ATTACHMENT 8

PREPAREDNESS AND PREVENTION PLAN

8-1 PROCEDURES, STRUCTURES, AND EQUIPMENT

8-1-1 Purpose and Scope

Precautions have been taken to minimize the accidental or sudden release of hazardous waste or waste constituents into the environment. The precautions comply with the requirements of R315-264-31.

8-1-2 Loading and Unloading Operations

Several precautions have been taken to minimize hazards during the loading and unloading of hazardous waste. These precautions are divided into four classes of Waste Management: Open Burning, Oxidizer Leaching, Drum Storage and Propellant/Explosives Storage.

Open Burning of hazardous waste explosives and propellants requires special precautions. Precautions taken during loading and unloading operations are described in Attachment 11. Safe loading and unloading of explosive waste helps to minimize waste release into the environment and reduce the possibility of unplanned ignition of waste material.

Waste energetic material received from off-site for storage prior to open burning, will be handled under the same precautions as all other wastes accepted for disposal at the burn grounds. Loading/off-loading areas will be inspected each day waste is received, and at a minimum of once per week.

Oxidizer leaching of ignitable and reactive hazardous waste is conducted in Building M-705L, which is a small Building adjacent to the M-705 wastewater treatment facility. Several provisions are in place and described in Attachment 12 to prevent releases to the environment during this process. This process is completed inside a closed building with containment.

Several precautions are also taken at the Drum Storage areas. Spill control equipment is located at each area and can be used in loading and unloading operations. All drums are on pallets and are loaded and unloaded by a forklift. The design of the Drum Storage facilities allows adequate aisle space for movement of drums with a forklift to minimize the actual handling of the drums. Permit conditions II.K.6. and III.E.4. state that, at a minimum, the Permittee shall maintain 30 inches of aisle space between containers or pallets of containers at storage areas M-186 and E-501. All forklift truck operators must have a license to operate the forklift truck. The operator receives this license by attending a training program which includes an actual driving test that must be passed. The hazardous waste operators must also participate in the Hazardous Waste Training Program discussed in Attachment 3.

Waste propellant, explosives and rocket motors are carefully off loaded from trucks using fork lifts, building cranes or a trailer mounted knuckle boom. Small containers, less than 50 lbs, may be off loaded by hand. All operators of the equipment listed above, undergo extensive training in the proper use of the equipment they operate. This training includes class room as well as hands on training. All ATK propellant moving, grounding and bonding procedures will apply.

Many precautions are taken during the transfer of waste hydrazine during the dilution process that is used to prepare this waste for off-plant disposal. These precautions include medical certification, operator knowledge of chemical properties, special safety equipment, and specific operating instructions.

8-1-3 Prevention of Run-on and Run-off

Run-on and run-off are controlled at the drum storage facilities M-186 and E-501 by a concrete berm around the facility. The M-705S storage and consolidation room is totally enclosed preventing run-on from entering the facility and eliminating any possibility for run-off. The M-705L oxidizer leaching process is totally enclosed preventing run-on from entering the facility and eliminating any possibility for run-off. Details of these structures and how they control run-off are found in Attachment 6 of this Permit.

Run-on and run-off at the Burning Grounds, M-225, M-136, and storage pad S-633 are controlled by diversion, collection ditches, and trenches. A diversion ditch directs run-on around the Burning Grounds. The run-off at M-136 is collected in a ditch and dispersed in a dispersion area. The run-off at M-225 is dispersed in an area directly in front of the burning area. Both areas will be included in the zone of Engineering Control. Waste material at the S-633 storage pad is stored in closed or covered containers/articles. Drawings showing the control systems for M-136 and M-225 are included in Attachment 6.

Run-on and run-off at building M-629 is controlled since the facility is a fully enclosed building which is elevated above the surrounding grade to prevent rain intrusion. Drawings of this building are found in Attachment 6 of this permit.

8-1-4 Prevention of Water Supply Contamination

The drum storage areas, M-186, E-501, M-705L and M-705S each have a containment system which is designed to prevent releases of contaminants to the environment. Each system is constructed to be leak-proof and divert run-on. These containment systems are shown in the facility drawings contained in Attachment 6.

The propellant/motor storage areas store only solid materials, and do not require secondary containment. The nature of this solid waste greatly reduces the potential for contaminating water supplies.

