

STATE OF KANSAS

DEPARTMENT OF HEALTH AND ENVIRONMENT  
DIVISION OF ENVIRONMENT

Hazardous Waste Management Facility Draft Permit

In accordance with the provisions of Kansas Statutes Annotated (K.S.A.) 65-3430 *et seq.* permission is hereby granted for hazardous waste Storage in Containers and Thermal Treatment to:

Facility Name: Day & Zimmermann Kansas LLC

Operator: Day & Zimmermann Kansas LLC

Owner: Day & Zimmermann Kansas LLC  
23102 Rush Road  
Parsons, KS 67357-8403

Location: 21017 Scott Road  
Parsons, KS 67357

EPA Identification Number: KSR000511964

This Permit is being issued in accordance with rules and regulations of the Kansas Department of Health and Environment (KDHE) and the following-named conditions and requirements to wit: The Permittee must comply with all terms and conditions in Section I through Section VI of this Permit. The Permit consists of the conditions contained herein, including those in any attachments, the permit application and all applicable hazardous waste regulations contained in Kansas Administrative Regulations (K.A.R.) 28-31-4 through 28-31-279a in effect on the date of issuance of this Permit. This Permit also contains provisions for corrective action as necessary to protect human health and the environment to address any release(s) of hazardous waste(s) or hazardous constituent(s) from any solid waste management unit (SWMU), area of concern (AOC), or release at the Facility, or that which may have migrated beyond the facility boundary.

This Permit shall become effective at 12:01 a.m. on \_\_\_\_\_ and shall remain in effect until \_\_\_\_\_ unless revoked and reissued, or terminated or continued in accordance with K.A.R. 28-31-124b.

Done at Topeka, this \_\_\_\_\_ day of \_\_\_\_\_



\_\_\_\_\_  
Susan Mosier, MD, Secretary  
Kansas Department of Health and Environment

## **FACILITY DESCRIPTION**

Since March 1, 1970 Day & Zimmermann Kansas LLC (DZKLLC), a Private Company, has continuously operated a portion of the United States Department of Defense (USDOD) owned Kansas Army Ammunition Plant located in Parsons Kansas. In July, 2013 DZKLLC became the owner of this portion of the Kansas Army Ammunition Plant, which was originally constructed in 1941-1942. Former DZKLLC operations included loading of various bombs and artillery ammunition, manufacturing associated components and reworking fired cartridge cases under contract with the USDOD.

The facility covers approximately 4,000 acres, contains 27.4 miles of roadway, and 9.25 miles of railroad. It has over 954,574 square feet of building and storage areas, and the Union Pacific Railroad serves the facility.

Currently there are two munitions manufacturing areas and three storage areas located at the facility. Current operations include loading, assembling, and packing munitions. Demilitarization of items shipped to the facility as a product has occurred in the past. The facility does not currently manufacture propellants, explosive or pyrotechnic (PEP) components, but does assemble them in munitions. The facility has the capability to produce the explosive KDNBF (Potassium Dinitrobenzofuran).

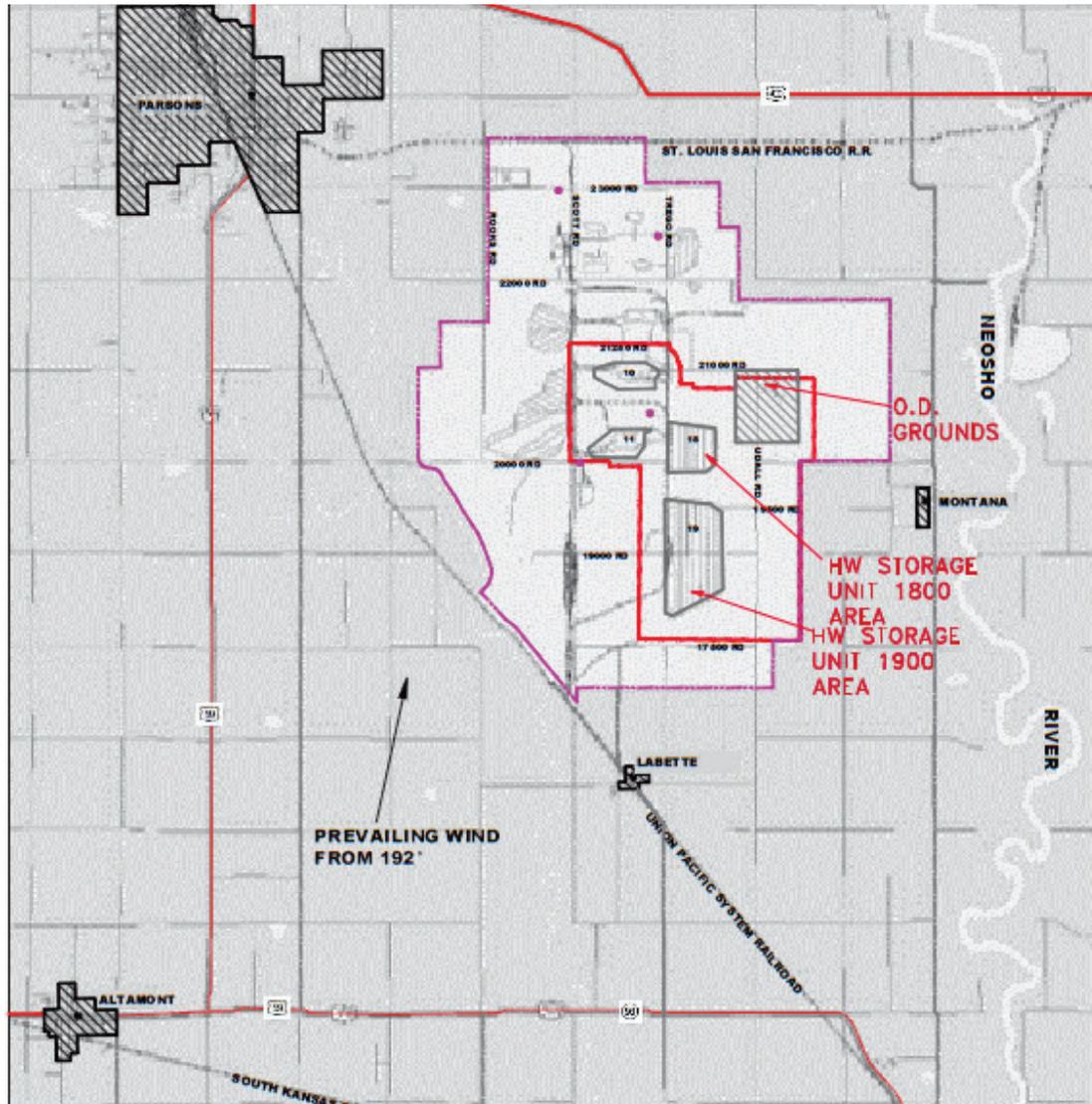
The facility operates hazardous waste container storage areas that store wastes for more than 90 days. The permitted storage units consist of eleven igloo structures located in the 1900 and 2700 Areas, and one magazine structure located in the 1800 Area. In addition, the facility provides onsite thermal treatment by Open Detonation (OD) in the area known as the OD 2700 Area for reactive hazardous wastes for which no other treatment method has been developed due to safety considerations. These reactive hazardous wastes either result from the facility's munitions filling and manufacturing operations or from the packing of explosive items for shipment, and include propellants, explosives and pyrotechnics (PEP) components, reject munitions with PEP components, or other reactive hazardous wastes which cannot be treated off-site. These materials may also originate from off-site USDOD munitions received for demilitarization and if required thermal treatment.

The two munitions manufacturing areas located in the 1000 and 1100 areas have also been used for demilitarization of munitions when received as a nonhazardous waste from other USDOD locations. In the future if the facility has the opportunity to receive off-site munitions for demilitarization, any hazardous waste generated from their disassembly and processing for recycling will be stored for off-site treatment and disposal. If no off-site treatment or disposal option is available for specific reactive hazardous waste generated onsite, the waste will be thermally treated at the OD 2700 Area. The facility may only receive off-site reactive wastes from other company owned facilities for thermal treatment in the OD 2700 Area.

The facility has been addressing groundwater monitoring, soil contamination and other corrective action requirements in accordance with its Part II RCRA permit, issued, July 11, 2013

by the United States Environmental Protection Agency Region VII (EPA). The EPA's July 11, 2013 Part II RCRA permit will expire and be terminated upon the effective date of this KDHE issued permit.

