

MODULE V

Treatment of Energetic Wastes

MODULE V – TREATMENT OF ENERGETIC WASTES
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ATTACHMENTS

- Attachment 3-1: DTF Waste Analysis Plan
- Attachment 3-2: DTF Security Plan
- Attachment 3-3: DTF Inspection Schedule
- Attachment 3-4: DTF Training Plan
- Attachment 3-5: DTF Facility Description
- Attachment 3-6: DTF Preparedness and Prevention Plan
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- Attachment 3-9: DTF Environmental Performance Standards

MODULE V - TREATMENT OF ENERGETIC WASTES

V.A. APPLICABILITY

The requirements of this permit module pertain to the treatment of waste energetic material at the Dugway Thermal Treatment Facility (DTTF). The DTTF is located at U.S. Army Dugway Proving Ground (Dugway), Dugway, Utah. The Permittee shall comply with Utah Administrative Code (Utah Admin. Code) R305-7, R315-101, 102, 103, 124, 260,261, 262, 263, 264, 265, 266, 268, and 270 and all conditions of this module.

- V.A.1. The permit conditions of this module allow treatment at the DTTF, as designed and described in the drawings and specifications in the DTTF Facility Description (Attachment 3-5). The DTTF consists of a large vegetation-free area for open burning (OB) or open detonation (OD). The DTTF is equipped with three burn pan for OB operations.
- V.A.2. The Permittee is allowed to receive waste energetic material, as defined in Condition V.B, from off-site for treatment at the DTTF. Approved waste energetic materials must meet the risk criteria required listed in Condition V.F and must be treated within 24 hours of arrival at Dugway. The Permittee shall seek an emergency storage permit from the Director, Waste Management and Radiation Control (Director), in accordance with Utah Admin. Code R315-270-61 in the event the waste cannot be treated within 24 hours of arrival.
- V.A.3. Waste treatment at the DTTF shall be accomplished only by Explosive Ordnance Detachment (EOD), Technical Escort Unit (TEU), West Desert Test Command (WDTC) Test Support Division (TSD), or other authorized personnel in accordance with the design requirements and operating conditions specified in Conditions V.G and V.H.

V.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

- V.B.1. The Permittee may thermally treat D003 hazardous waste energetic material at the DTTF generated from the following general sources or if the material meets the risk threshold criteria of Condition V.F:
- V.B.1.a. Excess munitions and explosive materials (e.g. bulk explosives, small arms munitions, projectiles, flares, grenades, sub-munitions, bombs, and rocket motors);
 - V.B.1.b. Excess solid propellant components and associated residue; and
 - V.B.1.c. Explosive residues generated by Dugway testing facilities and laboratories.
- V.B.2. The Permittee is prohibited from treating at the DTTF hazardous waste from sources, classes, or compositions other than those identified in Condition V.B.1, including wholly inert items and improvised explosive devices (e.g. homemade bombs which are non-military), armor penetrating weapons containing depleted uranium, and chemical and nuclear weapons, their devices, and components.

V.B.3. The Permittee shall comply with the waste compatibility requirements of Utah Admin. Code R315-264-17.

V.C. REQUIRED NOTICE

V.C.1. When the Permittee is to receive waste energetic material from a source other than Dugway, the Permittee must inform the generator in writing that the Permittee has the appropriate permits for, and will accept this waste. The Permittee must keep a copy of this written notice as part of the operating record, as required by Utah Admin. Code R315-262-12(b).

V.C.2. The Permittee shall notify the Director, in writing at least four weeks in advance of the date the Permittee expects to receive waste energetic material from a foreign location, as required by Utah Admin. Code R315-264-12(a)(1). Notice of subsequent shipments of the same waste from off Dugway locations in the same calendar year is not required.

V.D. WASTE CHARACTERIZATION AND ANALYSIS

V.D.1. The Permittee shall comply with the requirements of the DTTF Waste Analysis Plan (Attachment 3-1) to address the requirements of Utah Admin. Code R315-264-13.

V.E. WASTE ACCEPTANCE

V.E.1. The Permittee shall follow the waste acceptance procedures outlined in the DTTF Waste Analysis Plan (Attachment 3-1).

V.E.2. When receiving waste energetic material from a source other than Dugway, all formal requests for treatment and associated correspondence (a formal treatment request from the generator) must be referenced to on each uniform hazardous waste manifest. This information shall be kept in the operating record.

V.E.3. Inspection of each shipment shall be recorded in the operating record and compared to the acceptable parameters and type of material described in the DTTF Waste Analysis Plan (Attachment 3-1). Inspections shall be conducted in accordance with the DTTF Inspection Plan (Attachment 3-3).

