

MODULE I - STANDARD PERMIT CONDITIONS

I.A. EFFECT OF PERMIT

I.A.1. The Permittee includes both, the facility owner, Northrop Grumman Innovation Systems, Inc. and, the facility operator, ATK Launch Systems, Inc., a wholly owned subsidiary of Northrop Grumman Innovations Systems, Inc.

I.A.2. The Permittee is allowed to store hazardous waste in containers, treat reactive and ignitable hazardous waste in a tank by an oxidizer leaching process, treat hydrazine, by dilution, in containers and treat reactive hazardous waste by open burning or open detonation at the ATK Launch Systems Inc. -Promontory (ATK) Facility, Box Elder County, Utah in accordance with the conditions of this Permit. In addition, the Permittee is allowed to store waste solid rocket motors at the facility in accordance with the conditions of this Permit. ~~The facility owner is Northrop Grumman Innovation Systems, Inc. Orbital ATK, Inc., and the facility operator is ATK Launch Systems Inc., a wholly owned subsidiary of Orbital ATK, Inc Northrop Grumman Innovations Systems, Inc.~~ Any treatment, storage, or disposal of hazardous waste not authorized in this Permit, is prohibited.

I.A.~~23~~. Compliance with this Permit, during its term, constitutes compliance for purposes of enforcement with applicable sections of Utah Administrative Code (UAC) R315 only for those management practices specifically authorized by this Permit.

I.A.~~34~~. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations.

I.A.~~45~~. This Permit has been developed in accordance with the applicable requirements of UAC R315-1 through 101 of the Utah Hazardous Waste Management Rules. All conditions within this Permit ~~will shall~~ supercede conflicting statements, requirements, or procedures found within UAC R315-1 through 101 ~~or attachments to this Permit.~~

~~I.A.56.~~ Attachments to this Permit, including any documents incorporated by reference, are enforceable conditions of this Permit, as are documents incorporated by reference in the attachments. Language Permit conditions specified in the modules of this Permit supersedes any conflicting language in the attachments to this Permit or documents incorporated by reference.

I.A.6. The procedures, protocols, inspection schedules, training outlines, contingency plan responsibilities, and precautions contained in the preparedness and prevention plan as described in the Attachments to this Permit are enforceable conditions of this Permit. Permit conditions specified in the modules of this Permit supersede any conflicting language in the Attachments to this Permit.

I.B. ENFORCEABILITY

- I.B.1 Violations documented through the enforcement process pursuant to Utah Code Annotated (UCA) §19-6-112 may result in penalties assessed in accordance with R315-102, the Penalty Policy.

I.C. OTHER AUTHORITY

- I.C.1. The Director expressly reserves any right of entry provided by law and any authority to order or perform emergency or other response activities as authorized by law.

I.D. PERMIT ACTIONS

- I.D.1. This Permit may be modified, revoked and reissued, or terminated for cause, as specified in ~~UAC R315-3-4~~R315-270-41 and R315-270-43. If the Director determines that cause exists to modify, revoke, and reissue, or terminate this Permit, the action will proceed in accordance with ~~UAC R315-4-1.5~~R315-124-5.

- ~~I.D.2.~~ The filing of a request for a permit modification, revocation, reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any ~~permit~~ Permit condition.

- I.D.~~23.~~ The Director may modify this Permit, in accordance with ~~UAC R315-3-4.2~~R315-270-41, when the standards or regulations on which the Permit was based have been changed by statute, through promulgation of new or amended standards or regulations, or by judicial decision after the effective date of this Permit.

- I.D.~~34.~~ The ~~Permittee Permit~~ may ~~request the be modification of the Permit at the request of the Permittee in according accordance with~~ the procedures of ~~UAC R315-3-4.3~~R315-270-42.

- ~~I.D.45.~~ ~~All Permit conditions supersede conflicting statements, requirements or procedures found in the Attachments to the Permit.~~

- I.D.~~56.~~ If a conflict exists between conditions in this Permit, the Permittee shall comply with the most stringent condition, as determined by the Director, ~~shall be met.~~

- I.D.~~67.~~ In accordance with the Utah Solid and Hazardous Waste Act, UCA, 19-6-108(13), this Permit shall be reviewed no later than five (5) years from the date of issuance or renewal and subsequently modified, if necessary.

I.E. SEVERABILITY

I.E.1. The provisions of this Permit are severable and if any provision ~~of this Permit~~, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. Invalidation of any State or federal statutory or regulatory provision which forms the basis for any condition of this Permit does not affect the validity of any other state or federal statutory or regulatory basis for said condition.

I.F. DUTIES DUTY TO COMPLY

I.F.1. The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an Emergency Permit issued in accordance with ~~UAC R315-3-6.2~~R315-270-61. Any permit noncompliance, other than ~~noncompliance~~ authorized by an Emergency Permit, constitutes a violation of the Utah Solid and Hazardous Waste Act U.C.A. Sections 19-6-101 through 125, and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a Permit renewal application; ~~or a combination of enforcement action and any of the other listed remedies.~~

I.F.2. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3007, 3008, 3013, or 7003 of RCRA (42 U.S.C. Sections 6927, 6928, 6934 and 6973), Section 106(a), 104, or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9606(a), 9604, and 9607, commonly known as CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), or any other State or federal law providing for protection of human health or the environment from any imminent and substantial endangerment.

I.G. DUTY TO REAPPLY

I.G.1. If the Permittee wishes, or is required by the ~~Executive Secretary~~Director, to continue an activity ~~allowed-regulated~~ by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new permit, in accordance with ~~UAC R315-3-2.1g and UAC R315-3-3.1(b)~~R315-270-30(b) and R315-270-10(h), at least 180 days before this Permit expires.

I.H. PERMIT EXPIRATION

I.H.1. This Permit shall be effective for ten years from the date ~~it is issued~~of issuance. This Permit and all conditions herein shall continue in force until the effective date of a new permit, if the Permittee has submitted a timely (at least 180 days prior to permit expiration or by an alternate date if requested by the Director) and complete permit application and through no fault of the Permittee, the Director does not issue a new permit with an effective date on or before the expiration date of this Permit. A permit continued under this condition is fully effective and enforceable.

I.I. CONTINUATION OF EXPIRING PERMIT

~~I.I.1. This Permit and all conditions herein shall continue in force until the effective date of a new permit, if the Permittee has submitted a timely and complete application, in accordance with applicable requirements of UAC R315-3 and R315-4, and through no fault of the Permittee, the Director has neither issued nor denied a new permit under UAC R315-3-5.2 on or before the expiration date of this permit.~~

I.J. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

I.J.1. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

I.K. DUTY TO MITIGATE

I.K.1. In the event of noncompliance with the Permit, the Permittee shall take all reasonable steps to minimize releases of hazardous waste, hazardous waste constituents, and perchlorate salts to the environment ~~resulting from the noncompliance~~, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

I.L. PROPER OPERATION AND MAINTENANCE

I.L.1. The Permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary equipment or similar systems only when necessary to achieve compliance with the conditions of this Permit.

I.M. DUTY TO PROVIDE INFORMATION

I.M.1. The Permittee shall furnish to the Director, within ~~a reasonable time~~ 30 days, any relevant information, including copies of records required by this Permit, which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. ~~The Permittee shall also furnish to the Director upon request, copies of records required to be kept by this Permit.~~

I.N. INSPECTION AND ENTRY

I.N.1. Pursuant to the Utah Solid and Hazardous Waste Act, UCA §19-6-109, the Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents, as may be required by law, to:

- I.N.1.a. Enter, at reasonable times, upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records ~~are~~ shall be kept as required by the conditions of this Permit;
- I.N.1.b. Have access to and copy, at reasonable times, any records, data and reports that are shall be kept ~~required as required by~~ under the conditions of this Permit;
- I.N.1.c. Inspect at reasonable times any ~~portion of the Facility~~ facilities, equipment, ~~(including monitoring and control equipment)~~, practices, or operations regulated or required under this Permit;
- I.N.1.d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by ~~the Utah Solid and Hazardous Waste Act~~ U.C.A. Section 19-6-109, any substances or parameters at any location; and
- I.N.1.e. Make record of inspection by photographic, electronic, videotape, or any other reasonable medium. No audio recording devices shall be used without notice to all individuals in recording range prior to activation of the recording device. Photographic and video recording shall comply with the safety and security requirements of the Permittee.

I.O. MONITORING AND RECORDS

- I.O.1. The Permittee shall retain all data, records, and reports used to comply with the conditions of this Permit. These include records of all monitoring information required under this Permit, such as; including all calibration and maintenance records; ~~and, where applicable,~~ all original strip chart recordings (or equivalent recordings) for continuous monitoring instrumentation where applicable; ~~copies of all reports and records required by this Permit,~~ the waste minimization certification required by UAC R315-8-5.3R315-264-73, -(40 CFR § 264.73(b)(9) incorporated by reference), and records of all data used to comply with the conditions of this Permit and all data used to support human health and ecological risk assessments for cleanup and closure activities.
- I.O.2. ~~All of the above referenced~~ The Permittee shall retain the records and material referenced in Condition I.O.1. shall be retained at the Facility for a period of at least three years from the date of the sample, measurement, report, certification, or recording unless a longer retention period for certain information is required by other conditions of this Permit. The three-year period may be extended by the Director at any time by written notification to the Permittee. The retention times are automatically extended during the course of any unresolved enforcement action regarding the facility to three years beyond the conclusion of the enforcement action.

- I.O.3. ~~The Permittee shall comply with Condition I.O.2. by~~ Recordkeeping may be accomplished using retaining original documents, xerographic copies, document replicas, electronic facsimiles, electronic disk, CD-ROM computer drive files, microfilm, microfiche, photograph, magnetic tape or any other reasonable retrievable medium or similar recordkeeping technique. Any recordkeeping system shall be capable of reproducing complete, accurate and legible records.
- I.O.24. Pursuant to UAC R315-~~3-3-1270-30~~(j)(3), records of monitoring information shall specify at a minimum:
- I.O.24.a. The date(s), exact place, and times of sampling or measurements;
- I.O.24.b. The name(s), title(s), and affiliation of individual(s) who performed the sampling or measurements;
- I.O.24.c. The date(s) analyses were performed;
- I.O.24.d. The name or initials of the(s), title(s), and affiliation of ~~The~~ individual(s) who performed the analyses;
- I.O.24.e. The analytical techniques or methods used; and
- I.O.24.f. The results of such analyses, including the QA/QC data.
- ~~I.O.3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed shall be the appropriate method from UAC R315-50-6 or as specified or modified by this Permit. Laboratory methods shall be those specified in "Test Methods for Evaluating Solid Waste; Physical/Chemical Methods SW-846 (Third Edition, November 1986)" or most currently promulgated edition, "Standard Methods for Examination of Water and Wastewater (17th Edition, 1989)" or most currently promulgated edition; or an equivalent method as approved by the Director. The analysis of all samples shall be conducted by laboratories certified by the State of Utah.~~
- ~~I.O.4. When requesting substitute or additional analytical methods, the Permittee shall submit to the Director a request for substitution of analytical methods which are equivalent to the methods specifically approved for use in this permit, in accordance with UAC R315-3-4.3. The request shall provide information demonstrating that the proposed methods are equivalent or superior in terms of sensitivity, accuracy, and precision (i.e. reproducibility).~~
- I.O.5. This Permit contains and refers to documents and forms on which information and data is recorded. The documents and forms as attached contain the minimum requirements necessary to comply with this Permit. The Permittee may reformat documents and forms or use alternative forms as necessary to carry out administrative duties only if

the minimum requirements established in the attached documents or forms are maintained. Changes pertaining to a document or form that changes the required information shall only be changed in accordance with the provisions of Condition I.D.3.

I.P. REPORTING PLANNED CHANGES

- I.P.1. The Permittee shall give written notice to the Director 60 days prior to any planned physical alterations or additions to any Hazardous Waste Management Unit (HWMU) or system being permitted or previously permitted in accordance with ~~UAC R315-3-3.1(4)~~ R315-270-30(1)(1) and ~~R315-3-4.3~~ R315-270-42. ~~Planned physical alterations or additions shall include all changes in any hazardous and solid waste activities, and to any non-waste underground storage tanks regulated under UAC R315-202 (40 CFR 280). Construction or operation of new or modified HWMUs shall not begin unless the provisions of UAC R315-4-1.5 are met.~~

I.Q. REPORTING ANTICIPATED NONCOMPLIANCE

- I.Q.1. The Permittee shall give written notice to the Director 30 days prior to any planned changes in the permitted Facility or activity which may result in noncompliance with requirements of this Permit. Advance notice shall not constitute a defense for any noncompliance.

I.R. CERTIFICATION OF CONSTRUCTION OR MODIFICATION

- I.R.1. The Permittee shall not commence storage, treatment, or disposal of hazardous waste in a new ~~hazardous waste management unit~~ HWMU or in a modified portion of an existing permitted HWMU, except as provided in ~~UAC R315-3-4.3~~ R315-270-42, until:
- I.R.1.a. The Permittee has submitted to the Director by certified mail, express mail or hand delivery:
- I.R.1.a.i. A letter signed by the Permittee and an independent, Utah registered professional engineer, qualified by experience and education in the appropriate engineering field, certifying that the unit has been constructed or modified in accordance with the design specified in the approved modification request and this Permit; and
- I.R.1.a.ii. Certified Asas-built engineering drawings and specifications ~~specifications~~, as appropriate where applicable, with any deviations from the approved design noted on the drawing and a justification for each design deviation.
- I.R.1.b. The Director or designated representative has reviewed and inspected the modified or newly constructed unit(s) ~~and has notified the Permittee in writing that the unit was found to be in compliance with the conditions of this Permit.~~

I.R.1.c. After review of the as-built drawings and field verification of the new or modified units, the Director will notify the Permittee in writing of any change which ~~he concludes is~~ not in accordance with the approved design or the Permit. The Director ~~may notify the Permittee and~~ may require the Permittee to remove and replace any construction not in accordance with designs and specifications approved in this Permit.

I.R.1.d. The Director has notified the Permittee in writing that the new or modified units was found to be in compliance with this Permit.

I.R.2. If within fifteen (15) calendar days of the date of receipt of the letter required by Permit Condition I.R.1.a.i., the Permittee has not received notice from the Director, of the Director's intent to inspect, or a prior inspection is waived and the Permittee may commence treatment, storage, or disposal of hazardous waste in the permitted unit(s), if certified in accordance with Condition I.R.1.a.i.

I.S. TRANSFER OF PERMIT

I.S.1. This Permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to UAC R315-3-4.1 and R315-3-4.2(b)(2)R315-270-40. This Permit is not transferable to any person except after written notice to the Director. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under U.C.A. Utah Code, Sections 19-6-101 through 125. Prior to transferring ownership or operation of the Facility during its operating life, the Permittee shall notify the new owner or operator, in writing, of the applicable requirements of UAC R315-1 through R315-101R315-264, R315-270, and this Permit. Failure by the Permittee to notify the new owner or operator of these requirements and this Permit in no way relieves the new owner or operator of his obligation to comply with all applicable requirements of the Rules and this Permit.

I.T. TWENTY-FOUR HOUR REPORTING

I.T.1. In accordance with UAC R315-3-3.1(d)(6)(i) R315-270-30(d)(6)(i), the Permittee shall orally report to the Director any noncompliance with this Permit which may endanger human health or the environment. Any such information shall be reported as soon as possible, but not later than twenty-four (24) hours from the time the Permittee becomes aware of the noncompliance.

I.T.2. In accordance with UAC R315-9-1(b)R315-263-30(b), the Permittee shall immediately report to the Director any spill of any hazardous waste or material which, when spilled becomes a hazardous waste, if the spilled quantity exceeds 100 kilograms or a lesser amount if there is a potential for endangerment to human health or the environment, or exceeds 1 kilogram if the material is an acute hazardous waste as defined-identified by UAC R315-9-1(b)(2).R315-261-33(e).

~~I.T.3. The Permittee shall immediately report to the Director any spill that contains perchlorate, if it cannot be cleaned up to meet residential or industrial RSL standards, the spilled quantity exceeds 100 kilograms and the perchlorate concentration of the spilled material is greater than 15 ug/L. Any such spill that cannot be cleaned up to meet the RSL standards information shall be reported as a new solid waste management unit as required in the Post Closure Permit, soon as possible, but not later than 24 hours from the spill occurrence.~~

I.T.3. The Permittee shall report to the Director any spill that contains perchlorate that exceeds 5,000 pounds. This report shall be made as soon as possible, but no later than 24 hours after the spill occurred. ~~The Permittee shall clean-up all spills that contain perchlorate. Spills that cannot be cleaned up to meet the most current USEPA RSL for Residential Soil shall be reported as a new solid waste management unit in accordance with Condition I.T.6.h.~~

I.T.4. The non-compliance and spill reports shall include, but not be limited to, the following:

I.T.4.a. Information concerning the release of any hazardous waste which may endanger public drinking water supplies; and

I.T.4.b. Any information of a release or discharge of hazardous waste, or of a fire, or explosion at the Facility, which could threaten human health or the environment.

I.T.4.c. A description of the occurrence and its cause;

I.T.4.d. The name, title, and telephone number of the individual reporting;

I.T.4.e. The name, address, and telephone number of the owner or operator;

I.T.4.f. The name, address, and telephone number of the Facility;

I.T.4.g. The date, time, and type of the incident;

I.T.4.h. The location and cause of the incident;

I.T.4.i. The name and quantity of materials involved;

I.T.4.j. The extent of injuries, if any;

I.T.4.k. An assessment of actual or potential hazard to the environment and human health, where this is applicable;

- I.T.4.l. A description of any emergency action taken to minimize threat to human health and the environment;
- I.T.4.m. An estimated quantity and disposition of the recovered material that resulted from the incident; and
- I.T.4.n. Any other information necessary to fully evaluate the situation and to develop an appropriate course of action.
- I.T.5. Within 15 days of the ~~time the Permittee is required to provide the initial~~ report~~ing~~, specified in Conditions I.T.1. through I.T.4., the Permittee shall submit a written report to the Director ~~a written report~~.
- I.T.6. The written report shall include, but not be limited to the following:
- I.T.6.a. The name, title, address, and telephone number of the individual reporting;
- I.T.6.b. A description including the date, time, location and nature of the reported incident;
- I.T.6.c. The extent of injuries, if any;
- I.T.6.d. The name and quantity of material(s) involved in the spill;
- I.T.6.e. An estimated quantity and disposition of the recovered material;
- I.T.6.f. An assessment of actual or potential hazards to human health and the environment, where this is applicable. The report shall also include whether or not the results of the incident remain a threat to human health and the environment (whether the noncompliance has been corrected and the release has been adequately cleaned up); ~~and~~
- I.T.6.g. If the release or noncompliance has not been adequately corrected or cleaned up, the anticipated time that the noncompliance or remediation is expected to continue; the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance; and/or the steps taken or planned to adequately remediate the release; ~~and~~.
- I.T.6.h. If the spill cannot be cleaned up to meet the most current USEPA RSL for Residential Soil, the Permittee shall comply with the Notification and Assessment Requirements for newly identified SWMUs outlined in Section VI.K. of ATK's Post-Closure Permit. ~~that a new solid waste management unit has been created.~~

I.U. MONITORING REPORTS

- ~~I.U.1. Monitoring information shall be recorded and maintained as specified in Condition I.O.~~

I.V. COMPLIANCE SCHEDULES

- I.V.1. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 14 days following each scheduled date.

I.W. MANIFEST DISCREPANCY REPORT

- I.W.1. Manifest discrepancies ~~shall be~~ defined as significant differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity ~~or~~ and type of hazardous waste the permittee actually receives. Significant discrepancies in quantity are: (1) for batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload, and (2) for bulk waste, variations greater than 10 percent in weight. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper. If a significant discrepancy is discovered in a manifest, the Permittee shall attempt to reconcile the discrepancy. If not resolved within 15 days, the Permittee shall submit a written report, including a copy of the manifest, describing the discrepancy and the efforts to reconcile the discrepancy, to the Director in accordance with ~~UAC R315-8-5.4~~R315-264-72(c).

I.X. UNMANIFESTED WASTE REPORT

- I.X.1. The Permittee shall submit to the Director an Unmanifested Waste Report within 15 days of receipt of unmanifested waste in accordance with ~~UAC R315-8-5.7~~R315-264-76.

I.Y. BIENNIAL REPORT

- I.Y.1. The Permittee shall submit to the Director a Biennial Report (EPA Form 8700-13 A/B) covering ~~facility~~ Facility activities during odd numbered calendar years. This report shall be submitted by March 1 of the following even numbered year in accordance with ~~UAC R315-8-5.6~~R315-264-75.

I.Z. OTHER NONCOMPLIANCE

- I.Z.1. The Permittee shall submit a written report to the Director of all ~~other~~ instances of noncompliance with this Permit not otherwise required to be reported in accordance with Condition I.T.; This report shall be submitted within seven days of discovering the noncompliance. The reports shall contain the information listed in ~~Condition I.T.~~ of this Permit. Reporting shall not constitute a defense for any noncompliance.

I.AA. OTHER INFORMATION

I.AA.1. Whenever the Permittee becomes aware that it failed to submit any relevant facts in a permit application or modification request, or submitted incorrect information in a permit application or modification request, or in any report submitted to the Director, the Permittee shall submit such facts or corrected information within seven working days of discovery.

I.BB. SIGNATORY REQUIREMENT

I.BB.1. All reports, notifications, submissions or other information required by this Permit, requested by or submitted to the Director, shall be signed and certified in accordance with ~~UAC R315-3-2.2~~R315-270-11.

I.CC. CONFIDENTIAL INFORMATION

I.CC.1. The Permittee may claim confidential any information required to be submitted by this Permit in accordance with ~~Utah Code Annotated U.C.A. § 19-1-306, 63G-2-309, and R315-270-12. 63-2-101 et seq. and Utah Code Annotated 19-1-306.~~

I.DD. REPORTS, NOTIFICATIONS, AND SUBMISSIONS

I.DD.1. All reports, notifications, or other submissions which are required by this Permit to be transmitted to the Director should be sent by certified mail or other means of proof of delivery to:

Director, Division of Waste Management and Radiation Control ~~Solid and Hazardous Waste~~
Department of Environmental Quality
P.O. Box 144880
Salt Lake City, UT 84114-4880
Phone (801) 536-0200

Normal business hours are ~~7-8~~ am to ~~6-5~~ pm, Monday through ~~Thursday~~Friday, except Utah State holidays. Required oral notifications shall be given only to the Director or an authorized representative of the Director. Notifications made at other times shall be made to the 24-hour answering service at (801) 536-4123. Notifications made to the 24-hour answering service shall include all applicable information required by this Permit. The Permittee shall give oral notification to the Director or an authorized representative of the Director on the first business day following notification to the 24-hour answering service.

I.EE. DOCUMENTS TO BE MAINTAINED AT THE FACILITY SITE

- I.EE.1. The Permittee shall maintain at the ~~F~~facility, for the periods specified, current copies of the following documents and amendments, revisions and modifications to these documents:
- I.EE.1.a. A copy of the Permit until closure is certified in accordance with Condition II.O.;
- I.EE.1.b. Waste Analysis Plans (Attachment 1), and all associated analytical data, as required by ~~UAC R315-8-2.4.R315-270-14(b)(3)~~ and this Permit until closure is certified in accordance with Condition II.O.;
- I.EE.1.c. Inspection schedules, ~~and~~ logs (Attachment 2), ~~and results,~~ as required by ~~UAC R315-8-2.6(b) and this Permit for a period of at least three years from the date of inspection~~ in accordance with ~~UAC R315-8-2.6(d)R315-264-15(d)~~;
- I.EE.1.d. Personnel training documents (Attachment 3), and records, as required by ~~UAC R315-8-2.7(d)R315-264-16~~ and this Permit until closure for current employees, or for a period ~~of of at least three years~~ for former employees in accordance with ~~UAC R315-8-2.7(e)R315-264-16(e)~~;
- I.EE.1.e. Contingency Plan (Attachment 4), as required by ~~UAC R315-8-4R315-264-53~~ and this Permit until closure is certified in accordance with Condition II.O.;
- I.EE.1.f. Operating record, as required by ~~UAC R315-8-5.3R315-264-73~~, and this ~~permit~~ Permit until closure is certified in accordance with Condition II.O.;
- I.EE.1.g. Closure Plans (Attachment 5), as required by ~~UAC R315-8-7R315-264-112~~ and this ~~permit~~ Permit, until closure is certified in accordance with Condition II.O.;
- I.EE.1.h. ~~Cost~~ Current cost estimates (Attachment 5) for the closure and post-closure of the ~~Hazardous Waste Management Unit~~ HWMUs covered by this Permit, in accordance with ~~UAC R315-8-8R315-264-142~~ and Condition II.P. of this Permit;
- I.EE.1.i. Manifest copies, as required by ~~UAC R315-8-5R315-262-40(a), R315-264-71(a)(2)(vi),~~ and this Permit for at least three years from the date the waste shipment was accepted at ~~the facility or shipped off-site~~ from the facility to an approved hazardous waste management facility; and
- I.EE.1.j. A copy of the Permittee's waste minimization statement ~~as required by R315-264-73(b)(9)~~ until closure is certified in accordance with Condition II.O.

I.FF. PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

I.FF.1. Pursuant to Section 3005(C)(3) of RCRA (Section 212 of HSWA) and ~~UAC R315-3-3.3(b)(2) R315-270-32(b)(2) 40 CFR 270.32(b)(2)~~, this Permit contains those terms and conditions determined necessary to protect human health and the environment.

MODULE II - GENERAL FACILITY CONDITIONS

II.A. APPLICABILITY

- II.A.1. The requirements of this ~~permit~~ Permit module pertain to all Hazardous Waste Management Units (HWMUs) identified within ~~Modules I, II, III, IV and V~~ this Permit.

II.B. DESIGN AND OPERATION OF FACILITY

- II.B.1. The Permittee shall design, construct, maintain and operate all of the HWMUs and surrounding areas to minimize the possibility of a fire, explosion, or any sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, groundwater or surface water which could threaten human health or the environment.

II.B.1.a. ~~-Should one of these incidents~~ a fire, explosion or release of hazardous waste constituents occur, the Permittee shall:

II.B.1.a.i.- comply with Condition II.L. and the Contingency Plan;

II.B.1.a.ii. notify the Director in accordance with Condition I.T.;

II.B.1.a.iii. take all reasonable steps to minimize the release as required by Condition I.K.1.;

II.B.1.a.iv. take reasonable ~~-measures to prevent~~ significant adverse impacts on human health and the environment ~~future occurrences~~, in accordance with Conditions I.K.1.; and

II.B.1.a.v. submit a written report to the Director in accordance with Condition I.T.5. or I.Z.

II.B.1.b. ~~-The Director may consider appropriate enforcement action, to include the cessation of any and all hazardous waste management activities, until the Director has determined that the Permittee has adequately addressed the fire, explosion, or release of hazardous waste constituents and implemented appropriate corrective measures.~~ ~~adequate resolution of the problem occurs.~~

II.B.2. Any request for modifications to the design, construction, maintenance or operation of existing HWMUs or proposals for new HWMUs shall be in accordance with Condition I.D.4. and R315-270-42. Modifications ~~to the design and operation of~~ a HWMU shall satisfy ~~the applicable~~ requirements specified in this Permit and the Utah Solid and Hazardous Waste Rules. ~~Any construction deviation or construction changes~~ ~~modification from the approved design of~~ ~~s associated with~~ ~~to a permitted HWMU at the F~~ facility shall be documented by ~~the~~ as-built drawings and certified by a registered professional engineer in accordance with Condition I.R.1. and UAC R315-3-3.1(1)(2)(i) ~~R315-270-30(1).~~

II.B.3. As specified in Condition I.R.c., ~~After~~ ~~after~~ review of the as-built drawings and field verification of the ~~facility's new or modified~~ HWMUs, the Director will notify the Permittee in writing of any change which ~~he concludes does~~ ~~is not in accordance with~~ the approved design or this ~~not~~ satisfy the operating requirements specified in this ~~P~~ permit. ~~If it is established that such changes are not in accordance with the approved~~

~~design, t~~The Director may require the Permittee to remove, replace or modify any construction inconsistent with this Permit.

II.B.3.a. If within 15 calendar days of the date of the Director’s receipt of the registered professional engineer’s certification required in Conditions I.R.a.i. and II.B.2, the Permittee has not received notice of the Director’s intent to inspect, or a prior inspection is waived, the Permittee may commence treatment, storage, or disposal of hazardous waste in the permitted unit(s).

II.C. REQUIRED NOTICE

II.C.1. As required by ~~R315-264-12(a)(1)UAC R315-8-2.3(a)(1)~~, the Permittee shall notify the Director in writing at least four weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source. Notice of subsequent shipments of the same waste from the same foreign source in the same calendar year is not required.

II.C.2. When the Permittee arranges to receive hazardous waste from an off-site source (except where the Permittee is also the generator), prior to any waste shipment, the Permittee shall inform the generator in writing that ~~he-it~~ has the appropriate permit(s) for, and ~~will~~ may accept, the waste the generator is shipping. The Permittee shall keep a copy of this written notice as part of the operating record as required by ~~UAC R315-8-2.3(b)R315-264-12(b).~~

II.D. WASTE ANALYSIS PLAN

II.D.1. The Permittee shall ~~follow-comply with the all permit conditions involving waste analysis and the-~~ procedures of the Waste Analysis Plan included as Attachment 1. ~~of this Permit. In addition, the Permittee shall comply with any and all other Permit eConditions involving waste analysis in Modules I, II, III, IV, and V, and VI.~~

II.D.2. The Permittee shall use the test methods described in the Waste Analysis Plan (Attachment 1) or an equivalent procedure that satisfies Condition ~~I.O.3. II.D.4.~~ Changes in a test method described in the Waste Analysis Plan, as a result of an improvement or refinement of that method, may be adopted by the Permittee and incorporated into this Permit, in accordance with UAC R315-4-1.5 and Condition I.D. Changes in test methods described in the Waste Analysis Plan, as a result of an improvement or refinement by the EPA or the State of Utah may be implemented without modification of the Permit.

II.D.3. The Permittee shall characterize, using analytical techniques if necessary, all waste streams generated on or off-site in accordance with ~~UAC R315-8-2.4R315-264-13~~ and Attachment 1. The waste characterization profiles shall be kept in the operating record.

II.D.4. The method used to obtain a representative sample of the waste to be analyzed shall be the appropriate method from R315-261-1090 or as specified or modified by this Permit. Laboratory methods shall be those specified in “Test Methods for Evaluating Solid Waste; Physical/Chemical Methods SW-846 (Third Edition, November 1986)” or most currently promulgated edition, “Standard Methods for Examination of Water and Wastewater (17th Edition, 1989)” or most currently promulgated edition; or an

equivalent method as approved by the Director. The analysis of all samples shall be conducted by laboratories certified by the State of Utah.

II.D.5. When requesting substitute or additional analytical methods, the Permittee shall submit to the Director ~~for written approval~~ a request for substitution of analytical methods which are equivalent to the methods specifically approved for use in this permit, ~~in accordance with UAC R315-270-42~~. The request shall provide information demonstrating that the proposed methods are equivalent or superior in terms of sensitivity, accuracy, and precision (i.e. reproducibility).

II.D.46. The Permittee shall conduct an~~An~~ annual evaluation of each waste stream~~shall be performed~~, as outlined in the waste analysis plan, to verify that the waste characterization is still accurate. These evaluations shall be kept in the operating record until the next annual evaluations are completed. In accordance with the Waste Analysis Plan, the Permittee shall also ~~Characterization-characterize~~of waste streams shall also be done for each new or modified waste stream or each time the process generating the waste changes.

II.D.57. Any waste analysis used to evaluate off-site waste for acceptance by the Permittee shall be ~~accomplished-conducted~~ using a laboratory that has been certified by the ~~Utah State~~State of Utah ~~Division of Laboratories~~. Provisional certification is not acceptable as certification under this condition.

II.D.68. At a minimum, the Permittee shall:

II.D.68.a. Maintain properly functioning sampling and analytical equipment;

II.D.68.b. Use approved sampling and analytical methods; and

II.D.68.c. Submit an updated list of parameters, analytical methods, and sample preparation methods on an annual basis. The updated list shall be submitted to the Director on or before January 15th of each calendar year.

II.D.79. Whenever the Director determines that the Permittee needs to update the analytical methodologies or the version(s) of SW-846 that are being used by the Permittee's analytical laboratory, the Director will submit written notification to the Permittee. The Permittee shall obtain documentation that its laboratory is a-certificationed by the State of Utah for ~~thateach~~ analytical method. The Permittee shall notify the Utah Department of Health, Bureau of Laboratory Improvement of the requested update within 30 days of receipt of the Director's determination. The Permittee shall have 180 days from the receipt of the Director's written notification to complete the requested update. If it is not possible to complete the update within the prescribed time, the Permittee shall submit a written request for extension to the Director for approval or use a contract laboratory to perform the analysis.

II.D.810. If the Permittee uses a contract laboratory to perform analyses, the laboratory must be certified by the State of Utah to perform the contracted analyses. For parameters for which State of Utah certification is unavailable, the Permittee shall ensure that quality control/quality assurance data provided by the laboratory is sufficient to assess the

validity of the data. The Permittee shall inform the laboratory in writing that it must operate under the Waste Analysis Plan conditions set forth in this Permit.

II.E SECURITY

- II.E.1. The Permittee shall comply with the security conditions and procedures contained in Attachment 7 of this Permit.

II.F. GENERAL INSPECTION REQUIREMENTS

- II.F.1. The Permittee shall conduct inspections in accordance with ~~UAC R315-8-2.6~~R315-264-15 and shall follow the inspection schedule found in Attachment 2.
- II.F.2. The Permittee shall remedy any deterioration or malfunction of equipment or structures as required by ~~UAC R315-8-2.6(e)~~R315-264-15(c). If the remedy requires more than 72 hours to implement from the time that the problem is detected, the Permittee shall submit to the Director, before the expiration of the 72 hour period, a written report that shall include a proposed time schedule for correcting the problem.
- II.F.3. Any problem which could endanger human health or the environment shall be corrected as soon as possible after the problem is discovered. The Permittee shall make every effort to eliminate the threat to human health or the environment within 24 hours.
- II.F.4. If, upon determination by the Director or the Permittee, continued operation of the waste management unit involved in the inspection could endanger human health or the environment, the Permittee shall immediately cease operation of the unit until the problem has been corrected. The Permittee shall be allowed to undertake those operations which are part of corrective activities.
- II.F.5. Records of inspections shall be kept as required by ~~UAC R315-8-2.6(d)~~R315-264-15(d).

II.G. RISK THRESHOLDS

- II.G.1. The thermal treatment operations at the M-136 and M-225 Thermal Treatment Areas shall be conducted to minimize the risk to human health and the environment. The risk to human health was evaluated, in accordance with R315-101 and is based on the risk thresholds identified in Condition IV.C.11. The operating conditions identified in Module IV for the treatment areas shall be based on the information provided or referenced in Attachments to this Permit and the following site specific documents available for review in the Department of Environmental Quality, Division of Waste Management and Radiation Control ~~Solid and Hazardous Waste~~ files:
- II.G.1.a. Sampling Results for Emissions Characterization of Open Burning Waste Propellant Materials, October 2009;
- II.G.1.b. ATK Launch Systems Waste Characterization and Air Dispersion Modeling Protocol for use in the Human Health and Ecological Risk Assessments, April 2011, Tetra Tech; ADDENDUM Air Dispersion Modeling Protocol for Open Burning and Open Detonation at ATK Launch Systems in Promontory, Utah, February 2013, CBI;

- II.G.1.c. Air Dispersion Modeling Report for Open Burning and Open Detonation at ATK Launch Systems in Promontory, Utah, July 2014, CBI;
- II.G.1.d. Human Health Risk Assessment Protocol for Evaluation of the Open Burning and Open Detonation Units, ATK Launch Systems Promontory, Utah, August 2014, Terra Mentis; ~~and~~
- II.G.1.e. Open Burn Open Detonation Human Health Risk Assessment, ATK Launch Systems Promontory, Utah, June 2016, Geosyntec;-
- II.G.1.f. Ecological Risk Assessment Waiver Thermal Treatment Operations UTD009081357, August 29, 2017, Utah Division of Waste Management and Radiation Control;
- II.G.1.g. Thermal Treatment Units M-136 and M-225 Groundwater Monitoring Plan, ATK Launch Systems Promontory Facility, April 2018, ATK Launch Systems Inc.; and
- II.G.1.h. Soil Monitoring Plan, Promontory Hazardous Waste Storage and Subpart X Treatment Permit, April 2018, Orbital ATK Launch Systems Inc.
- II.G.2. Reserved
- II.G.3. The Permittee shall submit to the ~~Director~~ Director for review by March 1st of each calendar year, an annual report on the operation of the Promontory Thermal Treatment areas. This report shall at a minimum include the following:
 - II.G.3.a. An accounting of the quantities and types of reactive hazardous waste treated at the M-136 and M-225 thermal treatment areas, including all donor material and ignition compounds;
 - II.G.3.b. An accounting of the total quantity of Propellant, Explosives and Pyrotechnics (PEP) and Contaminated Waste treated at the M-136 and M-225 thermal treatment areas for the annual reporting period;
 - II.G.3.c. An accounting of the total quantity and types of reactive metal powders treated at the M-136 and M-225 thermal treatment areas for the annual reporting period;
 - II.G.3.d. An accounting of the types and quantities of flare molds treated at the M-136 and M-225 thermal treatment areas for the annual reporting period and a summary on the status of waste minimization projects for treatment of flare molds at the thermal treatment areas;
 - II.G.3.e. A list and description of any new waste profiles that have been generated for new energetic materials that have been treated at the Promontory Thermal Treatment Areas;
 - II.G.3.f. The semiannual annual analytical results for the burn ground ash as required by Section 11.8.2.5 of Attachment 11;
 - II.G.3.g. An evaluation of the emission factors used in the human health risk assessment, identified in Condition II.G.1.e., to determine whether these factors are representative of the wastes treated

and identified in the annual report, as directed by II.G.3., or if the emission factors need to be updated;

- II.G.3.h. A review of the of the human health risk assessment, identified in Condition II.G.1.e., to evaluate changes to dose-response factors for the three classes of detected COPCs: chromium (total and hexavalent), 2,3,7,8-TCDD TEQ, and detected potentially carcinogenic PAHs (benzo(a)anthracene, benzo(k)fluoranthene, chrysene and indeno(1,2,3-cd)pyrene); and
- II.G.3.i. A review of the potential human health risk scenarios that were evaluated in the risk assessment to assure that these scenarios have not changed.
- II.G.4. If the Director determines after reviewing this annual report that any component of the risk assessment needs to be updated, he will inform the Permittee in writing which components of the human health risk assessment to update.
- II.G.5. If the Permittee is required to update the human health risk assessment for the M-136 or M-225 Thermal Treatment areas, the Permit shall be modified in accordance with Condition I.D. of this Permit.

II.H. PERSONNEL TRAINING

- II.H.1. The Permittee shall conduct personnel training as specified in Attachment 3 and in accordance with required by UAC R315-8-2.7R315-264-16. ~~This training program shall follow the outline~~The Permittee shall comply with the training procedures found specified in Attachment 3. New personnel working with or around hazardous waste shall complete the required personnel training within six (6) months of their hire date, assignment to the ~~facility~~Facility or assignment to a new position at the ~~facility~~Facility. ~~Personnel shall not work unsupervised in these positions until they have completed the all training requirements.~~
- II.H.2. ~~Facility personnel~~The Permittee shall ~~take part in an~~provide -annual ~~review of their initial training for in the use of the contingency~~Contingency Plan and hazardous waste management procedures relevant to the positions in which they are employed for all on-site employees.
- II.H.3. The Permittee shall maintain training documents and records as specified in the Training Plan in Attachment 3 and as required by Condition I.O., UAC R315-8-2.7(d)R315-264-16(d) and R315-8-2.7(e)R315-264-16(e) [40 CFR 264.16(d) and 264.16(e)], in accordance with the Training Plan in Attachment 3. These records shall indicate the type and amount of training received.
- II.H.4. The Permittee shall maintain a current copy of ~~the Attachment 3~~ (Training Plan) at the Facility until ~~the Facility #~~ is fully closed and closure is certified in accordance with Condition I.EE.1.d. and R315-264-115.
- II.H.5. Employees working at the M-136 and M-225 Thermal Treatment Areas shall receive task-specific, on-the-job-training in addition to the training outlined in Attachment 3. This training shall be documented and maintained in the operating record as required in Condition II.H.3.

II.I. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

- II.I.1. The Permittee shall comply with the requirements of ~~UAC R315-8-2.8~~R315-264-17.
- II.I.2. In addition to the requirements of ~~UAC R315-8-2.8~~R315-264-17, the Permittee shall comply with the Conditions III.G and III.H pertaining to ignitable, reactive, or incompatible waste.

~~II.J.~~ LOCATION STANDARDS

- ~~II.J.1. The Permittee shall comply with the location standards specified by UAC R315-8-2.9.~~

II.K. PREPAREDNESS AND PREVENTION

- II.K.1. The Permittee shall ~~follow~~comply with the ~~procedures in the~~ Preparedness and Prevention Plan, Attachment 8.
- II.K.2. At a minimum, the Permittee shall ~~equip~~provide and maintain in good operating condition at the ~~facility~~Facility the equipment set forth in Attachment 8, as required by ~~UAC R315-8-3.3~~R315-264-32.
- II.K.3. The Permittee shall test and maintain the equipment specified in Condition II.K.2 as ~~necessary~~required to assure its proper operation in time of emergency.
- II.K.4. The Permittee shall maintain records of the preventative maintenance and repair activities specified in Condition II.K.3. and shall keep schedules, reflecting minimum and planned frequency for the performance of preventative maintenance activities in the Operating Record at the ~~facility~~Facility in accordance with Condition I.O.
- II.K.5. The Permittee shall maintain access to the communications or alarm system as required by ~~UAC R315-8-3.5~~R315-264-34.
- II.K.6. 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.
- II.K.7. The Permittee shall attempt to make arrangements (Coordination Agreements) with State and local authorities as required by ~~UAC R315-8-3.7~~R315-264-37. Copies of the Coordination Agreements shall be kept in the Operating Record. The attempts to make such agreements, any refusals and all final agreements shall be documented in the Operating Record.

II.L. CONTINGENCY PLAN

- II.L.1. The Permittee shall ~~immediately carry out the provisions of~~comply with Attachment 4, and ~~follow~~ the emergency procedures described by ~~UAC R315-8-4.7~~R315-264-56 whenever there is a fire, explosion, or release of hazardous waste or hazardous constituents which threatens or could threaten human health or the environment. The Permittee shall comply with R315-263-30 and Condition I.T. in reporting releases to the Director.

II.L.2. The Permittee shall provide copies of the Contingency Plan to emergency agencies who may be called in an emergency, shall maintain a copy of the Plan at the facility, and shall provide a copy upon request in accordance with ~~UAC R315-8-4.4~~R315-264-53.

II.L.3. The Permittee shall review ~~the Attachment 4~~ (Contingency Plan), in accordance with ~~UAC R315-8-4.5~~R315-264-54, when (a) the Permit is revised, (b) the Contingency Plan fails in an emergency, (c) changes to the Facility materially increase the potential for fires, explosions or releases of hazardous constituents. The Permittee ~~and~~ shall modify ~~it~~ Attachment 4 in accordance with Condition I.D. ~~and R315-270-42~~, if necessary.

II.L.4. A trained emergency coordinator shall be available at the Facility or on call at all times in case of an emergency, in accordance with ~~UAC R315-8-4.6~~R315-264-55 and identified in Attachment 4.

II.M. MANIFEST SYSTEM

II.M.1. The Permittee shall comply with the manifest requirements of ~~UAC R315-5-2~~R315-264-71, R315-264-72 and ~~UAC R315-8-5~~R315-264-76. The manifest tracking number shall be recorded in the Operating Record with each waste load that arrives or leaves the Permittee's facility.

~~II.M.2. If the waste load is refused and returned to the generator, the Permittee shall document such actions shall be documented in the Operating Record.~~

~~II.M.3. The Permittee shall comply with R315-262-217 and R315-264-70 for the movement of each waste load off-site. The Permittee shall record the manifest number shall be recorded in the Operating Record with each waste load that leaves the Permittee's Facility.~~

II.N. RECORDKEEPING AND REPORTING

II.N.1. The ~~P~~ermittee shall maintain an accurate written Operating Record at the facility in accordance with ~~UAC R315-8-5.3~~R315-264-73 (~~40 CFR 264.73 incorporated by reference~~) and ~~R315-50-2 (Appendix I to Part 264 incorporated by reference)~~R315-264-1103.

II.N.2. The Permittee shall, by March 1 of each year, submit to the Director a certification pursuant to ~~UAC R315-8-5.3~~ [~~40 CFR 264.73(b)(9) incorporated by reference~~]R315-264-73(b)(9), signed in accordance with R315-270-11 by the owner or operator of the facility or an authorized representative, 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; and that the proposed method of treatment, storage, or disposal is the most practicable method currently available to the Permittee which minimizes the present and future threat to human health or the environment.

II.N.3. The Permittee shall comply with the biennial report requirements of ~~UAC R315-8-5.6~~R315-264-75, by March 1 of each even-numbered reporting year. The report shall include wastes generated, treated or stored at the Permittee's facility during the previous odd-numbered year.

