STATE OF ARKANSAS
ARKANSAS DEPARTMENT OF ENVIRONMENTALQUALITY

FINAL
RCRA HAZARDOUS WASTE PERMIT 26H–RN2

Esterline-Armtec Countermeasures
Highland Industrial Park, Inc.

March 2018

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMIT RENEWAL
FOR A HAZARDOUS WASTE MANAGEMENT FACILITY

PERMITTEES:	Esterline-Armtec Countermeasures Company & Highland Industrial Park
OWNER:	Highland Industries, Inc.
OPERATOR:	Esterline-Armtec Countermeasures Company
FACILITY LOCATION:	State Highway 203, Highland Industrial Park, Calhoun County, Arkansas
EPA I. D. NUMBER:	ARD980867873
ACTIVITY:	Hazardous Waste Miscellaneous Treatment (Open Burning)
PERMIT NUMBER:	26H–RN2
AFIN:	07-00261

Pursuant to the Federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA), as amended (42 USC 6901 *et seq.*), the Hazardous and Solid Waste Amendments of 1984 (HSWA), the Arkansas Hazardous Waste Management Act (Arkansas Code Annotated §8-7-201 *et seq.*), as amended, the Arkansas Remedial Action Trust Fund Act (A.C.A. §8-7-501 *et seq.*), as amended, and the Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation No. 23, a Permit Renewal is issued by the Arkansas Department of Environmental Quality – Office of Land Resources (ADEQ) to Esterline-Armtec Countermeasures Company and Highland Industries, Inc., to operate a hazardous waste management facility located in Calhoun County, Arkansas. APC&EC Regulation No. 23 (Regulation No. 23), as adopted, September 25, 2015 and effective October 15, 2015 has incorporated verbatim all applicable hazardous waste federal regulations formerly cited in Permits by "40 CFR" part number but now cited by the equivalent APC&EC Regulation No. 23 section number, unless specifically noted otherwise.

The Permittee's location is summarily described as follows:

Latitude: 33 Degrees, 39 Minutes, 04 Seconds
Longitude: 92 Degrees, 38 Minutes, 14 Seconds

The facility is located on State Highway 203 in Highland Industrial Park, Calhoun County, Arkansas. The Permittee shall comply with all terms and conditions of this permit. This permit consists of the conditions contained in APC&EC Regulation No. 23 and 40 CFR Part 124, as specified in the Permit. Applicable regulations are those which

are in effect on the date of issuance of the Permit, in accordance with APC&EC Regulation No. 23 §270.32(c). Nothing contained herein shall negate the Permittee's duty to comply with the regulations and this permit, or ADEQ's ability to enforce the regulations and this permit. This permit is based on the assumption that the information submitted in the RCRA Part B Application of March 3, 2017, revised May 1, 2017, July 11, 2017, and October 23, 2017 (hereafter referred to as the Part B Application) is accurate and the facility will be operated as specified in the Part B 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 APC&EC Regulation No. 23 §270.41 and §270.43 and for enforcement action. The Permittee shall inform ADEQ of any deviation from or changes in the information in the Part B Application, which would affect the Permittee's ability to comply with the applicable regulations or Permit conditions.

The Director reserves the right to amend or add conditions to this permit, as necessary to be protective of human health and the environment.

This permit, which incorporates Modules I, II, XII(b), and XIV as conditions herein, shall be effective on service of notice of the permit decision, as specified in APC&EC Regulation No. 8 (Administrative Procedures), §211(B), and shall remain in effect for a period of ten (10) years from the effective date unless revoked and reissued under APC&EC Regulation No. 23 §270.41, terminated under APC&EC Regulation No. 23 §270.43, continued in accordance with APC&EC Regulation No. 23 §270.51(a) and §270.51(d), or modified under APC&EC Regulation No. 23 §270.41.

For the purposes of resolving conflicts between requirements to which the Permittee is subject, the following hierarchy and order of authority will govern in the Permittee's duty to comply: Regulations promulgated under APC&EC Regulation No. 23; General Permit Conditions (Module I); General Facility Conditions (Module II); Conditions/standards specific to activity (Modules XII(b)and XIV).

Issued this 19th day of March, 2018

Kevin White, Deputy Director - Land Resources
Office of Land Resources
Arkansas Department of Environmental Quality

Date of Service: March 20, 2018
(Certificate of Mailing of Notice of Decision)

Effective Date: March 20, 2018

END OF PERMIT SIGN-OFF SHEET

Sign Off Sheet

PERMIT SUMMARY SHEET

PERMIT RENEWAL FOR A
RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)
HAZARDOUS WASTE MANAGEMENT FACILITY

PERMIT ORGANIZATION

The renewal permit is divided into the following sections:

a. A permit sign-off cover sheet setting forth the basic legal authority for issuing the permit.

b. Modules I and II containing general permit and facility conditions which must be met by all hazardous waste management facilities.

c. Modules XII(b) and XIV containing specific permit conditions applicable to the facility.

FACILITY DESCRIPTION

Esterline-Armtec Countermeasures operates an Open Burn Unit (OBU) that consists of four burn pans. The RCRA Permit also includes a final Remedial Action Decision Document (RADD) concerning the corrective action decision for all applicable Solid Waste Management Units (SWMUs) at the facility.

SUMMARY OF PERMIT OPERATIONS

Esterline-Armtec Countermeasures utilizes the OBU to treat magnesium flare waste generated by the on-site production operation.

HSWA CORRECTIVE ACTION

The Hazardous and Solid Waste Amendments of 1984 (HSWA) requires operators of facilities to investigate releases from Solid Waste Management Units (SWMUs) and to implement a corrective action program for releases of hazardous constituents if such have occurred. A visual inspection and records research was performed for all SWMUs identified at the facility and further investigations were recommended for some of the SWMUs. Based on the results of the RCRA Facility Investigation Report, ADEQ determined that the identified SWMUs at Armtec Countermeasures had been remediated after unexploded ordinance and impacted soil were removed. Groundwater monitoring was instituted at the site.

SUMMARY OF THE PERMIT CONDITIONS

Module I - General Permit Conditions

Module I sets forth the standard procedural conditions that are applicable to all hazardous waste management facilities. The justification for these proposed permit conditions can be found in APC&EC Regulation No. 23 §270.30.

Module II - General Facility Conditions

Module II sets forth the general facility conditions applicable to all storage, treatment, incineration, and land disposal facilities. The regulatory basis for these conditions can be found in APC&EC Regulation No. 23, Section 264, Subsections A through E, G, and H.

Module XII (b) - Special Conditions for Corrective Action Related to Solid Waste Management Units

Module XII (b) contains conditions applicable to the corrective action of Solid Waste Management Units (SWMUs) (past or present) at the facility. Module XII (b) is issued as a specific condition of the facility obtaining an operating permit for hazardous waste management. The regulatory basis for these conditions is contained in APC&EC Regulation No. 23, Section 264, Subsections F and H, and APC&EC Regulation No. 23, Section 270.

Module XIV – Treatment of Energetic Wastes

Module XIV sets forth the conditions applicable to the daily operation and maintenance of the OBU. The regulatory basis for these conditions is contained in APC&EC Regulation No. 23, Section 264, Subsection X.

END OF PERMIT SUMMARY SHEET

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MODULE I - GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to treat and store hazardous waste in accordance with the conditions of this permit. Any storage/treatment/disposal of hazardous waste which requires a Permit and which is not specifically authorized in this permit is prohibited. Subject to APC&EC Regulation No. 23 §270.4, compliance with this permit generally constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA as amended, the Arkansas Remedial Action Trust Fund Act (A.C.A. §8-7-501), as amended, and the Arkansas Hazardous Waste Management Act (A.C.A. §8-7-201 et seq.), as amended. Issuance of a RCRA Permit consists of a Permit issued by ADEQ which addresses the provisions of the RCRA program and the Hazardous and Solid Waste Amendments of 1984 (HSWA) for which ADEQ is authorized by EPA for the administration of the programs.

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, or any infringement of state or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), 3008(h), 3013, or 7003 of RCRA; Sections 106(a), 104, or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), as amended, the Arkansas Hazardous Waste Management Act (A.C.A. §8-7-201 et seq.), as amended, or any other law providing for protection of public health or the environment. [APC&EC Regulation No. 23 §270.4(b) and (c); §270.30(g)]

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 APC&EC Regulation No. 23 §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. [APC&EC Regulation No. 23 §270.30(f)]

The Permittee shall provide written notice to all landholders and tenants of property contiguous to the facility, as well as to all persons listed on the facility mailing list, for all major permit modifications and permit renewals (APC&EC Regulation No. 23 §270.7(g)). For all minor permit

modifications (e.g., Class 1's with or without Director's approval), the Permittee shall send notice of the minor permit modification to all persons on the facility mailing list maintained by the Director [APC&EC Regulation No. 23 §270.42(a)(1)(ii)].

2. Permit Renewal

This permit may be renewed as specified in APC&EC Regulation No. 23 §270.30(b) and Permit Module I, Condition E.2. 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 regulations. [APC&EC Regulation No. 23 §270.30(b)]

3. Fees and Costs

a. Permit Application: Any person who applies for a permit for the construction, operation, or post closure care of a hazardous waste management facility or unit shall submit as part of said application a money order or cashier's check payable to the ADEQ to cover permit fees in accordance with the APC&EC Regulation No. 23 §6(a).

b. Permit Modification Applications: All permit modification applications other than Class 1 Modifications as defined at APC&EC Regulation No. 23 §270.42, must be accompanied by a money order or cashier's check payable to the ADEQ. The fee shall be 50% of the base permit application fee as set forth APC&EC Regulation No. 23 §6(a). If additional waste management activities are applied for or operating capacities increased, an additional waste management fee shall be calculated from APC&EC Regulation No. 23 §6(b) and added to the modification fee total. [APC&EC Regulation No. 23 §6(e)]

c. Annual Permit Maintenance Fee: Any person who holds a permit for the construction, operation, or post closure care of a hazardous waste management facility or unit shall submit annually no later than the effective date of this permit a money order or cashier's check payable to the ADEQ to cover annual permit maintenance fees in accordance with the APC&EC Regulation No. 23 §6(a).

d. Annual Monitoring/Inspection Fee: All treatment, storage, and disposal facilities shall submit annually a money order or cashier's check payable to the ADEQ to cover applicable monitoring and inspection fees in accordance with APC&EC Regulation No. 23 §6(n) and add any applicable inspection and monitoring fees for generators of hazardous waste in accordance with APC&EC

Regulation No. 23 §6(o) to (q) into the total by January 1 of every year.

e. Annual Fees on the Generation of Hazardous Waste: Every person who generates hazardous waste shall submit annually a money order or cashier's check payable to the ADEQ to cover the applicable fee according to APC&EC Regulation No. 23 §6(aa)(1)(ii) by July 1 of every year.

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 thereby. [APC&EC Regulation No. 23§29]

D. DEFINITIONS

For purposes of this permit, terms used herein shall have the same meaning as those in §§ 260.10 and 270.2 of APC&EC Regulation No. 23, unless this permit specifically provides otherwise; where terms are not defined in the regulations 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. "Director" means the Director of ADEQ or his designee or authorized representative. The Director of ADEQ is the authorized representative for all permit condition enforcement, reports, notifications, and other submission requirements.

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. Any permit noncompliance, other than noncompliance authorized by an Emergency Permit, constitutes a violation of RCRA and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a Permit renewal application. [APC&EC Regulation No. 23 §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 new Permit at least 180 days prior to Permit expiration. [APC&EC Regulation No. 23 §§ 270.10(h) and 270.30(b)]

3. Permit Expiration

Pursuant to APC&EC Regulation No. 23 §270.50, this permit shall be effective for a fixed term not to exceed ten (10) years. This permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely, complete application (see APC&EC Regulation No. 23 §270.10, and §270.13 through §270.28) and, through no fault of the Permittee, the Director has not issued a new permit, as set forth in APC&EC Regulation No. 23 §270.51.

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. [APC&EC Regulation No. 23 §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. [APC&EC Regulation No. 23 §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. [APC&EC Regulation No. 23 §270.30(e)]

7. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. This requirement to maintain and make available (at the facility) all records as necessary to comply with the conditions of this permit shall apply to contractors and sub-contractors of the Permittee. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. [APC&EC Regulation No. 23 §§ §§ 264.74(a) and 270.30(h)]

8. Inspection and Entry

Pursuant to APC&EC Regulation No. 23 §270.30(i), the Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents, as may be required by law, to:

a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records shall be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit including all corrective action work; and

d. Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by RCRA or HSWA and A.C.A. §8-7-209(a)(7), any substances or parameters at any location.