V.F. RISK THRESHOLDS

V.F.1. Hazardous waste treatment activities shall be conducted at the DTTF to minimize the risk to human health and the environment. The risk thresholds for operations at the DTTF are based on the *DTTF Ecological Risk Assessment* (CH2M Hill, 2006 and approved in February 2007) and the *DTTF Human Health Risk Assessment* (USACE, 2008 and approved in June 2009). The human health risk assessment uses cancer potency factors (slope factors) and reference doses for non-carcinogens following the Environmental Protection Agency (EPA) hierarchy of toxicological data [e.g., Integrated Risk Information System (IRIS) and Provisional Peer-Reviewed Toxicity Values, (PPTRV)].

V.F.2. In order to ensure that DTTF operations are conducted in a manner protective of human health and the environment, Dugway shall review and update the DTTF risk assessments as requested by the State when:

V.F.2.a. Updated munitions information or results from compliance sampling would require the addition of chemical compounds.

V.F.3. If changes are made to the DTF risk assessments, Dugway will update operating procedures at the DTF, as necessary, to minimize risk to personnel and the environment.

V.F.4. PERFORMANCE STANDARDS AND RISK THRESHOLDS

The Permittee shall operate the DTF to prevent unacceptable risk of cancer and non-cancer effects to on-site workers (DTF and Dugway), off-site residents (English Village and off Post) and to minimize significant effects to the ecosystem surrounding the DTF. The Permittee shall maintain compliance with the environmental performance standards listed in Utah Admin. Code R315-264-600 - 264-603 and update the information in the DTF risk assessments according to Condition V.F.2. The Permittee shall adhere to the following conditions to prevent unacceptable risk of cancer and non-cancer effects due to exposure to OB or OD emissions:

V.F.4.a. The cumulative carcinogenic risk to on-site workers shall not exceed 1.0×10^{-4} (one in ten thousand) for the closest potential receptors (DTF workers and locations evaluated using the Open Burn/Open Detonation Dispersion (OBOD) Model associated with the human health risk assessment). The risk shall be calculated according to the methodology in the *DTF Human Health Risk Assessment*.

V.F.4.b. The cumulative non-carcinogenic hazard to the closest on-site potential receptors of the burn or detonation shall be less than a hazard index of 1.0. The hazard shall be calculated according to the methodology in the *DTF Human Health Risk Assessment*.

V.F.4.c. The cumulative carcinogenic risk to actual or potential residential receptor shall not exceed 1.0×10^{-6} (one in a million). The cumulative non-carcinogenic hazard to actual or potential residential receptor shall not exceed a hazard index of 1.0.

V.F.4.d. The maximum net explosive weight (NEW), including donors and initiators, to be treated at the DTF shall not exceed 1,500 lbs. per event.

V.F.4.e. Open Burn

V.F.4.e.1. The NEW shall be no greater than 1,500 lbs. per event. The net explosive weight shall not exceed 150,000 lbs. per rolling 12 month period.

V.F.4.f. Open Detonation

V.F.4.f.1. The NEW shall be no greater than 1,500 lbs. per event. The net explosive weight shall not exceed 150,000 lbs. per rolling 12 month period.

V.G. DESIGN AND OPERATION OF THE TREATMENT UNIT

V.G.1. The Permittee shall design, construct, maintain, and operate the DTF to minimize the

possibility of a fire or explosion not authorized by this permit. The release of any hazardous waste or hazardous waste constituents that could threaten human health or the environment (i.e. groundwater, surface water, soil, or air) will be minimized in accordance with the DTF Facility Description (Attachment 3-5).

- V.G.2. The Permittee shall construct the facility or make substantial changes to existing structures in accordance with designs approved by the Director, except for minor changes deemed necessary by the Permittee and approved by the Director, to facilitate proper construction of the treatment unit. Minor deviations from the approved designs to accommodate proper construction and the substitution of equivalent or superior materials or equipment shall be noted on as-built drawings and specifications, and a rationale for those deviations shall be provided in written form.
- V.G.3. After review of the as-built drawings, the Director shall notify the Permittee in writing of any change that he concludes is not minor and is necessary for proper construction. The Director may notify the Permittee that the permit has been violated by making such changes without his approval prior to construction, in accordance with Utah Admin. Code R315-270-42, and may require the Permittee to remove and replace any construction inconsistent with any approved designs and specifications.