**Day & Zimmermann Kansas LLC**



**HAZARDOUS WASTE FACILITY PERMIT  
DAY & ZIMMERMANN KANSAS LLC  
PARSONS, KANSAS  
EPA I.D. #KSR000511964**

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**ACRONYMS AND ABBREVIATIONS**

|        |  |
|--------|--|
| ACL    | Alternate Concentration Limit  |
| ANPR   | Advanced Notice of Proposed Rulemaking                                       |
| AOC    | Area of Concern  |
| AR     | Administrative Record  |
| AST    | Aboveground Storage Tank   |
| ASTM   | American Society for Testing and Materials                                   |
| ATF    | Bureau of Alcohol, Tobacco, Firearms and Explosives                          |
| ATSDR  | Agency for Toxic Substances and Disease Registry                             |
| BERA   | Baseline Ecological Risk Assessment  |
| bgs    | below ground surface   |
| BMP    | Best Management Practice   |
| BWM    | Bureau of Waste Management   |
| CA     | Corrective Action  |
| CAMU   | Corrective Action Management Unit  |
| CAP    | Corrective Action Plan   |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act of 1980 |
| CFR    | Code of Federal Regulations  |
| CM     | Corrective Measures  |
| CMCC   | Corrective Measures Construction Completion                                  |
| CMC    | Corrective Measures Completion   |
| CMI    | Corrective Measures Implementation   |
| CMS    | Corrective Measures Study  |
| COC    | Contaminant of Concern   |
| CQA    | Construction Quality Assurance   |
| CS     | Confirmatory Sampling  |
| CSM    | Conceptual Site Model  |
| CUP    | Continuous Use Program   |
| DCC    | Description of Current Conditions  |
| DCFD   | Dodge City Fire Department   |
| DNAPL  | Dense Non-Aqueous Phase Liquid   |
| DOD    | Department of Defense  |
| DOE    | Department of Energy   |
| DOT    | U.S. Department of Transportation  |
| DQO    | Data Quality Objective   |
| EC     | Engineering Control  |
| EDD    | Electronic Data Deliverable  |
| EI     | Environmental Indicator  |
| EPA    | U.S. Environmental Protection Agency   |
| FA     | Financial Assurance  |
| FDRTC  | Final Corrective Measures Decision and Response to Comments                  |

|                   |  |
|-------------------|--|
| FSP               | Field Sampling Plan  |
| ft                | feet   |
| GIS               | Geographic Information System                              |
| GPS               | Global Positioning System                                  |
| GWPS              | Groundwater Protection Standard                            |
| HSP               | Health and Safety Plan                                     |
| HI                | Hazard Index   |
| HHRA              | Human Health Risk Assessment                               |
| HSWA              | Hazardous and Solid Waste Amendments of 1984               |
| HWIR              | Hazardous Waste Identification Rule                        |
| HWMU              | Hazardous Waste Management Unit                            |
| IC                | Institutional Control                                      |
| IM                | Interim Measure  |
| KAL               | Kansas Action Level  |
| K.A.R.            | Kansas Administrative Regulations                          |
| KDHE              | Kansas Department of Health and Environment                |
| KGS               | Kansas Geological Survey                                   |
| kg                | Kilogram   |
| kPa               | Kilopascals  |
| K.S.A             | Kansas Statutes Annotated                                  |
| lb                | Pound  |
| LDR               | Land Disposal Restriction                                  |
| LNAPL             | Light Non-Aqueous Phase Liquid                             |
| MCL               | Maximum Contaminant Level                                  |
| µg/L              | micrograms per liter                                       |
| µg/kg             | micrograms per kilogram                                    |
| µg/m <sup>3</sup> | micrograms per cubic meter                                 |
| mg/L              | milligrams per liter                                       |
| mg/kg             | milligrams per kilogram                                    |
| MTR               | Minimum Technology Requirements                            |
| NAPL              | Non-Aqueous Phase Liquid                                   |
| NCP               | National Contingency Plan                                  |
| NELAC             | National Environmental Laboratory Accreditation Conference |
| NEW               | Net Explosive Weight                                       |
| NIOSH             | National Institute for Occupational Safety and Health      |
| OD                | Open Detonation  |
| OD 2700 Area      | Open Detonation Treatment Unit                             |
| O&M               | Operation and Maintenance                                  |
| OM&M              | Operation, Maintenance and Monitoring                      |
| OSHA              | Occupational Safety and Health Administration              |
| OSWER             | Office of Solid Waste and Emergency Response               |
| PAH               | Polycyclic Aromatic Hydrocarbon                            |
| PAR               | Preliminary Assessment Report                              |
| PEP               | Propellants, Explosives, Pyrotechnics                      |
| PID               | Photoionization Detector                                   |

|         |  |
|---------|--|
| PMP     | Project Management Plan                              |
| POTW    | Publicly-Owned Treatment Works                       |
| ppb     | parts per billion                                    |
| ppm     | parts per million                                    |
| ppmw    | parts per million by weight                          |
| PR      | Preliminary Review                                   |
| psi     | pounds per square inch                               |
| QAPP    | Quality Assurance Project Plan                       |
| QA/QC   | Quality Assurance/Quality Control                    |
| RAGS    | Risk Assessment Guidance for Superfund               |
| RAL     | Removal Action Level                                 |
| RAO     | Remedial Action Objective                            |
| RAP     | Remedial Action Plan                                 |
| RCRA    | Resource Conservation and Recovery Act               |
| RFA     | RCRA Facility Assessment                             |
| RFI     | RCRA Facility Investigation                          |
| RSK     | Risk-Based Standards for Kansas                      |
| RSL     | Regional Screening Level                             |
| SAP     | Sampling and Analysis Plan                           |
| SARA    | Superfund Amendments and Reauthorization Act of 1986 |
| SLERA   | Screening Level Ecological Risk Assessment           |
| SOP     | Standard Operating Procedures                        |
| SOW     | Scope of Work  |
| SVOC    | Semi-Volatile Organic Compound                       |
| SWMU    | Solid Waste Management Unit                          |
| TPH     | Total Petroleum Hydrocarbons                         |
| TPH-DRO | TPH-Diesel-Range Organics                            |
| TPH-GRO | TPH-Gasoline-Range Organics                          |
| TSDF    | Treatment, Storage, and Disposal Facility            |
| TU      | Temporary Unit                                       |
| USCS    | Unified Soil Classification System                   |
| USGS    | U.S. Geological Survey                               |
| USDOD   | U. S. Department of Defense for the Army             |
| UST     | Underground Storage Tank                             |
| VOC     | Volatile Organic Compound                            |
| VSI     | Visual Site Inspection                               |
| WAP     | Waste Analysis Plan                                  |
| WMU     | Waste Management Unit                                |

## SECTION I - STANDARD PERMIT CONDITIONS

### I.A. EFFECT OF PERMIT

Day & Zimmermann Kansas LLC, Operator and Owner, herein referred to as the Permittee, is permitted to store and thermally treat hazardous waste in accordance with the terms and conditions of this Permit and Kansas Administrative Regulations (K.A.R.) 28-31-4 through 28-31-279a. Any treatment, storage or disposal of hazardous waste not authorized in this Permit is strictly prohibited. This Permit consists of the terms and conditions contained herein, including those in any attachments; as the approved permit application (Part A and Part B); and the applicable regulations contained in 40 Code of Federal Regulations (CFR) Parts 124, 260 through 264, 266, 268, and 270, as such applicable regulations are adopted and modified by K.A.R. 28-31-4 through 28-31-279a. Applicable regulations are those in effect on the date of issuance of this Permit. [40 CFR 270.32(c)] All citations to federal regulations are for the sake of convenience. Some modifications to federal regulations by applicable state regulations are noted in this Permit, but all modifications to federal regulations by state regulations are incorporated herein. To the extent that state regulations exclude any sections of applicable federal regulations, those sections shall not be in effect. In the instance of inconsistent language or discrepancies between permit conditions, state regulations, or federal regulations, the language of the more stringent provision shall govern; otherwise, state law governs.

Subject to 40 CFR 270.4, compliance with this Permit constitutes compliance, for purposes of enforcement, with Kansas Statutes Annotated (K.S.A.) 65-3430 *et seq.* and K.A.R. 28-31-4 through 28-31-279a and Subtitle C of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA). 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. 9606 *et seq.*, commonly known as CERCLA); or, any other law providing for the protection of public health or the environment. [40 CFR 270.4 and 270.30(g)]

### I.B. PERMIT ACTIONS

#### I.B.1. Permit Modification, Revocation and Reissuance, and Termination

This Permit may be modified, revoked and reissued, or terminated for cause, as specified in 40 CFR 270.41, 270.42, and 270.43. If cause exists, the Secretary may modify or revoke and reissue this Permit in accordance with 40 CFR 270.41. When this Permit is modified, only the conditions subject to the modification are

reopened. If this Permit is revoked and reissued, the entire Permit is reopened and subject to revision, and may be reissued for a new term.