9. Monitoring and Records

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 shall be the appropriate method from Appendix I of APC&EC Regulation No. 23, § 261, or an equivalent method approved by the Director. Laboratory methods shall be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, SW-846, as revised; 40 CFR Part 136 – Guidelines Establishing Test Procedures for the Analysis of Pollutants; *RCRA Ground-Water Monitoring Technical*

Enforcement Guidance Document, 1986; OSWER Directive 9950.1; or an equivalent method, as specified in the Waste Analysis Plan, Section A.4.4 of the Part B Application, and as approved by the Director. [APC&EC Regulation No. 23 §270.30(j)(1)]

b. The Permittee shall retain records of all monitoring information, copies of all reports and records required by this permit, the certification required by APC&EC Regulation No. 23 §264.73(b)(9), and records of all data used to complete the application for this permit for a period of at least three (3) years from the date of the sample, measurement, report, record, certification, or application. These periods may be extended by request of the Director at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility. [APC&EC Regulation No. 23 §§ §§ 264.74(b) and 270.30(j)(2)]

These requirements will also be applicable to open burning/open detonation units if groundwater monitoring is required.

c. Pursuant to APC&EC Regulation No. 23 §270.30(j)(3), records of monitoring information shall specify:

i. The date(s), exact place, and time(s) of sampling or measurement(s);

ii. The individual(s) who performed the sampling or measurements;

iii. The date(s) analyses were performed;

iv. The individual(s) who performed the analyses;

v. The analytical technique(s) or method(s) used; and

vi. The results of such analyses.

10. Reporting Planned Changes

The Permittee shall give notice to the Director as soon as possible, of any planned physical alterations or additions to the Permitted facility. [APC&EC Regulation No. 23 §270.30(l)(1)]

11. Reporting Anticipated Noncompliance

The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. [APC&EC Regulation No. 23 §270.30(l)(2)]

12. Certification of Construction or Modification

The Permittee may not commence, after the effective date of this permit, to store or treat hazardous waste at any newly constructed units until the Permittee has submitted to the Director, by certified mail or hand delivery, a letter signed by the Permittee and an Arkansas Registered Professional Engineer stating that the facility has been constructed or modified in compliance with the Permit including Module XV, Special Conditions [APC&EC Regulation No. 23 §270.30(l)(2)(i)]; and:

a. The Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the Permit; or

b. The Director has either waived the inspection or has not within fifteen (15) calendar days notified The Permittee of his intent to inspect. [APC&EC Regulation No. 23 §270.30(l)(2)(ii)(B)]

13. Transfer of Permits

a. This permit is not transferable to any person, except after notice to the Director. The Director may require modification or revocation and reissuance of the Permit pursuant to APC&EC Regulation No. 23 §270.40.

b. Changes in the ownership or operational control of the Permittee may be made as a Class 1 modification with prior written approval of the Director in accordance with APC&EC Regulation No. 23 §§ §§ 270.42 and 270.30(l)(3). A written agreement containing a specific date for transfer of permit responsibility between the current and new permittees shall be submitted to the Director. The Permittee shall be responsible for the requirements of APC&EC Regulation No. 23 § 264, Subsection H until the new owner or operator has demonstrated that he or she is complying with the requirements of Subsection H. The Director will notify the Permittee that the Permittee is no longer responsible for Subsection H requirements when the new owner or operator has demonstrated compliance with Subsection H requirements. 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 APC&EC Regulation No. 23, §§ 264 and 270 and this permit. [APC&EC Regulation No. 23 §270.30(l)(3) and §264.12(c)] The Permittee shall also meet the additional requirements of §§ §§ 270.7(g) and 270.10(l) of APC&EC Regulation No. 23 regarding ownership change and new partial owners.

14. Twenty-Four Hour Reporting

a. The Permittee shall report to the Director 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. The report shall include the following:

i. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.

ii. 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.

b. The description of the occurrence and its cause shall include:

i. Name, address, and telephone number of the owner or operator;

ii. Name, address, and telephone number of the facility;

iii. Date, time, and type of incident;

iv. Name and quantity of materials involved;

v. The extent of injuries, if any;

vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and

vii. Estimated quantity and disposition of recovered material that resulted from the incident.

c. A written submission shall also be provided within five (5) calendar 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 Director may waive the five-day written notice requirement in favor of a written report within fifteen (15) calendar days. [APC&EC Regulation No. 23 §270.30(l)(6)]

15. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above in Permit Module I, Conditions E.10 - E.14, at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Module I, Condition E.14. [APC&EC Regulation No. 23 §270.30(l)(10)]

16. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the Part B Application, or submitted incorrect information in a permit application, or in any report to the Director, the Permittee shall promptly submit such facts or information. [APC&EC Regulation No. 23 §270.30(l)(11)]

17. Request for Additional Authority

The Permittee may, if appropriate, request implementation of ADEQ's authority pursuant to the Remedial Action Trust Fund Act of 1985, as amended, for purposes of implementing remedial activities and for entitlement to rights of contribution.

F. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to or requested by the Director, his designee, or authorized representative, shall be signed and certified in accordance with APC&EC Regulation No. 23 §§ 270.11 and 270.30(k).

G. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DIRECTOR

All reports, notifications, or other submissions which are required by this permit to be sent or given to the Director should be sent by certified mail or hand delivered to:

Senior Manager
Office of Land Resources
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

H. CONFIDENTIAL INFORMATION

The Permittee may claim confidential any trade secrets required to be submitted by this permit. The Director shall determine which records are confidential. Any record not deemed confidential shall be marked "REJECTED" and promptly returned to the person submitting such information. [APC&EC Regulation No. 23 §270.12]

I. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility, until closure is completed and certified by an independent, Arkansas Registered Professional Engineer, the following documents and all amendments, revisions, and modifications to these documents:

1. Waste Analysis Plan, as required by APC&EC Regulation No. 23 §264.13 and this permit.

2. Inspection schedules, as required by APC&EC Regulation No. 23 §264.15(b)(2) and this permit.

3. Personnel training, documents and records, as required by APC&EC Regulation No. 23 §264.16(d) and (e) and this permit.

4. Contingency Plan, as required by APC&EC Regulation No. 23 §264.53(a) and this permit.

5. Operating record, as required by APC&EC Regulation No. 23 §264.73 and this permit.

6. Closure Plan, as required by APC&EC Regulation No. 23 §264.112(a) and this permit.

7. Annually-adjusted cost estimate for facility closure, as required by APC&EC Regulation No. 23 §264.142(d) and this permit.

8. **RESERVED**

9. **RESERVED**

10. Arkansas Registered Professional Engineer certified "as built" drawings and specifications for the facility's regulated constructed units, as regulated under this permit and required by APC&EC Regulation No. 23 §270.30(l)(2)(i).

11. All corrective action documents developed as a requirement of Module XII(b) or alternative corrective action procedure or authority.

12. Arkansas Registered Professional Engineer certified "as built" drawings for all corrective measures facilities including, but not limited to, monitoring well locations, closure facilities, et cetera, developed as a requirement of Module XII(b). Monitoring wells must be drilled by a driller licensed by the Arkansas Commission on Water Well Construction and the boring logs from the monitoring wells must be certified by a professional geologist registered to practice geology in the State of Arkansas.

13. A facility map which is kept current (semi-annual) showing all regulated units and HSWA Solid Waste Management Units (SWMUs) and the status of all RCRA units (operating, post-closure etc.) and HSWA corrective action work.

14. All other documents required by Permit Module I, Condition E.9, and all other applicable required information.

15. Documentation of the attempt to provide written arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of the hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes as required by APC&EC Regulation No. 23 §264.37.

END OF MODULE I

MODULE II - GENERAL FACILITY CONDITIONS

A. DESIGN AND OPERATION OF FACILITY

The Permittee shall construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden, or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. [APC&EC Regulation No. 23, §264.31]

B. RECEIPT OF HAZARDOUS WASTE

When the Permittee is to receive hazardous waste from an off-site source (except where the Permittee is also the generator), he shall inform the generator in writing that he has the appropriate permits and will accept the waste the generator is shipping. The Permittee shall keep a copy of this written notice as part of the operating record. The permittee may accept off-site waste only from the Armtec facility located in Highland Park. [APC&EC Regulation No. 23, §264.12(b)]

C. GENERAL WASTE ANALYSIS

The Permittee shall follow the waste analysis procedures required by APC&EC Regulation No. 23 §264.13, as well as those described in the Waste Analysis Plan, Section A.4.4 of the Part B Application.

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 Director (See Permit Module I, Condition E.9., Duties and Requirements).

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. If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory in writing that it shall operate under the waste analysis conditions set forth in this permit.

D. SECURITY

The Permittee shall comply with the security requirements of APC&EC Regulation No. 23, §264.14(b)(2) and §264.14(c) and Section A.5 of the Part B Application.

E. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the inspection schedule set out in Section A.6 of the Part B Application. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, and records of inspection shall be kept, by the Permittee. [APC&EC Regulation No. 23, §264.15(c) and (d)]

F. PERSONNEL TRAINING

The Permittee shall conduct personnel training as described in Section A.12 of the Part B Application. The Permittee shall maintain training documents and records for all employees, contractors, and subcontractors who transfer, handle, sort, mix, treat, or dispose of hazardous waste. [APC&EC Regulation No. 23, §264.16]

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

The Permittee shall follow the procedures for handling ignitable, reactive, and incompatible wastes set forth in Section A.8 of the Part B Application. [APC&EC Regulation No. 23, §264.17(a)]}

H. LOCATION STANDARDS

The Permittee shall operate and maintain the facility to prevent washout of any hazardous waste as specified in the drawings and specifications in Section A.11 of the Part B Application. [APC&EC Regulation No. 23, §264.18(b) (1)]

In the event of a flood, the Permittee shall remove all hazardous waste, before flood waters can reach the facility, to a location where the wastes will not be vulnerable to the flood waters in accordance with procedures in Section A.11 of the Part B Application. [APC&EC Regulation No. 23, §264.18(b)(1)(i)]

I. PREPAREDNESS AND PREVENTION

1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment set forth in the Contingency Plan, Section A.7 of the Part B Application. [APC&EC Regulation No. 23, §264.32]

2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in the above permit condition, as necessary, to assure its proper operation in time of emergency. [APC&EC Regulation No. 23, §264.33]

3. Access to Communications or Alarm System

The Permittee shall maintain access to the communications or alarm system. [APC&EC Regulation No. 23 §264.34]

4. Required Aisle Space

At a minimum, the Permittee shall maintain a minimum clear aisle space of 30 inches. Aisle space shall be measured from the inside of the secondary containment curb or wall to the container or pallet, as applicable. Aisle space between rows of containers shall be measured from container to container or, in the case of containers on pallets, from the outside of the pallet. [APC&EC Regulation No. 23, §264.35]

5. Arrangements with Local Authorities

The Permittee shall maintain arrangements with state and local authorities. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee shall document this refusal in the operating record. [APC&EC Regulation No. 23, §264.37]

J. CONTINGENCY PLAN

1. Implementation of Plan

The Permittee shall immediately carry out the provisions of the Contingency Plan, Section A.7 of the Part B Application, whenever there is a fire, explosion, or other release of hazardous waste or constituents which could threaten human health or the environment.

2. Copies of Plan

The Permittee shall maintain a copy of the Contingency Plan at the facility and shall provide a copy to all local police departments, fire departments, hospitals, and state and local emergency assistance teams. [APC&EC Regulation No. 23, §264.53]

3. Amendments to Plan

The Permittee shall review and immediately amend, if necessary, the Contingency Plan. [APC&EC Regulation No. 23, §264.54]

4. Emergency Coordinator

A trained emergency coordinator shall be available at all times either on the facility premises or on call in case of an emergency. [APC&EC Regulation No. 23, §264.55]

The names, addresses, and phone numbers of all persons qualified to act as emergency coordinators shall be supplied to the Director at the time of certification. [APC&EC Regulation No. 23, §264.52(d)]

K. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of APC&EC Regulation No. 23, §264.71, §264.72, and §264.76.

L. RECORDKEEPING AND REPORTING

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

1. Operating Record

The Permittee shall maintain a written operating record at the facility. [APC&EC Regulation No. 23, §264.73]

2. Annual Report

The Permittee shall comply with the annual reporting requirements of APC&EC Regulation No. 23, §264.75.

M. GENERAL CLOSURE REQUIREMENTS

1. Performance Standard

The Permittee shall close the facility, as required by APC&EC Regulation No. 23, §264.111 and in accordance with the Closure Plan, Section A.13 of the Part B Application.