V.H. OPERATING CONDITIONS

- V.H.1. When performing thermal treatment activities, the Permittee shall adhere to site-specific operating procedures, including the following requirements:
- V.H.1.a. DTF operations shall be conducted within the secure area of the DTF with controlled access for humans. At a minimum, the data provided in the table in Utah Admin. Code 315-265-1 (40 CFR 265.382 incorporated by reference) shall be used to dictate safe separation distances from external receptors.
- V.H.1.b. The DTF shall be secured as specified in the DTF Security Plan (Attachment 3-2). Warning signs shall be posted to keep unauthorized personnel out during a thermal treatment event. Access roads shall be controlled during DTF operations.
- V.H.1.c. The integrity of the DTF and support equipment shall be determined through regular inspections in accordance with the DTF Inspection Schedule (Attachment 3-3). Inspection records shall be maintained at the DTF Office as required by Utah Admin. Code R315-264-15(d).
- V.H.1.d. DTF personnel and operators shall follow an approved training program as specified in the DTF Training Plan (Attachment 3-4). The training program shall include operational practices and site-specific hazardous waste handling procedures.
- V.H.1.e. During DTF operations, telephone or two-way radio communications with support personnel shall be available, including communication with security and firefighting units as required by the DTF Preparedness and Prevention Plan (Attachment 3-6).

- V.H.1.f. In accordance with Dugway Standing Operating Procedure (SOP) DP-0000-H-100 (Thermal Treatment, Dugway Thermal Treatment Facility (DTTF): Munitions, Bulk Propellant, and Explosives), meteorological data shall be recorded for each day of burn or detonation activity and maintained in the operating record.
- V.H.1.g. Waste energetic material shall be treated as soon as conditions allow and qualified personnel are available at the DTTF.
- V.H.1.h. Prior to treatment, waste energetic material shall be inspected to ensure that only waste defined in Condition V.B. is burned or detonated. The results of each inspection will be noted in the Operating Record at the DTTF Office as required by Condition V.J.2.c.
- V.H.1.i. Within 24 hours after each DTTF operation, the site and surrounding area shall be inspected for untreated waste. Any untreated waste shall be immediately retreated or treated the following day. The results of each inspection will be noted in the Operating Record at the DTTF Office as required by Condition V.J.2.c.
- V.H.1.j. Fully treated residues from burning shall be removed after each treatment event and managed in accordance with condition V.I. Any partially treated residues shall be retreated until treatment is complete.
- V.H.1.k. Residues from detonation, such as surface exposed scrap metal, casings, fragments and related items shall be collected after each event and managed in accordance with condition V.I.
- V.H.1.l. Prior to each thermal treatment event, treatment areas to be used shall be inspected to insure that no animals are present.
- V.H.1.m. Thermal treatment operations shall not generate noise or ground vibration at levels that will have an adverse effect on nearby on-site and off-site receptors.
- V.H.1.n. The Permittee shall have available, during each burn or detonation, adequate fire protection equipment to assure the confinement and control of any fire resulting from the DTTF operations.

V.H.2. SPECIFIC OPERATING CONDITIONS - Open Burning

The Permittee shall conduct open burning operations in the burn pan on the ground surface based on the design plans in the DTTF Facility Description (Attachment 3-5) and in accordance with Dugway SOP DP-0000-H-100 (Thermal Treatment, Dugway Thermal Treatment Facility (DTTF): Munitions, Bulk Propellant, and Explosives) and the following conditions:

- V.H.2.a. The Permittee shall operate and maintain a lid to the burn pan such that the burn pan remains covered between burns, prevents direct exposure to wildlife, and minimizes the infiltration of precipitation.

- V.H.2.b. The Permittee shall manage accumulated precipitation in accordance with the DTF Waste Analysis Plan (Attachment 3-1).
- V.H.2.c. The area surrounding the burn pan shall be inspected for untreated explosives, propellant material, or other kick out material after each burn. Non-reactive residue will be collected, characterized, and containerized for disposal or recycling. Reactive residue that is safe to handle is considered newly generated waste and may be stored at the 90-day temporary storage site (TSS) at the DTF and treated during the next burning operation. Reactive residue that is not safe to handle will be retreated within 24 hours at the DTF.
- V.H.2.d. The Permittee shall use an electronic ignition device such as an electronic lighter to start the open burning process in accordance with SOP DP-0000-H-100.
- V.H.2.e. Upon completion of a burn, and within 24 hours, site personnel shall inspect the area for ejected material and retreat or recycle as appropriate in accordance with Condition V.H.1.i. Inspections will be documented in the operating record.

