CDPHE Comment - Responses on the 865 and 883 Cluster HSAs and Characterization Packages

1) Need to make a determination if B863 and Tank 026 are to be a part of this RLCR or the 800 Area RLCR.

Response: B863 and the 026-tank pad are not within the scope of the 865 Cluster RLC. They are within the scope of the 800 Area Type 1 RLC. It was agreed to during the scoping meeting for the 800 Area Type 1 RLC that Tank 026 would be released using the PRE process. The 865 Cluster RLC Plans and HSA will be modified to clarify which buildings and equipment are within the scope.

2) In section 2.3 it is stated that the sump along the north wall of the high bay area contained two tanks that collected process waste. However, in section 3.0, page 8 it is indicated that process waste drained into two underground tanks located under the building slab. It is also indicated in section 11.0, page 14, that "liquid wastes in B865 drained to tanks located under the floor of Building 865." Please make a determination if these are descriptions of the same two process waste tanks of if there are 4 or more tanks that have been used to collect process waste. Also, please provide the location and information on the tanks under the slab.

Response: The B865 HSA has been modified to clarify this issue. There were only two tanks and they were located in a sump in the floor slab on the north wall of room 145. Both tanks have been removed. These tanks were RCRA units 40.46 and 40.47. Tank 40.46 was closed in 1998 and RCRA unit 40.47 was withdrawn from the Permit in 1995 because it was never used.

Unit 40.46 was closed in accordance with revision to "Certification of RCRA Closures for Buildings 865, 883, and 889 (866)"; original Closure Certification dated 30 April 1998 (ref. 98-DOE-03363, 10 June 1998); revision dated 27 April 1999 (ref. Memo from D.Pontius, P.E., to T. Hopkins, RMRS Env. Mgr., 27 April 1999). Unit 40.47 existed, but was never used; Unit 40.47 was therefore *not* subject to RCRA regulation. This Unit was withdrawn on 12 April 1995 (ref.95-DOE-09335). A copy of the CDPHE concurrence letter for Unit 40.46 (CDPHE Concurrence Letter: 5 Nov 98; Certified Mail No. P335 618 557) was provided to CDPHE (D.Kruchek) during June 2001.

3) In section 3.0 there is a discussion of the cooling water supply on page 7. In this discussion it is indicated that additional information on the cooling tower C865 can be found in Section 7.3. However, I did not find a Section 7.3. As such, please indicate if this is referring to Section 10.0, or if there is additional information that has not been provided.

Response: The B865 HSA has been modified. The correct section is 10.0

4) In section 5.0, page 9, there is a discussion that indicates that excess solution (caustic?, acidic?, VOC, Be/Rad contaminated?) was pumped to the sump in room 151A. Please provide additional information on the use, possible contaminants, and discharge pathways for this sump. Also provide the specific characterization to be performed on this sump, Rad, Be, VOC, etc.

Response: The B865 HSA has been modified as follows. The sump in Room 151A is a closed system. The solution being referred to is the result of the Electrorefining (ER) Cell Stripout Process, located in Rooms 151 and 151A. This process was used for decontamination and decommissioning of the Beryllium Purification Process in Building 865. An electrolyte was prepared from salts consisting of potassium chloride, lithium chloride, and beryllium chloride, which were mixed in a salt mix loading box and were collected in a low-level waste container; wash water was

taken to Building 374 for treatment. The sump is a component of a RCRA unit (40.47), no additional sampling will be conducted because the hazardous waste codes that are attached to the unit are known. The unit will be closed in accordance with RCRA closure requirements specified in the Closure Plan, Section X, of the RCRA Part B Permit, which are also delineated in the RFCA RSOP for Component Removal, Decontamination and Size Reduction. Building surfaces within the scope of the RLC will be characterized for Be and Rad contaminates of concern, either with existing sample data or newly acquired sample data.

5) In section 10.0 the cooling tower Building C865 is described as having dimensions of 20 by 20 by 1 foot high. Seems sort of squat for a "tower", looks a bit higher in the picture provided. Also, it is indicated that the water was treated to reduce algae and sludge buildup. Please provide the chemicals that were added and provide the sampling to be conducted, which should include at a minimum Be, Rad, and metals (Cr, and any other suspected metal). Any sediment/sludge, in the basin and sump should also be sampled for the contaminants of concern, as well as the water.