- II.N.4. The Permittee shall submit additional reports to the Director in accordance ~~with UAC R315-8-5-8~~R315-264-77.
- II.N.5. All reports, notifications, applications, or other materials required to be submitted to the Director shall be submitted in accordance with Condition I.D.D.
- ~~II.N.6. The Permittee shall maintain a copy of the certifications required in Conditions II.N. in the operating record and sign each certification in accordance with R315-264-73(b)(9) and R315-270-11(d)(1).~~

II.O. CLOSURE/POST-CLOSURE

- II.O.1. The Permittee shall ~~comply with R315-264-110 through 120 as applicable and~~ close the facility ~~as required by~~in accordance with UAC R315-8-7, UAC R315-101 and the Closure Plan in Attachment 5 (Closure Plan), and Condition II.O.3.
- ~~II.O.2 The Permittee shall notify the Director in writing of its intent to conduct partial or final closure of any portion of the facility in accordance with R315-264-110. The Permittee shall notify the Director at least 180 60 days prior to the commencement of final or partial Facility closure.~~
- ~~II.O.3. The Permittee shall review its closure plans for the HWMUs contained in Attachment 5 and submit Updated Closure plans for the closure or partial closure of each individual hazardous waste management unit unit shall be submitted to the Director for approval no less than 180 60 days prior to the commencement of closure activities. No closure activities shall take place that have not received prior approval from the Director.~~
- ~~II.O.243. The Permittee shall amend the Closure Plan in Attachment 5, in accordance with R315-124-5, R315-270-42 and Condition I.D. whenever necessary, or when required to do so by the Director.~~

~~For all HWMUs, minor deviations from the approved closure plan procedures, submitted in accordance with Condition II.O.2, necessary to accommodate proper closure, shall be described in narrative form with the closure certification statements. The Permittee shall describe the rationale for implementing minor changes as part of this narrative report. Within 60 days after completion of closure of each HWMU, the Permittee shall submit the certification statements and narrative reports to the Director.~~

- ~~II.O.34. The Permittee shall amend Attachment 5, the closure/post-closure plan, in accordance with UAC R315-8-7R315-124-5 and Condition I.D. whenever necessary, or when required to do so by the Director.~~
- ~~II.O.45. The Permittee shall notify the Director in writing of the partial or final closure of any portion of the facility in accordance with UAC R315-8-7R315-264-110. The Permittee shall notify the Director at least 180 days prior to the commencement of final facility closure. The closure plans for the HWMUs contained in Attachment 5 will shall be reviewed by the Permittee, and an updated detailed closure plan shall be submitted before commencing partial or final facility closure. If the Attachment 5 closure plan requires modification, the plan shall be modified and submitted to the Director for approval in accordance with Condition I.D and R315-270-42.~~

- II.O.~~565~~. After receiving the final volume of hazardous waste at the burn grounds or at a hazardous waste storage facility, the Permittee shall treat or remove from the site all hazardous waste and complete closure activities in accordance with the schedule specified in Attachment 5 or the updated Closure Plan if the schedule was revised.
- II.O.~~676~~. The Permittee shall decontaminate or dispose of all facility equipment, structures, soil and rinsate off-site as required by ~~UAC R315-8-7, R315-8-9~~R315-264-114 and Attachment 5. Facility equipment, structures and soil which have not been decontaminated shall be disposed of only at a permitted hazardous waste ~~treatment~~Treatment, ~~storage~~Storage or ~~disposal~~Disposal facility Facility (TSDF).
- II.O.~~787~~. The Permittee shall certify that the facility has been closed in accordance with the specifications in the Closure Plan and Attachment 5, as required by ~~UAC R315-8-7~~R315-264-115. ~~The Permittee, and~~ shall also provide a certification by an independent, Utah registered professional engineer qualified by experience and education in the appropriate engineering field that the Facility has been closed in accordance with the approved Closure Plan.
- II.O.8. For all HWMUs, the Permittee shall describe in narrative form with the closure certification statements all minor deviations from the approved closure plan procedures, submitted in accordance with Condition II.O.3, necessary to accommodate proper closure. The Permittee shall describe the rationale for implementing minor changes as part of this narrative report. Within 60 days after completion of closure of each HWMU, the Permittee shall submit the certification statements required by Condition II.O.7. and narrative reports to the Director.
- II.O.~~89~~. In the event that any of the hazardous waste management units covered by this ~~P~~permit cannot be clean closed by decontaminating or removing contaminated structures or soil, or releases have occurred which have impacted soil or groundwater, the Permittee shall modify the Closure Plan for that hazardous waste management unit in accordance with Condition I.D. Within 30 days of the date that the Director approves the modification, the Permittee shall close the unit in accordance with the applicable provision of ~~UAC R315-8-7~~R315-264-110 and R315-101.
- II.O.~~910~~. If a HWMU cannot be clean closed, the Permittee shall submit a survey plat and property description for the HWMU with the submission of the certification of closure for the HWMU, in accordance with ~~UAC R315-8-7~~R315-264-116 and R315-101.

II.P. COST ESTIMATES FOR HWMU CLOSURE

- II.P.1. The Permittee's closure cost estimate for each HWMU shall be prepared and maintained at the ~~F~~facility in accordance with Attachment 5 and ~~UAC R315-8-8~~R315-264-142 ~~(40 CFR 264.142 incorporated by reference) and Attachment 5~~.
- II.P.2. By July 30 of each calendar year, the Permittee shall adjust the closure cost estimate for inflation or submit the latest adjusted closure cost estimate for review and approval by the Director. After approval, the Permittee shall maintain the latest adjusted closure cost estimate in the operating record. The closure cost estimates shall identify the costs, in current dollars, of the steps necessary to perform final closure for each HWMU in

accordance with ~~UAC R315-8-9.9~~R315-264-143 and ~~UAC R315-8-8~~R315-264-142 (~~40 CFR 264.142 incorporated by reference~~).

- II.P.3. On the five year anniversary date of the submittal of the closure cost estimates required by Condition II.P.2. above, the Permittee shall conduct a detailed evaluation of the closure cost estimates for each HWMU and determine whether the annual adjustments for inflation have been adequate to update the closure cost estimates. The Permittee shall submit a report on this assessment and if necessary, a modification of the Permit in accordance with Condition I.D. to the Director 90 days after the report is submitted.
- II.P.4. The Permittee shall revise the closure cost estimate within 30 days after the Director has approved the request to modify the affected closure plan(s).
- II.P.5. For each new HWMU placed into operation, an updated closure cost estimate to the facility must be prepared which includes the new unit, 60 days prior to waste being placed on or into the new unit.

II.Q. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

- II.Q.1 The Permittee shall demonstrate continuous compliance with ~~UAC R315-8-8~~R315-264-143 by providing documentation of financial assurance, as required by ~~UAC R315-8-8~~R315-264-143. Changes in financial assurance mechanisms shall be approved by the Director before the change is made effective, at least 60 days prior to such a change. On ten day notice from the Director, the Permittee shall direct any entity that is responsible for payment of closure costs, to provide copies of documents demonstrating the status of the financial assurance mechanism.
- II.Q.2. The Permittee shall revise the financial assurance for facility closure whenever there is a change in the facility's closure plan that would change the cost estimate as required by ~~UAC R315-8-8~~R315-264-143.

II.R. LIABILITY REQUIREMENTS

- II.R.1. The Permittee shall demonstrate continuous compliance with the liability requirements of ~~UAC R315-8-8~~R315-264-147 (~~40 CFR 264.147(a) incorporated by reference~~). The Permittee shall have and maintain hazardous waste liability coverage for sudden accidental occurrences in the amount of at least one \$1 million U.S. dollars per occurrence with an annual aggregate of at least \$2 million U.S. dollars, exclusive of legal defense costs. The Permittee shall submit an approved certificate of hazardous waste liability insurance worded as required by ~~UAC R315-8-8~~R315-264-147.
- II.R.2. The Permittee shall demonstrate continuous compliance with the requirements of ~~UAC R315-8-8~~R315-264-147 (~~40 CFR 264.147(b) incorporated by reference~~) to have and maintain liability coverage for non-sudden accidental occurrences arising from operations of the two Hazardous Waste Management Units, designated as the M-136 and M-225 Thermal Treatment Areas.
- II.R.3. Changes in liability coverage mechanisms shall be approved in writing by the Director 60 days prior to such a change before being made effective.

**II.S. INCAPACITY OF OWNER OR OPERATORS, GUARANTORS, OR
FINANCIAL INSTITUTIONS**

- II.S.1. The Permittee shall comply with ~~with the notification and financial requirements of UAC R315-8-8R315-264-148 (40 CFR 264.148 incorporated by reference) including notifying the Director by certified mail within ten days after commencement of a voluntary or involuntary proceeding under Title 11 Bankruptcy, U.S. Code naming the Permittee or owner or operator of the Facility as the debtor.~~

MODULE III – STORAGE IN CONTAINERS

III.A. APPLICABILITY

- III.A.1. The requirements of this permit Module pertain to the operation of hazardous waste container storage areas at the facility. The Permittee shall comply with ~~R315-8-9R315-264-170~~ and all conditions of this Module.
- III.A.2. The designated hazardous waste storage areas are the bays of Buildings M-705S, E-501, M-629, M-186, the burn trays at M-136, Burn Station 14 at M-136, and Storage Pad S-633. Drawings of these storage areas are presented in Attachment 6.

III.B. WASTE IDENTIFICATION

- III.B.1. The Permittee shall, subject to the terms of this Permit, store only the following hazardous wastes, as listed by EPA hazardous waste code, in containers at storage areas M-186, M-705S, ~~S-633, M-629, M-136~~ and E-501:

D001, D002, D003, D004, D005, D006, D007, D008, D009, D010 D011, D016, D018, D019, D021, D022, D023, D024, D026, D027, D028, D029, D030, D035, D036, D038, D039, D040, D042, D043, F001, F002, F003, F004, F005, F006, F007, F008, F009, K044, K045, P003, P012, P022, P028, P029, P030, P042, P044, P047, P048, P056, P064, P067, P076, P077, P078, P087, P092, P093, P095, P098, P102, P104, P105, P106, P112, P116, P119, P205, U001, U002, U003, U004, U006, U008, U009, U011, U012, U019, U025, U028, U029, U031, U037, U041, U044, U048, U053, U056, U057, U069, U070, U072, U075, U077, U078, U079, U080, U085, U088, U092, U093, U095, U098, U101, U102, U103, U105, U106, U108, U112, U113, U115, U117, U118, U120, U121, U122, U123, U131, U133, U134, U138, U140, U147, U148, U149, U151, U154, U156, U159, U160, U161, U162, U165, U168, U169, U170, U171, U185, U186, U188, U189, U190, U196, U201, U209, U210, U211, U218, U219, U220, U221, U223, U224, U225, U226, U228, U238, U239, U240, U243, U244, U246, U247~~U253~~, U328, U353, U359, U404.

- III.B.2. The Permittee may store solid reactive or ignitable hazardous wastes, EPA hazardous waste codes D003 and D001, and hazardous waste codes D005, D007, D008, D030, D038, F001, F002, F003, F004, F005 and K044 in storage units S-633, Building M-629, and M-136 subject to the terms of this Permit.
- III.B.3. The Permittee may store ~~solid reactive hazardous wastes, EPA hazardous waste code D003,~~ in accordance with Condition III.B.2. in burn trays at M-136 prior to thermal treatment and subject to the terms of this Permit. Waste stored in burn trays shall be containerized only in covered drums, boxes, plastic bags, woven bags, US Department of Transportation (DOT) approved shipping containers or containerized as described in Attachment 11. Containers shall be labeled and managed as specified in Attachment 9.
- III.B.4. The Permittee may store waste rocket motors, with hazardous waste codes as identified in Condition III.B.2. ~~EPA hazardous waste code D003~~, that contain solid propellant, one at a time on the ground at M-136, Burn Station 14 prior to thermal treatment.

Storage of waste rocket motors shall be conducted subject to the terms of this Permit and shall be labeled and managed as specified in Attachment 9.

III.B.5. The Permittee may store ~~solid reactive hazardous wastes~~, with hazardous waste codes as identified in Condition III.B.2., EPA hazardous waste code D003, on Storage Pad S-633 subject to the terms of this Permit.

III.B.6. The Permittee is prohibited from storing hazardous waste that is not identified in Section III.B. of this Module. Any addition of hazardous waste codes to Condition III.B.1. requires modification of the permit in accordance with Condition I.D.3.

III.B.7. Except for the storage of waste rocket motors at the M-136, Burn Station 14, the Permittee shall only use containers for the storage of reactive wastes that meet the DOD 4145.26-M requirements.

III.C. CONDITION OF CONTAINERS

III.C.1. If a container holding hazardous waste is not in good condition (e.g., severe rusting, bulging, apparent structural defects) or it has begun to leak, the Permittee shall transfer the hazardous waste from such a container, or the container of hazardous waste itself, to a UN approved container in accordance with Section 8-1-10 of Attachment 8. The transfer shall be completed as soon as possible but not later than 24 hours from the time the problem was first discovered.

III.D. COMPATIBILITY OF WASTE WITH CONTAINERS

III.D.1. The Permittee shall ~~assure-ensure~~ that the waste is compatible with the containers as required by ~~R315-8-9.3~~R315-264-172. The Permittee shall follow the compatibility plan as indicated in Section 9-2.1 and Table 9-2 of Attachment 9.

III.E. MANAGEMENT OF CONTAINERS

III.E.1. The Permittee shall manage containers in accordance with this module of the Permit, ~~UAC R315-8-9.4~~R315-264-173 and the procedures identified in Attachments 9 and 11. A container holding hazardous waste shall always be closed during storage except when the Permittee is adding or removing waste from the container. The Permittee shall not open, handle, or store containers in a manner which may cause the containers to leak.

III.E.2. The Permittee shall store liquid hazardous wastes in containers only at storage areas M-186, E-501 and M-705S. Drawings of the container storage areas are shown in Attachment 6. ~~At capacity, t~~The Permittee may store the up to the following volumes of wastes:

III.E.2.a. E-501 - 8,800 gallons, ~~which and no more than-is~~ 160 55-gallon containers or the equivalent;

III.E.2.b. M-186 - 22,000 gallons and no more than,~~which is~~ 400 55-gallon containers or the equivalent; and

- III.E.2.c. M-705S - 1,760 gallons and no more than, which is 32 55-gallon containers or the equivalent.
- III.E.3. The Permittee shall store solid reactive hazardous waste in containers at storage areas M-629, M-136 and S-633. Drawings of the storage areas are shown in Attachment 6. At capacity, the Permittee may store the following amounts of wastes:
 - III.E.3.a. M-629 - 110,000 lbs 1.3 solid reactive waste or 55,000 lbs 1.1 solid reactive hazardous waste;
 - III.E.3.b. M-136 – 125,000 lbs of 1.3 solid reactive waste in Burn Station 14, or the calendar day amounts identified in Conditions IV.C.1.a.i. through IV.C.1.f.a.iii. for the other Burn Stations at M-136, as described in Condition III.B.3. or III.B.4.;
 - III.E.3.b.i. M-136 - 20,000 lbs of 1.1 solid reactive hazardous waste, as described in Condition III.B.3. or III.B.4.; and
 - III.E.3.c S-633 – 75,000 lbs of 1.3 or 20,000 lbs of 1.1 solid reactive hazardous waste.
- III.E.4. The Permittee shall maintain an aisle space of 30 inches minimum between containers or pallets of containers at storage areas M-186 and E-501.
- III.E.5. The Permittee shall store hazardous wastes at M-705S, M-629, S-633 and M-136 so that the labels on the containers or waste rocket motor ~~may be readily inspected and hazardous waste labels~~ are visible.
- III.E.6. The Permittee may stack 55-gallon drums at a maximum of two high at storage areas M-186 and E-501.
- III.E.7. Hazardous waste containers shall not be stacked at storage areas M-705S, M-629, S-633 and M-136 except as described in Attachment 9-2.3.
- III.E.8. The Permittee shall unload any transport vehicle hauling containers of hazardous waste for storage within 10 days following arrival at the site. Arrival for purposes of this permit shall be the day the vehicle arrives at the facility.
- III.E.9. The Permittee shall provide storage for and maintain on-site, an 85 gallon over-pack drums at areas where liquid hazardous waste is stored.

III.F. CONTAINMENT SYSTEMS

- III.F.1. The Permittee shall maintain the containment systems in accordance with the attached plans and specifications contained in Attachment 9 and as specified in ~~UAC R315-8-9.6R315-264-175.~~
- III.F.2. The Permittee shall inspect the Container container management areas ~~shall be inspected~~ for the presence of free liquids in accordance with Attachment 2. If free liquids are discovered in the sumps or other containment areas, the Permittee shall identify the location in the inspection log. Any liquids discovered shall be removed immediately, but in no case later than twenty-four hours after the liquid is discovered

and managed according to the spill contingency plan specified in Section 9-4.3 of Attachment 9.

III.F.3. For purposes of inspections, all containers stored in the liquid hazardous waste storage area shall be considered full to their respective capacities with liquid hazardous waste. Gondolas/roll-offs that are used only for the storage of solid hazardous waste need not be considered in the calculations for containment. The area for storing solid waste shall be identified.

III.F.4. Some of the containers stored at M-136 contain small amounts of desensitizing fluid (e.g. diesel, shingle oil, etc.). The containment requirements, as specified in Attachment 9, apply to the storage of wastes in the burn trays. Inspection of the burn trays shall be conducted in accordance with Attachment 2.

III.G. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE

III.G.1. The Permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility boundary in accordance with R315-264-176, unless a written approval is obtained from the authority having jurisdiction over the local fire code, as allowed under R315-262-17.

III.G.2. If written approval is obtained to allow containers holding ignitable or reactive waste to be located within 50 feet of the facility boundary, in accordance with R315-264-176, the Permittee shall document it in the operating record and notify the Director.

III.G.23. The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste and follow the procedures specified in Attachment 8, ~~UAC R315-8-2.8~~R315-264-17 and ~~UAC R315-8-9.7.~~

III.H. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTE

III.H.1. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same container, in accordance with ~~UAC R315-8-2.8 and UAC R315-8-9.8(a)~~R315-264-177(a).

III.H.2. The Permittee shall not place hazardous waste or materials in an unwashed container that previously held an incompatible waste or material in accordance with ~~UAC R315-8-2.8 and UAC R315-8-9.8(b)~~R315-264-177(b).

III.H.3. A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby shall be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

III.I. IDENTIFICATION AND LOCATION OF CONTAINERS IN OPERATING RECORD

III.I.1. The Permittee shall record in the Operating Record the date and location of each container of hazardous waste accepted in any Permitted container storage area and the date the container is transferred or treated from the storage area for treatment or disposal.

III.J. INSPECTION SCHEDULES AND PROCEDURES

III.J.1. The Permittee shall inspect the hazardous waste storage and treatment facilities identified in Condition III.B. of this Permit as specified in the Inspection Schedules contained in Attachment 2. The purpose of these inspections shall be to detect leaking containers, standing liquids, deterioration of containers, and to detect deterioration of, or liquids in, the secondary containment system caused by corrosion and other factors as specified in ~~R315-8-9.5~~R315-264-174.

III.J.2. If problems are observed during the inspections, the Permittee shall correct the problem in accordance with Module II, Section F.

III.K. CLOSURE/POST-CLOSURE

III.K.1. The Permittee shall close the permitted hazardous waste storage areas in accordance with ~~UAC R315-8-7~~R315-264-110, ~~UAC R315-8-9.9~~R315-264-178, Condition II.O. and Attachment 5 of this Permit.

III.K.2. ~~Closure plans for each individual hazardous waste management area shall be submitted to the Director for approval no less than 180 days prior to the commencement of closure activities. No closure activities shall take place that have not received prior approval from the Director.~~

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~~R315-264 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 ~~a~~Attachments.
- IV.A.4. This Permit has been developed in accordance with the applicable requirements of ~~UAC R315-1 through 10~~Title R315 of the Utah Administrative Code. All conditions in this Permit shall supersede conflicting statements, requirements, or procedures found in ~~UAC R315-1 through 10~~Title R315 of the Utah Administrative Code or ~~the a~~Attachments to this Permit.

IV.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

- IV.B.1. The Permittee may treat energetic or reactive hazardous waste by open burning at the M-136 and M-225 Thermal Treatment Areas; at the two Promontory Thermal Treatment Areas by open burning and detonation. open detonation at M-136, stations 13 and 14 and open detonation at M-225, station 1. 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 by or owned by at the Promontory, Bacchus, ~~and~~ other ATK facilities as well as Autoliv ASP, DOD, NASA or other U.S. -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~~R315-261-32 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~~R315-261 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~~R315-124-5 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), in the M-136 Thermal Treatment Area more than a total combined amount of 122,000 pounds of reactive hazardous waste in a calendar day, under treatment scenario M-136-A as outlined in Table 1 of Attachment 11;
 - IV.C.1.b. The Permittee shall not treat by OB in the M-136 Thermal Treatment Area 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 as outlined in Table 1 of Attachment 11;

- IV.C.1.c. The Permittee shall not treat by OB in the M-136 Thermal Treatment Area more than 10,000 pounds total of reactive hazardous waste in a calendar day at burn station 13 under treatment scenario M-136-A as outlined in Table 1 of Attachment 11;
- IV.C.1.d. The Permittee shall not treat by OB in the M-136 Thermal Treatment Area more than 16,000 pounds total of reactive hazardous waste in a calendar day, at burn station 14 under treatment scenario M-136-A as outlined in Table 1 of Attachment 11;
- IV.C.1.e. The Permittee shall not treat by OB in the M-136 Thermal Treatment Area, more than 125,000 pounds total of reactive hazardous waste in a calendar day at burn station 14 under treatment scenario M-136-B as outlined in Table 1 of Attachment 11; and
- IV.C.1.f. The Permittee shall not treat by OD in the M-136 Thermal Treatment Area more than 600 pounds total of reactive hazardous waste in a calendar day at each burn station, 13 and 14 as outlined in Table 1 of Attachment 11.
- IV.C.2. In any one calendar day, The the Permittee shall not operate more than one treatment scenario, M-136-A, M-136-B, or M-136-C, in the M-136 Thermal Treatment Area in a calendar day.
- IV.C.3. When operating The the M-136 Thermal Treatment Area, the Permittee shall maintain the minimum safe “quantity-distance” spaces as specified in Attachment 11, Section 5. 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. Donor materials 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), in the M-225 Thermal Treatment Area more than 4,500 pounds of reactive hazardous waste per calendar day under treatment scenario M-225-A as outlined in Table 1 of Attachment 11;
- IV.C.5.b. The Permittee shall not treat by OB in the M-225 Thermal Treatment Area 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 as outlined in Table 1 of Attachment 11; and
- IV.C.5.c. The Permittee shall not treat, by open detonation (OD), in the M-225 Thermal Treatment Area more than 600 pounds of reactive hazardous waste in a calendar day under treatment scenario M-225-B as outlined in Table 1 of Attachment 11.
- 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. ~~When operating the M-225 Thermal Treatment Area, the Permittee shall maintain the minimum safe “quantity-distance” spaces as specified in Attachment 11, Section 5. 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~~ Donor material 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~~ R315-264-601 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 Quantity Distance restricted area (QD) as defined in Section 11.5 of Attachment 11, 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 ~~F~~ 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 functional radio or 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 [Attachement](#) 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~~[R315-264-601](#).
- 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 1.0×10^{-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 1.0×10^{-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 [unless Permit Condition IV.C.13. applies](#);
- 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 [unless Permit Condition IV.C.13.a. applies](#); and
- IV.C.12.d. The Permittee may conduct burns and open detonations only when the Clearing Index (CI) is greater than 500 [unless Permit condition IV.C.13. applies](#).

IV.C.13. The Permittee may treat Class 1.1, Class 1.3 and Class 1.3 flare wastes that are time-sensitive reactive wastes, as defined by I.A.17., by open burning at M-136, Station 13, when the Clearing Index is less than 500 in accordance with the following scenarios:

IV.C.13.a. Scenario 1: 1,000 pounds or less with a maximum wind speed of 15 mph;

IV.C.13.b. Scenario 2: 1,500 pounds or less with a maximum wind speed of 15 mph and a minimum wind speed of 3 mph.

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, M-136 or M-225, for thermal treatment, ~~t~~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 the Permittee verified that either radio or telephone communication with emergency services is available and will be in effect throughout the duration of the treatment;

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 located in Promontory Thermal Treatment Areas, M-136 or M-225, 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. The Permittee shall provide ~~There shall be~~ at least two trained 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 Permittee shall load 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. The Permittee shall ~~weigh account for a~~ All cardboard, wood and diesel used as donor material to assure a complete burn. The donor material ~~-~~ shall be counted towards the daily treatment limits, and recorded in the operating record; and
- 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~~ identify in the operating record the burn station used 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. The Permittee shall ensure all non-essential personnel leave the treatment area prior to preparing the ~~Reactive-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~~R315-264-73 and shall be entered into the operating record for the Promontory ~~F~~facility in accordance with attachment 11.6.

IV.G. POST-BURN ACTIIVTIES

- IV.G.1. Following treatment, the Permittee ~~shall~~shall: (a) conduct the post-burn inspection activities identified in Attachment 2 of this Permit, and (b) conduct clean-up activities identified in Attachment 11 of this Permit. ~~and shall (c) comply with Conditions IV.C.1, 5 and 9, and (d) shall have completed and complied with all provisions of Conditions, IV.E and F.~~
- IV.G.2. The Permittee shall conduct a post-burn inspection, including the tasks specified below, ~~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.i. or 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 in the Operating Record any treatment unit with an open flame, hot spot or smoldering residue;
- IV.G.2.c. Document in the Operating Record any treatment unit with unburned residue;
- IV. G.2.d. Document in the Operating Record 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. Clean the treatment units in accordance with Attachment 11 and Record-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 on the inspection form where any unburned waste is being stored;
- IV.G.2.h. ~~Evaluate-Inspect~~ 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~~R315-262.
- IV.G.4. Except as as allowed in Conditions IV.G.2.i. or IV.G.2.j., the Permittee's area supervisor, or designee, shall review the Promontory Thermal Treatment Areas log and post-burn inspection forms within 24 hours of completing each 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. The Permittee shall document the review and need for any corrective action in the Operating Record.
- IV.G.5. If meteorological conditions exist, as identified post burn requirements are postponed, as allowed in Conditions IV.G.2.j. or 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.~~35~~.a. The reason for the delay in ~~doing performing~~ the post-burn ~~clean up~~requirements specified in Condition IV.G.2.; and

IV.G.~~35~~.b. The date when the Permittee cleaned the treatment unit ~~was cleaned and completed the post-burn requirements specific in Condition IV.G.2. ; 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.46. 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.46.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~~R315-262;

IV.G.46.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~~R315-262. For operations at M-225, 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~~R315-270-61~~; This requirement is not applicable to operations at M-136.

IV.G.46.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. For operations at M-225, 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~~R315-270-61~~; This requirement is not applicable to operations at M-136.~~and~~

IV.G.46.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~~R315-262.

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~~R315-262.

IV.H.2. The Permittee shall maintain run-on diversion structures in accordance with this Permit and ~~UAC R315-8-16~~R315-264-601 ~~which incorporates by reference 40 CFR 264.601~~. The Permittee shall inspect the condition of those structures annually to ~~assure~~ ensure that they are in good repair. The annual inspection shall be documented in the ~~operating~~ 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~~R315-264-601, ~~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.64.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 Attachments 1 and 11 of this Permit.

IV.J. INSPECTION SCHEDULES AND PROCEDURES

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

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.K.1. The Permittee has completed a Human Health Risk Assessment based on the results of emissions sampling and air dispersion modeling. The primary, Director approved documents that were completed in the risk assessment process are listed in Section II.G. of this Permit.
- IV.K.2. The Permittee shall conduct soil monitoring in accordance with the Soil Monitoring Plan (referenced in Condition II.G.1.h.), in order to further assess the risk to human health from thermal treatment operations at the Promontory facility. ~~The results of the soil monitoring will be compared to the maximum off-site concentrations predicted by the air dispersion model, EPA Regional Screening Levels and background soil concentrations.~~
- IV.K.3. The Permittee shall complete the initial sampling event, as directed by the Soil Monitoring Plan, and submit a written report to the Director for approval on the soil monitoring results no later than January 31, 2019.
- IV.K.4. The Soil Monitoring Report shall contain: (a) -the validated analytical data, (b) a soil sampling location map, (c) a detailed analysis of the data ~~as described in Condition IV.K.2. and the Soil Monitoring Plan, including a comparison of the results of the soil monitoring with the maximum off-site concentrations predicted by the air dispersion model, EPA Regional Screening Levels and background soil concentrations, }and~~ (d) a recommendation on the need for additional monitoring.
- IV.K.5. The Director may require the Permittee to conduct additional soil monitoring based on the results of the Soil Monitoring Report.
- IV.K.6. The Permittee shall submit a Soil Monitoring Plan addendum in writing to the Director for approval within 90 days of being notified by the Director in writing that a Soil Monitoring Plan addendum is required.

- IV.K.7. The Permittee shall conduct groundwater monitoring in accordance with Module IV of the Permittee's Post-Closure Permit.
- IV.K.8. The Permittee shall evaluate the potential impacts to groundwater from thermal treatment operations at the M-136 Burn Grounds in accordance with the Groundwater Monitoring Plan as approved by the Director on May 21, 2018.
- IV.K.9. Based on the results of the evaluation required by Condition IV.K.8., the Director may require the Permittee to submit a plan in writing to the Director for approval to mitigate impacts to groundwater from thermal treatment operations.
- IV.K.10. The Permittee shall submit a Groundwater Monitoring Plan addendum in writing to the Director for approval within 90 days of being notified by the Director in writing that additional work is required to demonstrate that thermal treatment operations at the Promontory facility do not impact groundwater.

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.
- The need to conduct an Ecological Risk Assessment (ERA) has been evaluated and a waiver was granted by UDWMRC. The ERA waiver was justified because, the ecological receptors will not be affected by the treatment operations, Volatile Organic Compounds (VOCs) do not accumulate in the ecological system, modeled soil concentrations for metals, semi-volatile organic compounds (SVOCs) and other contaminants are below background levels, below measurable existing laboratory methods and several orders of magnitude below available environmental screening levels. Impacts of the thermal treatment unit operations will be evaluated using the soil monitoring plan.
- 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.L.1. The Permittee requested a waiver from the Director for assessing the ecological risk associated with thermal treatment operations at the Promontory facility on December 19, 2016.~~

~~IV.L.12. Based on the justifications presented by the Permittee, on December 19, 2016, in support of its request to waive the ecological risk assessment for the Promontory Thermal Treatment area the waiver application (referenced in Condition II.G.1.f.), the Director approved the waiver request on August 29, 2017.~~

IV.M HUMAN HEALTH RISK

IV.M.1. The Human Health Risk was evaluated as identified in Condition II.G.1. ~~The Permittee shall annually evaluate Emission~~ 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 ~~Condition I.D.4. and UAC R315-4-1.5~~ R315-124-5.

IV.O. CLOSURE AND POST CLOSURE

IV.O.1. The Permittee shall close the Promontory Thermal Treatment Areas in accordance with ~~R315-264-110, R315-264-178, Condition II.O., and Attachment 5 of this Permit, R315-264-110 and R315-264-178, the Closure Plan in Attachment 5.~~

IV.P. PROMONTORY THERMAL TREATMENT AREAS OPERATING RECORD

IV.P.1. The Permittee shall maintain an ~~operating~~ 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~~ R315-264-73;

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.

MODULE V – TREATMENT OF WASTE HYDRAZINE

V.A. APPLICABILITY

- V.A.1. The Permittee may treat hydrazine, EPA hazardous waste code U133, by dilution, at Building T-29B, for the sole purpose of safely shipping the resultant waste to an off-site disposal facility in accordance with this Module and Attachment 10 of this Permit.
- V.A.2. The treatment process shall be conducted in a manner that will ensure protection of human health and the environment.
- V.A.3. Once the hydrazine is determined to be a hazardous waste it will be managed in accordance with Attachment 10 ~~and 40 CFR 262.34 and R315-262~~ until it is shipped to an approved ~~hazardous waste management facility~~ Treatment, Storage and Disposal Facility (TSDF) for disposal or transferred to the M-186 Hazardous Waste Storage Facility.
- V.A.4. The Permittee shall comply with the requirements specified in the ~~F~~facility Contingency Plan (Attachment 4), when there has been a release at Building T-29B that threatens human health or the environment.
- V.A.5. The Permittee shall take precautions to prevent accidental ignition or reaction of the waste hydrazine and follow the procedures specified in ~~UAC R315-8-2.8~~ R315-264-17.
- V.A.6. The Permittee shall inspect Building T-29B in accordance with the inspection schedule contained in Attachment 2 of this Permit.

V.B. RECORD KEEPING AND REPORTING

- V.B.1. The Permittee shall record in the ~~operating~~ Operating Record the following:
- V.B.1.a. The date that waste hydrazine is received at T-29B;
- V.B.1.b. The quantity of waste hydrazine received;
- V.B.1.c. The date the waste hydrazine is treated by the dilution process;
- V.B.1.d. The quantity of diluted hydrazine after the dilution process is complete; and
- V.B.1.e. The date the diluted hydrazine is shipped off-site or to the M-186 storage facility.

V.C. **CLOSURE**

V.C.1. The Permittee shall close Building T-29B in accordance with ~~R315-8-7R315-264-110, -R315-8-9-9R315-264-178~~, Permit Condition II.O. and ~~the designated Closure Plan in~~ Attachment 5 of this Permit.

MODULE VI– OXIDIZER LEACHING TREATMENT OF ENERGETIC WASTE

VI.A. APPLICABILITY

VI.A.1. The requirements of this permit module apply to the treatment of reactive and ignitable hazardous waste, EPA hazardous waste codes D001 and D003, by oxidizer leaching at the ATK Launch Systems – Promontory facility, Box Elder County, Utah. The Permittee shall comply with R315-264 and all conditions of this Module and Permit.

VI.A.2. The Permit conditions of this module allow treatment at the Hazardous Waste Management Unit, designated as the M-705~~XL~~ oxidizer leaching process, as designed and described in the drawings and specifications in Attachments 6 and 12. The M-705~~XL~~ oxidizer leaching process consists of a 600 gallon leach tank and ancillary equipment and piping.

VI.A.3. All items or articles containing oxidizers, plastic or metals that ~~is~~ are reclaimed from the oxidizer leaching process that can recycled or be reused as an ingredient or product is not subject to the terms of Module VI.

VI.A.4. This Permit has been developed in accordance with the applicable requirements of Title R315 of the Utah Administrative Code. All conditions in this Permit shall supersede conflicting statements, requirements, or procedures found in Title R315 of the Utah Administrative Code or the Attachments to this Permit.

VI.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

VI.B.1. The Permittee may treat ignitable and reactive hazardous waste, EPA hazardous waste codes D001 and D003 at Building M705~~XL~~ by oxidizer leaching. The reactive or ignitable hazardous waste is generated from the following sources:

VI.B.1.a. Production materials generated at the ATK Promontory facility that are contaminated with reactive or ignitable residues (e.g., flare grain formers, gloves, other personal protective equipment, plastics, rubber and paper that were contaminated with reactive materials during the manufacturing process).

VI.B.2. Only reactive or ignitable hazardous waste as defined by R315-261 may be treated in the M-705~~XL~~ oxidizer leaching tank.

VI.B.3. The Permittee is prohibited from treating reactive or ignitable hazardous waste classes and compositions in the M-705~~XL~~ oxidizer leaching tank that are not included in Conditions IV.B.1. and IV.B.2.

- VI.B.4. The Permittee is prohibited from treating any reactive or ignitable hazardous waste by oxidizer leaching that does not have a designated waste profile.
- VI.B.5. The addition of hazardous waste codes to Conditions IV.B.1. and IV.B.1.a. requires modification of the permit as specified in R315-124-5 and Condition I.D.
- VI.B.6. The Permittee shall comply with the waste compatibility requirements of Condition II.I.

VI.C. GENERAL OPERATING CONDITIONS

- VI.C.1. The Permittee shall use appropriate controls and practices to maintain the integrity of the M-705~~XL~~ tank system and to prevent spills and overflows in accordance with the standards of R315-264-194.
- VI.C.2. In order to minimize the potential impacts to human health and the environment, the Permittee shall adhere to applicable provisions of Attachments 2 and 12 and the following Conditions:
- VI.C.2.a. Reactive and ignitable hazardous waste shall be managed in accordance with Attachment 12 and R315-262 until such time it is determined that it no longer exhibits the reactivity or ignitability characteristic ~~or is hazardous for toxicity or a listed hazardous waste.~~
- VI.C.2.b. The Permittee shall comply with the Waste Analysis Plan and operating parameters outlined in Attachment 1, Section 3.3.3 and Attachment 12, Section 12-3 to develop specific Waste Profiles and to determine when the reactive hazardous waste being treated is no longer hazardous.
- VI.C.2.c. The Permittee shall comply with the requirements specified in the facility Contingency Plan (Attachment 4), when there has been a release at Building M-705~~XL~~ that threatens human health or the environment.
- VI.C.2.d. The Permittee shall take precautions to prevent accidental ignition or reaction of the reactive ~~or ignitable~~ hazardous waste and comply with the procedures specified in R315-264-17.
- VI.C.2.e. Treatment of reactive hazardous waste by the oxidizer leaching process at M-705~~XL~~ shall only be accomplished by properly trained ATK personnel in accordance with the ATK Waste Profile #, the conditions of this Permit and its Attachments;
- VI.C.2.f. The Permittee shall post warning signs outside of the M-705~~XL~~ oxidizer leaching building to keep unauthorized personnel out;

- | VI.C.2.g. The Permittee shall maintain the egress paths for the M-705~~XL~~ oxidizer leaching building as identified in Attachment 4;
- | VI.C.2.h. The Permittee shall train all operators of the M-705~~XL~~ oxidizer leaching process in accordance with Condition II.H. and Attachment 3 of this Permit;
- | VI.C.2.i. The Permittee shall maintain the integrity of the M-705~~XL~~ tank system and ancillary equipment through regular inspections and in accordance with the inspection schedule contained in Attachment 2 of this Permit. Inspection records shall be maintained at the facility;
- | VI.C.2.j. The Permittee shall not operate the M-705~~XL~~ oxidizer leaching process without secondary containment as required by R315-264-193 ~~with the exception of the leak detection system requirements outlined in R315-264-193(c)(3); and~~
- | VI.C.2.k. ~~If the electronic leak detection system is not operational, the Permittee~~In lieu of a leak detection system, the Permittee shall conduct visual inspections of the secondary containment structure every day that the M-705~~XL~~ tank system contains hazardous waste.
- | VI.C.3. Once the Permittee has determined that the oxidizer leaching treatment process is complete for a batch of contaminated production materials or class 1.3 propellants or explosives, in accordance with Sections 12-2 and 12-3 of Attachment 12, the wastewater shall be pumped to the wastewater treatment plant where it is treated and discharged in accordance with the Permittee's current UPDES Permit #UT0024805.

| **VI.D. RECORD KEEPING AND REPORTING**

- | VI.D.1. The Permittee shall record in the Operating Record the following:
 - | VI.D.1.a. The date a batch of contaminated production materials or class 1.3 propellant or explosive is placed in the M-705~~XL~~ treatment tank;
 - | VI.D.1.b. The quantity and description of contaminated production materials or class 1.3 propellant or explosive, including the Waste Profile #, placed in the treatment tank;
 - | VI.D.1.c. The laboratory testing results associated with each Waste Profile #;
 - | VI.D.1.d. The date the treatment process for each batch of contaminated production materials or class 1.3 propellant or explosive is no longer reactive or ignitable in accordance with the Waste Profile #;

VI.D.1.e. The date the wastewater is pumped out of the tank to the wastewater treatment plant; and

VI.D.1.f. The waste determination of the treated production materials and any residue and the date they are removed from the tank.

| **VI.E. CLOSURE**

| VI.E.1. The Permittee shall close the Building M-705~~XL~~ oxidizer leaching treatment process in accordance with R315-264-110, R315-264-178, Permit Condition II.O. and the designated Closure Plan in Attachment 5 of this Permit.

Attachment 1

WASTE ANALYSIS PLAN

1.0 WASTE ANALYSIS PLAN

1.1 INTRODUCTION

This Waste Analysis Plan (WAP) is used to ensure that all reactive and ignitable waste will be properly characterized prior to being stored and/or treated. The WAP also outlines how chemical wastes that are being stored prior to shipment to an offsite disposal facility will be characterized. Information on these waste chemicals is obtained from process knowledge, SDSs, and chemical analysis.~~was prepared to support the Part B permit re-issuance for the ATK Promontory facility (ATK).~~

The ~~plan~~ WAP is intended to provide guidance and assistance in sampling and testing of the two general categories of hazardous waste ~~at for the ATK Promontory facility (ATK).~~ These two ~~groups~~ hazardous waste categories include "reactive and ignitable waste", and "chemical waste". The term "reactive waste" consists of propellant and explosive waste, as defined in ~~R315-2-9(f)~~R315-261-23. The term "ignitable waste" consists of propellant/explosive oxidizer containing waste, as defined in R315-261-21(4). The term "chemical waste" is the term used to describe all non-reactive RCRA hazardous waste, or unknown potential RCRA hazardous waste. This category could include drummed waste, lab packs, bulk wastes, waste from offsite ATK facilities, etc. The plan outlines a process for making a hazardous waste determination for both of these general waste categories. This plan will be on file with the Environmental Services and Operations group.

~~The WAP was developed to ensure that all reactive waste will be properly characterized prior to being stored and/or treated. The WAP also outlines how chemical wastes that are being stored prior to shipment to an offsite disposal facility will be characterized. Information on these waste chemicals is obtained from process knowledge, MSDSs/SDSs, and chemical analysis.~~

1.1.1 Site History

ATK-Promontory (ATK) has been manufacturing explosives at this site for over 50 years. The facility manufactures rocket motors, military flares and related items.

1.2 WASTE ACCEPTANCE PROTOCOL

1.2.1 Acceptance of On-Site Reactive Waste for Storage and Treatment

All reactive wastes must be characterized before they can be accepted for storage or treatment. The characterization will be accomplished through a profiling process which will identify the type of reactive waste as defined in ~~R315-2-9(f)~~R315-261-23 and determine whether the waste exhibits any additional hazardous waste characteristics, and if it is listed in accordance with ~~R315-2-9~~R315-261-20 and ~~40 UACR~~R315-261-30. The reactive waste profile is completed through process/generator knowledge, ~~MSDS-SDS~~ and testing, if needed. These profiles must be completed and approved before any waste is accepted at the burn grounds. Each profile includes the following information:

- Reactive material family name and general formulation type
- Chemical composition with percentage ranges
- US DOT hazard classification or suspected classification for developmental materials
- EPA codes
- Physical characteristics

- Underlying hazardous constituents (if any)
- Reactive waste category as defined in Figure 3-5
- Packaging type and other applicable information

The profile approval process includes approval by the Generator, Safety and Environmental Services.

Any new propellants or other reactive wastes will be characterized as described above before they are accepted for storage or treatment. Any waste that does not fit an existing profile, must be profiled before the waste can be accepted. In the event that a reactive waste cannot be properly characterized with existing information, additional information will be obtained, which may include laboratory analysis.

Laboratory wastes can be characterized using generator knowledge. Upon receipt of the reactive waste at permitted storage facilities, all containers are inspected to verify proper labeling, and packaging. The total quantity and type of propellant is then recorded in the facility operating record.

1.2.2 Acceptance of Hazardous Chemical Waste for Storage and Offsite Disposal

Hazardous chemical waste generated at the facility, and other ATK facilities are accepted for storage at M-186, M-705S and E-501. Upon receipt of all hazardous waste at these facilities, all containers are visually inspected to verify proper labeling, packaging and paper work. Upon acceptance, a unique container number is recorded in the chemical waste tracking system.

All wastes received from an off-site source have been characterized in advance, and are assigned a container number at the time of delivery. These shipments are visually inspected to verify that the type and quantity of the waste matches the profile and manifest. The manifest numbers for off-site generated hazardous waste are entered into the chemical waste tracking system upon acceptance.

Most waste generated on-site is characterized through generator/process knowledge before arrival at the permitted facility. However, some waste may be received at the TSDF without characterization. When this occurs, sampling and testing of the waste stream is conducted to properly characterize the waste.

Whenever a waste is accepted, all of the pertinent information on the waste is entered into the operating record. This information shall, at a minimum, include the waste profile description, EPA codes, quantity, date of generation, date received, storage location and date it was shipped off site for disposal. The chemical waste tracking system will also include the manifest number(s) for all hazardous waste received from an off-site source and all off-site shipments of hazardous waste to a TSDF. At a minimum the following resources are used to help characterize chemical waste:

- ~~R315-2~~ R315-261 of the UAC
- Generator process knowledge
- MSD SDS
- Laboratory analysis
- National Institute for Occupational Safety and Health: Pocket Guide to Chemical Hazards

1.2.3 Acceptance of Off-site Generated Reactive Waste

ATK periodically receives reactive waste from off-site ATK Launch Systems and non-ATK Launch Systems facilities. This waste is accepted by ATK for storage prior to on-site treatment at the M-136 burn grounds. All off-site generated wastes must be approved in advance through a waste acceptance and profiling process. The waste profile for wastes received from off-site contains the same information as profiles for wastes generated on-site (described above).

Before the waste is accepted, ATK reviews the shipping papers and visually inspects the container(s) to confirm that container(s) and shipping papers agree and that the waste description meets the previously approved waste profile. Discrepancies will be resolved with the generator before the waste is accepted. After the waste has been visually inspected and accepted by ATK, it will be entered into the reactive waste tracking system. Buildings/areas authorized to store reactive waste, and quantity limits are specified in Module III.