The materials in the trays at the burning grounds are normally destroyed on a biweekly basis, except those materials too sensitive to store which are burned the same day. The burn trays are inspected weekly and prior to loading to look for cracks or holes. Minimizing free liquids and controlling run-on and run-off prevents water supply contamination. It is not anticipated that groundwater or surface water will become contaminated from the storage operations.

8-1-5 Mitigating Effects of Equipment Failures and Power Outages

A power outage or equipment failure will have little effect on the hazardous waste storage and treatment areas. Any equipment failures, such as truck breakdowns, pump repairs, etc.; can be managed by on-plant maintenance. Power outages can occur, but all critical operations have backup generators so hazardous waste can be controlled. ATK maintains an electrical lineman crew that has the necessary equipment and experience to repair on plant power outages. In the event of a very large power outage or repair, Rocky Mountain Power will be contacted and necessary measures taken to restore power.

8-1-6 Prevention of Undue Exposure to Personnel

Exposure to personnel handling hazardous waste is minimized by containing and safely packaging waste and supplying personnel with proper protection and safety equipment. Section III F of the Contingency Plan (Attachment 4) lists the equipment available to all plant personnel. Specific procedures and requirements for personnel protection during the handling of hazardous waste are specified in area standard operating procedures.

8-1-7 Emergency Equipment

This equipment is inspected on a monthly basis. The emergency equipment is intended to help respond to small emergencies such as leaks or spills. It is not intended to respond to major incidents, fires, nor explosions. It is limited to equipment that is manually operated and is easily portable. Monthly inspections assure there are adequate supplies of material on hand and mechanical items are operable so that immediate response to small emergencies can be safely handled.

ATK maintains a spill response trailer which is used to respond to spills that are medium to large. The trailer contains safety and spill response equipment. This trailer is maintained by the fire department and is inspected weekly or after use to ensure that an adequate supply of material is on hand.

8-1-8 General Areas

The general area of each hazardous waste storage site is inspected on a daily basis when in use. These inspections consist of observing the area for possible spills or mismanagement of hazardous waste. These areas require daily inspections when in use to minimize potential for mismanagement of hazardous wastes during loading, unloading, or handling.

8-1-9 Safety Equipment

Safety equipment is inspected monthly. Monthly inspections include testing equipment to make sure it is in working order and ensuring that all equipment is complete and in place. These inspections help to maintain a safe work environment and minimize human health incidents.

8-1-10 Storage and Containment System

The storage and containment system shall be inspected as directed in Attachment 2. In some cases, inspections are required, as stated in the attachment, after each storm event. A storm event is defined as more than one inch of precipitation in a one-hour period. This is not only a regulatory requirement, but these inspections help to operate the container storage area in a safe manner and minimize environmental incidents. Inclement weather and mismanagement are the primary sources of deterioration of the containment system and containers.

Standing liquids in the containment system and/or sumps must be managed according to Section 9-4.3 of Attachment 9 – Container Management Procedures. Inspections are conducted in order to effectively manage standing liquid. These inspections minimize environmental

impacts from the actual storage of hazardous wastes in the storage areas.

If a leaking or deteriorating drum is identified during the inspection, the contents or the entire container must be immediately transferred into a new container. The new container must be numbered and labeled with exactly the same number and label as the old container. The date and time of any transfer action must be noted in the inspection log. The transfer of the leaking or deteriorating drum can be handled in two ways: the contents of the container can be transferred by pump to a new drum, or the

drum can be placed in an 85-gallon over-pack drum with the space between the two drums filled with an absorbent to control any possible leaks.

8-1-11 Burning Ground Area

Burning of explosives and reactive wastes occurs normally on a biweekly basis, but can occur more often if conditions necessitate the increased frequency. Inspections of the area, equipment, and burn trays, are conducted weekly or as specified in Attachment 2. Items inspected under this category are subject to general wear or weathering.

In addition, containers stored in burn trays at M-136 are inspected to ensure that they are in good condition, closed and labeled. Burn trays are inspected for cracks and gaps and accumulation of leaked liquids or precipitation. Inspections conducted as described above, provide the time necessary to correct maintenance and erosion or wear problems. They also minimize the environmental impact at the Burning Grounds.

8-1-12 General Facility

Equipment and PPE required to properly manage hazardous waste and for spill clean up is kept at the permitted facilities and regularly inspected. New materials are purchased as needed to assure an adequate supply.

8-1-13 Fire Department Equipment

The Fire department inspects their equipment on a routine basis and after each use. This equipment is especially important to aid in minimizing the effects from fires, explosions, and spills. The inspections are performed and records are kept by the Fire Department personnel.