Response: The B865 HSA has been modified to clarify the C865 dimensions. Information concerning chemical usage in the Cooling Towers is not fully known, therefore sampling will be conducted of sludge and water when this facility is characterized during the PDS phase. C865 is an anticipated Type 1 facility and will be characterized during the PDS phase of the 865 Project and is therefore not within the scope of this RLC effort. The 865 Cluster RLC Plans will be modified to clarify which buildings and equipment are within the RLC scope.

6) In section 11.0 the discussion indicates the process wastes from B865 and 889 were placed into holding tanks in B866. It also indicates that the waste streams entering B866 contained a host of contaminants, including solvents, metal, acids, bases, uranium, Be, and oils. It is also stated that there this building is contaminated due to spills. The contaminants of concern for B866 as listed in section 15.0 include VOAs, semi-VOAs, metals, and Be. As such, the RLC needs to properly investigate (or provide the results of any previous investigation that may be appropriate) the potential contamination that may be found in this Building.

Response: All RCRA permitted units in B865 have been characterized by the permitting process (i.e., approved waste codes). All RCRA units that have not been previously closed, will be closed in accordance with closure requirements specified in the Closure Plan, Section X, of the RCRA Part B Permit, which are also delineated in the RFCA RSOP for Component Removal, Decontamination and Size Reduction. Therefore, no additional sampling is required for RLC.

Additionally, all building surfaces within the scope of the RLC will be characterized for Be and radiological contaminates of concern, either with existing sample data or newly acquired sample data. It is assumed that all buildings systems and equipment are internally radiologically and Be contaminated and will be disposed of as LLW or LLMW. Therefore, in-process waste disposal characterization surveys will be performed on buildings systems and equipment at the time of waste packaging and disposal. The 865 Characterization Packages will be modified to further clarify the above response. There is no reason to suspect that the potential or actual hazards in any of the 865 systems would alter the anticipated facility typing.

7) Section 13.2 may provide a historical list of "Known Beryllium Areas", but may not be all inclusive of the areas that may have Be concerns. As such, this section should also discuss the buildings and areas that may have Be concerns, such as B866 and where recent Be investigations have shown the presence of Be, such as B865 Rm 10, 109, 110, 111, 113, etc, etc, etc.

Response: The HSA has had a statement added to clarify that the list of known beryllium areas was not intended to be a comprehensive list of all Be contamination, but instead intended to provide the reader with a feeling for the general extent of contamination. In addition, the HSA will

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state that Be sampling is ongoing and will be performed throughout the Cluster's characterization process. All building surfaces within the scope of the RLC will be characterized for Be contaminates of concern, either with existing sample data or newly acquired sample data.

8) Section 13.3 identifies the RCRA Units and their current status. However, this does not provide any information as to the characterization of the areas where these RCRA units are located. Unless sufficient analytical information can be provided to determine the appropriate characterization of the building in the areas where these units were or are located, then additional samples must be collected to properly characterize the building. This will include the secondary containment structures, sumps, slabs, etc.

Response: All RCRA permitted units in B865 have been characterized by the permitting process (i.e., approved waste codes). All RCRA units that have not been previously closed, will be closed in accordance with closure requirements specified in the Closure Plan, Section X, of the RCRA Part B Permit, which are also delineated in the RFCA RSOP for Component Removal, Decontamination and Size Reduction. It should be noted that the RCRA units include the secondary containment, sumps, slabs and ancillary equipment. Building surfaces within the scope of the RLC will be characterized for Be and Rad contaminates of concern, either with existing sample data or newly acquired sample data.

9) Section 14.0 the list of PACs, IHSSs, and UBC issues, should be utilized to identify possible contaminants and areas of concern to be included in this characterization effort. Unless specific documented analytical information is available to be included in the RLCR, additional samples need to be collected to properly characterize the concerns identified in this section.