3.3 TESTING CRITERIA

3.3.1 Parameters and Rationale for Testing Reactive Wastes

Reactive waste may carry several waste codes, but will always carry a D003 waste code for reactivity and such wastes are generally classified as explosives. Due to the inherent hazardous nature of reactive wastes, this material is not routinely sampled or analyzed as part of this WAP. In addition to classifying and characterizing the reactive waste managed at the ATK facility, in accordance with ~~R315-2R315-261-of the UAC~~, ATK will assess emission hazards associated with the open burning of these hazardous wastes as required in ~~40 CFR 264.601~~~~R315-264-601~~, Environmental Performance Standards. Figure 3-2 the Reactive Waste Treatment and Disposal Decision Matrix, diagrams the steps and decisions that are addressed whenever reactive wastes are treated and subsequently disposed.

3.3.2 Parameters and Rationale for Testing Chemical Waste

ATK generates two general categories of solid waste that can be defined as hazardous in accordance with ~~R315-2R315-261-of the UAC~~: 1) off-specification commercial chemical products, and 2) spent materials. These wastes may be disposed of individually or consolidated with other hazardous waste streams. Figure 3-3 the Chemical Waste Characterization and Disposal Decision Matrix, identifies how ATK will decide whether a waste is hazardous as defined by ~~R315-2R315-261-of the UAC~~.

Off-specification commercial chemical products are chemicals that have not been altered from their original manufactured formulation but are discarded for some reason. The most common reason for discarding these chemicals is because they are no longer needed or the shelf life has been exceeded. Under this scenario, generator knowledge can be used to characterize these wastes. Detailed information on commercial chemical products is available on the ~~MSDSs~~SDSs.

A spent material is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without being processed or reclaimed. ATK has process knowledge for most of its spent material waste streams. Annual evaluation will be performed to verify chemical composition and concentration ranges. All new or modified spent material waste streams will be initially assessed at the point of generation and annually thereafter to maintain proper characterization of all waste streams.

3.3.3 Parameters and Rationale for Testing Treated Leached Oxidizer Waste

ATK operates a simple leaching process to remove the oxidizer from 1.3 propellants/explosives and contaminated production materials in place of open burning. ATK may evaluate some reactive and/or ignitable waste streams for potential oxidizer leaching removal. Prior to creating a Waste Profile for each waste stream treated by the oxidizer leaching process, a Waste Analysis Plan for these types of waste streams will be developed by 1) evaluating waste composition, physical state and size, and other characteristics. 2) Conduct “bench top” testing in a laboratory type process evaluating treatment feasibility, including the ideal leaching time needed, the ideal leaching temperature, and an evaluation to determine if air agitation is necessary to complete the leaching process. 3) This is then followed by analytical laboratory testing to confirm the amount of oxidizer removed and that the material is inert.

3.4 TEST METHODS AND SAMPLING

3.4.1 Test Method [~~40 CFR 264.13(b)~~(2)R315-264-13 (b)(2)]

ATK will make a hazardous waste determination for all waste streams generated, stored or treated onsite. This waste stream evaluation will be made utilizing process knowledge and/or analytical testing. All analytical testing will be completed at a Utah certified laboratory. Only EPA approved test methods, selected from the most current version of SW-846 list ("Test Methods for Evaluating Solid Waste, Physical and Chemical Methods"), will be used. Test method selection will be made, based on the most applicable method as described in Chapter Two of the SW-846 publication. New test methods will be used only after they have been approved by the EPA. The laboratory will certify new methods during the annual certification process. Specific methods which may be used to characterize wastes are listed in Figure 3-4.

3.4.2 Sampling Methods [~~40 CFR 264.13~~R315-264-13(b)(3), ~~261 Appendix I~~R315-261-1090 and ~~UAC R315-8-2.4~~R315-264-13]

Waste sampled at the ATK facility consists of new waste, unknown waste, waste from changed processes, and waste sampled for annual re-verification analysis. Representative samples will be collected and handled in accordance with the procedures and protocols identified in Table 3-1. At a minimum the following safety precautions are used when sampling waste materials:

- Chemical resistant gloves and safety glasses will be used while sampling all waste. Based on the chemical hazards and splash potential, protective clothing and a splash shield or respirator may also be utilized.
- Non-sparking tools will be used to sample any waste that presents a fire hazard.
- All necessary equipment and materials will be available prior to sampling

Table 3-1

Waste Matrix	Container/Containment Type					
	Drums, Totes	Boxes, Bags, Sacks	Storage Tanks	Ponds, Lagoons, Pits	Tankers	Roll-Off Bins
Free Flowing Liquids/Slurries	Coliwas	N/A	Pump/Dipper	Dipper	Dipper	N/A
Sludges	Trier/Spoon	N/A	N/A	N/A	N/A	Trier/Bucket/Shovel
Moist Powder/Granules	Trier/Spoon	Trier/Spoon	N/A	N/A	N/A	Trier/Shovel
Dry Powder/Granules	Thief/Spoon	Thief/Spoon	N/A	N/A	N/A	Thief/Shovel
Sand/Packed Powder	Auger/Spoon	Auger/Spoon	N/A	N/A	N/A	Auger/Shovel
Large Grained Solids	Large Trier/Spoon	Large Trier/Spoon	N/A	N/A	N/A	Large Trier/Shovel
Debris (i.e. Rags, Gloves, Towels, etc.)	Rag ¹	Rag ¹	N/A	N/A	N/A	Rag ¹

¹ The rag technique is used for sampling solid material such as rags, gloves and paper towels. After a container has been selected, it is opened and a representative sample collected and placed in the sample container. One or more of the varied materials (e.g. gloves, tongue depressors, rags, paper, plastic, etc.) is sampled depending on the mix of the container.

A variety of sampling equipment and materials will be used to collect waste samples. All reusable equipment will be washed with a detergent solution and thoroughly rinsed before re-use. Disposable equipment may also be used. This equipment and specified sampling methods are described in the SW-846 publication.

Drummed consolidation waste will be randomly sampled each year as outlined in the table below. "Average Monthly Drum Number" will be based on the previous calendar years average monthly drum inventory, for each waste stream. Samples will be obtained during in the first quarter of each calendar year.

Table 3.1	
Average Monthly Drum Number	Aliquots Selected
2 to 8	2
9 to 27	3
28 to 64	4
65 to 125	5
126 to 216	6
217 to 343	7
344 to 512	8

The above table is based on a table found in ASTM D 140-70, "Standard Methods of Sampling Bituminous Materials," ASTM D 140-70.

All sample containers used during a sampling event will be new, and certified clean from a reliable source. Container selection will be based on the chemical/container compatibility, physical state and sample volume. A label will be attached to each sample container which will include the following minimum information:

- Sample number
- Samplers name
- Date
- Time
- Location

In addition to the information included on the label, the chain of custody, which accompanies all waste characterization samples, will also include the following:

- Composite or grab sample
- Number of containers
- Remarks section
- Relinquishment signature block

All samples will be preserved as specified in SW-846 while in storage at ATK and while in transit to the testing laboratory.

3.5 FREQUENCY OF ANALYSIS

3.5.1 Frequency of Analysis for Reactive Waste [~~40 CFR 264.13~~R315-264-13(b)(4)-and UAC R315-8-2.4]

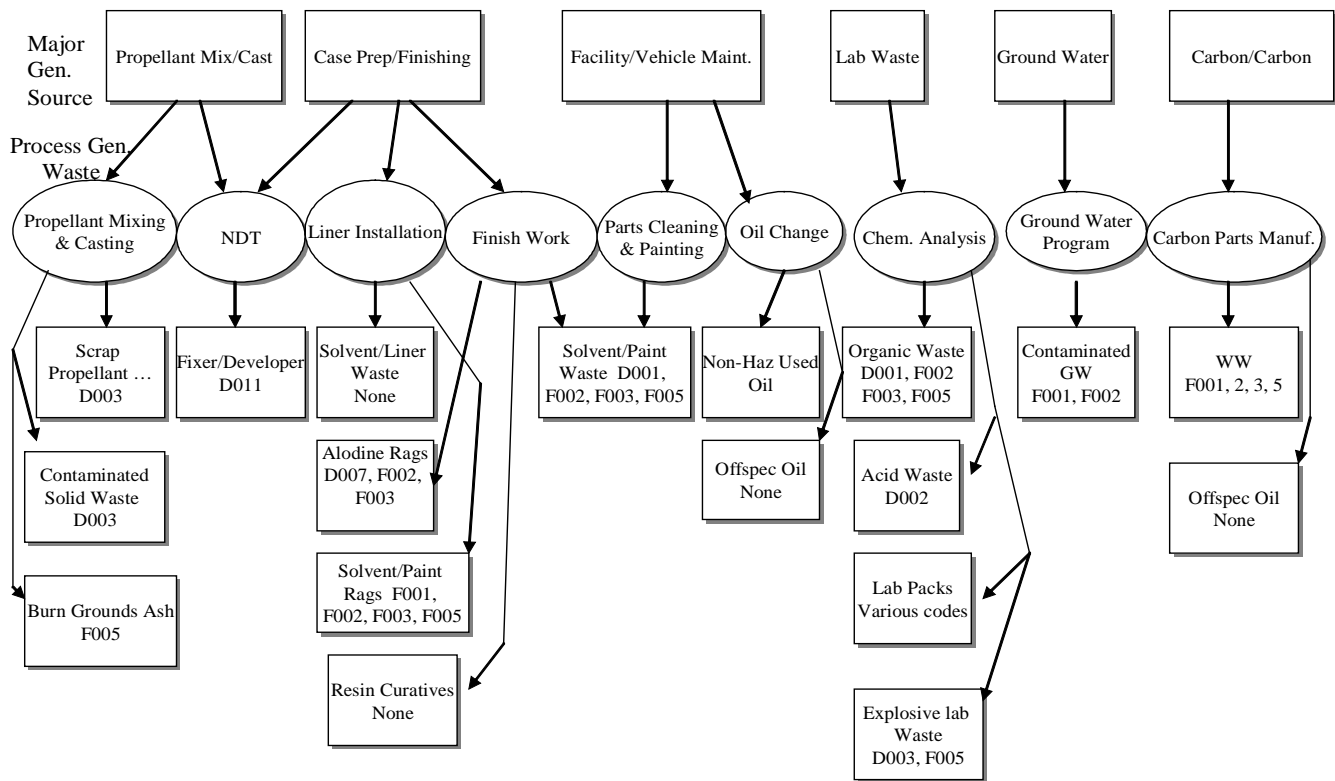
Reactive waste treated at the ATK burn grounds come from various ATK Launch Systems facilities, ~~Autoliv ASP~~ and occasionally from other Department of Defense facilities or contractors. These reactive wastes are derived from energetic materials that have been manufactured to strict specifications. Therefore, the chemical composition of each formulation is well known. As discussed above, ATK characterizes all reactive waste streams using generator knowledge. While these energetic waste streams are not analyzed prior to being treated, ATK does review the reactive waste profile on an annual basis or any time the manufacturing process changes.

3.5.2 Frequency of Analysis for Chemical Waste

The industrial processes at ATK generate a number of routine waste streams. Figure 3-1 shows major waste streams and processes generating those wastes. These waste streams will be evaluated annually to verify waste characterization is still accurate. The waste characterization will also be re-evaluated whenever the process that generated the waste changes to determine if the process change altered the characteristics of the waste stream.

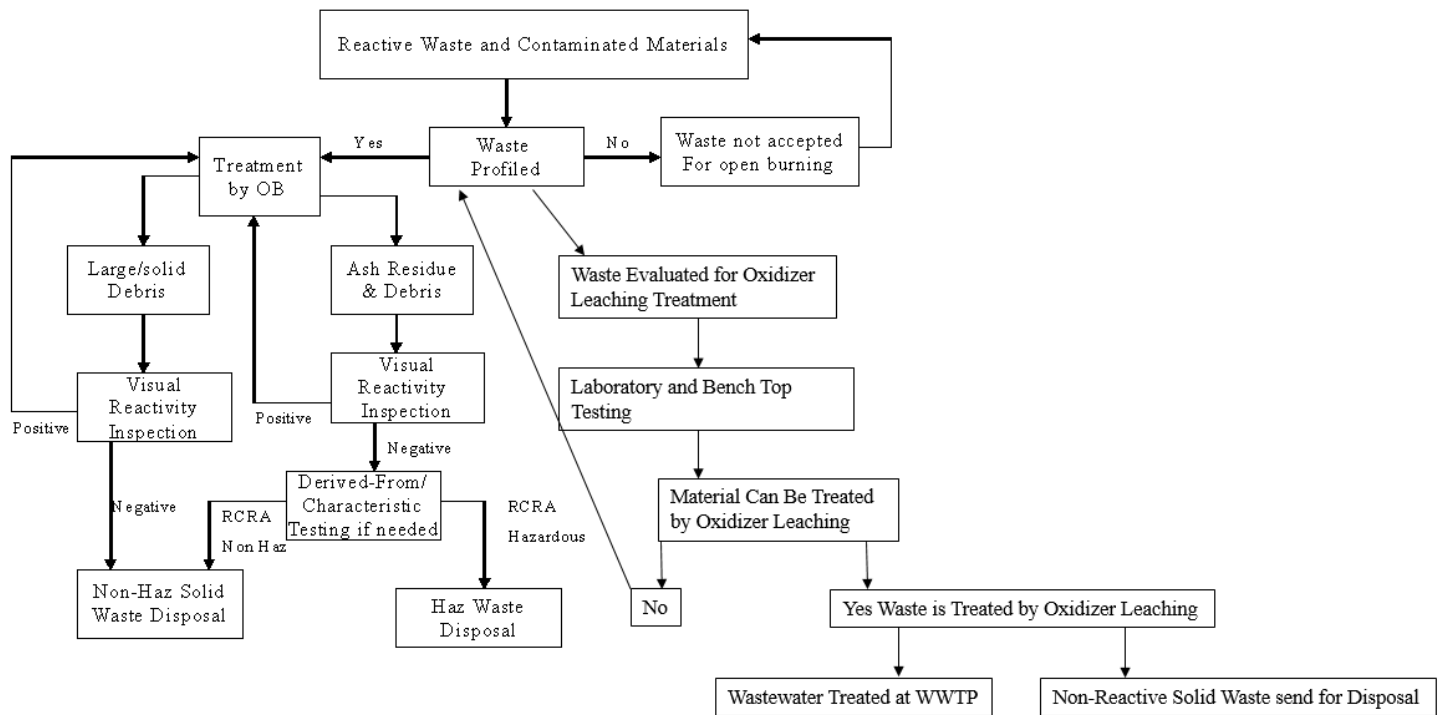
Off specification commercial chemical products are well characterized by the information on their ~~MSDSs~~SDSs. These wastes are not analyzed on a routine basis.

ATK- Promontory Waste Generation
Figure 3-1



Note: The EPA codes included above are primary codes only; The above list includes major waste streams only.

Reactive Waste Treatment and Disposal Decision Matrix
Figure 3-2



Chemical Waste Disposal Decision Matrix
Figure 3-3

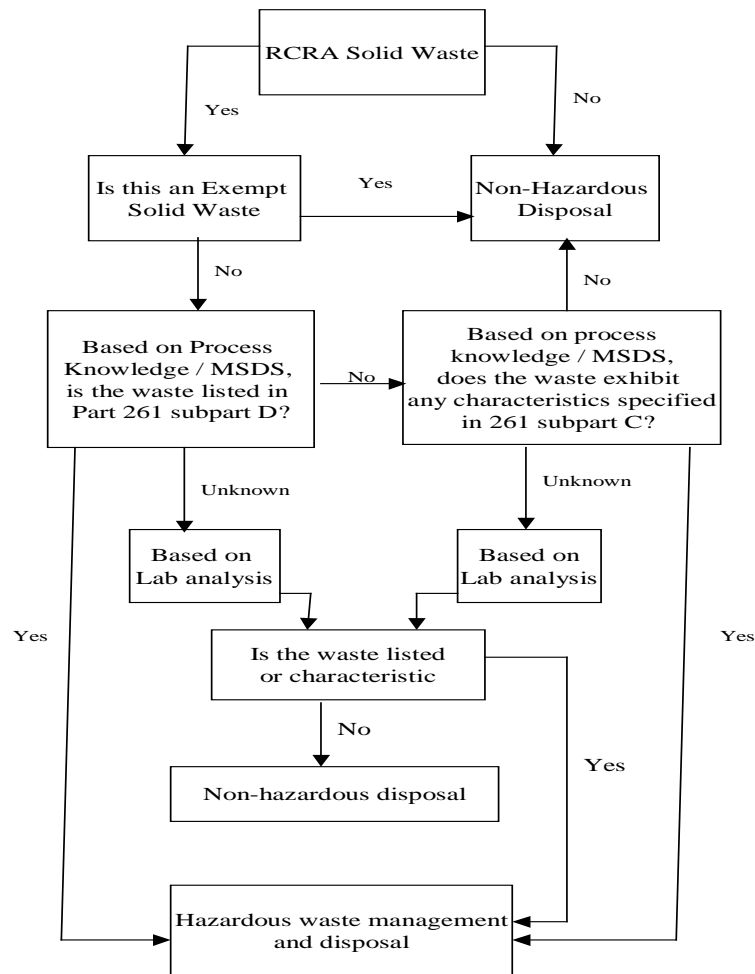


Figure 3-4

Analytical Methods for Metals

Parameter	Analytical Method¹	Preparation Method^{1,2}
Arsenic	EPA 6010C	EPA 3005A (W) & 3050B (S)
Barium	EPA 6010C	EPA 3005A (W) & 3050B (S)
Beryllium	EPA 6010C	EPA 3005A (W) & 3050B (S)
Boron	EPA 6010C	EPA 3005A (W) & 3050B (S)
Cadmium	EPA 6010C	EPA 3005A (W) & 3050B (S)
Chromium	EPA 6010C	EPA 3005A (W) & 3050B (S)
Copper	EPA 6010C	EPA 3005A (W) & 3050B (S)
Lead	EPA 6010C	EPA 3005A (W) & 3050B (S)
Manganese	EPA 6010C	EPA 3005A (W) & 3050B (S)
Mercury	EPA 7470A (W) & 7471B (S)	EPA 7470A (W) & 7471B (S)
Molybdenum	EPA 6010C	EPA 3005A (W) & 3050B (S)
Nickel	EPA 6010C	EPA 3005A (W) & 3050B (S)
Selenium	EPA 6010C	EPA 3005A (W) & 3050B (S)
Silver	EPA 6010C	EPA 3005A (W) & 3050B (S)
Thallium	EPA 6010C	EPA 3005A (W) & 3050B (S)
Vanadium	EPA 6010C	EPA 3005A (W) & 3050B (S)
Zinc	EPA 6010C	EPA 3005A (W) & 3050B (S)

Analytical Methods for Organics

Parameter	Analytical Method	Preparation Method
Volatile Organics	EPA 8260B	EPA 5030C (W) & 5035A (S)
Semivolatile Organics	EPA 8270D	EPA 3510C (W) & 3550C (S)
TPH	EPA 8015D	EPA 3510C (W) & 3550C (S)
TOC	EPA 9060A (W only)	EPA 9060A (W only)
Oil & Grease	EPA 1664A (W only)	EPA 1664A (W only)

Miscellaneous Test Methods

Parameter	Analytical Method	Preparation Method
pH	EPA 9040C (W) & 9045D (S)	EPA 9040C (W) & 9045D (S)
Ignitability	EPA 1010A (W only)	EPA 1010A (W only)
Toxicity	EPA 6010C/7470A (Metals/Hg) EPA 8260B (Volatile Organics) EPA 8270D (Semivolatile Organics)	EPA 1311 Followed by 3010A/7470A ² /7470 ³ EPA 1311 Followed by 5030C EPA 1311 Followed by 3510C
Explosives	EPA 8330A	EPA 8330A
Perchlorate	EPA 314.0	EPA 314.0
Anions	EPA 9056A	EPA 9056A (W) & 5050 (S)
TSS	SM 2540D	SM 2540D
TS	SM 2540B	SM 2540B

1. The laboratory shall utilize methods referenced in the latest edition EPA Publication, SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (referred to as EPA SW-846), or other methods accepted by Utah DEQ, unless otherwise noted. The latest revision to the analytical method will be used for waste analysis for each parameter. Samples will be collected in accordance with R315-261-1090.

- 1.2. -The 'W' indicates a water matrix. Samples that are water soluble liquids (or aqueous phase) fit into this category. Non-aqueous liquids are usually treated as solids depending on the test method. In the case of an oil matrix that cannot be analyzed by the solid preparation method, a waste dilution is often performed. The 'S' indicates a solid matrix.
- 2.3. Mercury will be prepared using Method 7470A.

Figure 3-5

REACTIVE WASTE CATEGORY	
Group	Description
A	Class 1.3 Composite Propellant without HMX, RDX or CXM-3
B	Class 1.3 Composite Propellant with HMX, RDX or CXM-3
C	Class 1.1/1.3 Nitrate Ester Containing Material
D	High Explosive Material
E	Class 1.3 Pyrotechnic, Illuminants, Metal Powders, or Autoliv ASP Products
F	Oxidizers (does not include high explosives such as HMX, RDX or CXM-3)
G	Developmental Materials-R&D Lab Use Only(small quantity)
H	Unique Waste (small quantity)

ATTACHMENT 2

INSPECTION SCHEDULES AND PROCEDURE

INSPECTION SCHEDULES AND PROCEDURES

II.A. Purpose and Scope

The inspection schedule used by ATK for the hazardous waste management areas has been designed to meet the requirements of ~~R315-8.2.6~~R315-264-15. The ~~design of the inspection~~ schedule promotes the detection of malfunctions, deterioration, discharges, and other situations which may be causing or leading to a release of hazardous waste constituents into the environment or pose a threat to human health. Inspections are conducted by personnel trained to identify potential problem areas and to use the inspection schedule and the inspection log. Eight areas are designated for inspection: the container storage area at E-501, M-705S, M-186, the Thermal Treatment Areas at M-136 (including the ~~LTTAs~~, burn trays and Burn Station 14), M-225, T-29B hydrazine dilution and the solid propellant/motor storage buildings, M-629 and storage pad S-633.

Waste solid propellant and rocket motors are stored at buildings M-629 and storage pad S-633 as well as M-136 burn grounds, and Periodically, waste hydrazine is treated (by dilution) at building T-29B ~~periodically~~. In addition, ATK Periodically, ATK operates a simple leaching process to remove the oxidizer from 1.3 propellants/explosives and contaminated production materials at Building M-705L. Therefore inspections of these facilities, in accordance with their inspection schedules, are only required when hazardous waste is being stored or treated at the facility. A facility must be inspected, however, prior to receiving hazardous waste for storage or treatment if inspections were discontinued during the period of inactivity. If any problems are identified with the areas of concern that are listed in the inspection schedules (contained in this attachment), they must be corrected before the facility is put back into use.

II.B. Remedial Action or Maintenance

Repairs or corrective action for any deterioration or malfunction discovered by an inspection shall be conducted as outlined in Module II, Section F. Repairs to security equipment shall be completed as soon as practicable, but not later than 72 hours after the problem is discovered. As stated in ~~R315-8-2.6(e)~~R315-264-15(c), where a hazard is imminent or has already occurred, remedial action shall be taken immediately.

II.C. Inspection Records

All records of inspections and remedial actions shall be retained in the Operating Record, for a period of at least three years. At a minimum, inspection records shall include the date and time of the inspection, the name of the inspector, a

notation of the observations made, and the date and nature of any repairs or maintenance taken.

II.D. Inspection Schedules

The inspection schedules appear in detail in Tables II-A through II-FH. Each inspection schedule is designed so that the items appearing on the schedule are inspected frequently enough to avoid any deterioration of equipment and thus reduce the probability of an environmental or human health incident between inspection times. Each inspection schedule is divided into individual categories and each category contains a specific list of items to be inspected. Inspections are also required within 24 hours after a storm event as outlined in the schedules below. A storm event is defined as precipitation in excess of 1.0 inch in a one-hour period. It shall be documented in the inspection log that the inspection was conducted in response to a storm event.

**TABLE II-A
INSPECTION SCHEDULE FOR DRUM STORAGE AT M-186**

<u>EQUIPMENT</u>	<u>MINIMUM FREQUENCY</u>	<u>AREAS OF CONCERN</u>
1. Security Equipment		
Fences	Weekly	Visually inspect all fence lines and look for broken or downed fence lines, loose wires
Signs	Weekly	Readable signs, signs in place
Gates	Weekly	Able to properly close gate, safety flags in place
Lock	Weekly	In working order, able to lock
2. Area		
Roadway	Daily ¹	Inspect road for spills, soil discoloration
Loading/ Unloading Areas	Daily ¹	Inspect loading areas for spills, soil discoloration
Periphery	Daily ¹	Inspect grounds for any spills, soil

discoloration or stressed vegetation

3. Safety Equipment

Eyewash/Shower	Monthly	Ensure in working order by testing, check water supply
Telephone/Radio	Monthly	Working condition

4. Storage Containment

Containers	Weekly	Number of containers, severe corrosion (i.e., flaking, large rust buildup, rusty bungs), dented drums, hazardous waste labels in place, properly marked, readable, open bungs, no standing liquid on drums, adequate aisle space (2.5 feet)
Pads	Weekly	Chips, cracks, or irregularities in concrete, general condition
Sumps/Pads	Daily ²	Standing liquid on pad or in sumps
Drainage Area	Weekly	Spills, discolored soil
Roof	Weekly	General condition including holes or defects

5. Emergency Equipment

Fire Extinguisher	Monthly	Fire extinguisher full, in working order
Absorbent	Monthly	Adequate supply (minimum 25 lbs)
Repack Drums	Monthly	Two repack drums with seals
55-Gallon drums	Monthly	Six empty 55-gallon drums with bungs in good condition, no dents, etc.
Generator	Monthly	Routine oil check, fill with gas, test startup
Pump	Monthly	Good working order, hoses intact, test startup and pump

¹ Daily when in use (i.e. when loading or unloading operations occur at the facility).

² Daily except for nonscheduled work days and holidays

TABLE II-B INSPECTION SCHEDULE FOR BURNING GROUNDS AT M-136

<u>EQUIPMENT</u>	<u>MINIMUM FREQUENCY</u>	<u>AREAS OF CONCERN</u>
1. Security Equipment		
Fences	Weekly	Visually inspect all fence lines, look for loose wires or broken lines
Signs	Weekly	Readable signs, signs in place
Gates	Weekly	Able to properly close gate
Lock	Weekly	In working order, able to lock
2. Area		
Roadway	Daily ¹	Spills, discolored soil
Loading/ Unloading Areas	Daily ¹	Spills, discolored soil
Periphery	Daily ¹	Spills, discolored soil, stressed vegetation
3. Safety Equipment		
Telephone/Radio	Monthly	Check operating condition of equipment
4. Burn Ground Area		
Erosion	Weekly ³	Survey area and note severe erosion on grounds
5. Storage/Containment		
Burn tray	<u>Prior to placing</u> <u>Waste then</u> <u>Weekly^{2,3}</u>	<u>Tray is intact and liquid tight, accumulation</u> <u>of liquids</u> Tray is intact and liquid tight, accumulation

~~of liquids~~

Container	Weekly ²	Closed, labeled, signs of leaks or spills
-----------	---------------------	---

6. Emergency Equipment

Fire Extinguisher	Monthly	Fire extinguisher full and in working order
-------------------	---------	---

1 Daily when in use (i.e. when loading or unloading operations occur at the facility).

2 Inspect upon arrival, then each calendar week

3 And after each storm event. A storm event is defined as more than one inch of precipitation in a one-hour period.

TABLE II-C INSPECTION SCHEDULE FOR BURNING GROUNDS AT M-225

<u>EQUIPMENT</u>	<u>MINIMUM FREQUENCY</u>	<u>AREAS OF CONCERN</u>
1. Security Equipment		
Fences	Weekly	Visually inspect all fence lines, look for loose wires or broken lines
Signs	Weekly	Readable signs, signs in place
Gates	Weekly	Able to properly close gate
Lock	Weekly	In working order, able to lock
2. Area		
Roadway	Daily ¹	Spills, discolored soil
Loading/Unloading	Daily ¹	Spills, discolored soil
Areas		
Periphery	Daily ¹	Spills, discolored soil, stressed vegetation

3. Safety Equipment

Telephone/Radio	Monthly	Check operating condition of equipment
-----------------	---------	--

4. Burn Ground Area

Erosion	Weekly ²	Survey area and note severe erosion on grounds
---------	---------------------	--

Burn Tray	Prior to placing waste then	Tray is intact and liquid tight, accumulation of liquids
	Weekly ²	Tray is intact and liquid tight, accumulation of liquids

5. Emergency Equipment

Fire Extinguisher	Monthly	Fire extinguisher full and in working order
-------------------	---------	---

¹ Daily when in use (i.e. when loading or unloading operations occur at the facility).

² And after each storm event. A storm event is defined as more than one inch of precipitation in a one-hour period.

TABLE II-D
INSPECTION SCHEDULE FOR STORAGE AND CONSOLIDATION
ROOM AT M-705S

<u>EQUIPMENT</u>	<u>MINIMUM FREQUENCY</u>	<u>AREAS OF CONCERN</u>
1. Security Equipment		
Signs	Weekly	Readable signs, signs in place
2. Area		
Roadway	Daily ¹	Spills, discolored soil
Loading/Unloading Areas	Daily ¹	Spills, discolored soil
Periphery	Daily ¹	Spills, discolored soil, stressed vegetation

3. Safety Equipment

Eyewash/Shower	Monthly	Ensure in working order by testing, check water supply
Telephone/Radio	Monthly	Check operating condition of equipment

4. Storage containment

Containers	Weekly	Number of containers, severe corrosion (i.e. flaking, large rust buildup, rusty bungs), dented drums, hazardous waste labels in place, properly marked, readable, no open bungs, no standing liquid on the drums
Pads, Sumps	Weekly	Chips, cracks, or irregularities in the concrete, general conditions
Portable Secondary	Daily ²	Cracks, liquid, containment integrity
Roof	Weekly	General condition including holes or defects
Sump, pads	Daily ²	Check for standing liquids in the sump and containment system

5. Emergency Equipment

Fire Extinguisher	Monthly	Fire extinguisher full and in working order
Absorbents	Monthly	Adequate supply (minimum 25 lbs.)
Repack Drums	Monthly	Two repack drums with seals
55-Gallon Drums	Monthly	Six empty 55-gallon drums with bungs in good condition, no dents, etc.

¹ Daily when in use (i.e. when loading or unloading operations occur at the facility).

² Daily except for weekends and holidays.

TABLE II-E
INSPECTION SCHEDULE FOR M-629

(Note: As stated in section II.A. of this Attachment, inspections of these storage buildings are not required during periods when hazardous waste is not being stored at the facility)

<u>EQUIPMENT</u>	<u>MINIMUM FREQUENCY</u>	<u>AREAS OF CONCERN</u>
1. Security Equipment		
Signs	Weekly	Readable signs, signs in place
Bay Doors	Weekly	Function properly
Lock	Weekly	Function properly
2. Area		
Roadway	Daily ¹	Inspect road for spills, soil discoloration
Loading/Unloading Areas	Daily ¹	Inspect loading areas for spills, soil discoloration
Periphery	Daily ¹	Inspect grounds for any spills, soil discoloration or stressed vegetation
3. Communications Equipment		
Telephone	Monthly	Working condition; place call to verify operation
4. Storage Containers		
Motors/bags, etc.	Weekly	Verify condition of motors/bags, properly marked and labeled, out of place material and check for leakage, or liquid discharge from waste solid rocket motors and propellant .

Building	Weekly	Verify no damage done to exterior of facility
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Roof	Weekly	General condition including holes or defects
------	--------	--

5. Emergency Equipment

Fire Extinguisher	Monthly	In working order and full
-------------------	---------	---------------------------

¹ Daily when in use (i.e. when loading or unloading operations occur at the facility).

TABLE II-F
INSPECTION SCHEDULE FOR DRUM STORAGE PAD AT E-501

<u>EQUIPMENT</u>	<u>MINIMUM FREQUENCY</u>	<u>AREAS OF CONCERN</u>
1. Security Equipment		
Fences	Weekly	Visually inspect all fence lines and look for broken or downed fence lines, loose wires
Signs	Weekly	Readable signs, signs in place
Gates	Weekly	Able to properly close gate, safety flags in place
Lock	Weekly	In working order, able to lock
2. Area		
Roadway	Daily ¹	Inspect road for spills, soil discoloration
Loading/ Unloading Areas	Daily ¹	Inspect loading areas for spills, soil discoloration
Periphery	Daily ¹	Inspect grounds for any spills, soil discoloration or stressed vegetation

3. Safety Equipment

Eyewash/Shower	Monthly	Ensure in working order by testing, check water supply
Telephone/Radio	Monthly	Working condition

4. Storage Containment

Containers	Weekly	Number of containers, severe corrosion (i.e., flaking, large rust buildup, rusty bungs), dented drums, hazardous waste labels in place, properly marked, readable, open bungs, no standing liquid on drums, adequate aisle space (2.5 feet)
Pads	Weekly	Chips, cracks, or irregularities in concrete, general condition
Sumps/Pads	Daily ¹	Standing liquid on pad or in sumps
Drainage Area	Weekly ²	Spills, discolored soil
Roof	Weekly	General condition including holes or defects

5. Emergency Equipment

Fire Extinguisher	Monthly	Fire extinguisher full, in working order
Absorbent	Monthly	Adequate supply (minimum 25 lbs)
Repack Drums	Monthly	One repack drum with seals
55-Gallon drums	Monthly	Three empty 55-gallon drums with bungs in good condition, no dents, etc.

¹ Daily when in use (i.e. when loading or unloading operations occur at the facility).

² And after each storm event. A storm event is defined as more than one inch of precipitation in a one-hour period.

TABLE II-G

INSPECTION SCHEDULE FOR T-29B Hydrazine Dilution Bay

(Note: As stated in section II.A. of this Attachment, inspections of building T-29B are not required during periods when hazardous waste is not being treated at the facility)

<u>EQUIPMENT</u>	<u>MINIMUM FREQUENCY</u>	<u>AREAS OF CONCERN</u>
1. Security Equipment		
Signs	Prior to treatment	Readable signs, signs in place
Door Locked	Prior to treatment	In working order, locked
2. Area		
Roadway	Daily ¹	Inspect road for spills, soil discoloration
Loading/ Unloading Areas	Daily ¹	Inspect loading areas for spills, soil discoloration
Periphery	Daily ¹	Inspect grounds for any spills, soil discoloration or stressed vegetation
3. Safety Equipment		
Eyewash/Shower	Prior to treatment	Ensure in working order by testing, check water supply
Telephone(cell)	Prior to treatment	Working condition
4. Storage Containment		
Containers	Prior to treatment	Number of containers, severe corrosion (i.e., flaking, large rust buildup, rusty bungs), dented drums, hazardous waste labels in place, properly marked, readable, open bungs, no standing liquid on drums

Floor	Prior to treatment	Chips, cracks, or irregularities in concrete, general condition
Roof	Prior to treatment	General condition including holes or defects

5. Emergency Equipment

Fire Extinguisher	Prior to treatment	Fire extinguisher full, in working order
Absorbent	Prior to treatment	Adequate supply (minimum 25 lbs)

¹ Daily when in use (i.e. when loading or unloading operations occur at the facility).

TABLE II-H
INSPECTION SCHEDULE FOR STORAGE PAD S-633
(Note: As stated in section II.A. of this Attachment, inspections of this storage pad are not required during periods when hazardous waste is not being stored on the pad)

<u>EQUIPMENT</u>	<u>MINIMUM FREQUENCY</u>	<u>AREAS OF CONCERN</u>
1. Security Equipment		
Fences	Weekly	Visually inspect all fence lines, look for loose wires or broken lines
Signs	Weekly	Readable signs, signs in place
Gate	Weekly	Able to properly close gate
Lock	Weekly	In working order, able to lock
2. Area		
Roadway	Daily ¹	Spills, discolored soil

Loading/Unloading Areas	Daily ¹	Spills, discolored soil
Periphery	Daily ¹	Spills, discolored soil, stressed vegetation
Erosion	Weekly ²	Survey area and note severe erosion on or around storage pad

3. Storage Containers

Motors/containers, etc.	Weekly ³	Verify condition of motors/containers, properly marked and labeled, out of place material and check for leakage, or liquid discharge from waste solid rocket motors and propellant.
-------------------------	---------------------	---

¹ Daily when in use (i.e. when loading or unloading operations occur at the facility).

² And after each storm event. A storm event is defined as more than one inch of precipitation in a one-hour period.

³ Inspect upon arrival, then each calendar week

TABLE II-I INSPECTION SCHEDULE FOR M-705L Oxidizer Leaching Process

(Note: As stated in section II.A. of this Attachment, inspections of building M-705L are not required during periods when hazardous waste is not being treated at the facility)

<u>EQUIPMENT</u>	<u>MINIMUM FREQUENCY</u>	<u>AREAS OF CONCERN</u>
------------------	------------------------------	-------------------------

1. Security Equipment

<u>Signs</u>	<u>Weekly¹</u>	<u>Readable signs, signs in place</u>
<u>Egress paths</u>	<u>Weekly¹</u>	<u>Egress paths clear during treatment</u>

2. Area

<u>Loading/ Unloading Areas</u>	<u>Weekly¹</u>	<u>Inspect loading areas for spills, soil discoloration</u>
-------------------------------------	---------------------------	---

3. Safety Equipment

<u>Eyewash</u>	<u>Weekly¹</u>	<u>Ensure in working order by testing, check water supply</u>
<u>Telephone(cell)</u>	<u>Monthly²</u>	<u>Working condition</u>

4. Equipment

<u>Treatment Tank</u>	<u>Weekly¹</u>	<u>Tank and ancillary equipment is liquid tight no visible signs of leaking</u>
<u>Containment Sump</u>	<u>Daily^{3,4}</u>	<u>Liquid present in sump</u>
<u>Containment</u>	<u>Weekly¹</u>	<u>Containment is intact, free from Chips, cracks, or irregularities in concrete, general condition</u>

5. Emergency Equipment

<u>Fire Extinguisher</u>	<u>Monthly²</u>	<u>Fire extinguisher full, in working order</u>
<u>Spill Kit</u>	<u>Monthly²</u>	<u>Spill Response Material Available</u>

¹ Weekly when in use (i.e. when treatment is occurring at the facility).

² Monthly when in use (i.e. when treatment is occurring at the facility).

³ Daily when in use (i.e. when treatment is occurring at the facility).

⁴ Daily inspection when electronic leak detector is not operable. No inspection required when electronic leak detector is operable.

ATTACHMENT 3

PERSONNEL TRAINING

Annual On-Going Up-Date Training Outline

- I. Introduction to Hazardous Waste
 - A. Major Laws
 - B. Government Publications (29, 40, 49 CFR)
 - C. EPA, DOT, OSHA Interface
- II. Hazardous Waste Determination
 - A. ~~40 CFR 261~~R315-261
- III. Hazardous Waste Accumulation Areas
 - A. ~~40 CFR 262.34~~R315-262
- IV. Container Management
 - A. ~~40 CFR 265 Subpart H~~R315-264-170
- V. DOT Shipping Criteria
 - A. 49 CFR 172.101
- VI. Reportable Quantities
 - A. 49 CFR 172.101 Appendix
- VII. Implementation of the Contingency Plan

Training is held throughout the year for all TSDF operators that handle or are expected to handle hazardous waste.

OUTLINE FOR THE TRAINING OF PERSONNEL WHO GENERATE, PICKUP/TRANSPORT/DISPOSE OF, AND MANAGE HAZARDOUS WASTE

INTRODUCTION

This training will teach employees and contractors (if they work with hazardous waste) to properly handle, pickup/transport/dispose of, and manage hazardous waste. It will enable employees to safely handle hazardous waste and ensure that facility personnel are able to respond effectively to emergencies in order to protect human health and the environment. It will also ensure that the Company is in compliance with all applicable laws and regulations as they pertain to training.

AUDIENCE

The audience is made up of three major groups. 1) Those individuals who generate hazardous waste. 2) Personnel who pickup, transport, and dispose of hazardous waste. 3) The technical people who manage hazardous waste operations at the Company.

CONTENT OF THE PROGRAM:

(The employee will be able to:)

REQUIRED FOR

GROUP(s)

- | | | |
|-----|--|-------|
| 1) | Define hazardous waste terms | 1,2,3 |
| 2) | Understand the importance of and follow procedures | 1,2,3 |
| 3) | List characteristics of hazardous waste | 1,2,3 |
| 4) | List various hazardous waste materials | 1,2,3 |
| 5) | List examples of and consequences of improper disposal | 1,2,3 |
| 6) | Comply with Federal and State Laws | 1,2,3 |
| 7) | Comply with Company | 1,2,3 |
| 8) | List the major functions performed in their work area as related to hazardous waste | 1,2,3 |
| 9) | List their job responsibilities as related to hazardous waste | 1,2,3 |
| 10) | Use resources and references related to hazardous waste | 1,2,3 |
| 11) | Operate various hazardous waste handling equipment | 1,2,3 |
| 12) | Proper use of safety equipment | 1,2,3 |
| 13) | Avoid shortcuts when handling hazardous waste | 1,2,3 |
| 14) | Proper use of monitoring equipment | 2,3 |
| 15) | Identify hazardous waste | 1,2,3 |
| 16) | Segregate incompatible materials | 1,2,3 |
| 17) | Proper use of package materials | 1,2,3 |
| 18) | Label materials | 1,2,3 |
| 19) | Inspection requirements for TSDFs | 2,3 |
| 20) | Requirements for the pickup of hazardous waste | 2,3 |
| 21) | Requirements for the transport of hazardous waste | 2,3 |
| 22) | Dispose of hazardous waste in a timely manner | 1,2 |
| 23) | Respond properly under emergency conditions | 1,2,3 |
| 24) | Procedures to cleanup spills | 1,2,3 |
| 25) | Understand the importance of properly handling and disposing of hazardous waste to protect employees and the environment | 1,2,3 |
| 26) | Understand the basis for these requirements | 1,2,3 |

APPROACH

The training is divided into the following three categories:

1. Orientation training. Items number 1, 2, 3, 4, and 5 and parts of number 6, 7, 8, and 9 listed above will be covered in orientation training. These items will also be reinforced on the job.
2. Formal, Structured on-the-job-training. Parts of items 6, 7, 8, and 9 and items 10 through 26 will be covered on the job.
3. Specialty training. This is classroom instruction indirectly related to hazardous waste operations. Some of these courses are: Asbestos, Propellant Material Handling, Environmental awareness and Hazardous Waste Disposal and Hazardous Waste for Dock Coordinators. All training must be recorded.

Employees will not be allowed to handle hazardous waste unsupervised until they have successfully completed the training program. Training will be completed within six months of the employee's hire date. There will also be annual refresher training (similar to new hire training) conducted for all employees affected by the program to assure they are always adequately trained. This training will consist of, at a minimum, a review of their initial training in both contingency procedures and the hazardous waste management procedures relevant to the positions in which they are employed. All training will be evaluated to ensure compliance and safety. Performance will be measured against specific standards set out at the beginning of the program.

TRAINING DOCUMENTATION

The following documents and records will be maintained at the facility and made available for review by ~~DSHW~~ DWMRC upon request:

1. The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;
2. A written job description for each position listed under number one above. The description will include the requisite skill, education, or other qualifications and duties of the employees assigned to each position;
3. A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position under number one above.
4. Records that document that the required training or job experience has been given to, and completed by the appropriate personnel;

Records of the training will be kept until closure of the facility or for three years after the employee leaves the Company.

CONCLUSION

The training program presented in this outline is made up of a number of different components, all of which work together and supplement each other. All of these components are under the guidance, supervision, and management of a combination of professional trainers, line supervision, and hazardous waste management professionals. The trainers are skilled in current instructional technologies, have appropriate educational backgrounds, and the work experience to qualify them for this assignment. Much of the training is already being done in one form or another. Throughout its life, the program will continue to be evaluated and revised. This will assure that it is continually improved, current, and in compliance. The program will meet the needs of the employees, the environment, the law, and the Company.

HAZARDOUS WASTE MANAGEMENT

Contingency Plan and Emergency Procedures For Spills of Hazardous Materials

July 2019

**ATK Launch Systems, Inc.
Promontory Facility
P.O. Box 707 Brigham City UT 84302-0689
(435) 863-8545**

PREFACE

This document, HAZARDOUS WASTE MANAGEMENT CONTINGENCY PLAN AND EMERGENCY PROCEDURES FOR SPILLS OF HAZARDOUS MATERIALS, (herein referred to as Contingency Plan), provides written instructions on how to take care of spills of hazardous substances. It is intended to meet the requirements of the Utah Hazardous Waste Rules and Subpart D of the EPA Resource Conservation and Recovery Act.

This CONTINGENCY PLAN does not replace, nor is it to be used instead of, the ATK Launch Systems - Promontory EMERGENCY ~~MANAGEMENT PLAN AND DISASTER RESPONSE PLAN~~, or any other plan which outlines procedures to be followed during general emergencies, disasters, civil disturbances, riots, bomb threats, etc.

Most spills involving hazardous substances will not require use of the EMERGENCY AND DISASTER RESPONSE PLAN. Spills that create an emergency situation involving possible injury to personnel or damage to property will require use of the EMERGENCY ~~MANAGEMENT PLAN AND DISASTER RESPONSE PLAN~~ to take care of the emergency. This CONTINGENCY PLAN applies to containment and cleanup of a hazardous waste spill.