8-1-14 Heavy Equipment

Most of the heavy equipment is used on a regular basis for construction services and for the management of solid wastes. It is also available for use in emergencies. This equipment is handled at the heavy equipment garage and is inspected on an hour-usage basis rate of 100-150 hours depending on the equipment type and working conditions. A detailed checklist is covered by Maintenance that is checked thoroughly by trained personnel. All inspection records on heavy equipment are kept on file at Maintenance Control and are available for inspection.

8-1-15 Inspection Log

All inspections are recorded. These forms are put into one of three inspection logs. Each log contains the most recent three years of records and is available for review. Environmental Services keeps the inspection

logs of the results of all inspections on the security equipment, emergency equipment, general area, safety equipment, storage and containment system, burning grounds, and general facility categories. The Fire department keeps a log of the Fire department categories and Maintenance Control keeps a log for the heavy equipment category.

8-2 CONTINGENCY PLAN

8-2-1 Purpose and Scope

ATK has developed and supplied a contingency plan as required by R315-270-14(b)(7) and R315-264-50. This plan has been devised as a separate document so that it can be used independently of this permit.

A copy of the contingency plan is in Attachment 4. The plan has been designed to minimize hazards to human health and the environment from fires, explosives, or any unplanned or sudden release of hazardous wastes.

8-3 PREPAREDNESS AND PREVENTION

8-3-1 Purpose and Scope

The hazardous waste treatment and storage facilities have been designed, constructed, maintained, and operated to minimize the possibility of unplanned fires, explosions, or discharges of hazardous wastes. In the event of an emergency, the responsibilities of responders, organizational structure, and procedures required to ensure effective warning, response, and control to minimize hazards to human health or the environment are addressed in detail in the Contingency Plan (Attachment 4).

8-3-2 Required Equipment

All hazardous waste facilities are equipped to respond effectively to an emergency situation. Should an emergency situation arise, such as a discharge of hazardous waste, a fire, or an explosion, employees who are in hazardous waste management areas should be able to respond according to the procedures outlined in the Contingency Plan.

All hazardous waste facilities are equipped with internal and external communication systems. Internal communications are provided by voice signals and commands specified in the Contingency Plan in Section E. All hazardous waste facilities are in open-space areas and there are no loud, industrial noises that could muffle voice commands or signals. These voice commands provide immediate onsite emergency instructions to employees in the hazardous waste management areas. An external communication system using telephones is provided for employees at each

area. These telephones can be used to contact Internal Emergency Response or initiate the Contingency Plan. Storage buildings not equipped with alarms or hard wired phones, will utilize cellular phones to contact ATK's emergency responders if needed.

To prevent personnel from fighting fires in the waste rocket motor/propellant storage buildings and adjacent waste docks, fire extinguishers are not provided. All other hazardous waste storage areas are equipped with fire extinguishers.

The buildings that have separate electrical rooms, have extinguishers that are to be used in the electrical rooms only. Spill clean-up material will be provided in each of these buildings as outlined in section III.F of the Contingency Plan. The location of the fire extinguisher is shown on the evacuation plan in Appendix 1 of the Contingency Plan. Along with these portable extinguishers, ATK maintains a Fire department to respond to fires or explosions. Descriptions of fire equipment, available water, and the Fire department are described in Section I G of the Contingency Plan.

Building M-629 is equipped with a fire sprinkler system, which is checked at least annually. ATK's full time, fully equipped and trained Fire Department are immediately available for any emergency response action.

8-3-3 Testing and Maintenance of Equipment

All emergency and safety equipment is inspected on a routine basis to ensure it is in working order and in good repair. These inspections are documented and are available for inspection.

8-3-4 Access to Communications or Alarm Systems

All employees who manage hazardous waste have immediate access to both internal and external communication systems. All employees have access to telephones or cellular phones and are trained on how to summon external emergency assistance if required.

8-3-5 Required Aisle Space

Aisle space has been designed into each drum storage pad. This type of drum storage allows easy access to thoroughly inspect the area around each drum and allows adequate room to transfer hazardous waste into a new drum if a drum is found to be leaking or in poor condition. There is enough aisle space and clearance around each storage pad to allow free movement of fire protection equipment, spill control equipment, and any needed decontamination equipment. Detailed drawings of the drum storage areas are found in Attachment 6 of this Permit. An aisle space of 30 inches minimum between containers or pallets of containers will be

maintained at storage areas M-186 and E-501. Hazardous waste stored in containers at M-705S, M-629, S-633 and M-136 will be stored so that they may be readily inspected and hazardous waste labels are visible.