2. Amendment to Closure Plan

The Permittee shall amend the Closure Plan whenever necessary. [APC&EC Regulation No. 23, §264.112(c)]

3. Notification of Closure

The Permittee shall notify the Director in writing at least sixty (60) calendar days prior to the date on which he expects to begin final closure of the facility. [APC&EC Regulation No. 23, §264.112(d)]

4. Time Allowed for Closure

Within ninety (90) calendar days after receiving the final volume of hazardous waste, the Permittee shall treat, remove from the unit or facility, or dispose of on site all hazardous waste and shall complete closure activities, in accordance with the schedules specified in the Closure Plan, Section A.13 of the Part B Application. [APC&EC Regulation No. 23, §264.113]

5. Disposal or Decontamination Equipment, Structures, and Soils

The Permittee shall decontaminate and/or dispose of all contaminated equipment, structures, and soils, as required by the Closure Plan, Section A.13 of the Part B Application. [APC&EC Regulation No. 23, §264.114]

6. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications in the Closure Plan. [APC&EC Regulation No. 23, §264.115]

7. RESERVED

N. SPECIFIC CONDITIONS

1. Waste Minimization

The Permittee shall submit a certified report (according to APC&EC Regulation No. 23, §270.11) in writing annually by December 1, for the previous year ending September 30, that:

a. The Permittee shall have a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the

Permittee's facility's operation to the degree determined to be economically practicable; and the proposed method of treatment, storage, or disposal is that practical method currently available to the Permittee which minimizes the present and future threat to human health and the environment. This certified report shall address the items below:

i. Any written policy or statement that outlines goals, objectives, and/or methods for source reduction and recycling of hazardous waste at the facility;

ii. Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities;

iii. Any source reduction and/or recycling measures implemented in the last five years or planned for the near future;

iv. An itemized list of the dollar amounts of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste;

v. Factors that have prevented implementation of source reduction and/or recycling;

vi. Sources of information on source reduction and/or recycling received at the facility (e.g., local government, trade associations, suppliers, etc.);

vii. An investigation of additional waste minimization efforts which could be implemented at the facility. This investigation shall analyze the potential for reducing the quantity and toxicity of each waste stream through production reformulation, recycling, and all other appropriate means. The analysis shall include an assessment of the technical feasibility, cost, and potential waste reduction for each option;

viii. The Permittee shall submit a flow chart or matrix detailing all hazardous waste it produces, by quantity and type and by building or area; and

ix. The Permittee shall demonstrate the need to use those processes which could produce a particular hazardous waste due to a lack of alternative processes that would produce less volume of hazardous waste.

b. The Permittee shall include this certified report in the operating record.

2. Dust Suppression

Pursuant to APC&EC Regulation No. 23, §266.23(b), the Permittee shall not use waste, used oil, or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability) for dust suppression or road treatment.

3. Permit Review

This permit may be reviewed at any time (A.C.A. §8-7-220) and shall be modified as necessary as provided by APC&EC Regulation No. 23, §270.41. The Permit will be reviewed by the Director five years after the date of permit issuance pursuant to APC&EC Regulation No. 23, §270.50(d) and may be modified as necessary as provided for in APC&EC Regulation No. 23, §270.41.

4. Specific Waste Ban

a. The Permittee shall not place in any land disposal unit the wastes specified in APC&EC Regulation No. 23, §268 after the effective date of the prohibition unless the Director has established disposal or treatment standards for the hazardous waste, and the Permittee meets such standards and other applicable conditions of this permit.

b. The Permittee may store wastes restricted under APC&EC Regulation No. 23, §268 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal provided that it meets the requirements of APC&EC Regulation No. 23, §268.50(a)(2) including, but not limited to, clearly marking and dating each tank or container.

c. The Permittee is required to comply with all the requirements of Regulation No. 23, §268.7, as amended. Changes to the waste analysis plan will be considered permit modifications at the request of the Permittee, pursuant to APC&EC Regulation No. 23,

§270.42.

d. The Permittee shall perform a waste analysis at least annually or when a process changes, to determine whether the waste meets applicable treatment standards. Results shall be maintained in the operating record.

O. RESERVED

P. RESERVED

Q. FINANCIAL ASSURANCE

1. Cost Estimate for Facility Closure

a. The Permittee's most recent closure cost estimate, prepared in accordance with APC&EC Regulation No. 23, §264.142, §264.197(c)(3) and (5), §264.228(c)(2), and §264.258(c)(2), is specified in Appendix A.13-2 of the Part B Application.

b. The Permittee shall adjust and submit annually to ADEQ for review and approval the closure cost estimate for inflation within sixty (60) calendar days prior and no later than thirty (30) days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with APC&EC Regulation No. 23, §264.143 and Permit Module II, Condition Q.3, Liability Requirements, or when using an approved state-required mechanism, upon such date as required by the state. [APC&EC Regulation No. 23, §264.142(b)]

c. The Permittee shall revise and submit annually the closure cost estimate whenever there is a change in the facility's Closure Plan as required by APC&EC Regulation No. 23, §264.142(c).

d. The Permittee shall keep at the facility the latest closure cost estimate as required by APC&EC Regulation No. 23, §264.142(d).

2. Financial Assurance for Facility Closure

The Permittee shall demonstrate continuous compliance with APC&EC Regulation No. 23, §264.143 and §264.146 by providing documentation of financial assurance, as required by APC&EC Regulation No. 23, §264.143, in no less than the amount of the most current cost estimates

required by Permit Module II, Condition Q.1., Cost Estimate for Facility Closure. The Permittee's method of financial assurance is shown in the Part B Application. Changes in financial assurance mechanisms shall be approved by the Director pursuant to APC&EC Regulation No. 23, §264.143 {§264.145,} or §264.149.

3. Liability Requirements

The Permittee shall have and maintain liability coverage for sudden accidental occurrences of at least $1 million per occurrence, with an annual aggregate of at least $2 million, exclusive of legal defense costs. [APC&EC Regulation No. 23, §264.147(a)]

a. The Permittee also shall have and maintain liability coverage for non-sudden accidental occurrences in the amount of at least $3 million per occurrence, with an annual aggregate of at least $6 million, exclusive of legal defense costs. [APC&EC Regulation No. 23, §264.147(b)]

b. The Permittee may combine the required per-occurrence coverage levels for sudden and non-sudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and non-sudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and non-sudden accidental occurrences shall maintain liability coverage in the amount of at least $4 million per occurrence and $8 million annual aggregate. [APC&EC Regulation No. 23, §264.147(b)]

4. Cost Estimate for Corrective Action

a. RESESRVED

b. The cost estimates for Corrective Action under Permit Module XII(b) shall be reviewed and evaluated in the same manner as for the closure cost estimates required in Module II Condition Q.1 of this permit. Adjustments to the cost estimates shall be made during the annual evaluation and are necessary due to:

i. Inflation, as determined using the procedures outlined in Regulation No. 23, §264.142(b); and

ii. Changes in the corrective actions and as various tasks of the investigation, remedy selection, design and implementation work are completed allowing more accurate cost estimates.

5. Financial Assurance for Corrective Action

The Permittee shall demonstrate continuous compliance with APC&EC Regulation No. 23, §264.143 and §264.146 by providing documentation of financial assurance, as required by APC&EC Regulation No. 23, §264.143, in no less than the amount of the most current cost estimates required by Permit Module II, Condition Q.4., Cost Estimate for Facility Closure. The Permittee's method of financial assurance is shown in the Part B Application. Changes in financial assurance mechanisms shall be approved by the Director pursuant to APC&EC Regulation No. 23, §264.143 {§264.145,} or §264.149.

6. Changes in Financial Assurance Mechanisms

Any changes of financial assurance instruments shall be considered a Class 1 permit modification, subject to prior approval of the Director.

7. Incapacity of Owners or Operators, Guarantors, or Financial Institution

The Permittee shall comply with APC&EC Regulation No. 23 §264.148 whenever necessary.

R. RESERVED

END OF MODULE II

MODULE XII(b)

SPECIAL CONDITIONS FOR CORRECTIVE ACTION RELATED TO SOLID WASTE MANAGEMENT UNITS

A. DEFINITIONS

For purposes of Module XII(b), the following definitions shall apply:

"Area of Concern (AOC)" means any area where an actual or potential release of hazardous waste, hazardous constituents, or hazardous substances, which is not from a solid waste management unit, is occurring and ADEQ determines to pose an actual or potential threat to human health or the environment.

"Facility" means all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA and the Arkansas Hazardous Waste Management Act.

"Hazardous Constituent" means any constituent identified in Appendix VIII of APC&EC Regulation No. 23, § 261, or any constituent identified in Appendix IX of APC&EC Regulation No. 23, § 264.

"Hazardous Substance" means (A) any substance designated pursuant to Section 311(b)(2)(A) of the Federal Water Pollution Control Act (Public Law 92-500); any element, compound, mixture, solution, or substance designated pursuant to Section 102 of Title 1 of the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1989 (Public Law 96-510); any hazardous waste, including polychlorinated biphenyls (PCBs), as defined by the Arkansas Hazardous Waste Management Act, as amended, §8-7-201 et seq., and the regulations promulgated thereunder; any toxic pollutant listed under Section 307(a) of the Federal Water Pollution Control Act; any hazardous air pollutant listed under Section 112 of the federal Clean Air Act; and any hazardous chemical substance or mixture regulated under Section 7 of the federal Toxic Substances Control Act; and (B) any other substance or pollutant designated by the Arkansas Hazardous Waste Management Act or by regulations of ADEQ.

"Hazardous Waste" means a hazardous waste as defined in APC&EC Regulation No. 23, §261.3.

"Release" means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents).

"Solid Waste Management Unit" (SWMU) means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include, but are not limited to, any area at a facility at which solid wastes have been routinely and systematically released.

If, subsequent to the issuance of this permit, these terms are redefined in promulgated regulations, the Director may, at his discretion, apply the new definition to this permit.

B. STANDARD CONDITIONS

1. Section 3004(u) of RCRA, as amended by HSWA, and Regulation No. 23, §264.101 require that permits issued after November 8, 1984, address corrective action for releases of hazardous waste, hazardous constituents, or hazardous substances from any SWMU at the facility, regardless of when the waste was placed in the unit.

   Section 3004 (v) of RCRA, as amended by HSWA, and Regulation No. 23, §264.101 require corrective action beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off site access is denied.

2. Failure to submit the information required in Permit Module XII(b) or falsification of any submitted information is grounds for termination of this permit (as provided by APC&EC Regulation No. 23, §270.43) and/or other actions. The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Director required in Permit Module XII(b) are signed and certified in accordance with APC&EC Regulation No. 23 §270.11. One (1) electronic copy and one (1) hard copy of each of these plans, reports, notifications or other submissions shall be submitted by Certified Mail or hand delivered to:

   Senior Manager
   Office of Land Resources
   Arkansas Department of Environmental Quality
   5301 Northshore Drive
   North Little Rock, AR 72118-5317

3. All plans and schedules required by these conditions are, upon approval of the Director, incorporated into this permit by reference and become an enforceable part of this permit. Any noncompliance with such approved plans and schedules shall be termed noncompliance with this permit. Extensions of the due dates for submittals may be granted by the Director in accordance with the Permit modification process under APC&EC Regulation No. 23, §270.42.

The required information under this permit shall include each item specified under RFI Tasks I-V and CMS Tasks VI-IX and CMI Tasks X-XIII [RADD effective – see attached RADD]. Since these required items are essential elements of this permit, failure to submit any of these elements or submission of inadequate or insufficient information may subject the Permittee to enforcement action under Section 3008 of RCRA and/or the Arkansas Hazardous Waste Management Act which may include fines, suspension, or revocation of the Permit.

If the Director determines that further actions beyond those provided in Permit Module XII(b) or changes to that which is stated herein, are warranted, the Director may modify Permit Module XII(b) according to the Permit modification processes under APC&EC Regulation No. 23 §270.41.

4. All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to Permit Module XII(b) shall be maintained at the facility during the term of this permit, including any reissued Permits.