Definitions in the HAZARDOUS WASTE MANAGEMENT CONTINGENCY PLAN AND EMERGENCY PROCEDURES reflect EPA and State of Utah environmental language while those in the EMERGENCY ~~MANAGEMENT PLAN AND DISASTER RESPONSE PLAN~~ reflect OSHA, UOSH, FEMA, and ATK Launch Systems language. The user must be careful not to be confused by differences in language between these documents and must evaluate the applicability of each document to the particular situation.

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I. INTRODUCTION

A. PURPOSE

This plan may be activated by requesting emergency response on phone number 2222 or 911.

The purpose of this Contingency Plan and Emergency Procedures is to set forth responsibilities, establish organizational structure, and outline the procedures required to ensure effective warning, response, and control to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

B. SCOPE

This organizational plan is intended to meet requirements of the Utah Hazardous Waste Management Rules ([R315-264-50 through R315-264-56](#)) and Subpart D of the Resource Conservation and Recovery Act.

The provisions of this plan will be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents at one of the permitted facilities that could threaten human health or the environment. This plan specifically addresses company actions to be initiated in the event of a spill or release of hazardous materials.

C. NOTIFICATION

Incidents covered by this contingency plan and which meet applicable State of Utah and U.S. EPA reporting requirements will be reported to the appropriate agencies by Environmental Specialists. The Environmental Specialist should confer with the ~~Director or~~ Manager of Environmental Services prior to notification.

D. POSTING

Copies of the Contingency Plan and all revisions must be:

1. Maintained at the facility and the Fire Department's Spill Response vehicle.
2. Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.
(Arrangements have been made between ATK Launch Systems – Promontory and the hospitals located at Brigham City and Tremonton regarding emergency services that would be provided as required. Letters of ~~notification agreement~~ are kept in the ~~Operating Record~~ ~~Environmental Services Central Files~~.)

E. REVISIONS AND UPDATING

This contingency plan will be reviewed and amended whenever:

1. Applicable regulations are revised.
2. The plan fails in an emergency.
3. The facility changes its design, construction, operations, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or release of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency.

~~4. The list of emergency coordinators change.~~

~~5. The list of emergency equipment changes.~~

F. DEFINITIONS

1. **Disaster** - An event in which loss of life, serious and/or multiple injuries, major property or environmental damage, or major disruption of normal operations has occurred. This includes serious fires or major hazardous material spills, explosions, injuries to multiple people, and acts of nature such as floods, violent storms, or earthquakes.
2. **Discharge** - The accidental or intentional spilling (see Spill), leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste on or into the air, land, or water.
3. **Emergency** - A situation which, if not quickly controlled, can lead to death, serious and/or multiple injuries, major loss or damage to property, significant damage to the environment, or disruption of normal operations.
4. **Emergency Command Unit** - The group of personnel selected by the emergency commander to assist in the full scope administration of the emergency.
5. **Emergency Commander** - The General Manager or his designee, as head of the Command Unit, is responsible for the overall direction, coordination, and function of all units charged with providing countermeasures to cope with conditions and/or events within the scope of this plan. The Command Unit will consist of any and all persons selected by the Emergency Commander.

NOTE

The Emergency Commander will be the head of the Command Unit for all civil disturbances, bomb threats, national emergencies, and natural disasters.

The Command Unit will operate from a pre-designated Emergency Operations Center specified by the Emergency Disaster Response Plan or the Emergency Commander.

6. **Emergency Operations Center (E.O.C.)** - The location of senior management where decisions and incident specific policies are made.
7. **Environmental Specialist** - The Environmental Specialist is the Spill Team Leader from Environmental Services. He or his designated alternate will assist the Incident Commander in the evaluation of the impact on the environment resulting from any emergency, disaster, or hazardous substance discharge.

NOTE

When required, notification of Federal, State, and/or local environmental agencies shall be through the Environmental Specialist. Company policy requires that the event be discussed with the Vice President of the applicable division and Northrop Grumman Sector ~~ATK Corporate~~ Environmental.

8. **Fire Brigade** - A group of employees, generally from maintenance, who have received HAZWOPER training and are called on as needed to assist the full-time fire department in emergency response.

9. **Fire Warden** - A designated individual assigned in advance to assist the fire department in evacuation procedures and give information on the building and surrounding area.
10. **Hazardous Waste** - Identified in ~~40 CFR 261 and in Utah Hazardous Waste Management Rules, Section 2-1R315-261~~ on the basis of specific listed material and general characteristics. Specific listed wastes are found in these documents. The EPA regulations provide detailed technical specifications of four characteristics:
- Ignitable (D001) - An ignitable compressed gas, an oxidizer, a liquid having a flashpoint < 140°F, or a non-liquid capable of causing fire, under standard temperature and pressure, through friction, absorption, moisture, or spontaneous chemical changes.
- Corrosive (D002) - A solid waste that (1) is aqueous and has a pH < 2 or > 12.5; or (2) is a liquid and has a corrosion rate > 0.25 inches/year on steel.
- Reactive (D003) - A solid waste that:
- a. Is unstable and readily undergoes violent change without detonating.
 - b. Reacts violently with water.
 - c. Forms potentially explosive mixtures with water.
 - d. Generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment when mixed with water.
 - e. Is a cyanide or sulfide bearing waste which can generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment when exposed to pH conditions between 2 and 12.5.
- TCLP Toxicity - (as determined by Toxicity Characteristic Leachate Procedures) - Presence of certain listed toxic materials at levels greater than those specified in the regulation.
11. **Chemical Safety Software EMS-E** - a computer based system which contains a scanned image of the MSDS, plus additional safety and disposal information.
12. **Hazardous Waste Profile Data (HWPD) Sheet** - An ATK document that lists all EPA, DOT, and chemical information needed for marking, labeling, and identifying waste streams on plant.
13. **Hazardous Waste Operations and Emergency Response (HAZWOPER)** - Refers to specific training requirement for handling hazardous materials and for emergency operations. These requirements are found in 29 CFR 1910.120.
14. **Human Resource Coordination** - An intermediate between management and personnel who deals with employee concerns and interests.
15. **Incident Commander/Emergency Coordinator** - The Incident Commander will be the on-duty Assistant Fire Chief/Incident Commander.

The Incident Commander will direct the activities of all Field Units from a designated control point at the scene of the emergency, disaster, or other event.

The Security Manager will be the Incident Commander for countermeasures in situations caused by hostile persons.

The Fire Prevention Captain will act as Incident Commander until relieved by an Assistant Fire Chief.

The following items are identified as principles for the Emergency Commander and Incident Commander to apply to the unique circumstances of the emergency or disaster:

- a. Assist the injured.
 - b. Stabilize situation and site.
 - c. Assure evidence is not destroyed, lost, or moved.
 - d. Record situation through text, photographs, videos, and/or mapping.
 - e. Notify State and local officials.
 - f. Secure and admit only qualified essential personnel to the site.
 - g. Debrief participants.
16. **Material Safety Data Sheet (MSDS)** - Provides information on safe handling-, proper PPE, and disposal information for each chemical. This document is prepared by the chemical manufacture. For additional information, contact your local Industrial Hygiene representative.
17. **Non-sudden Release** - The accidental discharging (see Discharge), spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous wastes or materials which, when spilled become hazardous wastes, into or on any land or water over an extended period of time. This also includes spills onto asphalt or concrete pads.
18. **Reportable Spill** (Discharge) - A hazardous waste spill which must be reported to the ~~Utah Department~~Division of Environmental Response and Remediation, National Response Center and/or other applicable Federal, State or local authorities. The Utah Hazardous Waste Management Rules list reportable spill quantities as:
- a. One kilogram (2.2 lb) of material in accordance with ~~R315-9-1(b)(1)~~R315-263-30(b)(1). A spill of a lesser quantity must be reported if there is a potential threat to human health or the environment.
 - b. One-hundred kilograms (220 lb) of hazardous waste or material which, when spilled, becomes hazardous waste, in accordance with ~~R315-9-1(b)(2)~~R315-263-30(b)(2). A spill of a lesser quantity must be reported if there is a potential threat to human health or the environment.
 - c. ~~Subpart J of 40 CFR Part 265~~The Utah Administrative Code -R315-264-196 of the Resource Conservation and Recovery Act stipulates that a spill of 1 lb from a leaking hazardous waste sump is a reportable quantity.

NOTE

For complete descriptions and listings, contact Environmental Services or refer to ~~R315-9-1~~R315-263 of the Utah Hazardous Waste Management Rules.

The following is a partial list of materials used at ATK and the quantities which, if spilled, would require State or Federal notification:

	EPA	Utah
<u>Material</u>	<u>Quantity</u>	<u>Quantity</u>
Acetone	5000 lbs.	220 lbs.
Methanol	5000 lbs.	220 lbs.
Methylchloroform	1000 lbs.	220 lbs.
Methylene Chloride	1000 lbs.	220 lbs.
Methyl Ethyl Ketone	5000 lbs.	220 lbs.
Methyl Isobutyl Ketone	5000 lbs.	220 lbs.
Nitroglycerin	10 lbs.	2.2 lbs.
Propellants, reactive materials (HMX) oxidizers (AP)	100 lbs.	220 lbs.
Sodium Azide	1000 lbs.	2.2 lbs.
Toluene	1000 lbs.	220 lbs.
Xylene	100 lbs.	220 lbs.

19. **Solid Waste** - Any discarded material that is a solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, or agricultural operations and is not excluded under [40 CFR 261.4\(a\)R315-261-4\(a\)](#), [260.30R315-260-30](#), or [260.34R315-260-31](#).
20. **Spill** - The accidental discharging (see Discharge), spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous wastes or materials which, when spilled become hazardous wastes, into or on any land or water. This also includes spills onto asphalt or concrete pads.
21. **Environmental Services** - A department with expertise in the areas of hazardous waste, air and water management, including environmental regulations in these areas.

G. PLANT LOCATIONS AND SITE INFORMATION

1. The ATK Launch Systems – Promontory (ATK) plant is located in Box Elder County approximately 30 miles northwest of Brigham City. The 30-square mile plant site is remote from any major population centers and is reasonably isolated from ranches located at varying distances from the area boundaries. The plant site is composed of four major areas in which manufacturing and testing activities take place: South Plant, North Plant, Test Area, and Plant 3. There are approximately 675 buildings located on the plant site, (See Appendix I for facility site maps).

ATK owns and operates these 4 areas. All of these areas are contiguous and waste disposal is managed by one organization.

From the beginning of operations in 1956 to the present time, plant activities have encompassed a wide range of programs requiring the production of solid rocket propellants, rocket motor testing, and industrial support necessary to achieve each program's objectives. Solid rocket motors manufactured during this period vary from motors containing 7-9 lb of propellant to 1,440,000 lb. Programs have included Space Shuttle SRM, Peacekeeper, Trident, SRAM, HARM, Standard, Genie, Minuteman, Poseidon and a variety of ground and air launched flares.

2. The plant site has ~~nine~~~~eight~~ hazardous waste treatment and storage facilities: Burning Grounds at M-136, and M-225; Drum Storage areas at E-501 and M-186; the T-29B Hydrazine Dilution Facility; the M-705S Hazardous Waste Consolidation Room; ~~the M-705L Oxidizer Leaching Treatment Facility~~; and the solid propellant waste storage facilities at building M-629 and storage pad S-633. The site maps and evacuation plans for these facilities are shown in Appendix I.

These ~~nine~~~~eight~~ facilities serve as waste management units for the entire facility. Reactive wastes treated at the burning grounds include waste propellants, waste explosives, oxidizers, or solid waste contaminated with propellants, explosives, or oxidizers. No propellants or explosives are ever stored in the drum storage areas; hazardous wastes that are flammable, toxic, or corrosive are stored in these units. The Hydrazine Dilution Facility at T-29B dilutes waste hydrazine to between 5 to 50 percent by volume for shipment to an off-plant disposal site. The M-705 Wastewater Treatment Facility treats hazardous and industrial waters from building sumps. Hazardous wastes are consolidated and lab packed at the M-705S Hazardous Waste Consolidation Room. ~~The M-705L Oxidizer Leaching Facility treats 1.3 explosives or propellants by water leaching removal of the oxidizer from the explosives or propellants.~~

3. Approved hazardous waste accumulation areas are described in Table I.
4. Fire hydrants are located as follows: 101 hydrants in the Administrative and Manufacturing area, 95 at North Plant, 47 in the Test Area, and 9 in Plant 3. Static and dynamic pressure heads have been measured for each hydrant and the Fire Department maintains this information. The fire protection system at the plant site meets the NFPA codes for fire protection. ATK owns and operates two pumper fire engines and two brush trucks which are used for emergency response.

The following water tanks are interconnected:

<u>Location</u>	<u>Capacity (gal)</u>
X-1	200,000
X-2	20,000
M-131	50,000
M-132	50,000
M-133	100,000
M-587 (North Plant)	1,000,000
M-696	20,000
T-59 (Test)	1,000,000

The M-203 (Propellant Development Area) water tank with a 100,000 gallon capacity is not interconnected to the other tanks.

Fire hydrants throughout the plant are color coded according to capacity.

<u>Color Code</u>	<u>Flow Capacity (gpm)</u>
Green Fire Hydrant	1,000 or more
Orange Fire Hydrant	500 - 1,000
Red Fire Hydrant	500 or less

5. Information depicting the capacity, location, and practical consequences of a catastrophic failure of large hazardous material storage areas is found in Appendix II C, p.67.
6. All buildings with 10 or more regular occupants have an evacuation plan posted at all major exits of the building. (See Appendix I for the site maps and evacuation routes of the hazardous waste treatment and storage facilities).

H. PREVENTION OF RECURRENCE OR SPREAD OF FIRES, EXPLOSIONS, OR RELEASES

1. There are many steps that can be taken to prevent the recurrence and spread of fires, explosions, or releases at the drum storage areas, burning grounds, and operating buildings. These include limiting propellant quantities placed in the burning trays, following safe handling procedures, personnel training, segregating incompatible and reactive materials in the burning trays and in the drum storage areas, practicing good housekeeping procedures, proper labeling, regular inspections, and separating the burning trays by safe distances. These procedures are outlined in company operating manuals.
2. Each fire, explosion, or release into the environment is unique. The Incident Commander must be an experienced individual who will take all possible steps to prevent a recurrence, to limit the extent of the damage, and to stop the discharge. These steps may include:
 - a. Stopping processes and operations.
 - b. Collecting and containing released wastes.
 - c. Removing and isolating containers.
 - d. Preventing additional harm to the environment through knowledge of the potential hazards associated with storage areas (found in Appendix II, A and B, pp. 65 and 66, their locations, capacities, and identification).
3. User organizations conduct regular inspections on items such as bulk storage containers that store hazardous wastes or materials which, if released to the environment, would become hazardous wastes. Audits are taken on volumes of stored materials versus consumption to ensure that non-sudden releases are not occurring. If a non-sudden release of materials is discovered, steps are taken immediately to minimize the impact on the environment.

II. REPORTING PROCEDURES AND INCIDENT IDENTIFICATION

A. EVACUATION CRITERIA

1. A fire that is a threat to human safety.
2. A spill that is a threat to human safety.

B. IDENTIFICATION OF A HAZARDOUS WASTE IN A SPILL

1. The building personnel working the operation identify the material.

2. The ~~Material Safety Data Sheet (MSDS)~~ or ~~Safety Data Sheets (SDS)~~ ~~is~~~~are~~ referred to for chemical constituents, health hazards and protective clothing.
3. The Hazardous Waste Profile Data sheet, Chemical Safety Software EMS-E, or ~~MSDS/SDS~~ is referred to for proper disposal of the waste.

C. REPORTING OF EMERGENCY INCIDENTS

1. Spilled material is reported to Security.
2. Security contacts the Environmental Service's Spill Advisory Team and Safety for technical support and advice.
3. Environmental Services contacts the State and EPA to report the incident (if required).
4. Environmental Services obtains the log from Security to prepare the written report to the State.
5. Within 15 days, Environmental Services submits the written report to the State and maintains a permanent copy in the Environmental Services' Central File as required.

D. PERSONNEL RESPONSIBILITIES

1. EMERGENCY MANAGER

- a. At all times, there shall be at least one employee either present on the facility premises or on call with the responsibility for coordinating all emergency response measures.
- b. The facility emergency coordinator is thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of manifests and all other records within the facility, and the facility layout, or has immediate access to persons with this information.
- c. This person shall have the authority to commit the resources needed to carry out the contingency plan.
- d. Arranges for and directs a spill contingency plan simulation.

2. EMPLOYEES, FIRST LINE SUPERVISORS AND FIRE WARDENS

- a. Report all fires or emergencies by activating the fire alarm or calling the emergency number.
- b. Report from a safe telephone location:

Your name and phone number
Type of incident (fire, explosion, injury, spill, etc.)
Location of incident
- c. Stay on the line when possible until released by the emergency operator.
- d. Do not attempt to fight fires involving live or possibly toxic hazardous materials.

- e. Do not attempt to contain spills that are beyond capability or training.

3. FIRST LINE SUPERVISORS

- a. Ensure personnel evacuate buildings or areas to the assembly point indicated on the Emergency/Evacuation Plan located in each building.

NOTE

Handicapped personnel must be provided priority and assistance during evacuation and assembly.

- b. Advise the Fire Captain and the Incident Commander of conditions at the scene.
- c. Account for all employees that were in or assigned to the affected building or area.
- d. Report any injured or missing personnel to the Incident Commander.
- e. Remain at the assembly point until released by the Incident Commander.
- f. Notify appropriate Safety Department and fill out a Mishap Report.

4. INCIDENT COMMANDER

- a. Initiate the first response actions.
- b. Contact line supervision at the assembly point to determine the details of the situation:
 - i. Nature of incident
 - ii. Number of personnel injured or not accounted for and the location of their last known assignment.
 - iii. Location and type of hazardous materials that may be exposed to fire or explosion (Quantity Distance Criteria).
- c. Applicable Quantity Distance Criteria.
- d. Assume control of emergency area.
- e. Declare severity of event such as an emergency or disaster as appropriate.
- f. Establish emergency scene, coordinate road blocks, cordon the site, and control entry/exit from the area.
- g. Make an initial assessment of situation.
- h. Notify the Security Radio Dispatcher as appropriate, close the switchboard, if absolutely necessary. The Environmental Specialists must be included if a building deluge system has been activated and the building sump has overflowed or another known spill of hazardous material has taken place.
- i. Identify safe response routes for follow-on units.

- j. Coordinate activities with other emergency units.
 - k. Commit rescue and first aid crews as necessary.
 - l. Obtain emergency rescue and ambulance as required.
 - m. Keep the Emergency Commander informed of the emergency situation.
 - n. Request outside assistance from the EOC as needed.
 - p. Check with building's supervision to identify propellant ingredients and hazardous constituents in any building or building sump which must be pumped by Water Operations personnel. Evaluate what hazards, if any, exist which may hinder safe access to the building.
 - q. Perform actions in accordance with 29 CFR 1910.120 (HAZWOPER).
5. SECURITY
- a. Set up road blocks as directed by the Incident Commander to preclude unauthorized entry of personnel and provide clear traffic flow for emergency vehicles.
 - b. Coordinate with Incident Commander to ensure orderly evacuation of personnel.
 - c. Provide protection for classified information, valuable records, and special equipment.
 - d. Ensure protection of Company and Government property from theft or sabotage.
 - e. Provide proper disposition, storage, and protection of classified material in accordance with the Department of Defense Industrial Security Manual.
 - f. Establish perimeter boundary for emergency scene, set up road blocks, cordons, etc.
 - g. Above actions must be consistent with HAZWOPER requirements.
6. SECURITY RADIO DISPATCHER
- a. When directed by the Incident Commander, notify appropriate personnel in accordance with the *Emergency and Disaster Response Plan*.
 - b. Monitor and record all emergency radio communications, and establish required communications between radio units.
 - c. Upon direction of the Incident Commander, notifies appropriate ATK management.
7. TELEPHONE OPERATORS
- a. When directed by the Incident Commander, refuse incoming and outgoing calls unless directed otherwise by the Emergency Commander.
8. INDUSTRIAL HYGIENIST

- a. Report to the Incident Commander at the assembly point or Field Command Post.
 - b. Advise the Incident Commander on emergencies involving toxic chemical or radiation hazards.
 - c. Perform the following activities as necessary:
 - i. Sample air at the scene, including any sumps which have to be pumped. (if determined to be necessary by the Industrial Hygienist (IH) on the scene)
 - ii. Monitor radioactivity at the scene. (if determined to be necessary by the IH on the scene)
 - iii. Advise Emergency Response Team concerning proper decontamination controls.
 - iv. Notify Medical Services of personnel exposure to toxic chemicals or radioactive materials.
 - v. Advise the Incident Commander to notify public health authorities.
 - d. Performs these duties in accordance with HAZWOPER requirements.
9. MAINTENANCE CRAFTS PERSONNEL
- a. Respond to all alarms when notified by the Security Police Radio Dispatcher and report to the Incident Commander at the command post.
 - b. Control distribution of air, water, steam, and electrical power as directed by the Incident Commander.
 - c. Provide equipment, barricading, and shoring as necessary per direction of Incident Commander.
 - d. As Fire Brigade, assist when needed.
 - e. Provide construction type materials and services for containment of hazardous material spills.
 - f. Performs these duties per direction of Incident Commander.
10. ENVIRONMENTAL SERVICES PERSONNEL
- a. Report to the Incident Commander at the command post, when notified by Security Police Radio Dispatch.
 - b. Perform duties as directed by the Incident Commander after material to be collected has been identified, any hazards associated with the material have been identified, and safe procedures to handle the material have been established.
 - c. Perform these duties in accordance with HAZWOPER requirements.
 - d. Advise the Incident Commander on potential environmental hazards, safe handling, and disposal options.

11. MEDICAL SERVICES PERSONNEL

- a. Remain at or report to the Dispensary to receive and treat patients.
- b. Report to the emergency area when requested by the Incident Commander.
- c. Coordinate with surrounding community hospitals and doctors for the receipt and treatment of injured.
- d. Requisition supplemental medical supplies, equipment, and personnel as needed. May request helicopter transportation in life or death situations.
- e. Conduct and supervise treatment for injured personnel.
- f. Review MSDS and other relevant information, and transmit same to receiving hospital.

12. TRANSPORTATION PERSONNEL (IN-PLANT TAXI SERVICE)

- a. Coordinate with Incident Commander to ensure adequate transportation of plant personnel.

13. EMERGENCY COMMANDER

- a. Control and coordinate overall activities of the emergency situation. The Emergency Commander will work from the Emergency Command Center, and will assist and direct the On-Scene Incident Commander as needed.
- b. Evaluate situation and determine need to convene the Emergency Command Unit.
- c. Direct the Telephone Operators to open or close the switchboard according to the nature of the emergency.
- d. Open the Emergency Operations Center as necessary.
- e. Identify the disaster potential posed by the emergency.
- f. Make the disaster declaration when necessary (disaster responsibilities are listed in Section III).

14. PHOTOGRAPHER

- a. Report to the Incident Commander at the Command Post.
- b. Advise the Incident Commander on photo coverage.
- c. Photograph the scene as directed.
- d. Expedite printing and delivery of the photographs.
- e. Interpret the photographs as required.

15. HUMAN RESOURCES COORDINATOR

- a. Provide food and assistance with personal needs for emergency team members

and those affected.

- b. Notify next of kin of injured persons when advised by Emergency Commander. (See Section IV, the *Emergency and Disaster Response Plan* for procedures).

16. ENVIRONMENTAL SPECIALIST

- a. Assess possible environmental hazards resulting from the incident including assessment of spills caused by the activation of a building deluge system which in turn caused the building sump to overflow.
- b. Initiate reports required by the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and Utah Waste Management and Radiation Control~~Solid and Hazardous Waste~~ Regulations.
- c. Determine (along with the responding local emergency agency) whether the facility has had a discharge, fire, or explosion which could threaten the environment outside of the facility. Assure immediate implementation of emergency procedures.
- d. Notify the State and Federal environmental agencies as required.
- e. The Environmental Specialist contacts either the government official designated as the on-scene coordinator or the National Response Center, (800) 424-8802, and Utah Dept. the Division of Environmental Response and Remediation (DERR) at (801) 536-4123 to relaying the following information:
 - i. Name and telephone number of reporter.
 - ii. Name and address of facility.
 - iii. Time and type of incident (such as discharge, fire, etc.).
 - iv. Name and quantity of material(s) involved, to the extent known.
 - v. The extent of injuries, if any.
 - vi. The possible hazards to human health or to the environment outside the facility.
- f. Notify the NG Sector~~Corporate~~ Environmental Engineer if the spill is reportable.

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(952) 351-2663

- g. Utah Hazardous Waste Management Rules require that the Environmental Specialist note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Director of the Division of Waste Management and Radiation Control. The report must include:
 - i. Name, address, and telephone number of the owner or operator.
 - ii. Name, address, and telephone number of the facility.

- iii. Date, time, and type of incident (such as fire, explosion, etc.).
 - iv. Name and quantity of material(s) involved.
 - v. The extent of injuries, if any.
 - vi. An assessment of actual or potential hazards to human health or the environment where this is applicable.
 - vii. Estimated quantity and disposition of material recovered from the incident.
 - h. Notify the community emergency coordinator for the local emergency planning committee in compliance with requirements outlined in ~~40 CFR 355.40~~R315-263-30 and R315-263-33, where applicable.
 - i. Immediately after an emergency, the Environmental Specialist must provide direction for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a discharge, fire, or explosion at the facility.
 - j. The Environmental Specialist and the Incident Commander must ensure that, in the affected area(s) of the facility:
 - i. A determination is made who will do the spill remediation work (Building Personnel, ATK Spill Remediation Team, or Off-Site Contractor).
 - ii. No waste that may be incompatible with the discharged material is stored or disposed of until cleanup procedures are completed; and
 - iii. All emergency equipment listed in the contingency plan is cleaned and ready for its intended use before normal operations are resumed.
17. CORPORATE PUBLIC AFFAIRS
- a. Establish liaison with representatives of public information media.
 - b. Prepare drafts of general/public information press releases relating to the emergency.
 - c. Release information as directed by the Emergency Commander, according to ATK Policy.
18. RECORDER
- a. Record incoming and outgoing communications at the EOC.
 - b. Record all significant events and actions.
 - c. Initiate and maintain record information in a time line log.
 - d. Assist in the preparation of interim and final reports.

E. ALARM SYSTEMS

- Alarm systems are available at ATK for fires or building evacuations if an emergency or disaster situation exists:

<u>Type</u>	<u>People/Materials</u>	<u>Sound</u>
Fire and Building Evacuation	People	Fire Alarm
Hazardous Waste	People	Verbal Signal (or fire alarm, if available)
Storage and Thermal Treatment	Materials	Verbal Signal (fire alarm or air horn, if available)

- The hazardous waste storage facilities at ~~M-186 and~~ E-501 ~~is~~are located outdoors in open areas, evacuation of personnel will be in any direction away from the problem. The assembly area for E-501 is directly across the street (to the north) from the entrance gate. ~~The assembly point for M-186 is at the M-381 trailer.~~
- ~~The hazardous waste storage facility at M-186 is a large single room building with five bays each having containment. M-186 is equipped with three man door exits to the west, and five rollup doors on the east side. The M-186 building is heated. The assembly point for M-186 is at the M-381 trailer.~~
- ~~34.~~ The hazardous waste storage facility at the M-705 Consolidation Room is a single room equipped with two exits, a single door on the west and a double door on the east. Both sets of doors open directly to an open outdoor area where personnel are to evacuate to an area near the intersection of the main in-plant road and the M-705 access road. The room is equipped with a heat sensor alarm, a fire alarm and a carbon monoxide alarm on the supplied air system.
- ~~45.~~ M-629 is a storage building with multiple exits as outlined in the evacuation plan in Appendix I.
- ~~56.~~ Tables and maps showing the function of the various hazardous waste sites and area evacuation plans are found in Appendix I, p. 34.

F. LOCAL LAW-ENFORCEMENT AGENCIES, FIRE DEPARTMENTS, AND HOSPITALS

- Local law-enforcement agencies, fire departments, and hospitals have been contacted to ~~assist if needed or~~ respond ~~if requested by ATK~~ to ~~provide assistance if necessary~~ ~~in or treat~~ any ~~ATK~~ emergency. The most recent copy of this Contingency Plan is sent to each agency in order to familiarize them with the layout, description of hazardous wastes handled, and evacuation plan for the plant. Copies of the letters sent to each agency are kept in the Operating Record.
- All emergency response units from off-plant will be escorted from the ~~Promontory Facility entrance gate~~ to the fire/explosion/spill site by an ATK authorized agent. This will ensure the units reach the location as quickly and efficiently as possible.
- ~~As allowed in R315-262-256(c) 40 CFR 262.256(c) a facility possessing 24-hour~~

response capabilities, such as ATK, may receive a waiver from needing to make arrangements with the local emergency response agencies provided that the waiver is documented in the operating record.

III. SPILL CONTAINMENT AND CLEANUP

A. CONTROL PROCEDURES

1. Detailed emergency response procedures whenever there is a fire, explosion, or release (spill) are found in the current *Emergency ~~Management and Disaster Response~~ Plan*.
2. Specific directives for cleaning up spills are given in the Environmental Management System (EMS)~~Hazardous Waste Profile Data (HWPD)~~. There are over ~~420,000~~ chemical entries in the EMSHPWD. Approximately ~~818,000~~ of the chemicals in current use exhibit hazardous properties. The ~~MHSI~~MSDS/SDS documents are ~~managed/generated~~ in-house to provide a standard format for easy use. Each entry contains Material Safety Data Sheet (MSDS)~~Safety Data Sheet (SDS)~~ information as well as other information. ~~There are approximately 100 sets of MHSI distributed throughout the facility. In addition, a complete MHSI is accessible through over 1,000 computer terminals at the facility.~~
3. The Wastewater Treatment Facility (M-705) is designed to treat wastewater containing hazardous constituents. The responsible building foreman or supervisor should report to the M-705 facility personnel any spill or accidental discharge to a sump suspected of containing chemicals at concentrations above the levels normally discharged. The report should include the incident location, name of person reporting, chemical involved, and approximate quantity. The treatment facility personnel will then be able to determine how best to handle the wastewater.
4. The propellant storage buildings will be inspected daily or weekly as required when in use. While the propellants stored in these buildings are solid, occasionally a small amount of nitro glycerin or similar material can ooze from the motor and drip to the floor. These drips will be checked for during the inspections, and cleaned up using rags and acetone within 24 hours of discovery or as soon as is practicable.

B. SPILL CONTAINMENT AND CONTROL

§265.56(e) of the Resource Conservation and Recovery Act (RCRA) states:

"During an emergency, the Emergency Commander must take all reasonable measures to ensure that fires, explosions and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include where applicable, stopping processes and operations, collecting and containing released waste and removing or isolating containers."

Confine hazardous material spills to the affected area with dams, Quicksorb, or other approved means. Hazardous material properties may be determined by consulting the Hazardous Waste Profile Data Sheet, MHSI~~SDS~~, or the DOT Emergency Response Guidebook. No attempt will be made to contain a spill until the hazardous properties are known. Secondary containment is provided for most storage tanks. For those tanks without secondary containment, consult Appendix II for spill containment considerations.

C. SPILL CLEANUP

1. ~~Waste Management~~Environmental Operations and Environmental Services will be responsible for the coordination of spill cleanup activities. Building personnel will clean up smaller sized spills, incidental to the work process, that are deemed within the skills and level of training possessed by available building personnel, where the spill occurred. All other spills will be cleaned up by the Spill Remediation Team or a company contracted by ATK.

Proper procedures will be followed for every release of hazardous wastes. Because of the extensive inventory of hazardous materials managed at ATK ~~Launch Systems Corporation~~, each release will require specific safety precautions, cleanup procedures, and/or disposal methods. See Table II p. for chemical compatibility information.

WARNING

Do not attempt to contain or clean up any spill until hazards associated with the material are known and proper safety precautions are taken.

2. Response procedures to be used during container spills or leaks are as outlined:
 - a. Identify the material
 - ! From the hazardous waste label
 - ! From ~~Waste Management~~Environmental Operations and Environmental Services inventory records
 - ! Through laboratory analysis
 - ! From carrier manifest or placard DOT guide number
 - b. Protect personnel through the use of personal protective equipment specific to the identified material (refer to ~~EMSMHSI~~ or ~~Material Safety Data Sheet~~Safety Data Sheet, available from Industrial Hygiene.)
 - c. Stop the spill or leak
 - d. Contain the material
 - ! Eliminate the source
 - ! Use Quicksorb, or other approved methods
 - e. Clean up the material
 - ! Re-drum
 - ! Wipe up, use absorbent material, excavate soil
 - f. Dispose of the material (refer to ~~EMSHaz-Com-Web~~ and Disposal Instructions for Reactive Waste Materials, RWDIGM-3.4)
 - g. Decontaminate the site and clean the equipment

D. FOLLOWUP PROCEDURES

1. When the spill has been properly contained and stopped, appropriate equipment will be used to remove the spilled material to a disposal site

2. Spills involving very large quantities of material caused by the failure of a large storage tank should be dealt with as quickly as possible to minimize exposure to the environment. The method of pickup generally will be pumping material into a tank truck, the original tank after repairs, or into another tank. An alternative may be to use the Environmental Waste Disposal sump truck to pump liquid hazardous wastes ~~and transfer them to a 5,000 gallon storage tank trailer at M-705.~~ Contact ~~Waste Management~~ Environmental Operations and Environmental Services for use.
3. Proper steps will be taken to repair equipment and facilities and/or remove the cause of the spill.
4. Operating procedures will be changed, if necessary, to prevent recurrence of a spill.
5. Safety and Operational Training will be instigated, if required.
6. When possible, all reasonable effort will be made to salvage reusable material.

E. INCOMPATIBLE WASTE

The Environmental Coordinator and Incident Commander will ensure no waste is incompatible with any material during the cleanup of a discharge. Table II, p. lists the information and its available location to the Environmental Coordinator and Incident Commander to make decisions regarding compatibility. All of these materials are available for inspection at the plant site.

F. CLEANUP MATERIAL AND EQUIPMENT

The following is a partial list of safety equipment that may be used for cleanup as ~~indicated required~~ per ~~Environmental Management System Chemical Safety~~ Software (EMS)-
E. All items can be obtained from Stores or from a call contract.

<u>Item</u>	<u>Stock No.</u>	<u>Use</u>
Coveralls		Live Operations
Smocks		Manufacturing Area
Tyvek Suit (m)		Asbestos & Dust
Tyvek Suit (l)		Asbestos & Dust
Tyvek Suit (xl)		Asbestos & Dust
Tyvek Sack Suit		Asbestos & Chemical Spills
Tyvek Hood		Asbestos & Chemical Spills
Polyethylene-		
Tyvek Suit		Asbestos & Chemical Spills
Saranex Tyvek Suit		Chemical Spills
Booties (Yellow)		Asbestos & Chemical Spills
Booties (Clear)		Asbestos & Chemical Spills
Boots (Rubber)		Chemical Spills
Glasses, Safety		Spills-Less than 1 quart
Monogoggles		Spills-Greater than 1 quart
Ear Plugs		Noise-Greater than 90 B(A)
Gloves, Rubber (s)		Methyl Ethyl Ketone
Gloves, Rubber (m)		Methyl Ethyl Ketone
Gloves, Rubber (l)		Methyl Ethyl Ketone

Gloves, Leather	General Use
Gloves, Cotton	General Use
Gloves	Solvent Resistant
Gloves, NBR (s)	Methyl Chloroform
Gloves, NBR (m)	Methyl Chloroform
Gloves, NBR (l)	Methyl Chloroform
Respirator, Half Mask	
Air Purifying	In O ₂ Sufficient Areas Only
Respirator,	
Full-face Cart	In O ₂ Sufficient Areas Only
Respirator, Fresh Air	In O ₂ Deficient Areas Only
Respirator, No. 8710	Dust, Single-use Only
Filter S (Gray)	Dusts, Mists, Fumes, Radon
	Daughters, Asbestos
Filter H (Purple)	Dusts, Mists, Fumes, Radio-
	nuclides, Asbestos
Filter GMA (Black)	Organic Vapors
Filter GMC (Yellow)	Organic Vapors, Acid Gases
Filter GMD (Green)	Ammonia & Methylamine
Filter (Purple/Black)	Organic Vapors, Dusts, Mists,
GMA-H	Fumes, Radionuclides,
	Asbestos
Filter (Purple/	
Yellow) GMC-H	Organic Vapors, Acid Gases,
	Dusts, Fumes, Mists,
	Radionuclides, Asbestos
Filter (Black/Olive)	Pesticides
GMP	
Acetone	Propellant solvent
Rumple cloth	wipe
Chemliner bag	Contain solvent rags
Velostat bag	Conductive bag to contain chemiliner

In addition, the following materials are available if required:

<u>Item</u>	<u>Location</u>	<u>Ext</u>	<u>Description</u>
Lumber	M-90	2680/2757	Plywood, Lumbers
Sawdust	M-90	2680/2757	Bulk
Pipe	M-90	2680/2757	All dimensions
Quicksorb (27-200002)	M-3 (Stores)	2757	50 lb Bag
Absorption Clay	Landfill	2837	Bulk
Hydrated Lime (54-426006)	M-3 (Stores)	2757	50 lb Bag
Chemical Spill	J. T. Baker		
Neutralizer			
Acids (General)	M-53	2617	3.2 kg
Bases (General)	M-53	2617/7436	1.2 kg
Flammable Solvents	M-53	2617	(1.1 kg) (18 kg)
Mercury Cleanup Kits	M-53	2617	0.9 kg

NG Spill and Detector Kit	M-585	8446	5 liter bottle
Bulldozer (Space/DLV)	M-55/M-321	2837/2455	D-8
Front-end Loader	M-55/M-321	2837/2455	1½ and 3 yd bucket
Portable Lights and Generator	M-6	3431	2 Mercury Lamps
Sump Tank	M-136	2520	3,000 gal
Portable Diaphragm Pumps	M-55/M-321	2837/2455	
General Trucks	M-55/M-321	2837/2455	1½ - 5 Ton
SCBA Respirators	Fire Dept	2222	30 Min. Tank
Water Ops. Equip	M-705	2222	Sump Trucks, Etc.
Spill Response Truck	Fire Dept	2222	Spill Response and Rescue

G. DECONTAMINATION EQUIPMENT AND PROCEDURES

- Equipment available for decontamination includes two disposable wading pools, a wood-framed plastic pool carried on the spill truck for tool and spill team decontamination, and fire trucks to supply wash down water. Decontamination procedures outlined on Figures 1 and 2 will be followed to ensure spill containment and to minimize the area of contamination.
- The M-186 hazardous waste ~~drum~~ storage site is located near the burning grounds. This area is serviced by the ~~E-522~~M-11 Fire Station which is located ~~3-5~~ minutes away. The M-705 Hazardous Waste consolidation room and the E-501 drum storage yard are also serviced by the ~~M-11~~E-522 Fire Station which is located ~~4-27~~ minutes away. ~~The Both the E-522 and M-11 Fire Stations~~ isare outfitted with quick-response spill control equipment (See maps, Appendix I). In addition, spill response kits are available at the M-53 and M-585 Laboratories.

H. EQUIPMENT DECONTAMINATION AND REPLENISHMENT

- The Incident Commander, or his designee, will ensure all equipment has been properly decontaminated, cleaned, and replaced before normal operations are resumed. The following guidelines are to be used for decontamination of equipment after a discharge has occurred. These steps are also supplemented by the information found in the sources listed in Paragraph F.
- As much as possible, measures should be taken to prevent contamination of equipment. Any delicate instrument which cannot be decontaminated easily should be protected while it is being used. It should be bagged and the bag taped and secured around the instrument. Openings can be made in the bag for sample intake.
 - Sampling Devices

Sampling devices require special cleaning. The instruction and care manuals provide information on proper decontamination methods for each instrument used.
 - Tools and Equipment

Equipment and tools designated for spill response should be disposable; however, some tools and equipment require decontamination.

Decontamination equipment, materials, and supplies are generally selected based on availability. Soft-bristle scrub brushes or long-handle brushes are used to

remove contaminants. Water in buckets is used for rinsing. Large galvanized wash tanks or stock tanks can hold wash and rinse solutions; children's wading pools can also be used. Open top (55-gallon) drums or similar containers lined with plastic bags can be used to store contaminated clothing and equipment. Contaminated liquids can be stored temporarily in metal or plastic cans or drums. Other supplies include paper or cloth towels for drying protective clothing and equipment.

Personal protective equipment, sampling tools, and other equipment are usually decontaminated by scrubbing with detergent-water using a soft-bristle brush followed by rinsing with copious amounts of water. While this process may not be fully effective in removing some contaminants, it is a relatively safe option compared with using a chemical decontaminating solution. Occasionally, a decontamination chemical is then needed to change the contaminant into a less harmful substance during decontamination. The Environmental Coordinator and Incident Commander, or his designee, may consult the information sources in Table I, p. 33, to determine the necessity of using a chemical decontamination solution.

All materials and equipment used for decontamination must comply with proper disposal. Clothing, tools, buckets, brushes, and all other equipment that are contaminated must be secured in drums or other containers and labeled. Clothing not completely decontaminated onsite should be secured in plastic bags before being removed from the site.

Contaminated wash and rinse solutions should be contained to hold spent solutions. The spent solutions are transferred to drums which are labeled and properly disposed of. The Environmental Specialist and Incident Commander, or his designee, will ensure the disposal of these materials is done in an appropriate manner.

c. Respirators

Certain parts of contaminated respirators, such as the harness assembly and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may have to be discarded with the other spill cleanup wastes. Rubber components can be soaked in soap and water and scrubbed with a brush. Regulators must be maintained according to manufacturer's recommendations. Persons responsible for decontaminating respirators should be thoroughly trained in respirator maintenance.

d. Heavy Equipment

Bulldozers, trucks, back-hoes, bulking chambers, and other heavy equipment are difficult to decontaminate. The method generally used is to wash them with water under high pressure and/or to scrub accessible parts with detergent/water solution under pressure, if possible. Shovels, scoops, and lifts may be sandblasted or steam cleaned. Particular care must be given to those components in direct contact with contaminants such as tires and scoops. Wash water generated during the decontamination process must be contained and disposed of in a proper manner.

IV. INSTALLATION RESPONSE TEAM TRAINING

Building/area personnel responding to spills of hazardous materials incidental to the normal

processes within their building/area will not need training beyond that required by ATK's Hazard Communication Program. Personnel responding to spills, who are not assigned to the building/area where the spill occurred, are to be members of the Spill Remediation Team with the proper OSHA training.

NOTE

Hazard Communication Plus Program is a combination of the HAZ-COM Program required by OSHA 29 CFR 1910.1200 and HAZWOPER first awareness level required by OSHA 29 CFR 1910.120.

A. TRAINING

All personnel involved in cleanup operations will be trained. This training will include an awareness of the locations of cleanup materials and equipment and the procedures for the operation of such equipment.

~~B. SIMULATION~~

~~The Spill Contingency Plan will be simulated annually under the direction of the Emergency Commander.~~

V. TRAINING PLAN

One of the most important objectives of the Contingency Plan is to ensure that the emergency responders are properly trained. Training should include teaching, exercise and critique phases. Re-training and review should be completed at least annually. The following is an outline of training plan elements:

A. SCOPE AND PURPOSE OF THE CONTINGENCY PLAN

B. REVIEW OF LEGAL REQUIREMENTS

1. Authority
2. OSHA requirements
3. State requirements
4. EPA requirements
5. State Fire Marshall requirements
6. Law enforcement requirements
7. Medical Examiner/Coroner requirements

C. LOCAL ATK REQUIREMENTS

D. CUSTOMER REQUIREMENTS

Contract review

E. REVIEW AUTHORITY AND FUNCTION OF EACH RESPONSE TEAM MEMBER

F. EMERGENCY COMMUNICATION SYSTEM

1. Initial notification and follow-up
2. Verification of information
3. Radio discipline
4. Communication intercept

G. FIRE PLANS/FIRE DRILL

1. Use
2. Exercise
3. Evaluate
4. Evacuation
5. Assembly points

H. BOMB SEARCH TECHNIQUES

1. Outside to Inside
2. Left to right
3. Bottom to Top
4. Evacuation
5. Suspect items (Isolate; don't touch or disturb)

I. FIRE BARRICADE/CORDON AREAS

1. Function
2. Initiate/release

J. EMERGENCY MEDICAL TREATMENT

1. EMT training, equipment
2. First response first aid

K. SECURITY OF SITE

1. Purpose
2. Authority
3. Who authorizes access

L. INVESTIGATION

1. OSHA
2. EPA
3. Local Law enforcement
4. Medical Examiner/Coroner
5. Customer
6. ATK

M. PUBLIC RELEASE OF INFORMATION

1. Who authorizes
2. Importance of controlling
3. Who releases
4. Who reviews
5. Next of kin

N. FACT-FINDING METHODS

1. Initial interview
2. Follow-up interview
3. Recordings

4. Photo Coverage
5. Mapping damage
 - a. Who?
 - b. How?
 - c. Why?
6. Personnel security checks
7. Drug and alcohol tests
8. Weather conditions
9. Product status
10. Operational status
11. Equipment records and history
12. Facility, tooling, modification and history

O. SAFING THE AREA

1. Electric Power
2. Water
3. Steam
4. Toxic chemicals
5. Falling hazards
6. Explosives

P. CONTROL OF THE CURIOS

1. Outsider
2. Employees
3. Press

Q. HANDLING OF REMAINS

1. Notification
2. Photo
3. Movement (after authorization by Medical Examiner)
4. Release (after authorization by Medical Examiner)

R. NOTIFICATION PROCEDURES

1. When?
2. Who?
3. How?
4. Verification

S. RESCUE EFFORTS

1. When?
2. When not to
3. How to determine

TABLE I
COMPATIBILITY INFORMATION

<u>Source of Compatibility Information</u>	<u>Location</u>
1. Hazardous Waste Compatibility Chart Table 9-2 of Attachment 9	Available at Environmental Services offices
2. Material Health and Safety Information (example of informa- tion found in plan)	Available in hard copy form at approximately 100 locations through- the plant; also available on 1,000 computer terminals throughout the plant*
32. Material Safety and Data Sheets/ Safety Data Sheets	Located on the internal web <u>Environmental Management Chemical Safety Software (EMS)-E</u>
43. Work Experience	Knowledge of each member of the Response Team when responding to a discharge

VI. EMERGENCY COORDINATOR

The Emergency Coordinator is the ATK Fire Department's Emergency Manager. The alternate Emergency Coordinators are the ATK Fire Department Shift Supervisors. A primary or alternate Emergency Coordinator is on plant or on call at all times. In this plan, the Emergency Coordinator may be referred to as the Incident Commander (IC). The primary and alternate Emergency Coordinators or ICs are identified in the Operating Record, which is maintained onsite at the Promontory facility. ATK Promontory security headquarters/dispatch can be contacted 24/7 at 435-863-8545. ATK Promontory security headquarters/dispatch can contact the on plant Emergency Coordinator or IC.

