

## **MODULE IV – THERMAL TREATMENT OF ENERGETIC WASTES**

### **IV.A. APPLICABILITY**

- IV.A.1. The requirements of this permit module apply to the thermal treatment of energetic or reactive hazardous waste at the ATK Launch Systems – Promontory facility, Box Elder County, Utah. The Permittee shall comply with UAC R315-8 and all conditions of this module and Permit.
- IV.A.2. The permit conditions of this module allow thermal treatment at the two Hazardous Waste Management Units, designated as the M-136 and M-225 Thermal Treatment Areas, as designed and described in the drawings and specifications in Attachments 6 and 11. The M-136 Thermal Treatment Area consists of 14 burn stations and 2 open detonation areas. The M-225 Thermal Treatment Area consists of 4 burn stations and 1 open detonation area.
- IV.A.3. Thermal treatment at both of the Promontory Thermal Treatment Areas shall only be accomplished by properly trained ATK personnel in accordance with ATK’s Standard Operating Procedures, the conditions of this Permit and its attachments.
- IV.A.4. This Permit has been developed in accordance with the applicable requirements of UAC R315-1 through 101. All conditions in this Permit shall supersede conflicting statements, requirements, or procedures found in UAC R315-1 through 101 or attachments to this Permit.

### **IV.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION**

- IV.B.1. The Permittee may treat energetic or reactive hazardous waste at the two Promontory Thermal Treatment Areas by open burning and detonation. These energetic and reactive hazardous wastes are generated from the following sources:
- IV.B.1.a. Class 1.1 and 1.3 propellants and explosives manufactured at the Promontory, Bacchus, and other ATK facilities as well as Autoliv ASP, DOD, NASA or other government and private facilities (e.g. cured and uncured propellants, excess propellants and propellant scraps);
- IV.B.1.b. Production materials contaminated with class 1.1 and 1.3 propellants and explosives and reactive residues (e.g., rags, gloves, other personal protective equipment, plastics, rubber and paper that were contaminated with explosive materials during the manufacturing process);
- IV.B.1.c. Large and small class 1.1 and 1.3 rocket motors and initiating devices;
- IV.B.1.d. Class 1.3 Pyrotechnic, Illuminants, Metal Powders, or Autoliv ASP Products;
- IV.B.1.e. Production materials contaminated with class 1.3 Pyrotechnic, Illuminants, Metal Powders, or Autoliv ASP Products and other reactive residues (e.g., rags, gloves, other personal protective equipment, plastics, rubber and paper that were contaminated with explosive materials during the manufacturing process);
- IV.B.1.f. Reactive laboratory wastes which may contain solvents;

- IV.B.1.g. Wastewater treatment sludge generated from the processing of explosive ingredients and propellants defined in UAC R315-2 as a K044 listed hazardous waste;
- IV.B.1.h. Reactive bag house dust generated from the processing of explosive ingredients and propellants; and
- IV.B.1.i. Waste developmental propellants, explosives and associated contaminated production materials.
- IV.B.2. Only reactive hazardous waste as defined by UAC R315-2 may be treated at the Promontory Thermal Treatment Areas. Reactive hazardous waste thermally treated at the Promontory Thermal Treatment Areas may contain the follow EPA waste codes: D001, D003, D005, D007, D008, D030, D038, F001, F002, F003, F004, F005 and K044.
- IV.B.3. The Permittee is prohibited from thermally treating reactive hazardous waste classes and compositions not included in Conditions IV.B.1. and IV.B.2. including wholly inert items, improvised explosive devices (e.g. homemade bombs) and chemical wastes.
- IV.B.4. The Permittee is prohibited from thermally treating any reactive hazardous waste that does not have a designated waste profile.
- IV.B.5. The Permittee is prohibited from thermally treating decoy flare molds with less than 4% propellant contamination.
- IV.B.6. The addition of hazardous waste codes to Condition IV.B.2. requires modification of the permit as specified in UAC R315-4-1.5 and Condition I.D.
- IV.B.7. The Permittee shall comply with the waste compatibility requirements of Condition II.I.

