Response to Notice of Deficiencies No. 1

Class 3 Hazardous Waste Storage & Treatment Permit Modification Request

Offsite Shipment and Disposal of Agent Hydrolysate

Volume 1:

1. Please provide certification that a permitted Treatment, Storage, and Disposal Facility (TSDF) has been identified and has agreed to accept hydrolysate for treatment. Include the name, EPA ID number, and location of the facility and any acceptance criteria required by the facility. Address what treatment will be provided by the facility and what the final disposition of the waste will be.

Response: The waste certification for agent hydrolysate offsite shipment for disposal is attached.

2. Please address the relevant recommendations in the 2015 NASEM Report "Review Criteria for Successful Treatment of Hydrolysate at the Blue Grass Chemical Agent Destruction Pilot Plant". This would include recommendations 3-1, 4-9, 6-3, and 6-4.

Response: Reponses are provided at the end of this document under the heading NASEM Recommendation Reponses.

3. Please discuss measures taken to comply with the Emergency Planning and Community Right-To-Know Act and the National Environmental Policy Act.

Response: Emergency Planning and Community Right-To-Know Act (EPCRA): Information for reporting requirements under EPCRA for Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) is provided to the Blue Grass Army Depot (BGAD) for inclusion in their reporting. The hydrolysate will be transported by a commercial hazardous waste transportation company which is licensed and permitted. They will follow their own procedures to meet EPCRA requirements. Likewise, the hazardous waste treatment facility that the hydrolysate will be treated at will follow its own procedures to comply with EPCRA.

National Environmental Policy Act (NEPA): A Record of Environmental Consideration (REC) for Re-Piping Hydrolysate Lines at BGCAPP was completed and a memorandum was signed October 1, 2018. Previously, off-site shipment of hydrolysate from BGAD was conducted during Operation Swift Solution when three-ton containers were neutralized. A REC for this action was completed in October 2008 utilizing a categorical exclusion (H)(4) for routine transportation of hazardous waste to a permitted, commercial TSDF. Likewise, this categorical exclusion was used in RECs for the off-site shipment of hydrolysate at both the Newport Chemical Agent Disposal Facility (NECDF) and Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP). Once the permitting actions for off-site shipment of hydrolysate are completed for the BGCAPP permit, a REC for off-site shipment of hydrolysate from BGCAPP will be completed.

4. Section 2.2, Justification for Permit Modification. This section discusses the Centers for Disease Control and Prevention (CDC) involvement in evaluating safety of the SCWO process.

Please discuss whether the CDC has provided recommendations for safe shipment of hydrolysate.

Response: The CDC has reviewed and provided comments on the Transportation Risk Assessments (TRAs) for the shipment of hydrolysate from BGCAPP. The TRAs, CDC comments, and comment resolution form are attached.

5. Section 2.2, page 6: Please verify/clarify the statement "Initial estimates indicate only enough agent hydrolysate storage capacity in the Hydrolysate Storage System (HSS) tanks through mid to late 2021, requiring a halt in munitions processing once these are filled." Since energetics hydrolysate will no longer be produced, it appears that there will be additional capacity available in the HSS tanks.

Response: HSS tanks MT-HSS-0604 and MT-HSS-0704 will be used exclusively for OTM Condensate during the VX projectile and rocket campaigns and for OTM Condensate and Spent Decontamination Solution (SDS) during the GB rocket campaign. OTM Condensate during the VX projectile/rocket campaigns and OTM Condensate/SDS during the GB rocket campaign will be disposed by deep-well injection and so must be kept separate from agent hydrolysate. Two tanks are required to support OTM Condensate and OTM Condensate/SDS offsite shipment and disposal. While one tank is being filled, the other tank will be sampled and analyzed for agent to verify that its contents meets the permit limits for OTM Condensate, and SDS as applicable, for offsite shipment. In addition, there currently are no direct flow paths that would allow transfer of agent hydrolysate from the Agent Neutralization System (ANS) to tanks MT-HSS-0604 and MT-HSS-0704.

6. Section 3.2.2. Transportation Risk Assessment. Please provide the BGCAPP-specific transportation risk assessment for agent hydrolysate with this application.

Response: The TRAs are attached.

7. Section 3.4.1. Container Storage. As currently written, it appears that spent decontamination solution (SDS) could not be shipped unless comingled with agent hydrolysate or OTM condensate. Please verify that this is the intent.

Response: SDS will be placed in tanks MT-HSS-0604 and MT-HSS-0704 with OTM Condensate during the GB rocket campaign, with the comingled waste stream subsequently disposed by deep-well injection. SDS will be comingled with agent hydrolysate during the VX projectile and rocket campaigns due to concerns with deep-well injection of the SDS resulting from VX processing. The agent hydrolysate/SDS waste stream will be shipped offsite for incineration.

8. Section 3.4.2. Tank Management. Page 11, line 36.Please clarify or delete the statement that "additional ancillary equipment as needed will be installed". Any change could require a permit modification.

Response: Statement has been deleted.

***Volume 2**:*

1. For agent hydrolysate, OTM condensate, and spent decontamination solution, please clarify the criteria that are intended to be used for release from the Munitions Demilitarization Building (MDB), and, if different, for shipment to a TSDF. Please review the following sections and ensure that the text is consistent with the criteria:

a. Section C-1, page 1, beginning on line 41.

b. Section C-1d, page 5, paragraph beginning on line 33.

c. Section C-1l, page 9, paragraph beginning on line 30.

d. Table C-4, pages 24 and 27.

