

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES HAZARDOUS WASTE TREATMENT AND STORAGE PERMIT

Permittee: Tech Ord, a Division of AMTEC Corporation; Clear Lake, South Dakota

Permit Number: SDD981549983-2016

Pursuant to South Dakota Codified Laws (SDCL) Chapter 34A-11, and the Administrative Rules of South Dakota (ARSD) Article 74:28 promulgated by the South Dakota Board of Minerals and Environment, a Permit is issued to Tech Ord, a Division of AMTEC Corporation, (hereafter called the Permittee), identification number SDD981549983, to operate a hazardous waste facility consisting of storage and treatment (deactivation) units for reactive (explosive) hazardous wastes generated from on-site production of products that contain energetic materials. The facility is located at 47600 180th Street, Clear Lake, SD (44.7808 degrees North latitude; 96.6647 degrees West longitude).

The Permittee must comply with all terms and conditions of this Permit. This Permit consists of the conditions contained in Modules I through IX, the Permit attachments referenced in the Modules, the applicable statutory requirements under SDCL Chapter 34A-11, and rules contained in ARSD Article 74:28.

This Permit is based on the premise that information the Permittee submitted in the Permit Renewal Application received January 27, 2015, revised Part A Application received April 21, 2015, and revised Part B Application received June 30, 2015 (hereafter referred to as the Application) is accurate, and that the Permittee will operate and maintain the facility as specified in the Application and this Permit.

Any inaccuracies found in the submitted information may be grounds for the termination, revocation and reissuance, or modification of this Permit in accordance with SDCL Section 34A-11-12 and ARSD Section 74:28:26:01 (Title 40 Code of Federal Regulations (40 CFR) Sections 270.41, 270.42, and 270.43). The Permittee must inform the South Dakota Department of Environment and Natural Resources (hereafter called the Department), in writing, of any deviation from or changes in the information in the Application that would affect the Permittee's ability to comply with the applicable regulations or Permit conditions.

This Permit is effective as of March 21, 2016, and shall remain in effect until Midnight on March 21, 2021, unless revoked and reissued under SDCL Section 34A-11-12, SDCL Chapter 1-26, and ARSD Section 74:28:26:01 (40 CFR Section 270.41); terminated under SDCL Section 34A-11-12, SDCL Chapter 1-26, and ARSD Section 74:28:26:01 (40 CFR Section 270.43); or continued in accordance with SDCL Section 34A-11-12 and SDCL Section 1-26-28 (40 CFR Section 270.51(a)).

Signature: _____



Steven M. Pirner, Secretary

Department of Environment and Natural Resources

Date: March 21, 2016

APPENDIX

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Modules

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Attachments

- Attachment 1: Revised RCRA Part A Application form (Amendment #2015-A) for Tech Ord dated April 20, 2015.
- Attachment 2: Certification of Applicant form for Tech Ord dated April 20, 2015.
- Attachment 3: Revised Tech Ord RCRA Part B Application received June 30, 2015.
- Attachment 4: 2015 Human Health Risk Assessment Report; July 2015 Prepared for Tech Ord A Division of AMTEC Corporation, Prepared by Wenck Associates, Inc. and J.B. Stevens & Associates.
- Attachment 5: Integrated Contingency Plan (ICP) Emergency Planning and Response for Tech Ord Clear Lake Facility; Revision H, October 21, 2015.
- Attachment 6: May 21, 2013 Chemring Energetic Devices letter updating August 2012 initial permit application with Bunker Structural Analysis attachment.
- Attachment 7: December 18, 2013 Additional Soil Sampling Results-Former OB/OD Area, GeoTek Engineering and Testing Services.
- Attachment 8: September 1, 2015, Background Groundwater Monitoring Results To Date, Tech Ord HWTF, GeoTek Engineering and Testing Services.

LIST OF ACRONYMS

40 CFR	Title 40 Code of Federal Regulations
AOC	Area(s) of Concern
ARSD	Administrative Rules of South Dakota
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CoC	Contaminants of Concern
CTU	Confined Treatment Unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
Department	South Dakota Department of Environment & Natural Resources
DPA	Disposable Production Aids
EPA	United States Environmental Protection Agency
EWSU	Energetic Wastes Storage Unit (>90-Day HW Storage)
HE	High Explosive
HEPA	High-Efficiency Particulate Air
HMX	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
HNS	1,3,5-Trinitro-2-[2-(2,4,6-trinitrophenyl)ethenyl]benzene
HPC-13	Alliant Tech Systems HPC-13 double base smokeless propellant
HSWA	Hazardous and Solid Waste Amendments of 1984
HW	Hazardous Waste
SAL	Site Action Levels
SDS	Safety Data Sheet
NEW	Net Explosive Weight
OB/OD	Open Burn/Open Detonate
OBODM	Open Burn Open Detonation Model
PBX	Polymer-Bonded Explosive
PETN	Pentaerythritol tetranitrate
RCRA	Resource Conservation and Recovery Act
RDX	Hexahydro-1,3,5-trinitro-1,3,5-triazine
SDCL	South Dakota Codified Laws
SWMU	Solid Waste Management Unit
TCLP	Toxicity Characteristic Leaching Procedure
Tetryl	Methyl-2,4,6-trinitrophenylnitramine

MODULE I - GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to store and treat hazardous waste in accordance with the conditions of this Permit. Any storage or treatment of hazardous waste not authorized in this Permit is prohibited. Compliance with this Permit constitutes compliance, for the purposes of enforcement, with South Dakota Codified Laws (SDCL) Chapter 34A-11 and the Administrative Rules of South Dakota (ARSD) Article 74:28. Issuance of this Permit does not convey any 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, any infringement of state or local laws, rules, or ordinances, or preclude compliance with any other federal, state, or local laws or regulations governing the treatment and handling of explosives.

Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under SDCL Chapter 34A-11 or Sections 3008(a), 3008(h), 3013, or 7003 of the federal Resource Conservation and Recovery Act (RCRA); Sections 106(a), 104 or 107 of the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), or any other federal or state law providing for protection of public health or the environment.

B. PERMIT ACTIONS

1. Permit Modification, Revocation and Reissuance, and Termination

This Permit may be modified, revoked and reissued, or terminated for cause, as specified in SDCL Section 34A-11-12, ARSD Section 74:28:26:01 (40 CFR Sections 270.41, 270.42, and 270.43). The filing of a request for a Permit modification, revocation and reissuance, or 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 condition (ARSD Section 74:28:26:01, 40 CFR Sections 270.4(a), 270.30(f)).

All permit conditions specified within this Permit shall supersede any conflicting statements, requirements, or procedures found within the attachments of each module.

2. Permit Renewal

This Permit may be renewed as specified in SDCL Section 34A-11-12, ARSD Section 74:28:26:01 (40 CFR Section 270.30(b)), and according to the Permit condition found under Module I Section B.1 upon completion and compliance with the conditions established under this Permit. Review of any application for a Permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable rules (ARSD Section 74:28:26:01, 40 CFR Section 270.30(b), HSWA Sec. 212).

C. SEVERABILITY

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 hereby.

D. DEFINITIONS

For purposes of this Permit, terms used herein shall have the same meaning as those in SDCL Chapter 34A-11 and ARSD Article 74:28 (40 CFR Parts 124, 260, 261, 262, 264, 266, 268, 270, 273 and 279), unless this Permit specifically provides otherwise. Where terms are not defined in the rules or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term. References made to the Application refer to the RCRA Revised Subpart X permit Application, June 2015 (Permit Attachment 3).

E. DUTIES AND REQUIREMENTS

1. Duty to Comply

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 or order. Any Permit noncompliance, other than noncompliance authorized by an emergency permit or order, constitutes a violation of SDCL Chapter 34A-11 and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a Permit renewal application (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(a)).

2. Duty to Reapply

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a Permit renewal at least 180 days prior to Permit expiration (ARSD Section 74:28:26:01, 40 CFR Sections 270.10(h) and 270.30(b)).

3. Permit Expiration

Pursuant to SDCL Section 34A-11-12, this Permit shall be effective for a term of five years from the date of issuance and may be renewed for periods of five years. As long as the Department is the Permit-issuing authority, this Permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely and complete application to renew the Permit. The existing Permit shall remain effective until the application has been finally determined by the Department (SDCL Section 1-26-28, South Dakota Administrative Procedures and Rules Act). "Timely" shall be defined as submission of the application at least 180 days prior to the date of Permit expiration (ARSD Section 74:28:26:01, 40 CFR Sections 270.10(h) and 270.30(b)).

4. Need to Halt or Reduce Activity Not a Defense

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 (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(c)).

5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(d)).

6. Proper Operation and Maintenance

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/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(e)).

7. Permit Actions

Pursuant to SDCL 34A-11-15, this Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any Permit condition (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(f)).

8. Property Rights

This Permit does not convey any property rights of any sort, or any exclusive privilege (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(g)).

9. Duty to Provide Information

The Permittee shall furnish to the Department, within a reasonable time, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, to determine compliance with this Permit, or to determine compliance with rules that become effective after the date of Permit issuance. The Permittee shall also furnish to the Department, upon request, copies of records required to be kept by this Permit (ARSD Sections 74:28:25:01 and 74:28:26:01; and 40 CFR Sections 264.74(a)

and 270.30(h)).

10. Inspection and Entry

Pursuant to SDCL Section 34A-11-16, ARSD Section 74:28:26:01, and 40 CFR Section 270.30(i), the Permittee shall allow the Department or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

- a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit or in accordance with rules that become effective after the date of Permit issuance;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by SDCL Chapter 34A-11, any substances or parameters at any location.

11. Monitoring and Records

The Department may require such testing by the Permittee, and may make such modifications to this Permit, deemed necessary to ensure implementation of new regulations or requirements, or to ensure protection of human health and the environment.

- a. 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 must be the appropriate method from ARSD Section 74:28:22:01 (Appendix I of 40 CFR Part 261) or an equivalent method approved by the Department. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846 (latest revision); Standard Methods of Wastewater Analysis; or an equivalent method, as specified in the Waste Analysis Plan, Section 5 Appendix of the Application, (Permit Attachment 3).
 - i. For waste tracking and reporting purposes required under this Permit, the Permittee may use appropriate conversion factors to estimate total material weights. The conversion factors used shall be verifiable and based on information specific to the components used for individual parts.
- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation,

copies of all reports and records required by this Permit, the certification required by ARSD Section 74:28:25:01 (40 CFR Section 264.73(b)(9)), and records of all data used to complete the Application for this Permit, for a period of at least three years from the date of the sample, measurement, report, record, certification, or application. This period may be extended by request of the Department at any time and is automatically extended during the course of any unresolved enforcement action regarding this facility. The Permittee shall also maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility, and for any required post-closure care period (ARSD Sections 74:28:25:01 and 74:28:26:01; and 40 CFR Sections 264.74(b) and 270.30(j)(2)).

- c. Pursuant to ARSD Section 74:28:26:01 (40 CFR Section 270.30(j)(3)), records for monitoring information shall include:
 - i. The dates, exact place, and times of sampling or measurements;
 - ii. The individuals who performed the sampling or measurements;
 - iii. The dates analyses were performed;
 - iv. The individuals who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.