**IV.C. GENERAL OPERATING CONDITIONS**

- IV.C.1. Based on the results of the Human Health Risk Assessment, identified in Condition II.G.1.e., the Permittee shall comply with the following treatment limits for the M-136 Thermal Treatment Area:
  - IV.C.1.a. The Permittee shall not treat, by open burning (OB), more than a combined amount of 122,000 pounds of reactive hazardous waste in a calendar day, under treatment scenario M-136-A;
  - IV.C.1.b. The Permittee shall not treat by OB more than 96,000 pounds total of reactive hazardous waste in a calendar day at any six burn stations of burn stations 1 through 12, at 16,000 pounds in each station, under treatment scenario M-136-A;
  - IV.C.1.c. The Permittee shall not treat by OB more than 10,000 pounds of reactive hazardous waste in a calendar day at burn station 13 under treatment scenario M-136-A;
  - IV.C.1.d. The Permittee shall not treat by OB more than 16,000 pounds of reactive hazardous waste in a calendar day, at burn station 14 under treatment scenario M-136-A;
  - IV.C.1.e. The Permittee shall not treat, by open burning (OB), more than 125,000 pounds total of reactive hazardous waste in a calendar day at burn station 14 under treatment scenario M-136-B; and

- IV.C.1.f. The Permittee shall not treat by OD more than 600 pounds of reactive hazardous waste in a calendar day at each burn station 13 and 14.
- IV.C.2. The Permittee shall not operate more than one treatment scenario, M-136-A, M-136-B, or M-136-C in a calendar day.
- IV.C.3. The Permittee shall operate the M-136 Thermal Treatment Area in accordance with the quantity-distance requirements identified in Attachment 11, Section 5.
- IV.C.4. The Permittee shall not treat more than 10,000,000 pounds of reactive hazardous waste at the M-136 Thermal Treatment Area in a calendar year. This 10,000,000 pound limit shall be established by adding the Net Explosive Weight (NEW) and all donor and initiator materials. Donors shall include all pallets, cardboard, packaging material, absorbents and diesel fuel.
- IV.C.5. Based on the results of the Human Health Risk Assessment, identified in Condition II.G.1.e., the Permittee shall comply with the following treatment limits for the M-225 Thermal Treatment Area:
  - IV.C.5.a. The Permittee shall not treat, by open burning (OB), more than 4,500 pounds of reactive hazardous waste per calendar day under treatment scenario M-225-A;
  - IV.C.5.b. The Permittee shall not treat by OB more than 4,500 pounds total of reactive hazardous waste in a calendar day at burn stations 1 through 4, at 1,125 pounds in each station under treatment scenario M-225-A; and
  - IV.C.5.c. The Permittee shall not treat, by open detonation (OD), more than 600 pounds of reactive hazardous waste in a calendar day under treatment scenario M-225-B.
- IV.C.6. The Permittee shall not operate more than one treatment scenario, M-225-A, or M-225-B in a calendar day.
- IV.C.7. The Permittee shall operate the M-225 Thermal Treatment Area in accordance with the quantity-distance requirements identified in Attachment 11 section 5.
- IV.C.8. The Permittee shall not treat more than 55,000 pounds, by open burning, and 10,000 pounds, by open detonation, of reactive hazardous waste at the M-225 Thermal Treatment Area in a calendar year. This limit shall be established by adding the Net Explosive Weight (NEW) and all donor and initiator materials. Donors shall include all pallets, cardboard, packaging material, absorbents and diesel fuel.
- IV.C.9. The Permittee shall maintain the integrity of the Promontory Thermal Treatment Areas to ensure that they meet the performance standards of UAC R315-8-16 and minimize the potential impacts to human health and the environment. The Permittee shall adhere to applicable provisions of Attachments 2 and 11 and the following conditions:
  - IV.C.9.a. The Permittee shall conduct all open burn operations within the secure areas designated as the M-136 or M-225 Thermal Treatment Areas with controlled access as identified in Attachment 11;