5. For purposes of Permit Module XII(b), should the Permittee take exception to all or part of a disapproval or conditional approval of any plan or report required by this module, the Permittee may invoke the dispute resolution process outlined below:

   a. The Permittee and the Director shall in good faith attempt to resolve expeditiously and informally all disputes or differences of opinion. If the parties are unable to informally resolve the dispute within ten calendar days of the receipt of the disapproval decision or directive which is the subject of dispute, the Permittee shall provide written notice to the Director of the invocation of dispute resolution. The Permittee shall provide the written notice no later than the twentieth calendar day after receipt of the disapproval decision or directive. The notice shall set forth the specific points of the dispute, the position the Permittee is maintaining should be adopted as consistent with the Permit's requirements, the basis therefore, and any matters which it considers necessary for the Director's proper determination. Within ten calendar days of receipt of the written notice, the Director will provide to the Permittee a written statement of its decision on the pending dispute, which shall be incorporated into the final Permit unless the Permittee requests an opportunity for a conference in accordance with Paragraph b. of this section. The existence of a dispute as defined herein, and the consideration of such matters which are placed into dispute shall not excuse, toll or suspend any compliance obligation or deadline not in dispute during the pending dispute resolution process including continuance of Module XII(b) work not otherwise dependent on the dispute at hand.

b. If the Permittee objects to any determination by the Director regarding the disputed issue(s), the Permittee shall within ten calendar days of its receipt of the Director's decision pursuant to Paragraph a. of this section, notify the Director in writing of its objections and may request the Director to convene an informal conference for the purpose of discussing the Permittee's objections and the reasons for the Director's determination. After this conference, the Director will state in writing his decision regarding the factual issues in dispute. Such decision shall be the final resolution of the dispute and shall be implemented by the Permittee in accordance with the schedule contained in the final decision.

C. REPORTING REQUIREMENTS

1. The Permittee shall submit to the Director signed semi-annual progress reports of all activities (e.g., SWMU Assessment, Interim Measures, RCRA Facility Investigation, Corrective Measures Study, Corrective Measures Implementation) conducted pursuant to the provisions of Permit Module XII(b) beginning no later than ninety (90) calendar days from the effective date of this permit. These reports shall contain:

   a. a description of the work completed;

   b. summaries of all findings, including summaries of laboratory data;

   c. summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems; and

   d. projected work for the next reporting period.

2. Copies of other reports (e.g., inspection reports), drilling logs, and laboratory data shall be made available to the Director upon request.

3. As specified under Permit Module XII(b), Conditions F., DOCC and RFI work plan, and G., RFI work plan Implementation, the Director may require the Permittee to conduct new or more extensive assessments, investigations, or studies, as needed, based on information provided in these progress reports or other supporting information.

4. The Permittee shall submit to the Director signed Annual Groundwater Monitoring Reports as specified in the Annual Groundwater Monitoring Plan, Appendix A.14-1 of the Part B Application. These reports shall be submitted to the Director within sixty (60) calendar days following the completion of field sampling activities.

D. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY-IDENTIFIED SOLID WASTE MANAGEMENT UNIT(s) (SWMUs)

1. The Permittee shall notify the Director, in writing, of any newly-identified SWMU(s) (i.e., a SWMU or potential SWMU not specifically identified within this permit or the Part B Application). This notification must be submitted no later than fifteen (15) calendar days after discovery. The notification shall include the following items, to the extent available:

   a. the location of the newly-identified SWMU in relation to other SWMUs;

   b. the type and function of the unit;

   c. the general dimensions, capacities, and structural description of the unit (supply available drawings);

   d. the period during which the unit was operated;

   e. the specifics on wastes that have been or are being managed at the SWMU, to the extent available; and

   f. the results of any sampling and analysis required for the purpose of determining whether releases of hazardous wastes, including hazardous substances, have occurred, are occurring, or are likely to occur from this unit.

2. Based on the results of this Notification, the Director will determine the need for further investigations or corrective measures at any newly-identified SWMU(s) covered in the Notification. If the Director determines that such investigations are needed, the Director may require the Permittee to prepare a plan for such investigations. This plan will be reviewed for approval as an RFI work plan under Permit Module XII(b), Condition H., RFI Report and Summary, and, where possible, any previously approved RFI work plan should be modified as necessary and adopted for use for newly identified SWMUs in order to expedite the work.

   Any modifications to Module XII(b) to include a newly identified SMWU must be made in accordance with the regulations of APC&EC Regulation Number 23, §§ 270.41 and 270.42.

E. NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES AT SWMU(s)

The Permittee shall notify the Director, in writing, of any release(s) of hazardous waste or hazardous substances discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities undertaken after the

commencement of the RFI, no later than fifteen (15) calendar days after discovery. Such newly-discovered releases may be from newly-identified units, from units for which, based on the findings of the RFA, the Director has previously determined that no further investigation was necessary, or from units investigated or discovered as part of RFI. The Director may require further investigation and/or Interim Measures for the newly-identified release(s).

F. DESCRIPTION OF CURRENT CONDITIONS REPORT (DOCC) AND RCRA FACILITY INVESTIGATION (RFI) WORK PLAN

1. Within ninety (90) calendar days after the effective date of this permit, the Permittee shall submit to the Director a Description of Current Conditions Report (DOCC) describing the current conditions at the facility as outlined in the RFI Scope of Work, Permit Module XII(b), Condition Q., Scope of Work for a RFI, Task I. This Report may be limited to information not in the Part B Application or to recent information not addressed in the RCRA Facility Assessment (RFA). Any previously submitted information shall be referenced and summarized as appropriate to completely detail the current conditions at the facility. Results of any previous investigations and any other investigations required by state or local authorities may be included in this DOCC if they address any of the requirements of this permit. The DOCC shall address the background information pertinent to the facility and the nature and extent of contamination.

   Facility's RCRA Facility Assessment (RFA) (completed in July 1991) was substituted for DOCC

2. The DOCC shall identify all areas of potential interim measures which may be necessary to protect human health and the environment with proposed schedule of implementation.

   Facility's RCRA Facility Assessment (RFA) (completed in July 1991) was substituted for DOCC

3. On or before one hundred twenty (120) days after the effective date of this permit, the Permittee shall submit to the Director for review and approval an RFI work plan as outlined in Permit Module XII(b), Condition Q., Scope of Work for a RFI, Task II. The RFI work plan must address those units, releases of hazardous waste containing hazardous substances, and media of concern which, based on the results of the RFA or other information, require further investigation. The RFI work plan shall be the implementing document for the work outlined in Permit Module XII(b), Condition Q., Scope of Work for a RFI, Tasks III and IV. The scope of the RFI shall include, but not be limited to, the SWMU's listed in Table 1, and potential releases to all media. The SWMU's are to be investigated to determine the necessity of corrective action. The RFI work plan must include a concise schedule for completing the Task III and IV work and require the RFI

Report in no more than sixty (60) calendar days after completion of Tasks III and IV. An interim RFI Report can be required by the Director as soon as sufficient information is available for the most significant units which will obviously require corrective action in order to protect human health and the environment.

RFI Work Plan Received November 16, 1994
RFI Work Plan Approved February 10, 1995

Table 1
Solid Waste Management Units

SWMU	Remediation	Description
SWMU 1	1997	Mix Muller and Granular Shed, Building R-1-E
SWMU 2	1997	Mix Muller and Granular Shed Sump
SWMU 5	1997	Oil/Water Separator South of Laboratory
SWMU 11	1997	Drum Staging Area
SWMU 16	1997	Pellet Process Building Sump No. 2
SWMU 19	1997	Satellite Waste Accumulation Area No. 2
AOC 1	1997	Screening Room Drain, Building 5-FC-3
AOC 2	1997	Outcropping of Pipes in Parking Lot, Building R-1-A
AOC 3	1997	Exposed Objects of Drum Staging Area
AOC 1	2006	Two Anomalies Southwest of R-15 and North of R-1
AOC 2	2006	One Sinkhole Feature with Two Anomalies designated as R-1 Anomaly A and Anomaly B
AOC 3	2006	Four Surface Anomalies North of AOC 2
AOC 6	2006	The Area Within the R-15 Fence with Several Anomalous Features
AOC 7	2006	Demolition Burn Pit Area, R-15
AOC 8	2006	West of the R-15 fence with Several Anomalous Features

Based on the requirements of Armtec's (formerly Tracor) previous Hazardous Waste Management Permit, Permit 26H-RN1, the facility investigated all Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) for the possible release of hazardous substances into the environment. The facility investigated all SWMUs and AOCs shown in Table 1. The remedial activities are discussed in the Remedial Action decision Document (RADD) issued in 1997 and the revised in 2006.

a. The RFI work plan shall describe the objectives of the investigation and the overall technical and analytical approach to completing all actions necessary to characterize the nature, direction, rate, movement, and concentration of releases of hazardous waste including hazardous substances from specific units or groups of units, and their actual or

potential receptors. The RFI work plan shall detail all proposed activities and procedures to be conducted at the facility, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI. The Scope of Work for a RFI is outlined in Condition Q. of this module.

b. The RFI work plan shall discuss sampling and data collection quality assurance and data management procedures, including formats for documenting and tracking data and other results of investigations, and health and safety procedures.

c. The RFI work plan shall include a plan for further developing any existing site-wide monitoring well network. If the Director determines based on the DOCC or the RFA report that groundwater contamination is likely, the Director may require the Permittee to submit a groundwater monitoring plan in the RFI work plan. The plan shall include:

i. A review of all known past or present Solid Waste Management Units and all known spills;

ii. A review of any existing groundwater monitoring well network;

iii. A plan and implementation schedule for plugging and abandoning any monitoring wells that are determined not to be useful in a site-wide well network;

iv. A plan and implementation schedule for installing such additional monitoring wells as may be needed to complete the proposed site-wide well network for the aquifer above the confining zone.

4. After the Permittee submits the RFI work plan, the Director will approve, disapprove, or modify the RFI work plan in writing. If the Director approves the plan, the Permittee shall immediately initiate implementation of the plan according to the schedule contained therein. All approved work plans become incorporated into this permit.

In the event of disapproval (in whole or in part) of the plan, the Director will specify any plan deficiencies in writing. The Permittee shall modify the plan to correct these within 30 days of receipt of the disapproval by the Director. The modified plan shall be submitted in writing to the Director for review. Should the Permittee take exception to all or part of the disapproval, the Permittee may invoke dispute resolution as outlined by Permit Module XII(b), Condition B.5., Standard Conditions, above. Where appropriate, all other work not subject to dispute resolution may be specified by the Director to proceed independent of the

dispute process. If necessary to accomplish matters of noted deficiencies or of dispute resolution, the Director will make further modifications as required.

If the Director modifies the plan, this modified plan becomes the approved RFI work plan. If the modified plan is not the result of dispute resolution but is modified due to Director review, the modified plan is also subject to the dispute resolution rights of the Permittee as described above. The Permittee shall immediately initiate implementation of the approved RFI work plan according to the schedule contained therein.

5. The Director shall review for approval, as supplements to the RFI work plan, any plans developed pursuant to Permit Module XII(b), Condition D., new SWMU Notification Requirements, addressing further investigations of newly-identified SWMUs or new releases from previously-identified units. In the event that the RFI work plan and supplements do not call for applicable work of Permit Module XII(b), Condition Q., Scope of Work for a RFI, Tasks II-V, the requirements of Condition Q., Tasks II-V must be met. The RFI work plan must include a concise schedule for completing the Tasks III and IV work and require the RFI Report within sixty (60) calendar days of Tasks III and IV work completion.

G. RFI WORK PLAN IMPLEMENTATION

Upon receipt of written approval from the Director for the RFI work plan, the Permittee shall begin implementation of the RFI according to the Schedules specified in the approved or modified RFI work plan. The RFI shall be conducted in accordance with the approved RFI work plan and accomplish all appropriate work outlined in Permit Module XII(b), Condition Q., Scope of Work for a RFI, Tasks III and IV. The Permittee shall implement the RFI work plan and undertake the facility investigation in accordance with the following:

1. Development of the RFI work plan and reporting of data shall be consistent with the RCRA Facility Investigation Guidance Document (OSWER Directive 9502.00-6 (D)) May 1989 or the equivalent thereof;

2. ADEQ reserves the right to split samples. The Permittee shall notify ADEQ at least ten (10) calendar days prior to any sampling activity;

3. When developing groundwater related investigations, the Permittee shall follow the RCRA Groundwater Monitoring Technical Enforcement Guidance Document (EPA OSWER Directive 9950-1, September 1986) or the equivalent thereof, to determine methods and materials that are acceptable to ADEQ;

4. Any major deviations from the approved RFI work plan which are necessary during implementation of the investigations must be approved by the Director and fully documented and described in the progress reports and in the RFI Report.