12. Reporting Requirements

- a. **Planned Changes:** The Permittee shall give notice to the Department, as soon as possible, of any planned physical alterations or additions to the permitted facility (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(l)(1)).
- b. **Anticipated Noncompliance:** The Permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with Permit requirements (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(l)(2)).
 - i. The Permittee may not commence storage or treatment of hazardous waste in newly constructed or modified portions of the facility authorized under this Permit until the Permittee has submitted to the Department a letter signed by the Permittee and a registered professional engineer, licensed in South Dakota (SDCL 36-18A and ARSD Article 20:38), stating that the facility has been constructed or modified in compliance with the Permit; and

- aa. The Department has inspected the newly constructed or modified portion(s) of the facility authorized under this Permit and finds those portions are in compliance with the conditions of the Permit; or
 - bb. The Department has either waived the inspection or has not within 15 days notified the Permittee of the Department's intent to inspect within the next 30 days (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(l)(2)).
- c. Transfer of Permits: This Permit is not transferable to any person, except after notice to the Department. The Department may require modification or revocation and reissuance of the Permit pursuant to SDCL Section 34A-11-15 and ARSD Section 74:28:26:01 (40 CFR Sections 270.30(l)(3) and 270.40). Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of SDCL Chapter 34A-11 and ARSD Article 74:28, 40 CFR Parts 264 and 270, and this Permit (ARSD Section 74:28:25:01 and 40 CFR Section 264.12(c)).
- d. Monitoring Reports: Monitoring results shall be reported at the intervals specified elsewhere in this Permit (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(l)(4)).
- e. Compliance Schedules: 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 fourteen days following each schedule date (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(l)(5)).
- f. Twenty-Four Hour Reporting:
 - i. The Permittee shall report to the Department any noncompliance which may endanger health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances, as required under ARSD Section 74:28:26:01 (40 CFR Section 270.30(l)(6)), including:
 - aa. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies; and
 - bb. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility, which could threaten the environment or human health outside the facility.
 - ii. The description of the occurrence and its cause shall

include:

- aa. Name, address, and telephone number of the owner or operator;
 - bb. Name, address, and telephone number of the facility;
 - cc. Date, time, and type of incident;
 - dd. Name and quantity of materials involved;
 - ee. The extent of injuries, if any;
 - ff. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - gg. Estimated quantity and disposition of recovered material that resulted from the incident.
- iii. A written submission shall also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Department may waive the five-day written notice requirement in favor of a written report within 15 days.
- iv. Under this Permit, circumstances consistent with normal facility operations but addressed by implementing standard Contingency Plan procedures are not subject to the twenty-four hour reporting requirements under Module 1.E.12.g; provided they do not result in unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water, or groundwater that could threaten human health or the environment. Examples of such circumstances include:
- aa. Minor medical issues addressed on-site without the assistance of off-site medical or emergency response personnel; and
 - bb. De Minimis discharges of hazardous waste or hazardous waste constituents. For this permit condition, a De Minimis discharge is a release of less than 25 gallons that is: 1) not subject to reporting requirements under ARSD 74:34:01 for known or suspected discharges; and, 2) remediated within 24 hours such that no endangerment of health or the

environment remains.

- g. **Unauthorized Waste Report:** As noted in Module II.C of this Permit, the Permittee may not receive hazardous waste from off-site sources. If the facility receives any hazardous waste from off-site sources, the Permittee must submit a written report to the Department within 15 days of receiving that waste. The report shall include the following information:
 - i. The identification number, name, and address of the facility;
 - ii. The date the facility received the waste;
 - iii. The identification number, name, and address of the generator and the transporter, if available;
 - iv. A description and the quantity of each hazardous waste the facility received from off-site;
 - v. The proposed method of treatment, storage, or disposal for each hazardous waste;
 - vi. The certification signed by the owner or operator of the facility or his authorized representative; and
 - vii. A brief explanation of why the waste was received, if known.
- h. **Biennial Report:** A biennial report must be submitted covering facility activities during odd numbered calendar years (ARSD Sections 74:28:26:01 and 74:28:25:01; and 40 CFR Sections 270.30(l)(9) and 264.75).
- i. **Other Noncompliance:** The Permittee shall report all other instances of noncompliance not otherwise required to be reported above (as found under the Permit conditions specified under Module I Sections E.12.a through h), at the time monitoring reports are submitted. The reports shall contain the information listed in the Permit condition specified under Module I Section E.12.g. (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(l)(10)).
- j. **Other Information:** Whenever the Permittee becomes aware that it failed to submit any relevant facts in the Application, or submitted incorrect information in a permit application or in any report to the Department, the Permittee shall promptly submit such facts or information (ARSD Section 74:28:26:01 and 40 CFR Section 270.30(l)(11)).

F. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to or requested by the Department shall be signed and certified in accordance with ARSD Section 74:28:26:01 (40 CFR Sections 270.11 and 270.30(k)).

G. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DEPARTMENT

All reports, notifications, or other submissions which are required by this Permit to be sent or given to the Department should be sent by certified mail, an approved equivalent mail delivery service that establishes proof of delivery, or hand delivered to:

South Dakota Department of Environment and Natural Resources
Waste Management Program
523 East Capitol Avenue - Joe Foss Building
Pierre, South Dakota 57501-3182

When the Permittee hand delivers required information, the Permittee shall be responsible for obtaining proof of delivery from Department personnel.

H. CONFIDENTIAL INFORMATION

In accordance with SDCL Section 34A-11-22, ARSD Section 74:28:26:01 (40 CFR Section 270.12), the Permittee may claim confidential any information required to be submitted by this Permit. The Permittee must assert any such claim in the prescribed manner at the time of submission and the Department will treat information claimed confidential in accordance with the governing statutory and regulatory authorities cited. Information deemed confidential upon review and approval by the Department, will be kept confidential and not available as public information.

I. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility, until closure is completed and certified by an independent, registered professional engineer, the following documents and all amendments, revisions and modifications to these documents.

1. Waste Analysis Plan, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.13) and this Permit.
2. Inspection schedules, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.15(b)(2)) and this Permit.
3. Personnel training documents and records, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.16(d)) and this Permit.
4. Contingency Plan, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.53(a)) and this Permit.
5. Operating Record, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.73) and this Permit.
6. Closure Plan, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.112(a)) and this Permit.
7. Closure Cost Estimate, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.142(d)) and this Permit.
8. A copy of the latest revision of the Part B Permit Application, as submitted

by the Permittee, and the most current Permit with attachments and any modifications to the current Permit that have been approved by the Department.

9. Additional records required under Permit Modules II through IX.

J. **DOCUMENTS TO BE SUBMITTED TO THE DEPARTMENT**

The Permittee shall submit the documents in Table I.J to the Department in accordance with the due dates listed:

Table I.J

<u>Document</u>	<u>Due Date</u>
1. Permit renewal application, as required in Module I.E.2.	180 days prior to Permit expiration.
2. Notice of planned changes, as required in Module I.E.12.a.	As soon as possible, but prior to implementing changes.
3. Notice of anticipated noncompliance, as required in Module I.E.12.b.	As soon as possible, but prior to implementing changes or activities.
4. P.E. and Permittee letter verifying facility construction or modification, as required in Module I.E.12.b.i.	Before storage or treatment of wastes in newly constructed or modified portions of the facility.
5. Permit Transfer Notification, as required in Module I.E.12.c.	Before transferring facility ownership or operation.
6. Monitoring Reports, as required in Module I.E.12.d.	As specified in permit conditions under modules IV through IX.
7. Compliance Schedules, as required in Module I.E.12.e.	No later than fourteen days following each schedule date.
8. Twenty-Four Hour Reporting, as required in Module I.E.12.f.	Oral report within 24 hours and written submission within five days.
9. Unauthorized Waste Report, as required in Module I.E.12.g.	Letter report within 15 days of receiving hazardous waste from an off-site source.
10. Biennial Report, as required in Module I.E.12.h.	By March 1 of each even numbered calendar year.
11. Other noncompliance reports, as required in Module I.E.12.i.	With Monitoring Reports specified under Module I.E.12.d.
12. Other Information, as required in Module I.E.12.j.	Upon discovery of relevant information.
13. Confidential Information claims, as required in Module I.H.	At the time of submission of information asserted confidential.

MODULE II - GENERAL FACILITY CONDITIONS

A. APPLICABILITY

The requirements of Permit Module II pertain to the hazardous waste storage and treatment units identified within Modules III, IV, and V of this Permit.

B. DESIGN AND OPERATION OF FACILITY

The Permittee shall design, construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.31).

C. REQUIRED NOTICES

1. Hazardous Waste Imports

The Permittee may not receive hazardous waste from a foreign source.

2. Hazardous Waste from Off-Site Sources

The Permittee may not receive hazardous waste from off-site.

D. GENERAL WASTE ANALYSIS

1. The Permittee shall follow the waste analysis procedures required by ARSD Section 74:28:25:01 (40 CFR Section 264.13), as described in the current Waste Analysis Plan, Section 5 Appendix of the Application (Permit Attachment 3). The Permittee shall verify the analysis of each waste stream annually as part of its quality assurance program, in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, or equivalent methods approved by the Department.

a. At a minimum, the Permittee shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.13(b)(1) through (4)) and ARSD Section 74:28:26:01 (40 CFR Section 270.30(e)). If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory in writing that it must operate under the Waste Analysis conditions set forth in this Permit. The Permittee shall submit any waste analyses required under this section to the Department within 30 days of receipt from the testing laboratory.

2. In addition to the Permit Condition found under Module II Section D.1 above, and in accordance with ARSD Section 74:28:26:01 (40 CFR Section 270.14(b)(2)) requirements, if requested by the Department to determine compliance with this Permit the Permittee shall provide appropriate quantitative analyses of wastes or media.

3. The Permittee shall institute quantitative analyses for precipitation or other fluids that accumulate in primary or secondary containment systems for hazardous waste treatment units included in this Permit.
 - a. At a minimum, analyses shall consist of initial sampling and testing adequate to determine the hazardous waste regulatory status of the accumulated precipitation or other fluids; and subsequent evaluations, every calendar year at a minimum, adequate to determine hazardous waste regulatory status.
 - b. In accordance with ARSD Section 74:28:25:01 and 40 CFR Section 264.193(c)(4), accumulated precipitation or other fluids must be removed from containment systems within 24 hours or in as timely a manner as possible. Such precipitation may be containerized until sampling procedures described above are accomplished.
 - i. When necessary for operational safety, removal of accumulated precipitation from containment systems on the next business operating day shall meet the requirement for timely removal.
 - c. The Permittee shall notify the Department 30 days prior to discontinuing sampling under this Permit condition.
 - d. The Permittee shall comply with all monitoring and discharge requirements under the facility storm water discharge permit (SDR00A091) or surface water discharge permit (SD0026301) for any discharge of precipitation or other fluids.

E. SECURITY

The Permittee shall comply with the security provisions of ARSD Section 74:28:25:01 (40 CFR Sections 264.14(b)(2) and (c)) and Section 4 of the Application (Permit Attachment 3).

F. GENERAL INSPECTION REQUIREMENTS

1. The Permittee shall follow the inspection schedule set out in Section 8 of the Application (Permit Attachment 3), where "daily inspection" shall be defined as inspections conducted, per unit, each day that a given treatment unit operates.
2. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.15(c)).
3. The Permittee shall keep records of inspections, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.15(d)).

G. PERSONNEL TRAINING

1. The Permittee shall conduct personnel training, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.16).

- a. The training program shall follow the system described in Section 11 of the Application (Permit Attachment 3).
- b. The Permittee shall maintain training documents and records, as required by ARSD Section 74:28:25:01 (40 CFR Sections 264.16(d) and (e)).

H. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall comply with the requirements of ARSD Section 74:28:25:01 (40 CFR Section 264.17) and the procedures for handling ignitable, reactive, and incompatible wastes in Section 9 of the Application (Permit Attachment 3).

I. PREPAREDNESS AND PREVENTION

1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment set forth in the Preparedness and Prevention Plan in Section 9 of the Application (Permit Attachment 3), and as required by ARSD Section 74:28:25:01 (40 CFR Section 264.32).

2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in the Permit condition found under Module II Section I.1, as necessary, to ensure its proper operation in time of emergency, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.33).

3. Access to Communications or Alarm System

The Permittee shall maintain access to the communications or alarm system, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.34).

4. Required Aisle Space

At a minimum, the Permittee shall maintain aisle space, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.35) and the attached plans and specifications as set forth in Section 9 of the Application (Permit Attachment 3).

5. Arrangements with Local Authorities

The Permittee shall maintain arrangements with state and local authorities, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.37). If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

J. CONTINGENCY PLAN

1. Implementation of Plan

The Permittee shall carry out the provisions of the Contingency Plan in

Section 10 of the Application (Permit Attachment 3) and applicable Plan updates (Permit Attachment 5), immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.51(b)).

2. Copies of Plan

The Permittee shall maintain a copy of the Contingency Plan at the facility and submit a copy to all police departments, fire departments, hospitals, and State and local emergency response teams that may be asked to provide emergency assistance, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.53).

3. Amendments to Plan

The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.54).

4. Emergency Coordinator

A trained emergency coordinator shall be available at all times in case of an emergency, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.55).

K. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements applicable under ARSD Section 74:28:25:01 (40 CFR Sections 264.70). Uniform Hazardous Waste Manifests are not required for wastes generated and treated on-site, but other records for wastes treated at the OB/OD and CTU areas are required under Modules IV and V. As noted in Module II.C of this Permit, the Permittee may not receive hazardous waste from off-site sources.

L. RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this Permit, the Permittee shall accomplish the following:

1. Operating Record

The Permittee shall maintain a written operating record at the facility, in accordance with ARSD Section 74:28:25:01 (40 CFR Section 264.73).

2. Biennial Report

The Permittee shall comply with the biennial reporting requirements of ARSD Section 74:28:25:01 (40 CFR Section 264.75).