V.H.3. SPECIFIC OPERATING CONDITIONS – Open Detonation

The Permittee shall conduct open detonation operations based on the design plans in the DTF Facility Description (Attachment 3-5) and in accordance with Dugway SOP DP-0000-H-100 (Thermal Treatment, Dugway Thermal Treatment Facility (DTF): Munitions, Bulk Propellant, and Explosives) and the following conditions:

- V.H.3.a. Any fires started from kick out from a detonation shall be immediately extinguished.
- V.H.3.b. The detonation area shall be inspected for untreated explosives, propellant material, or other kick out material after each treatment event. Non-reactive residue will be collected, characterized, and containerized for disposal or recycling. Reactive residue that is safe to handle may be stored at the 90-day TSS at the DTF and treated at the next operation. Reactive residue that is not safe to handle will be retreated within 24 hours at the DTF. The results of each inspection will be noted in the Operating Record at the DTF Office as required by Condition V.J.2.c.

V.H.4. SPECIFIC OPERATING CONDITIONS – Emergency Destructions outside the DTF

- V.H.4.a. The Permittee may perform open detonation operations outside the DTF facility under the following conditions in the event energetic material has been determined unsafe for transport to the DTF. Chemical, radiological, and biological munitions will require approval by the Director prior to treatment.
- V.H.4.b. The Permittee shall provide the Director with a notification of a planned detonation activity prior to the event. The notification may be an email and

shall specify the material to be detonated, the general location, and date of the planned event.

- V.H.4.c. Dugway shall comply with all applicable portions of Utah Admin. Code R315-260 through R315-270, R315-124 and R315-101. Applicable rules are those which are in effect on the date of the emergency detonation. Upon conducting emergency detonations on the Open Range, the detonation area shall be inspected for untreated explosives, propellant material, or other kick out material after each treatment event. Non-reactive residue will be collected, characterized, and containerized for disposal or recycling. Reactive residue that is safe to handle may be stored at the 90-day TSS at the DTF and treated at the next operation. Reactive residue that is not safe to handle will be retreated within 24 hours at the DTF. The results of each inspection will be noted in the Operating Record at the DTF Office as required by Condition V.J.2.c.
- V.H.4.d. Dugway shall perform emergency detonation using qualified personnel and approved procedures.
- V.H.4.e. The Permittee shall document in the Operating Record the information required by the Range-Discovered Material Potentially Presenting an Explosive Hazard Tracking System.
- V.H.4.f. The Permittee shall submit a written report detailing the event to the Director within 15 days of each destruction event that occurs outside of the DTF. The report shall include the latest version of the Range-Discovered Material Potentially Presenting an Explosive Hazard Tracking System.

V.I. RESIDUE AND ASH MANAGEMENT

- V.I.1. All residue and ash generated from DTF operations shall be managed in accordance with the following conditions:
 - V.I.1.a. The ash and material will be collected within 24 hours from the completion of a burn.
 - V.I.1.b. The burn pan shall remain closed until the ash is removed.
 - V.I.1.c. The ash will be collected and placed in approved Department of Transportation (DOT) containers.
- V.I.2. The Permittee shall collect and manage any kick-out from detonations or ash from burns from areas other than the burn pan within 72 hours of each burn or detonation.
- V.I.3. Drummed residue and ash shall be handled according to the procedures in the DTF Waste Analysis Plan (Attachment 3-1).
- V.I.4. Surface exposed scrap metal, casings, fragments can be managed off-site for recycling.