H. RFI REPORT AND SUMMARY

1. Within sixty (60) calendar days after the completion of the RFI, Tasks III and IV as shown in the RFI work plan schedule, the Permittee shall submit an RFI Report. The RFI Report shall describe the procedures, methods, and results of all investigations of SWMUs and their releases, including information on the type and extent of contamination at the facility, sources and migration pathways, and actual or potential receptors. The RFI Report shall present all information gathered under the approved RFI work plan, and include an investigative analysis as described under Permit Module XII(b), Condition Q., Scope of Work for a RFI, Task IV. The Report must contain adequate information to support corrective action studies at the facility to eventually implement a remedy if necessary.

RFI Report Received	**April 15, 1995**
RFI Report Approved	**November 2, 1995**

2. After the Permittee submits the RFI Report, the Director shall either approve or disapprove the Report in writing.

   If the Director approves the RFI Report, the Permittee shall mail a notice that the RFI Report has been approved to all individuals on the facility mailing list established pursuant to 40 CFR 124.10(c)(1)(ix), within fifteen (15) calendar days of receipt of approval. This notice shall indicate where a copy of the report can be found and who to contact for more information.

   If the Director determines the RFI Final Report does not fully detail the objectives stated under Permit Module XII(b), Condition Q., Scope of Work for a RFI, the Director may disapprove the RFI Report. If the Director disapproves the Report, the Director will notify the Permittee in writing of the Report's deficiencies and specify a due date for submittal of a revised Final Report. Once approved, the Permittee shall mail a notice that the RFI Report has been approved to all individuals on the facility mailing list as specified above.

   If the Director determines the RFI Final Report fulfills the requirements of the RFI work plan, but that additional information or data is required, the Director may require the Permittee to conduct additional investigations as necessary. In addition, the RFI Report may be used by the Director to implement specific interim measures as necessary to protect the public health and the environment. Failure to properly implement the RFI work plan and resulting in an unapprovable RFI Report may subject the Permittee to enforcement action and should not relieve the Permittee of the responsibility to implement partial CMS Tasks VI through IX work as directed or interim measures stipulated by the Director as necessary to protect human health and the environment.

I. INTERIM MEASURES

This condition is to provide for unforeseen interim measures that may arise after permit issuance. The interim measures Appendices A - E apply to work under this condition as applicable, as guidance for interim measures outside the normal RFI/CMS process.

1. If during the course of any activity initiated under Permit Module XII(b), the Director determines that a release or potential release of hazardous substances from a SWMU poses a threat to human health and the environment, the Director may specify corrective action interim measures. The Director may determine the specific measure, including potential permit modifications and the schedule for implementing the required measures which may forego RFI and CMS tasks as appropriate. The Director will notify the Permittee in writing of the requirement to perform such interim measures. The Director may modify Permit Module XII(b) according to the permit modification procedures under APC&EC Regulation No. 23 §270.41, to incorporate such interim measures into the Permit, but actual implementation can begin immediately for the goal of protecting human health and the environment.

2. The following factors will be considered by the Director in determining the need for interim measures:

   a. time required to develop and implement a final remedy;

   b. actual and potential exposure to human and environmental receptors;

   c. actual and potential contamination of drinking water supplies and sensitive ecosystems;

   d. the potential for further degradation of the medium absent interim measures;

   e. presence of hazardous waste in containers that may pose a threat of release;

   f. presence and concentration of hazardous wastes, including hazardous substances, in soil that have the potential to migrate to groundwater or surface water;

   g. weather conditions that may affect the current levels of contamination;

   h. risks of fire, explosion, or accident; and

   i. other situations that may pose threats to human health and the environment.

J. DETERMINATION OF NO FURTHER ACTION

1. Based on the results of the RFI and other relevant information, the Permittee may submit an application to the Director for a Class 3 permit modification under Regulation No. 23 §270.42(c) to terminate the RFI/CMS process for a specific unit or units. This permit modification application must contain information demonstrating that there are no releases of hazardous wastes or hazardous substances from a particular SWMU at the facility that poses a threat to human health and the environment, as well as information required in APC&EC Regulation No. 23 §270.42(c), which incorporates by reference APC&EC Regulation No. 23 §270.13 through §270.21, §270.62, and §260.63.

   If, based upon review of the Permittee's request for a permit modification, the results of the RFI, and other information, including comments received during the sixty (60) calendar day public comment period required for Class 3 permit modifications, the Director determines that releases or suspected releases which were investigated either are non-existent or do not pose a threat to human health and the environment, the Director may grant the requested modification.

2. The Permittee shall conduct groundwater monitoring in accordance with Permit Module XII(b), Condition C.4 and Annual Groundwater Monitoring Plan, Appendix A.14-1 of the Part B Application until a period of three (3) successive annual sampling events indicate site constituents of concern (COCs) are at levels less than 5 micrograms per liter (µg/L).

3. A determination of no further action shall not preclude the Director from requiring continued or periodic monitoring of air, soil, groundwater, or surface water, when site-specific circumstances indicate that release of hazardous wastes including hazardous substances are likely to occur, and as necessary to protect human health and the environment.

4. A determination of no further action shall not preclude the Director from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates a release or likelihood of a release from a SWMU at the facility that is likely to pose a threat to human health or the environment. In such a case, the Director may initiate a Class 3 Permit modification according to APC&EC Regulation No. 23, §270.41, to rescind the determination made in accordance with Permit Module XII(b), Condition J., Determination of No Further Action.

K. CORRECTIVE MEASURES STUDY (CMS) PLAN

1. If, after review of the RFI Report, the Director has reason to believe that a SWMU has released concentrations of hazardous substances, or if the Director determines that contaminants present a threat to human health and the environment given site-specific exposure conditions, the Director may require a CMS and shall notify the Permittee in writing. The notification may also specify remedial alternatives to be evaluated by the Permittee during the CMS.

2. The Permittee shall submit a CMS Plan to the Director within sixty (60) calendar days from notification of the requirement to conduct a CMS. The CMS Plan will be as necessary to implement the CMS, Tasks VI-IX as described in Permit Module XII(b), Condition R., Scope of Work for a CMS. The CMS Plan shall provide the following information:

   a. a description of the general approach to investigation and potential remedies;

   b. a definition of the overall objectives of the study;

   c. the specific plans for evaluating remedies to ensure compliance with remedy standards;

   d. the schedule for conducting the study; and

   e. the proposed format for the presentation of information; and

   f. a schedule for completion of the CMS Tasks VII-IX.

3. After the Permittee submits the CMS Plan, the Director will either approve or disapprove the Plan. If the Plan is not approved, the Director will notify the Permittee in writing of the Plan's deficiencies and specify a due date for submittal of the revised Plan. If this Plan is not approved, the Director may revise the Plan and notify the Permittee of the revisions. The Director revised Plan becomes the approved Plan.

Draft RADD Effective **March 21, 1997**
Draft Revised RADD Effective **September 8, 2006**

L. CORRECTIVE MEASURES STUDY (CMS)

No later than fifteen (15) calendar days after the Permittee has received written approval from the Director for the CMS Plan, the Permittee shall begin to implement the CMS according to the schedules specified in the CMS Plan. The CMS shall be conducted in accordance with the approved Plan and as necessary to satisfy the requirements of Permit

Module XII(b), Condition R., Scope of Work for a CMS, Tasks VII and VIII, sufficient to prepare an approvable CMS Report (Task IX of Condition R.).

CMS Not Required due to RFI Report Received

M. CMS REPORT AND DRAFT REMEDIAL ACTION DECISION DOCUMENT (RADD)

1. Within sixty (60) calendar days after the completion of the CMS, the Permittee shall submit a CMS Report. The CMS Report shall summarize the results of the investigations for each remedy studied and of any bench-scale or pilot tests conducted. The CMS Report must include an evaluation of each remedial alternative. The CMS Report shall present all information gathered under the approved CMS Plan. The report must contain adequate information to support the Director in the remedy selection decision-making process and shall be sufficient for concise remedy selection and design without further investigation or study.

2. If the Director determines that the CMS Report does not fully satisfy the information requirements specified under Permit Module XII(b), Condition R., Scope of Work for a CMS, the Director may disapprove the CMS Report. If the Director disapproves the Report, the Director shall notify the Permittee in writing of deficiencies in the report and specify a due date for submittal of a revised CMS Report. If this revised report is not approved, the Director may revise the report as necessary to require specific corrective actions and notify the Permittee of the revisions.

   Failure to properly implement the CMS Plan and resulting in an unapprovable CMS Report may subject the Permittee to enforcement action and shall not relieve the Permittee of the responsibility to implement partial CMI Tasks X through XIII work as directed by the Director as necessary to protect human health and the environment.

3. A schedule for implementation of all corrective measures designs and construction must be included and shall address interim measures as appropriate. The Director may implement corrective action interim measures as necessary to protect human health and the environment.

4. As part of the Director's review and approval/disapproval of the CMS, he will choose the particular remedy for each unit or group of units and he can concur with the Permittee's selected remedy or he can choose another remedy, or combination of remedies, as appropriately justified. This shall be accomplished through a Draft RADD as described in Permit Module XII(b), Condition R., Scope of Work for a CMS, Task IX.C. The Draft RADD shall be subject to public comment as described in the following paragraph:

The Director shall prepare a thirty (30) day Public Notice to solicit public comments on the CMS Report and the Corrective Measure selection through the Draft RADD. The Director will consider the public comments as set out in the Draft RADD prior to approval of the CMS Report and corrective measure(s) for preparing a Final RADD. The Permittee shall bear the cost of the Public Notice. The CMS Report revised by the Director becomes the approved Report.

5. Based on the comments from the Public Notice for the RADD, the Director may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

6. Based on the CMS Report and the comments from the public for the RADD, the Director will then develop the Final RADD which will approve the CMS phase, as modified, and will become the controlling document for all Corrective Measures Implementation and resulting Corrective Measures Designs.

CMS Not Required due to RFI Report Received

N. CORRECTIVE MEASURES IMPLEMENTATION AND FINAL RADD

1. The RADD shall include a proposed schedule for implementing the corrective measures design and construction as set by the CMS work or by the Director through modifications of the CMS Report. It shall be finalized based on public comments and must be implemented within fifteen (15) calendar days of the Director's notification of the Final RADD and final approval of the CMS Report as modified for the Final RADD.

2. The Corrective Measures Implementation (CMI) must be carried out to meet the requirements of Permit Module XII(b), Condition S., Scope of Work for the CMI, Tasks X-XIII, and to comply with the Final RADD.

RADD Effective	**September 11, 1997**
Revised RADD Effective	**November 8, 2006**

O. MODIFICATION OF THE PERMIT

1. If at any time the Director determines that modification of Permit Module XII(b) is necessary, a modification may be initiated according to the procedures of Regulation No. 23 §270.41 and §270.42.

2. Modifications to Permit Module XII(b) do not constitute a reissuance of the Permit.

P. RFI/CMS SUBMISSION SUMMARY

Below is a summary of the planned reporting requirements pursuant to Permit Module XII(b):

Actions	Due Date (examples)
Notification of newly-discovered SWMUs or newly discovered releases	15 calendar days after discovery
Progress reports on all activities	semi-annually -- no later than 90 calendar days after effective date of permit
Description of Current Conditions Report	90 calendar days after effective date of permit
RFI work plan for SWMU(s) identified at time of permit issuance	120 calendar days after effective date of permit
RFI Report and Summary	60 calendar days after completion of RFI Tasks III & IV
Interim Measures Plan for interim measures required after permit issuance	30 calendar days after notification
CMS Plan (Task VI)	60 calendar days after notification of requirement to perform CMS
CMS (Tasks VII and VIII)	per schedule in CMS Plan
CMS Report (Task IX)	60 calendar days after completion of CMS VII & VIII
Demonstration of Financial Assurance for Selected Remedy	120 calendar days after permit modification for remedy

Note: Failure of the Permittee to meet any submittal time frame of Permit Module XII(b), Condition P., RFI/CMS Submission Study, without written approval of the Director to do otherwise, will be adequate justification for enforcement action against the Permittee and shall not be justification for not continuing other work or interim measures required by the Director.

End of Module XII(b)

Attachment

Revised Remedial Action Decision Document

STATE OF ARKANSAS
DEPARTMENT OF ENVIRONMENTAL QUALITY

Final Revised Remedial Action Decision Document (RADD) for Corrective Action

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Esterline-Armtec Countermeasures Company
East Camden, Arkansas

November 2006

Armtec Countermeasures Co.
Former Tracor Aerospace Arkansas OPS (Tracor)

Final Remedial Action Decision Document

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Final Revised Remedial Action Decision Document (RADD)

Armtec Countermeasures Co. - EPA ID# ARD980867873

A) *Introduction*

Esterline-Armtec (formerly Tracor) operates a facility for the treatment of reactive hazardous waste generated onsite during the manufacture of pyrotechnics. The plant site location is in the Highland Industrial Park near East Camden, Calhoun County, Arkansas. The facility occupies approximately 50 acres.