- IV.C.9.b. The Permittee shall post warning signs around both of the Thermal Treatment Areas to keep unauthorized personnel out;
- IV.C.9.c. The Permittee shall maintain the egress paths for both of the Thermal Treatment Areas identified in Attachment 4;
- IV.C.9.d. The Permittee shall disable the firing system whenever operators are in the QD for this treatment unit. The firing system shall only be active or armed when operators are conducting a pre-burn continuity check, as specified in Attachment 11, Section 8.2.3, or when the firing system is being maintained and no waste is present in the treatment area, or after all operators have exited the treatment unit and retreated to the firing control room in preparation of initiating an ignition as specified in Condition IV.F.2.e;
- IV.C.9.e. The Permittee shall assess and monitor meteorological conditions to ensure operators are not exposed to risks from lightning strikes or other adverse weather conditions that would preclude the safe operation of the M-136 or M-225 Thermal Treatment Areas. The Permittee shall record the temperature, wind speed, wind direction, sky conditions and clearing index prior to each burn in the facility operating record;
- IV.C.9.f. The Permittee shall comply with all requirements for pre-placement of waste, placement of waste in treatment units, wiring and ignition and the post-burn inspection and clean up activities identified in Condition IV.D, E, F, G, H and I;
- IV.C.9.g. The Permittee shall provide operators with access to a telephone that can be used to contact support personnel, including security, safety and fire-fighting units, whenever the operators are inside the M-136 or M-225 Thermal Treatment Areas;
- IV.C.9.h. The Permittee shall maintain the integrity of the two Promontory Thermal Treatment Areas and support equipment through regular inspections and in accordance with the inspection plan in Attachment 2. Inspection records shall be maintained at the facility;
- IV.C.9.i. The Permittee shall train all operators of the Promontory Thermal Treatment Areas in accordance with Condition II.H. and Attachment 3 of this Permit;
- IV.C.9.j. The Permittee shall not operate either of the Promontory Thermal Treatment Areas without containment measures (e.g. firebreaks) to assure the confinement and control of any fire resulting from the open burn and open detonation operations at the Promontory Thermal Treatment Areas; and
- IV.C.9.k. The Permittee shall not treat propulsive items at the Promontory Thermal Treatment Areas, unless the item has been rendered non-propulsive or is contained in accordance with Attachment 11.
- IV.C.10. The Permittee shall operate the Promontory Thermal Treatment Areas to prevent unacceptable risk of cancer and non-cancer effects to on-site workers and off-site residents and to minimize significant effects to the ecosystem surrounding the Promontory Thermal Treatment Areas. The Permittee shall maintain compliance with the environmental performance standards listed in UAC R315-8-16.

- IV.C.11. The Permittee shall adhere to the following conditions to prevent unacceptable risk of cancer and non-cancer effects due to exposure to emissions from the open burning operations:
- IV.C.11.a. The excess cumulative carcinogenic risk to on-site workers shall not exceed  $1.0 \times 10^{-4}$  (one in ten thousand) or a Hazard Index of 1.0 for the potential workers positioned at the point of on-site maximum exposure, as calculated according to the methodology in the approved HHRA. The maximum amount treated at the burning grounds shall not exceed the treatment scenarios outlined in Table 1, Attachment 11; and
- IV.C.11.b. The excess cumulative carcinogenic risk to actual or potential off-site receptors shall not exceed  $1.0 \times 10^{-6}$  (one in a million). The cumulative non-carcinogenic hazard to actual or potential off-site receptors shall not exceed a hazard index of 1.0 for any 24-hour period following initiation of a burn or detonation, as calculated according to the methodology in the approved HHRA.. The maximum amount treated at the burning grounds shall not exceed the annual maximum quantities outlined in Table 1, Attachment 11.
- IV.C.12. Based on the air dispersion and deposition modeling and the human health risk assessment, identified in Section II.G., the Permittee shall adhere to the following conditions:
- IV.C.12.a. The Permittee shall notify the Box Elder County Fire Marshall's Office and obtain a clearing index before each treatment operation involving reactive material;
- IV.C.12.b. The Permittee may conduct burns and open detonations only between the hours of 9:00 am Mountain Time (MT) and 6:00 pm MT;
- IV.C.12.c. The Permittee shall only conduct burns when the surface wind speed is greater than 3 miles per hour (mph) and less than 15mph; and
- IV.C.12.d. The Permittee may conduct burns and open detonations only when the Clearing Index (CI) is greater than 500 unless, approved by agreement with the Utah Division of Air Quality, Box Elder County and the Director.

**IV.D. WASTE TRACKING**

- IV.D.1. The Permittee shall track all reactive hazardous waste in accordance with Attachment 11 and maintain this information in the operating record for both of the Promontory Thermal Treatment Areas.