The Secretary will, upon request by the Permittee, approve or deny modifications to this Permit in accordance with 40 CFR 270.42. The modification will become an enforceable part of this Permit. The filing of a request for 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. [40 CFR 270.4(a) and 270.30(f)]

Failure to submit the information required by the conditions within this Permit, or falsification of any submitted information, is grounds for termination of the Permit in accordance with 40 CFR 270.43, and for an enforcement action pursuant to Permit Condition I.E.

#### I.B.2. Permit Renewal

This Permit may be renewed as specified in 40 CFR 270.30(b) and Permit Condition I.E.3. Review of any application for a permit renewal shall consider improvements in the area of control and measurement technology, as well as changes in applicable regulations. [40 CFR 270.30(b)]

#### **I.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. [40 CFR 124.16(a)]

#### **I.D. DEFINITIONS**

For purposes of this Permit, terms presented in Attachment 1 of this Permit and used herein shall have the same meaning as those in K.S.A. 65-3430 and K.A.R. 28-31-260a, and in 40 CFR Parts 124, 260, 262, 264, 266, 268, and 270, as adopted by applicable state regulations, unless this Permit specifically provides otherwise. When the same word is defined in the Kansas statutes or regulations and in the federal regulations and the definitions are not identical, the definition in the Kansas statutes or regulations shall control [K.A.R. 28-31-260a(b)]. “Secretary” means the Secretary of the Kansas Department of Health and Environment (KDHE), or a designee or authorized representative of KDHE. Where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

## **I.E. DUTIES AND REQUIREMENTS**

### I.E.1. Duty to Comply

The Permittee shall comply with all conditions of this Permit, except as to the extent and for the duration such noncompliance is authorized by an emergency permit (see 40 CFR 270.61). Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of RCRA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application. [40 CFR 270.30(a)]

### I.E.2. Compliance Schedules

Any schedule of compliance established subsequent to the issuance of this Permit shall be adopted by reference as a condition of permit compliance as if fully set forth herein. Furthermore, all plans and schedules, as required by this Permit (upon written approval from KDHE), shall similarly be incorporated into this Permit. Any noncompliance with such approved plans and schedules shall be deemed noncompliance with this Permit. The Permittee shall only receive extension(s) of the specified compliance schedule due date(s) for the submittal(s), required by this Permit, upon written approval from KDHE.

### I.E.3. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new permit at least one-hundred and eighty (180) days before this Permit expires, unless permission for a later submission date has been granted by the Secretary. [40 CFR 270.10(h) and 270.30(b)]

### I.E.4. Permit Expiration

Pursuant to 40 CFR 270.50, this Permit shall be effective for a fixed term not to exceed ten (10) years. As long as KDHE is the permit-issuing authority, this Permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely, complete application (see 40 CFR 270.10, 270.13 through 270.29) and, through no fault of the Permittee, the Secretary has not issued a new permit, as set forth in 40 CFR 270.51.

### I.E.5. Corrective Action Obligations

The corrective action obligations contained in this Permit shall continue regardless of whether the Permittee continues to operate, or ceases operation and closes the Facility. The Permittee is obligated to complete facility-wide corrective

action under the conditions of this Permit regardless of the operational status of the Facility. The Permittee must submit an application for a new permit at least one-hundred and eighty (180) days before this Permit expires pursuant to 40 CFR 270.10(h), unless the Permit has been modified to terminate the corrective action, and the Permittee has been released from financial assurance requirements for corrective action.

#### I.E.6. 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. [40 CFR 270.30(c)]

#### I.E.7. Duty to Mitigate

In the event of noncompliance with the 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. [40 CFR 270.30(d)]

#### I.E.8. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all Facility systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit. [40 CFR 270.30(e)]

#### I.E.9. Duty to Provide Information

The Permittee shall furnish to the Secretary, within a time period specified by the Secretary, any relevant information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Secretary, upon request, copies of records required to be kept by this Permit. [40 CFR 264.74(a) and 270.30(h)]

#### I.E.10. Inspection and Entry

Pursuant to 40 CFR 270.30(i) and K.A.R. 28-31-12, the Permittee shall allow the Secretary, or an authorized representative, upon the presentation of credentials

and other documents as may be required by law to conduct any of the activities set forth in K.A.R. 28-31-12(a)(1-10).

#### I.E.11. Monitoring and Records

I.E.11.a. Pursuant to 40 CFR 270.30(j)(1), samples and measurements taken, to comply with this Permit, for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the medium to be analyzed for a given hazardous constituent must be the appropriate method from Appendix I of 40 CFR Part 261 or equivalent method approved by the Secretary. Laboratory methods must be those specified in the latest revision of U.S. Environmental Protection Agency (EPA) Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," or an equivalent method as specified in the Waste Analysis Plan (WAP) contained in the approved Part B application. All constituent chemical analysis shall be performed by a laboratory certified by KDHE in accordance with K.A.R. 28-31-264a(f).

I.E.11.b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification required by 40 CFR 264.73(b)(9), and records of all data used to complete the application for this Permit, for a period of time as specified in Permit Condition I.J. of this Permit. This period may be extended by request of the Secretary at any time and is automatically extended during the course of any unresolved enforcement action regarding this Facility. [40 CFR 264.74(b) and 270.30(j)(2)]

Furthermore, the Permittee shall maintain records from all past, present, and future groundwater monitoring wells and associated groundwater surface elevations, for the active life of the Facility and corrective action period. 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 the permit conditions in Section VI of this Permit) shall be maintained at the Facility, or other such location as approved by KDHE, in accordance with Permit Condition I.J. of this Permit. Such information shall be made available to KDHE upon request.

I.E.11.c. Records of monitoring information shall specify:

- i. The dates, exact place, and times of sampling or measurements;
- ii. The individual(s) who performed the sampling or measurements;

- iii. The dates analyses were performed;
- iv. The individual(s) who performed the analyses;
- v. The analytical techniques or methods used; and
- vi. The results of such analyses;

#### I.E.12. Reporting Planned Changes

The Permittee shall give notice to the Secretary twenty (20) days prior to any planned physical alterations or additions to the permitted Facility. This includes advance notice to KDHE of any planned physical alterations or additions which may affect any hazardous waste management units (HWMUs), solid waste management units (SWMUs), areas of concern (AOCs), contaminated media or debris, or existing institutional controls (ICs) or engineering controls (ECs). The replacement of worn or broken parts need not be reported as long as replacement is with an equivalent component, which does not adversely affect the designed operating procedures or performance of the Facility. [40 CFR 270.30(l)(1)]

#### I.E.13. Reporting Anticipated Noncompliance

The Permittee shall give notice to the Secretary twenty (20) days prior to any planned changes in the permitted Facility or activity which may result in noncompliance with permit requirements. Such notification does not waive the Permittee's duty to comply with this Permit pursuant to Permit Condition I.E.1. [40 CFR 270.30(l)(2)]

#### I.E.14. Transfer of Permit

Before transferring ownership or operation of the Facility or any part of the Facility, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270 and this Permit. At least ninety (90) calendar days prior to the anticipated date of transfer, the new owner and/or operator shall submit to KDHE a certification that the new owner or operator has read this Permit, understand its requirements and will comply with the terms and conditions herein. If the property transfer involves subdividing the property to more than one owner or operator, a map and legal description shall be provided to the Secretary that identifies the properties to be occupied by each new owner. [40 CFR 264.12(c)]

An owner or operator's failure to notify the new owner or operator of the requirements of this Permit in no way relieves the new owner or operator of his obligation to comply with all applicable requirements. [40 CFR 264.12]

The Permit will be modified or revoked and reissued in accordance with 40 CFR 270.40(b) or 270.41(b)(2), respectively. The Secretary may incorporate such other

requirements as may be necessary under RCRA as part of the modification to this Permit. [40 CFR 270.30(l)(3)]

In order to transfer the Facility or any part of the Facility, the new owner and/or operator shall submit a revised permit application no later than ninety (90) days prior to the scheduled change in ownership and/or operational control. A written agreement containing a specific date for transfer of permit responsibility between the Permittee and new Permittee(s) must also be submitted no later than ninety (90) days prior to the scheduled change in ownership and/or operational control. [40 CFR 270.40(b)]