Esterline-Armtec's Resource Conservation and Recovery Act (RCRA) Permit, Permit 26H-M002, includes conditions requiring corrective action applicable to the Hazardous and Solid Waste Amendments of 1984 (HSWA) to the RCRA program. The Permit requires the facility to investigate all Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) for the possible releases of hazardous substances into the environment. The facility submitted the results of the required investigation in the RCRA Facility Investigation (RFI) Report. Based on the results of the RFI, ADEQ determined that hazardous substances have been released to the environment and required a Corrective Measure Study (CMS). The facility investigated and reported in the CMS various remedial options that might be applicable to remediate the SWMUs. This RADD describes the remedial option chosen by the Department and provides justification for the selected option.

Investigation required by the RFI portion of Permit 26H-M002 includes investigations of all media potentially affected by the SWMUs and AOCs. The facility investigated these SWMUs and AOCs for the releases of hazardous substances. Investigations at the site included soil sample analysis for organic constituents and heavy metals.

The Corrective Measures Implementation (CMI) process required under the Corrective Action Conditions of the approved Hazardous Waste Management Permit 26H-M002 has been implemented prior to the final approval of this decision document due to immanent hazards involved at this site. The contents of the revised RADD are subject to public notice and comment.

The details of remedial activities conducted during 1997 are explained in this RADD along with the recent activities conducted at the designated areas of R1 and R15 for the clearance of Unexploded Ordinance (UXO).

This RADD represents ADEQ's decision regarding *the remedial activities conducted at the site* and affords the public the opportunity to participate in decisions regarding potentially hazardous substances within their communities.

B) ***Site Background***

The facility manufactures a variety of Pyrotechnics for the Department of Defense and private users. During the manufacturing process, the facility generates reactive wastes. The facility treats the reactive hazardous waste by open burning.

Based upon the RCRA Facility Investigation completed for all SWMUs on the facility, SWMU No. 11 and Area of Concern (AOC) No. 3A may have impacted the surrounding media. Soils at SWMU No. 11 and AOC No. 3A contained elevated levels of barium, cadmium, chromium and lead when compared with levels found in natural background soils. The corrective actions for these two units have been completed.

BAE Systems (BAE) formerly leased the R-1 and R-15 areas of the Highland Industrial Park. In September 2002, the leasehold was transferred from BAE to Esterline-Armtec Countermeasures, Inc. (ARMTEC) the current facility operator. Documents related to the leasehold transfer identified AOCs agreed to by BAE and the current facility operators. As part of the leasehold transfer agreement, BAE was required to perform remediation at R-1 and R-15 areas.

These properties are part of the former Shumaker Naval Ammunition Depot (NAD). The former Shumaker NAD, consisting of 68,417.82 acres, was located four miles northeast of Camden, Arkansas on the east side of U.S. Highway 79 and north of State Highway Number 4. The NAD covered land in two counties, Calhoun and Ouachita. The site was operated by the U.S. Navy from 1944 until 1957 for the manufacture, testing, storage, distribution, disassembly, reworking, and destruction of ammunition, bombs, and explosives, consisting principally of rockets. It was operated by the National Fireworks Ordnance Corporation as a government owned-contractor operated (GOCO) facility under the supervision of U.S. Navy personnel.

The rocket test range was utilized to test flight rockets. The entire rocket test range measures one mile wide by eight miles long. The area known as R-1 occupies only the developed western end of the test range. The area currently known as the R-15 has been identified in historical documents as the Fuse Test Range and was utilized to conduct fuse function testing. It consisted of a control building and two targets located east of the control building at 300 and 1200 feet.

As part of facility activities, an open thermal treatment operation was permitted and operated under RCRA regulations by the facility in the R-15 area. In corrective actions required in the RCRA permit, ADEQ requested the facility to investigate for buried ordinance in the R-15 and adjacent R-1 areas.

During several phases of investigation, the facility conducted geophysical investigations in the R-1 area, R-15 fenced area, north of the R-15 fenced area, and southwest of the R-15 fenced area. Ordnance of concern included 2.5-inch rockets, BLU-26 anti-material/anti-personnel ordnance, and the modern version BLU-63, and

trip flares. All of this ordnance was manufactured, tested or disposed at this facility by various parties in the past.

Due to the complex history of the site, two distinctly different, but complementary geophysical investigation methods were undertaken in the R-1 and R-15 areas. Surface and near surface clearance activities were performed to investigate the presence of unexploded ordnance (UXO) and ordnance and explosive (OE) materials. Traditional geophysical investigation activities were also undertaken to investigate the presence of buried waste areas.

Poor disposal operations resulted in the spread of the bomblets around the R-15 area. The bomblets were found in configurations ranging from complete bomblets to pieces. The few in the R-1 facility appeared to be fragmentation from operations in R-15. R-1 was searched south of R-15 for 400 feet, at which distance no more bomblet fragments could be found. In an area adjacent and directly north of R-15, old dump areas were found. These dump areas contained a large amount of trip flare components and powdered metal. These types of trip flares were the same type that was manufactured on the former Shumaker Naval Ammunition Depot.

Investigations at the site also included soil sample analyses and groundwater analyses for organic constituents as well as heavy metals.

Based upon a comprehensive investigation for all SWMUs at the facility, several additional AOCs were identified. These AOCs are listed as follows:

AOC #1 Description: A metal detector survey conducted in 2001 occurred in the area southwest of R-15 and north of R-1. This metal detector survey identified two separate "serious hits". This AOC represents the small metal detector anomalies.

AOC #2 Description: A soil erosion feature (sinkhole feature) just west of the eastern-most road in the R-1 area. This feature represents a surface soil collapse that upon close examination exhibited buried waste materials. Two areas of anomalous geophysical measurements were reported based on the EM31 survey conducted by Science Applications International Corporation (SAIC) retained by BAE in January 2002. These two anomalies were designated as R-1 Anomaly A (the sink feature) and Anomaly B (located approximately 170 feet north of Anomaly A). The size, depth and locations were refined through a GPR survey conducted by SAIC in September 2002.

AOC #3B Description: Surface anomalies identified through geophysical surveying north of AOC #2. This AOC represents the geophysical anomalies identified during the January 2002 geophysical investigation. Four separate anomalies were identified. The size, depth and locations were refined through a GPR survey conducted in September 2002. The anomalies were designated as R-1 Anomalies C, D, E and F. The GPR survey determined that Anomaly F was likely a subsurface utility that did not require additional investigation.

AOC #6 Description: AOC #6 represents the area within the R-15 fence. This area has traditionally been used for material storage and incineration. This area was subject to a geophysical investigation in October 2002. Several anomalous features were identified and excavated.

AOC #7 Description: North of the R-15 fence, this AOC is known at the Camden facility as the Demolition Burn Pit Area, R-15. In the 1956 aerial photo, AOC #7 was an open field. The area was used as a staging area for hazardous wastes generated from manufacturing operations at the R-1 and Main facilities, and was used to incinerate waste materials from the manufacturing process.

AOC #8 Description: Located west of the R-15 fence, the area was an open field in the 1956 aerial photograph. EOD reconnaissance in this area identified several features of interest and concern including waste disposal and a constructed concrete pad. Examination of subsequent aerial photographs indicates significant usage of the northern portion of this area in 1971.

Following surface clearance of ordnance and other OE material, geophysical work was conducted. The purpose of these geophysical surveys was to investigate the possible presence of buried waste, delineate the boundaries of identified anomalies, and establish locations that were clear of subsurface features for intrusive sampling. The geophysical investigation performed was designed to investigate deeper burial features that may not be detected by the surface clearance methods provided by the EOD personnel. The geophysical methods used at this site included electromagnetic terrain conductivity surveying (EM31), ground-penetrating radar (GPR), and time domain electromagnetic survey (EM61).

This work was followed by an EM31 survey in order to characterize the site and identify anomalous areas that warranted further assessment. The EM31 surveys were also used to initiate an anomaly identification scheme that was used for excavation and soil sampling activities. The GPR survey refined the understanding of the EM31 anomalies as well as examined potential groundwater sample locations for deep features that may have presented drilling hazards.

C) ***Summary of Site Risks***

The contaminated soils excavated pursuant to the original RADD (1997) potentially could have leached contaminants into the groundwater. Removal of the contaminated soils mitigated any potential leaching from the site to the groundwater or surface water. By placing removed soils in the landfill with bottom liners and caps, the chosen corrective action ensured that the contaminated soils had little chance to impact human health and the environment.

Due to the imminent hazards involved at this site, ADEQ authorized the facility in June 2001 to initiate site investigation and remedial activities in the areas designated as R-1 and R-15. The site risk for the current remediation was minimized by using

interim measures. This authorization was given based on the Interim Measures guidance provided in Module XII (b) of the facility's Permit. Section I of Module XII (b) of the Permit states if the Director determines that a release or potential release of hazardous substances from a SWMU poses a threat to human health and the environment, the Director may specify corrective action interim measures. An interim measure is limited only to actions addressing actual or potential releases of hazardous waste or hazardous waste constituents from SWMUs at a facility.

Since the rocket test range at the R-1 area site tested 2.75-inch rockets, 5-inch HVARs, and 11.75-inch Tiny Tim Rockets, it was anticipated that parts of or intact rockets may be found at this site. The suspected explosives and/or explosive admixtures from the rockets test activities were TNT, Composition B, ammonium nitrate, RDX base, and aluminum powder.

Per "Corrective Measures Study Report – R-1 and R-15 Areas UXO Clearance, Buried Waste investigation, Removal and Disposal Activities" provided by BAE, only UXO qualified personnel performed OE procedures during the remediation of the site. The general procedures, protocol, and safety concepts for UXO operations on this site were developed using the U.S. Army Corps of Engineers "Basic Safety Concepts and Considerations for Ordnance and Explosives Operations, EP385-1-95a," dated June 29, 2001. This document is a standard used on Formally Utilized Defense Sites (FUDS) when UXO or explosives are present.

During several phases of investigation, BAE conducted geophysical investigations in the R-1 and R-15 areas. The purpose of these activities was to assess buried waste areas. Once the investigation of anomalies was completed, the excavation activities were initiated. Excavation activities of the identified anomalies began in February 2003 and were completed in June 2003. Prior to excavation, the surface of anomaly locations was cleared by EOD personnel. BAE investigated the SWMUs for the releases of hazardous substances. Investigations at the site included soil sample analysis and groundwater analysis for organic constituents as well as heavy metals.

All excavation locations were sampled prior to site restoration. The laboratory results for post-excavation confirmation soil samples indicate that there were no apparent environmental impacts above levels of regulatory concern. Based on these results, excavation activities were successful at removing UXO, buried waste and contaminated soil to minimize potential environmental impacts of past practices at the site.

The laboratory results for the confirmation soil samples were compared to the risk-based EPA Region 6 Human Health Medium-Specific Screening Levels (HHMSSLs) for an Industrial-Outdoor Worker. The Region 6 Screening Levels are chemical concentrations that correspond to fixed levels of risk (i.e., either a one in one million [10^{-6}] cancer risk or a non-carcinogenic hazard quotient of one) in soil.

The review of the records for this site indicated that there was no chemical warfare material employed at this site.

D) ***Summary of Alternatives Considered in Feasibility Study***

The corrective measures considered in the feasibility study were:

1) conduct a site specific risk assessment to determine if the lead at AOC 3A warrants removal, or if the soil could remain in place;

2) cap the area with asphalt, conduct a risk assessment based on capping and evaluate long term monitoring needs, and;

3) remove the contaminated soil, conduct verification sampling, determine if contaminated soils are a characteristic hazardous waste and transport the soil to a permitted non-hazardous solid waste landfill or hazardous waste landfill as appropriate. (Facility Compliant)

Since Interim Measures were utilized to remediate UXO at areas R-1 and R-15, no additional alternatives were considered.

E) ***Technologies Rejected in Feasibility Study***

ADEQ rejected the two alternatives that required a full risk assessment for the site in the original RADD of 1997. The alternative selected and approved by ADEQ was alternative 3 described above in Section D.

Since Interim Measures were utilized to remediate UXO at areas R-1 and R-15, no additional other technologies were considered.

F) ***Proposed/Recommended Remedies***

ADEQ selected alternative 3 above, which included the excavation of contaminated soil (for the remedial activities conducted in the original RADD of 1997), verification sampling, determination if contaminated soil was a characteristic hazardous waste pursuant to the methods found in Arkansas Pollution Control Commission Regulation No. 23 § 261 and off-site disposal. The option eliminated the possibility of further contamination from the site and cost less than other alternatives.

