining MLLW-03 waste by 2009. (LC) (SS)</p>			
35.	p. 27	<p><b>Comment:</b> Page 17 of the plan states that WRAP's processing capabilities include amalgamation of mercury. However, this option is not discussed on page 27.</p> <p><b>Justification:</b> M-91-42 requires that all CH-MLLW in storage as of December 31, 2002, be treated to meet LDR requirements by December 31, 2009.</p> <p><b>Modification needed:</b> Revise the plan to discuss the possibilities of using WRAP to treat Hanford's MLLW-06 waste. (LC) (SS)</p>			
36.	p. 27	<p><b>Comment:</b> At this point in time, Ecology does not have enough information authorize in-trench treatment of specific wastes.</p>			

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		<b>Modification needed:</b> Revise the plan to discuss the specifics of this treatment alternative or provide Ecology personnel with additional information. Also in-trench treatments will require LLBG Permit and waste analysis plan (WAP) revisions. (SS) (MYM)			
37.	p. 29	<p><b>Comment:</b> WRAP, CWC, and T-Plant facilities will need completion of Permits, WAPs, etc. to assure TRU and MLLW waste processes are authorized.</p> <p><b>Modification needed:</b> Revise the plan to discuss the schedule of these activities and completion dates. Perhaps these activities should be a milestone to ensure contractor and USDOE-RL cooperation in getting these Permits completed. (SS) (MYM)</p>			
38.	p. 29	<p><b>Comment:</b> The first bullet under <b>MLLW Assumptions</b> refers to “sufficient commercial treatment capacity is available for...” However, “sufficient” is not defined.</p> <p><b>Modification needed:</b> Revise the plan to define “sufficient”. (SS)</p>			
39.	p. 30	<p><b>Comment:</b> At the end of the first paragraph, there is an assumption that WRAP can repackage 85 gallon containers. However, it was stated during the recent M-91 inspection that the Contractor/USDOE-RL has determined it is not feasible for WRAP to repackaging 85 gallon overpacks.</p> <p><b>Modification needed:</b> Revise the plan to be consistent with current and future operations. (SS)</p>			
40.	p. 30 and 31	<p><b>Comment:</b> Waste Isolation Pilot Plant (WIPP) approved waste streams are listed on page 30. However, the process of receiving approval from WIPP for the waste streams is not described.</p> <p><b>Modification needed:</b> Add a description and timeframe required to obtained approval from WIPP for WIPP-approved Waste Streams. Also</p>			

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		provide a tentative schedule for the “waste streams slated for near-term approval by WIPP”. (MYM)			
41.	p. 30 and 31	<p><b>Comment:</b> WIPP approved waste streams are listed on page 30. However, the WIPP approved waste streams listed on the “3/30/2006 Draft Hanford Waste Stream Workoff Plan” do not list Plutonium Alloy PFP or PUAL as a stream. Also, the “3/30/2006 Draft Hanford Waste Stream Workoff Plan” lists Hanford MOX Debris and Non-mixed PUREX Debris as previously approved. Twenty-six additional waste streams and associated approximate volumes in above ground storage with projected development/approval dates are listed.</p> <p><b>Modification needed:</b> Resolve the discrepancies listed, review “3/30/2006 Draft Hanford Waste Stream Workoff Plan” with the project personnel for additional modifications, and add this information (all current and projected waste streams with approximate volumes and tentative dates of development/completion) to the document. (MYM)</p>			
42.	p. 31	<p><b>Comment:</b> Section 3.2 discusses treatment/disposition paths for CH-MLLW streams, and CH-TRU. However, no possible paths for RH wastes are discussed.</p> <p><b>Modification needed:</b> Add a subsection to describe the possible treatment/disposition paths for RH-MLLW and RH-TRU. Also include the timeframe or schedule to implement the WIPP site certification processes of waste (RH waste) sent to WIPP, but completely certified at Hanford prior to shipment. (MYM)</p>			
43.	p. A-1	<p><b>Comment:</b> WIPP Approved Waste Streams are defined on page 30. However not defined in Appendix A.</p> <p><b>Modification needed:</b> Add the bullets/definitions to A-1. (JFO)</p>			
44.	Appendix B	<p><b>Comment:</b> Ecology finds the proposed change package unacceptable.</p>			

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		<p><b>Justification:</b> USDOE has not provided a plan (cost and schedule) to meet the existing milestones, but rather has provided a plan to meet some completely different schedules. USDOE has not justified why it cannot meet the existing milestones and does not provide a substantial detailed plan including cost and schedule for their new proposal.</p> <p><b>Modification needed:</b> None. Existing milestones are in place and enforceable. (LC)</p>			
45.	Appendix G-8	<p><b>Comment:</b> Ecology does not agree with assumption nine.</p> <p><b>Justification:</b> The definition of RSW in M-91-00 states that for what USDOE is referring to as non-RSW, the decision as to how to move forward will be determined through the cleanup process set forth in Resource Conservation and Recovery Act, Chapter 70.105 Revised Code of Washington, or CERCLA as appropriate. It does not require or state a preference for waiting for the 200-SW-2 Operable Unit (OU) actions. The Parties will be signing a change package to require more sampling and essentially delay cleanup decisions for 200-SW-2 OU. Depending on the circumstances, it may make more sense to clean up these releases sooner. In any event, this is a planning assumption that may cause USDOE and its contractors to underestimate their budgetary needs to maintain regulatory compliance.</p> <p><b>Modification needed:</b> The plan should assume that the remedial decision for any non-RSW wastes will go through the proper regulatory process and could result in immediate response actions. (LC)</p>			
46.	Appendix G-8	<p><b>Comment:</b> Ecology does not agree with assumption nine. Opportunistic sampling of non M-91 RSW-wastes (200-SW-2 OU waste) should not be excluded.</p> <p><b>Justification:</b> Sampling will be required to characterize the waste present</p>			

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		and due to the 200-SW-2 OU sites. It would be a cost savings to sample any non M-91 RSW-waste (200-SW-2 OU waste) that is encountered during retrieval operations.  <b>Modification needed:</b> Modify the document to include the requirement of 200-SW-2 OU wastes when possible during the M-91 Retrieval Operations and provide this characterization data to the CERCLA clean-up project. (DS) (MYM)			
47.	Appendix G-8	<b>Comment:</b> Ecology does not agree with assumption 13.  <b>Justification:</b> This assumption is overly optimistic and can lead to USDOE underestimating the funding requirements to achieve compliance.  <b>Modification needed:</b> USDOE should plan using the assumption that at least 10% of the waste will need intrusive sampling to complete designation. (LC)			
48.	Appendix G-8	<b>Comment:</b> Ecology does not believe assumption 14 is a good assumption. Not being able to use information gained during the certification of the TRU portion of a waste stream will certainly increase the necessity for intrusive sampling.  <b>Justification:</b> M-91 requires retrieved waste to be designated with 90 days of retrieval. Unless the TRU portion of a waste stream is certified within 90 days of retrieval, this information will not be available to the designation process.  <b>Modification needed:</b> Demonstrate how information from certification will be available within 90 days of retrieval or delete the assumption. (LC)			