V.J. INSPECTION SCHEDULES, PROCEDURES AND REQUIREMENTS

- V.J.1. The Permittee shall inspect the DTF in accordance with the inspection plans, schedules and checklists described in the DTF Inspection Schedule (Attachment 3-3). The Permittee shall conduct inspections of the DTF on each day of treatment.
- V.J.2. The Permittee shall comply with the following conditions, as well as conditions pertaining to inspections in the DTF Inspection Schedule (Attachment 3-3):
- V.J.2.a. If problems (such as equipment deterioration, equipment malfunction, transportation spill, etc.) are observed during inspections as detailed in the inspection forms and checklists (Attachment 3-3), the Permittee shall repair or take remedial action to correct the problem as specified in Utah Admin. Code R315-264-15(c).
 - V.J.2.b. If, upon determination by the Director or the Permittee, continued operation of the DTF could endanger human health or the environment, the Permittee shall cease operation of the unit until the problem has been corrected. Any problem where a hazard is imminent or has already occurred, that could endanger human health or the environment as determined by the Director or the Permittee, shall be corrected immediately and documented in the operating record.
 - V.J.2.c. A record of inspections shall be maintained as part of the operating record as specified by Utah Admin. Code R315-264-15(d).
- V.J.3. The Permittee may make the following revisions to the inspection requirements (included as Attachment 3-3 of this permit), in accordance with the procedures for Class 1 permit modifications, which require pre-approval from the Director, Utah Division of Waste Management and Radiation Control (Director), in accordance with Utah Admin. Code R315-270-42
- V.J.3.a. Upon certification of closure of an individual hazardous waste management unit, any portion of the Inspection Plan specific to that unit shall be deleted from the inspection requirements.
 - V.J.3.b. The Permittee may modify inspection requirements in an existing inspection form, table, figure, or record in cases where such modifications will result in more comprehensive or detailed inspection requirements.
 - V.J.3.c. If necessary, the Permittee shall create additional inspection forms, tables, figures, or records to address inspection requirements for equivalent replacement equipment, which is to be routinely inspected. These shall become part of the operating records.
 - V.J.3.d. The Permittee shall submit updated inspection requirements referenced in the Permit for the DTF within fifteen (15) days after amending and updating these documents. The Director shall notify the Permittee of the necessity of modifying the Permit. The Permittee is not prohibited from submitting updated referenced documents as permit modifications as required by Utah Admin. Code R315-270-42.

V.K. SECURITY

The Permittee shall comply with security conditions and procedures outlined in the DTF Security Plan (Attachment 3-2).

V.L. PERSONNEL TRAINING

V.L.1. The Permittee shall conduct personnel training as required by Utah Admin. Code R315-264-16. This training program shall follow the plan found in the DTF Training Plan (Attachment 3-4). New DTF facility personnel shall complete the required personnel training within six months of their hire date or assignment to the facility or to a new position at the facility. In addition, the Permittee shall comply with the following conditions:

V.L.2. The Permittee shall provide training as required by Utah Admin. Code R315-264-16 and Attachment 3-4 (DTF Training Plan).

V.L.3. The Permittee shall maintain training documents and records as required by Utah Admin. Code R315-264-16(d) and Utah Admin. Code R315-264-16(e). These records shall indicate the date the employee was assigned to management of hazardous waste, the type and amount of training received conducted.

V.L.4. The Permittee shall maintain a copy of the Training Plan until the DTF is fully closed and closure is certified.

V.L.5. The Permittee shall provide the Director with written notification of changes to any job position, job title, job description or the related relevant job responsibilities to include job requisite skill, education, and other qualifications required for each job position for all personnel assigned or responding to emergency response actions required by Attachment 3-4 as specified by Utah Admin. Code R315-264-16(d). Upon the Director's approval, the Permittee shall submit these items as permit modifications as required by Utah Admin. Code R315-270-42.

V.M. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

V.M.1. The Permittee shall comply with the requirements of Utah Admin. Code R315-264-17 and the requirements of all applicable National Fire Protection Association (NFPA) codes. "No Smoking" signs shall be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

V.M.2. In addition to the requirements of Utah Admin. Code R315-264-17, the Permittee shall comply with the specifications in the DTF Inspection Schedule (Attachment 3-3).

V.M.3. The Permittee shall separate and protect ignitable and reactive waste from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical),

spontaneous ignition (e.g., from heat-producing chemical reactions), water and radiant heat.

- V.M.4. The Permittee shall take precautions to prevent reactions which:
- V.M.4.a. Generate extreme heat or pressure, fire or explosions, or violent reactions;
 - V.M.4.b. Produce uncontrolled toxic mists, fumes, or gases in sufficient quantities to threaten human health or the environment;
 - V.M.4.c. Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
 - V.M.4.d. Damage the structural integrity of the device or facility;
 - V.M.4.e. Through other like means, threaten human health or the environment.

V.N. LOCATION STANDARDS

- V.N.1. It has been determined that this facility has met the location standards as required by State and Federal Rules. Supporting documentation is provided in Attachment 3-5.