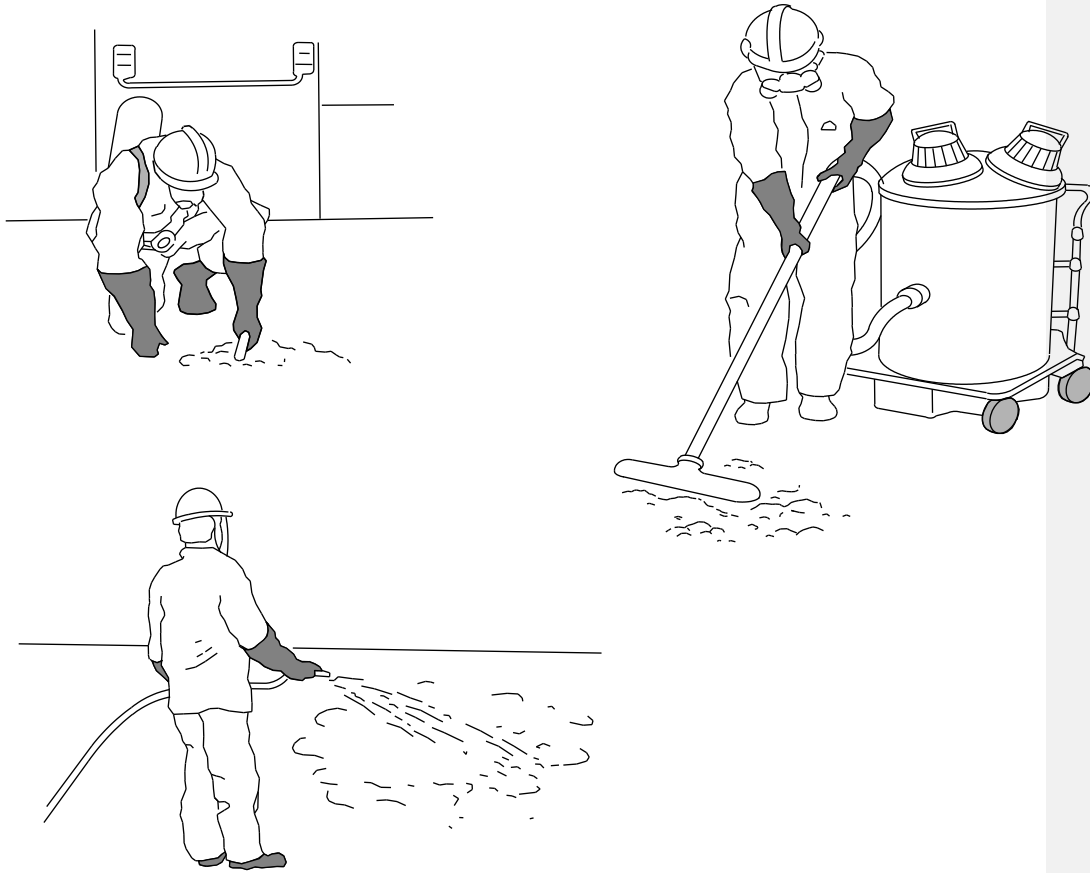


FIGURE 1. DECONTAMINATION/SPILL SCENE
Difficult Decontamination Situations

Some situations, such as a solvent spilled on tiles or large spills on unprotected ground require the removal and disposal of the affected material. Other situations, such as contaminated equipment or fixtures, require steam cleaning and the use of a detergent. Frequently, the rinse from steam cleaning is best controlled with a wet/dry vacuum. Steam cleaners, detergents, and wet/dry vacuums can be obtained from local rental companies. The rinse should be tested for the contaminant and managed appropriately.

The Spill Scene

While each spill is unique, every spill shares common features best referred to as the "Spill Scene." This allows a conceptual illustration of the work area which emphasizes the relationship of the various components.

Complete decontamination of workers, tools, and the spill site must be performed before the spill response is completed.

It is prudent to establish an area for worker decontamination through which all SPILL TEAM members must pass prior to leaving the site. In this TEAM DECONTAMINATION SITE (TDS) protective clothing can be thoroughly washed with detergent and rinsed with water, if necessary. The soles of ALL WORKERS SHOES MUST BE RINSED before they leave the area. Outer coveralls (Tyvek, etc.) must be removed in this area. These steps are necessary to prevent spreading the contamination or introducing toxic substances into workers homes.

Tools can be rinsed with detergent and water prior to removal from the spill scene. All rinses from these decontamination procedures must be treated as hazardous waste.
Dry decontamination may be used when appropriate.

It is frequently necessary to test the site for completeness of decontamination prior to declaring the emergency resolved. Spills which contaminate soil, asphalt, concrete, or other absorbent materials will require that samples be obtained and analyzed. After all residual contamination is removed, asphalt and concrete areas must receive a thorough wash-down with fresh water.

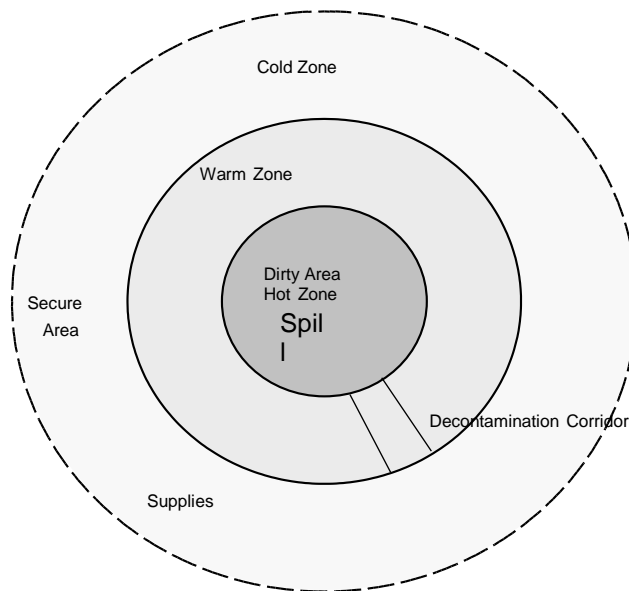
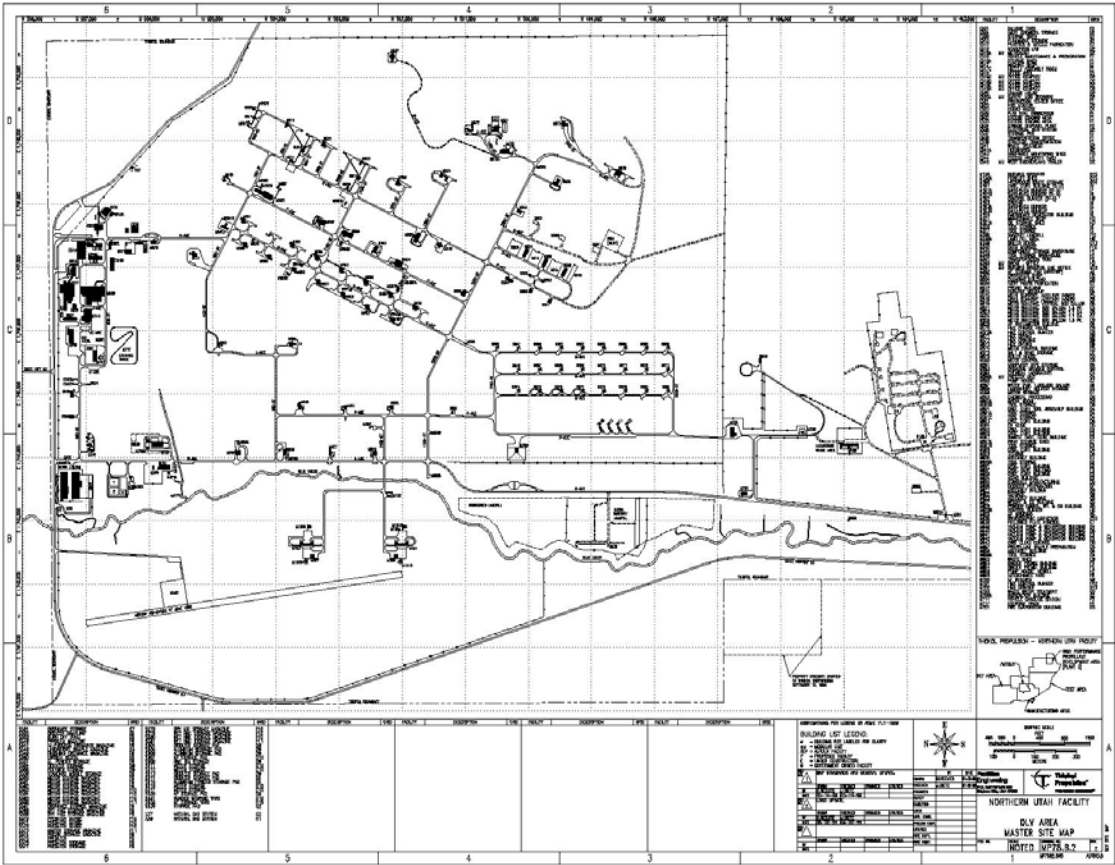


FIGURE 2. DECONTAMINATION

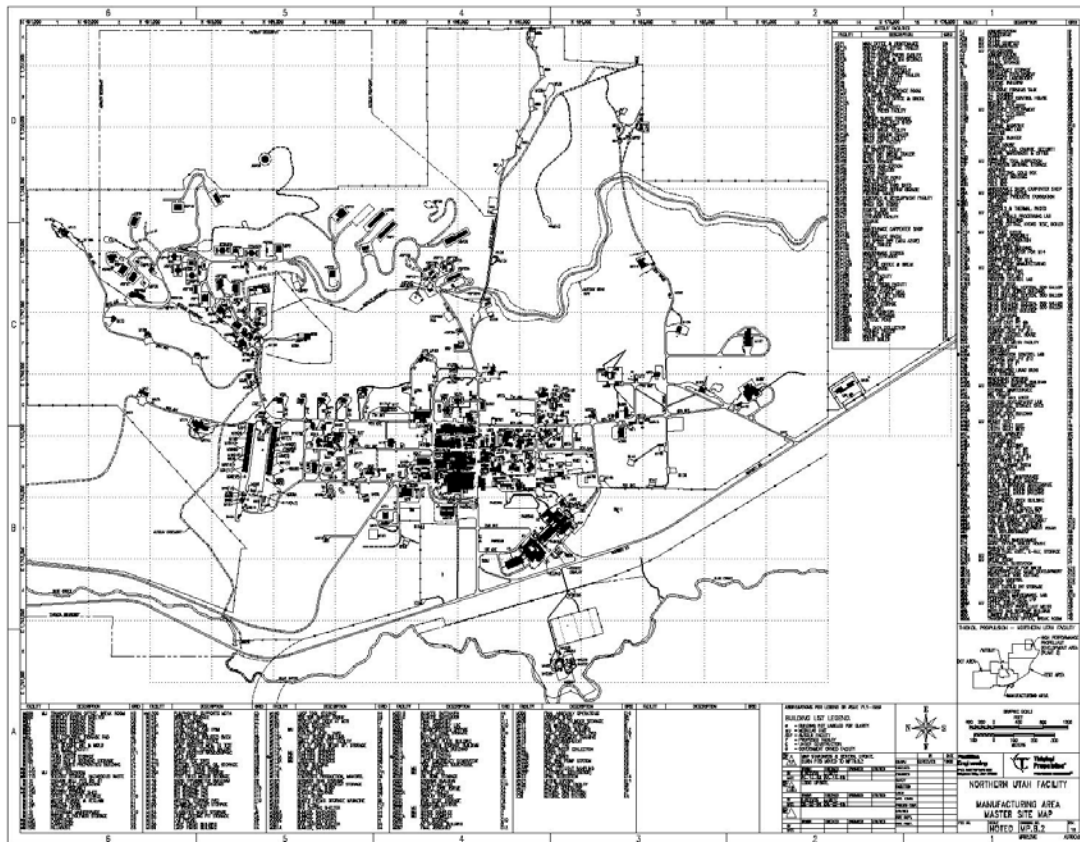
APPENDIX I

FACILITY FUNCTION TABLES, SITE MAPS, & EVACUATION PLANS

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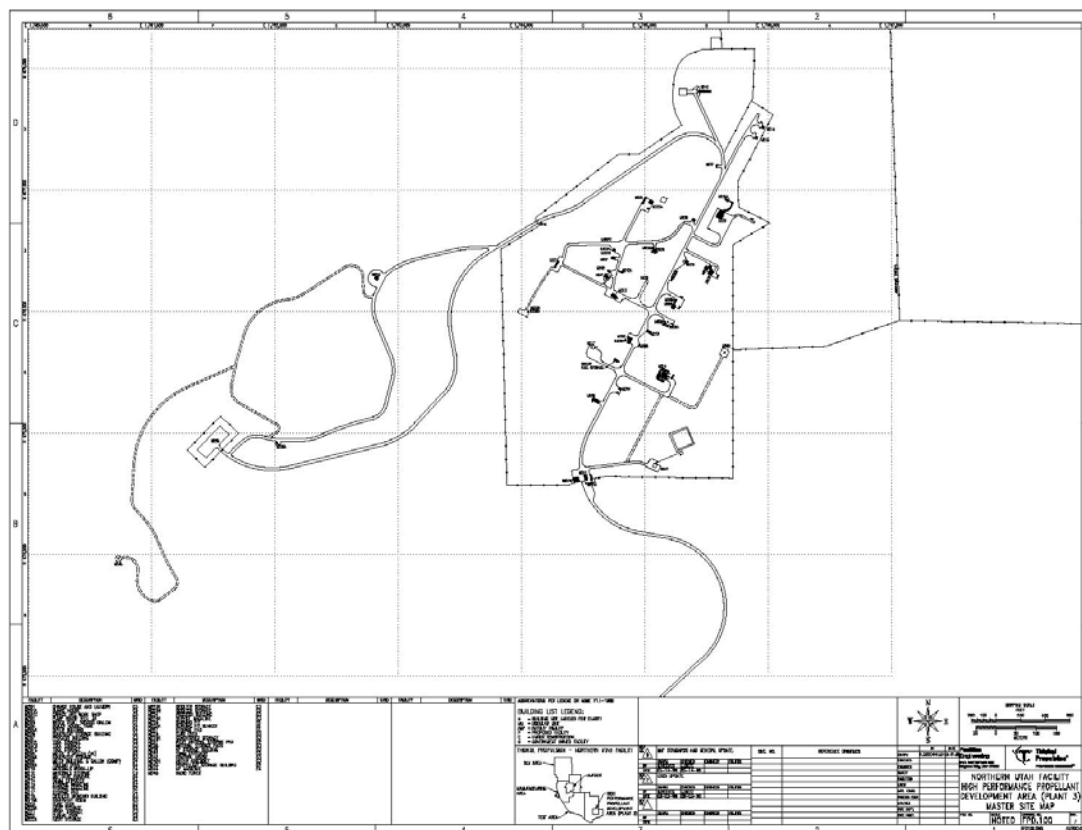


NORTH PLANT SITE MAP



MANUFACTURING AREA SITE MAP
(South Plant)





PLANT 3 SITE MAP

M-136 BURNING GROUNDS

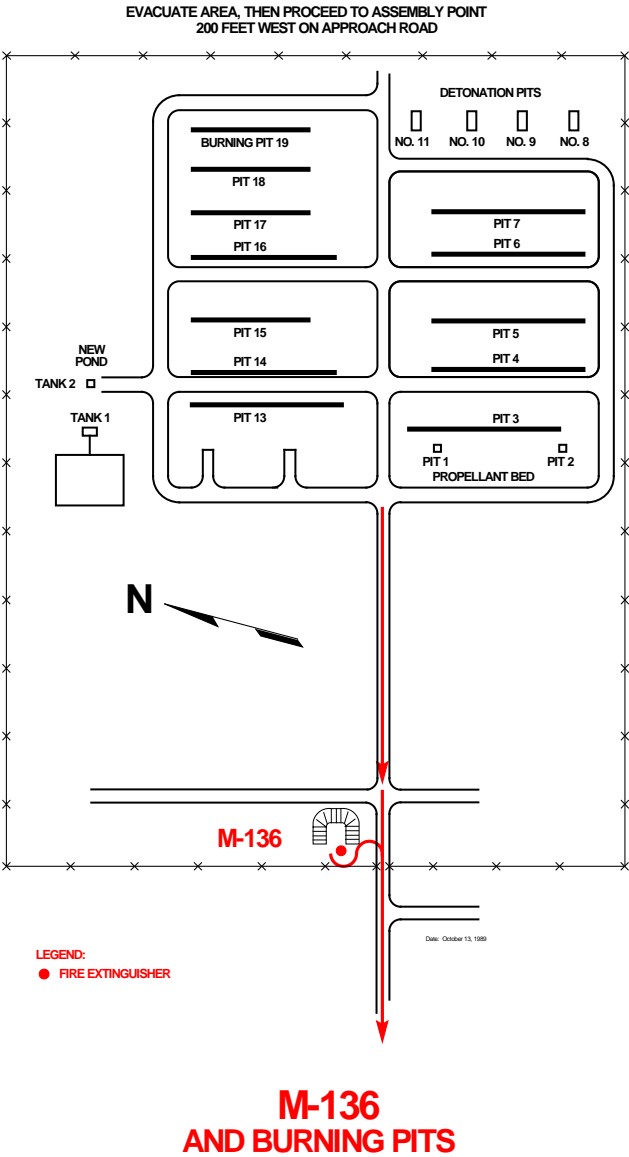
FACILITY FUNCTION: Propellant, explosives, unstable and pyrotechnic waste disposal

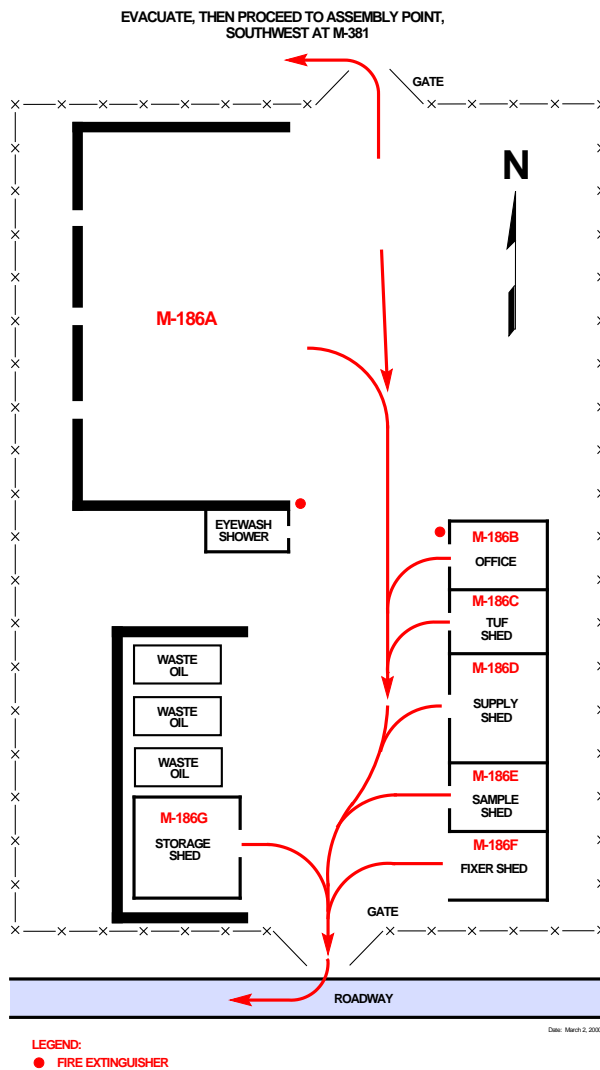
<u>Waste Products Into Area</u>	<u>Method of Disposal</u>	<u>Spill Cleanup/Handling</u>
Class 1.1 and 1.3 propellant wastes, propellant contaminated wastes, and unstable waste.	Burning	Flashing in waste propellant disposal areas

M-186 HAZARDOUS WASTE AREA

FACILITY FUNCTION: Receive hazardous waste materials and store for shipment

<u>Waste Products Into Area</u>	<u>Method of Disposal</u>	<u>Spill Cleanup/Handling</u>
Methyl Chloroform Methyl Ethyl Ketone Xylene Toluene Paint Thinners Oil Lab Chemicals Photographic Fixer Solution Rags & debris	Store for off-plant shipment Store for off-plant shipment	Six UN Drums Quicksorb, 100 lb Two shovels One broom One fire extinguisher Emergency shower/eye wash Two overpack drums Saranex suit (level B)



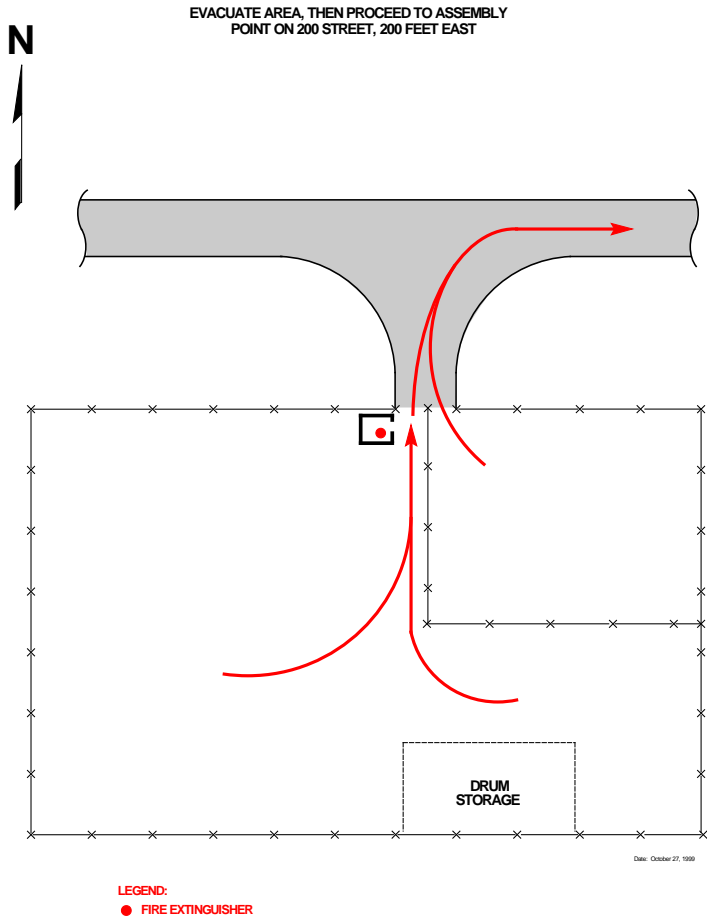


**HAZARDOUS WASTE TREATMENT,
STORAGE, DISPOSAL, AND FACILITIES**
M-186

BUILDING E-501 STORAGE YARD

FACILITY FUNCTION: Hazardous Waste Storage Yard

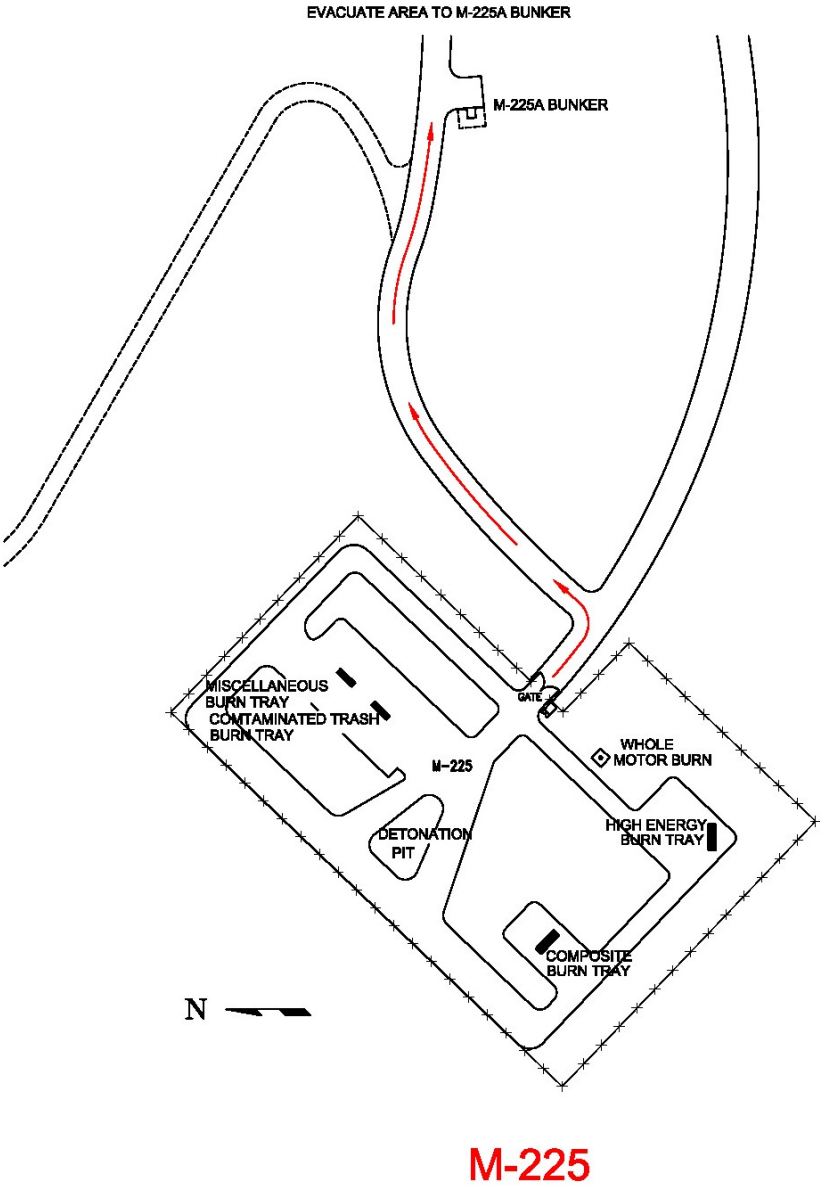
<u>Waste Products Into Area</u>	<u>Method of Disposal</u>	<u>Spill Cleanup/Handling</u>
Various	Shipment off-plant for disposal	Two fire extinguishers Absorbent Two repack drums Electrical pump
Other assorted materials that may be recycled	N/A	Telephone/radio Eyewash/shower Safety gates Safety flags Six UN 55-gal drums (empty) Saranex suit (level B)



M-225 BURNING GROUNDS

FACILITY FUNCTION: Disposal of waste products from High Performance Propellant Development Area and miscellaneous rocket motors, igniters, and related materials

<u>Waste Products Into Area</u>	<u>Method of Disposal</u>	<u>Spill Cleanup/Handling</u>
Composite propellant, uncured from M-209	Burn	Dampened rags (wipes)
Composite propellant, cured from M-221	Burn	Pick up, soft brush or wet rags (wipes)
NG propellant, uncured from M-208, M-241	Burn	Solvent dampened rags followed by NG detector to verify cleanliness
NG propellant, cured from M-221	Burn	Pick up, soft brush and/or wet rags
HMX from M-208, M-210	Burn with diesel	Soft brush and/or water-damp rags. If possible, wet HMX with water before handling
AP from M-210 (fine only)	Burn with propellant	Sweep with soft brush. Wipe with composite water-wet rag. Flush with water into sump
Binder premix (NG or other nitrate, etc.)	Burn or detonate depending on materials and/or condition	Contain, absorb into sawdust or pulp, pick up with wipes, wet rags. Apply NG detector to verify cleanliness
PEP contaminated waste (rags, containers, etc.)	Burn with respective propellant	Pick up, clean with method used for respective propellant or ingredient
Miscellaneous (motor, igniters)	Burn or detonate depending on materials and/or condition	Each case must be dealt with on an individual basis

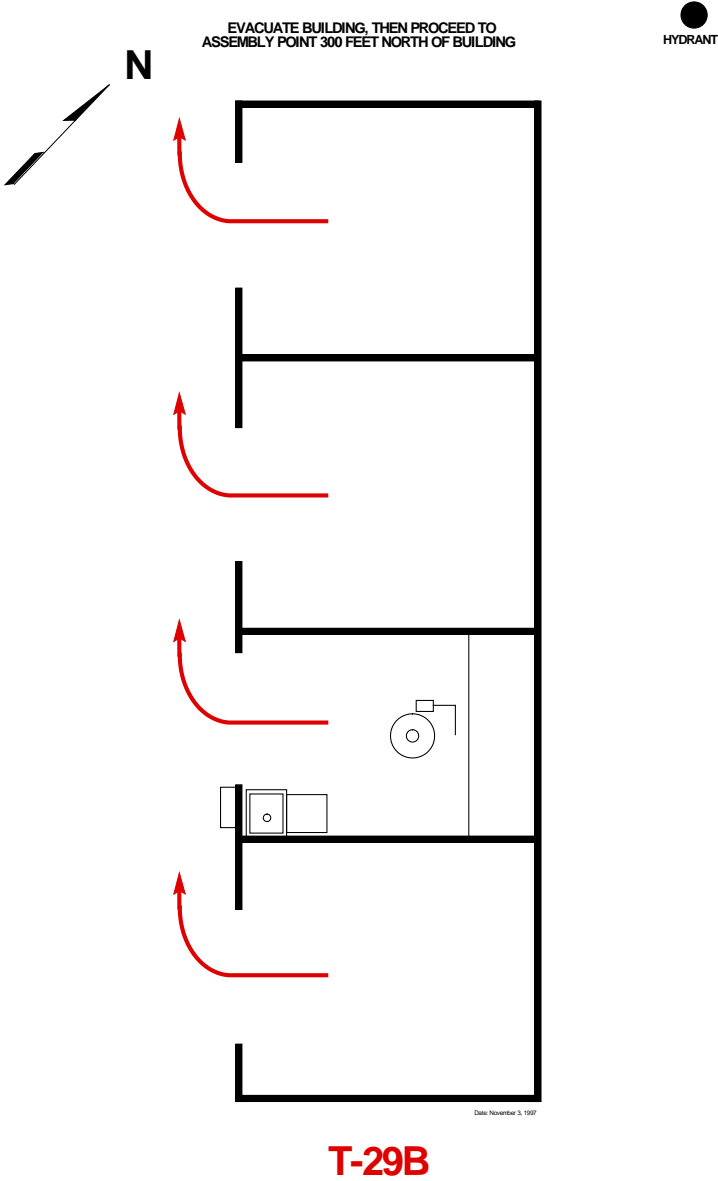


T-29B SATELLITE ACCUMULATION AREA

BUILDING FUNCTION: Hydrazine Storage and Dilution Facility

Waste Product Method of disposal

<u>From Building</u>	<u>Disposal</u>	<u>Spill Cleanup/Handling</u>
Pure hydrazine Hydrazine-citric acid solution 5-50% dilute hydrazine contaminated waste	Dilute with water to 5-50% solution by volume. Waste hydrazine is shipped for disposal/Treatment. Contaminated waste is also shipped for disposal/treatment	All areas where normal operations are performed have a drainage system which culminates in a common sump. Spills should be flushed thoroughly with large amounts of water. The wash water is then drummed and shipped for disposal



M-705 WASTEWATER TREATMENT FACILITY

BUILDING FUNCTION: Removal of reactive wastes from sump water

<u>Waste Products From Area</u>	<u>Method of Disposal</u>	<u>Spill Cleanup/Handling</u>
Lime Sludge (Heavy Metals)	Shipment to off-plant disposal company	Two shovels One broom Plastic gloves One bin Saranex suit (level B)

M-705L Ignitable and Reactive HAZARDOUS WASTE Treatment by Oxidizer Leaching Room

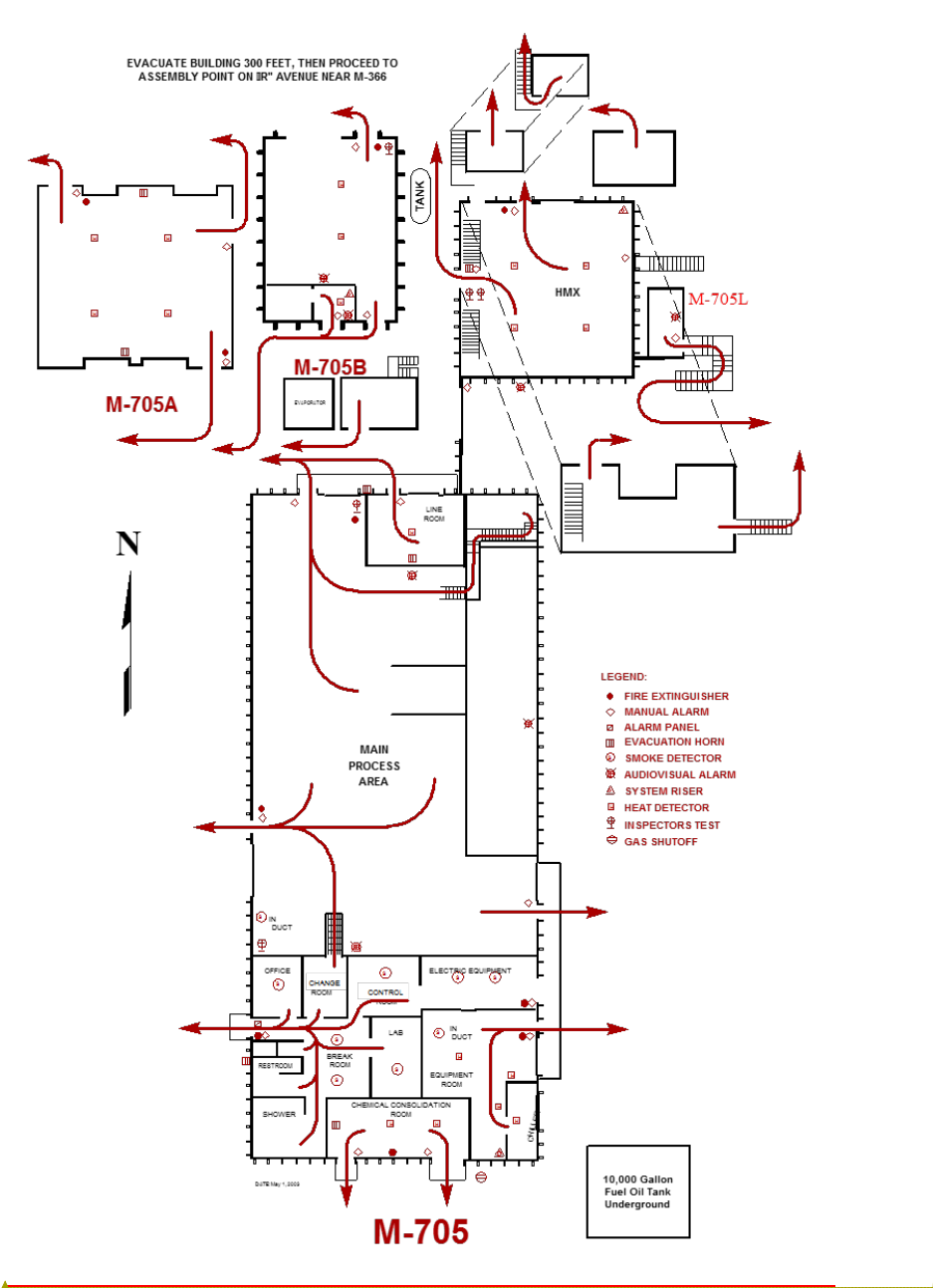
BUILDING FUNCTION: Removal of oxidizers from ignitable and reactive hazardous waste

<u>Waste Products From Area</u>	<u>Method of Disposal</u>	<u>Spill Cleanup/Handling</u>
Solid Waste residue	Landfill or off-plant disposal	Spill Kit (pigs, adsorbent) Plastic Gloves Fire Extinguisher
Oxidizer containing waste water	Wastewater at M-705 WWTP or oxidizer recovery process	Emergency eyewash

M-705S HAZARDOUS WASTE CONSOLIDATION ROOM

BUILDING FUNCTION: Consolidation and lab packing of hazardous wastes

<u>Waste Products From Area</u>	<u>Method of Disposal</u>	<u>Spill Cleanup/Handling</u>
Consolidated hazardous wastes Lab packed hazardous wastes	Shipment to M-186 for eventual off-plant disposal	Two shovels One broom Plastic Gloves One Fire Extinguisher Emergency shower/eyewash Quicksorb, 100 lb Two overpack drums Six UN drums Saranex suit (level B)

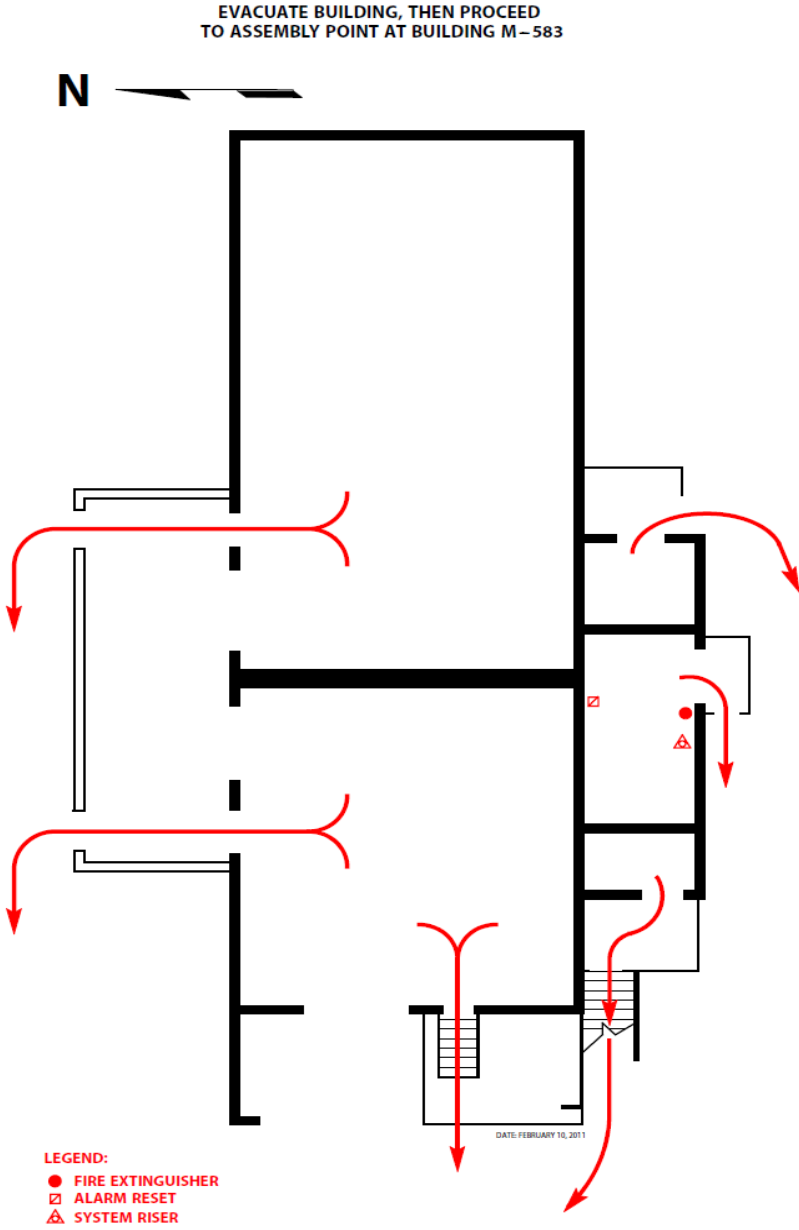


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M-629 PROPELLANT and Propellant Waste STORAGE FACILITY

BUILDING FUNCTION: Storage of reactive hazardous waste propellant/propellant contaminated materials, motors. Non-waste propellant,(donor propellant) and explosive initiation articles are also stored within the building.

<u>Solid Hazardous Waste</u>	<u>Method of Disposal</u>	<u>Spill Cleanup Materials</u>
1.3C Propellant/propellant contaminated materials	Thermal Treatment	Obtain clean up material as needed
1.3C Rocket Motors	Thermal Treatment	Obtain clean up material as needed
1.1C Propellant/propellant contaminated materials	Thermal Treatment	Obtain clean up material as needed
1.1C Rocket Motors	Thermal Treatment	Obtain clean up material as needed
1.3C Flares and Flare Illuminate contaminated materials	Thermal Treatment	Obtain clean up material as needed



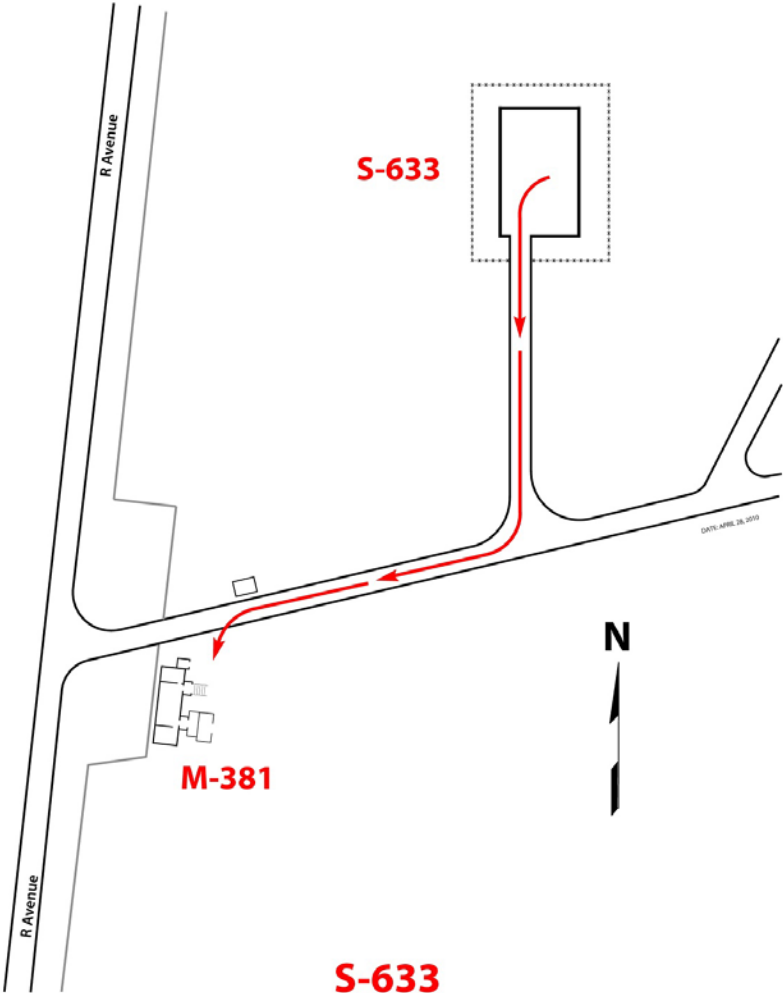
M-629

S-633 REACTIVE HAZARDOUS WASTE STORAGE PAD

STORAGE PAD FUNCTION: Storage of reactive hazardous waste propellant/propellant contaminated materials and motors and non-waste propellant

<u>Waste and non-waste Products</u>	<u>Method of Disposal</u>	<u>Spill Cleanup Materials</u>
1.3C Propellant/propellant contaminated materials	Thermal Treatment	Obtain clean up material as needed
1.3C Rocket Motors	Thermal Treatment	Obtain clean up material as needed
1.1C Propellant/propellant contaminated materials	Thermal Treatment	Obtain clean up material as needed
1.1C Rocket Motors	Thermal Treatment	Obtain clean up material as needed
1.3C Donor Burn Propellant	Burn Enhancer	Obtain clean up material as needed
1.3C Flares and Flare Material	Thermal Treatment	Obtain clean up material as needed

EVACUATE PAD, THEN PROCEED TO ASSEMBLY POINT AT M-381



APPENDIX II
 BULK STORAGE AREAS INFORMATION

A. BULK FLAMMABLE LIQUID STORAGE AREAS50
 B. PRACTICAL CONSEQUENCES OF A CATASTROPHIC FAILURE 51

APPENDIX III
 ARRANGEMENTS WITH LOCAL AUTHORITIES.....52

A. BULK FLAMMABLE LIQUID STORAGE AREAS

<u>Location</u>	<u>Type of Flammable Liquid</u>	<u>Capacity (Gallons)</u>	<u>Above/Below Ground</u>
M-4	Butanol	40	Above
	Ethanol	60	Above
	Isopropanol	530	Above
	Methanol	500	Above
	Methyl Ethyl Ketone	400	Above
	Paint	500	Above
	Paint Thinner	120	Above
M-53	Acetone	60	Above
	Ethanol	10	Above
	Heptane	10	Above
	Methanol	50	Above
	Methyl Ethyl Ketone	60	Above
M-55	Gasoline	17,000	Below
M-66	Assorted	80	Above
I-10	Methanol	15	Above
	Methyl Ethyl Ketone	50	Above
M-585	Acetone	50	Above
	Ethyl Acetate	15	Above
	Methanol	10	Above
	Toluene	30	Above
M-711	Gasoline	10,000	Below
E-510	Ethanol	100	Above
	Isopropanol	1,660	Above
	Methanol	35	Above
E-512	Acetone	100	Above
	Isopropanol	50	Above
	Paint Thinner	50	Above
	Polyester Resin	160	Above
	Toluene	50	Above
	Xylene	160	Above
E-517	Isopropanol	170	Above
	Kerosene	50	Above
	Methyl Ethyl Ketone	450	
T-29B	Hydrazine	100	Above

B. PRACTICAL CONSEQUENCES OF A CATASTROPHIC FAILURE

<u>Building Number</u>	<u>Location</u>	<u>Direction of Flow*</u>
I-10	Shed west of building	Has self-containment concrete berm
M-4**	Building north of M-3 system	Liquid would run west across asphalt into drain
M-8**	Two sheds west of building	Spill would drain down west hill
M-43B	Shed south of building	Self-contained storage building
M-53A	Shed south of building	Self-contained storage building
M-66	Shed southwest of building	Spill would run into ditch (trench or grading needed to keep surface runoff from accumulating in containment area)
M-504	Shed south of building	Spill would flow into ditch
M-585	Shed east of building	Spill would drain into ditch
M-605	Waste dock north of building	Spill would drain into ditch
E-512	Shed west of building	Spill would drain into ditch
E-517	Shed north of building	Spill would drain into ditch
*	All other storage areas have self-containment	
**	Fire flows and/or spilled material from these buildings will flow into a gated spill containment structure below M-2. The gates are hand operated.	