**IV.E. PRE-BURN ACTIVITIES**

- IV.E.1. Prior to bringing any reactive hazardous waste into either of the Promontory Thermal Treatment Areas for thermal treatment, The Permittee shall conduct pre-burn activities in accordance with the requirements identified in Attachment 11, and the pre-burn inspection requirements in accordance with the inspection schedule included in Attachment 2. The Permittee shall also comply with the following conditions:
- IV.E.1.a. If the treatment units have not been inspected the same day the unit is loaded, the treatment unit shall be inspected prior to placing reactive waste in the treatment unit;

- IV.E.1.b. Any treatment unit that fails one or more of the inspection criteria shall be removed from service until the problem is corrected;
- IV.E.1.c. No treatment is permitted unless either radio or telephone communication with emergency services is available;
- IV.E.1.d. No treatment is permitted if the emergency equipment listed in Attachment 2, Table II-B, “Inspection Schedule for Thermal Treatment Area at M-136” or Table II-C, “Inspection Schedule for Thermal Treatment Areas at M-225” is not available for use at each respective location;
- IV.E.1.e. All leaks or spills of diesel fuel shall be cleaned up before the Promontory thermal treatment areas can be operated; and
- IV.E.1.f. The loss of the flashing light will require that the unit be shut down until the problem is corrected. If the Permittee must use the treatment unit when the flashing light is not working, the supervisor shall visually inspect the area within the QD of the treatment unit and assure that no unauthorized employees are present in the area. If any unauthorized employees are found within this area, they will be escorted from the area. Treatment operations can commence once the supervisor verifies in the operating record that the area is clear.

**IV.F. PREPARING WASTE FOR THERMAL TREATMENT BURN**

- IV.F.1. Prior to placing any reactive hazardous waste in a treatment unit, the Permittee shall comply with all provisions Conditions IV.C, D and E of this Permit. The Permittee shall also comply with the following conditions:
  - IV.F.1.a. There shall be at least two operators present when a treatment unit is in the process of being loaded with reactive hazardous wastes as defined in Condition IV.B.1;
  - IV.F.1.b. The treatment unit shall be loaded in accordance with all internal safety procedures and requirements and the provisions identified in Attachment 11.8.2.2;
  - IV.F.1.c. All cardboard, wood and diesel used as donor material to assure a complete burn shall be counted towards the daily treatment limits, and recorded in the operating record;
  - IV.F.1.d. All reusable propellant buckets used as accumulation containers for reactive waste shall be inspected after use. If there is any contamination in the containers they shall be cleaned or decontaminated in accordance with the procedures identified in Attachment 11 before being reused; and
  - IV.F.1.e. The Permittee shall document in the operating record the burn station for each container of reactive hazardous waste treated.
- IV.F.2. Prior to beginning the final preparations for an open burn, the Permittee shall comply with the following conditions:
  - IV.F.2.a. Reactive waste shall not be prepared for ignition, as described in Attachment 11.8.2.3, until all non-essential personnel leave the treatment area;

- IV.F.2.b. All wiring and ignition operations, described in Attachment 11.8.2.3, shall be conducted by at least two employees;
- IV.F.2.c. The Permittee may reactivate the firing system treatment areas only after all operators have exited the QD for the treatment unit;
- IV.F.2.d. As the operators leave the treatment area following operations described in Attachment 11, Section 8.2.3, they shall close the gate to the treatment area;
- IV.F.2.e. After all operators have exited the treatment area and retreated to the firing control room, the operators may replace the firing system interlock in the firing system control console and activate the firing system;
- ;
- IV.F.2.f. After activating the firing system, the operators shall confirm that the flashing red light was activated to alert all personnel that a treatment event is about to start and that they should vacate the QD area for the treatment area. If the flashing light is not operational, the Permittee shall comply with Condition IV.E.1.f. before initiating the thermal treatment;
- IV.F.2.g. After the warning identified in Condition IV.F.2.f. has been completed, the Permittee shall conduct a pre-ignition continuity check of the firing system to assure that the igniters have been installed correctly into the hard-wired portion of the firing system. If any firing circuit fails this test, the Permittee shall perform the following tasks:
  - IV.F.2.g.i. Remove the interlock for the firing control system, deactivating the firing control system;
  - IV.F.2.g.ii. At least two operators shall reenter the treatment area, and correct the problem;
  - IV.F.2.g.iii. If the resistance problem cannot be immediately corrected, the operators may connect a separate igniter wire to an adjacent stanchion; and
  - IV.F.2.g.iv. After the problem with the firing circuit has been corrected the operators shall repeat the steps described in Conditions IV.F.2.g.
- IV.F.2.h. The treatment units shall be fired in accordance with the provision of Attachment 11, Section 8.2.3 of this Permit;
- IV.F.2.i. All thermal treatment events shall be observed with a video camera from the firing control room or immediately outside the firing control room;
- IV.F.2.j. In the event that none of the treatment units ignite, the operators shall wait 30 minutes before removing the firing system interlock and reentering the treatment area to correct the problem. After correcting the problem, the operators shall repeat the steps described in Conditions IV.F.2.c, d, e, f and g, and proceed with activating the firing system;
- IV.F.2.k. If at least one treatment unit ignites, then the operators shall wait at least 16- hours before reentering the treatment area, and correcting the problem. After the problem has been corrected, the operators shall repeat the steps described in Conditions IV.F.2.c, d, e, f and g, and proceed with activating the firing system;
- IV.F.2.l. Prior to ignition, the area supervisor or designee, shall review the placement of the waste on the treatment units; and