- I.E.14.a. Whenever this Permit is transferred to a new Permittee, the old Permittee shall maintain compliance with the requirements of 40 CFR Part 264, Subpart H, (Financial Requirements) until the new Permittee has demonstrated compliance with the requirements of that subpart. The new Permittee shall demonstrate compliance with 40 CFR Part 264, Subpart H, within six (6) months of the date of the transfer of this Permit. Upon the new Permittee's demonstration of compliance with 40 CFR Part 264, Subpart H, the Secretary shall notify the old Permittee that maintaining financial assurances pursuant to that subpart (40 CFR 270.40(b)) is no longer necessary.
- I.E.14.b. Whenever this Permit is transferred to a new Permittee, the old Permittee shall maintain compliance with the requirements of Permit Condition II.M., until such time as the new Permittee has demonstrated compliance with these requirements. The new Permittee shall demonstrate compliance with the requirements of Permit Condition II.M. within six (6) months of the date of the transfer of this Permit. Upon the new Permittee's demonstration of compliance with Permit Condition II.M., the Secretary shall notify the old Permittee that maintaining financial assurances is no longer required pursuant to Permit Condition II.M.
- I.E.14.c. In the case of bankruptcy of the Permittee pursuant to Title 11 of the United States Code, the bankruptcy Trustee shall provide the required notices to the Secretary and shall ensure the new owner and/or operator submits a revised permit application no later than ninety (90) days prior to the scheduled change in ownership and/or operational control. A written agreement containing a specific date for transfer of permit responsibility between the Court and/or the old Permittee and new Permittee(s) must also be submitted no later than ninety (90) days prior to the scheduled change in ownership and/or operational control. The new Permittee shall demonstrate compliance with 40 CFR Part 264, Subpart H and/or Permit Condition II.M. within six months of the date of the transfer of this Permit. Upon the new Permittee's

demonstration of compliance with 40 CFR Part 264, Subpart H, and/or Permit Condition I.I.M., the Secretary shall notify the old Permittee that maintaining financial assurances pursuant to that subpart (40 CFR 270.40(b)) and/or Permit Condition I.I.M. is no longer necessary.

I.E.15. Twenty-Four Hour Reporting

- I.E.15.a. Pursuant to 40 CFR 270.30(l)(6), the Permittee shall report to the Secretary any noncompliance with the Permit which may endanger health or the environment. Any such information shall be reported orally within twenty-four (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 which may cause an endangerment to public drinking water supplies; and
  - 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.
- I.E.15.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 hazard 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.
- I.E.15.c. A written submission shall also be provided within five (5) 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 of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Secretary may waive the five-day written notice requirement in favor of a written report within fifteen (15) days. [40 CFR 270.30(l)(6)]

#### I.E.16. Other Noncompliance

The Permittee shall report all instances of noncompliance not otherwise required to be reported above in Permit Conditions I.E.12. thru I.E.15., at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition I.E.15. of this section. [40 CFR 270.30(l)(10)]

#### I.E.17. Information Repository

As set forth at 40 CFR 270.30(m), KDHE may require the Permittee to establish and maintain an information repository at any time, based on the factors set forth in 40 CFR 124.33(b). The information repository will be governed by the provisions in 40 CFR 124.33(c) through (f).

#### I.E.18. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in an application or in any report to the Secretary, the Permittee shall promptly submit such facts or information. [40 CFR 270.30(l)(11)]

#### I.E.19. Other Requirements

- I.E.19.a. The Permittee shall defend, indemnify, and hold harmless the State of Kansas, its officers, agents, and employees, officially or personally, against all actions, claims, and demands whatsoever which may arise from or on account of the issuance of this Permit or the construction or maintenance of any facilities hereunder.
- I.E.19.b. Within thirty (30) calendar days after receipt of the final permit, the Permittee shall submit a certification that the applicant has read the permit in its entirety and understands all permit conditions contained herein and agrees to operate the hazardous waste storage facility within the conditions of this Permit.
- I.E.19.c. All sample collection and analysis shall be performed in compliance with the approved work plan(s), including scheduling of analyses, documentation of sample collection, handling and analysis. Specifically, unless otherwise directed or approved by KDHE, all corrective action-related work plans of an assessment or investigative nature shall include both a Sampling and Analysis Plan (SAP) and a Quality Assurance Project Plan (QAPP).
- I.E.19.d. The Permittee shall ensure its analytical data meet the data quality objectives (DQOs) stated in the corresponding QAPP. DQOs shall be

prepared consistent with available EPA guidance documents: *Guidance on Systematic Planning Using the Data Quality Objectives Process* (EPA QA/G-4, EPA/240/B-06/001, February 2006); *Guidance for Developing Quality Systems for Environmental Programs* (EPA QA/G-1, EPA/240/R-008, November 2002); and any subsequent revisions or editions, or as otherwise directed or approved by KDHE. QAPPs shall be prepared consistent with EPA guidance document titled *EPA Requirements for Quality Assurance Project Plans* (EPA QA/R-5, March 2001), and any subsequent revisions or editions, or as otherwise directed or approved by KDHE.

- I.E.19.e. To demonstrate protection of human health and the environment, the detection limit for each hazardous waste constituent shall be less than or equal to the corresponding screening or threshold level as directed or approved by KDHE. If the detection limit cannot be achieved due to matrix interference or other analytical limitations (provided that appropriate supporting documentation is provided to KDHE), the affected sample and associated chemical analysis may be exempted from this requirement. Such an exemption does not, however, in any way relieve the Permittee from achieving corrective action objectives.
- I.E.19.f. Any deviation from the procedures and methods set forth in these documents must be approved by KDHE prior to use. The Permittee shall notify KDHE within five (5) working days of notice or knowledge of a potential deviation from prescribed procedures and methods. Such notice shall provide information as to the nature of the deviation, if known, and outline a proposed investigation to determine whether the sample or results are representative or should not be considered valid. If the results cannot be validated by evaluation of the quality assurance/quality control (QA/QC) procedures, historical data and/or laboratory protocol, the Permittee will re-sample if directed to do so by KDHE.
- I.E.19.g. The Permittee shall use the quality assurance, quality control, and chain-of-custody procedures specified in the QAPPs which are part of the work plan(s), for all sample collection and analysis performed pursuant to this Permit, unless otherwise agreed to by KDHE.

## **I.F. SIGNATORY REQUIREMENT**

All applications, reports or other information submitted to or requested by the Secretary, a designee, or authorized representative, shall be signed and certified in accordance with 40 CFR 270.11 and 270.30(k). All plans, reports, notifications, and other submissions to KDHE, as required by Section VI of this Permit, shall be similarly signed and certified. In addition, as required by the Kansas State Board of Technical Professions, pursuant to

K.S.A. 74-7001 and K.A.R. 66-6-4, the Permittee shall ensure that all work products that constitute the practice of geology, engineering, architecture, or surveying will be sealed, signed, and dated by a professional licensed by the Kansas State Board of Technical Professions to practice in the State of Kansas.

## **I.G. WASTE MINIMIZATION**

I.G.1. Pursuant to 40 CFR 264.73(b)(9), and Section 3005(h) of RCRA, 42 U.S.C. 6925(h), the Permittee must record and maintain in the facility operating record, at least annually, a waste minimization certification that:

I.G.1.a. Specifies the Permittee has a program in place to reduce the volume and toxicity of all hazardous waste and/or hazardous constituents generated by the Facility's operation to the degree determined by the Permittee to be economically practicable; and

I.G.1.b. The proposed method of treatment, storage or disposal is the practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

I.G.2. The Permittee shall maintain copies of this certification and supporting documents in the facility operating record as required by Permit Condition I.J.4. and 40 CFR 264.73(b)(9).

## **I.H. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE SECRETARY**

One (1) hard copy and one (1) electronic copy of all reports, notifications, or other submissions which are required by this Permit shall be reported or sent directly to:

**Chief, Hazardous Waste Permits Section  
Kansas Department of Health and Environment  
Bureau of Waste Management  
1000 SW Jackson, Suite 320  
Topeka, Kansas 66612-1366  
Telephone Number (785) 296-1600**

In addition, one (1) hard copy and one (1) electronic copy of all reports, notifications or other submissions shall be submitted to:

**U.S. Environmental Protection Agency Region 7  
Attn: Chief, Waste Remediation and Permitting Branch  
Air and Waste Management Division  
11201 Renner Boulevard  
Lenexa, KS 66219**

## **I.I. CONFIDENTIAL INFORMATION**

In accordance with 40 CFR 270.12 and K.S.A. 65-3447, the Permittee may claim confidential any information required to be submitted by this Permit. This claim must be asserted at the time of submission. Such claims shall be evaluated pursuant to K.S.A. 65-3447.