V.O. PREPAREDNESS AND PREVENTION

- V.O.1. The Permittee shall follow the Preparedness and Prevention procedures in the DTTF Preparedness and Prevention Plan (Attachment 3-6).
- V.O.2. The Permittee shall equip and maintain, in good operating condition, the equipment listed in the DTTF Preparedness and Prevention Plan (Attachment 3-6) as required by Utah Admin. Code R315-264-32.
- V.O.3. The Permittee shall test and maintain the equipment specified in Condition V.O.2, and Preparedness and Prevention Plan (Attachment 3-6) as required by Utah Admin. Code R315-264-33, and as required by the National Fire Protection Agency (NFPA) to assure its proper operation in time of an emergency.
- V.O.4. The Permittee shall maintain records of the preventative maintenance and repair activities specified in Condition V.O.3 and shall keep schedules, reflecting minimum and planned frequency for the performance of preventative maintenance activities of the equipment at the DTTF office.
- V.O.5. The Permittee shall maintain access to the communications or alarm system as required by Utah Admin. Code R315-264-34, and as outlined in the DTTF Preparedness and Prevention Plan (Attachment 3-6).
- V.O.6. In accordance with Utah Admin. Code R315-264-37, and Preparedness and Prevention Plan (Attachment 3-6) Arrangements with Local Authorities, the Permittee will ensure that on-site police, fire departments, and emergency response teams are familiar with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and

roads inside the facility, and possible evacuation routes.

V.P. CONTINGENCY PLAN

V.P.1. Whenever there is a fire, explosion or release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment the Permittee shall immediately carry out the provisions of the DTTF Contingency Plan (Attachment 3-7) and follow the emergency procedures as described in Utah Admin. Code R315-264-56. The Permittee shall comply with Utah Admin. Code R315-263-30 – 263-33 in the reporting of releases to the Director.

V.P.2. The Permittee shall provide copies of the Contingency Plan to emergency response personnel as required by Utah Admin. Code R315-264-53.

V.P.3. A trained Emergency Coordinator shall be available at all times in case of an emergency at the DTTF, as required by Utah Admin. Code R315-264-55. The names, addresses, and telephone numbers of all persons qualified to act as emergency coordinators shall be supplied to the Director at the time of approval and certification as required by Utah Admin. Code R315-264-52(d). The Permittee shall notify the Director of any changes to the list of Emergency Coordinators in Attachment 3-7.

V.P.4. The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by Utah Admin. Code R315-264-54 and as specified by Utah Admin. Code R315-124-5.

V.Q. MANIFEST SYSTEM

V.Q.1. The Permittee shall comply with the manifest requirements of Utah Admin. Code R315-264-71, R315-264-72 and R315-264-76.

V.Q.2. If a waste load is refused for treatment at the facility and returned to the generator, such action shall be documented in the Operating Record.

V.Q.3. Copies of all manifests received by the Permittee shall be included in the Operating Record.

V.R. RECORDKEEPING AND REPORTING

V.R.1. In addition to the recordkeeping and reporting requirements specified elsewhere in this permit, the Permittee shall comply with the following:

V.R.1.a. The Permittee shall maintain a written Operating Record at the facility in accordance with Utah Admin. Code R315-264-73 and R315-264-110

V.R.1.b. The Permittee shall, by March 31 of each year, submit to the Director a certification pursuant to Utah Admin. Code R315-264-73(b)(9). The certification must verify that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable. The certification must also verify that the proposed method of treatment, storage, or disposal

- is the most practicable method currently available to the Permittee and that it minimizes the present and future threat to human health or the environment.
- V.R.1.c. The Permittee shall maintain in the Operating Record copies of all spill reports for the DTF submitted to the Director.
- V.R.1.d. The Permittee shall comply with the waste tracking requirements provided in the figures located at the end of this module (Range Discovered Material Potentially Presenting an Explosive Hazard Tracking System and Flow Diagram).
- V.R.3. The Permittee shall maintain a copy of the certifications required in Condition V.R.1.b in the Operating Record and sign each certification in accordance with Utah Admin. Code R315-264-73.
- V.R.4. The Permittee shall comply with the biennial report requirements of Utah Admin. Code R315-264-75, by March 1 of each even-numbered reporting year. The report shall include wastes generated, treated and stored at the Permittee's facility during the previous odd-numbered year except as specified by the Director.
- V.R.5. The Permittee shall submit additional reports to the Director in accordance with Utah Admin. Code R315-264-77.
- V.R.6. All reports, notifications, applications, or other materials that are required to be transmitted to the Director shall be sent by certified mail or other means with proof of delivery to:
- Director
Utah Division of Waste Management and Radiation Control
P.O. Box 144880
Salt Lake City, Utah 84114-4880

