TECHNICAL COMMENTS
CAMP MINDEN
M6 and CBI DESTRUCTION TECHNOLOGY
May 7, 2015

Engineering Description of Combustion Units: Provide a complete engineering description of the unit which will include: (a) Process flow diagram of the entire combustion unit including all Air Pollution Control Equipment (APCE), (b) Engineering description of each equipment including combustion chambers and APCE, (c) Process monitoring and Instrument Control System, and (d) Automatic Waste Feed Control (AWFCO) System.

Performance Test: The quote states that a performance test will be conducted. Detailed information on the testing is required which should include: (a) Target Operating Parameter Limits (OPLs) for each equipment and combustion chambers, (b) Waste feed characteristics including any spiking, (c) Selection of Principal Organic Hazardous Constituents (POHCs) for demonstration of DRE, (d) System operation to achieve steady state, (e) Test runs protocol; minimum three runs under identical operating conditions (OPLs, minimum combustion chambers temperatures, maximum waste feed limits for each type of waste, stack gas flow rate, etc.), (e) Continuous Emissions Monitoring System (CEMS) for CO, THC, NOx, Oxygen and stack gas flow meter, and (f) Sampling and Analysis Plan for the wastes, stack emissions and solids residuals.

The work plan should also include supporting plans including: (a) Operation during initial shakedown phase, (b) Quality Assurance Project Plan, (c) CEMS Performance Evaluation Plan, (d) Startup, Shutdown and Malfunction Plan, and (e) Contingency Plan per the Administrative Order on Consent.

Test Results: A report with the results of the performance test will be submitted which will include, at minimum: (a) Field and process data including CEMS and all operating parameters, (b) Field sampling and laboratory analyses results, (c) Calculation of Destruction and Removal Efficiency (DRE) for the POHCs, (d) Emissions calculations and demonstration of compliance with applicable Clean Air Standards under NESHAP Maximum Achievable Control Technology and under MACT EEE (CO, THC, Dioxins/Furans, and Particulate Matter) and for NOx, and (f) Proposed Operating Parameters Limits (OPLs) for the entire combustion operations and the APCE.

Periodic Stack Sampling and Analyses: In the work plan, please include periodic sampling/analyses of dinitrotoluene, dibutylpthalate, and diphenylamine.

Pollution Control Equipment: The quote outlined optional pollution control equipment. To meet concerns over volatile organic compounds and maximize the destruction of material, the system should include an afterburner. In addition, to achieve maximum NOx reductions, the combustion unit should include a Selective Catalytic Reduction System. Furthermore, the unit must also include CEMS to measure CO, THC, NOx, O2 and stack gas flow rate.

Environmental Monitoring/Sampling: As in the AOC, LMD must develop a Quality Assurance Sampling Plan for the collection of environmental data prior to, during and post operations. During the operation phase, meteorological and environmental data should be collected at the destruction unit on a continuous basis and posted real time for public viewing. There should be the capability to routinely sample/analyze the various media for the constituents associated with M6 & CBI propellant (i.e., dinitrotoluene).

Community Involvement Plan: Develop a Community Involvement Plan in cooperation with EPA to keep the community involved throughout the process and establish a community information center for face-to-face information exchange with the public.

Magazine Priority: The quote included an insightful analysis of the priority of the magazines. EPA encourages the Vendor to reevaluate and update that priority based on such information contained in the March 2015 Explosive Safety Technical Assistance Visit Report. In that Report, the compromised CBI was recommended to be prioritized.

Air Modeling: The proposal states that air emissions modeling analyses will be performed using the PAS to evaluate fence-line concentration of gaseous emissions. The following items are also necessary to model air emissions and dispersion of constituents.

<u>Source Input Parameters:</u>

- Source Location: This would be the location of any emission point (e.g., stack release point). This could be provided in either lat/lon or UTM coordinates. EPA also wants to confirmation that there will be only one emission point and no other point or fugitive releases expected.
- Emission Rates: List of all anticipated emitted pollutants (e.g., CO, NOx, DNT) with an maximum short-term emission rate (lb/hr emission rate). Information regarding maximum long-term emission rate (tpy) is also necessary for evaluating emissions against long-term standards (e.g., annual NAAQS). If long-term emission rates are not available the short-term emission rate can also be used as a conservative model input.
- Emission Point Parameters: In the case of a stack, this will include the stack release height, stack exhaust temperature, stack diameter, and stack exhaust flow rate. If other emission sources, such as fugitive releases, are identified additional emission point information will be needed and will vary based on the source type.

<u>Meteorological Data:</u>

- Surface and Upper Air Met Data Files: This data will need to be accounted for in any modeling for this site.