## **I.J. DOCUMENTS TO BE MAINTAINED AT THE FACILITY**

The Permittee shall maintain at the Facility, through the term of the Permit, in accordance with Permit Condition I.E.4., or for a minimum of three (3) years, whichever is longer, the following documents and amendments, revisions and modifications to these documents:

- I.J.1. A copy of this Permit, including all approved permit modifications.
- I.J.2. A copy of the approved Part A and Part B applications including, but not limited to the following:
  - I.J.2.a. Waste Analysis Plan, as required by 40 CFR 264.13 and this Permit.
  - I.J.2.b. Inspection schedules and documents, as required by 40 CFR 264.15(b) and this Permit.
  - I.J.2.c. Contingency Plan, as required by 40 CFR 264.53(a) and this Permit.
  - I.J.2.d. Closure Plan, as required by 40 CFR 264.112(a) and this Permit.
  - I.J.2.e. Waste Characterization as required by 40 CFR 270.14(b)(2) and (3), and this Permit.
  - I.J.2.f. Corrective action documents as required by this Permit. These documents must be maintained for at least three (3) years after KDHE has deemed the corrective action process terminated, remedial activities completed, and/or no further action required.
- I.J.3. Personnel training documents and records as required by 40 CFR 264.16(d) and (e), and this Permit. The training records on former employees must be kept for at least five (5) years from the date the employee last worked at the Facility.
- I.J.4. Operating record, as required by 40 CFR 264.73 and this Permit.
- I.J.5. Annually adjusted cost estimate for facility closure and/or corrective action as required by 40 CFR 264.142(d), 40 CFR 264.101, and this Permit.

I.J.6. All other documents required by Permit Condition I.E.11.

#### **I.K. PENALTIES**

Failure to comply with the terms of this Permit may subject the Permittee to an administrative and/or civil penalty, a criminal penalty and/or an action to suspend or revoke this Permit. Failure to minimize or mitigate any adverse impact on the environment resulting from noncompliance may serve to increase the severity of such penalties. [K.S.A. 65-3444 and 65-3446]

#### **I.L. PROPERTY RIGHTS**

This Permit does not convey any property rights of any sort, nor any exclusive privilege. [40 CFR 270.30(g)]

#### **I.M. DISPUTE RESOLUTION**

If the Permittee takes exception to any disapproval, modification, or other decision or directive made by KDHE pursuant to provisions of the Permit, the Permittee shall follow the dispute resolution procedures outlined in Permit Conditions I.M.1. and I.M.2.

I.M.1. If the Permittee disagrees, in whole or in part, with any disapproval, modification, or other decision or directive made by KDHE pursuant to provisions of this Permit, the Permittee shall notify KDHE in writing, in accordance with Permit Condition I.H., of any objections and basis for them within fifteen (15) calendar days of receipt of KDHE's disapproval, decision, or directive. The notice shall set forth specific points of the dispute, the position the Permittee maintains should be adopted as consistent with the requirements of this Permit, the basis for the Permittee's position, and all matters the Permittee considers necessary for KDHE's determination. The Permittee and KDHE shall then have an additional thirty (30) calendar days from KDHE's receipt of the Permittee's objection to attempt to resolve the dispute. If agreement is reached, the resolution will be reduced to writing by KDHE and shall become part of this Permit. If the parties are unable to reach agreement within this 30-day period, KDHE shall issue its final decision on the dispute, in writing. The Permittee reserves its right to appeal any decision to the Secretary in accordance with K.S.A. 65-3440, and the Secretary shall notify the Permittee in writing of the final resolution of the dispute, and the reasons for this resolution. The final resolution of such dispute shall be incorporated into and made an enforceable part of this Permit.

I.M.2. The existence of a dispute as defined herein and the Secretary's consideration of such matters as placed in dispute shall not excuse, toll, or suspend any obligation or deadline required pursuant to this Permit, that is not the subject of dispute, during pendency of the dispute resolution process.

## SECTION II - GENERAL FACILITY CONDITIONS

### II.A. DESIGN AND OPERATION OF FACILITY

The Permittee shall design, construct, maintain, and operate the Facility to minimize the possibility of a fire, explosion or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment (40 CFR 264.31). This includes adherence to operating conditions and procedures, and emergency shutdown procedures specified in the permit application and in this Permit.

In addition, the Permittee currently doing contract work for the USDOD or for any other military branch in the future must comply with all current applicable policies, procedures, and guidance documents published by those military branches, including but not limited to: Army AR 75-15, Policy for Explosive Ordnance Disposal; DOD Ammunition and Explosives Safety Standards MANUAL NUMBER 6055.09-M, Volume 1-8; DOD Contractor's Safety Manual For Ammunition and Explosives MANUAL NUMBER 4145.26-M; DOE STANDARD EXPLOSIVES SAFETY DOE-STD-1212-2012; OSHA 29 CFR 1910.119 Process Safety Management of Highly Hazardous Chemicals; ATF Part 555 Subpart K, Storage Requirements for Explosive Materials.

### II.B. REQUIRED NOTICES

#### II.B.1. Hazardous Waste Imports

The Permittee is not authorized to import hazardous waste from a foreign source.

#### II.B.2. Hazardous Waste from Off-Site Sources

The Permittee is authorized to receive off-site hazardous waste from only Day & Zimmermann, Inc. owned facilities. The Permittee must inform the generator in writing that he has the appropriate permits, and will accept the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record. [40 CFR 264.12(b)]

#### II.B.3. Transferring Ownership or Operation

Before transferring ownership or operation of the Facility during its operating life, the owner or operator must notify the new owner or operator in writing of the requirements of K.A.R. 28-31-124a(b), 40 CFR Parts 264 and 270, and this Permit. [40 CFR 264.12(c)]

#### II.B.4. Notice in Deed to Property

Pursuant to K.A.R 28-31-264a(b), the facility property owner shall record, in accordance with Kansas law, a notice with the register of deeds in the county where the property is located. The notice shall include the following information:

- a. The land has been used to manage hazardous waste.
- b. All records regarding permits, closure, or both are available for review at the department.

#### II.B.5. Restrictive Covenant and Easement

Pursuant to K.A.R 28-31-264a(c), as required by the Secretary, the facility property owner shall file a restrictive covenant or easement with the register of deeds in the county in which the Facility is located that specify the uses that may be made of the property after closure, and shall include all requirements of K.A.R. 28-31-264a(c).

### **II.C. GENERAL WASTE ANALYSIS**

The Permittee shall follow the waste analysis procedures required by 40 CFR 264.13, as described in the Waste Analysis Plan (WAP), Section C-2 of the approved Part B application. At a minimum, the Permittee shall maintain proper functioning instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations for nonreactive hazardous wastes. If the Permittee uses a contract laboratory to perform the analyses, then the Permittee shall inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this Permit. A copy of the written notification between the Permittee and its contract laboratory must be maintained at the Facility. Analytical data provided for waste determination must be performed by a Kansas Certified Laboratory.

The Permittee must maintain documentation of known constituents and ballistic properties for each reactive hazardous waste stored or thermally treated that is not analyzed by a laboratory because of characterization by published information as described in the WAP Section C-2 and Table's C-1, C-2, C-3A, C-3B, C-4 and C-6.

II.C.1. The Permittee shall follow, for each analytical parameter, the sampling methods and analytical procedures in accordance with the WAP Section C-2 and Table's C-7, C-9, and C-12 of the approved Part B application. [40 CFR 264.13(2)]

II.C.2. The Permittee shall verify the analysis of each waste stream annually as part of its quality assurance program in compliance with the WAP found in Section C-2d and Table C-11 of the approved Part B application. [40 CFR 264.13(3)]

II.C.3. Samples collected in Permit Condition II.C.1. and II.C.2. shall be analyzed at a Kansas Certified Laboratory with an approved SW-846 analytical method [K.A.R. 28-31-4(b)(3)(A)]. The records of analytical data must be retained in compliance with Permit Conditions I.E.11.b. and I.E.11.c.

II.C.4. The Permittee shall keep a copy of the current WAP at the Facility.

## **II.D. SECURITY**

The Permittee shall comply with the security provisions of 40 CFR 264.14(a) (b)(1) and b)(2) the Preparedness and Prevention Plan, Section F-1 of the approved Part B application.

## **II.E. GENERAL INSPECTION REQUIREMENTS**

The Permittee shall follow the inspection schedules set out in Section F-2 and Table's F-1, F-2 and F-3 of the approved Part B application. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by 40 CFR 264.15(c). Records of inspection shall be kept, as required by 40 CFR 264.15(d).