V.S. CLOSURE AND POST-CLOSURE

- V.S.1. The Permittee shall close the facility as required by Utah Admin. Code R315-264-110 – 264-120 and in accordance with the DTF Closure and Post-Closure Plan (Attachment 3-8).
- V.S.2. Any deviation from the Closure Plan necessary to accommodate proper closure shall be proposed to and approved by the Director prior to implementation. Such changes may require modification of the permit pursuant to Utah Admin. Code R315-124-5. The changes shall also be described in narrative form with the closure certification statements. Within 60 days after completion of closure of the DTF, the Permittee shall submit the certification statements and narrative report to the Director.
- V.S.3. The Permittee shall amend the closure plan as found in Attachment 3-8 in accordance with Utah Admin. Code R315-264-110 – 264-120 whenever necessary, or when required to do so by the Director.
- V.S.4. The Permittee shall notify the Director in writing of partial or final closure of the Facility in accordance with Utah Admin. Code R315-264-112(d). The Permittee shall review the

DTTF Closure and Post Closure Plan (Attachment 3-8) before commencing partial or final closure and shall certify to the Director that the closure plan is accurate and applicable to the DTTF. If the closure plan requires modification, the plan shall be modified pursuant to Utah Admin. Code R315-124-5.

- V.S.5. After receiving the final volume of hazardous waste, the Permittee shall treat or remove from the unit all hazardous waste and complete closure activities in accordance with the schedules specified in the DTTF Closure and Post-Closure Plan (Attachment 3-8).
- V.S.6. The Permittee shall decontaminate or dispose of all facility equipment, structures, soil, and rinsate as required by Utah Admin. Code R315-264-110 – 264-120 and DTTF Closure and Post-Closure Plan (Attachment 3-8). Facility equipment, structures and soil that have not been decontaminated shall be managed only at a permitted hazardous waste treatment, storage, or disposal facility.
- V.S.7. The Permittee shall certify that the facility has been closed as specified in the DTTF Closure and Post-Closure Plan (Attachment 3-8) as required by Utah Admin. Code R315-264-110 – 264-112 and shall provide a certification by an independent, registered professional engineer qualified by experience and education in the appropriate engineering field.
- V.S.8. In the event that the DTTF cannot be clean closed by removing hazardous waste and hazardous waste constituents from contaminated soil and groundwater, as specified in the DTTF Closure and Post-Closure Plan (Attachment 3-8) the Permittee shall either modify the permit in accordance with Utah Admin. Code R315-125-5 to provide for closure of the unit as a landfill in accordance with Utah Admin. Code R315-264-110 – 264-112 or provide for closure of the unit as required by Utah Admin. Code R315-101. If the DTTF is closed as a landfill, the Permittee shall maintain post-closure as required by Utah Admin. Code R315-264-110 – 264-112 and in accordance with the DTTF Closure and Post-Closure Plan (Attachment 3-8).
- V.S.9. If contamination is left in place at the time of closure, the Permittee shall prepare a survey plat indicating the location of the contamination. The survey plat shall be submitted with the certification of closure in accordance with Utah Admin. Code R315-264-116.
- V.S.10. The following conditions apply to closure of the DTTF, in addition to any closure requirements described elsewhere in this permit:
- V.S.10.a. Rinsate resulting from decontamination of facility structures and equipment at the time of closure will be sampled and managed in accordance with the DTTF Closure and Post-Closure Plan (Attachment 3-8). Analysis of the wash waters shall be conducted in accordance with a Waste Analysis Plan submitted for approval by the Director at the time of notification of closure.
- V.S.10.b. Prior to closure, the Permittee shall review the Operating Record for records of spills at the DTTF and shall visually inspect the DTTF for signs of contamination such as soil staining. The Permittee shall propose a list of additional sampling parameters, soil sampling locations and clean-up criteria for approval by the Director to ensure that the hazardous wastes and

hazardous constituents documented in the spill reports and visual inspections are accounted for in the Closure Plan.

V.S.11. The Permittee shall submit, prior to closure, a Post-Closure Monitoring Plan to be implemented should contamination be left in place at the DTF.

V.T. ENVIRONMENTAL MONITORING

Environmental monitoring requirements are discussed in Attachment 3-9, (Environmental Performance Standards). Environmental monitoring of soil and groundwater at the DTF should be conducted in accordance with the monitoring frequencies, sampling locations, sampling methods, analytical parameters, analytical methods, and quality control requirements specified in Attachment 3-9.

V.U. FACILITY MODIFICATION/EXPANSION

Modification of the design plans and specifications in the DTF Facility Description (Attachment 3-5) and construction of additional treatment units shall be allowed only in accordance with Condition V.B.

V.V. CLOSURE AND POST CLOSURE OF ENERGETIC TREATMENT AREAS

The Permittee shall close the DTF in accordance with the DTF Closure and Post-Closure Plan (Attachment 3-8) or conduct post-closure monitoring in accordance with a Post-Closure Plan to be submitted in accordance with Condition V.S.