M. GENERAL CLOSURE REQUIREMENTS

1. Performance Standard

The Permittee shall close the facility, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.111) and in accordance with the

Closure Plan as set forth in Section 12 of the Application (Permit Attachment 3).

2. Amendment of Closure Plan

The Permittee shall amend the Closure Plan, in accordance with ARSD Section 74:28:25:01 (40 CFR Section 264.112(c)), whenever necessary.

3. Notification of Partial Closure and Final Closure

a. The Permittee shall notify the Department in writing at least 60 days prior to the date on which he expects to begin closure of any unit operated under Modules III, IV or V of this Permit, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.112(d) and (e)) and the schedules specified in the Closure Plan as submitted under Section 12 of the Application (Permit Attachment 3).

b. The Permittee shall notify the Department in writing at least 45 days prior to the date on which he expects to begin final closure of the facility or unit, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.112(d) and (e)) and the schedules specified in the Closure Plan as submitted under Section 12 of the Application, as (Permit Attachment 3).

4. Time Allowed for Closure

After treating the final volume of hazardous waste, the Permittee shall remove from the facility all remaining hazardous waste and complete closure activities, in accordance with ARSD Section 74:28:25:01 (40 CFR Section 264.113) and the schedules specified in the Closure Plan as submitted under Section 12 of the Application (Permit Attachment 3).

5. Disposal or Decontamination of Equipment, Structures, and Soils

The Permittee shall decontaminate and/or dispose of all contaminated equipment, structures and soils, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.114) and set forth in the Closure Plan under Section 12 of the Application (Permit Attachment 3).

6. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications in the Closure Plan, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.115) and set forth in the Closure Plan under Section 12 of the Application (Permit Attachment 3).

N. POST-CLOSURE REQUIREMENTS

If the Permittee demonstrates that not all contaminated soils or groundwater can be practicably removed or decontaminated during closure, then the Permittee shall perform post-closure care in accordance with ARSD Section 74:28:25:01 (40 CFR Sections 264.603 and 264.117) and this Permit. Upon determination that clean closure cannot be attained, the Permittee shall, within 90 days of such discovery, submit a Post-Closure Plan to the Department in accordance with

ARSD Section 74:28:25:01 (40 CFR Sections 264.603 and 264.118).

O. COST ESTIMATE FOR FACILITY CLOSURE

1. The Permittee's most recent closure cost estimate, prepared in accordance with ARSD Section 74:28:25:01 (40 CFR Sections 264.142, 264.144, 264.197(c)(3) and (5), 264.228(c)(2), and 264.258(c)(2)), shall comply with the following:
 - a. The Permittee must adjust the closure cost estimate for inflation annually, within 30 days after the close of the firm's fiscal year and before submission of updated information to the Department, as required by ARSD Section 74:28:25:01 (40 CFR 264.142(b)); and
 - b. The Permittee must revise the closure cost estimate whenever there is a change in the facility's closure plan, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.142(c)); and
 - c. The Permittee must keep at the facility the latest closure cost estimate, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.142(d)).

P. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

1. The Permittee shall demonstrate continuous compliance with ARSD Section 74:28:25:01 (40 CFR Section 264.143) by providing documentation of financial assurance, as required by ARSD Section 74:28:25:01 (40 CFR Section 264.151), in at least the amount of the cost estimates required by the Permit Condition found under Module II.O.
2. Changes in financial assurance mechanisms must be approved by the Department pursuant to ARSD Section 74:28:25:01 (40 CFR Section 264.143).
3. For new treatment units authorized under this Permit, the Permittee shall demonstrate compliance with this Permit condition by submitting the required documentation to the Department at least 60 days before first managing hazardous waste in those units, as required under ARSD Section 74:28:25:01 (40 CFR Section 264.143).

Q. LIABILITY REQUIREMENTS

1. The Permittee shall demonstrate continuous compliance with the requirement of ARSD Section 74:28:25:01 (40 CFR Sections 264.147(a) and 264.151) to have and maintain liability coverage, for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility, in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs.
2. The Permittee also shall demonstrate continuous compliance with the ARSD Section 74:28:25:01 (40 CFR Sections 264.147(b) and 264.151) requirement to have and maintain liability coverage, for bodily injury and

property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility, in the amount of at least \$3 million per occurrence, with an annual aggregate of at least \$6 million, exclusive of legal defense costs.

3. The Permittee may combine coverage levels for sudden and nonsudden accidental occurrences, maintaining liability coverage in the amount of at least \$4 million per occurrence and \$8 million annual aggregate, as allowed under ARSD Section 74:28:25:01 (40 CFR Section 264.147(b)).

R. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittee shall comply with ARSD Section 74:28:25:01 (40 CFR Section 264.148), whenever necessary.

S. DOCUMENTS TO BE SUBMITTED TO THE DEPARTMENT

The Permittee shall submit the documents in Table II.S to the Department in accordance with the due dates listed:

Table II.S

<u>Document</u>		<u>Due Date</u>
1.	Waste analyses, as required in Module II D.1.a.	Within 30 days of receipt from the testing laboratory.
2.	Notification prior to discontinuing precipitation sampling, as required in Module II.D.3.c.	At least 30 days before discontinuing sampling.
3.	Notification of Closure for permitted units, as required in Module II.M.3.	60 or 45 days, as required for unit or facility, before beginning closure.
4.	Certification of Closure required in Module II.M.6.	Upon completion of unit or facility closure.
5.	Post-Closure Plan, if required in Module II.N.	Within 90 days of determination facility cannot attain clean closure.
6.	Closure cost estimate adjustments and financial assurance demonstrations, as required in Module II Sections O, P, and Q.	Annually with submission of financial assurance documentation or within 30 days after Department approval of a request to modify the closure plan.

MODULE III – HAZARDOUS WASTE MUNITIONS AND EXPLOSIVES STORAGE

A. DESCRIPTION

This Permit allows operation of an approved unit for storing hazardous waste munitions and explosives (energetic wastes) on-site for periods longer than 90 days. The Energetic Wastes Storage Unit (EWSU) consists of nine existing earth-covered magazines identified in the Application as Bunker Numbers 32 through 40. The Application states these bunkers are Type I Outdoor Explosive Magazines designed for storing explosive product materials and meet Department of Defense requirements for storing explosive materials. The Application documents the construction of these magazines consists of waterproofed, reinforced concrete with steel doors, and the steel-door entrance side to each magazine is the only side of the magazines that are not earth-covered. An Engineering Evaluation dated May 16, 2013 (Permit Attachment 6) confirms that the bunker floor and foundation are adequate to support the maximum storage weight for each bunker. Based on the application and supplemental information, these magazines meet requirements under ARSD 74:28:25:01 (40 CFR Subpart EE) for Hazardous Waste Munitions and Explosives Storage.

The interior dimensions for each magazine used for storing energetic wastes are 4' wide by 5.5' deep by 6'-7" high, yielding a maximum volume available for storage of 5.36 cubic yards per magazine. This Permit restricts hazardous waste storage volume for the nine magazines to the least of 4.85 cubic yards per magazine/43.6 cubic yards total; 5000 pounds total weight per magazine (Permit Attachment 3, Section 6), or no magazine containing more than 100 pounds Net Explosive Weight (Permit Attachment 1, Section 13 comments; Permit Attachment 3, Section 6.3.7). Only wastes that exhibit, at a minimum, the hazardous waste characteristic of reactivity may be stored in the permitted magazines.

Hazardous wastes stored inside the permitted magazines must be inside appropriate containers. The Application states primary packaging during storage consists of conductive materials or cardboard sufficient to retain the waste and help prevent sympathetic detonation. Some wastes placed in bunkers are saturated with liquids to help stabilize hazard properties. Those may contain small amounts of free liquids and are double packaged in appropriate containers (Permit Attachment 3, Section 5.2; Permit Attachment 5). Additional secondary containment is provided when necessary to provide adequate containment capacity for free liquids.

In addition to the area permitted for the storage of energetic wastes on-site for periods longer than 90 days, the Permittee stores containers of hazardous wastes on-site for periods less than 90 days in various storage areas not addressed under this Permit. The storage of wastes in those areas must comply with all applicable requirements for generators managing hazardous wastes stored on-site for less than 90 days.

B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

1. The Permittee may store wastes Listed in Table III.B.1 in appropriate containers inside the EWSU at the facility for periods longer than 90 days, subject to the terms of this Permit and the following conditions:

Table III.B.1

Description of Allowed Hazardous Wastes	Allowed Hazardous Waste Code(s)	Container Type
a. Reactivity Characteristic (D003) Energetic Hazardous Wastes listed in Application Section 5.1 and Table 5-1 (typically Pyrotechnic Powders/Pellets, Detonators, Primers, Leads, Tracers, HE Powders/Pellets, Delays, Impulse Cartridges, Contaminated Metal Parts, Piston Actuators, and subassemblies of these parts)	D003 ⁽¹⁾ , D001 TCLP constituents ⁽²⁾	Intact, closed containers compatible with waste type.
b. Other D003-Characteristic Energetic Hazardous Wastes (following receipt of Department approval) ⁽³⁾	D003 ⁽¹⁾ , D001 TCLP constituents ⁽²⁾	Intact, closed containers compatible with waste type.

⁽¹⁾ – Wastes stored in the EWSU must, at a minimum, exhibit the hazardous waste characteristic of reactivity.

⁽²⁾ – Allowed TCLP constituents include the D005, D006, D007, and D008 hazardous waste constituents listed in Section 5.1.4 of the Application.

⁽³⁾ – The Department reserves authority to allow the storage of wastes in the EWSU that contain the same hazardous waste constituents, as could result from new manufacturing products or processes, following submittal of a written request by the Permittee that provides supporting documentation and subsequent Department review and written approval. For the purposes of this Permit, such a request is a Class I Modification requiring prior Department approval (ARSD 74:28:26:01, 40 CFR Sections 270.42(a) and 270.42(d)).

2. This Permit prohibits storing or treating in the EWSU hazardous waste that is not identified under Module III Permit Condition B.1 above or otherwise approved by the Department.
3. The Permit prohibits storing hazardous waste quantities in the EWSU that exceed the least of 43.6 cubic yards total volume, 5000 pounds total weight per magazine, or 100 pounds NEW per magazine.

C. CONDITION OF CONTAINERS

1. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer that waste to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this Permit and ARSD Section 74:28:25:01 (40 CFR Section 264.171) and set forth in in Section 8 of the Application (Permit Attachment 3).
2. The Permittee shall complete the actions required under Module III.C.1 no later than 24 hours after discovery.

D. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee shall ensure that the ability of the container to contain the waste is not impaired, as required under ARSD Section 74:28:25:01 (40 CFR Section 264.172).

E. MANAGEMENT OF CONTAINERS

1. The Permittee shall keep all containers closed during storage, except when it is necessary to add, remove, sample, or inspect the waste, as required under ARSD Section 74:28:25:01 (40 CFR Section 264.173).
2. The Permittee shall not open, handle, or store containers in a manner which may rupture the container or cause it to leak, as required under ARSD Section 74:28:25:01 (40 CFR Section 264.173).
3. The Permittee shall maintain adequate spacing of containers holding reactive wastes to allow required container inspections.

F. INSPECTION SCHEDULES AND PROCEDURES

1. The Permittee shall, at a minimum, inspect the storage areas for containers weekly to detect leaking containers, deterioration of containers, or deterioration of the containment system caused by corrosion or other factors, as required under ARSD Section 74:28:25:01 (40 CFR Sections 264.1201 and 264.174) and set forth in Sections 6 and 8 of the Application (Permit Attachment 3).
2. The Permittee shall inventory hazardous wastes stored in the EWSU at least annually, as required under ARSD Section 74:28:25:01 (40 CFR Section 264.1201) and set forth in Section 6.3.11 of the Application (Permit Attachment 3).

G. CONTAINMENT SYSTEMS

The Permittee shall inspect, monitor, and maintain the containment systems in accordance with the requirements of ARSD Section 74:28:25:01 (40 CFR Sections 264.1201 and 264.175) and as set forth in Section 6 of the Application (Permit Attachments 3 and 5).

H. RECORDKEEPING

1. In addition to recordkeeping and reporting requirements specified

elsewhere in this Permit, the Permittee shall develop and place all relevant information for the EWSU required under ARSD Section 74:28:25:01 (40 CFR Section 264.73) into the facility operating record including, at a minimum:

- a. Logs recording the date, time, material type, and quantity (including both total and net explosive weight) that materials are placed into and removed from storage;
- b. Weekly inspection records including the date and time of the inspection, name of the inspector, observations made, the nature of any repairs or other remedial actions needed, and the date those actions were taken; and
- c. The time, date, and details of any incident that requires implementing the facility's Contingency Plan.