8-4 PRECAUTIONS TO PREVENT IGNITION AND REACTION

8-4-1 Purpose and Scope

Precautions to prevent accidental ignition or reaction are essential to the safety of all personnel. The precautions taken ensure compliance with R315-264-17. The precautions are a part of everyday manufacturing and production activities at ATK.

8-4-2 Precautions for Open Burning of Explosives and Propellants

Many precautions are taken to prevent accidental ignition or reaction of hazardous waste materials at the Burning Grounds at M-136 and M-225. Because of the extremely sensitive nature of these wastes, special precautions are taken for each source of ignition.

Safety procedures for handling energetic and sensitive materials are found in ATK's Hazardous Operations Standard Manual (HOPS) and the internal handling procedures or protocols.

8-4-3 Precautions for Drum Storage of Hazardous Waste

The drum storage buildings have been designed to hold flammable liquids.

The front and all sides of E-501 are open to ensure that proper ventilation is maintained in each storage area. Doors are opened as needed at M-186 and M-705S to provide adequate ventilation. Unauthorized personnel are kept out of the storage areas. The areas are inspected on a weekly or daily basis and all leaking or damaged containers are replaced as addressed above and in Attachment 9.

In the event of a spill of hazardous waste or material which, when spilled, becomes hazardous waste, the person responsible for the material at the time of the spill shall immediately take appropriate action to minimize the threat to human health and the environment and comply with R315-263-30 and implement the Contingency Plan if necessary.

8-4-4 Precautions for Propellant/Motor Storage

All propellants/motors will be safely handled in accordance with HOPS. These procedures include, but are not limited to, proper grounding and bonding protocol. All permitted hazardous waste storage and treatment facilities are located more than 50 feet from any property line to help

minimize the fire potential of adjoining property. General site maps which show these buildings, as well as the property lines, are found in Attachment 6.

8-4-5 Precautions for Oxidizer Leaching Treatment

All explosives/propellants will be safely handled in accordance with HOPS during the oxidizer leaching process. Safety provisions, such as shielding of the heat exchanger within the process tank, to prevent accidental ignition and reaction of these wastes are described in Attachment 12. All permitted hazardous waste storage and treatment facilities are located more than 50 feet from any property line to help minimize the fire potential of adjoining property. General site maps which show these buildings, as well as the property lines, are found in Attachment 6.

TABLE 8A

Precautions Against Accidental Ignition and Reaction of Hazardous Waste Explosives and Propellants

IGNITION SOURCE	PRECAUTIONS
Smoking	Burning grounds are designated as areas where smoking is a fire hazard and as such must meet the requirements of company procedures. Requirements for smoking are strictly enforced by the Safety department.
Open Flames	The use of a flame, heat, or spark-emitting device in any area requires a permit. Requirements for uses and restrictions of these permits are found in company procedures. These permits are issued prior to starting work.
Static Electricity	Static electricity can be an ignition source. To avoid static charges, all explosive or propellant waste is packed in a container with either a conductive or static dissipative liner. During storage and prior to and/or during transportation of wastes to the burning grounds, all conductive waste containers are grounded to prevent static spark. Upon placement in the metal burn tray, grounding is no longer required. Rocket motors for disposal will not be packaged in these liners, but will be grounded to the case prior to being placed into position for open burning.
Incompatible Materials	Incompatible materials are not placed in the same containers and incompatible wastes are segregated at each waste pickup dock.
Friction and Sparks	Vehicles hauling waste propellant must have spark arresters in the exhaust line. Non-sparking rakes are used in preparing the trenches for burning or re-burning. A porous, non-sparking truck bed is also used.
Electrical Equipment	No electrical work is allowed in areas where explosives or propellant are present.

TABLE 8B

Precautions Against Accidental Ignition and Reaction of Hazardous Waste in Drum Storage

IGNITION SOURCE	PRECAUTIONS
Smoking	The drum storage areas are designed as areas where smoking is a fire hazard and as such must meet the requirements of company procedures. Requirements for smoking are strictly enforced
Open Flames	The use of a flame, heat, or spark-emitting device in any area of the plant requires a permit. Requirements for uses and restrictions of these permits are found in company procedures. These permits are issued prior to starting work.