V.W. DTF OPERATING RECORD

V.W.1. The Permittee shall maintain an operating record describing the DTF activities. The record shall include the following information:

V.W.1.a. The requirements of Utah Admin. Code R315-264-73.

V.W.1.b. Description and quantity (number and NEW) of each hazardous waste energetic material received and treated at the DTF.

V.W.1.c. Type of Treatment (open burn or open detonation)

V.W.1.c. Date and time of treatment.

V.W.1.d. Copies of manifests showing disposition of burn residues and a description of solid waste used as initiators that were burned or detonated.

V.W.1.e. Current copies of all operating procedures used at the DTF.

V.W.1.f. Meteorological conditions for each burn or detonation as listed in Condition V.H.1.f.

V.X. LAND USE PROVISIONS

V.X.1. Land surrounding the DTTF is devoid of development and dedicated to military training and weapon testing. The nearest receptors outside of the DTTF are workers at the Carr Facility.

V.X.2. The Permittee shall notify the Director of any changes to the land use description provided in Condition V.X.1.

V.Y. COMPLIANCE SCHEDULE

V.Y.1. The Permittee shall submit on an annual basis the following:

V.Y.1.a. A waste minimization statement in accordance with the recordkeeping requirements of Condition V.R.1.b.

V.Z. FINANCIAL ASSURANCE AND REQUIREMENTS

States and the Federal Government are exempt from the financial requirements of Utah Admin. Code R315-264-140 – 264-151. However, the Permittee's failure to request or obtain appropriate monies for its budget to complete all closure activities and any post-closure activities shall not be a defense against a finding of non-compliance by the Director.

Range-Discovered Material Potentially Presenting an Explosive Hazard (MPPEH) Tracking System

The intent of this tracking system is to track all identified MPPEH, whether discovered on a range, Solid Waste Management Unit (SWMU), Hazardous Waste Management Unit (HWMU), or is excess material from testing.

1 Control No.	2 MPPEH Item Description	3 Location (UTM/GPS Coordinates)	4 Determination (insert: INERT, DTTF, or ED)	5 Date of Determination	6 Explosive Operator	7 NEW (pounds)	8 Date/Time of Action/ Treatment	9 Location of Action/ Treatment	10 EP System Author	11 Date of Verification/OC
09-001										
09-002										
09-003										
09-004										
09-005										
09-006										
09-007										
09-008										
09-009										
09-010										

Tracking System Notes/Instructions

1. Control No. This is a unique number assigned to each item of MPPEH. The first two digits of the control number correspond to the year and items are number sequentially.
2. Specific description of item. Example: M-42 round, M-55 rocket.
3. Location should include UTM/GPS coordinates for item.
4. Determination
 - "INERT" - if item is determined to contain no potentially explosive hazard, the item is listed as inert.
 - "DTTF" - if item is determined to contain a potentially explosive hazard and is safe to move, the item should be treated at the Dugway Thermal Treatment Facility (DTTF).
 - "ED" - if the item is determined to contain a potentially explosive hazard but is not safe to move, the item should be treated via Emergency Destruct (ED).
5. Date of determination. Enter date that Explosive Operator made the determination.
 - If item is inert and no treatment is required, the date of determination should also correspond to the date the item is placed into the scrap/recycle bin at Carr Facility.
 - If item is to be treated at the DTTF, the date of determination should also correspond to the date the item is placed into the DTTF 90-day storage magazine.
6. Explosive Operator. Enter name of person who made the determination of whether item is inert, inert needing decon, can be treated at the DTTF or via ED.
7. Net Explosive Weight (NEW) in pounds. This is inclusive of the weight of the item plus any donor material used in treatment.
8. Date and time that item was treated.
 - If item was inert and sent for scrap/recycling, enter "Inert".
 - Enter date of treatment if treated at DTTF or treated on-range via ED.
9. Location of Action/Treatment.
 - Enter "INERT" if item was inert, did not require decontamination and was sent for recycling.
 - Enter "DECON" if item was inert but required decontamination (decon) prior to waste disposal.
 - Enter "DTTF" if treated at the DTTF.
 - Enter GPS/UTM coordinates if treated via ED.
10. EP Author. Enter the initials of the Environmental Programs person entering this record into the tracking system.
11. EP QC. John Bate is the overall quality control (QC) officer for this tracking system and this cell is specifically for documentation of QC. Enter date of verification/QC of data for specified entry.

Range-Discovered Material Potentially Presenting an Explosive Hazard (MPPEH) Tracking System Flow Diagram