Response: PACs, IHSS and UBC issues identified in the HSA have been reviewed by the characterization SMEs and appropriate samples and surveys have been incorporated into the revised characterization packages. Note: Only issues that affect the actual building surfaces are being considered for inclusion in this RLC effort. Environmental restoration issues will be coordinated with the Environmental Restoration Group. In addition the HSA has been modified to identify which PACs, IHSSs and UBCs are classified as "Active", as "Approved NFA", as "NFAs submitted and awaiting approval", or as "NFA to be submitted this Fiscal Year".

10) Based on the comments of Mr. Link, Be and radiological sampling should be conducted in B827.

Response: B827 is an emergency diesel generator building and has no process history of radiological or chemical hazards. B827 is an anticipated Type 1 facility and will be characterized during the PDS phase of the 865 Project and is therefore not within the scope of this RLC effort. The 865 Cluster RLC Plans will be modified to clarify which buildings and equipment are within the RLC scope.

11) The above comments need to be utilized to modify the proposed Chemical Characterization Plan for B865 Cluster. This includes adding Be sampling for all of the structures (currently shown as no samples), adding RCRA sampling in the sumps and areas of concern (including the covered sumps, pits, and trenches), adding PCB sampling in areas where PCB oils may have been spilled (such as in the trenches, pits and sumps).

Response: CDPHE comments have been reviewed and incorporated. The 865 characterization packages have been modified, and samples and surveys added as necessary.

B883 HSA

1) Need to make a determination if T883D and Tanks 020 & 021 are to be a part of this RLCR or the 800 Area RLCR.

Response: T883D and the 020 and 021 tank pads are not within the scope of the 883 Cluster RLC. They are within the scope of the 800 Area Type 1 RLC. It was agreed to during the scoping meeting for the 800 Area Type 1 RLC that Tanks 020 and 021 would be released using the PRE process. The 883 Cluster RLC Plans and HSA will be modified to clarify which buildings and equipment are within the RLC scope.

2) In section 3.7 it is stated that there are two air tunnels in the basement. These air tunnels need to be identified and appropriate sampling performed.

Response: These air tunnels are connected to the "A" and "B" Press/Mills and are a part of the ventilation system for this equipment. Appropriate remote samples and surveys will be taken in the pits of the "A" and "B" Press/Mills and will be representative of the worst case conditions of the air tunnels. Since these air tunnels are posted High Contamination Areas (HCAs) and Airborne Areas (ARAs) it would not be a good ALARA practice to enter the air tunnels for RLC purposes, and the site RLCP does not require characterization in HCAs and ARAs.

3) The RLC needs to consider the concerns/hazards and perform appropriate characterization of the salt water system as described in section 4.10, as well as the vacuum systems as described in section 4.14, and the process cooling water described in section 4.3.

Response: It is assumed that all building systems and equipment are internally contaminated and will be disposed of as LLW or LLMW. Therefore, in-process waste disposal characterization surveys and sampling will be performed on systems and equipment at the time of waste packaging and disposal. The 883 Characterization Packages will be modified to further clarify the above response. There is no reason to suspect that the potential or actual hazards in any of the 883 systems would alter the anticipated facility typing.

4) Section 8.2 may provide a historical list of "Known Beryllium Areas", but may not be all inclusive of the areas that may have Be concerns. As such, this section should also discuss the buildings and areas that may have Be concerns. At a minimum all of the facilities in this cluster appear to have Be concerns and need to have Be samples collected.

Response: All building surfaces within the scope of the RLC will be characterized for Be, either with existing sample data or newly acquired sample data. A statement was added to the HSA saying the list of known beryllium areas was not intended to be a comprehensive list of all Be contamination in the cluster, but instead intended to provide the reader with a feeling for the general extent of Be contamination. In addition, the HSA will state that Be sampling is an ongoing activity and will be performed as needed throughout the facility characterization process.

5) Section 8.3 identifies the RCRA Units and their current status. However, this does not provide any information as to the characterization of the areas where these RCRA units are located. Unless sufficient analytical information can be provided to determine the appropriate characterization of the building in the areas where these units were or are located, then additional samples must be collected to properly characterize the building. This will include the secondary containment structures, sumps, pits, slabs, etc.