APPENDIX III

Arrangements with Local Authorities

Due to the remote location of the ATK Promontory facility and the reactive materials produced, ATK has a specialized and well trained ~~and~~ full time Fire Department and Security Department onsite. ATK's roads and grounds and Water Operations departments maintains a fleet of trucks, tractors, vacuum trucks and other equipment that could be used during an emergency response. The facility also has a nursing staff during normal business hour, and a 24/7 ambulance service operated by ATK firemen with EMT certifications. These emergency response capabilities are often used to support the local community.

Since the Promontory ATK facility has the resources described above, the Quick Reference Guide as required by R315-262-262 with its associated map showing where hazardous wastes are generated, accumulated and treated will be maintained in the facility operating record.

Due to these capabilities, the need for outside assistance is greatly reduced. The most likely need for outside assistance would be that of hospital service. Arrangements ~~have will be~~ made with both the Bear River Valley Hospital and the Brigham City Community Hospital to accept employees that may have been injured due to an explosion, chemical exposure or other accident. This arrangement ~~will included~~ information on the types of chemicals used at ATK Promontory as well as explosive hazards and other mechanical hazards associated with work performed at ATK.

The most likely scenario that would require assistance from a police agency would be the need to control traffic on Highway 83. In the event of such an emergency, ~~A~~rrangements for assistance in this area will be made with the Box Elder County Sheriff's Department and the Utah Highway Patrol. All on plant traffic control will be handled by ATK's security department.

ATK has established contracts with ~~three~~ different emergency response/remediation contractors for use as needed. While we do not anticipate the need for emergency service assistance, these companies are on call to provide service if needed.

All emergency response at the plant will be handled by the ATK Fire Department, who will act as the primary emergency authority. If warranted, ~~A~~rrangements will also be made with the Box Elder County Fire Department and the Tremonton Fire Department. We do not anticipate any need for assistance from the ~~Utah~~ Department ~~Division~~ of Environmental Response and Remediation, although notification of emergencies will be made to this department as required. In addition to those agencies listed above, ATK will also provide a copy of the contingency plan to the Box Elder County Emergency Planning Committee for review ~~and comment.~~

Below is a summary list of those agencies/service providers for which service arrangements will be sought if needed:

Bear River Valley Hospital
Brigham City Community Hospital
Box Elder County Sheriff's Department
Utah Highway Patrol
Box Elder County Fire Department
Tremonton Fire Department

The most recent copy of the Contingency Plan will be sent to each of these agencies in order to familiarize them with the layout, description of hazardous wastes handled, and evacuation plans for the plant. All ~~notification correspondence with~~ these agencies, ~~in regard to~~ the Contingency Plan and ~~service assistance~~ arrangements will be kept in the Operating Record.

CLOSURE PLAN AND FINANCIAL REQUIREMENTS

This Closure Plan describes the steps that will be taken to close the hazardous waste management units (HWMUs) at the ATK Launch Systems Inc. – Promontory (ATK) facility. Closure Cost estimates are maintained in the Operating Record once approved by the Director. HWMUs included in this document are: M-186; M-705S; ~~M-705L~~; E-501; M-136; M-225; T-29B; M-629 and S-633.

The Closure Plan was developed to comply with ~~R315-8-7~~R315-264-110 through 120 and ~~R315-8-9~~R315-264-178 of the Utah Administrative Code (UAC). ~~UAC R315-8-7 incorporates by reference the requirements of 40 CFR 264 Subpart G.~~ The closure cost estimates were made in accordance with ~~UAC R315-8-8~~R315-264-140 through 151, ~~which incorporates by reference the requirements of 40 CFR 264 Subpart H.~~

All HWMUs in current operation are being managed in a manner that facilitates clean closure. Historical sites, such as the LTTAs do require post closure care, and are covered in our Post Closure Permit.

1.0 Closure Plans [~~40 CFR 270.14(b)(13)~~R315-270-14(b)(13), ~~270.23(a)(2)~~R315-270-23(a)(2), and ~~264.112(a)(1)~~R315-264-112(a)(1) & (2)]

This Closure Plan identifies the general steps needed to close storage and treatment facilities, as identified above, at the end of their operating life. Copies of this plan will be maintained at the Promontory Facility. The closure plans will be followed as written, unless modification to the original plans have been submitted and approved by the Utah Department of Environmental Quality, Division of ~~Waste Management and Radiation Control~~Solid and Hazardous Waste (D~~WMRC~~SHW). Upon update/revision approval, revised pages or complete documents will be sent to all plan addressees.

1.1 Closure Performance Standards [~~40 CFR 264.111~~R315-264-111 and ~~UAC R315-8-7~~]

Closure standards specified under RCRA are designed to be protective of human health and the environment. These goals will be achieved by one of the following closure methods:

- Clean closure – this method refers to residential risk based levels. Cleanup to residential risk based levels, as outlined in UAC R315-101, will be considered clean closure. Clean closure includes removal of all contaminants, or removal to the risk based level.
- Site Management – closure where waste remains in place and specific post closure care is required.

For the purposes of estimating closure costs, it is assumed that all of the HWMUs will be “clean closed”. Clean closure can be achieved by cleaning the units to background conditions or by

meeting the clean closure equivalency as defined in ~~UAC~~ R315-101-6(c)(1). All closures will assess real and reasonably likely impacts to human and ecological exposures. Preliminary remediation goals can be established prior to implementing any of the closure plans. Screening levels published by USEPA or site-specific risk based levels based on ~~UAC~~ R315-101-5.2 may be used.

If contamination from hazardous waste or constituents is discovered at a HWMU above risk based goals, further investigation will be performed to determine the extent of the contamination. Based on the results of this investigation, a Corrective Measure Study (CMS) may be prepared for review and approval by the DEQ, prior to implementation.

If investigation suggests that clean closure is not a practicable approach, a Site Management Plan will be prepared. Upon approval, the unit will be closed by implementing appropriate site management or post closure requirements. If this approach is necessary, the Post Closure Permit may be modified to provide post closure care for the sites that are not clean closed.

1.2 Partial Closure and Final Closure Activities [~~40 CFR 264.112~~R315-264-112(b)(1) through (b)(7) and R315-264-110 through 120~~UAC R-315-8-7~~]

This plan is designed to accommodate both partial and final closure. The plan includes separate steps to close storage, consolidation & disassembly areas, and open burning/open detonation areas. A detailed plan for closing each HWMU will be submitted in accordance with Permit Condition III.J.2.

Soil monitoring has been conducted at the M-136 and M-225 burn grounds since 1991. Semi-annual groundwater monitoring is also conducted, in accordance with ATK's Post-Closure Permit.

1.3 Maximum Waste Inventory and Disposal Method [~~40 CFR 264.112~~R315-264-112(b)(3) and UAC R315-264-110 through 120~~R315-8-7~~]

The maximum inventory of hazardous waste onsite at any one time during the life of the facilities is based on permit limitations for inert facilities, and Quantity/Distance(QD) limitations for live materials, based on Department of Defense Explosive Safety Standard 4145.26M or a lesser designated amount. If storage capacities change, the Permit will be modified. These quantity limitations are listed below:

M-186 (inert) -----	400 ea. 55 gallon drum equivalent
M-705S (inert) -----	32 ea. 55 gallon drum equivalent
E-501 (inert) -----	160 ea. 55 gallon drum equivalent
M-136 (live) -----	125,000 lbs 1.3 / 20,000 lbs 1.1
M-225 (live) -----	55,000 lbs 1.3 / 1,500 lbs 1.1
T-29B (inert) -----	1 ea. 55 gallon drum (pure) equivalent
M-629 (live) -----	110,000 lbs 1.3 / 55,000 lbs 1.1
S-633 (live) -----	75,000 lbs 1.3/20,000 lbs 1.1
<u>M-705L(inert)-----</u>	<u>6,000 lbs 1.3</u>

ATK treats reactive hazardous wastes on-site at the M-136 and M-225 open burning grounds. ATK treats ignitable and reactive hazardous wastes on-site at the M-705L oxidizer leaching process. Wastewater is collected and treated on site and discharged through one of two UPDES permitted treatment facilities. All other hazardous wastes are transported ~~by commercial carrier~~ to fully permitted disposal or recycling facilities.

1.4 Schedule for Closure [~~40 CFR 264.112~~R315-264-112(b)(6) and R315-264-110 through 120UAC R315-8-7]

Section 1.4.1 of this plan provides an estimated closure schedule for all activities associated with implementation of this Closure Plan. If sample results indicate the need for additional investigation or a CMS, the schedule will be modified to accommodate the changes. Final closure will be certified by an independent professional engineer licensed in Utah.

1.4.1 Time Allowance for Closure [~~40 CFR 264.113~~R315-264-113(a) and (b) and R315-264-110 through 120UAC R315-8-7]

Final closure is expected to be initiated within 30 days following shipment of the final volume of hazardous waste. If more time is required, a request will be submitted to the Director. All hazardous wastes will be removed or treated within 90 days of (1) plan approval, or (2) after receiving the final volume of hazardous waste, whichever is later. Final closure activities will be completed within 180 days of (1) plan approval, or (2) after receiving the final volume of hazardous waste, whichever is later.

1.4.2 Extensions for Closure time [~~40 CFR 264.113~~R315-264-113(a) and (b) and R315-264-110 through 120UAC R315-8-7]

If closure activities cannot be completed within the time designated in this Closure Plan, a permit modification and request for additional time will be submitted to the DSHW. The request will state the reason for needed additional time and the status of the closure underway. It will also address any added measures that must be followed to minimize any threats to human health or the environment during the extension period.

1.5 Closure Procedures [~~40 CFR 264.112~~R315-264-112 and ~~264.114~~R315-264-114 and R315-264-110 through 120UAC R315-8-7]

All permitted treatment and storage facilities have been designed and managed to minimize possible contamination. This includes chemical resistant concrete coatings, blind containment sumps, regular inspections, regular maintenance, and prompt cleanup of any spilled materials. These practices should greatly reduce the need for significant remediation efforts upon closure.

1.5.1 Soil and Groundwater Sampling

Groundwater sampling is not covered under this plan. A groundwater monitoring program is required by ATK's Post-Closure Permit and is currently in place, ~~as discussed above~~. Soil

sampling should not be required for any of the permitted facilities, except for the two burn ground areas (M-136 and M-225) and S-633. However, should if the Director determines that soil sampling be deemed is necessary at any of the permitted facilities, ATK will shall submit a soil sampling plan as requested. The soil sampling plan shall conform to the QAPP contained in Attachment 3 of the Post-Closure Permit.

Detailed sampling plans will be submitted in accordance with Permit Condition ~~III.J.2.~~ II.O.2. Samples will first be collected at locations most likely to have been affected by waste management practices – as approved by ~~DSHW-DWMRC~~ personnel. Twenty soil samples will be collected at M-136, eight soil samples will be collected at M-225 and eight soil samples will be collected at S-633. These samples will be sent to a State of Utah certified laboratory for analysis as required by Module II.D. Sample collection, preservation and handling methods will follow those outlined in the Waste Analysis Plan of this permit, and will be in compliance with all applicable SW-846 methods. All samples will be processed and analyzed by a Utah Certified Laboratory in accordance with Module II.D and R444-14-3(2) UAC. ~~Analytical and extraction methods to be used are shown below.~~ Laboratory methods shall be those specified in “Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846 (Third Edition, November 1986)” or most currently promulgated edition, “Standard Methods for Examination of Water and Wastewater (17th Edition, 1989)” or most currently promulgated edition; or an equivalent method as approved by the Director.

Analytical and Extraction Methods		
Parameter	Analytical procedure	Extraction Procedure
Volatiles	SW-846; 8260 B	SW-846; 5030 B (W), 5035 S (S)
Semi-Volatiles	SW-846; 8270 C	SW-846; 3510 C (W), 3550(S)
RCRA Metals	SW-846; 6010 B	SW-846; 3005 A (W), 7471 A (S)
Mercury	SW-846; 7470 A /7471 A	SW-846; 7470 A (W), 7471 A (S)
Explosives	SW-846; 8330 Modified	SW-846; 8330 Modified
Perchlorate	EPA 314.0	EPA 314.0

1.5.1.1 Sampling Equipment Decontamination Procedures

All field sampling equipment will arrive on site pre-cleaned, and will be decontaminated following standard protocol and the waste analysis plan in this permit. A mobile decontamination station will be used to clean all sampling equipment that could come in contact with soil samples.

1.5.1.2 Sampling Waste Management

All waste generated from field sampling and decontamination operations will be managed in accordance with the current UAC R315 rules. Water used in the decontamination process will be containerized and ~~sent offsite for treatment or disposal~~ disposed in accordance with permit

requirements. Soils will be stored in ~~UN~~ DOT approved containers pending lab results. Any soil determined to be hazardous waste will be managed appropriately.

All non-aqueous hazardous waste generated by the sampling operation will be transported ~~by a third party contractor off site~~ to a fully permitted TSDf for disposal. Any waste determined not to be hazardous under EPA regulations will be sent via third party to a non-hazardous landfill for disposal.

A field log will be maintained to track and identify all samples. This log will include sample numbers, dates, times, sample depth, samplers name, weather conditions, test methods and constituents for which to analyze.

1.5.1.3 Health and Safety Procedures

Soil and water sampling will be performed by trained and qualified personnel. A determination of appropriate personal protective equipment (PPE) to be used for this effort will be determined at the time of closure. PPE selection will be based on potential hazards as determined at the time of closure, and in consultation with Industrial Hygiene professionals.

Soil sampling should only be required at the burn grounds, because of well-maintained secondary containment and waste management practices during the entire life of all other permitted facilities. Protective clothing appropriate for the task will be used during removal of waste and during decontamination of containment areas for the permitted storage and treatment units.

1.5.2 Determining Cleanup Goals

For the purposes of estimating closure costs, it is assumed that all of the HWMUs will be clean closed. Clean closure can be achieved by cleaning the units to background conditions or by meeting the clean closure equivalency as defined in ~~UAC~~ R315-101-6(c)(1). All closures will assess real and reasonably anticipated potential impacts to human and ecological exposures. It is anticipated that the HWMUs will be clean closed and will not require post-closure care.

1.5.3 Site Cleanup

1.5.3.1 Inventory Removal [~~40 CFR 264.112~~ R315-264-112(b)(3) and R315-264-110 through 120~~UAC R315-8-7~~]

The maximum inventory of hazardous waste on hand at any given permitted facility is based on the maximum allowed under this permit, or a quantity - distance limit for explosives, imposed by the Department of Defense and ATK. These limitations are specified in Section 1.3 of this Closure Plan.

Transportation and disposal costs of all hazardous waste during closure of a facility will be based on hiring a third party. The transportation contractor will be licensed and insured, and the

disposal facility will be a permitted facility. Reactive hazardous wastes may be open burned on site. Cost calculations for treatment, disposal and equipment decontamination will be based on maintaining an ATK staff sufficient to complete these efforts.

1.5.3.2 Disposal or Decontamination of Equipment and Structures [~~40 CFR 264.112~~R315-264-112(b)(4), ~~264.112~~R315-264-112(e), and ~~264.114~~R315-264-114 and R315-264-110 through 120~~UAC R315-8-7~~]

Decontamination of equipment and structures at the Promontory facilities will follow one of two plans. These plans cover the open burning units, and all other facilities.

The open burning facilities use burn trays, pipes, concrete vaults or rocket cases to contain the waste to be treated. Most of the material burned is hazardous by characteristic only. Any waste that may be contaminated with, or contains solvents or hazardous heavy metals is designated as a derived waste, and the ash collected for offsite disposal. Therefore, except for the derived trays, all ash in trays, vaults, cases, and on the ground around these units will be collected and disposed on-site. The burn trays will then be high pressure water washed and the rinsate collected for disposal. After the final rinse, a composite sample from the trays will be collected and analyzed at a Utah certified lab as required by Module II.D requirements to verify proper tray decontamination. Each sample will include rinsate from 5 trays. Samples will be extracted and analyzed as described in 1.5.1.

All facilities except for M-136, M-225, M-629 and S-633 are designed with secondary containment. The secondary containment includes a concrete pad with curbing and blind sump to simplify cleaning. The containment pads and sumps are coated with a chemical resistant epoxy to prevent liquid migration through the concrete. Secondary containments are inspected daily, when in use, and maintained as needed. After removal of all containerized waste, the liquid chemical containment pads of facilities E-501, M-186, M-705L, M-705S, and T-29B will be high pressure water washed, and the rinsate will be collected for disposal. After the final wash, rinse water samples will be collected from each sump and characterized for disposal. Samples will be sent to a State certified laboratory for analysis following the requirements found in Module II.D.

1.5.3.3 Closure Containers [~~40 CFR 264.178~~, and ~~UAC R315-8-9.9~~R315-264-178]

Non-reactive hazardous waste requiring off-site disposal will be placed in ~~a~~ UN or a bulk USDOT authorized containers for offsite shipment to permitted disposal facilities. Empty containers will be managed as described in Attachment 9~~cleaned in compliance with 49 CFR, and sent for disposal.~~

2.0 Closure Certification [~~40 CFR 264.115~~R315-264-115 and R315-264-110 through 120~~UAC R315-8-7~~]

Within 60 days of completion of closure of each facility, ATK will submit a certification to the DSHW by registered mail, that the hazardous waste management facility was closed in compliance with this Closure Plan. This certification will be signed by ATK and an independent

registered professional engineer licensed in Utah. Documentation supporting the engineer's registration will be provided upon request.

3.0 Closure Cost Estimate [~~40-CFR-264.142~~R315-264-142]

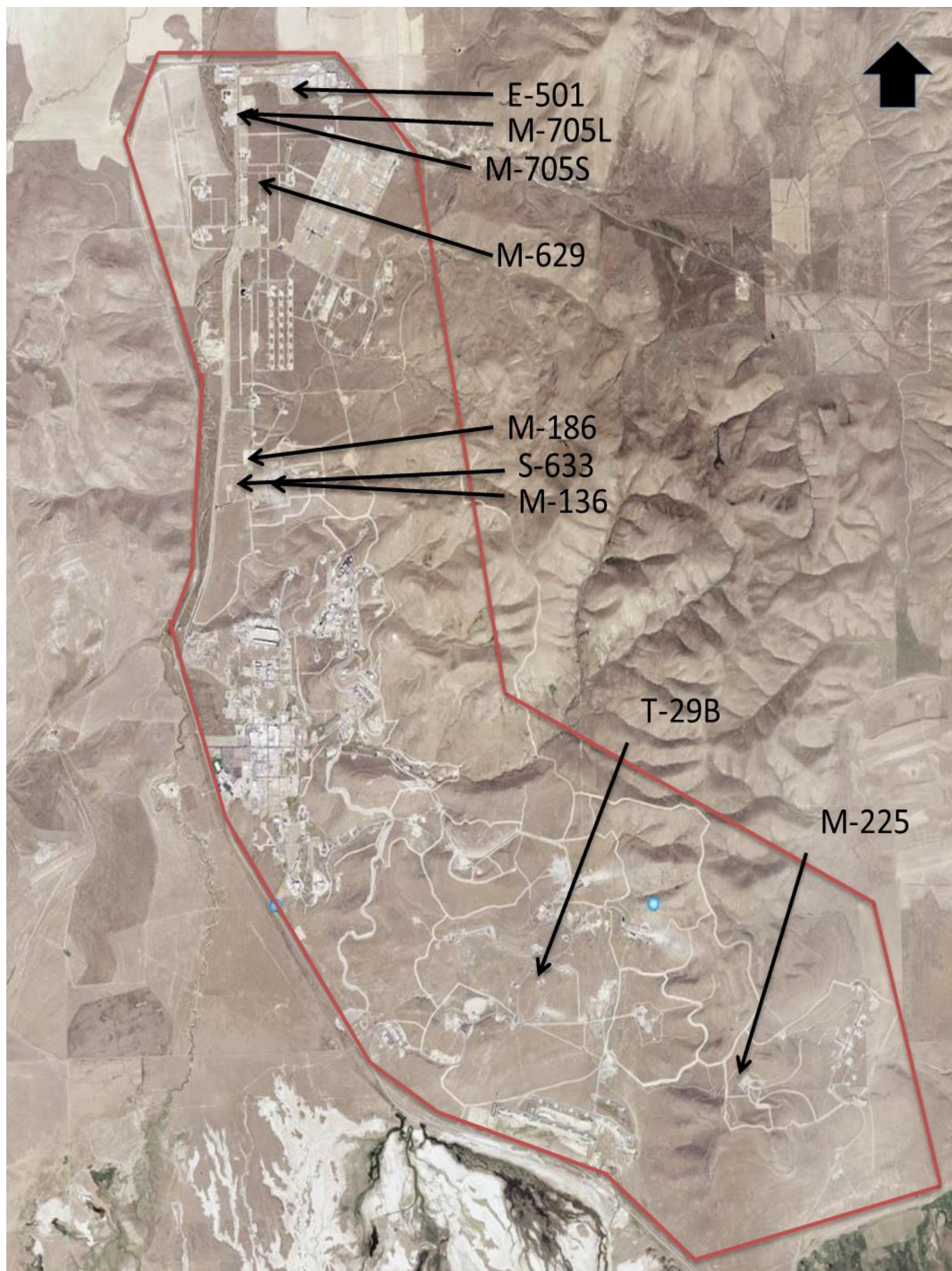
Closure cost estimates are maintained in the operating record once approved by the Director. Closure cost estimates are based on using a third party except for the thermal treatment and disposal of reactive waste which will be conducted on site.

4.0 Financial Assurance Mechanism for Closure [~~40-CFR-264.143~~R315-264-143 and R315-309]

ATK will maintain current financial assurance meeting the requirements outlined in the above referenced Federal and State regulations. ATK will provide documentation to DSHW supporting compliance with financial mechanism requirements.

5.0 Post Closure Plan

If it is determined that a HWMU can't be clean closed, contaminants may be left in place, and a post closure or site management plan will be developed. Any proposal for post closure care or site management will be developed in accordance with ~~UAC R315-8-7, UAC R315-8-8 and 40 CFR 264 Subparts G and H~~R315-264-110 through 120 and R315-264-140 through 151, and will be submitted to the Director for approval. If this approach is necessary, the Post Closure Plan may be modified to provide post closure care for the sites that are not clean closed.



ATK Promontory Facility – Figure 6A

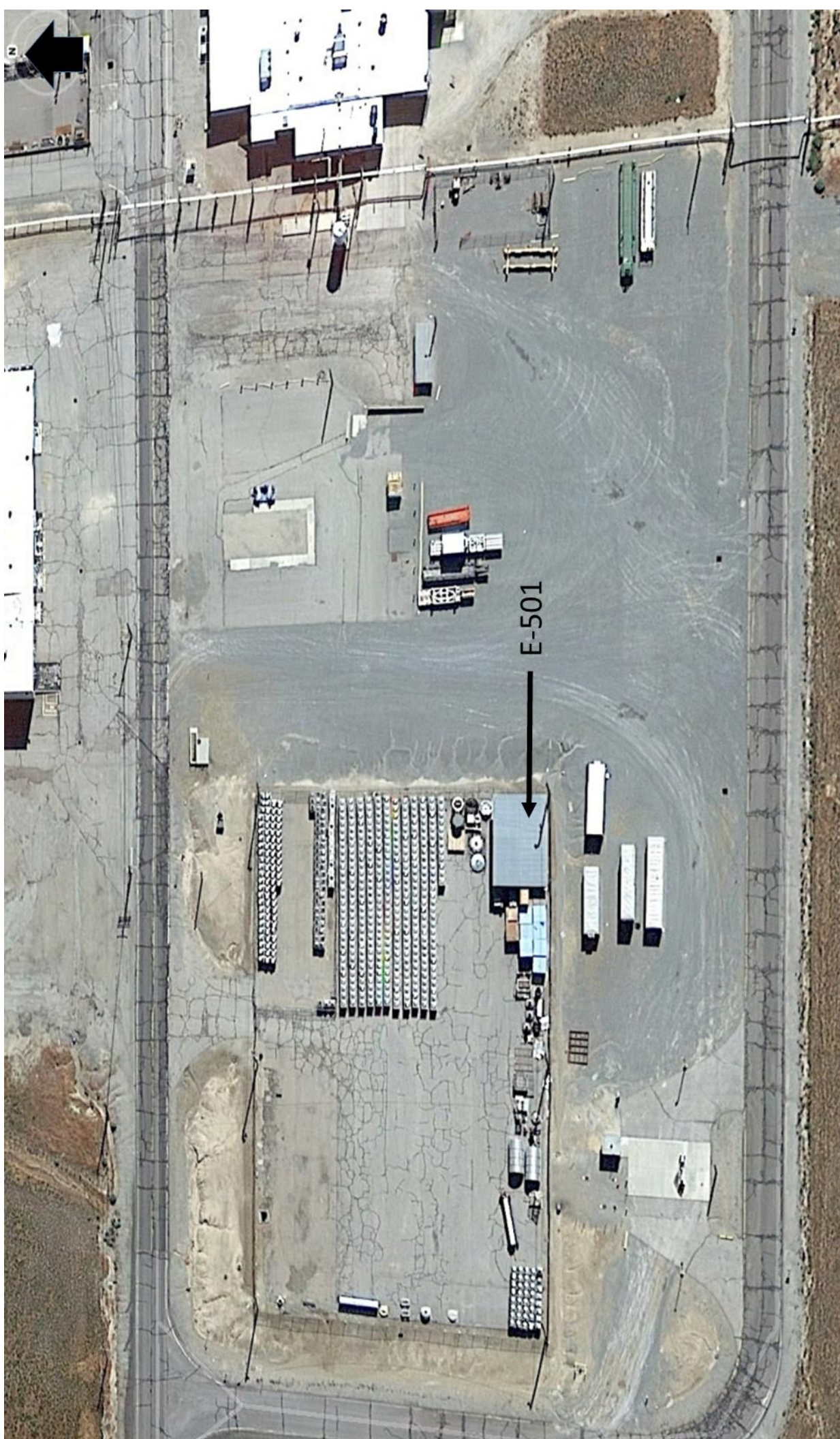
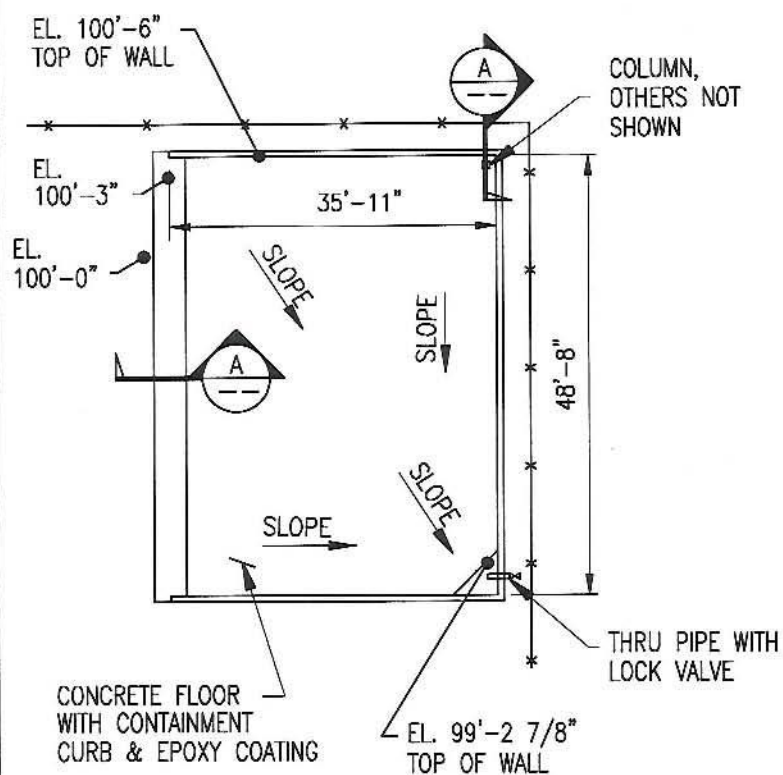
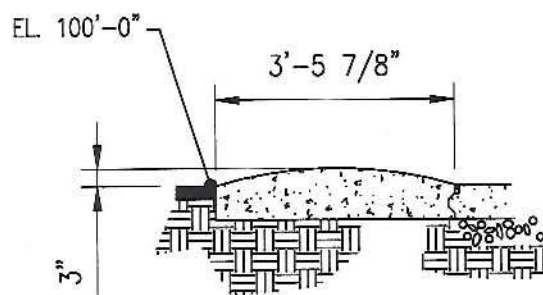


Figure 6B



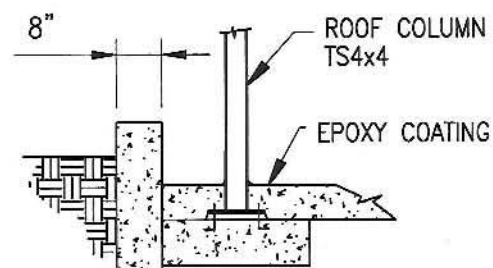
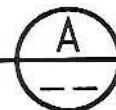
E-501 PLAN VIEW

SCALE: 1" = 20'-0"±



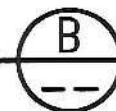
SECTION

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SECTION

SCALE: 3/8" = 1'-0"



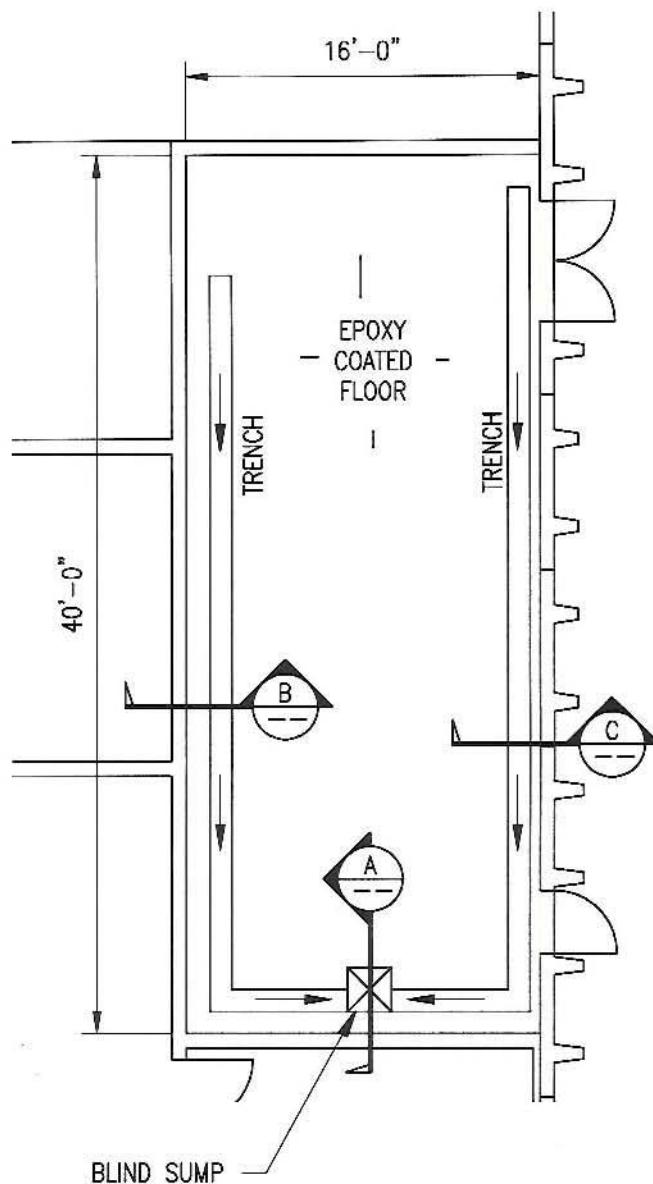
E-501 PAD LAYOUT

FIGURE B-1



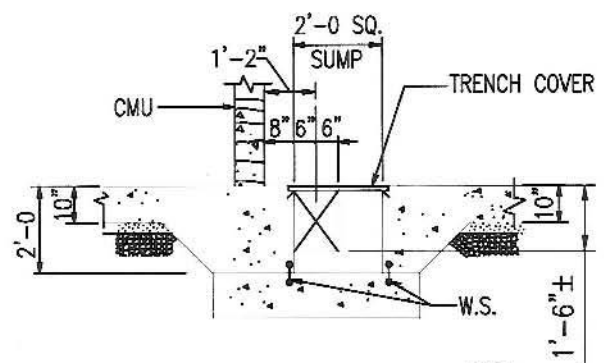


Figure 6C



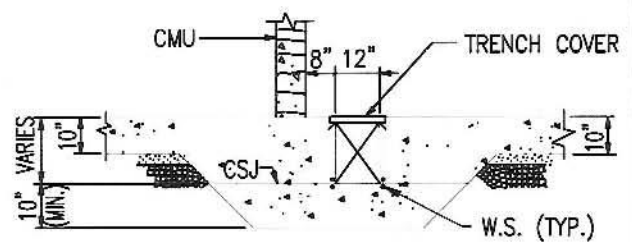
M-705S PLAN VIEW

SCALE: 1/8" = 1'-0"



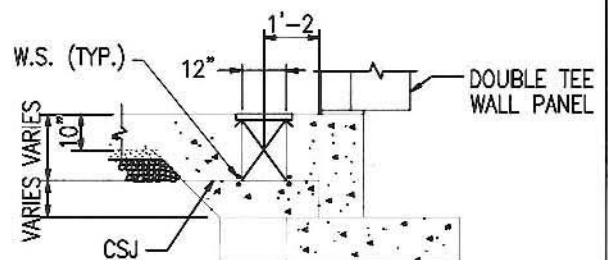
SECTION A

SCALE: 1/4" = 1'-0"



SECTION B

SCALE: 1/4" = 1'-0"



SECTION C

SCALE: 1/4" = 1'-0"

M-705S BUILDING LAYOUT

FIGURE C-1

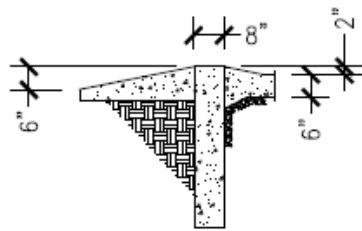




Figure 6D

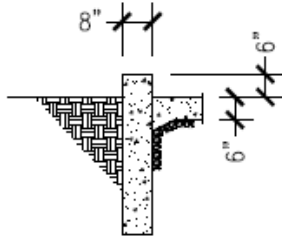
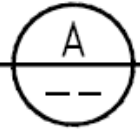


Figure 6E



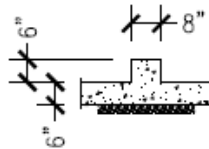
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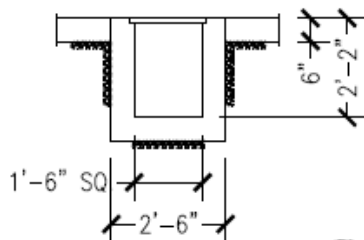
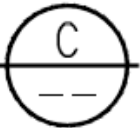
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SECTION

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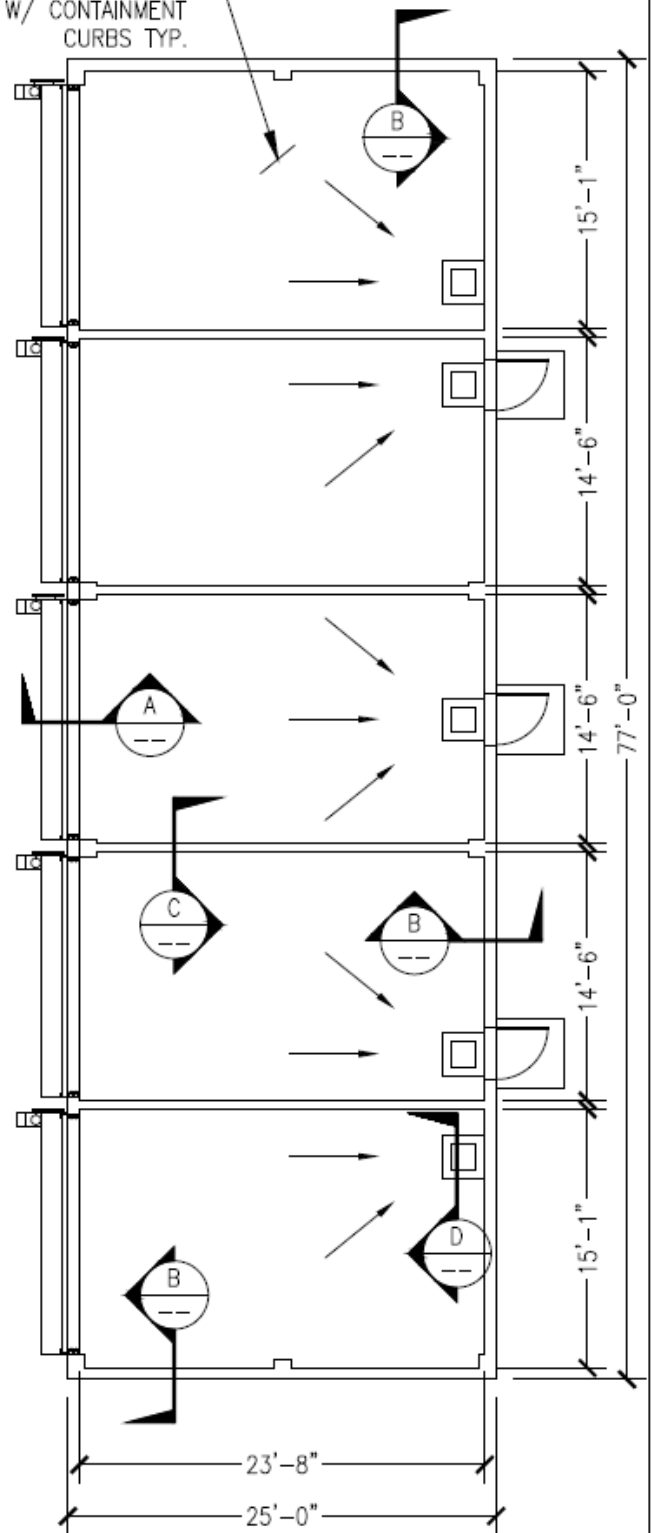


SECTION

SCALE: 1/4"=1'-0"



CHEMICAL RESISTANT
CONCRETE FLOOR
W/ CONTAINMENT
CURBS TYP.