### II.E.1. Inspection for Malfunctions and Deterioration

The Permittee shall inspect the Facility as required by 40 CFR 264.15 and the Inspection Schedules, Section F-2 and Table's F-1, F-2 and F-3 of the approved Part B application, for malfunctions and deterioration, operator errors and discharges which may be causing or may lead to (1) release of hazardous waste constituents to the environment, or (2) a threat to human health.

### II.E.2. Schedule of Inspections

The Permittee shall follow the written schedule in the Inspection Schedules, Section F-2 and Table's F-1, F-2 and F-3 of the approved Part B application for the inspection of monitoring and remediation equipment, safety and emergency equipment, security devices, and operating, remediation, and structural equipment that are for the purpose of preventing, detecting, or responding to environmental or human health hazards. The Permittee shall keep this schedule at the Facility.

### II.E.3. Records of Inspections

The Permittee shall record inspections required by Permit Condition II.E.2. in an inspection log or summary in accordance with Section F-2 and Figure's F-1, F-2 and F-3 of the approved Part B application. The log or summary shall be kept for at least three (3) years from the date of inspection. At a minimum, the items to be inspected must include those identified in the inspection plan contained in Section F-2 of the approved Part B application. The logs must include the date and time

of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

#### II.E.4. Remedial Action Resulting from Inspections

The Permittee shall remedy any observed deterioration or malfunction of equipment or structures to ensure that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

### **II.F. PERSONNEL TRAINING**

The Permittee shall conduct personnel training as required by 40 CFR 264.16. This training shall be in accordance with Personnel Training, Section H of the approved Part B application. The Permittee shall maintain training documents and records, as required by 40 CFR 264.16(d) and (e).

### **II.G. LOCATION STANDARDS**

The Facility is not located within a 100-year flood plain and, therefore, is not required to meet the requirements of 40 CFR 264.18(b)(1). In addition, the Facility is not listed in Appendix VI of 40 CFR 264.

### **II.H. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE**

The Permittee shall comply with the requirements of 40 CFR 264.17. The Permittee shall follow the procedures for handling ignitable, reactive, and incompatible wastes set forth in Sections C-2f and F-5 of the approved Part B application.

### **II.I. PREPAREDNESS AND PREVENTION**

#### II.I.1. Required Equipment

At a minimum, the Permittee shall maintain at the Facility the safety and emergency equipment set forth in the Contingency Plan, Section G-5 and Appendix G-1 of the approved Part B application, as required by 40 CFR 264.32.

#### II.I.2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in Permit Condition II.I.1., as necessary, to assure its proper operation in time of emergency, as required by 40 CFR 264.33 set forth in Section F-3a(5) and Table F-2 of the approved Part B application.

II.I.3. Access to Communications or Alarm System

The Permittee shall maintain access to the communications or alarm system, as required by 40 CFR 264.34 and Section F-3a(6) of the approved Part B application.

II.I.4. Arrangements with Local Authorities

The Permittee shall maintain arrangements with state and local authorities, as required by 40 CFR 264.37. If state or local officials refuse to enter into preparedness and prevention arrangements, the Permittee must document the refusal in the operating record.

**II.J. CONTINGENCY PLAN**

II.J.1. Implementation of Plan

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

II.J.2. Copies of Plan

Copies of the contingency plan and all revisions to the plans must be:

- II.J.2.a. Maintained at the Facility; and
- II.J.2.b. Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services. [40 CFR 264.53]

II.J.3. Amendments to Plan

The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by 40 CFR 264.54. Amendments to the Contingency Plan are subject to the permit modification provisions of 40 CFR 270.41 and 270.42.

II.J.4. Emergency Coordinator

A trained Emergency Coordinator shall be available at all times in case of an emergency, as required by 40 CFR 264.55. The Emergency Coordinator shall have the authority to commit the resources needed to carry out the contingency plan.

The names, addresses, and telephone numbers of all persons qualified to act as Emergency Coordinators shall be listed in the Contingency Plan. [40 CFR 264.52(d)]

#### II.J.5. Emergency Procedures

Whenever there is an imminent or actual emergency situation, the Permittee shall immediately comply with the requirements of 40 CFR 264.56.

### **II.K. RECORDKEEPING AND REPORTING**

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

#### II.K.1. Operating Record

The Permittee shall maintain a written operating record at the Facility, in accordance with 40 CFR 264.73.

#### II.K.2. Availability, Retention, and Disposition of Records

The Permittee shall comply with the maintaining, retention, and disposition of all records in accordance with the requirements of 40 CFR 264.74.

#### II.K.3. Biennial Report

The Permittee shall comply with the biennial report requirements of 40 CFR 264.75 and 270.30(l)(9) and any other annual reporting requirement of the Secretary.

#### II.K.4. Manifests

Whenever a shipment of hazardous waste is initiated from the Facility, the Permittee shall comply with the generator requirements in K.A.R. 28-31-4 and 40 CFR 264.71(c).

#### II.K.5. Manifest Discrepancy Report

If a significant discrepancy in a manifest is discovered, the Permittee must attempt to reconcile the discrepancy. If not resolved within fifteen (15) days, the Permittee must submit a letter report, including a copy of the manifest, to the Secretary. (See 40 CFR 264.72) [40 CFR 270.30(l)(7)]

#### II.K.6. Unmanifested Waste Report

A report must be submitted to the Secretary within fifteen (15) calendar days of receipt of unmanifested hazardous waste. (See 40 CFR 264.76) [40 CFR 270.30(l)(8)]

## **II.L. GENERAL CLOSURE REQUIREMENTS**

### II.L.1. Performance Standard

The Permittee shall close the Facility, as required by 40 CFR 264.111, 264.112(a) and (b), 264.178, and 264.197 and in accordance with the Closure Plan, Section I of the approved Part B application.

### II.L.2. Amendment to Closure Plan

The Permittee shall amend the Closure Plan, in accordance with 40 CFR 264.112(c), whenever necessary. Amendment of the closure plan is subject to the permit modification requirements of 40 CFR 270.42.

### II.L.3. Notification of Closure

The Permittee shall notify the Secretary in writing at least forty-five (45) days prior to the date on which they expect to begin final closure of the Facility, as required by 40 CFR 264.112(d).

### II.L.4. Time Allowed for Closure

After receiving the final volume of hazardous waste, the Permittee shall treat or remove from the unit or Facility, all hazardous waste and shall complete closure activities, in accordance with 40 CFR 264.113 and the schedules specified in the Closure Plan, Section I and Appendix I-1 and I-2 and of the approved Part B application.

### II.L.5. Disposal or Decontamination of Equipment, Structures, and Soils

The Permittee shall decontaminate and/or dispose of all contaminated equipment, structures, and soils, as required by 40 CFR 264.114 and the Closure Plan, Section I of the approved Part B application.

### II.L.6. Certification of Closure

The Permittee and an independent Kansas Professional Engineer shall certify that the Facility has been closed in accordance with the specifications in the Closure Plan, Section I of the approved Part B application, as required by 40 CFR 264.115.

## **II.M. FINANCIAL REQUIREMENTS**

### II.M.1. Cost Estimate for Closure

- II.M.1.a. The Permittee's current cost estimate for closure, prepared in accordance with 40 CFR 264.142(a), is contained in the Closure Cost Estimate, Section I Appendix I-1 and I-2 of the approved Part B application. The cost estimate must be based on the plan implementation cost, in current dollars, assuming that a third party performs the work.
- II.M.1.b. The Permittee shall adjust the closure cost estimate for inflation within sixty (60) days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with 40 CFR 264.143.

If using the financial test and corporate guarantee demonstration, the Permittee shall adjust the closure cost estimate for inflation within thirty (30) days after the close of the firm's fiscal year and before submission of updated information to the Secretary.

The adjustment shall be made by either recalculating the maximum cost of closure or by using an inflation factor derived from the most current quarterly Implicit Price Deflator for Gross Domestic Product published by the U.S. Department of Commerce in its Survey of Current Business. [40 CFR 264.142(b)]

- II.M.1.c. The Permittee shall revise the closure cost estimate in the approved Part B application whenever there is a change in the Facility's closure plan as required by 40 CFR 264.142(c) and Permit Condition II.L. This type of revision is subject to the permit modification requirements of 40 CFR 270.41 and 270.42 and Permit Condition I.B.1.
- II.M.1.d. The Permittee shall keep at the Facility the latest adjusted closure cost estimate as required by 40 CFR 264.142(d) and Permit Condition I.J.5.