IV.F.2.m. All treatment data shall be maintained in accordance with the requirements of UAC R315-8-5.3 and shall be entered into the operating record for the Promontory facility in accordance with attachment 11.6.

**IV.G. POST-BURN ACTIIVTIES**

IV.G.1. Following treatment, the Permittee shall conduct the post-burn inspection activities identified in Attachment 2, and clean-up activities identified in Attachment 11 of this Permit, and shall comply with Conditions IV.C.1, 5 and 9, and shall have completed and complied with all provisions of Conditions, IV.E and F.

IV.G.2. The post-burn inspection shall be conducted within 24 hours of completing a treatment event, and perform the following unless one of the exceptions identified in IV.G.2.j. applies:

IV.G.2.a. Prior to entering the treatment area, the operators shall deactivate the firing control system and remove the interlock;

IV.G.2.b. Document any treatment unit with an open flame, hot spot or smoldering residue;

IV.G.2.c. Document any treatment unit with unburned residue;

IV. G.2.d. Document any treatment unit with unburned reactive hazardous waste and identify if possible in the operating record why the waste did not burn;

IV.G.2.e. Inspect for any unburned waste that was ejected from a treatment unit during the last treatment event. Such waste shall be picked up and placed in a treatment unit;

IV.G.2.f. Record on the inspection form the date that the treatment units were cleaned, or the reason why the units were not cleaned within 24 hours after completing the treatment event;

IV.G.2.g. Identify the treatment unit where unburned waste is being stored;

IV.G.2.h. Evaluate the condition of the safety equipment identified in Attachment 2, Table II-B and Table II-C;

IV.G.2.i. The Permittee may postpone post-burn activities if lightning strikes or adverse weather conditions prohibit the safe operation of the treatment areas. Lightning strikes closer than 30 miles restrict attended operations at the Promontory Facility. The Permittee shall document the reasons for the delay in the facility's operating record; and

IV.G.2.j. The Permittee may delay the post-burn inspection for burns involving bulk propellant and bulk explosives that occurred on a Thursday, if it is the end of the work week or Friday. The post-burn inspection shall be conducted on the following Monday, unless the meteorological conditions identified in Condition IV.G.2.i. prohibit re-entry into the treatment area. The Permittee shall document the reasons for the delay in the facility's operating record.

IV.G.3. Within 24 hours of completing an open burn that generates a characteristic or listed ash or residue, the Permittee shall remove all characteristic or listed residues from the treatment area and manage the waste in accordance with R315-5 of the UAC. If meteorological conditions exist, as identified in Condition IV.G.2.i., that prohibit re-entry into the

treatment area within the 24 hour period, the Permittee shall document the following information in the operating record:

- IV.G.3.a. The reason for the delay in doing the post-burn clean up;
- IV.G.3.b. The date when the treatment unit was cleaned; and
- IV.G.3.c. Except as delayed by the conditions described in Condition IV.G.2.i, the area supervisor, or designee, shall review the Promontory Thermal Treatment Areas log and post-burn inspection forms within 24 hours of completing a thermal treatment event. The review shall assure that all of the recorded information is correct and identify any items that may require corrective action including any treatment unit that failed to ignite, had an ignition problem or misfired, had an unplanned detonation, where the burn did not propagate as expected or any other unexpected event.
- IV.G.4. Open burn operations at the Promontory Thermal Treatment Areas may result in the generation of untreated residue and unburned wastes. The Permittee shall manage these residues and wastes in accordance with the following provisions:
  - IV.G.4.a. Small amounts of untreated residue shall be considered newly generated waste and shall be logged and tracked as such in the explosive waste tracking system. This small amount is defined as less than 5% of the total volume placed treatment unit. The primary option for managing this waste is to burn it by 6:00 pm of the following calendar day. If the untreated residue cannot be treated by 6:00 pm of the following calendar day then it shall be managed in accordance with UAC R315-5;
  - IV.G.4.b. Unburned waste resulting from a misfire or an interrupted ignition shall be treated by 6:00 pm of the calendar day following the date of the first attempt to treat this waste. For the purposes of this Permit, an interrupted ignition occurs when anything greater than 5% of the waste placed on in a treatment unit or in a station fails to ignite. This unreacted waste shall not be considered a newly generated residue. If the Permittee is unable treat the unburned waste by 6:00 pm of the following calendar day, the Permittee shall cover the waste and manage the treatment unit or station in accordance with UAC R315-5. If the cumulative storage time for the unburned waste both while in storage prior to treatment and while on the treatment unit or in the burn station is greater than 90 days, the Permittee shall request an emergency storage permit in accordance with UAC R315-3-6.2;
  - IV.G.4.c. For reactive hazardous wastes that have been in storage for greater than 90 days when they are placed on in a treatment unit or in a burn station and which do not completely burn, the Permittee shall treat all unburned or unreacted waste by 6:00 pm of the calendar day following the date of the initial attempt to treat the waste. If the Permittee is unable to treat the unburned or unreacted waste by 6:00 pm of the following calendar day, then the Permittee shall request an emergency storage permit in accordance with UAC R315-3-6.2; and
  - IV.G.4.d. The Permittee shall manage all treatment residues generated from the treatment of listed and/or characteristic wastes during post-burn activities in accordance with this Permit and UAC R315-5.

**IV.H. STORM WATER MANAGEMENT AND RUN-ON AND RUN-OFF CONTROLS**

- IV.H.1. The Permittee shall manage all storm water collected from treatment units in accordance with this Permit, Attachment 11, Section 11 and UAC R315-5.
- IV.H.2. The Permittee shall maintain run-on diversion structures in accordance with this Permit and UAC R315-8-16 which incorporates by reference 40 CFR 264.601. The Permittee shall inspect the condition of those structures annually to assure that they are in good repair. The annual inspection shall be documented in the operating record for Promontory Thermal Treatment Areas.
- IV.H.3. Run-off from precipitation that falls within the operating area of the Promontory Thermal Treatment Areas shall be managed in accordance with UAC R315-8-16, which incorporates by reference 40 CFR 264.601, using berms, and ground slope.

**IV.I. TREATMENT RESIDUE AND ASH MANAGEMENT**

- IV.I.1. All treatment residue and ash generated from the Promontory Thermal Treatment operations shall be managed in accordance with Condition IV.G.4.d. and the procedures identified in Attachment 11.
- IV.I.2. Sampling and analysis of treatment residues and ash generated during operations at the thermal treatment areas shall be performed in accordance with Attachment 1 and 11.

**IV.J. INSPECTION SCHEDULES AND PROCEDURES**

- IV.J.1 The Permittee shall conduct inspections of the Promontory Thermal Treatment areas in accordance with Attachment 2 and 11.

**IV.K. ENVIRONMENTAL MONITORING REQUIREMENTS**

- IV.K.1. Within 180 days of issuance of this Permit or completion of the Human Health Risk Assessment, whichever occurs later, the Permittee shall submit a Soil Monitoring Plan to the Director for approval. The Soil Monitoring Plan shall, at a minimum, address the following:
- IV.K.1.a. The impact of thermal treatment operations on soils within the treatment zone as identified by the air dispersion and deposition models and the human health risk assessment report referenced in Condition II.G.1.;
- IV.K.1.b. Risks to human health from exposure to media impacted by emissions from the Promontory Thermal Treatment Areas operations shall be assessed. Acceptable risks are specified in Conditions IV.C.11.a. and IV.C.11.b. The receptors to be evaluated are listed in the Human Health Risk Assessment identified in Condition II.G.1.e. The risk assessment methodology shall be consistent with UAC R315-101; and
- IV.K.1.c. The plan shall identify analytes, sampling protocols and data quality objectives for the soil monitoring program.
- IV.K.2. If the Director does not approve the Soil Monitoring Plan, he shall provide written comments to the Permittee identifying the deficiencies in Soil Monitoring Plan. The

Permittee shall address the comments and submit a revised Soil Monitoring Plan to the Director for approval within 60 days of receipt of written comments.