I. CLOSURE

At closure of the EWSU the Permittee shall remove all hazardous waste and hazardous waste residues from the unit, as required under ARSD Section 74:28:25:01 (40 CFR Section 264.178) and in accordance with the procedures set forth in Section 12 of the Application (Permit Attachment 3).

J. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

1. The Permittee shall not store containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line, in accordance with ARSD Section 74:28:25:01 (40 CFR Section 264.176).
2. The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste, as required under ARSD Section 74:28:25:01 (40 CFR Sections 264.17(a) and 264.176) and in accordance with procedures set forth in Section 9.10 of the Application (Permit Attachment 3).

K. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

1. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same container, as required under ARSD Section 74:28:25:01 (40 CFR Sections 264.177(a) and 264.17) and in accordance with procedures set forth in Section 9 of the Application (Permit Attachment 3).
2. The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material, as required under ARSD Section 74:28:25:01 (40 CFR Sections 264.177(b) and 264.17).
3. The Permittee shall separate containers of incompatible wastes in a manner adequate to prevent the mixing of incompatible wastes or materials if containers break or leak, as required under ARSD Section 74:28:25:01 (40 CFR Section 264.177(c) and 264.17).

L. DOCUMENTS TO BE SUBMITTED TO THE DEPARTMENT

The Permittee shall submit the documents in Table III.L to the Department in accordance with the due dates listed:

Table III.L

<u>Document</u>	<u>Due Date</u>
1. Written request and supporting documentation to allow the storage of additional waste types in the EWSU containing only hazardous waste constituents or codes allowed under Module III.B.1.	Prior to implementing waste storage.
2. Written notification of implementation for a Class I modification approved by the Department under Module III.B.1.	Within 7 calendar days after the change is put into effect.
3. Verification the Permittee provided notice of the modification to all persons on the facility mailing list for a Class I modification approved by the Department under Module III.B.1.	Within 90 calendar days after Department approval of the Class 1 modification.

MODULE IV – TREATMENT BY OPEN BURNING/OPEN DETONATION

A. DESCRIPTION

The Permittee generates reactive (D003) hazardous wastes that contain energetic materials from on-site manufacturing operations. This Permit allows the Permittee to thermally treat certain wastes by open burning or open detonation (OB/OD) in approved treatment units. This Permit prohibits the OB/OD treatment of wastes not described in this Module.

The Permittee shall operate and maintain the permitted OB/OD treatment units in accordance with operational procedures submitted to the Department with the Application, final as-built plans previously submitted, and modifications approved by the Department. Each unit is designed to deactivate small batches of specific types of explosive waste. Each unit consists of an engineered steel treatment fixture on a concrete burn pad, with each fixture and burn pad located on a concrete primary containment pad and underlain by a secondary containment system. Each unit has curbing and a retractable weather cover to minimize and control run-on and run-off from precipitation. For temporary use in limited circumstances, an additional engineered steel treatment fixture designed for OD treatment may replace an OB treatment fixture on one unit to detonate materials not appropriate for OB treatment. A control room for initiating and monitoring OB/OD area activities is 100 feet south of the OB/OD pads, within the adjacent Confined Treatment Unit (CTU) building (see Module V).

Wastes treated in the OB/OD units must exhibit the hazardous waste characteristic of reactivity, and may contain a maximum of 15 percent by weight of the RCRA toxicity characteristic metals barium, cadmium, chromium, or lead. This Permit limits individual treatment batches, hourly waste throughput, and annual treatment quantities for the OB/OD units. The limit for individual OB treatment batches is 50 pounds NEW treated at one time. This limit ensures facility compliance with calculated safety distances. The hourly throughput limit for OB treatment is the lesser of 100 lb/hr total weight and 25 lb/hr Net Explosive Weight (NEW). Annual treatment limits are based on the facility operations. The hourly and annual limits ensure OB/OD emissions do not exceed the quantities used in risk assessment calculations submitted for the Tech Ord facility.

In the event the Permittee cannot conduct normal treatment operations in the adjacent CTU for an extended period such that a lack of permitted storage capacity exists, following prior Department notification and approval the Permittee may treat certain wastes normally restricted to CTU treatment (detonators, primers, tracers, delays, contaminated PPE and energetic contaminated bags) in the OB/OD units. Because these wastes are normally treated in the CTU, some wastes would contain more than 15 percent by weight of barium, cadmium, chromium, or lead. This Permit limits the open detonation unit, if operated, to a maximum treatment batch limit that is the lesser of 8 lb total weight and 2 lb NEW and an hourly throughput limit that is the lesser of 24 lb/hr total weight and 6 lb/hr NEW. Risk analysis calculations include these limited activities.

B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

1. The Permittee is permitted to treat wastes by OB/OD subject to the terms of this Permit and as described below:
 - a. The waste types and quantities appropriate for treatment in OB/OD units are those listed in Table IV.B.4;
 - b. Wastes treated in OB/OD units must, at a minimum, exhibit the hazardous waste characteristic of reactivity;
 - c. Allowed TCLP constituents for wastes treated in the OB/OD units include the D005, D006, D007, and D008 hazardous waste constituents listed in Table 5-1 of the Application;
 - d. In situations when the Permittee cannot conduct normal treatment operations in the CTU for extended periods, the Department reserves authority to allow the temporary treatment in OB/OD units of wastes that contain greater than 15 percent by weight RCRA toxicity characteristic metal constituents following submittal of a written request by the Permittee that provides supporting documentation and subsequent Department review and approval; and
 - e. In the event the Permittee needs to manage a waste type not delineated in Table IV.B.4, as could result from new manufacturing products or processes, but can document that waste is consistent with the waste types approved previously (i.e., no new waste constituents or codes) and can be managed under the existing annual quantity restrictions listed in Table IV.B.4 for Units 1 through 3 in this Permit, the Permittee shall submit a written request to the Department that provides supporting documentation for subsequent Department review and approval. For the purposes of this Permit, waste approved in this manner is a Class I Modification requiring prior Department approval (ARSD 74:28:26:01, 40 CFR Sections 270.42(a) and 270.42(d)).
2. The Permittee is prohibited from treating the following wastes by OB/OD:
 - a. Hazardous waste not identified under Module IV Permit Condition B.1, unless otherwise approved by the Department;
 - b. Hazardous waste containing mercury, pesticides, dioxins, furans, or polychlorinated biphenyls; and
 - c. Other wastes, except as provided under Module VIII.D.1.
3. OB/OD thermal treatment of hazardous waste by means other than as authorized by this permit is prohibited.
4. The following wastes are approved for OB/OD treatment:

Table IV.B.4

Unit # - Unit Type Unit Name Unit Construction	Hazardous Waste Codes Allowed	Waste Type(s) Allowed	Max Qty Treated per Year	Max Waste Throughput (8-hr Daily Average)	Max Waste Qty per Burn
1 - Open Burning "Burn Box" <u>Fixture:</u> Steel burn vessel on curbed concrete pad. <u>Containment:</u> Curbed concrete primary pad with HDPE-lined secondary containment and leak detection system.	D003, D001, and TCLP constituents D005, D006, D007, D008	Primary Wastes: -Non-Toxic Impulse Cartridges.. -Impulse Ctdgs (w/ Pb/ Ba, Cr).. -Contaminated Metal Parts..... Other Wastes (upon approval)... - Contaminated Bags - Contaminated PPE & DPA Note: Treatment of Other Wastes requires a written request and prior Department approval.	3,250 lb 1,050 lb 1,000 lb Not to Exceed Max Qty Totals for Primary Units	100 lbs/hr Total Wt	Least of: 100 lbs Total Wt or 25 lbs NEW
2 - Open Burning "Strong Box" <u>Fixture:</u> Steel burn vessel on curbed concrete pad. <u>Containment:</u> Identical to Unit 1.	D003, D001, TCLP constituents (D005, D006, D007 and D008)	Primary Wastes: -Leads..... -Piston Actuators..... Other Wastes (upon approval) - Not Applicable	2,000 lb 1,000 lb Not to Exceed Max Qty Totals for Primary Units	100 lbs/hr Total Wt	Least of: 100 lbs Total Wt or 25 lbs NEW

Table IV.B.4 (continued)

Unit # - Unit Type Unit Name Unit Construction	Hazardous Waste Codes Allowed	Waste Type(s) Allowed	Max Qty Treated per Year	Max Waste Throughput (8-hr Daily Average)	Max Waste Qty per Burn
3 - Open Burning "Burn Troughs" <u>Fixture:</u> Steel burn vessel on curbed concrete pad. <u>Containment:</u> Identical to Unit 1	D003, D001, and TCLP constituents D005, D006, D007, D008	Primary Wastes: -Pyrotechnic Powders/Pellets... -Tracers..... -High Expl. Powders/Pellets..... Other Wastes (upon approval) - Not Applicable.	2,000 lb 1,000 lb 10,000 lb Not to Exceed Max Qty Totals for Primary Units	100 lbs/hr Total Wt	Least of: 50 lbs Total Wt or 25 lbs NEW
4 - Open Detonation "Detonation Tank" <u>Fixture:</u> Steel detonation tank (Replaces a burn fixture on Unit 1-3 during use). <u>Containment:</u> Identical to Unit 1.	D003, D001, TCLP constituents (D005, D006, D007 and D008)	Primary Wastes: -Not Applicable. Other Wastes (upon approval) -CTU and OB Units 1-3 Wastes Note: OD activities require a written request and prior Department approval.	200 lb	24 lbs/hr Total Wt	Least of: 8 lbs Total Wt or 2 lb NEW

C. DESIGN, CONSTRUCTION, AND OPERATING REQUIREMENTS

1. The Permittee shall operate and maintain the OB/OD units in accordance with the design plans and specifications, and operational procedures contained in Sections 1 to 5, 7 to 11, 15 and 16 of the Application (Permit Attachment 3).
2. The Permittee shall operate and maintain the secondary containment systems and associated leak detection equipment for the OB/OD units in accordance with the plans and specifications contained in Sections 7, 8, 9, 10, 11, and 15 of the Application (Permit Attachment 3).
 - a. Upon reaching an action level of three inches of liquid in the secondary containment system (approximately 25 gallons) of any OB/OD unit, the Permittee shall immediately remove the affected unit from service until the unit is thoroughly inspected and repaired if necessary. The Permittee must remove the accumulated liquid from the secondary containment system and notify the Department within 24 hours of reaching the action level.
 - b. For major repairs to eliminate leaks or restore the integrity of containment systems for OB/OD units the Permittee shall submit to the Department, within seven days from returning the unit to use, certification the repaired system is capable of handling hazardous wastes without release for the intended life of the system. Examples of major repairs are replacement of primary containment pads or repair/replacement of secondary containment system components.
3. The Permittee shall operate and maintain a precipitation cover over each OB/OD unit in accordance with the plans, specifications, and operating practices contained in Sections 2, 7 to 11, and 15 to 17 of the Application (Permit Attachment 3).
4. The Permittee shall manage any precipitation accumulated from the OB/OD units in accordance with the practices contained in Sections 7 and 15 of the Application (Permit Attachment 3) and the following permit condition:
 - a. Ensure precipitation water released to the facility storm water conveyance system is not a hazardous waste and complies with requirements under the facility storm water discharge permit (SDR00A091) or surface water discharge permit (SD0026301).
5. The Permittee shall operate and maintain each OB/OD unit in order to minimize air emissions or exposure of people (on-site or off-site) to toxic or hazardous emissions in accordance with Sections 1, 2, 7, to 11, and 16 of the Application (Permit Attachment 3) and the following permit conditions:
 - a. OB/OD operations shall only occur during daylight hours between 8:00 a.m. and 4:00 p.m.;

- b. OB/OD operations cannot occur during periods of measurable precipitation;
 - c. OB/OD operations shall only occur when the sustained wind speed, exclusive of gusts, is more than 1 mile per hour and less than 15 miles per hour; and
 - d. OB/OD operations must be suspended and the area evacuated when lightning is detected within eight (8) miles of the facility.
- 6. The Permittee shall operate and maintain the OB/OD units in order to minimize noise from OB/OD operations, as measured at the property boundary, in accordance with the following permit conditions:
 - a. Noise levels shall not exceed federal Occupational Safety & Health Administration levels for permissible noise exposures; and
 - b. Noise levels shall not exceed any other applicable federal, state, or local requirements (i.e., nuisance ordinance, etc.).
- 7. The Permittee shall manage ash and other residues from the OB/OD units in accordance with Sections 2, 5, 6, and 7 of the Application (Permit Attachment 3), and the following permit condition:
 - a. At a minimum, the Permittee shall remove ash, scrap metal, and other residues from the OB/OD units on the next business day.