### II.M.2. Cost Estimate for Corrective Action

- II.M.2.a. Within thirty (30) calendar days after the effective date of this Permit or within thirty (30) calendar days after KDHE has approved a new work plan for Additional Work under Permit Condition VI.O., the Permittee shall prepare a cost estimate for the completion of any corrective action required under this Permit for SWMUs, AOCs, and releases in order to provide financial assurance for completion of corrective action as required under 40 CFR 264.90(a)(2) and 264.101.

Such cost estimate shall be based upon the cost of assessment of all affected media and the design, installation, operation, inspection, monitoring, and maintenance of the corrective action system to meet the requirements of 40 CFR 264.101 and this Permit to include any treatment system necessary for all affected media. Such cost estimate will include the full cost (100 percent) of corrective action as defined by Permit Condition I.E.5. of this Permit. The cost estimate will also cover the total third party cost of implementing the corrective action, including any necessary long-term corrective action costs. Third-party costs are described in 40 CFR 264.142(a)(2) and shall include all direct costs and also indirect costs (including contingencies) as described in EPA Directive No. 9476.00-6 (November, 1986), Volume III, Chapter 10. The cost estimate shall contain sufficient details to allow it to be evaluated by KDHE. KDHE may prescribe the specific form of the cost estimate to be completed by the Permittee. The cost estimate shall not incorporate any salvage value that may be realized from the sale of wastes, facility structures or equipment, land or other assets associated with the Facility.

- II.M.2.b. The Permittee shall adjust the corrective action cost estimate for inflation within sixty (60) days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with 40 CFR 264.101.

If using the financial test and corporate guarantee demonstration, the Permittee shall adjust the corrective action cost estimate for inflation within thirty (30) days after the close of the firm's fiscal year and before submission of updated information to the Secretary.

The adjustment shall be made by either recalculating the maximum cost of corrective action or by using an inflation factor derived from the most current quarterly Implicit Price Deflator for Gross Domestic Product published by the U.S. Department of Commerce in its Survey of Current Business.

- II.M.2.c. The Permittee shall revise the corrective action cost estimate whenever there is a change in the Facility's corrective action as required by 40 CFR 264.101. This type of revision is subject to the permit modification requirements of 40 CFR 270.41 and 270.42 and Permit Condition I.B.1.
- II.M.2.d. The Permittee shall keep at the Facility the latest adjusted corrective action cost estimate as required by 40 CFR 264.142(d) and Permit Condition I.J.5.

### II.M.3. Liability Requirements for Sudden Accidental Occurrences

The Permittee shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the Facility. The Permittee shall maintain liability coverage for sudden accidental occurrences in the amount of at least one million dollars (\$1,000,000) per occurrence with an annual aggregated amount of at least two million dollars (\$2,000,000), exclusive of legal defense costs. [40 CFR 264.147(a) as modified in accordance with K.A.R. 28-31-264(c) and K.A.R. 28-31-264a(a)]

### II.M.4. Facility Financial Assurance

The Permittee shall demonstrate continuous compliance by providing documentation of financial assurance, as required by 40 CFR 264.101, 264.143 and 264.147, in at least the amount of the closure and corrective action cost estimates required by Permit Conditions II.M.1. and II.M.2. The Permittee shall maintain documentation demonstrating the Permittee's financial assurance in Section I-5 Appendix I- 3, I-4 and I-5 of the approved Part B application, in accordance with 40 CFR 264.101, 264.143 and 264.147.

Changes in financial assurance mechanisms and coverage amount must be approved by the Secretary pursuant to 40 CFR 264.101, 264.143 and 264.147.

In accordance with K.A.R. 28-31-264(c), modifications shall be made to 40 CFR 264. Additional state financial assurance requirements must be met as established in K.A.R. 28-31-264a(a).

### II.M.5. Incapacity of Owners or Operators, Guarantors, or Financial Institutions

The Permittee shall comply with 40 CFR 264.148 whenever necessary.

### II.M.6. Monitoring Fees

The Permittee shall pay the annual monitoring fee in accordance with K.A.R. 28-31-10.

### II.M.7. Cost Recovery for Clean-up/Corrective Action

The Permittee shall reimburse KDHE costs as defined herein, pursuant to K.S.A. 65-3453(a)(4), K.S.A. 65-3453(a)(6), and K.S.A. 65-3455 for all clean-up/corrective action activities performed under this Permit.

## SECTION III - STORAGE IN CONTAINERS

### III.A. DESCRIPTION OF STORAGE FACILITIES

The Facility operates eleven earth-covered concrete bunkers and one aboveground warehouse with a total permitted container storage capacity of 260,920 gallons. Hazardous waste generated onsite from munitions manufacturing, reworking fired cartridge cases, and demilitarization operations and hazardous waste permitted to be received from offsite Day & Zimmermann, Inc. owned facilities for thermal treatment are stored at nine of these locations in the 1800 and 1900 Areas. These wastes are either transported offsite for treatment and/or disposal at appropriate permitted facilities or in the case of certain reactive onsite and offsite hazardous wastes containing explosives and/or explosive loaded equipment are thermally treated onsite at the OD 2700 Area.

There are three container storage areas for hazardous waste referred to as Area 1800, Area 1900, and Area 2700; each with a different number of individual storage units. Area 1800 has only one container storage unit, a warehouse building referred to as Magazine 1816. It is constructed of wood columns and tiles pilasters with 8-inch thick tiles walls on a 6-inch reinforced concrete floor slab over fill on grade. The roof is a pitched roof, laid over a wood truss system spanning the width of the building. Roofing materials are asbestos shingles over 2-inch tongue and groove sheathing, laid on 2-foot by 8-foot joists and stringers. Twelve metal ventilators are installed along the peak of the roof. The dimensions of the magazine are 216-foot by 50-foot for an approximate floor area of 10,800 square feet. No liquid wastes are stored at this location.

Storage Area 1900 consist of 8 individual earth-covered concrete bunker container storage units referred to as Igloos 1934, 1935, 1936, 1942, 1967, 1969, 1970, and 1979. They have identical construction of poured concrete with arched ceilings. The concrete walls vary in thickness from eight to 16 inches, and rest on a concrete foundation. The six-inch thick floor slabs are 60-feet and 8-inches long by 25-foot and 6-inches wide, for an approximate floor area of 1,547 square feet. Each is earth-covered to a minimum depth of two feet with 2:1 side slopes. The concrete floors are pitched one-half inch from the center line to the troughs on the side of the igloos for drainage. The drainage troughs are four-inches wide by two-inches deep and run the length of each igloo. A ventilator is installed in an 18-inch square concrete shaft at the rear of each storage igloo. In addition to the ventilator, two lightning arresters are located at the front and rear of each igloo. Each lightning arrestor is tied into the wire reinforcement rods of the concrete walls in each igloo. No liquid waste may be stored in igloo's 1970 and 1979.

Storage Area 2700 consist of 3 individual earth-covered concrete bunker container storage units referred to as Igloos 2707, 2708, and 2709. They have identical construction of poured reinforced concrete. The reinforced concrete slab walls are six-inches thick and

rest on an eight-inch reinforced concrete slab floor poured on fill on grade. The floor dimensions of each igloo are 6-foot by 6-foot, for a total floor space of 36 square feet. Ceiling height within the igloos is seven feet. Each igloo is earth-covered to a minimum depth of two feet with 1:1 grass-covered side slopes. Each has a secondary containment consisting of a 2.5-inch concrete sill at the entrance.

The Permittee is authorized to store a total of 260,920 gallons of hazardous waste in containers, as described in Section D-1a(2) of the approved Part B application. Subject to the requirements of Permit Condition III.B., the Permittee may store hazardous waste generated onsite and offsite in the storage units covered by this Permit.

### **III.B. PERMITTED AND PROHIBITED WASTE**

- III.B.1. The Permittee is allowed to store the hazardous wastes identified in Section C, Tables C-1, C-2, C-3a, C3b, and C-4 of the approved Part B application in the container storage areas described in Section III.A. of this Permit
- III.B.2. The Permittee is prohibited from storing hazardous wastes identified in Section C, Table C 5 of the approved Part B application.
- III.B.3. The Permittee is allowed to store only the hazardous waste with the waste codes identified in Attachment 2 of this Permit and Section C, Table C-8 of the approved Part B application. The Permittee is prohibited from the storage of hazardous waste with waste codes that are not identified in Attachment 2 of this Permit and Section C, Table C-8 of the approved Part B application.

### **III.C. OPERATION AND MAINTENANCE**

The Permittee shall operate and maintain the container storage facilities in accordance with 40 CFR 264, Subpart I and the specifications and design criteria contained in Section D-1 of the approved Part B application.