Response: These sections have been updated to indicate that prior to release from the MDB, VX and GB hydrolysates will be required to meet the lower of the agent concentration from the DRE requirement or the WCLs contained in the USAPHC Chemical Agent Health-Based Standards and Guidelines for release. The treatment levels required for offsite shipment for each campaign will be the same as those required for release from the MDB. In addition, the sections have been updated to indicate both OTM Condensate and SDS that will be shipped offsite will be required to meet the same criteria as the agent hydrolysate for the respective campaign prior to shipment. Table C-1 has also been edited for consistency with these criteria.

2. Section C-1d, page 5, paragraph beginning on line 33. Please clarify what is meant by “used in the MDB processes”.

Response: SDS will be used as makeup water in the ANRs in place of process water. The section has been updated to clarify that the use of SDS will be in the ANRs.

3. Section C-1i. Please explain the change from the previous Waste Analysis Plan value of 0.7 VSL to 1.0 VSL.

Response: The monitoring level for VX is 1 VSL with an alarm level as specified in the MINICAMS/DAAMS Monitoring Table (currently 0.5 VSL). This is consistent with the currently approved MINICAMS/DAAMS Monitoring Table and other permit conditions. The section has been updated to specify that the alarm criteria will be as listed in the approved MINICAMS/DAAMS Monitoring Table.

4. Section C-1l, page 10, line 8. Please clarify this statement. Also, energetics hydrolysate is mentioned here and several other places in the document. Please revise or indicate that it will be revised with the RWCS application.

Response: Clarification has been added that large spills or leaks of agent hydrolysate will be reprocessed in the ANRs and the resulting ANR agent hydrolysate subsequently characterized. The two mentions of energetics are removed from Section C-1l, as in other locations in the document where necessary. Note that some rooms or areas still retain “Energetics” in their name and so those references are not removed.

5. Section C-1m, page 10, line 37. Please clarify whether this statement applies to rocket motors and shipping and firing tubes.

Response: Phrasing updated to indicate containers meet EPA air emissions requirements when required. Note that neither Rocket Motor nor SFT waste streams contain greater than or equal to 500 ppm volatile organics and so these are exempt per 40 CFR 264.1082 from the container requirements of 40 CFR 264.1086.

NASEM Recommendation Reponses

NASEM Recommendations 3-1, 4-9, 6-3, and 6-4 from *Review Criteria for Successful Treatment of Hydrolysate at the Blue Grass Chemical Agent Destruction Pilot Plant*

Recommendation 3-1. In collaboration with the CAC/CDCAB, the Program Executive Office for Assembled Chemical Weapons Alternatives should institutionalize a transparent consultation process that builds on the existing foundation and working group structure to ensure meaningful stakeholder input into analyses, evaluations, and decision criteria related to potential offsite shipment of hydrolysate and that provides opportunities for engaging with communities that would receive hydrolysate.

Response: The CAC has requested PEOACWA, Bechtel Parsons Blue Grass (BPBG) Joint Venture (JV), and the receiving TSDF develop a public outreach and execution plan with considerations for reaching low income and minority populations. This will be done for any TSDF selected for treatment of BGCAPP hydrolysate. The Port Arthur Facility in Texas has been used in the past and preliminary discussions with community leaders indicate the Port Arthur activist community will concur with plans to initiate a dialogue via a proposed existing platform, the Port Arthur Facility and Community Advisory Group.

Recommendation 4-9. BGCAPP project management should begin immediately to determine whether its current NEPA documentation is adequate to support offsite hydrolysate or other waste shipment or if new documentation is needed. This documentation could possibly include a new Final Environmental Assessment, a new Final Environmental Impact Statement, or a document to support categorical exclusion if one applies. This determination should be completed while BGCAPP is still operating under its RCRA RD&D permit. BGCAPP management should also determine how much time would be required to prepare any new NEPA documentation required and pre-file it.

Response: BGCAPP is using the same NEPA strategy for the off-site shipment of hydrolysate that was utilized at PCAPP. A Record of Environmental Consideration (REC) for Re-Piping Hydrolysate Lines at BGCAPP was completed and a memorandum was signed October 1, 2018. Previously, off-site shipment of hydrolysate from BGAD was conducted during Operation Swift Solution when three-ton containers were neutralized. A REC for this action was completed in October 2008 utilizing a categorical exclusion (H)(4) for routine transportation of hazardous waste to a permitted, commercial TSDF. Likewise, this categorical exclusion was used in RECs for the off-site shipment of hydrolysate at both the NECDF and PCAPP. Additionally, there are ongoing permitting actions for off-site shipment of hydrolysate for the BGCAPP permit. Once completed, a REC for off-site shipment of hydrolysate from BGCAPP will be completed.

Recommendation 6-3. The [Program Manager for Assembled Chemical Weapons Alternatives] should perform a quantitative transportation risk assessment for hydrolysate, including a quantitative assessment of the human health consequences of hydrolysate spills with and without a fire. This assessment needs to be completed to facilitate discussions with the public and regulators about the hydrolysate offsite shipment alternative.

Response: The TRAs are attached.

Recommendation 6-4. The Program Manager for Assembled Chemical Weapons Alternatives should prepare a prototypical emergency response plan for hydrolysate shipment, including the possibility of a fire or the occurrence of natural disasters such as floods. This plan would be the starting point for setting contractual requirements for the treatment, storage, and disposal facility and the shipper. The prototype needs to be completed to facilitate discussions with the public and regulators about the hydrolysate offsite shipment alternative.

Response: As part of the evaluation to select a hazardous waste transporter and a TSDF for the off-shipment and treatment of the BGCAPP hydrolysate, PEOACWA and the BPBG JV consider the emergency response plans that the transporter and TSDF are required to have as a RCRA permitted company. Additionally, PEOACWA and the BPBG JV monitor the weather prior to any shipment and adjust transportation routes and/or scheduled shipment dates based on potential issues. This is standard practice of hazardous waste shipments from both ACWA facilities (BGCAPP and PCAPP).