D. HANDLING AND STORAGE REQUIREMENTS

- 1. The Permittee shall handle and manage energetic wastes at the OB/OD units in accordance with Sections 2, 3, and 5 through 10 of the Application (Permit Attachment 3).
- 2. The Permittee shall store any energetic wastes at the OB/OD area in accordance with Sections 3, and 7 through 12 of the Application (Permit Attachment 3), and the following permit conditions:
 - a. Total temporary storage of energetic wastes at the OB/OD area is limited to a maximum of 100 pounds NEW;
 - b. All untreated energetic wastes will be removed from the OB/OD area at the end of each operating day; and
 - c. The maximum hazardous waste inventory of ash and other treatment residues from the OB/OD units stored on site shall not exceed four, 55-gallon drums.

E. INSPECTION SCHEDULES AND PROCEDURES

- 1. The Permittee shall inspect the OB/OD units in accordance with the inspection schedules in Section 8 of the Application (Permit Attachment 3).

F. PREVENTION OF UNINTENDED IGNITION OR REACTION OF WASTES

The Permittee shall follow the applicable facility procedures contained or

referenced in Sections 5 through 11 of the Application (Permit Attachment 3), that are designed to prevent unintended ignition or reaction of wastes.

G. MONITORING REQUIREMENTS

1. Ground Water Monitoring

The Permittee shall conduct ground water monitoring in accordance with the requirements in Module VI of this Permit.

2. Soil Monitoring

The Permittee shall conduct soil monitoring in accordance with the requirements in Module VII of this Permit.

3. Air Monitoring

The Permittee shall comply with applicable air monitoring requirements in Module VIII of this Permit.

4. Surface Water Monitoring

The Permittee shall comply with any surface water monitoring requirements under the facility storm water discharge permit (SDR00A091) or surface water discharge permit (SD0026301).

5. The Department reserves the right to require additional monitoring based on results from ground water, surface water, soil monitoring, or other information.

H. FACILITY MODIFICATION/EXPANSION

1. Permit Modification

The Department reserves the right to modify this Permit in accordance with SDCL Section 34A-11-12 and ARSD Section 74:28:26:01 (40 CFR Section 270.41).

2. Permit Modification at the Request of the Permittee

Modifications or expansions of the OB/OD units shall be accomplished in accordance with SDCL Section 34A-11-12 and ARSD Section 74:28:26:01 (40 CFR Section 270.41).

I. CLOSURE AND POST-CLOSURE

1. The Permittee may close individual OB/OD units separately if necessary, and shall follow the applicable requirements under Module II, Section M of this Permit for the closure of any OB/OD unit.
2. If during or after closure of any OB/OD unit the Permittee demonstrates that not all contaminated soils and debris can be removed or decontaminated in accordance with the Closure Plan, then the Permittee shall close the OB/OD unit and perform post-closure care in accordance with requirements contained in Module II, Section N of this Permit.

J. RECORDKEEPING AND REPORTING

1. The Permittee shall develop and place into the facility operating record all information necessary to demonstrate compliance of the OB/OD units with requirements applicable under Modules I through IX of this Permit. At a minimum, records maintained for the OB/OD units shall include:
 - a. Logs recording the date, time, material type, quantity (including both total and net explosive weight), and the unit used for each burn/detonation event;
 - b. Meteorological conditions during each burn/detonation event;
 - c. Logs recording the date, time, material type, quantity, and disposition of wastes removed from OB/OD units;
 - d. Weekly inspection records including the date and time of the inspection, name of the inspector, observations made, the nature of any repairs or other remedial actions needed, and the date those actions were taken;
 - e. Monitoring records and test results;
 - f. Training records for personnel conducting OB/OD operations;
 - g. The time, date, and details of any incident that requires implementing the facility's Contingency Plan; and
 - h. Records for off-site shipments of wastes resulting from OB/OD operations.
2. The Permittee shall report to the Department, within 24 hours of detection, when a leak or spill occurs from an OB/OD unit into the secondary containment system or to the environment.
3. Within 30 days of detecting a leak or spill from an OB/OD unit into the secondary containment system or to the environment, the Permittee shall report the following information to the Department:
 - a. Likely route of migration of the release;
 - b. Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);
 - c. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee shall provide the Department with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;
 - d. Proximity to downgradient drinking water, surface water, and populated areas; and
 - e. Description of response actions taken or planned.
4. The Permittee shall submit to the Department certification of major repairs

to correct leaks from OB/OD units within seven days from returning the unit to use.

5. The Permittee shall maintain a summary of waste treatment conducted in the OB/OD unit, to document treatment conducted during the previous calendar year. The summary shall include, at a minimum, the list of wastes as specified in Table 5-1 of the Application, the units in which treatment occurred, and the monthly amounts.

K. DOCUMENTS TO BE SUBMITTED TO THE DEPARTMENT

The Permittee shall submit the documents in Table IV.K to the Department in accordance with the due dates listed:

Table IV.K

<u>Document</u>	<u>Due Date</u>
1. Final as-built plans for the OD tank.	Prior to initial operation of that unit unless otherwise approved by the Department.
2. Written request for any temporary treatment of wastes containing greater than 15 percent by weight RCRA toxic metal constituents in OB/OD units, as required in Module IV.B.1.d.	Prior to treating the wastes in OB/OD units.
3. Written request and supporting documentation for Department approval of a Class I modification for waste treatment under Module IV.B.1.e.	Prior to implementing waste treatment.
4. Written notification of implementation for a Class I modification approved by the Department under Module IV.B.1.e.	Within 7 calendar days after the change is put into effect.
5. Verification the Permittee provided notice of the modification to all persons on the facility mailing list for a Class I modification approved by the Department under Module IV.B.1.e.	Within 90 calendar days after Department approval of the Class 1 modification.
6. Written request for Department approval of waste treatment by open detonation(s).	Before each occurrence of treatment by open detonation.
7. Notification and reports of leaks from OB/OD units, as required in Modules IV.C.2, IV.J.2, and IV.J.3.	Notification within 24 hours of detecting leak and reports within 24 hours and 30 days, as required.
8. Certification of major repairs to OB/OD units, as required in Modules IV.C.2.b and IV.J.4.	Within seven days from returning the unit to use.

MODULE V – TREATMENT IN CONFINED TREATMENT UNIT

A. DESCRIPTION

The Permittee generates reactive (D003) hazardous wastes that contain energetic materials from on-site manufacturing operations. In addition to the thermal treatment of reactive hazardous waste by open burning or open detonation allowed under Module IV, this Permit allows the Permittee to thermally treat certain reactive wastes by burning or detonation in an approved Confined Treatment Unit (CTU) equipped with an air pollution control system. This Permit prohibits treating wastes not described in this Module in the CTU.

The Permittee shall operate and maintain the CTU in accordance with operational procedures submitted to the Department with the Application, final as-built plans previously submitted, and modifications approved by the Department. The CTU is designed to safely deactivate small batches of specific types of explosive waste that contain more than 15 percent by weight RCRA toxicity characteristic metals. The CTU consists of an enclosed treatment fixture that contains two gas-fired burn chambers and a three-stage air pollution control system that consists of cyclone, bag house, and high-efficiency particulate air (HEPA) filter components. The treatment fixture for the CTU is located inside a dedicated building that also has a control room for the adjacent OB/OD units.

Wastes treated in the CTU must exhibit the hazardous waste characteristic of reactivity, and may contain more than 15 percent by weight of the RCRA toxicity characteristic metals barium, cadmium, chromium, or lead. This Permit limits individual treatment batches, hourly waste throughput, and annual treatment quantities for the CTU. The limit for individual CTU treatment batches is 10 grams NEW on a TNT equivalency basis. This limit ensures compliance with a safety factor calculated for the CTU design. The hourly throughput limit for CTU treatment is the least of 2.12 lb/hr total weight and 0.53 lb/hr NEW on an 8-hour daily average. Annual treatment limits are based on the facility operations. The hourly and annual limits ensure CTU emissions do not exceed the quantities used in risk assessment calculations submitted for the Tech Ord facility.

In the event the Permittee cannot conduct normal CTU treatment operations for an extended period such that a lack of permitted storage capacity exists, following prior Department notification and approval the Permittee may conduct temporary treatment of the explosive wastes normally restricted to treatment in the CTU (contaminated bags, contaminated PPE and DPA, detonators, primers, delays, and cutter cartridges) in the OB/OD units approved under Module IV. Risk analysis calculations included these limited activities.

B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

1. The Permittee is permitted to treat wastes in the CTU subject to the terms of this Permit and as described below:
 - a. The wastes and quantities appropriate for treatment in the CTU are those listed in Table V.B.4;
 - b. Wastes treated in the CTU must, at a minimum, exhibit the hazardous waste characteristic of reactivity;
 - c. Allowed TCLP constituents for wastes treated in the CTU include the D005, D006, D007, and D008 hazardous waste constituents listed in Table 5-1 of the Application;
 - d. In situations when the Permittee cannot conduct normal treatment operations in the CTU for extended periods, the Department reserves authority to allow the temporary treatment in approved OB/OD units of those wastes approved for treatment in the CTU under this section following submittal of a written request by the Permittee that provides supporting documentation and subsequent Department review and approval; and
 - e. In the event the Permittee needs to manage a waste type not delineated in Table V.B.4, as could result from new manufacturing products or processes, but can document that waste is consistent with the waste types approved previously (i.e., no new waste constituents or codes) and can be managed under the existing annual quantity restrictions listed in Table V.B.4, the Permittee shall submit a written request to the Department that provides supporting documentation for subsequent Department review and approval. For the purposes of this Permit, waste approved in this manner is a Class I Modification requiring prior Department approval (ARSD 74:28:26:01, 40 CFR Sections 270.42(a) and 270.42(d)).
 - i. The Permittee generates scrap cardboard solid waste from managing the outer packaging of explosive powders used in production operations and can recycle most of that scrap cardboard. However, Application information (Waste Profile ID# TOA-1001) and previous Department inspections document the Permittee has the potential to generate scrap cardboard as hazardous waste should the cardboard container become contaminated with explosive powders. This may occur when inner packaging bags for powder are compromised. The powder contaminated cardboard waste is consistent with an approved waste type (Powder Contaminated Plastic Bags, Waste Profile ID# TOA-1002) and can be managed under the existing annual quantity restrictions. Therefore, under the circumstances described above, the Department approves the thermal treatment of

hazardous waste powder contaminated cardboard in the CTU under this Permit. Scrap cardboard that does not exhibit the reactivity characteristic cannot be treated in the CTU.

2. The Permittee is prohibited from treating the following wastes in the CTU:
 - a. Hazardous waste not identified under Module V Permit Condition B.1, unless otherwise approved by the Department; and
 - b. Hazardous waste containing mercury, pesticides, dioxins, furans, or polychlorinated biphenyls; and
 - c. Other wastes, except as provided under Module VIII.D.1.
3. CTU thermal treatment of hazardous waste by means other than as authorized by this Permit is prohibited.
4. The following wastes are approved for CTU treatment:

Table V.B.4

Unit # - Unit Type Unit Name Unit Construction	Hazardous Waste Codes Allowed	Waste Type(s) Allowed	Max Qty Treated per Year	Max Waste Throughput (8-hr Daily Average)	Max Waste Qty per Burn
Thermal Treatment "Confined Treatment Unit" <u>Fixture:</u> Two gas-fired steel burn vessels with exterior waste feed systems inside a steel confinement vessel. <u>Containment:</u> Steel confinement vessel provides primary containment and building enclosure provides secondary containment.	D003, D001, and TCLP constituents (D005, D006, D007, D008)	Primary Wastes: -Powder Contaminated Bags.... -Contaminated PPE & DPA..... -Detonators..... -Primers -Delays & Cutter Cartridges Other Wastes (upon approval)... - Not Applicable. Note: Treatment of Other Wastes requires a written request and prior Department approval.	10,000 lb 10,000 lb 1,500 lb 1,000 lb 200 lb Not to Exceed Max Qty Totals Above	Least of: 2.12 lb/hr Total Wt or 0.53 lb/hr NEW	10 grams NEW as TNT Equivalent

C. DESIGN, CONSTRUCTION, AND OPERATING REQUIREMENTS

1. The Permittee shall operate and maintain the CTU in accordance with the procedures contained in Sections 1 to 5, 7 to 11, 15, and 16 of the Application (Permit Attachment 3).
 - a. For major repairs to the CTU the Permittee shall notify the Department within 24 hours of discontinuing normal CTU operations. Examples of major repairs include replacement of system components or other repairs that require discontinuing normal operations for periods longer than 48 hours; and
 - b. The Permittee shall submit to the Department, within seven (7) days from returning the CTU to use following major repairs, certification the repaired system is capable of handling hazardous wastes as designed for the intended life of the system.
2. The Permittee shall operate and maintain the building enclosure for the CTU treatment vessel and the hard surfaces below associated air pollution control equipment in accordance with the plans and specifications contained in Sections 2, 7 to 11, 15, and 16 of the Application (Permit Attachment 3).
 - a. Because the CTU treatment vessel is constructed above a concrete floor inside an enclosed structure and associated air pollution control equipment is on concrete pads, additional containment systems are not required for CTU components.
3. The Permittee shall ensure precipitation water released to the facility storm water conveyance system is not a hazardous waste and complies with requirements under the facility storm water discharge permit (SDR00A091) or surface water discharge permit (SD0026301).
4. The Permittee shall operate and maintain the CTU in order to minimize air emissions or exposure of people (on site or off site) to toxic or hazardous emissions in accordance with Sections 1, 2, 7, to 11, and 16 of the Application (Permit Attachment 3), and the following permit condition:
 - a. CTU operations must be suspended and the area evacuated when lightning is detected within eight (8) miles of the facility.
5. The Permittee shall operate and maintain the CTU in order to minimize noise from CTU operations, as measured at the property boundary, in accordance with the following permit conditions:
 - a. Noise levels shall not exceed federal Occupational Safety & Health Administration levels for permissible noise exposures; and
 - b. Noise levels shall not exceed any other applicable federal, state, or local requirements (i.e., nuisance ordinance, etc.).
6. The Permittee shall manage ash and other residues from the CTU in accordance with Sections 2, 5, 6, and 7 of the Application (Permit

Attachment 3), and the following permit condition.