Response: All RCRA permitted units in B883 have been characterized by the permitting process (i.e., approved waste codes). All RCRA units that have not been previously closed, will be closed in accordance with closure requirements specified in the Closure Plan, Section X, of the RCRA

Part B Permit, which are also delineated in the RFCA RSOP for Component Removal, Decontamination and Size Reduction. Therefore, no additional RCRA sampling is required for characterization. Building surfaces within the scope of the RLC will be characterized for Be and Rad contaminates of concern, either with existing sample data or newly acquired sample data.

6) In section 9.0 the cooling tower Building 883C is discussed. However, no mention of possible chemical concerns is included in this discussion. Please include this discussion. If chemicals have been used in this system to reduce algae and sludge buildup, then appropriate sampling of this facility may need to be performed. At the very least, sampling of any sediment/sludge and water should be conducted for Be, Rads, and metals (including lead, which is indicated to have been generated during process operations).

Response: Information concerning chemical usage in the Cooling Towers is not fully known, therefore sampling will be conducted of sludge and water when this facility is characterized during the PDS phase. C883 is an anticipated Type 1 facility and will be characterized during the PDS phase of the 883 Project and is therefore not within the scope of this RLC effort. The 883 Cluster RLC Plans will be modified to clarify which buildings and equipment are within the RLC scope.

7) In section 14.0 there is a discussion of Tank 016 that indicates that this tank may be contaminated and contain contaminated groundwater. If this tank is to be characterized during this RLC and included in the D&D of this building then sufficient samples need to be collected and/or a discussion provided in the RLCR identifying the appropriate characterization (to include Be) and disposition of this tank. Also Tanks 312 and 313 are included in this RLC, yet they are indicated to be addressed as a part of ER's scope of work. Please indicate if these two tanks are to be included in this RLC and fully discussed in the RLCR. Appropriate sampling needs to be performed to properly characterize these two tanks, which do not appear to be included as RCRA tanks in section 8.3.

Response:

Two Foundation Tanks (Tank 016 and Tank 013) are located in the southwest corner of B883. These tanks connect a series of French drains which drain groundwater and roof and parking lot runoff water from around B883. According to the RFETS Storm Water Pollution Prevention Plan (April 2001), water from these tanks flows into a system of surface drainages and culverts which outfall into the South Interceptor Ditch (SID); the SID drains into Woman Creek. Based on the stormwater discharge criterion, Tanks 013 and 016 should be reclassified to "anticipated" Type 1 structures, not Type 2 as was originally designated on the Listing of Facilities. KH requests that RFFO and CDPHE concur with this reclassification. Any anticipated Type 1 facilities will be characterized during the PDS phase of B883 D&D process.

Tanks 312 and 313 are underground storage tanks and are therefore a part of the Environmental Restoration Group's scope of work and not the Facility D&D Group. These two tanks will be addressed during the ER phase of the site closure project.

8) Section 15.0 the list of PACs, IHSSs, and UBC issues, should be utilized to identify possible contaminants and areas of concern to be included in this characterization effort. Unless specific documented analytical information is available to be included in the RLCR, additional samples need to be collected to properly characterize the concerns identified in this section. This would include possible RCRA contamination.

Response: PACs, IHSS and UBC issues identified in the HSA have been reviewed by the characterization SMEs and appropriate samples and surveys have been incorporated into the revised characterization packages. Note: Only issues that affect the actual building surfaces are

being considered for inclusion in this RLC effort. Environmental restoration issues will be cordinated with the Environmental Restoration Group. In addition, the HSA has been modified to identify which PACs, IHSSs and UBCs are classified as "Active", as "Approved NFA", as "NFAs submitted and awaiting approval", or as "NFA to be submitted this Fiscal Year".

9) Section 16.0 - The discussion of Be appears to indicate that none of the buildings other than B883 and B879 have any Be concerns. Since this may not be correct, this statement should be modified to indicate that Be may be a concern in the B883 Cluster, although they are not all included in the list of known Be areas.

Response: Building surfaces within the scope of the RLC will be characterized for Be, either with existing sample data or newly acquired sample data. See response to Question #4

10) Section 16.0 indicates that lead is a waste that has been generated and is therefore a contaminant of concern that needs to be included in this RLC.