IV.K.3. Within 30 days of receipt of the Director’s approval of the Soil Monitoring Plan, the Permittee shall submit a request to modify the Permit in accordance with Condition I.D. to incorporate the requirements of the Soil Monitoring Plan into this Permit.

IV.K.4. Within 180 days of the issuance of this Permit, or completion of the Human Health Risk Assessment, whichever occurs later, the Permittee shall submit a Groundwater Monitoring Plan to the Director for approval. The Groundwater Monitoring Plan shall, at a minimum, address the following:

IV.K.4.a. The impact of thermal treatment operations on groundwater up and down gradient of the M-136 and M-225 Thermal Treatment Areas; and

IV.K.4.b. The plan shall identify analytes, sampling protocols and data quality objectives for the groundwater monitoring program. In addition, the plan shall propose a method for determining if existing groundwater contamination concentrations increase due to ongoing thermal treatment operations.

**IV.L. ECOLOGICAL RISK**

IV.L.1. Within 180 days of issuance of this Permit or completion of the human health risk assessment, whichever occurs later, the Permittee shall submit an Ecological Risk Assessment Protocol document for evaluating thermal treatment operations to the Director for approval. If the Director does not approve the Ecological Risk Assessment Protocol document, he shall provide written comments to the Permittee identifying the deficiencies in the Ecological Risk Assessment Protocol document.

The Permittee shall address the comments and submit a revised Ecological Risk Assessment Protocol document to the Director for approval within 60 days of receipt of written comments.

IV.L.2. Within one year of receiving approval of the Ecological Risk Assessment Protocol document, the Permittee shall submit an Ecological Risk Assessment for evaluating thermal treatment operations to the Director for approval. If the Director does not approve the Ecological Risk Assessment, he shall provide written comments to the Permittee identifying the deficiencies in the Ecological Risk Assessment. The Permittee shall address the comments and submit a revised Ecological Risk Assessment to the Director for approval within 60 days of receipt of written comments.

IV.L.3. Within 30 days of receiving approval of the Ecological Risk Assessment, the Permittee shall submit a request to modify Condition II.G. of this Permit in accordance with Condition I.D. to add performance standards for the acceptable ecological risk associated with the operation of both of the Promontory Thermal Treatment areas.

**IV.M HUMAN HEALTH RISK**

IV.M.1. The Human Health Risk was evaluated as identified in Condition II.G.1. Emission factors, dose-response factors and human health risk scenarios are evaluated annually as directed by Conditions II.G.3.g., II.G.3.h. and II.G.3.i.

**IV.N. FACILITY MODIFICATION/EXPANSION**

IV.N.1. Modification of the design plans and specifications in Attachment 6 or construction of additional treatment units shall be allowed only in accordance with UAC R315-4-1.5.

**IV.O. CLOSURE AND POST CLOSURE**

IV.O.1. The Permittee shall close the Promontory Thermal Treatment Areas in accordance with the Closure Plan in Attachment 5.

**IV.P. PROMONTORY THERMAL TREATMENT AREAS OPERATING RECORD**

IV.P.1. The Permittee shall maintain an operating record at the Promontory facility that describes the operation of the Thermal Treatment areas. The operating records for the M-136 and M-225 Thermal Treatment Areas shall, at a minimum, include the following information:

IV.P.1.a. All information required by UAC R315-8-5.3;

IV.P.1.b. Copies of all inspections required by this module;

IV.P.1.c. All waste tracking information maintained in the electronic Waste Tracking Record identified in Attachment 11;

IV.P.1.d. A description of the meteorological conditions described in Condition IV.C.9.e. during each burn;

IV.P.1.e. Copies of all reports identified in Condition II.G.1. and required by Condition II.G.3. and IV.K and IV.L; and

IV.P.1.f. A running total of the type and quantity of reactive hazardous waste that has been treated at both of the Promontory Thermal Treatment areas during the calendar year.