- a. At a minimum, the Permittee shall remove ash, scrap metal, and other accumulated residues from the two burn chambers inside the CTU at the end of each operating day or before beginning treatment operations on the next CTU operating day.

D. HANDLING AND STORAGE REQUIREMENTS

1. The Permittee shall handle and manage energetic wastes at the CTU building in accordance with Sections 2, through 10 of the Application (Permit Attachment 3).
2. The Permittee shall store any energetic wastes at the CTU building in accordance with Sections 2, 4, and 6 through 12 of the Application (Permit Attachment 3), and the following permit conditions:
 - a. Total temporary storage of energetic wastes at the OB/OD and CTU areas is limited to a maximum of 100 pounds NEW;
 - b. All untreated energetic wastes will be removed from the CTU building at the end of each operating day; and
 - c. The maximum hazardous waste inventory of ash and other treatment residues from the CTU stored on site shall not exceed two, 55-gallon drums.

E. INSPECTION SCHEDULES AND PROCEDURES

1. The Permittee shall inspect the CTU in accordance with the inspection schedules in Section 8 of the Application (Permit Attachment 3).

F. PREVENTION OF UNINTENDED IGNITION OR REACTION OF WASTES

1. The Permittee shall follow the applicable facility procedures contained or referenced in Sections 5 through 11 of the Application (Permit Attachment 3), that are designed to prevent unintended ignition or reaction of wastes.

G. MONITORING REQUIREMENTS

1. Ground Water Monitoring

The Permittee shall conduct ground water monitoring in accordance with the requirements of Module VI of this Permit.

2. Soil Monitoring

The Permittee shall conduct soil monitoring in accordance with the requirements in Module VII of this Permit.

3. Air Monitoring

The Permittee shall comply with applicable air monitoring requirements in Module VIII of this Permit.

4. Surface Water Monitoring

The Permittee shall comply with any surface water monitoring

requirements under the facility storm water discharge permit (SDR00A091) or surface water discharge permit (SD0026301).

5. The Department reserves the right to require additional monitoring based on results from ground water, surface water, soil monitoring, or other information.

H. FACILITY MODIFICATION/EXPANSION

1. Permit Modification

- a. The Department reserves the right to modify this Permit in accordance with SDCL Section 34A-11-12 and ARSD Section 74:28:26:01 (40 CFR Section 270.41).

2. Permit Modification at the Request of the Permittee

- a. Modifications or expansions of the CTU shall be accomplished in accordance with SDCL Section 34A-11-12 and ARSD Section 74:28:26:01 (40 CFR Section 270.41).
- b. The Permittee may implement modifications to the CTU as submitted by Tech Ord to the Department with preliminary drawings, on September 28, 2015. The modifications approved include the following: 1) Installation of a thermocouple and housing to monitor the steel temperature of the CTU detonation barrel; 2) Installation of a funnel and perforated plate in the CTU detonation barrel to improve the feeding and retention of parts during treatment; and 3) Installation of a hinge for the CTU detonation barrel to facilitate access for cleaning. Approval is contingent upon the Department's receipt of final design drawings, signed by a Professional Engineer and a letter signed by the Permittee stating the modification has been completed in compliance with this Permit.

I. CLOSURE AND POST-CLOSURE

1. The Permittee may close the CTU separate of other units if necessary, and shall follow the applicable requirements under Module II, Section M of this Permit for the closure of the CTU.
2. If during or after closure of the CTU the Permittee demonstrates that not all contaminated soils and debris can be removed or decontaminated in accordance with the Closure Plan, then the Permittee shall close the CTU and perform post-closure care in accordance with requirements contained in Module II, Section N of this Permit.

J. RECORDKEEPING AND REPORTING

1. The Permittee shall complete and place into the facility operating record all information necessary to demonstrate the compliance of the CTU with requirements applicable under Modules I through IX of this Permit. At a minimum, records maintained for the CTU shall include:

- a. Logs recording the date, time, material type, quantity (including both total and net explosive weight), and the burn chamber used for each burn/detonation event;
 - b. Meteorological conditions during each burn/detonation event;
 - c. Logs recording the date, time, material type, quantity, and disposition of wastes removed from the CTU;
 - d. Weekly inspection records including the date and time of the inspection, name of the inspector, waste containers (number/size/fill levels/condition) observations made, the nature of any repairs or other remedial actions needed, and the date those actions were taken;
 - e. Monitoring records and test results;
 - f. Training records for personnel conducting CTU operations;
 - g. The time, date, and details of any incident that requires implementing the facility's Contingency Plan: and
 - h. Records for off-site shipments of wastes resulting from CTU operations.
2. The Permittee shall report to the Department, within 24 hours of detection, when a leak or spill occurs from the CTU unit into the environment.
3. Within 30 days of detecting a leak or spill from the CTU into the environment, the Permittee shall report the following information to the Department:
 - a. Likely route of migration of the release;
 - b. Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);
 - c. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee shall provide the Department with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;
 - d. Proximity to downgradient drinking water, surface water, and populated areas; and
 - e. Description of response actions taken or planned.
4. The Permittee shall submit to the Department certification of major repairs to correct leaks from the CTU within seven days from returning the unit to use.
5. The Permittee shall maintain a summary of waste treatment conducted in the CTU to document treatment conducted during the previous calendar year. The summary shall include, at a minimum, the list of wastes as specified in Table 5-1 of the Application and the amount treated on a

monthly basis.

K. **DOCUMENTS TO BE SUBMITTED TO THE DEPARTMENT**

The Permittee shall submit the documents in Table V.K to the Department in accordance with the due dates listed:

Table V.K

<u>Document</u>	<u>Due Date</u>
1. Written request and supporting documentation for Department approval of a Class I modification for waste treatment under Module V.B.1.e.	Prior to implementing waste treatment.
2. Written notification of implementation for a Class I modification approved by the Department under Module V.B.1.e.	Within 7 calendar days after the change is put into effect.
3. Verification the Permittee provided notice of the modification to all persons on the facility mailing list for a Class I modification approved by the Department under Module V.B.1.e.	Within 90 calendar days after Department approval of the Class 1 modification.
4. Written request for any temporary treatment of wastes approved for CTU treatment in OB/OD units, as required under Module V.B.1.d.	Prior to treating the wastes in OB/OD units.
5. Notifications, reports, and certifications for leaks from, or major repairs to, the CTU, as required under Module V.C.1, V.J.3; and V.J.4.	Within 24 hours of discontinuing normal CTU operations or detecting a leak, or seven days of returning unit to service, as required.
6. Final design drawings, signed by a registered Professional Engineer, for the CTU Detonation Barrel modifications approved under Module V.H.2.b. of this Permit, and the Permittee letter confirming completion of those modifications.	Submittal of the design drawings is required before implementing the modifications. Submittal of the Permittee letter is required before resuming CTU operations following modification.

MODULE VI – GROUND WATER MONITORING PROGRAM

A. DESCRIPTION

Application information indicates the site is located on Pleistocene age deposits of glacial till that primarily consist of lean clay with a little sand. Monitoring wells installed on the property indicate the presence of shallow ground water in the surficial deposits at depths from six to twelve feet below surface grades. Test results from monitoring well samples indicate the presence of contamination in at least two of the well locations (MW #2 and MW #3). These wells are located in close proximity to the former OB/OD area, which will be closed in accordance with the partial closure provisions in Module II.M of this Permit.

This Permit requires the Permittee to implement a ground water monitoring program that ensures early and reliable detection of indicators of ground water contamination in the shallow ground water beneath the new treatment units due to releases of hazardous waste or waste constituents from those units. The monitoring program includes initial test analyses for hazardous constituents required under ARSD and CFR regulations or present in the wastes treated to determine background levels in the ground water, with retesting for all constituents at each permit renewal. The program also requires semi-annual detection monitoring consisting of statistical analyses of ground water samples for a subset of targeted constituents representative of the wastes treated.

In the event detection monitoring provides a statistically significant indication of ground water contamination, the Permit requires the Permittee to provide additional information demonstrating the source of the statistical deviation or implement appropriate response actions up to and including additional compliance monitoring and/or corrective action requirements.

B. MONITORING WELL LOCATION, INSTALLATION, AND DECOMMISSIONING

The Permittee shall install and maintain a ground water monitoring system meeting the requirements applicable under ARSD 74:28:25:01 (adopting by reference 40 CFR 264.97), and the following permit requirements.

1. Install and maintain ground water monitoring wells in accordance with plans and specifications in Sections 2 and 15 of the Application (Permit Attachment 3), and the following requirements:
 - a. Install a minimum of three monitoring wells adequate to provide sampling access and establish ground water flow direction;
 - b. Install monitoring wells to yield samples from upgradient wells that represent the quality of the background ground water unaffected by leakage from any regulated unit, and from downgradient wells that represent the quality of water passing a point of compliance approved by the Department;
 - c. At least 30 days before installation, submit for Department review the location(s) proposed for new monitoring well(s) installed pursuant to this Module;

- d. All monitoring wells installed and used shall meet the applicable well construction requirements under ARSD:74:02:04;
- e. Record the surveyed elevation of the monitoring well(s) when installed (with as-built drawings that include total well depth as well as elevations of the top of casing, ground surface and/or apron elevation, and the protective casing);
- f. Within 90 days of installing new monitoring wells pursuant to this module, submit to the Department installation report(s) that include the well construction information;
- g. If the monitoring wells installed are not adequate, the Permittee shall install additional wells or repair existing wells as required by the Department; and
- h. After receiving written approval from the Department, the Permittee may delete wells from the monitoring program provided they:
 - i. Decommission the wells approved for removal in compliance with applicable plugging and abandonment requirements under ARSD:74:02:04; and
 - ii. Submit well decommissioning methods and certification to the Department within 90 days of receiving the written approval from the Department.

C. INDICATOR PARAMETERS AND MONITORING CONSTITUENTS

1. For the wells described in Module VI.B, the Permittee shall establish background levels and monitor for parameters and hazardous constituents established in accordance with ARSD 74:28:25:01 (adopting 40 CFR 264.91 through 264.99). The parameters and constituents shall include, but not be limited to, those in Table VI.C.1 below. These constituents shall be incorporated into the facility Ground Water Monitoring and Response Plan established in accordance with ARSD 74:28:25:01, adopting 40 CFR 264.91, and requirements under Module VI.D.