Response: The Table of Potential Contaminants of Concern in section 16 will include a foot note that lead in paint will be addressed in accordance with RFETS Guidance Document 27 "Lead Based Paint (LBP) and LBP debris disposal".

Lead parts were apparently formed and handled in B883. Details concerning the specific location(s) and activities are not known. However, at those areas where these activities took place, it is not anticipated that lead has permeated the concrete flooring. It is possible that any lead particles that may have been released to the floor of B883, may have migrated to low areas in the flooring such as sumps, pits, trenches, and utility chases. Therefore, any sludge and/or liquid that is identified in sumps, pits, trenches, and utility chases (during collection of Be and rad samples) will also be sampled for RCRA chemicals. Analysis for lead will be included in the analytical suite for all such sludge and liquid samples.

11) Section 16.0 discusses Tank 013. Please indicate if this RLC includes Tank 013 in addition to Tank 016. If not, why not.

Response: The 883 and 881 HSAs have been modified to delete tank 013 from the 881 HSA and to include it in the 883 HSA. This change is intended to correct an error in the master facility list. Refer to comment response #7 (above) for tank 016.

12) Section 16.0 indicates that solvents, PCBs, oils, Rads, metals, acids, bases and other contaminants may have been spilled or released. As such this RLC needs to properly characterize for all of these concerns throughout B883 and the cluster facilities as appropriate. This would include the below slab and basement areas, pits, sumps, trenches, etc.

Response: The HSA have been reviewed by the characterization SMEs and appropriate samples and surveys have been incorporated into the revised characterization packages, including basement areas, pits, sumps, trenches, etc. Note: Only issues that affect the actual building surfaces are being considered for inclusion in this RLC effort. Below slab issues (e.g., UBC issues) identified in the HSA are not within the scope of this facility RLC and will be cordinated with the Environmental Restoration Group. Building surfaces within the scope of the RLC will be characterized for Be and Rad contaminates of concern, either with existing sample data or newly acquired sample data.

13) As stated in Section 16.0 there is the potential for plutonium contamination as well as pure beta emitters such as Strontium90, Tritium, Phosphorous32, Nickel63, and mixed fission products. As such these contaminants need to be included in the RLC.

Response: The 883 characterization package has been modified to address the potential plutonium contamination issue. A clarification interview was performed with Dick Link. Mr. Link stated that the impurities in the depleted uranium material were in the ppb range relative to the uranium material as a whole. In relation to the total specific activity of the uranium material, the potential impurities were at such minute levels, the elimination of these impurities as contaminants of concern may be justified. Additional RLC surveys will be performed in high potential areas for applicable beta emitters, fission products and plutonium. Results will be evaluated to possibly eliminate them as contaminates of concern in the 883 Cluster.

12) The above comments need to be utilized to modify the proposed Chemical Characterization Plan for B883 Cluster. This includes adding Be sampling for all of the structures (currently shown as no samples), adding RCRA sampling in the sumps and areas of concern (including the covered sumps, pits, and trenches), adding PCB sampling in areas where PCB oils may have been spilled (such as in the trenches, pits and sumps).

Response: CDPHE comments have been reviewed and incorporated. The 883 characterization packages have been modified, and samples and surveys added as necessary.

William Prymak
09/20/2001 01:44 PM

To: Steven Tower/doe/rffo@RFFO
cc:

Subject: Comments on B856 RLCR

None of these comments are show stoppers, but we should keep this in mind as the project moves forward.....

1. In Attachment G, the waste estimate has a footnote that says all waste types are assumed to be LLW and Be Waste. I cannot believe we mean that the structure once cleaned out will be LLWasted and it will remain Be contaminated. I think this statement is in error, and should only be focused on the wastes generated during stripout of the equipment in the building.

2. The HSA states, and the RLCR backs up, there is no contamination from Pu or other transuranics in the B865 cluster. Therefore, unless we discover something during decommissioning, the final surveys for this building should only look for DU contamination. This may save us some $$.

That's all. Overall looks complete.

Bill

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