M-186A BUILDING LAYOUT
FIGURE E-1



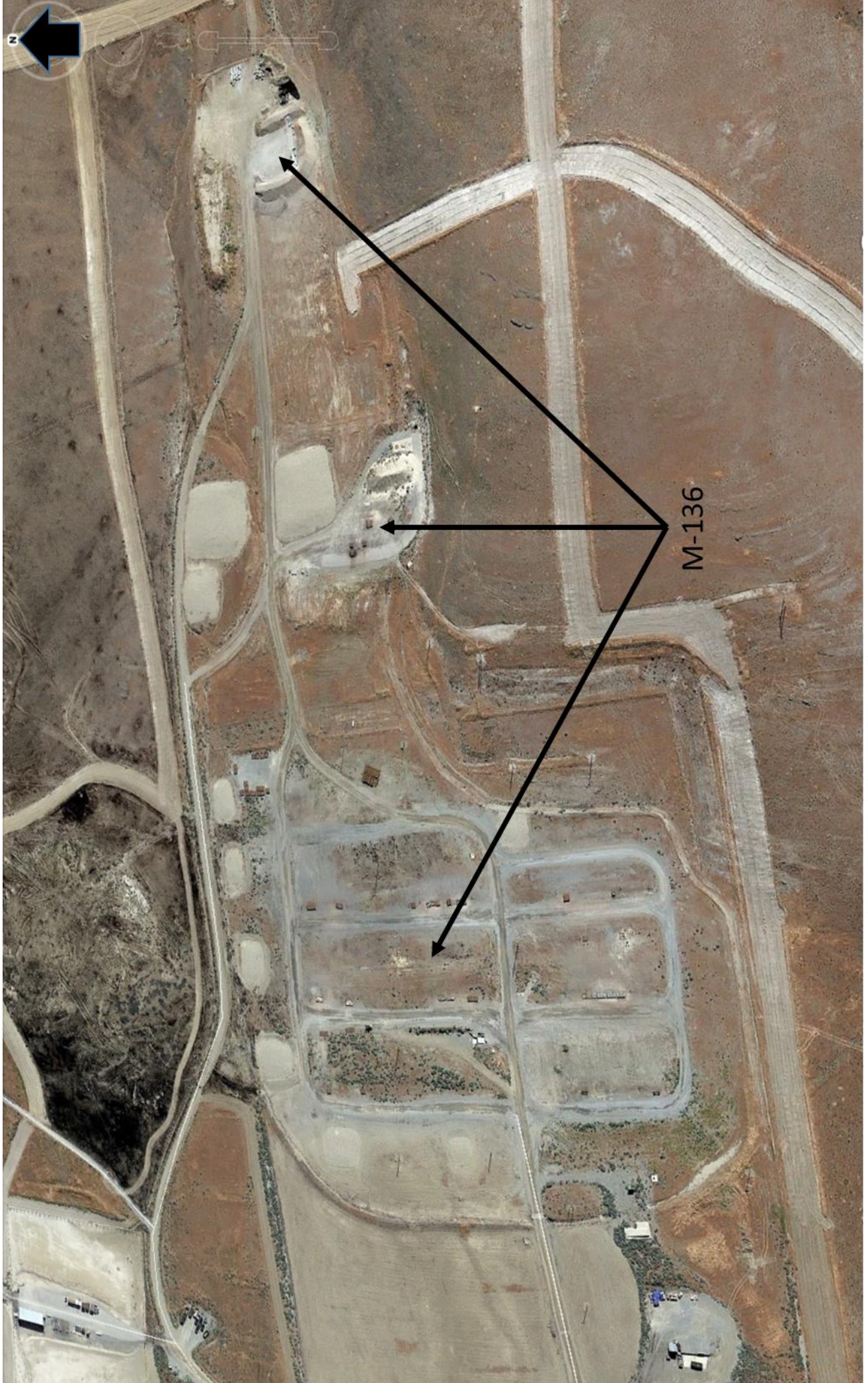
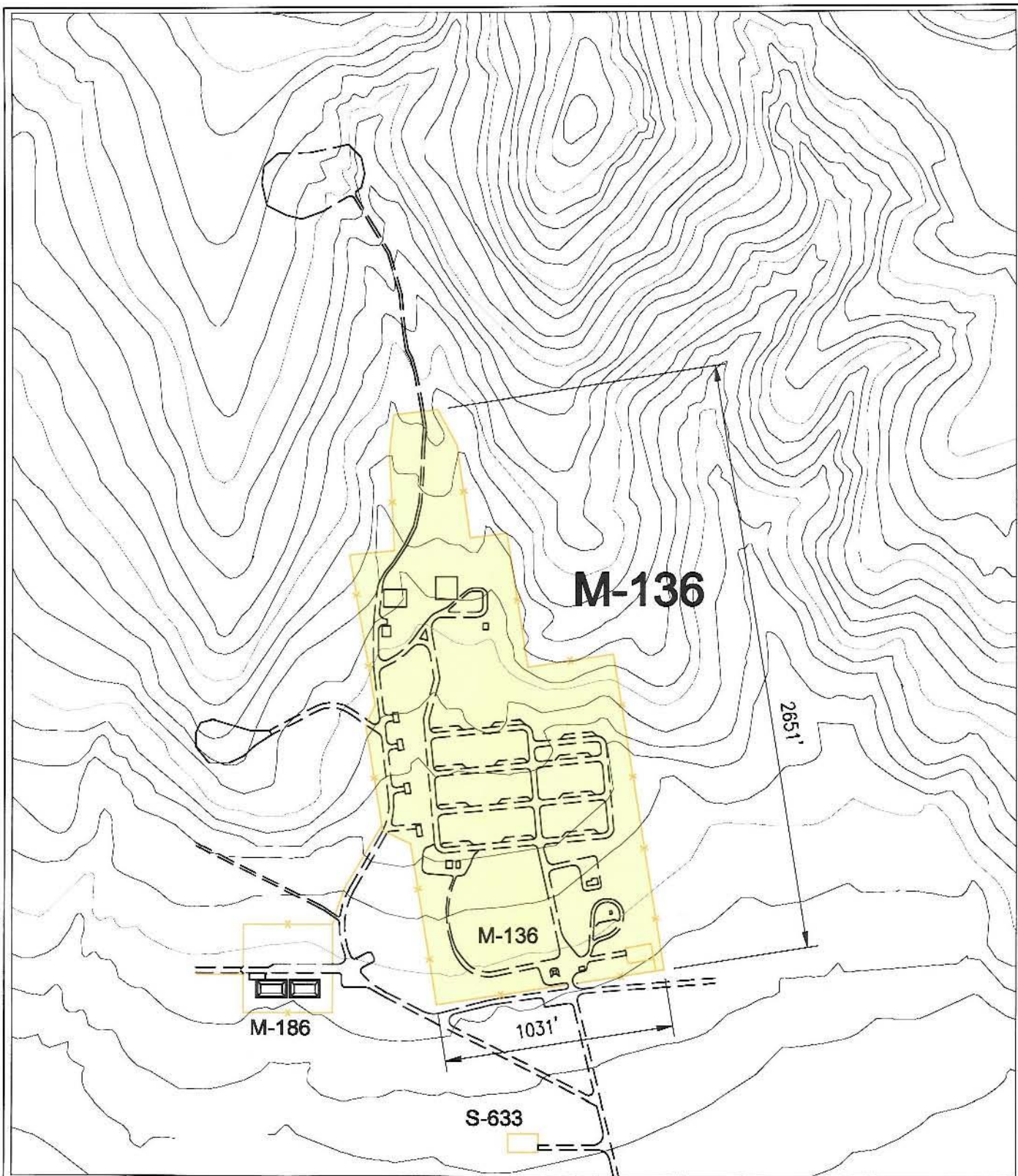


Figure 6F



**M-136 BURN GROUND
FACILITY LAYOUT
FIGURE F-1**



SCALE: 1" = 800' - 0"±



Figure 6G

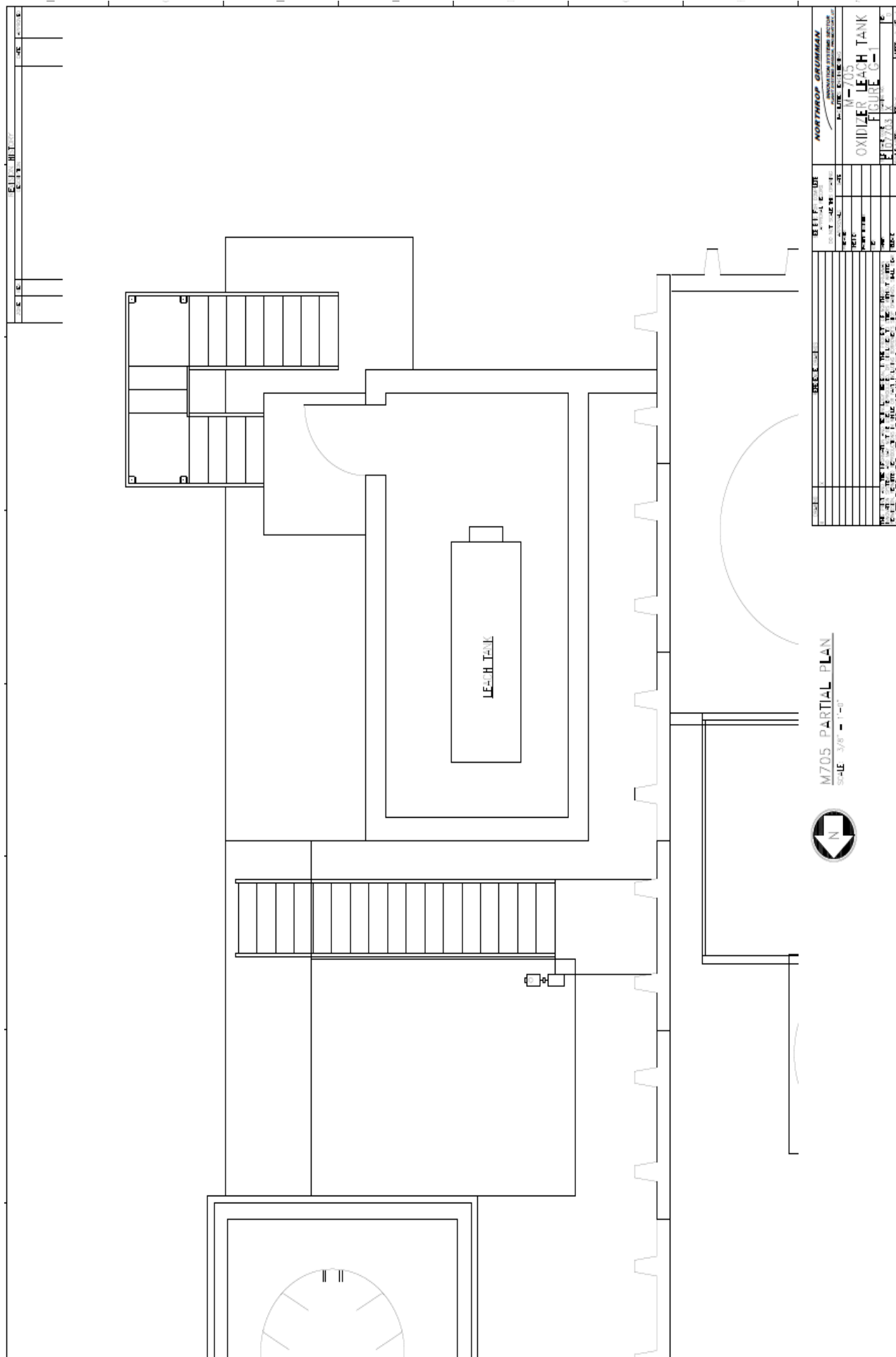
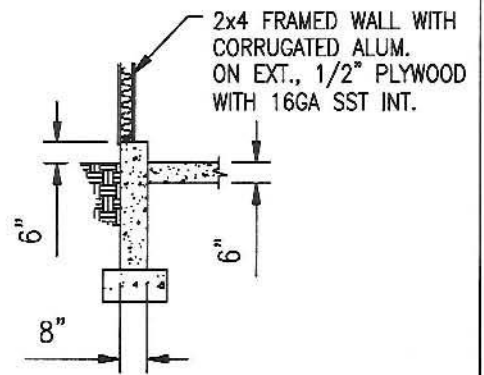
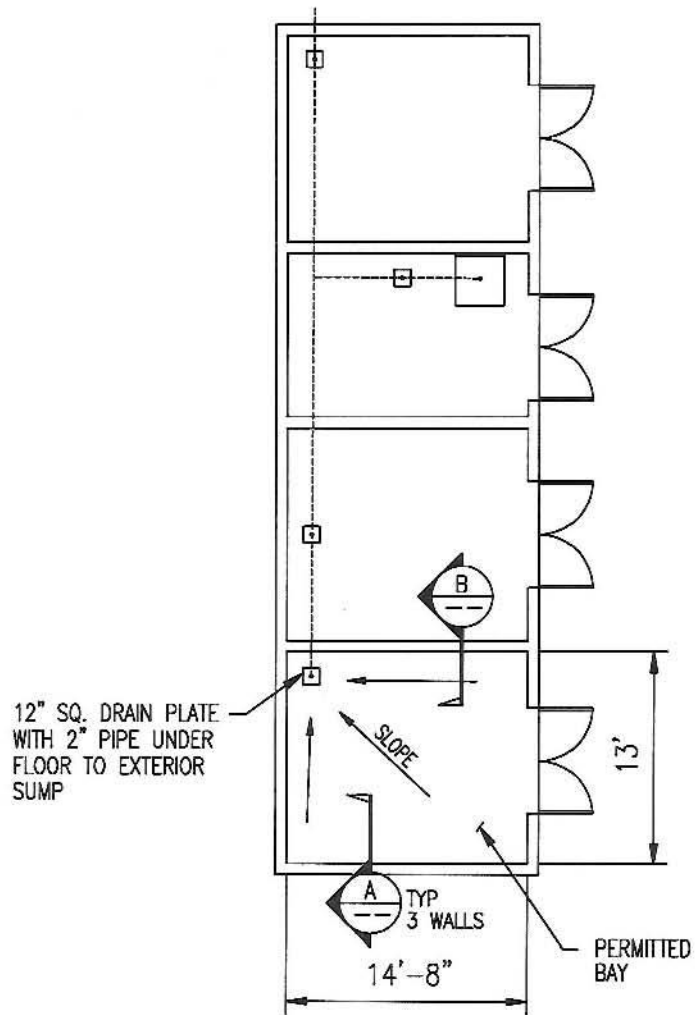


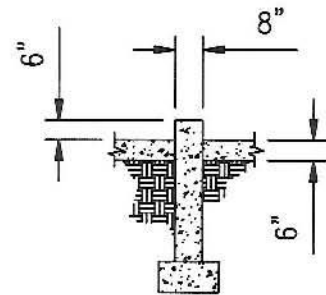


Figure 6H



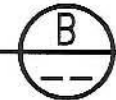
SECTION

SCALE: 1/4" = 1'-0"



SECTION

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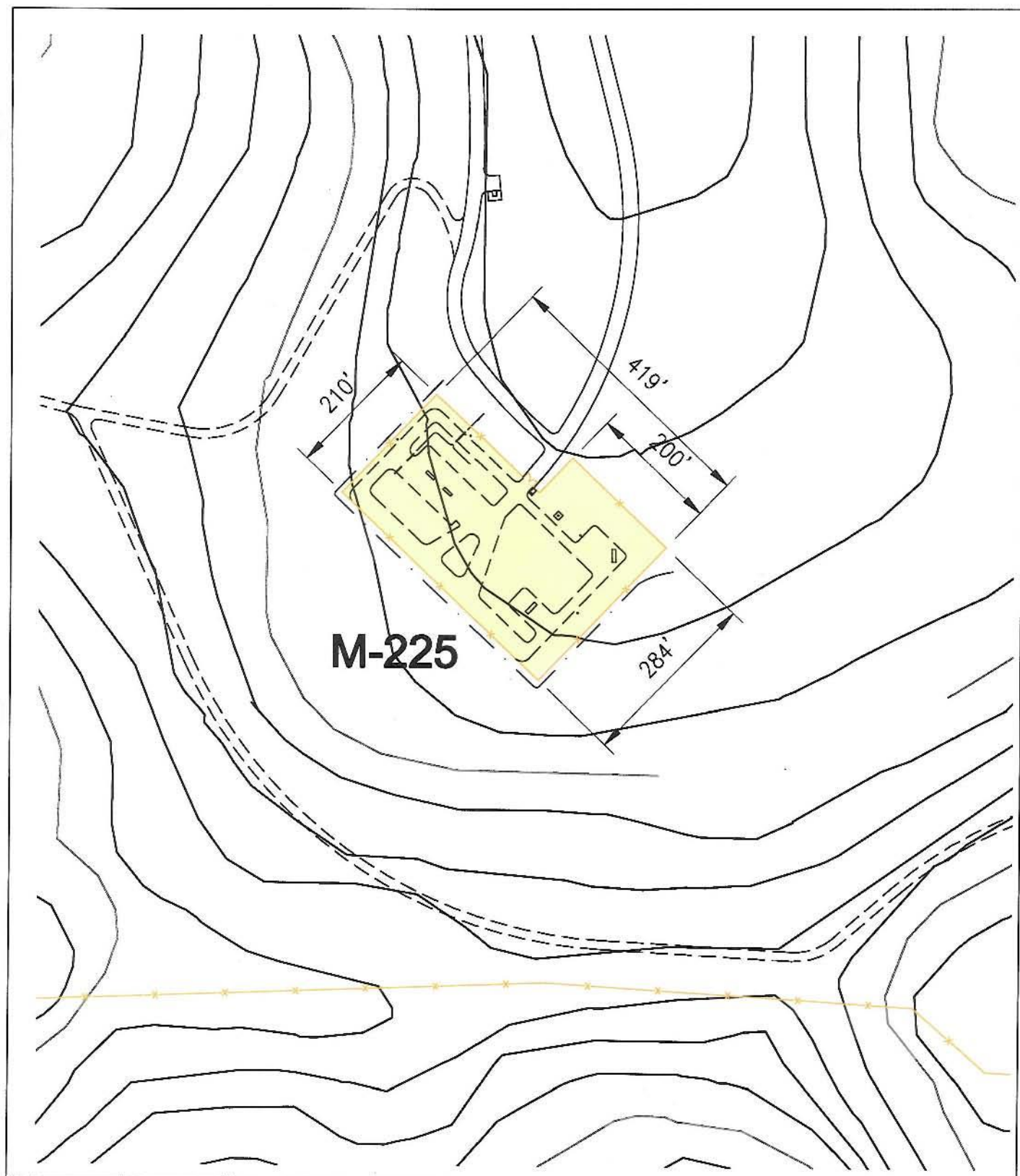
T-29B BUILDING LAYOUT

FIGURE H-1





Figure 6I



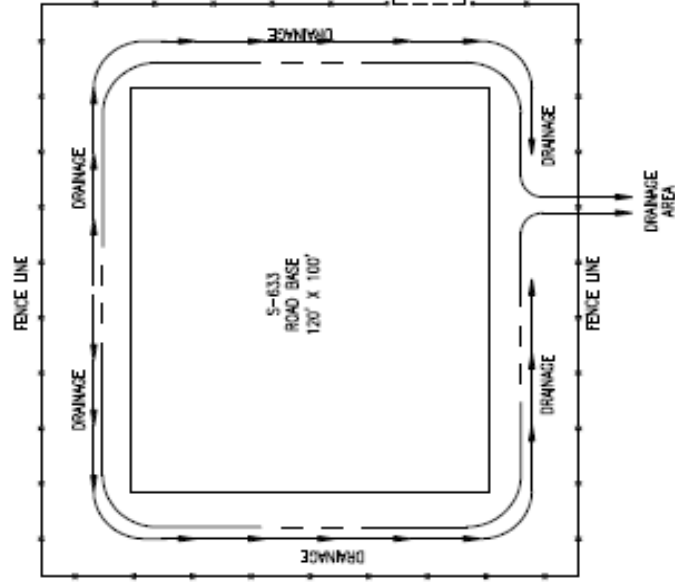
**M-225 BURN GROUND
FACILITY LAYOUT
FIGURE I-1**



SCALE: 1" = 200' - 0"±



Figure 6J



ATK Launch Systems Inc.
FACILITIES ENGINEERING
 P.O. Box 707 ne UT-6-202
 Brigham City, Utah 84302

M225G4.DWG

S-633 STORAGE PAD

DWG. SIZE	SCALE	DRAWING NO.	REV.
	NONE	FIGURE J-1	

ATTACHMENT 7

SECURITY PLAN

07 HAZARDOUS WASTE MANAGEMENT

07.01.1 SECURITY PROCEDURES

07.01.1 Purpose and Scope

The work performed at the ATK Launch Systems, Promontory facility primarily involves Department of Defense and NASA contracts; therefore, comprehensive security agreement measures have been instituted. ~~These security measures meet the requirements of the Division of Waste Management and Radiation Control Solid and Hazardous Waste Administrative Rules R315-8-2.5R315-264-14. No waiver from these requirements is being sought as the~~ The facility has both a twenty-four hour surveillance system and an artificial barrier around the facilities to minimize the possibility of unknown entry of livestock or personnel.

07.01.2 Surveillance System

Security is maintained by a trained security force which controls entry and exit from the facility and provides patrol, escort, and other activities within the plant. The main plant entrances are manned by a minimum of one security officer during normal working hours. All other gates are locked and only used when authorized by Security. All employees entering the facility must show identification badges at the gate and wear them in plain sight throughout the day. All visitors and vendors are required to wear special identification badges.

07.01.3 Artificial Barrier

There are artificial or natural barriers around the entire plant. The primary barrier consists of a chain link and barbed wire fence with controlled access at the main entrances to the plant. The chain link fence runs along the highway from building A until it runs into the gully formed by Blue Creek just west of M-46. A natural barrier is provided by the Blue Creek gully which is approximately 15 feet deep with near vertical sides. This barrier extends for approximately 8,000 feet to a five-foot, four-strand barbed wire fence. This fence extends to the north, changes to chain link, and runs around the north end of the Plant. The chain link fences are seven feet high and topped with barbed wire. This fence is continued by a five-foot, four-strand barbed wire fence, which completes the primary barrier by encircling North Plant, Test, and South Plant. Plant III is encircled by a five-foot, four-strand barbed wire fence and also has controlled access at the main entrance. Each hazardous waste management area also has an artificial barrier.

- E-501: The Container Storage Area is surrounded by a seven-foot chain link fence and has controlled access. The gate is locked when no one is present.
- M-136: A five-foot, four-strand barbed wire fence surrounds the Burning Grounds area. It has a gate, which is locked when no one is present.
- S-633 The storage area is located inside the secured M-136 perimeter fence. S-633 is also surrounded by a five foot four strand barbed wire fence in addition to the M-136 fence.
- M-186: A five-foot, four-strand barbed wire fence surrounds the Container Storage Area. It has a gate, which is locked when no one is present.
- M-225: The Burning Grounds are surrounded by an eight-foot, chain link fence. It has a gate, which is locked when no one is present. A five-foot, four-strand barbed wire fence surrounds the runoff dispersion area.
- M-705L: The hazardous waste management area is inside a building with lockable doors to provide access control. In addition, the facility uses the plant's artificial barrier.
- M-705S: The hazardous waste management area is inside a building with lockable doors to provide access control. In addition, the facility uses the plant's artificial barrier.
- M-629: The solid reactive waste storage area is inside the building and remains locked except when occupied by personnel for placement of material into storage or removal from storage.
- T29B: Building T29B remains locked at all times and is controlled by authorized Test Service personnel.

07.01.4 Signs

All hazardous waste management areas (i.e., E-501, M-136, S-633, M-186, M-225, M-705L, M-705S, M-629 and T29B) have warning signs placed at the access approaches. All signs are legible from a distance of at least 25 feet. All signs have a legend which reads "Danger - Unauthorized Personnel Keep Out."

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 ~~R315-8-3.2~~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 ~~three~~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.M-136 Burning Grounds Operating procedures and in M-225 Burning Grounds Operating procedures~~. 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, under go 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~~^{pads} 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.

~~Historical management of hazardous waste has resulted in groundwater contamination at ATK. Semiannual groundwater monitoring is conducted in the area of the M-136 Burning Grounds, and down gradient, in accordance with ATK's Post-Closure Permit. Groundwater flow and transport models have been developed to help predict the migration of contaminant plumes. The Division of Solid and Hazardous Waste has approved the ATK Promontory groundwater modeling report. The risk assessments and potential corrective measures are being conducted.~~

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 ~~need~~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 ~~R315-3-2.5(b)(7)~~R315-270-14(b)(7) and ~~R315-8-4~~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~~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 ~~R315-8-2.8~~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 (AHOPS) 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 ~~UAC R315-9R315-263-30~~ 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 AHOPS. 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.

ATTACHMENT 9

CONTAINER MANAGEMENT PROCEDURES

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9 USE AND MANAGEMENT OF CONTAINERS

9-1 PURPOSE AND SCOPE

ATK Launch Systems – Promontory (ATK) currently manages the drum storage areas at M-186, E-501, M-705S, the solid propellant storage building M-629, storage pad S-633 and solid propellant storage in burn trays and at Burn Station 14 at M-136 in accordance with the Division of ~~Solid and Hazardous Waste~~ Waste Management and Radiation Control Administrative Rules ~~R315-8-9~~ R315-264-170. These waste storage areas are owned and operated by ATK. All containers are being temporarily stored waiting thermal treatment on-site, or shipment off-site for recycling, treatment and/or disposal.

The drum storage site at M-186 is designed to hold 400, 55-gallon drums of various types of waste intended for treatment or disposal. The drum storage site at E-501 is designed to hold 160, 55-gallon drums of various types of waste intended for treatment or disposal. The M-705S storage and consolidation room is designed to store a maximum of 32, 55-gallon drums, both rooms include palletainers of various types of waste intended for consolidation or lab packing. For solid propellant storage capacities, see Module III section E.

9-1.1 Facility Description

The M-186 storage ~~pad~~ building is permitted for the storage of the hazardous wastes identified in Permit Condition III.B.1. The storage pad is divided into five storage bays to keep incompatible materials separated. The pad is a coated concrete floor with secondary containment. The M-186 storage facility is shown in Figure E-1 of Attachment 6.

The E-501 storage pad is permitted for the storage of the hazardous wastes identified in Permit Condition III.B.1. The pad is a coated concrete floor with secondary containment. The E-501 storage facility is shown in Figure B-1 of Attachment 6.

The M-705S Storage and Consolidation Room is a single room with a coated concrete floor and secondary containment. It is permitted for the storage of the hazardous wastes identified in Permit Condition III.B.1. The room is equipped with plastic containers to keep incompatible materials separated. Poly-spill pallets are used to provide separate containment for each consolidation drum and lab pack drum as needed. The M-705S storage facility is shown in Figure C-1 of Attachment 6.

M-629 is designed for storage of solid propellant/explosives. This building is sited for the maximum quantity of propellant/explosives based on Quantity/Distance, DOD siting criteria found in the contractor safety manual, 4145.26m. Each building is set up to permit proper grounding and cross bonding as appropriate. The M-629 storage facility is shown in Figure 6-D of Attachment 6.

Storage Pad S-633 is designed for storage of solid propellant/ explosives. It is secured by a perimeter fence, a vehicle access gate that can be locked, and has the appropriate warning signs for a storage area. It has a road base surface, and has lighting protection. Precipitation run-on or run-off is prevented by a combination of diversion ditches, collection ditches and trenches. The S-633 storage pad is shown in Figure J-1 of Attachment 6.

The storage of solid propellant wastes at M-136 includes waste stored in containers placed in burn trays and waste rocket motors that contain solid propellant placed on the ground at Burn Station 14. The storage of waste materials ~~received from off site~~ at M-136 is permitted in order to facilitate more efficient and safer waste handling practices, and to accommodate delays in waste treatment due to weather or other uncontrollable delays. Storage of this waste will be in compliance with this permit and ~~R315-8-~~
9R315-264-170.

9-2 MANAGEMENT OF CONTAINERS

9-2.1 Types of Containers for Storage

The containers to be used for storage, lab packing, or consolidation at M-186, E-501, and M-705S will meet the UN or USDOT criteria or will be a sturdy liquid tight alternative container. No more than 400 drums will be stored at M-186; 160 drums at E-501; and 32 drums at M-705S. Substitute containers will reduce the number of drums that can be stored based on the volume of the container chosen.

The containers that will be used for storing solid, reactive wastes at M-629 and S-633 include rocket motor cases, covered drums, boxes, plastic bags, woven bags, slids, and US Department of Transportation (DOT) approved shipping containers. The standard containers used at the Facility are described in Attachment 11, Section 11.4.

All solid reactive waste stored at M-136 will be stored in containers as described in Attachment 11.4. Storage of these containers is permitted in liquid tight burn trays or on the ground at Burn Station 14 for intact rocket motors. All containers will be kept closed during storage.

Lab pack and consolidation drums used for different compatibility groups will be separated using a portable secondary containment system (PSCS) such as a Poly-spill pallet. The PSCS will have the capacity to hold a minimum of 55 gallons. Most PSCSs are unsatisfactory for storing most organic waste; therefore, flammable/combustible waste lab packs or consolidation drums will be placed on a pallet and stored on the floor using the room's containment system. Lab pack and containment drums with non-hazardous waste will be stored on the floor. Non-hazardous waste found to be incompatible with solvents would be placed on a PSCS for which it was found to be compatible. All full consolidation or lab pack drums will be transferred from M-705S to a permitted storage facility to stay within M-705S's storage capacity.

TABLE 9-2
HAZARDOUS WASTE COMPATIBILITY FOR STORAGE AT
M-186, E-501, M-705S, M-629, and S-633

<u>General Compatibility Groups</u>	<u>DOT Hazard Class in Group</u>
1. Flammable/combustible liquids and non-flammable solvents	a. Flammable Liquids b. Combustible Liquids
2. Corrosives (acids)	a. Corrosive Liquids (acids only)
3. Corrosives (bases)	a. Corrosive Liquids (bases only)
4. Reactive Chemicals	a. Organic Peroxides b. Oxidizes
5. Toxic Chemicals	a. Toxic b. Infectious
6. Explosives	a. 1.1 b. 1.3

9-2.3 Storage of Containers

M-186, E-501 and M-705S

Before any waste container is accepted at M-705S, E-501, and M-186, it shall be inspected to determine whether the waste matches the identity of the waste specified on the accompanying manifest or shipping paper. In addition, the containers shall be inspected to ensure that they are in good condition, are closed, and labeled in accordance with ~~40 CFR 262.34~~ ~~(incorporated by reference in R315-5-3.34) and R315-5-3.31~~ R315-262-31 and R315-262-32, R315-262-17(a)(5)

If the drum is found to be unacceptable, it must be immediately repacked and relabeled or the waste transferred to a new drum. Each drum or container must be entered into the operator's log (see Section 9-2.5) when the drum or the container is accepted in to the drum storage area. A forklift and/or pallet jack is used to move the pallet into the storage area.

Drums or containers in the holding bays at M-186 and at E-501 will be sampled according to Attachment 1 of this permit. The wastes are accumulated until enough containers exist to complete a load. The containers are then loaded into a truck and shipped to the disposal facility for proper treatment and/or disposal.

All drums stored at the M-705S, E-501, and M-186 storage areas will be stored with either both plugs closed or with the top of the drum sealed. No waste containers will be open unless waste is being added or removed. Adding or removing waste will only occur at these storage facilities if a container is damaged, leaking, for sampling, for waste consolidation, and/or for lab packing. A container may be filled if spilled material is found in a sump during the transfer of waste containers. A container being filled or replaced will be located in the containment area. This will provide containment if any spillage results from an incident during transferring procedures. Precautions to be taken during the transfer of the waste include: insuring all transfer equipment (i.e., hoses, pumps, funnels) is located inside the containment area; ensuring a proper drum is used when transferring waste material.

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. 55-gallon drums may be stacked at a maximum of two high at storage areas M-186 and E-501 only. Containers stored at M-629 and S-633 that can be safely stacked, such as flare or munition boxes, may be stacked to a maximum height of 6 feet.

All storage containers shall have hazardous waste labels attached that meet the requirements of ~~40 CFR 262.34 (incorporated by reference in R315-5-3.34)R315-262-32R315-262-17(a)(5)~~. All personnel required to complete RCRA labeling shall receive training as appropriate.

M-629 and S-633

All waste propellant/explosives stored at M-629 and S-633 must be entered into the operating record. Building and storage pad inspections must begin upon first receipt of material and end when all hazardous waste has been removed from the building or storage pad. All containers must be kept closed except when adding or removing waste. Adequate aisle space must be provided to permit proper container inspection. Total quantity limitations are as outlined in module III section E.

All containers shall have hazardous waste labels attached that meet the requirements of ~~40 CFR 262.34 (incorporated by reference in R315-5-3.34)R315-262-32 R315-262-17(a)(5)~~.

M-136 Burn Trays and Burn Station 14

All solid reactive wastes received from off-site shall be inspected prior to placement into burn trays or Burn Station 14 at M-136 to determine whether the waste matches the identity of the waste specified on the accompanying manifest or shipping paper. In addition, the containers shall be inspected to ensure that they are in good condition, are closed, and labeled in accordance with ~~40 CFR 262.34 (incorporated by reference in R315-5-3.34)R315-262-32 and R315-5-3.31R315-262-31 R315-262-17(a)(5)~~.

If a container holding hazardous waste is not in good condition, e.g., apparent structural defects, or if it has begun to leak, ATK personnel shall take steps as appropriate to prevent a release from the container to the environment.

Prior to placement of hazardous wastes into burn trays, the tray shall be inspected as outlined in Attachment 2. Once the container or waste rocket motor is received it is placed in a burn tray or Burn Station 14, the date of the placement shall be added to the hazardous waste label.

Containers stored in burn trays at M-136 shall remain closed during storage, except when it is necessary to add or remove waste. A container holding hazardous waste shall not be handled or stored in a manner which may rupture the container or cause it to leak. Containers shall be stored such that the hazardous waste labels may be readily inspected.

9-2.4 Inspections

All container storage areas are inspected on at least a weekly basis. Details of inspection requirements for the storage areas are outlined in Attachment 2. If a container is found with severe corrosion, structural defects, rusty bungs, or leaking, 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.

9-2.5 Operating Record

All waste brought into the M-186, E-501, M-705S, M-629, S-633 and M-136 storage areas are entered into a hazardous waste log compliant with ~~R315-8-5.3~~R315-264-73. This log is kept for all wastes.

If a waste material is consolidated, the consolidation drum is recorded in the hazardous waste log in such a way as to allow the consolidated material to continue to be tracked. Waste materials to be lab packed are placed in a lab pack drum and recorded in a hazardous waste log in such a way as to allow the material and the drum to also be tracked.

The operating record is kept for all hazardous wastes. These records are used to track wastes as they come in from on and off-plant generators and satellite generator facilities.

9-3 **LAB PACKS AND WASTE CONSOLIDATION**

9-3.1 Lab Pack Preparation

ATK disposes of several hazardous wastes in lab packs. Completed lab packs are stored in the drum storage bays. Before a lab pack is accepted at the drum storage bay, it must be prepared, labeled, and documented in accordance with ~~40 CFR 262 Subpart C (incorporated by reference in R315-5-3.34)~~R315-262-32 and R315-5-3.31~~R315-262-31~~ R315-262-17(a)(5).

Materials in small containers may be stored at the lab packing and consolidation room at M-705S or at M-186 for lab packing or waste consolidation. The materials are separated into compatibility groups based on DOT hazard classification. The materials are generally in small containers ranging from one or two ounces to 5-gallon cans. The small containers are then stored in palletainers or on a shelf until ready to lab pack or consolidate. Incompatible materials are not allowed to be stored in the same palletainer, or containment bay.

9-3.2 Lab Pack Labeling

Each waste container must be labeled with a complete hazardous waste label.

9-3.3 Containment Sealer

The concrete containment area where consolidation and lab packing occur at M-186 and M-705S, is sealed with a high build polyamide epoxy coating system or equivalent. The Material Safety Data Sheet and compatibility chart for this material can be found on the manufacturer's web site.

9-3.4 Lab Pack Compatibility

Under no circumstances will a lab pack contain wastes that are incompatible. Compatibility of wastes will be determined by using the MSDS or other reference sources. If a waste is not found in the reference material, then the material will be assumed incompatible with all wastes and lab packed separately unless research by Environmental Waste Disposal's technical staff documents compatibility. Lab packing will be done in accordance with USDOT regulations and the requirements of the disposal company.

9-4 CONTAINMENT

9-4.1 Capacity of Containment

All the container storage areas and consolidation/lab packing areas at M-186, E-501, and M-705S are designed to hold a minimum of ten percent of the volume of waste stored in the area or the volume of the largest container, whichever is greater. Table 9-5A summarizes the calculations.

TABLE 9-5A			
Containment Capacity of Drum Storage Areas			
Storage Container	Number of Drums to be Stored	Needed Containment	Containment Available
M-186 Storage Bay	80 Drums	440 Gal	980 Gal
E-501 Storage Pad	160 Drums	880 Gal	895 Gal
M-705S Room	16 Drums*	88 Gal	830 Gal
M-705S Poly-spill pallet	4 Drums	55 Gal	85 Gal

* Includes Palletainers

Storage building M-629 and storage pad S-633 are not permitted to store liquids. Each container will be inspected to assure no liquids are present upon arrival at the storage facility. Storage building M-629 is fully enclosed to prevent contact of waste with rain water, and does not require secondary containment. Roof leaks must be repaired as soon as is practicable. Storage pad S-633 is located within the M-136 Thermal Treatment Area. Any rain water falling on the pad is collected in the M-136 storm water run-on/run-off control system.

9-4.2 Containment Sealer

The containment area at the M-186 and M-705S storage facilities are coated with an epoxy resin to resist liquid penetration. No leakage or spillage is anticipated during waste storage; however, in the event spills or leaks do occur, the epoxy will prevent the material from penetrating the concrete.

The containment system at E-501 is coated with an epoxy sealer that is a high-build chemical resistant coating. The chemical compatibility and properties of this epoxy are available from the manufacturer.

9-4.3 Removal of Free Liquids From Containment Area

Removal of free liquids at M-186, E-501, and M-705S must be done with a pump or vacuum truck. When free liquids are found in the sump, a portable drum pump, either electric or hand operated, is used to transfer the liquid to a UN 55 gallon drum. A vacuum truck can also be used to pump out collection of rain water and snow melt. Water pumped with the vacuum truck will be taken to a UPDES permitted waste water treatment facility (M-705) for processing. All free liquids taken from the sumps will be managed as hazardous wastes until waste analysis or inspection dictates otherwise.

Precautions will be taken to avoid spills. All spills are cleaned immediately, unless the size demands spill response. After the liquids are transferred into drums, a sample will be taken from each drum according to the sampling procedure in the Waste Analysis Plan, contained in Attachment 1. The drums will be managed as hazardous waste until a determination has been made classifying the contents. If the analysis indicates the liquid is a hazardous waste as defined by the Division of ~~Solid and Hazardous Waste~~ Waste Management and Radiation Control Administrative Rules ~~R315-2~~ R315-261, then the drums will continue to be managed as a hazardous waste. If the liquid is a wastewater, the liquid will be taken to M-705 Wastewater Treatment Facility.

Occasionally, small amounts of liquid such as nitroglycerine can drip from rocket motors onto the concrete floor. These drips are typically less than 1-inch in diameter and may drip as much as once per week. Any sign of out-of-place waste will be checked during the regular inspections outlined in Attachment 2. Clean up of dripped materials will be completed as soon as is practicable using rags and acetone or other appropriate cleaners.

M-136 Burn Trays

Although the burn trays at M-136 are permitted for the storage of solid reactive wastes in containers, some of these containers contain small amounts of desensitizing fluid (e.g. diesel, shingle oil, etc.). Therefore, the containment requirements of ~~R315-8-9.6~~R315-264-175, as discussed below, apply to the storage of wastes in the burn trays.

The burn trays shall be free of cracks or gaps and be sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.

Spilled or leaked waste and accumulated precipitation shall be removed from the burn trays in as timely a manner as is necessary to prevent overflow of the tray. Inspection requirements for burn trays and the accumulation of liquids are outlined in Attachment 2.

If the collected material is a hazardous waste under ~~R315-2~~R315-261, it shall be managed as a hazardous waste in accordance with all applicable requirements of the State of Utah Hazardous Waste Management Rules. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of section 402 of the Clean Water Act, as amended.

9-5

RUN-ON AND RUN-OFF CONTROL

Run-on and run-off water is prevented from entering the M-186 and E-501 drum storage pads. Three sides of each pad contain a curb that is six inches in height and a sloped grade in the front that is three inches above the ground surface. Each pad has sufficient height to prevent run-on from entering the drum storage containment system. Detailed drawings of these facilities are contained in Attachment 6.

The storage facility at M-705S is totally enclosed to prevent any run-on water from entering the building.

Calculations have been performed for the M-186 storage pad and these indicate that no run-on or run-off should enter the storage building and affect the capacity of the containment area. The calculations were based

on a 24-hour, 25-year storm event and were submitted with the Part B Permit Application.

The terrain around the burn grounds and storage pad S-633 has been graded and drainage ditches surround the area in order to minimize run-on/run-off. The topography and drainage ditches at M-136, M-225, and S-633 are shown in Attachment 11 Figures 11-1 and 11-2, and Attachment 6 Figure J-1.

In addition, all waste will be in water tight burn trays to prevent run-on and run-off. Waste Rocket motors will be covered to eliminate contact with rain water.

9-6

REQUIREMENTS FOR IGNITABLE AND REACTIVE WASTES

All container storage areas are located more than 50 feet from facility property lines. The aerial photograph contained in Attachment 6 (Figure 6A) shows the property boundaries and facility location.

ATTACHMENT 10

T-29B HYDRAZINE DILUTION PROCEDURES

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10 **HYDRAZINE DILUTION PROCESS**

10-1 **PURPOSE AND SCOPE**

ATK Launch Systems - Promontory (ATK) operates a small treatment process to dilute waste hydrazine at Building T-29B. This process dilutes hydrazine waste with water so that waste hydrazine solutions do not exceed hydrazine concentrations above 50 percent. The dilution process is necessary because of the extreme flammability and reactivity of hydrazine and the lack of a disposal facility for concentrated hydrazine. The diluted waste hydrazine is shipped off plant to an incinerator for destruction.

10-2 **PROCESS DESCRIPTION**

The dilution of waste hydrazine with water is a simple process. ATK does not generate large amounts of waste hydrazine, but because hydrazine is extremely flammable and reactive, special care must be used in its disposal. Hydrazine is used during a motor firing static test process. At the completion of the test, residual hydrazine is removed from the test system and is collected in a small, nitrogen purged, cart mounted tank, and transferred to Building T-29B. Typically hydrazine is filtered and stored in the tank until it is used during the next static test. In the event the hydrazine can't be used or is no longer needed it is transferred to a drum where it is mixed with water and sent off-site for disposal as a hazardous waste. Lab samples from quality assurance testing of the hydrazine product are also dumped directly into the water /hydrazine diluted drum for disposal. The waste collection container can be managed as either a 90-day waste or under satellite accumulation rules depending on the waste volume.

Here is a description of the hydrazine mixing process. This tank is equipped with a scrubber vent system which is utilized during initial transfer into the tank. A volume of water equal to the volume of hydrazine is placed into a 55-gallon drum at T-29B. A tube is run from the tank into the bottom of the 55-gallon drum. The hydrazine is then dispensed into the drum through the tube using nitrogen pressure. This process is repeated until the collection container is full. This transfer is performed with personnel in Level A personal protective equipment (PPE). After the transfer is complete, the air in the room is tested to assure safety before the Level A PPE is removed.

The system is designed and operated to prevent any releases and to safely transfer the material. After the material transfer has been completed, the

material is shipped off plant for disposal or sent to the M-186 Hazardous Waste Storage Facility.

10-3

ENVIRONMENTAL PERFORMANCE STANDARDS

The T-29 Hydrazine dilution process has been located, designed, operated, maintained and will be closed in a manner that will ensure protection of human health and the environment. This section addresses the prevention of releases due to migration of hazardous constituents into the ground water or subsurface environment, surface waters, wetlands, surface soils, and in the air.

10-3-1

Prevention of Releases to Ground Water or Subsurface Environment

Several parameters have been considered in determining the prevention of a release to ground water or subsurface environments. It is important to note that there will only be a limited amount of pure hydrazine, generally no more than 55 gallons, to dilute at any one time and that this process is all done within a containment system. The containment system is shown in the facility drawing contained in Attachment 6 (Figure H-1). Because of the secondary containment, there should be minimal potential for deposition or migration of waste constituents into the subsurface or groundwater.

10-3-2

Prevention of Releases to Surface Water, Wetlands, or Soil Surface

The dilution area has secondary containment to ensure collection of any spill. A 7,500-gallon, emergency-use-only sump has been designed to contain any spill. The sump is only used if a spill occurs; it is not used on a routine basis. The sump is designed to collect any large spill and has more than sufficient capacity to hold any spill during the dilution process.

The use of this containment, along with careful procedures and the low volume of waste, reduces the potential for any adverse effect on human health or the environment.

10-3-3

Prevention of Releases to Air

The transfer of hydrazine is conducted with strict safeguards and procedures to prevent the migration of waste constituents in the air. This process transfers the hydrazine using nitrogen. Escaping gases are minimized by discharging through a tube under water in the collection drum. These procedures minimize the quantity of any hydrazine migration through the air and minimize the potential for any adverse effects to human health or the environment.

10-4 **MONITORING, ANALYSIS, INSPECTION, RESPONSE,
REPORTING, AND CORRECTIVE ACTION**

Because hydrazine requires special handling precautions and safety procedures, ATK personnel ~~shall~~ follow internal procedures ~~when~~^{for} performing the dilution process. ATK will conduct the dilution process in a manner that will ensure protection of human health and the environment.

ATK will comply with the requirements specified in the facility Contingency Plan (Attachment 4), when there has been a release at Building T-29B that threatens human health or the environment.

ATK will comply with the ignitable and reactive waste regulations as required by UAC ~~R315-8-2.8~~R315-264-17.

ATK will inspect Building T-29B in accordance with the inspection schedule contained in Attachment 2.

10-5 **RECORD KEEPING AND REPORTING**

ATK will record in the operating record the following:

1. The date that waste hydrazine is received at T-29B;
2. The quantity of waste hydrazine received;
3. The date the waste hydrazine is treated by the dilution process;
4. The quantity of diluted hydrazine after the dilution process is complete; and
5. The date the diluted hydrazine is shipped off-site or to the M-186 storage facility.

10-6 **CLOSURE**

ATK will close Building T-29B in accordance with ~~R315-8-7~~R315-264-110 through 120, ~~R315-8-9.9~~R315-264-178, Permit Condition II.N. and the designated Closure Plan in Attachment 5 of this Permit.

ATTACHMENT 11

M-136 and M-225 Thermal Treatment Operations

11.0 PROCESS INFORMATION

All reactive waste management operations at the facility are conducted and are under the management of ATK. The reactive waste management process is described in the following text.

11.1 Facility Description

The ATK Promontory facility is located in a remote area of west Box Elder County, Utah, approximately 30 miles northwest of Brigham City, and approximately 11 miles north of the Great Salt Lake. The facility was purchased by Thiokol in 1956, with the exception of a 1,500-acre tract that was sold to the U.S. Air Force in 1958 and then repurchased in 1995. The facility has been held in its entirety since purchase.

ATK Launch Systems conducts thermal treatment of reactive hazardous wastes at two treatment units: (1) the main facility, M-136, located centrally to the two main manufacturing sites; and (2) M-225 located in a remote development location called Plant III.

M-136 is the primary treatment area for conducting open burning at the Promontory facility. Open detonation is also conducted at M-136 which is a secured fenced facility within the main facility fence.

The M-225 treatment area receives small amounts of the reactive hazardous waste materials from the Plant III propellant development area. The M-225 treatment unit is surrounded with an 8-foot high chain link fence. The waste materials are treated via open burning or open detonation.

The M-136 and M-225 treatment areas are fenced and are located within a controlled and fenced facility that is patrolled and maintained by a security department. The treatment areas have warning signs posted around the perimeter. The vegetation is controlled within the treatment areas through application of herbicide and putting in place loads of gravel and road base. Surrounding both treatment areas are a large system of fire breaks that are constructed using large equipment to till and cultivate a large strip of land removing any vegetation. The system of fire breaks are designed to contain a fire within its boundaries.

Contained within the boundaries of the M-136 treatment area are twelve former surface impoundments called Liquid Thermal Treatment Areas (LTTAs). These impoundments were used for the disposal of hazardous waste and wastewater and then capped and closed. The units are currently under post closure care and managed through a Post Closure Permit which includes requirements for groundwater monitoring and corrective action. The Post-Closure groundwater monitoring program includes all wells around the M-136 and M-225 treatment areas as part of the groundwater monitoring system. These wells are routinely monitored thorough the permit requirements which includes the Sampling and Analysis and Quality Assurance Plans.

The Promontory facility is located in the Blue Spring Valley which is bounded on the east by the Blue Spring Hills and on the west by Engineer Mountain and the Promontory Mountain ranges. Within the Blue Spring Valley, the terrain is characterized by topography that slopes down from the mountain crest at an elevation

of approximately 6,050 feet above mean sea level (AMSL) toward the center of the Blue Creek Valley at an elevation of 4,250 feet AMSL. As a result, the surrounding environment extending out to 6.2 miles (10 kilometers) from both treatment units can be characterized as complex terrain.

GEOLOGY

The ATK facility is located in the Southern Blue Creek Valley, northwest of the Salt Lake Valley, which is the eastern most structural valley of the Basin and Range physiographic province, which includes parts of Utah, Idaho, Nevada, Arizona, and New Mexico. The Basin and Range province consists of a number of north-south aligned mountain ranges and valleys bounded by high-angle normal faults. The Blue Creek Valley, in which ATK is located, is bounded on the east and west by the Blue Springs Hills and the Engineer and Promontory Mountain ranges, respectively. Movement along the faults has displaced the mountains upward relative to the adjacent valley. Likewise, the mountains immediately west of ATK are bounded on their eastern margin by one or more faults which are partly buried by recent deposits.

Bedrock, composed of Middle Paleozoic shale, sandstone, and limestone, is exposed in the ranges adjacent to the site. The bedrock is highly fractured with some folding.

During the Mississippian and Permian Periods, marine sediments consisting of sand, clay, and calcareous detritus were deposited in shallow marine environments. In the late Cretaceous Period, compressional forces from the west resulted in folding and thrust faulting in conjunction with uplift of the region into mountain ranges. Extensive jointing and fracturing of the bedrock were caused by this folding and faulting episode. Tensional stresses in the early to middle Tertiary Period resulted in north south trending normal faults that formed a series of high linear mountain ranges with intervening basins which received sediment from adjacent highlands. This activity was associated with volcanism and ancient lake deposition.