Table VI.C.1

Facility/Waste-Specific Parameters	Regulatory Standards	Field Tests
Explosives constituents and applicable degradation products, including: <ul style="list-style-type: none"> - Lead azide - Lead styphnate - HMX - RDX - PBX - HNS - HPC-13 - Nitrocellulose 	All constituents listed in 40 CFR 264.94 Table 1 All constituents listed in 40 CFR 264 Appendix IX Nitrates and Nitrites Sulfates and Sulfides Total Organic Carbon Total Petroleum Hydrocarbons BTEX	Temperature pH Specific Conductance Turbidity Dissolved Oxygen

<ul style="list-style-type: none"> - PETN - Tetracene - Tetryl - Triaminotrinitrobenzene - Perchlorate - Peroxides (Ba, Pb, Sr) - Aluminum - Antimony - Barium - Boron - Chromium - Magnesium - Potassium - Strontium - Tungsten - Zirconium - Diphenylamine - Vinyl Chloride - Vinyl acetate - Nitroglycerin - 2,4-Dinitrotoluene - 2,6-Dinitrotoluene - Other secondary explosive components in application MSDS 		
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2. For the parameters and constituents in Permit Condition VI.C.1 for which no background values are established at the time the Permit is issued, the Permittee shall establish background values in accordance with the following procedures:

- a. Background ground water quality for a monitoring parameter or constituent shall be based on a sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained.

D. GROUND WATER MONITORING AND RESPONSE PROGRAM

The Permittee shall conduct the Ground Water Monitoring and Response Program as provided in Section 15, and Section 15 Appendix of the Application and ARSD 74:28:25:01 (adopting 40 CFR 264.90 to 264.99). The Ground Water Monitoring Program includes:

1. Techniques and procedures for sample collection, preservation, control, tracking, shipping, and analysis as applicable under ARSD 74:28:25:01 and 40 CFR 264.97(d) and (e), and described in Sections 12 and 15 of the Application (Permit Attachment 3);
2. Procedures for determination and results documenting the elevation of the ground water surface at each monitoring well, including
 - a. Ground water elevation measurements shall be conducted at least quarterly and each time the ground water is sampled (ARSD 74:28:25:01 adopting by reference 40 CFR 264.97(f));

3. The statistical method(s) used to evaluate ground water monitoring data (ARSD 74:28:25:01 and 40 CFR 264.97(h) and (i));
4. A Detection Monitoring Program in accordance with ARSD 74:28:25:01, adopting by reference 40 CFR 264.91(a)(4) and 264.98, that will be implemented immediately upon establishing the monitoring wells required under Module VI.B., including:
 - a. Under the Detection Monitoring Program, the Permittee shall conduct sampling and analysis of each monitoring well at least semi-annually to determine if there is a statistically significant increase over background values for the required parameters and constituents; and
 - b. The Permittee shall provide the Department opportunity to observe ground water sampling by providing notification (either over the telephone or through electronic mail) at least seven days prior to each sampling event.
5. Procedures for establishing a Compliance Monitoring Program that shall be implemented if detection monitoring results show a statistically significant increase above the background values for required parameters or constituents in accordance with ARSD 74:28:25:01, adopting by reference 40 CFR 264.91(a)(1) and 264.99; and
6. Procedures for establishing an engineering feasibility plan for a corrective action program meeting the requirements of ARSD 74:28:25:01, adopting by reference 40 CFR 264.98(g)(5) and 264.100, when required by the Department as a result of a statistically significant increase above the background values for required detection monitoring parameters or constituents.

E. RECORDKEEPING AND REPORTING

1. The Permittee shall enter all monitoring, testing, and analytical data obtained from ground water monitoring into the operating record in accordance with ARSD 74:28:25:01, adopting by reference 40 CFR 264.73(b)(6).
 - a. The data shall include all computations and results associated with the statistical test used in evaluating ground water monitoring data.
2. The Permittee shall submit the final background values established in accordance with Module VI.C to the Department within 60 days of completing all sampling necessary to establish those values and the schedule in Table VI.E.3.
 - a. Data submitted shall include sample analytical test results and computations made to determine background values.

3. The Permittee shall submit the results for analytical tests of monitoring well samples and statistical analyses required for ground water monitoring under Module VI.D in accordance with the schedule in Table VI.E.3 below:

Table VI.E.3

Sample Collection Quarter	Results Due to Department
January – March	Within 60 days of sampling and before May 31
April – June	Within 60 days of sampling and before Aug 30
July – September	Within 60 days of sampling and before Nov 30
October – December	Within 60 days of sampling and before Mar 2

4. For each quarter in which sampling of monitoring wells occurs, the Permittee shall submit to the Department a written report summarizing the year-to-date analytical test results and required statistical analyses.

F. GROUND WATER MONITORING PLAN MODIFICATION

1. Based on data from previous sampling events and other relevant facility information, the Permittee may submit proposed revisions to the Ground Water Monitoring Plan for Department review and approval, subject to the following permit conditions:
 - a. Submit the changes to the Department in writing at least 30 days before the proposed implementation date; and
 - b. The Permittee shall not implement proposed changes until receiving written approval from the Department.
2. The Department will not require a permit modification for monitoring plan changes proposed and approved in accordance with the requirements in Module VI.F.1.
3. In the event the Ground Water Monitoring Program no longer substantially satisfies the requirements of the regulations, the Department reserves the right to require the Permittee to submit an application for a Permit Modification in accordance with ARSD:74:28:25:01, adopting by reference 40 CFR 264.91.

G. ASSURANCE OF COMPLIANCE

The Permittee shall assure the Department that ground water monitoring and corrective action measures necessary to achieve compliance with the ground water protection standard and environmental performance standard under ARSD:74:28:25:01, adopting by reference 40 CFR 264.92 and 264.601 are taken during the term of the Permit.

H. DOCUMENTS TO BE SUBMITTED TO THE DEPARTMENT

The Permittee shall submit the documents in Table VI.H to the Department in accordance with the due dates listed:

Table VI.H

<u>Document</u>		<u>Due Date</u>
1.	Location proposed for each new monitoring well, as required in Module VI.B.1.c.	At least 30 days before well installation.
2.	Monitoring well installation reports, as required in Module VI.B.1.f.	Within 90 days of each well installation.
3.	Well decommissioning requests, reports, and certification, as required in Module VI.B.1.h.	Requests prior to decommissioning; reports and certification within 90 days of Department approval.
4.	Elevation measurements, analytical results, computational data, statistical analyses, and reports for ground water monitoring, as required in Modules VI.D.2, VI.E.3, and VI.E.4.	In accordance with the schedules in Modules VI.D.2, VI.D.4, and Table VI.E.3.
5.	Procedures to be implemented if ground water monitoring results show a statistically significant increase above the background values, as required Module VI.D.5.	With written Ground Water Monitoring and Response Program plan, at least 30 days before beginning authorized treatment operations.
6.	Any revisions proposed to the Ground Water Monitoring Plan, as required under Module VI.F.	At least 30 days before proposed implementation date.

MODULE VII – SOIL MONITORING PROGRAM

A. DESCRIPTION

Application information indicates surficial soils at the site are generally Pleistocene age deposits of glacial till that primarily consist of lean clay with a little sand. Soil sampling the Permittee performed previously at the Former OB/OD Area (AOC 001), located about 800 feet northwest of the HWTF, indicates a potential for some soil contamination resulting from long-term treatment operations allowed under this Permit (Permit Attachment 7). Therefore, this Permit requires soil monitoring as a means to monitor deposition resulting from air emissions related to treatment operations allowed under this Permit.

The Permittee conducted soil sampling at 13 locations across the site property to establish soil background concentrations. The Permittee also obtained incremental and discrete soil samples from the former OB/OD area (Section 15 Appendix), in conjunction with closure operations for that area. Test results from those soil samples indicate historic operations at the former OB/OD area resulted in elevated concentrations (above background means) of lead, cadmium, and chromium in surficial soils at that area. Results also show some soils within that area exceed site action levels for the primary contaminants of concern established for the site.

This Permit includes background values and action levels established for applicable hazardous constituents and indicator parameters in soils from the treatment units allowed under Modules IV and V. This Permit also requires the Permittee to continue conducting the established soil monitoring program to assess soils in the on-site areas adjacent to the permitted treatment units on a semiannual basis.

B. CONTAMINANTS of CONCERN and SITE ACTION LEVELS FOR SOIL

The Permittee conducted previous sampling required to establish soil background levels for indicator parameters and monitoring constituents listed under Module VI.C.1. Based on waste profile information and results from the soil testing, the Permittee established the following Contaminants of Concern (CoC), and Site Action Levels (SAL) under their Soil Monitoring Program.

Table VII.B

CONTAMINANT OF CONCERN	CAS NUMBER	SITE ACTION LEVEL (mg/kg)
Semi-Volatile Organics		
1,3,5-Trinitrobenzene	99-35-4	110
1,3-Dinitrobenzene	99-65-0	0.35
2,4-Dinitrotoluene	121-14-2	0.81
2,6-Dinitrotoluene	66-20-2	0.35
Naphthalene	91-20-3	1.8
Nitrobenzene	98-95-3	2.4

CONTAMINANT OF CONCERN	CAS NUMBER	SITE ACTION LEVEL (mg/kg)
Dimethyl phthalate	131-11-3	18
Bis(2-ethylhexyl)phthalate	117-81-7	18
Diesel Range Organics [C10-C28]	--	250
Nitroaromatics and Nitramines		
Perchlorate and Perchlorate Salts	14797-73-0	2.8
HMX	2691-41-0	190
RDX	121-82-4	2.8
Nitroglycerin	55-63-0	0.61
Tetryl	479-45-8	12
PETN	78-11-5	6.0
Triaminotrinitrobenzene (TATB)	3058-38-6	0.16
2,4,6-Trinitrotoluene (TNT)	118-96-7	1.8
Total Metals		
Aluminum	7429-90-5	10,000
Arsenic	7440-38-2	12
Barium	7440-39-3	750
Cadmium	7440-43-9	3.5
Hexavalent Chromium – Cr(VI)	18540-29-9	0.15
Trivalent Chromium – Cr(III)	16065-83-1	6000
Cobalt	7440-48-4	8.0
Lead	7439-92-1	200
Mercury	7139-97-6	0.5
Nickel	7440-02-0	75
Selenium	7782-49-2	20
Silver	7440-22-4	20
Strontium	7440-24-6	2,350
Zinc	7440-66-6	1,150
Zirconium	7440-67-7	7.0
General Chemistry		
Nitrocellulose	9004-70-0	9.0+E6
Nitrate as N	14797-55-8	6500
Dioxins & Furans		
2,3,7,8-TCDD	1746-01-6	0.0000023
Total HxCDD	34465-46-8	0.000047

C. SOIL MONITORING PROGRAM

1. The Permittee shall implement the Soil Monitoring Program in accordance with Section 15 and Section 15 Appendix of the Application, and the following Permit requirements:
 - a. The Permittee shall conduct semi-annual sampling and testing for the indicator parameters and hazardous constituents listed as CoC constituents in Table VII.B;
 - b. Within 60 days of completing each required semiannual soil

sampling and testing event, the Permittee shall submit to the Department a written report summarizing the year-to-date analytical test results for the Soil Monitoring Program, including detailing whether any action levels were exceeded;

- c. If soil monitoring results show parameters or hazardous constituents present above the action levels established, the Permittee shall implement additional appropriate actions specified in the Plan or required by the Department up to and including additional sampling and testing or implementing a corrective action program;
- d. For permit renewals, the Permittee shall submit with the renewal application, soil testing results for all the background values established under Module VII.B.; and
- e. The Permittee shall provide the Department opportunity to observe soil sampling by providing notification (either over the telephone or through electronic mail) at least seven (7) calendar days prior to each sampling event.

D. SOIL MONITORING PLAN MODIFICATION

- 1. Based on data from previous sampling events and other relevant facility information, the Permittee may submit proposed revisions to the Soil Monitoring Plan for Department review and approval, subject to the following permit conditions:
 - a. Submit the changes to the Department in writing at least 30 days before the proposed implementation date; and
 - b. The Permittee shall not implement proposed changes until receiving written approval from the Department.
- 2. The Department will not require a permit modification for monitoring plan changes proposed and approved in accordance with the requirements in Module VII.D.1.
- 3. In the event the Soil Monitoring Program no longer substantially satisfies the requirements of the regulations, the Department reserves the right to require the Permittee to submit an application for a Permit Modification in accordance with ARSD 74:28:25:01, adopting by reference 40 CFR 264.91.

E. ASSURANCE OF COMPLIANCE

The Permittee shall assure the Department that soil monitoring and corrective action measures necessary to achieve compliance with the environmental performance standard under ARSD 74:28:25:01, adopting by reference 40 CFR 264.601, are taken during the term of the Permit.