Interim measures were employed to remove all UXO and buried waste at the R-1 and R-15 areas. Items that were determined to be non-UXO items by a UXO technician were placed in roll-off containers or over-pack drums and were disposed of using normal avenues of disposal. Items that were determined to be hazardous through laboratory testing prior to or during excavation activities were placed into lined and covered roll-offs. Materials were shipped offsite utilizing hazardous waste manifests.

Drummed and over-packed materials were transported to a disposal facility awaiting laboratory analytical results. In addition, a limited number of flares were disposed of as hazardous waste. UXO items containing explosives were treated on-site by EOD personnel using donor explosives. No scrap was generated from this explosive disposal procedure.

In the R-1 area, clean fill was brought in and the area was restored to natural grade. The R-15 asphalt pad was rebuilt.

G) *Coordination with Other Divisions and Agencies*

It is important to involve/inform other divisions of ADEQ and other agencies in the development of a RADD, as applicable. To keep EPA informed of all corrective action work, EPA Region 6 was provided a copy of the Public Notice and Draft RADD for review and comment.

	Divisions Consulted/Informed	**Sent Notice of Decision**
X	Water	Yes
X	NPDES	Yes
	Air	
	Solid Waste	
	Regulated Storage Tanks	
X	Environ. Preserv. & Tech. Services	Yes
	Mining	

	Agencies Consulted/Informed	**Sent Notice of Decision**
X	EPA, Region 6	Yes
	Office of Emergency Services	
	Ark. State Health Dept.	
	Ark. State Clearinghouse	
X	Ark. State Historic Pres.	Yes
	Ark. Natural Heritage Comm.	
	Ark. Game & Fish Comm.	
	U.S. Army Corps of Engineers	

Once a RADD is public noticed, the Notice of Decision Document will be sent to EPA, all applicable branches of the Hazardous Waste Division, and to all divisions and agencies indicated above.

H) *Remedial Action Levels*

The facility proposed using action levels generated from the EPA Region III risk-based action levels. ADEQ Hazardous Waste Division had not adopted any risk-based action levels, but determined action levels on a case by case basis.

The facility provided no demonstration that the facility had institutional controls to prevent future residential housing development at the site. Therefore, ADEQ determined the action levels for residential use to be appropriate. The action levels

accepted in soils were 5,500 mg/kg barium, 39 mg/kg cadmium, 78,000 mg/kg chromium and 400 mg/kg lead.

The contaminated area is limited to a small area (16 feet by 16 feet by 2 feet deep). The levels of soil contamination ranged from 20-39 mg/kg cadmium, 1700-4500 mg/kg lead, 270-600 mg/kg chromium, and lead from 73-1700 mg/kg. Considering the small areal extent, the low concentrations, and the cost of refining the risk-based concentrations, ADEQ accepted residential risk-based levels. Removal of the soils with heavy metals at concentrations higher than the action levels reduced the potential exposure to soils with higher levels of contamination.

A total of six anomalies were investigated in R-1 area and 21 anomalies in the R-15 area. In addition, the R-15 areas to the north, east and west of the fence were cleared by EOD personnel. Within the limits of available technology and best management practices, UXO and buried waste were removed and disposed of as either hazardous or non-hazardous waste. A total of 3,384,000 pounds of excavated soil and debris were transported off-site for disposal as non-hazardous waste. In addition, 344,000 pounds of hazardous soil and debris were transported to the appropriate facility for disposal. Drummed and over-packed materials were transported using hazardous waste manifests for disposal at a hazardous waste facility.

Following surface clearance of ordnance and other OE material, geophysical work was conducted to characterize the site and identify anomalous areas. All identified waste material was properly disposed offsite in permitted disposal facilities. Building debris alone was found present in nine (9) of the buried waste areas. Industrial waste materials (drums, paint cans etc.) were found in six (6) locations. Ordnance and explosive materials were encountered in 20 locations.

Wastes were disposed offsite as four specific waste streams; nonhazardous, hazardous, drummed wastes and explosive wastes. A total of 152 roll-offs of nonhazardous waste, (representing 1,692 tons of non-hazardous waste) were sent to the permitted Two Pine landfill located in Jacksonville, Arkansas. A total of 14 lined and covered roll-offs (representing 172 tons) of hazardous waste were sent to the Rineco permitted Hazardous Waste Management facility for treatment by thermal desorption methods and recycled as fuel products. Removed drummed wastes were over-packed, sampled and transported by Eagle Environmental to the Little Rock, AR facility. Drummed materials were subsequently disposed of at the PSC/Chemical Reclamation Services, Inc. facility located in Avalon, Texas. A limited number of flares were packaged with mineral oil and placed into a drum for disposal at the Safety Kleen facility located in Colfax, LA. Final disposition of explosive items was performed by Explosive Ordnance and Demolition (EOD) personnel using onsite detonation.

The facility also conducted a groundwater investigation to assess potential groundwater impacts related to surface waste disposal and buried waste disposal in the R-1 and R-15 areas. The groundwater investigation occurred during several

separate phases of work. An initial groundwater investigation was conducted from December 2 to December 11, 2002, and involved the installation of 31 temporary piezometers downgradient and up gradient from the identified AOCs with respect to anticipated groundwater flow direction. Groundwater samples were collected from each temporary piezometer and subsequently analyzed by an Arkansas certified laboratory.

Subsequent to the receipt of the comprehensive report (initially submitted to ADEQ in August 2003) documenting the initial temporary piezometer groundwater sampling work, supplemental analysis of groundwater for perchlorate was requested. The supplemental sampling and analysis was performed following a Scope of Work (SOW) that was submitted and approved by ADEQ.

The groundwater sampling was conducted in a fashion that was consistent with RCRA permit activities. Perchlorate was detected in the groundwater at the Tracor well in July 2004 at an estimated concentration of 24 µg/L. Perchlorate had been detected at this well in January 2004 (33.9 µg/L). Groundwater sample analysis results from supplement sampling of temporary piezometers indicated no detection of perchlorate at 0.28 µg/L Method Detection Limit (MDL), and a 4 µg/L reporting limit, except at the Tracor Well.

In addition, the January 2004 groundwater sampling indicated that the following detected constituents exceeded their respective regulatory limits:

Constituent	Concentration (µg/L)	MCL (µg/L)
Tetrachloroethene (PCE)	7	5
Beryllium	30	4
Chromium	828	100
Hexavalent Chromium	560	100
Lead	258	15

A second, confirmatory round of groundwater sampling was performed for two purposes: to verify the existence or absence of the previously detected constituents (inorganics, PCE, and perchlorate) and accurately determine the groundwater flow direction. The results of this sampling phase revealed that perchlorate was detected above ADEQ Hazardous Waste Division's (HWD) recommended perchlorate guideline of 6 µg/L at three sampling locations at concentrations of 6.3, 8.7 and 24 µg/L. Also, PCE exceeded its 5 µg/L MCL. Significant natural attenuation of residual perchlorate concentrations in the groundwater is expected by dilution, dispersion, biodegradation, etc.

During drilling, a soil sample was collected at a depth of eight (8) feet below grade at all the former burn pit areas for laboratory analysis of perchlorate. Soil sample analysis indicated that no perchlorate was detected in any of the former burn pits. The absence of perchlorate in the soil at the sampling depth (8 feet below grade) and excavation of shallow soil in the area in 2002 (associated with removal of remnant

ordnance components and associated wastes) suggests that the remaining soil in these areas is not an ongoing source of perchlorate.

All excavation locations were sampled prior to site restoration. The laboratory results for all post-excavation confirmation soil samples indicate that there were no apparent environmental impacts above levels of regulatory concern. Based on these soil sampling results, excavation activities were successful at removing buried waste and minimizing potential environmental impacts related to past practice at the site.

Due to these chemical detections in groundwater, it was concluded that groundwater conditions would be verified with a round of sampling during the last quarter of 2005, followed by four quarters of sampling during 2006. Semi-annual groundwater sampling will occur during 2007 and 2008.

Analytes for the initial sampling, as well as 2006 quarterly monitoring of groundwater include the following:

- Resource Conservation and Recovery Act (RCRA) Metals (including hexavalent chromium) on unfiltered groundwater samples,
- RCRA Metals on field filtered groundwater samples,
- Perchlorate and,
- Volatile Organic Compounds (VOCs) by EPA Method 8260B

Annual Assessment of sampling analysis may result in recommended modification of the analytes or wells to be sampled.

I) ***Justifications for Selections***

ADEQ determined that the selected remedy (alternative 3; 1997) represented a permanent, effective solution and was utilized in a cost-effective manner for the site. The excavation and removal to a Subtitle D or hazardous waste landfill remedy was less expensive than the other alternatives that required a full risk assessment. Additionally, removal of the contaminated soil from the site eliminated any potential of future contamination to soil, surface water, or groundwater from the contaminated soil. Based on the cost and environment benefit, ADEQ selected the option to remove the soils contaminated above the action levels, conduct verification sampling, determine if the removed contaminated soil is a characteristic hazardous waste, and consequently dispose of the removed soil at a permitted non-hazardous solid waste landfill or hazardous waste landfill. If the removed contaminated soil was determined to be a hazardous waste, all land disposal restrictions were applied to the disposal of the waste. (Facility Compliant)

ADEQ determined that the remedial activities conducted at the R-1 and R-15 areas of the Schumaker Naval Depot to address wastes associated with the past manufacture and testing of various explosives and weapons is an effective solution for the site. Remedial testing of the soil and groundwater after excavation at the areas of concern

demonstrated that all but residual quantities of compounds of concern associated with the waste have been addressed. Natural attenuation of any remaining compounds is expected.

Perchlorate was detected at low estimated concentrations of 24 to 33 µg/L at permanent wells centered on the Tracor well. These are above the EPA Drinking Water Equivalent Level (DWEL) and ADEQ guideline. EPA's DWEL is 24 µg/L and ADEQ's remediation goal for perchlorate is 6 µg/L. The EPA groundwater standard for PCE and the ADEQ guideline for perchlorate were exceeded in one or more wells onsite. Significant natural attenuation of residual perchlorate concentrations in the groundwater is expected by dilution, dispersion, biodegradation, etc. This and the low detected perchlorate concentrations, remediation of possible perchlorate source(s) in 2003 by excavation, delineation of the perchlorate occurrence onsite, and lack of use of the groundwater for drinking water, suggest that there is no imminent threat from perchlorate at this time. Perchlorate will be monitored for a period of three (3) years during which the assessment of sampling analysis will identify the action that may be taken in the future to remedy potential perchlorate at the site.

J) ***Newly Adapted Federal Regulations***

This RADD does not relieve the facility from complying with new regulations related to remediation activities.

K) ***Interim Measures***

Refer to "Summary of Site Risks". The original RADD did not contain any interim measures. However, interim measures were utilized prior to this revised RADD.

L) ***Ready for Reuse (RfR)***

The Site was remediated to industrial levels regarding the SWMUs identified at R1 and R15 areas as proposed in this document (or as modified pursuant to public comment). After a final RADD (or modified RADD based on public comment) is issued, the results of groundwater monitoring will be evaluated for a period of three years. Based on the results obtained at the conclusion of monitoring period, ADEQ will issue a no further action statement or will identify any further action that may be necessary in the future.

M) ***Public Participation***

The notice of Draft revised RADD was published in the South Arkansas Sun by ADEQ on September 14, 2006. The public comment period for this notice was thirty (30) calendar days.

All documents and correspondence associated with this project are available for public viewing at the following location:

Arkansas Department of Environmental Quality
Central Records Section
Arkansas State Police Building
One State Police Plaza
Little Rock, AR 72209

N) ***List of Documents Used to Prepare the RADD***

Original RADD issued in September 1997

RCRA Facility Investigation (RFI) Work plan for the R-15 Portion of R-1 Area at the East Camden Facility, Prepared by SAIC, December 2002

R-1 and R-15 Areas Comprehensive Report – UXO Clearance, Buried Waste Investigation, Removal and Disposal Activities, Prepared by SAIC, August 2003

R-1 and R-15 Areas Comprehensive Report – UXO Clearance, Buried Waste Investigation, Removal and Disposal Activities, Prepared by SAIC, Modified October 2004

Corrective Measures Study Report – June 2006

O) *Site Work Area Map*

END OF RADD

MODULE XIV - TREATMENT OF ENERGETIC WASTES

A. MODULE HIGHLIGHTS

Esterline-Armtec Countermeasures Company (Armtec) manufactures countermeasures devices primarily for the United States Department of Defense. This process generates unusable residual pyrotechnic materials that are classified as hazardous waste due to the characteristic of ignitability or reactivity. The thermal treatment units at the facility are designed to treat Magnesium-Teflon flares, Magnesium-Teflon Flare residues, and Magnesium Powder from pyrotechnic manufacturing. The treatment occurs in the four (4) thermal treatment units. The thermal treatment units are constructed of 3/8 inch type 304 stainless steel and are twelve (12) feet long by five (5) feet wide by thirty-two (32) inches high. The units have a cylindrical bottom filled with sand and gravel. The units are covered with an aluminum lid when not in use.