In the late Tertiary Period, a series of geologic units tentatively identified as the Salt Lake Group were formed from deposition of sediments in large lakes which developed within the valleys. These lake deposits are composed primarily of silts and clays with minor amounts of sand and gravel and are characterized by low to moderate permeabilities; extensive deposits of volcanic ash are also present in the Salt Lake Group. The alluvial fan deposits were overlapped by more recent lake sediments of Pleistocene Lake Bonneville, the predecessor to the present Great Salt Lake. Lake Bonneville covered much of western Utah and parts of Idaho and Nevada between about 23,000 and 12,000 years ago. Deposits associated with the lake consist of lakebed and alluvial materials reworked by lake bottom and shoreline processes. Lake Bonneville sediments thicken southward.

The most recent sedimentary deposits consist of stream alluvium and mud and debris flows. The stream alluvium consists primarily of silty and clayey sand and gravel. The mud and debris flow deposits are characterized by a broad gradation of sediments from clay-size fines to boulders as large as 3 feet in diameter.

HYDROGEOLOGY

Ground water in Blue Creek Valley occurs under unconfined and confined conditions. These two conditions exist in fractured and faulted bedrock, lake clays and gravels, unconsolidated alluvium, gravel, and sandy deposits. Precipitation, surface water

infiltration, and plant discharges that infiltrate into sediments may migrate slowly, vertically, and horizontally to form perched water tables above the 50- 150-foot depth of the regional water zone. The perched ground water may eventually migrate to the deeper regional system. The regional system ranges from 50- 600 feet in depth depending on the topographical location. Blue Creek may recharge shallow aquifers in the center of the Blue Creek Valley. The direction of movement within the faulted and fractured bedrock will be controlled by the connection of faults and fractures. Regionally, the ground water flow trend is from north to south. Depth to groundwater at the M-136 treatment units is an average 300 feet. Depth to groundwater at the M-225 treatment unit is 600 feet.

The ground water quality in Blue Creek Valley is generally poor due to naturally occurring chlorides and total dissolved solids. Levels of dissolved solids range from 400 to over 12,000 mg/l. The quality of ground water depends upon the sediments, which it has contacted. Quality is quite good in local, up gradient areas of water recharge, but degrades rapidly as it moves from mountain to the valley axis. High levels of total dissolved solids in lowland areas are probably due to slow migration through Tertiary sediments. Down gradient from the ATK sites, quality deteriorates rapidly as it enters the mudflats of the Great Salt Lake.

CLIMATE

ATK has a 10-meter meteorological tower and instruments to measure and record air temperature, barometric pressure, relative humidity, solar radiation, precipitation, vertical and horizontal wind speed, and direction.

The ATK plant site is classified as semiarid, with an average annual total precipitation of 14.88 inches at the ATK meteorology station. During the winter months, the average total snowfall amounts to 24 inches. Precipitation typically occurs on 95 days out of the year (includes trace precipitation). During the year, it would be expected that 35 percent of the days would be clear, 30 percent of the days would be partly cloudy, 34 percent would be cloudy, and fog would be expected to occur about 1 percent of the time. According to interpreted weather data for the ATK facility, the 25-year storm with 24-hour duration would result in 2.4 inches of precipitation.

Evaporation rates are high throughout the year, with the Great Salt Lake averaging 66 in. a year. The average area evapotranspiration rate is 46.6 inches. The consistently low precipitation and high evaporation allow little if any percolation into subsurface soils.

The average annual temperature in the ATK Promontory area is in the 45 to 50 degree range, with generally hot, dry summers. Relative humidity averages between 20 and 30 percent during summer afternoons. Nights are usually cool, but daytime maximums occasionally exceed 100 degrees F. On clear nights, cold air usually drains from the slopes of the adjacent ranges and accumulates on the valley floor, while the foothills and bench areas, such as at ATK, remain relatively warm. The average daily temperature ranges from about 11 to 32 degrees F in January and from about 54 to 91 degrees F in July.

On an annual basis, the winds for the valley tend to prevail from the north during the earlier morning hours and south to southeast, averaging about 10 mph, during the afternoon.

Blue Creek is the only perennial stream in the valley drainage basin and is the closest water body to the M-136 treatment unit. Blue Creek originates some 15 miles north of the Promontory facility from a warm saline spring, which flows along the western boundary of the facility.

The Promontory area is characterized as a very sparsely populated rural region, with primarily dry farms and ranching activities. Low growing perennial grasses and shrubs characterize the vegetation in the area. The ecological habitat found at the Promontory facility includes many head of mule deer and large populations of various birds, rabbit, and predator species.

11.2 WASTE CHARACTERIZATION

Wastes will be characterized to identify hazardous properties to ensure they are properly managed. The Waste Analysis Plan (see Attachment 1) will be used to characterize and classify reactive wastes.

11.3 REACTIVE WASTE DESCRIPTION

The primary products produced at the facility include solid rocket motors, military and aviation flares, and high explosive/high energy compounds. Solid rocket motors are typically cast with composite propellants. Composite propellants are classified as a DOT 1.3 material, and typically contain a non-explosive liquid binder mixed with aluminum powder and ammonium perchlorate. Flares are generally classified as a DOT 1.3 material, and typically contain an inert binder, a metal powder, and an oxidizer. High explosive compounds are generally classified as DOT 1.1 material and are generally nitramine compounds developed for specific military requirements. Reactive wastes are produced from the manufacturing process include, but are not limited to the following: cured and uncured propellants; rocket motors; small initiating devices; explosives articles, propellant scrap; and explosive ingredients such as HMX, RDX, CL-20, explosive contaminated metal powders such as aluminum and magnesium and oxidizers such as ammonium perchlorate and potassium perchlorate. The facility also contains both quality assurance and research and development laboratories. The quality assurance laboratories generate wastes similar to manufacturing wastes. The Research and Development laboratories generate a small quantity, but a wide variety of both explosive compounds and precursors to explosive compounds.

Reactive wastes are characteristic hazardous wastes for reactivity (D003). Nearly all of the reactive wastes are reactive due to the presence of propellants and explosives.

Some reactive wastes, such as those from laboratory operations, may contain solvents which would also be a listed waste defined by ~~R315-2~~R315-261-1 of the UAC.

Wastewater treatment sludge generated from the processing of explosives is a K044 listed hazardous waste. Reactive wastes also include materials such as rags, gloves, other personal protective equipment, plastics, rubber and paper contaminated with explosive materials during the manufacturing process.

Reactive wastes may also be received from off-site sources. With one exception, off-site wastes are rocket motors, propellants or explosives with similar formulations and ingredients to those generated on site. ~~The exception is wastes received from Autoliv~~

~~Automotive Safety Products Inc. (Autoliv) which are generally DOT Class 1.3 materials containing compounds similar in nature to flare products. Ingredients include oxidizers (e.g. ammonium nitrate, copper nitrate, potassium nitrate, strontium nitrate and potassium perchlorate), reactive metal powders (e.g. boron, zirconium, aluminum and magnesium), nitrogen rich fuels (e.g. tetrazole or triazole compounds) and polyacrylimide binders. Many of the Autoliv products were initially developed at Promontory when Thiokol Chemical Corporation operated the site. Autoliv and ATK are co-located, and a working relationship continues between the two companies, which includes open burning reactive wastes generated by Autoliv that can't cannot be commercially disposed.~~

11.4 REACTIVE WASTE GENERATION AND COLLECTION

ATK uses a variety of containers to store reactive wastes at the Facility. The standard containers used at the Facility are described in this section. However, due to the nature of our business, new types of containers may be required in the future, and can't be described in this application. To ensure that all containers are safe to use, containers will be selected using the DOD Contractor's Safety Manual for Ammunition and Explosives (DOD 4145.26-M). All containers for reactive waste that are currently used, or will be used in the future, will meet the DOD 4145.26-M requirements.

Operating buildings generating reactive wastes use a variety of collection containers as described below:

- **Conductive Containers** –Electrically conductive containers are typically bags made of opaque, volume-conductive carbon-impregnated polyolefin or polypropylene. They can be grounded to prevent ~~he the~~ build-up of static electricity. The bags are available in a variety of sizes from small containers to large than one cubic yard. They are typically used to line other containers, but can be used without an outside container. Typical conductive containers include Velostat® bags, Velostat® sheet material, and conductive sling bag and Super Sack® containers.
- **Static Dissipative Containers** –Static dissipative containers are typically bags made of a polyethylene material. The material prevents the build-up of static electricity by continually dissipating the charge. These bags are typically used to line other containers, but may be used without an outside container. Typical static dissipative containers include pink poly bags, pink poly sheet material and static dissipative Cromhmiq™ sack containers.
- **Fiberboard drums** – Wastes may be collected directly into commercially available 30-gallon fiberboard drums. These drums have a removable lid that can be sealed in place with a locking chime after the drum is filled. Fiberboard drums selected for this application are approved by DOT for highway transportation of hazardous materials and can be used to ship these wastes off-site for treatment and disposal.
- **Sumps**- Explosive contaminated wastewater is collected in sumps at the point of generation. When appropriate, propellant “chips” and other suspended solids are filtered out before the wastewater reaches the tank, and when the wastewater is pumped out of the tanks. The wastewater is pumped into tanker trucks where it is

treated at M-705 and discharged under a UPDES permit. Filters containing “chips and other suspended solids are accumulated , and treated and disposed of in accordance with the applicable hazardous waste management rules.

- **Other Containers** – Large blocks of cured propellant are containerized by wrapping the waste in plastic and placing it on wood pallets. Ammunition cans are used to hold initiating and ordnance items. Waste rocket motors are generally large enough to be their own container. Plastic buckets are used to hold conductive and static dissipative bags. The buckets are reused and become contaminated with reactive material. The buckets are cleaned by removing the contaminated material using a rag. The contaminated rag is then collected for disposal and managed as directed in UAC ~~345-5R~~315-262. If a bucket cannot be cleaned, it is managed as a hazardous waste and treated by open burning. Laboratory waste may come in a variety of sizes and types of containers such as plastic, metal or glass. DOT containers for Class 1.1 and 1.3 reactive materials may also be used. A plastic cover secured to a tray may be used as a container for unburned residue or containers of off-site waste stored in a tray prior to thermal treatment.

Operating personnel accumulate reactive waste in these containers as it is generated. When a reactive waste container is full or at the end of an operating shift, it is closed or sealed as applicable for the container. A hazardous waste label is filled out and attached to the container. Operators at the buildings that generated the waste enter pertinent information into the electronic waste tracking system described in Section 11.5.

Most operating buildings that generate reactive waste have an explosive waste collection area located approximately 50 feet from the operating building. Except as described below, waste containers are placed in the collection area to facilitate removal of waste propellant, explosive and reactive wastes from the operating buildings. The collection sheds are constructed of wood or corrugated metal and are secured to a concrete floor.

When managing reactive wastes, ATK building operators use the temporary collection sheds as 90-day or satellite accumulation stations. Reactive wastes are placed in the collection area either as they are generated or at the end of each operating shift. Waste containers that are not full at the end of a shift are sealed, a hazardous waste label is attached to the container and they are moved to the temporary collection area.

Containerized explosive wastes are picked up from the collection location using a vehicle approved for the transport of explosive wastes. Extreme care is used when handling all explosive wastes. Wastes are transported directly to either M-629, S-633 for storage, or to the M-136 or M-225 burning ground.

Propellant and explosive operating buildings at the facility, including explosive waste 90-day storage and satellite accumulation areas, are designed and constructed in accordance with strict federal standards. These standards identify the criteria that must be used to construct buildings where reactive material will be used and/or stored. These standards also require that explosive buildings to be separated by sufficient distance, or a quantity-distance relationship, to prevent an explosive event in one building from propagating to another building. Quantity-distance rules also control the location of propellant and explosive operating buildings with regard to public property

(highways, parks, etc.) and private property. All buildings used for temporary storage of waste explosives, including the temporary storage sheds, are correctly sited with respect to the applicable quantity-distance rules.

11.5 QUANTITY DISTANCE DETERMINATION

The facility uses the Department of Defense (DOD) guidance to calculate quantity distance relationships. The evaluation was conducted according to NAVSEA OP5, Volume 1, Revision 4, Paragraph 11-3.2. The method used to determine safe quantity distance relationships for both Class 1.1 and 1.3 propellants is provided below.

The quantity distance relationship for Class 1.3 propellant is determined by the following formula: $D = 5W^{1/3}$. Where W is the weight of Class 1.3 propellant and D is the safe distance. The formula applies to Class 1.3 propellant and Class 1.3 propellant ingredients. The safe distance is defined as the interline protection for mass fire for Class 1.3 propellant.

The quantity distance relationship for Class 1.1 propellant is determined by the following formula: $D = 18W^{1/3}$. Where W is the weight of a Class 1.1 explosive and D is the safe distance. The formula applies to Class 1.1 propellant and Class 1.1 propellant ingredients. The safe distance is defined as the unbarricaded interline protection for Class 1.1 propellant.

11.6 WASTE TRACKING

ATK maintains an electronic waste tracking record to collect and manage information about reactive wastes generated at the facility. This tracking system uses a combination of paper records and an electronic database.

Wastes being accumulated in containers at operating areas within the facility are labeled and managed in accordance with ~~R315-5~~R315-262 of the UAC for either a satellite accumulation or less than 90-day hazardous waste storage area. The electronic tracking system maintains the following information to monitor cradle to grave waste handling practices:

- ID# - container identification number
- Date – accumulation date
- Building # - identifies where the waste was generated;
- RWDI# - identifies the reactive waste disposal instruction
- Profile # - identifies the profile
- Quantity of PEP – quantity of propellant, explosive or pyrotechnic material ;
- Quantity of Contaminated waste - Explosive and total weight of the container;
- Material Description – description of the material
- Propellant name – describes the propellant by type, program other identifier
- Log Date – date logged into the system

The electronic tracking system maintains information on all containers of reactive waste in 90- day storage at M-136 and M-225. It also tracks the total weight of waste placed on each burn tray, and the total weight of waste burned on any given day.

In the event reactive waste is shipped off-site for treatment, the system maintains the following information: the manifest number, transporters, manifest ship date, and manifest return date.

In the event the electronic tracking system is not operable, the information will be tracked using paper copies until the electronic system is operable. In the event this occurs, ATK will transfer all information to the electronic system within 3 business days of the system becoming operational again.

11.7 REACTIVE WASTE STORAGE

ATK may store hazardous wastes prior to disposal. Solid reactive wastes are stored in designated facilities as described in this section, and are segregated according to compatibility requirements.

- **M-629** - This building can be used to store any of the explosive wastes listed in Section 11.3. All containers of waste in storage will be closed except when waste is being added to or removed from the container. Adequate aisle space must be provided to permit proper container inspection. All containers will be labeled and managed in accordance with ~~R315-5~~R315-262 of the UAC. This building is equipped with a fire sprinkler system, which is checked annually. Employees are not permitted to fight fires inside an explosive storage building. This building is totally enclosed, so there are no precipitation run-on or run-off concerns.
- **M136**- trays at M-136 can be used to store waste containers prior to treatment subject to the terms of the Permit. In addition, waste rocket motors may be stored on the ground at Burn Station 14 prior to treatment subject to the terms of this Permit. All containers of waste must be closed, labeled and managed in accordance with ~~R315-5~~of the UAC R315-262.
- **S-633**- This storage pad can be used to store any of the explosive wastes listed in Section 11.3. All containers of waste in storage will be closed except when waste is being added to or removed from the container. Adequate aisle space must be provided to permit proper container inspection. S-633 is approximately 100' x 100' in size. It is secured by a perimeter fence, a vehicle access gate that can be locked, and has the appropriate warning signs for a storage area. It has a road base surface, and has lighting protection. All waste containers will be labeled, and managed in accordance with ~~R315-5 of the UAC~~R315-262. This area does not have water immediately available, and relies on the Fire Department for any emergency action. Employees are not permitted to fight fires inside a reactive waste storage area. Precipitation run-on or run-off is prevented by a combination of diversion ditches, collection ditches and trenches.

11.8 TREATMENT OF REACTIVE WASTE

The facility utilizes thermal treatment methods to safely dispose reactive hazardous wastes. Thermal treatment methods include both open burning and open detonation. Reactive hazard wastes may also be shipped off-site and treated at other permitted treatment storage and disposal facilities.

11.8.1 OFF-SITE TREATMENT OF REACTIVE WASTE

All hazardous reactive wastes treated off-site will comply with all applicable local, State and Federal regulations.

11.8.2 ON-SITE TREATMENT

The M-136 and M-225 facilities are thermal treatment units designed to treat reactive hazardous wastes using open burning or open detonation. Treatment by open burning at M-136 is limited to a maximum of 125,000, 122,000, or 1,200 pounds per day depending on the treatment scenario. Thermal treatment scenarios are limited to those shown in Table 1 below. Treatment by open detonation will be conducted at burn stations 13 and 14 only, and is limited to 600 pounds per burn station. Figure 11-2 shows the security fence, control bunker, and vehicle access points for M-136.

Treatment by open burning at M-225 is limited to a maximum of 4,500 pounds per day. Each burn station 1-4 may burn all or a portion of the 4,500 pound limit. Treatment by open detonation is limited to the 600 pounds per day in the M-225 open detonation area. Figure 11-2 shows the security fence and vehicle access points for M-225.

The process flow for open burning at both treatment areas is identified below:

1. Pre-planned Activities
2. Placement of Waste in Treatment Units, Wiring and Ignition
3. Post-burn Inspection and Cleanup

The following precautions are used to ensure operator safety while working at the M-136 and M-225 burn grounds:

1. Emergency egress routes are always maintained while employees are working in the treatment areas.
2. The firing systems are disabled using an interlock to prevent accidental ignition.
3. Weather conditions are monitored to assure operators are not exposed to risks from lightning strikes.

**TABLE 1 - ATK Promontory OB/OD Treatment Limit Scenarios
Appendix A, June 2016 HHRA Report**

Treatment Scenario	Treatment Scenario Description	Annual Emissions Rates – Chronic Exposure Max. lbs/year	Annual Emissions Rates – Chronic Exposure Max. lbs/day	One-Hour Emission Rate – Acute Exposure Max. lbs/event (or hour or day)	Annual Max ÷ One-Hour Emission Rate lbs/event (or hr)
M-136 A1	OB in 6 Stations – 1,4,7,8,10 and 11	6,720,000 (1,120,000X6)	18,408 (3,068X6)	96,000 (16,000X6)	70
M-136 A2	OB in Station 13	840,000	2,301	10,000	84
M-136 A3	OB in Station 14	840,000	2,301	16,000	52.5
M-136 B	OB of large rocket motors in Station 14	1,500,000	4,110	125,000	12
M-136 C13	OD in Station 13	50,000	137	600	83.333
M-136 C14	OD in Station 14	50,000	137	600	83.333
M-225 A	OB in Stations 1 through 4	55,000	151	4500	12.222
M-225 B	OD in Station 1	10,000	27	600	16.666

The Permittee shall not operate more than one treatment scenario at M-136 or M-225 in a calendar day. One treatment scenario can occur at M-136 and M-225 on the same calendar day.

11.8.2.1 PRE- PLACEMENT ACTIVITIES

OBOD operations at the facility are a continuous process. Wastes are transported from the generation areas and brought into the treatment areas on a daily basis. Wastes are off-loaded and placed in trays and managed under 90-day rules at M-225 and as a permitted storage area at M-136 until treatment occurs. When treatment is completed, the trays are cleaned, inspected and the loading process begins again. Pre-placement inspections occur during the post-burn inspection and clean-up phase of the treatment process.

Prior to placing reactive waste for treatment at the OBOD facilities, operators visually verify the following tasks were completed during post-burn inspection and cleanup activity:

1. Any untreated waste and/or unburned residue ~~has~~ been identified, collected and is being properly managed;
2. Storm water accumulated in the trays has been removed.
3. Trays which do not meet the inspection criteria have been removed from service.

11.8.2.2 PLACEMENT OF WASTE IN TREATMENT UNITS

Reactive hazardous waste is transported to the OBOD facilities using a vehicle which meets explosive safety requirements. Reactive hazardous waste may be offloaded by hand or mechanical means including a knuckle boom, forklift, crane, or other appropriate equipment. Reactive hazardous waste is not collected, transported, or unloaded during a lightning warning, which is defined as lightning within 30 miles of the facility. If collection, transportation, or unloading operation has started, the operation is brought to a safe halt.

Treatment units used to treat and contain waste are listed below but are not limited to, the following:

- **Burn Trays** – Metal trays constructed in several different sizes including, 4'X10', 5'X16', 8'X8', and 8'X20'. Typical construction is out of steel plate A36 grade steel ranging thicknesses of ¼", 3/8", ½", ¾", and 1 inch.
- **Clamshell Disposal Trays**– Used for the disposal of items that have the potential to be propulsive. Typical construction is a square welded box 1-inch thick, A36 steel plate with a vented lid that enables treatment of potentially propulsive items, while safely containing the propulsive energy.
- **Restraining Trays** are typically constructed of 1-inch thick A36 steel plate welded into a square box that is filled with sand. There are several different designs for restraining trays which include: (1) steel tubes sitting on end in the sand are used to hold potentially propulsive items which are secured to the tube allowing the exhaust to vent out of the open end of the steel tubes, and (2) used without steel tubes where propulsive items are secured at the base for items where the exhaust will vent from the side of the item.
- **Small Motor Disposal Vaults**– Constructed from a concrete 10x10 foot sump filled with sand. Small rocket motors such are placed into the sand with the aft end exposed perpendicular to the ground. Motors are treated with the propulsive force directed into the concrete sump and the sand.

The vehicle containing hazardous waste is to be parked near the receiving tray with any side rails lowered to facilitate offloading of the waste. Containers are transferred directly from the truck and carefully placed into the burn tray. Items to be open detonated are offloaded from the vehicle by hand, knuckle boom, or by forklift and then placed on the ground for treatment

Items that have the potential to be propulsive are off-loaded into the clamshell, sandbox, or small motor disposal vault by hand, knuckle boom, or by forklift. After

offloading, items are restrained using engineered restraints allowing for safe treatment. Potentially propulsive items (e.g. rocket motors) may also be off-loaded into station 14 using the knuckle boom, forklift, or crane. The case may be placed on the ground, sand/dirt mounds, chocks, or other support media for treatment.

PEP waste which generates ash or residue which is listed or characteristic is segregated from PEP waste which generates non-regulated ash. Ash and residue is managed as described in 11.8.2.5.

11.8.2.3 WIRING AND IGNITION

After waste has been placed on a tray, the next step is to complete a resistance check on the ignition system. As a safety precaution, a physical interlock (e.g. key) is used to prevent the firing panel from being accidentally engaged during the resistance check. The key remains in under the control of the operators during the resistance check and all subsequent operations until the operators return to the control bunker to complete treatment. Each firing stanchion must have 10 ohms or less. A firing stanchion that has a resistance of 10 ohms or greater must be tagged out until repairs are made.

Once the resistance check is completed igniter installation is performed. The igniter is attached to the firing system by connecting the lead wire from the initiating device to the firing stanchion. Igniter installation operations are performed by a minimum of two operators. The types of igniters commonly used are listed below:

1. Burn Grounds Igniter –Propellant with a hot wire
2. Bag Igniters – Propellant, explosive, pyrotechnic with electric match or other electric initiation device.
3. Blasting Caps – Small amount of primary explosive
4. Electric Matches – wire attached to small explosive device
5. Fuse – a tube, cord, or the like, filled or saturated with combustible matter
6. EBW – Exploding Bridge Wire, a wire that contacts explosives fired by a high voltage electricity source
7. TBI – Through Bulkhead Initiator, shock initiation of an energetic material provided through an integral barrier

Linear shaped charge may also be used to facilitate thermal treatment of potentially propulsive wastes and items contaminated with reactive hazardous wastes.

Reactive hazardous wastes may be desensitized by adding one of the liquids listed below. The addition of these liquids modifies the reactive nature of the waste making it safer to store, handle and transport. It also slows the burning rate of the material during treatment.

1. Oils
2. Water
3. Alcohol
4. Triacetin
5. Physical Media (e.g. Conductive and static dissipative packaging)

When necessary, additional burn enhancers may be used to promote a more complete burn. Additives include, but are not limited to, the following:

1. Diesel Fuel
2. Alcohol
3. Wood (e.g. Pallets)
4. Propellant

The burning ground operators verify the treatment area has been evacuated of all personnel before proceeding with ignition. The burning ground operators retreat to the control bunker and close the door. The lockout key is inserted into the control system which allows power to the firing panel. Circuit continuity is checked at the firing panel which verifies that igniters were properly installed. A flashing red light is activated once the firing system is operational to alert personnel inside the area that a treatment operation is about to begin. The appropriate stanchion is chosen and the igniter fired by pressing the ignition buttons. Two operators are required for this operation.

In the event of a misfire, operators must wait a minimum period before reentering the treatment area to correct the problem. If a misfire occurs on the first tray, being burned the process stops, and personnel are required to stay in the bunker for at least 30 minutes. After 30 minutes, the igniter which failed is uninstalled. This process requires two employees and is done by: (1) the two employees performing the task remove the physical interlock and keep it in their possession, (2) the igniter wires are removed from the stanchion where the misfire occurred then twisted together to short the circuit. The igniter is not physically removed from its position. A new igniter is installed, and the operators return to the control bunker and repeat the process.

If a misfire occurs and it is not the first tray in the burn sequence, the operators return after 16 hours and repeat the process described above.

The Box Elder County Dispatch is notified prior to each treatment. This notification can be made by telephone, fax or email, and may be made immediately prior to ignition or an undefined number of hours prior to igniting the waste. Notification must be made the same day as the waste is treated.

11.8.2.4 POST-BURN INSPECTION AND CLEANUP

Following a treatment event, the area where the burn or detonation occurred cannot be re-entered for at least 16 hours after completion of the event without specific approval from ATK management. A preliminary inspection is performed before the cleanup begins. This inspection includes checking for hot spots and checking for unburned reactive hazardous waste. Hot spots include visual indications of hot material (flame, smoke, high temperature). If these conditions exist, post-burn clean is postponed until the hot spots are gone.

All residues remaining on the burn trays are visually inspected to determine if there is any unburned reactive material. Unburned reactive material will be reburned. Depending on the nature of the material that did not burn, donor material or burn enhancers such as diesel or wood may be used to ensure the material will completely burn. Unburned waste ejected from the tray will be collected and placed on a burn tray, and treated in the same manner.

Small amounts of untreated residue will be considered as newly generated waste and will be tracked as such in the tracking system. A small amount is defined as less than or equal to 5% of the total volume placed on the tray or treatment area. The primary option for managing this waste is to burn it by 6pm the following calendar day. If untreated residue cannot be treated by 6pm the following calendar day then it will be managed in accordance with ~~R315-5~~R315-262 of the UAC.

Unburned waste that results from a misfire or an interrupted ignition can remain on a burn tray. An interrupted ignition occurs when anything greater than 5% of the waste on the tray fails to ignite. In this situation, the waste is considered unreacted waste instead of newly generated residue. ATK will attempt to reburn the waste by 6 pm of the following calendar day. If unforeseen circumstances prevent the burn from occurring by 6pm of the following day, the waste will be covered and the burn tray will be labeled and managed as a 90-day storage area in accordance with the requirements of ~~R315-5 of the UAC~~R315-262. The cumulative storage time for the waste both in storage prior to burning and on the burn tray may not exceed 90-days. If it is necessary to store this waste for greater than 90-days, an emergency permit would be requested.

Typically, the post-burn and cleanup activities described in this section will be conducted the next calendar day following treatment. The clean process begins after the preliminary inspection is completed. Cleaning is accomplished using a variety of tools and equipment such as rakes, shovels, a forklift and a tractor. Ash is classified for disposal as described in 11.8.2.5. The majority of the waste treated is classified as EPA waste number D003 reactive only. The ash resulting from treating D003 reactive waste is collected, and transported to the on-site landfill where it is disposed.

Ash classified as hazardous is collected and managed in accordance with the requirements of ~~R315-5 of the UAC~~R315-262. Ash resulting from the treatment of K044 is collected and disposed in the on-site landfill. After the tray is cleaned, it is inspected for holes, weld cracks, and 6 inches of wall height. If a tray fails the inspection criteria, it is removed from service. These inspections are maintained onsite in the operating record. In the event a tray is not going to be used for an extended period, it is stored in a manner to prevent stormwater accumulation (e.g. stored upside down or with a lid). If accumulated liquid is present in a burn tray it is removed and delivered for treatment at a UPDES permitted facility.

11.8.2.5 Ash Classification

A waste assessment is conducted prior to receiving waste for treatment. The waste assessment is made using generator knowledge of the production process, the raw materials used to produce the material, and the chemical composition of the materials. If the assessment identifies that, at the point of generation, the waste meets any of the following three criteria, all ash from the initial treatment is collected, and the ash is sampled and analyzed using the protocol described in Attachment 1.

1. It could potentially contain ~~40 CFR 261.31~~R315-261-31 listed constituents.
2. It could potentially contain toxicity characteristic constituents above the ~~40 CFR 261.24~~R315-261-24 regulatory level.
3. It could potentially contain underlying hazardous constituents above the ~~40 CFR 268.48~~R315-268-48 treatment standards.

Based on the analytical results, the ash is managed using the logic in Attachment 1 Figure 3-2. All ash classified as hazardous based on the above criteria is managed in accordance with the requirements of ~~R315-5 of the UACR~~ R315-262.

As stated above, the majority of the waste treated at the burn grounds is classified as EPA waste number D003 reactive only. The ash resulting from treating D003 reactive waste is collected, and transported to the on-site landfill where it is disposed.

To ensure that significant concentrations of perchlorate are not disposed of in the on-site, solid waste landfill, a representative sample of burn ground ash resulting from the typical treatment of D003 reactive waste shall be analyzed for perchlorate on ~~an~~ a semiannual basis.

The analytical results of the burn ground ash shall be included with the Promontory Thermal Treatment Areas Annual Report as required by Condition II.G.3.e.

11.9 RECEIVING HAZARDOUS WASTE FROM OFF-SITE

ATK periodically receives reactive hazardous waste from off-site sources. All hazardous waste received from an off-site source will be managed at one of the permitted storage units. All off-site generated hazardous waste will be reviewed and approved prior to being accepted using the following criteria:

- EPA hazardous waste number(s);
- Physical description;
- Chemical description;
- Source of the waste;
- Sampling frequency;
- Parameter for analysis;
- Handling code;
- Tracking system number;
- DOT shipping description; and
- Safe handling instructions

Upon receipt, all off-site generated hazardous waste will be visually inspected to ensure that it meets the acceptance criteria, the manifest is correct, and the containers are labeled, closed, in good condition and compatible with the waste. All deficiencies will be resolved with the generator before the waste is received. After the waste has been accepted, it will be managed using the tracking systems described in Sections 11.6.

11.10 ENVIRONMENTAL PERFORMANCE STANDARDS

~~40 CFR 264.600~~ R315-264-600 contains requirements for treatment, storage and disposal facilities to meet environmental performance standards to ensure operations are conducted in a manner that ensures protection of human health and the environment. The follow areas of concern have been or are in the process of being addressed to ensure compliance with the performance standard requirements.

Prevention of Releases Due to Migration of Waste Constituents in the Ground Water or the Subsurface Environment - this standard requires actions to prevent releases that may have adverse effects on human health or the environment due to migration of waste constituents in the ground water or subsurface environment. Topics that must be considered are:

- The volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;
- The hydrologic and geologic characteristics of the unit and the surrounding area;
- The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water;
- The quantity and direction of ground-water flow;
- The proximity to and withdrawal rates of current and potential ground-water users;
- The patterns of land use in the region;
- The potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation;
- The potential for health risks caused by human exposure to waste constituents; and
- The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

Prevention of Releases Due to Migration of Waste Constituents in Surface Water, Wetlands or on the Soil Surface -This standard requires actions to prevent releases that may have adverse effects on human health or the environment due to migration of waste constituents in surface water, or wetlands or on the soil surface. Topics that must be considered are:

- The volume and physical and chemical characteristics of the waste in the unit;
- The effectiveness and reliability of containing, confining, and collecting systems and structures in preventing migration;
- The hydrologic characteristics of the unit and the surrounding area, including the topography of the land around the unit;
- The patterns of precipitation in the region;
- The quantity, quality, and direction of ground-water flow;
- The proximity of the unit to surface waters;
- The current and potential uses of nearby surface waters and any water quality standards established for those surface waters;
- The existing quality of surface waters and surface soils, including other sources of contamination and their cumulative impact on surface waters and surface soils;
- The patterns of land use in the region;
- The potential for health risks caused by human exposure to waste constituents; and
- The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

Prevention of Releases Due to Migration of Waste Constituents in the Air - this standard requires actions to prevent releases that may have adverse effects on human

health or the environment due to migration of waste constituents in the air. Topics that must be considered are:

- The volume and physical and chemical characteristics of the waste in the unit, including its potential for the emission and dispersal of gases, aerosols and particulates;
- The effectiveness and reliability of systems and structures to reduce or prevent emissions of hazardous constituents to the air;
- The operating characteristics of the unit;
- The atmospheric, meteorologic, and topographic characteristics of the unit and the surrounding area;
- The existing quality of the air, including other sources of contamination and their cumulative impact on the air;
- The potential for health risks caused by human exposure to waste constituents; and
- The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

11.10.1 Compliance With Environmental Performance Standard Requirements

All of these factors have been and will continue to be evaluated until closure of the facility to ensure waste treatment methods are conservative and will not adversely affect human health or the environment. Control measures include, but are not limited to the following:

Human Health Risk Assessment - A Human Health Risk Assessment (HHRA) has been conducted to evaluate the risk to the public from open burning and open detonation operations at the facility. Tasks associated with the HHRA included developing an air dispersion model, evaluating sources, source parameters, and waste materials, and characterizing emissions. The HHRA addresses the following environmental performance related concerns:

- The volume and physical and chemical characteristics of the waste in the unit, including its potential for the emission and dispersal of gases, aerosols and particulates;
- The effectiveness and reliability of systems and structures to reduce or prevent emissions of hazardous constituents to the air;
- The operating characteristics of the unit;
- The atmospheric, meteorologic, and topographic characteristics of the unit and the surrounding area; and
- The potential for health risks caused by human exposure to waste constituents.

The methods used in the HHRA are based on United States Environmental Protection Agency (U.S. EPA) risk assessment guidance documents, and to the extent possible, the dispersion modeling methodology within the Human Health Risk Assessment Protocol (HHRAP) for Hazardous Waste Combustion Facilities (U.S. EPA, September 2005). The completed HHRA Protocol and Report has been reviewed and approved by the Utah Division of Waste Management and Radiation Control. Limits on OBOD operations have been based on this assessment.

Ecological Risk assessment – ~~an the need to conduct an~~ Ecological Risk Assessment (ERA) ~~has been evaluated and a waiver was granted by UDMRC. The ERA waiver was justified because, the ecological receptors will not be affected by the treatment operations, Volatile Organic Compounds (VOCs) do not accumulate in the ecological system, modeled soil concentrations for metals, semi-volatile organic compounds (SVOCs) and other contaminants are below background levels, below measurable existing laboratory methods and several orders of magnitude below available environmental screening levels. Impacts of the thermal treatment unit operations will be evaluated using the soil monitoring plan.~~ ~~will be conducted to determine potential risks to ecological receptors that may be affected by OBOD operations. It will evaluate the potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures. The completed ERA will be submitted to the Utah Division of Solid and Hazardous Waste for review. Limits on the OBOD operations will be based on this assessment, as appropriate, once approval of the ERA Report is given by the Director of the Utah Solid and Hazardous Waste Control Board.~~

Soil Monitoring Plan – a Soil Monitoring Plan (SMP) ~~has will been~~ developed to verify the air dispersion and deposition models that were developed for the HHRA. The SMP will be used to evaluate the existing quality of ~~surface waters and~~ surface soils, and to determine what impact continued operations at the thermal treatment areas has on surface soil. ~~and surface water quality.~~ Risks to human health and the environment will be evaluated using the data collected during implementation of the SMP.

Groundwater Monitoring Plan – a groundwater monitoring program has been in place at the facility since 1986 to monitor contaminants that were released from past disposal practices. The sampling methods, constituents of concern, sampling frequency, sampling results and analytical methods are closely reviewed and monitored by the ~~DWMRCSHW.~~

The groundwater monitoring program addresses the following concerns:

- The hydrologic and geologic characteristics of the unit and the surrounding area
- The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater;
- The quantity and direction of groundwater flow; and
- The proximity to and withdrawal rates of current and potential groundwater users.

A Groundwater Monitoring Plan ~~has will been~~ developed to evaluate the impact of thermal treatment operations on groundwater down gradient of the M-136 and M-225 Thermal Treatment Areas. The plan ~~will identify~~ ies additional statistical studies, any additional groundwater modeling needed and groundwater monitoring frequency and reporting, analytes, sampling protocols and data quality objectives. ~~In addition, the plan will propose a method for determining if existing groundwater contamination concentrations increase due to ongoing thermal treatment operations.~~

Annual Review of Limits – Permit Condition II.G.3.f. requires ATK to review the emission factors established by the HHRA to determine whether the factors are still representative of the wastes treated. In addition, Permit Condition II.G.3.g. requires ATK to review the HHRA to evaluate changes to dose-response factors for the three classes of detected COPCs: chromium (total and hexavalent), 2,3,7,8-TCDD TE, and detected

potentially carcinogenic PAHs (benzo(a)anthracene, benzo(k)fluoranthene, chrysene and indeno(1,2,3-cd)pyrene)., A review of the potential human health risk scenarios evaluated in the HHRA is also required to assure that the scenarios have not changed. These reviews are conducted annually and are included with the Promontory Thermal Treatment Areas Annual Report that is submitted to the Director by March 1st of each calendar year. The annual Report requirements are listed under Condition II.G.3

Stormwater Management – Stormwater run-on and run-off is controlled by a combination of soil grading and drainage ditches. The terrain around M-136 and M-225 has been graded and drainage ditches surround the areas in order to minimize stormwater run-on and run-off. The topography is shown in Attachment 6, Figures F-1 and I-1. Stormwater collection and drainage is shown in Attach 11 Figure 11-1 and Figure 11-2. The combination of controlling run-on and run-off, containing waste in water-tight burn trays, lack of precipitation, high evaporation rate and depth to groundwater prevents waste constituents from being released to the groundwater and or subsurface environment. Ongoing soil and groundwater monitoring are used to verify these controls are effective in preventing adverse effects to human health and the environment.

Actions to Prevent Releases to the Environment – all spills of hazardous materials are promptly cleaned up. Internal procedures require that chemicals be properly containerized, labeled, stored, used and disposed. The workplace is routinely audited to ensure compliance with procedures. When spills do occur, the released material is promptly cleaned up and R315 reporting requirements are followed.

Open Burning is Conducted in Steel Containers – Open burning is conducted in containers which minimizes the potential for waste constituents to migrate to the ground water, surface water or related environments. The Operating Permit requires routine inspections to ensure the containers are properly maintained. Containers requiring repair are removed from service until repairs are completed.

Ash Management – ash and residue from OBOD operations are promptly collected and disposed. Ash is managed and classified as described in sections 8.2.4, and 8.2.5 of this attachment.

Storage and Inspections – All PEP and residues from OBOD treatment are stored in accordance with Section 4 of this attachment and ~~R315-5~~R315-262 Hazardous Waste Generator Requirements. Storage and treatment areas are inspected as required by Attachment 2, and operated in accordance with Attachment 9 of this permit.

Regulatory Oversight- the facility is subject to strict regulatory oversight by the Utah Division of Waste Management and Radiation Control. All aspects of hazardous waste management described in this Attachment are subject to their review. When necessary, deficiencies are identified and corrective action is taken by the permittee.

ATTACHMENT 12

M-705L OXIDIZER LEACHING PROCESS

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12 **OXIDIZER LEACHING PROCESS**

12-1 **PURPOSE AND SCOPE**

ATK Launch Systems - Promontory (ATK) operates a small treatment process in which it can remove the oxidizer from class 1.3 explosive sufficient enough to render the explosive nonreactive. This process is completed in Building M-705L. This process leaches the oxidizer from class 1.3 explosives with heated water, and agitation if needed, rendering the explosive nonreactive. The effluent wastewater is then treated through various processes in the advanced wastewater treatment facility prior to being discharged. The remaining solid residue is then prepared for disposal as a solid waste.

The oxidizer leaching process allows some reactive hazardous waste to be treated by wastewater technology in place of treatment by open burning.

12-2 **PROCESS DESCRIPTION**

The oxidizer leaching process is a simple process. ATK only treats specific waste streams that can fit this treatment methodology. As previously described, the process leaches the water soluble oxidizer from 1.3 class explosives using water and agitation if necessary to render the explosive nonreactive.

The following is a description of the oxidizer leaching process.

This process uses a 600 gallon leach tank that was fabricated from 3/16" stainless steel. The tank is equipped with high and low level transmitters and is heated by low pressure steam. The tank has been designed with steel grating between the reactive waste items and the heat exchanger to prevent direct contact with the explosive material and the hot surface of the heat exchanger. The heated steam control is interlocked with the water level, to prevent steam heat from being applied when the low level water alarm is active.

The system also utilizes air sparging to assist in the leaching process if needed. Water is supplied to the unit and is protected with backflow prevention. The building has been adequately ventilated for this process. Water sampling is performed periodically to monitor the oxidizer levels during the leaching process. Once the oxidizer levels stop increasing in the water, this indicates that no further leaching is taking place and the process is complete. The inert waste is then removed from the baskets and prepared

for disposal as a solid waste. The oxidizer containing wastewater is then treated by one or multiple biological, chemical, or physical treatment processes at the wastewater treatment facility.

12-3 **WASTE ANALYSIS AND OPERATING PARAMETERS**

Prior to treatment of a new composite propellant waste or propellant contaminated waste article, a Waste Profile is developed to determine the operating parameters such as, temperature, air agitation and time necessary to complete the oxidizer removal.

The Waste Profile is developed in a “bench top” laboratory type process and then followed by laboratory testing to determine the amount of oxidizer remaining and a determination of when the material is no longer a reactive waste. The Waste Profile number and laboratory testing results are maintained in the facility permit operating record.

The system is designed and operated to prevent any releases to the environment and to safely render the reactive material to a nonreactive state.

12-4 **ENVIRONMENTAL PERFORMANCE STANDARDS**

The M-705L leaching process has been located, designed, operated, and maintained in a manner that will ensure protection of human health and the environment. This section addresses the prevention of releases due to migration of hazardous constituents into the ground water or subsurface environment, surface waters, wetlands, surface soils, and in the air.

12-4-1 **Prevention of Releases to Ground Water or Subsurface Environment**

Several parameters have been considered in determining the prevention of a release to ground water or to subsurface environments. It is important to note that this process is completed inside a closed building with containment. The containment system, consisting of concrete floor space with curbing and a concrete sump within the floor space area, is shown in the facility drawing contained in Attachment 6 (Figure K-1). Because of this secondary containment, there should be negligible potential for deposition or migration of waste constituents into the subsurface or groundwater.

12-4-2 **Prevention of Releases to Surface Water, Wetlands, or Soil Surface**

The oxidizer leaching area has secondary containment to ensure collection of any spill or release. The oxidizer leach tank has a maximum volume of approximately 600 gallons. The containment system has a volume of approximately 800 gallons. Within the containment system, is a blind sump

with a volume of approximately 100 gallons. The sump is only used if a spill occurs; it is not used on a routine basis. The sump is located beneath the leach tank to contain a small spill. The overall floor space containment is designed to collect any large spill and has more than sufficient capacity to hold any spill during the oxidizer leaching process.

The use of this containment along with the high level transmitter and the low volume of waste and wastewater reduces the potential for any releases to surface water, wetlands, or surrounding soils.

Wastewater resulting from this treatment process will be treated by one or multiple biological, chemical, or physical treatment processes at the wastewater treatment facility prior to being discharge to the environment.

12-4-3 **Prevention of Releases to Air**

The oxidizer leaching process is completed within a closed building that contains a closed tank with a lid. The only constituent released to the air is a very small amount of hydrogen. An onsite Safety evaluation has been completed to verify that no hazard is created from the small amount of hydrogen released within the building. Since there is very small amount of constituents released to the air, the potential for any adverse effects to human health or the environment are negligible.

12-5 **MONITORING, ANALYSIS, INSPECTION, RESPONSE, REPORTING, AND CORRECTIVE ACTION**

Handling explosive waste requires special handling precautions and safety procedures, ATK personnel follow internal procedures for performing the leaching process. ATK will conduct the leaching process in a manner that will ensure protection of human health and the environment.

ATK will comply with the requirements specified in the facility Contingency Plan (Attachment 4), when there has been a release at Building M-705L that threatens human health or the environment.

ATK will comply with the ignitable and reactive waste regulations as required by R315-264-17.

ATK will inspect Building M-705L in accordance with the inspection schedule contained in Attachment 2.

12-6 **RECORD KEEPING AND REPORTING**

The Permittee shall record in the Operating Record the following:

- 12-6.1 The date a batch of contaminated production materials is placed in the M-705L treatment tank;
- 12-6.2 The quantity and description of contaminated productions materials or propellants/explosives, including the Waste Profile #, placed in the treatment tank;
- 12-6.3 The laboratory testing results associated with each Waste Profile #;
- 12-6.4 The date the treatment process for each batch of contaminated production materials or propellants/explosives is complete;
- 12-6.5 The date the wastewater is pumped out of the tank to the wastewater treatment plant; and
- 12-6.6 The waste determination of the treated production materials and the date they are removed from the tank.

12-7 **CLOSURE**

ATK will close Building M-705L in accordance with R315-264-110 through R315-264-120, R315-264-178, Permit Condition II.O. and Attachment 5 of this Permit.