F. DOCUMENTS TO BE SUBMITTED TO THE DEPARTMENT

The Permittee shall submit the documents in Table VII.F to the Department in accordance with the due dates listed:

Table VII.F

<u>Document</u>		<u>Due Date</u>
1.	Reports summarizing year-to-date analytical test results for Soil Monitoring Program, including whether action levels were exceeded, as required in Module VII.C.1.	Within 60 days of completing each required semi-annual soil sampling and testing.
2.	Test results for all soil background values established under Module VII.B, as required in Module VII.C.1.d.	With permit renewal application.
3.	Any revisions proposed to the Soil Monitoring Plan, as required in Module VII.D.1.	At least 30 days before proposed implementation date.

MODULE VIII – AIR MONITORING

A. DESCRIPTION

As described in the Application, the Permittee will generate both fugitive and point source emissions as a result of the thermal treatment of hazardous wastes in the units allowed under Modules IV and V.

The Permittee will thermally treat hazardous wastes by OB/OD in the treatment units allowed under Module IV. Those units do not have air pollution control systems. Wastes treated in those units typically contain less than 15 percent by weight of RCRA toxicity characteristic metal constituents. Under normal operating conditions, the Permittee will treat a maximum of 21,300 pounds of hazardous waste in these units annually. Those wastes will consist of the unusable explosive powders and off-specification manufactured materials containing explosives listed in Table IV.B.4.

The Permittee will also conduct thermal treatment of hazardous wastes in the CTU allowed under Module V that is equipped with a three-stage air pollution control system designed to limit releases of RCRA toxicity characteristic metal constituents. Wastes treated in this unit typically contain more than 15 percent by weight of the RCRA metal toxicity constituents. The Permittee will treat a maximum of 22,700 pounds of hazardous waste annually in the CTU under normal operating conditions. Those wastes will consist of the off-specification materials containing explosives listed in Table V.B.4. The Permit allows for the treatment of wastes typically managed in the CTU in the OB/OD units under limited circumstances.

The Permittee submitted a Human Health Risk Assessment (Attachment 4) for the OB/OD and CTU waste treatment operations. The risk assessment modeled emissions using the maximum waste quantities allowed under this Permit and evaluated potential human health risks. The risk assessment did not identify significant lifetime cancer risks, chronic hazard index estimates, or acute inhalation hazards from the thermal treatment operations allowed under this Permit. The risk assessment also noted actual facility emissions are expected to be well below those calculated for the maximum treatment limits.

Due to limitations in monitoring air emissions from OB/OD operations, this Permit does not require ongoing air monitoring. However, the risk assessment information and Soil Monitoring Program required under Module VII are designed to identify and monitor the potential for health risks from facility emissions. This Permit requires the Permittee to meet opacity requirements, as applicable, for air emissions during operation of the units allowed under Modules IV and V.

B. OPACITY RESTRICTIONS

Except for brief periods during start up, shut down and malfunctions, the Permittee shall operate the treatment units allowed under Modules IV and V such that discharge into the ambient air from a single unit of emissions do not exceed 20 percent opacity as determined using EPA Method 9 or Method 22, as appropriate (ARSD 74:36:12:01 and 74:36:12:02).

C. NOISE AND NUSIANCE RESTRICTIONS

The Permittee shall operate the treatment units allowed under Modules IV and V in accordance with all applicable local, state, and federal noise and nuisance restrictions.

D. PERFORMANCE TESTING

1. For the treatment of new wastes in the CTU and OB/OD units that are not allowed under Modules IV and V, the Permittee shall prepare a written plan and conduct an initial performance test that provides emissions information representative of the unit as operated and in compliance with the following Permit requirements:
 - a. The Permittee shall submit the written plan with a written request for permit modification as required under Modules I, IV, and V of this Permit. The written plan must include proposed testing procedures, including monitoring parameters and constituents, for Department review and approval.
 - i. The Department will notify the Permittee if the procedures proposed are approved or denied; if denied, the Department will provide written notification outlining additional procedures needing completion for approval.
 - b. The performance testing shall include a test burn for a representative set of waste streams, approved by the Department, with appropriate stack tests and ash analyses of the treatment unit.
 - i. Where appropriate and with previous Department approval, the Permittee may conduct test burns for other wastes proposed for management in the CTU or OB/OD units for the purposes of obtaining data for modifications to the permit, including managing additional wastes in the on-site units or changes to required monitoring programs.
 - c. The Permittee shall notify the Department at least 14 days in advance of the performance test to allow the Department the opportunity to observe the testing.
 - d. The Permittee shall submit a performance test report to the Department within 60 days after completing the performance test, or by a later date if agreed to by the Department. The performance report shall contain, at a minimum, the following information:
 - i. A brief description of the process and, with respect to the CTU, the air pollution control system being tested;
 - ii. Sampling location description(s);
 - iii. A description of sampling and analytical procedures and any modifications to standard procedures;
 - iv. Test results;

- v. Quality assurance procedures and results;
- vi. Records of operating conditions during the test, preparation of standards, and calibration procedures;
- vii. Raw data sheets for field sampling and field and laboratory analyses;
- viii. Documentation of calculations; and
- ix. All data recorded and used to establish parameters for compliance monitoring.

E. AIR MONITORING PLAN MODIFICATIONS

1. The Department reserves the right to require changes to the Permit based on the data obtained from the performance testing required under this Permit, including changes to the ground water, soil, or air monitoring plans; wastes allowed for treatment in the units approved under Modules IV and V, or other appropriate changes to facility operations.
2. The Department will not require a permit modification for changes required in accordance with Module VIII.E.1.

F. ASSURANCE OF COMPLIANCE

The Permittee shall assure the Department that air monitoring measures necessary to achieve compliance with the environmental performance standard under ARSD 74:28:25:01, adopting by reference 40 CFR 264.601, are taken during the term of the Permit.

G. DOCUMENTS TO BE SUBMITTED TO THE DEPARTMENT

The Permittee shall submit the documents in Table VIII.G to the Department in accordance with the due dates listed:

Table VIII.G

	<u>Document</u>	<u>Due Date</u>
1.	Written proposed procedures for performance testing, as required in Module VIII.D.1.a.	With request for permit modification before beginning treatment of new wastes.
2.	Advance notification of performance testing, as required in Module VIII.D.1.c.	At least 14 days in advance of the performance test.
3.	Performance test report as required in Module VIII.D.1.d.	Within 60 days after completing the performance test, or a later date if agreed to by the Department.

MODULE IX - CORRECTIVE ACTION AND SITE ASSESSMENT

A. DESCRIPTION

Information submitted with the Application indicates previous on-site waste management activities at the Former OB/OD Area (AOC 001) resulted in elevated concentrations, above background means, of lead, cadmium, chromium and non-RCRA metals and constituents, in surficial soils in that area (Permit Attachment 7). Incremental soil test results from some surficial soils within that area also show exceedances of Site Action Levels (SAL). Information provided in the October 21, 2013 Limited Environmental Assessment (Section 12 Appendix-Closure Plan) indicates testing of manufactured devices in Building 106 Testing Area (AOC 002) has resulted in elevated concentrations of RCRA toxicity metals in a limited area of surficial soils.

The Permittee initially installed three ground water monitoring wells at the Former OB/OD Area. Measurements at those wells indicate the presence of shallow ground water at depths from six to twelve feet below surface grade. As noted in the Groundwater Monitoring Well Installation report submitted in the Application (Section 15 Appendix), and the subsequent summary report for Background Groundwater Monitoring Results To Date (Attachment 8), additional ground water level measurements are necessary to better delineate the ground water gradient at AOC 001.

The test results submitted for ground water samples collected at each monitoring well indicate the presence of elevated concentrations of perchlorate, HMX and RDX in some wells near AOC 001 (primarily MW2 and MW3). The Department believes these results indicate historic treatment operations at AOC 001 resulted in surficial depositions which in turn have migrated to the ground water.

Because current information indicates previous site activities have impacted soils and ground water at the Former OB/OD Area and have impacted soils at the Building 106 Product Testing Area, the Department will require the Permittee to implement additional site assessment and corrective action activities.

B. GENERAL CORRECTIVE ACTION REQUIREMENTS

1. The Permittee shall comply with the following permit conditions for reporting new Solid Waste Management Units or Areas of Concern (SWMU/AOC).
 - a. The Permittee shall notify the Department within 15 days of discovery of any additional SWMU/AOC identified during the course of ground water monitoring, field investigations, environmental audits, or through other means. "Discovery" shall refer to the date on which the Permittee:
 - i. Visually observes evidence of a new SWMU/AOC;
 - ii. Visually observes evidence of a previously unidentified release of contaminant(s) to the environment; or
 - iii. Receives information from a credible source of the presence of a previously unidentified or new release of contaminant(s)

to the environment.

2. The Permittee shall comply with corrective action requirements of ARSD 74:28:25:01, adopting by reference 40 CFR 264.100 and 264.101, and the following permit conditions:
 - a. The Permittee shall institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit;
 - b. The corrective action requirements of this Permit extend to all contiguous property under the control of the Permittee and to all contamination originating from discharges at the contiguous property under control of the Permittee;
 - c. The Permittee must attempt to implement corrective action measures beyond the facility property boundary, where necessary to protect human health and the environment;
 - d. The Permittee must initiate and complete corrective action measures within a reasonable period of time, to be determined by the Department, considering the extent of contamination;
 - e. The Permittee must report in writing to the Department at least annually on the effectiveness of required corrective actions;
 - f. The Permittee must continue corrective action measures required by the Department to the extent necessary to ensure applicable protection standards enforced under South Dakota's ground water quality rules (ARSD Articles 74:34, 74:54, and 74:56), surface water quality rules (ARSD Article 74:51), and air quality rules (ARSD Article 74:36) are not exceeded; and
 - g. The Permittee may terminate required corrective action measures, only after establishing the concentration of hazardous constituents is reduced to levels that ensure applicable protection standards are not exceeded and receiving Department approval to terminate those measures.

C. EXISTING SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

SWMU/AOC areas identified to date for which corrective action is required are those identified in Table IX.C below:

Table IX.C

SWMU/AOC #	SWMU/AOC NAME	UNIT COMMENTS
001	Former OB/OD Area	The Permittee will conduct closure of the Former OB/OD Area in accordance with Module II.M. of this Permit and Section 12 of the Permit Application. Corrective Action will be conducted, to include assessment and remediation where necessary of potential soil and ground water impacts from on-site OB/OD treatment of reactive (explosive) hazardous wastes from the on-site production of products that contain energetic materials.
002	Building 106 Test Area	Application information indicates Building 106 Testing Area continues to be used for product testing purposes; soil sampling information indicates elevated RCRA toxicity metals above site background levels (Section 12 Appendix-Closure Plan).

D. SPECIFIC CORRECTIVE ACTION REQUIREMENTS

1. In addition to completing the Closure Plan activities submitted in Section 12 of the Application for the Former OB/OD Area identified in Module IX.C, the Permittee shall conduct Corrective Action activities, as appropriate, to protect human health and the environment to address all releases of hazardous waste or constituents.
 - a. Submit proposed plans and schedules for implementing Corrective Action activities for AOC 001 and AOC 002, and the closure of AOC 001 within 60 days of issuance of this Permit;
 - b. Conduct additional ground water level measurements as necessary to delineate the direction of ground water flow, including accounting for seasonal variations, to establish a downgradient point of compliance;
 - c. Conduct confirmatory sampling and testing of the ground water for the parameters and constituents required under Module VI as necessary to verify the completion of corrective action activities for ground water;
 - d. Conduct confirmatory sampling and testing of soils for the parameters and constituents required under Module VII as

necessary to verify the completion of corrective action activities for soils;

- e. Remove and properly manage or dispose any remaining existing equipment, structures, and contaminated soils;
- f. Decommission any unused monitoring wells after receiving Department approval that corrective actions for that unit are complete; and
- g. Grade the area to approximate the original topography and prevent water from ponding in that area.

E. DOCUMENTS TO BE SUBMITTED TO THE DEPARTMENT

The Permittee shall submit the documents in Table IX.E to the Department in accordance with the due dates listed:

Table IX.E

<u>Document</u>		<u>Due Date</u>
1.	Proposed plans for implementing corrective action activities for AOC 001 and AOC 002, and closure of AOC 001, as required in Module IX.D.1.a.	Within 60 days of Permit issuance.
2.	Notification of Closure of the Former OB/OD Area, as required in Module II.M.3.	Within 45 days before beginning closure.
3.	Certification of Closure, as required in Module II.M.6.	Upon completion of Closure of Former OB/OD Area.
4.	Notification of the discovery of any additional SWMU/AOC, as required in Module IX.B.1.a.	Within 15 days of discovery.
5.	Annual reports on the effectiveness or required corrective actions, as required in Module IX.B.2.e.	Annually.