All units are located on a concrete slab. The concrete slab is sealed with a coating impervious to the wastes which may contact the slab. The area around the concrete is paved with asphalt. The paved area are swept to remove any material deposited on the area after a burn is completed.

B. GENERAL

1. All plans and schedules required by this permit are, upon approval by the Director, incorporated into Permit Module XIV, Condition B. Since required items are essential elements of this permit, failure to submit any of the required items or submission of inadequate or insufficient information may subject the Permittee to enforcement action under the Arkansas Hazardous Waste Management Act (A.C.A. §8-7-201 *et seq.*) which may include fines, suspension, or revocation of this permit. The Permittee may submit written requests for extensions of due dates for submittals to the Director for review, but such requests must be submitted to ADEQ at least thirty (30) calendar days prior to the expiration of the stipulated submittal date.

2. RESERVED

3. A basis for a modification of the list of wastes that may be treated is a determination that open burning of any of the wastes threatens human health and the environment or that other practical and generally approved method of treatment can be used which are more protective of human health and the environment.

4. For purposes of Permit Module XIV, Condition B., the applicable definitions found in Permit Module XIV, Condition A., Module Highlights, shall apply.

C. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

1. The Permittee may open burn the following wastes subject to the terms of this permit and as described below:

Type of unit	Description of unit	Description of Hazardous Wastes	Hazardous Waste No. 23	Allowed Quantity
OTTU (4)	3/8" thick steel pan	Reactive Waste	D001, D003 (Magnesium-Teflon flares, Magnesium-Teflon flares residue, and raw magnesium powder only)	0.5 tons/day (1000 lbs/day)

2. The Permittee is prohibited from treating hazardous waste that is not identified in Permit Module XIV, Condition C.1.

3. Open burning of all non-reactive hazardous and non-hazardous waste is prohibited.

D. DESIGN, CONSTRUCTION, AND OPERATING REQUIREMENTS

1. Open Burning in a Containment Device

   a. The Permittee shall design and construct an open burning device in accordance with the design drawings and specifications contained in Appendix B.1-1 of Module B of the Part B Application.

   b. The Permittee shall operate and maintain the open burning device in accordance with the operating procedures contained in Appendix A.3-1 of the Part B Application.

   c. The Permittee shall operate and maintain a precipitation cover in accordance with the design drawings, specifications, and operating practices contained in Module B of the Part B Application.

   d. The Permittee shall operate and maintain a precipitation cover in accordance with the general operating practices at the facility and the guidelines provided in Appendix A.3-1 of the Part B Application.

   e. The Permittee shall manage accumulated precipitation in accordance with Section A.8.2 of the Part B Application by collecting all accumulated precipitation in containers for proper

disposal. If the Permittee discharges any accumulated water to surface, the Permittee shall comply with the requirements of APC&EC Regulation No. 6 and Regulation No.2.

f. The Permittee shall design, construct, operate and maintain the open burning unit in order to minimize air emissions or exposure of people (onsite or offsite) to toxic or hazardous emissions in accordance with Appendix A.3-1 of Module A of the Part B Application.

g. The Permittee shall operate and maintain the open burning unit in order to minimize noise and concussions in accordance with Appendix A.3-1 of the Part B Application.

h. Ash/residues from the open burning unit shall be managed in accordance with Appendix A.3-1 of the Part B Application and the following conditions:

   a. All ashes or wastes remaining in the OTTUs shall be removed at least once every five days.

   b. The ashes and wastes removed shall be stored in water proof containers. All residuals must be protected from surface water at all times.

2. **RESERVED**

3. Operating Conditions

   a. Thermal treatment operations shall not be initiated or conducted during periods when atmospheric wind speeds equal or exceed ten (10) miles per hour.

   b. Thermal treatment operations shall not be initiated or conducted when electrical storms are present within a three (3) mile radius of the facility.

   c. Thermal treatment operations shall be limited to daylight hours only between 8 a.m. and 5 p.m.; this includes physical preparation, transportation of pyrotechnic materials which are reactive and ignitable to the thermal units, and treatment and inspection after the cool-down period.

   d. The Permittee shall observe a minimum of at least a forty-five (45) minute cool-down period following each burn.

e. Ash/residues from the thermal treatment units shall be managed in accordance with Permit Module II, Condition C and shall be removed at least within five (5) calendar days of the last burn series.

f. The Permittee shall record the date and time of all waste treatment acitivities before, during, and after the thermal treatment process including unexpected explosions. The operating record shall include the thermal treatment unit where the explosion occurred, a detailed description of the wastes, the amount that exploded, and the reason for the explosion.

g. Highly volatile and flammable liquids shall not be used to facilitate burning. Number 2 diesel fuel oil is acceptable.

h. RESERVED

i. The Permittee shall not mix bulk pyrotechnic for treatment.

j. A warning signal shall be operated prior to and during treatment operations.

E. HANDLING AND STORAGE REQUIREMENTS

1. The Permittee shall handle/manage energetic waste in accordance with Module B of the Part B Application.

2. The Permittee shall store energetic wastes in accordance with Module B of the Part B Application.

F. INSPECTION SCHEDULES AND PROCEDURES

1. The Permittee shall inspect the open burning unit in accordance with the Inspection Schedule, Module A of the Part B Application and shall complete the following as part of those inspections.

2. The Permittee shall thoroughly inspect the thermal treatment units and associated equipment/structures for leaks and/or spills. The leaks/spills shall be cleaned up immediately upon discovery.

3. The Permittee shall inspect the thermal treatment area concrete pad and berm twice every week and shall repair any cracks or deteriorations immediately upon discovery.

4. All defects, deteriorations, or other malfunctions of the thermal units and associated structures (e.g., precipitation covers or roofs, and thermal

treatment unit concrete pads and curbs) discovered during the required inspections shall be repaired before additional treatment can occur in those units. Materials in units that are damaged and must be replaced shall be decontaminated prior to disposal.

5. The inspection and maintenance schedules, results, and repair records shall become part of the operating record and shall be made available to the Director at all reasonable times.

G. PREVENTION OF UNINTENDED IGNITION OR REACTION OF WASTES

The Permittee shall follow the procedures contained in Module A.9 of the Part B Application designed to prevent unintended ignition or reaction of wastes.

H. MONITORING REQUIREMENTS

1. Groundwater Monitoring

   The Permittee shall conduct groundwater monitoring as specified in the Annual Groundwater Monitoring Plan, Appendix A.14-1 of the Part B Application.

2. Air Monitoring

   The Permittee shall conduct air monitoring in accordance with Permit Module XIV, Condition J, Ambient Air Monitoring Program, and Appendix B.1-2 of the Part B Application

3. Surface Water Monitoring

   The Permittee shall conduct surface water monitoring in accordance with Permit Module XIV, Condition K, and Appendix B.1-2 of the Part B Application.

4. Soil Monitoring

   The Permittee shall conduct soil monitoring in accordance with Permit Module XIV, Condition K and Appendix B.1-2 of the Part B Application.

I. RESERVED

J. AMBIENT AIR MONITORING PROGRAM

An Ambient Air Monitoring Report shall be submitted to the Director according to a schedule proposed in the Workplan. This report shall describe the actions

taken by the Permittee, in accordance with the approved Workplan, to implement the air monitoring program. The Director may perform an inspection of the facility to ensure compliance with this Permit. The Permittee shall obtain written notification from the Director that the information presented in this report demonstrates compliance with the Environmental Standards codified at Regulation No. 23 §264.601(c), §264.602, and this Permit prior to commencing thermal treatment operations in new units and continuing operation of existing units.

Upon implementation of the Air Monitoring Program, the Permittee shall notify the Director in writing within fifteen (15) days of the detection of hazardous wastes or hazardous waste constituents above background levels at any of the monitoring stations. Within thirty (30) days of detection, the Permittee shall submit to the Director for approval a Facility Modification Workplan which details the activities necessary to comply with the Environmental Performance Standards codified at Regulation No. 23 §264.601(c).

In the event of disapproval (in whole or in part) of the Workplan, the Director will specify deficiencies in writing. The Permittee shall modify the plan to correct these deficiencies within thirty (30) days of the receipt of notification of disapproval from the Director and shall submit a modified Workplan to the Director for review. Upon receipt of written approval from the Director for the Workplan, the Permittee shall implement the plan according to the schedule contained in the approved Workplan. In the event that the Director disapproves the modified Workplan, the Director will modify this Workplan as necessary to accomplish the desired work. This modified Workplan shall become the approved Workplan.

A Facility Investigation Report shall be submitted to the Director according to a schedule proposed in the approved Workplan. This report shall describe the corrective actions taken by the Permittee to comply with the Environmental Performance Standards codified at Regulation No. 23 §264.601(c). The Permittee shall continue to monitor the ambient air at the facility according to the approved air monitoring plan and shall take corrective actions as necessary to ensure compliance with these environmental performance standards.

K. SOIL AND SURFACE WATER SAMPLING WITH CONTINGENCY FOR GROUND WATER INVESTIGATION

The Permittee shall notify the Director in writing, within fifteen (15) days of the detection of hazardous wastes or hazardous waste constituents above background levels in the soil, or for any detectable levels in surface water within thirty (30) days of the detection of contaminants in the soil or surface water, the Permittee shall submit to the Director for approval a Phase II Facility Investigation Workplan which details the activities necessary to define the full vertical and horizontal extent of soil and surface water contamination and the activities

necessary to comply with the Environmental Performance Standards codified at Regulation No. 23 §264.601(a) and (b).

The expanded Workplan and all investigation and remediation work that may result under that Workplan must follow the RFI/CMS/CMI process of Module XII(b), Conditions Q., R., and S., and for the items presented in Table IV. These activities may include, but not be limited to, plans to modify the construction details of the thermal treatment units, reduction of the maximum permitted treatment capacity of the units, restriction of certain wastes determined to be adversely affecting human health and the environment from thermal treatment, assessment of human health and environmental risks posed by the contaminants, excavation and disposal of the contaminated surface water and soils, and/or implementation of measures necessary to comply with the Environmental Performance Standards codified at Regulation No. 23 §264.601(a) and (b).

In the event of disapproval (in whole or in part) of this expanded Workplan (hereafter referred to as Workplan), the Director will specify deficiencies in writing. The Permittee shall modify the plan to correct these deficiencies within thirty (30) days of the receipt of notification of disapproval from the Director and shall submit a modified Workplan to the Director for review. Upon receipt of written approval from the Director for the Workplan, the Permittee shall implement the plan according to the schedule contained in the approved plan. In the event that the Director disapproves the modified Workplan, the Director will again modify this Workplan as necessary to accomplish the desired work. This modified Workplan shall become the approved Workplan.

A Facility Investigation Report shall be submitted to the Director according to a schedule proposed in the approved Workplan. This report shall describe the corrective actions taken by the Permittee to comply with the Environmental Performance Standards codified at Regulation No. 23 §264.601(a) and (b). The Permittee shall continue to monitor the soil and surface water media according to the approved Soil and Surface Water Monitoring Program and shall take corrective actions as necessary to ensure compliance with these environmental performance standards..

L. CLOSURE

1. At final closure of the open burning unit(s), the Permittee shall follow the procedures in the Closure Plan, Section A.13 of the Part B Application.

   a. If after closure the Permittee finds that not all contaminated soils and debris can be removed or decontaminated in accordance with the Closure Plan, then the Permittee shall initiate Post-Closure Care of the open burning unit(s).

2. **RESERVED**

3. The Permittee must submit a post-closure permit application within ninety (90) calendar days if clean closure is determined not to be achievable.

4. The Permittee must analyze the soils for all compounds listed in EPA Method SW-846 Test Method 8330 at closure. The closure standard for RDX is nondetect.

M. RECORDKEEPING

The Permittee shall develop and maintain all records required to comply with APC&EC Regulation No. 23 §264.73, §264.602. The facility shall maintain sufficient records to demonstrate compliance with the conditions of the permit, including meteorological restriction, pounds of hazardous waste burned in each event, and time of each event.

N. RESERVED

END OF MODULE XIV