### **III.D. CONTAINER STORAGE FACILITY CAPACITIES**

The Permittee is allowed to store a maximum volume of 260,920 gallons of hazardous waste in the storage areas described in Section III.A. subject to the terms of this Permit. The Permittee shall limit the storage of liquids and the maximum container storage capacities for each individual storage unit in accordance with the following table.

| Storage Facility | Maximum Number of 55-gallon Containers to be Stored in Facility | Capacity of Containers (Gallons) | Secondary Containment (Gallons) | Maximum Net Explosive Weight (NEW) (Pounds) | Liquid Storage Permitted |
|------------------|---|----------------------------------|---------------------------------|---|--------------------------|
| 1816             | 2,160   | 118,800                          | NA                              | 0   | NO                       |
| 1934             | 320   | 17,600                           | 3,500                           | 100,000                                     | YES                      |
| 1935             | 320   | 17,600                           | 3,500                           | 100,000                                     | YES                      |
| 1936             | 320   | 17,600                           | 3,500                           | 100,000                                     | YES                      |
| 1942             | 320   | 17,600                           | 3,500                           | 100,000                                     | YES                      |
| 1967             | 320   | 17,600                           | 3,500                           | 100,000                                     | YES                      |
| 1969             | 320   | 17,600                           | NA                              | 100,000                                     | NO                       |
| 1970             | 320   | 17,600                           | NA                              | 100,000                                     | NO                       |
| 1979             | 320   | 17,600                           | 3,500                           | 100,000                                     | YES                      |
| 2707             | 8   | 440                              | 56                              | 50  | NO                       |
| 2708             | 8   | 440                              | 56                              | 50  | NO                       |
| 2709             | 8   | 440                              | 56                              | 50  | NO                       |

NA Not applicable, no liquid waste stored at this unit.

No palletized container unit stored in any storage area may be stacked in greater than two tiers. Various sized containers, as described in Section D-1 Table D-1 of the approved Part B application, may be used provided the conditions of 40 CFR 264, Subpart I and all other provisions of this Permit are met. The volume of the largest container of any kind stored in any of the container storage areas shall not exceed the net secondary containment volume listed in the above table and calculated in the approved Part B application for each area or the maximum stack height allowed by the National Fire Protection Association for the type of waste being stored in each area.

### III.E. CONDITION OF CONTAINERS

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this Permit. [40 CFR 264.171]

### III.F. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee shall use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored so that the ability of the container to contain the waste is not impaired. [40 CFR 264.172]

### **III.G. MANAGEMENT OF CONTAINERS**

- III.G.1. The Permittee shall keep all containers closed during storage, except when it is necessary to add or remove waste, and shall not open, handle, or store containers in a manner which may rupture the container or cause it to leak. [40 CFR 264.173]
- III.G.2. The Permittee shall comply with all the applicable requirements of 40 CFR 264, Subpart CC and Section V of this Permit in accordance with the approved Part B application Section O-1.

### **III.H. INSPECTION SCHEDULES AND PROCEDURES**

The Permittee shall inspect the container storage units at least weekly, in accordance with the Inspection Schedule contained in Section F-2 and Table F-1 of the approved Part B application, to detect leaking containers and the deterioration of containers and containment systems caused by corrosion and other factors. [40 CFR 264.174]

### **III.I. CONTAINMENT SYSTEMS**

- III.I.1. The Permittee shall maintain the containment systems in accordance with the plans and specifications contained in Section D-1a(3) and Figure D-7 of the approved Part B application. [40 CFR 264.175]
- III.I.2. The Permittee shall remove spilled or leaked waste and accumulated precipitation from the secondary containment system within (24) hours or in as timely a manner as possible. [40 CFR 264.175(b)(5)]

### **III.J. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE**

- III.J.1. The Permittee shall not locate containers holding ignitable or reactive waste within fifteen (15) meters (50 feet) of the Facility's property line. [40 CFR 264.176]
- III.J.2. The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste and follow the procedures specified in Section F-5 of the approved Part B application. [40 CFR 264.17(a) and 264.176]

### **III.K. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE**

- III.K.1. The Permittee shall not place incompatible wastes, or wastes and incompatible materials, in the same container unless 40 CFR 264.17(b) is complied with. [40 CFR 264.177(a)]
- III.K.2. The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material. [40 CFR 264.177(b)]
- III.K.3. The Permittee shall not place containers of incompatible wastes within the same secondary containment area unless precautions are taken to prevent the accidental mixing of incompatible waste should a container leak, spill, or otherwise release its contents. [40 CFR 264.177(c)]

### **III.L. RECORDKEEPING**

The Permittee shall place the results of all waste analyses, trial tests, and any other documentation showing compliance with the requirements of 40 CFR 264.17(c) and 264.177 in the facility operating record. [40 CFR 264.73]

### **III.M. CLOSURE**

- III.M.1. At closure of a container storage area, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment systems, in accordance with the procedures in the Closure Plan, Section I of the approved Part B application, and Section II.L. of this Permit. [40 CFR 264.178]
- III.M.2. The Permittee shall begin closure by submitting a Closure Work Plan, including SAP and QAPP consistent with the requirements found in Section I of the approved Part B application at least forty-five (45) days prior to beginning closure implementation. Following the receipt of department approval of the Closure Work Plan, including SAP and QAPP, the Permittee shall implement closure in accordance with the closure schedule approved in the Closure Work Plan.
- III.M.3. If the Permittee demonstrates that not all contaminated soils and groundwater can be practically removed or decontaminated, in accordance with the Closure Plan, then the Permittee shall close the container storage system and perform post-closure care following 40 CFR 264.117 through 264.120.

## **SECTION IV – THERMAL TREATMENT IN OPEN DETONATION UNIT**

### **IV.A. DESCRIPTION OF THERMAL TREATMENT OPEN DETONATION UNIT**

The Open Detonation (OD) 2700 Area occupies approximately 1,070,900 square feet and is fully enclosed by a 6-foot chain link fence. The area consists of 20 earthen mounds aligned in several east-west oriented rows. The mounds average 5 to 8 feet in height, and are approximately 150 feet long and 50 feet wide. Sections B and D of the approved Part B application illustrate the layout of the OD 2700 Area. Aisles between the rows are kept clear of debris and vegetation for access by earth moving and other equipment. Detonation pits are excavated by mechanized equipment on the south sides of the mounds to a depth of no less than four feet. Explosives and charges are placed in the pits according to procedures outlined for various explosive types in the Standard Operating Procedures (SOP's) located in Appendix D-3 in Section D of the approved Part B application. The pits are then backfilled with the excavated material. Detonations are triggered by a remote operator via an electrical ignition train. Section D of the approved Part B application depicts the treatment process.

Certain reactive hazardous wastes containing explosives and/or explosive loaded equipment are thermally treated onsite at the OD 2700 Area. There is a maximum thermal treatment rate of five hundred (500) pounds per day (ten [10] individual charges containing a maximum total explosive charge of 50 pounds each). The OD 2700 Area operation is limited to 100 days per year. Therefore, the Maximum Yearly Quantity of reactive hazardous wastes containing explosives that can be thermally treated in the OD 2700 Area is 50,000 pounds (Net Explosives Weight) which may consist of TNT only, RDX only or a combination of TNT and RDX. These quantities may be revised pending further regulatory review of the DRAFT FINAL HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT, THE OPEN DETONATION UNIT DATED APRIL 2015. The three small earth-covered concrete bunkers in the 2700 Area are for staging, preparing and storing items to be thermally treated onsite in the OD 2700 Area.

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

- IV.B.1. The Permittee is allowed to thermally treat hazardous wastes in the OD 2700 Area identified in Table C-4 located in Section C of the approved Part B application, subject to the terms of this Permit.
- IV.B.2. The Permittee is prohibited from thermally treating hazardous wastes in the OD 2700 Area identified in Table C-5 located in Section C of the approved Part B application.

- IV.B.3. The Permittee is prohibited from thermally treating hazardous waste not identified in Permit Condition IV.B.1. unless a permit modification allowing thermal treatment of other wastes has been approved in accordance with 40 CFR 270.42 and Permit Condition I.B.1.
- IV.B.4. The Permittee is allowed to thermally treat the hazardous waste codes identified in Attachment 2 of this Permit. The Permittee is prohibited from the thermal treatment of hazardous waste codes that are not identified in Attachment 2 of this Permit.
- IV.B.5. Addition of hazardous waste codes to Permit Condition IV.B requires modification of Attachment 2 to this Permit as specified in 40 CFR 270.42 and Permit Condition I.B.1.

#### **IV.C. OPERATION AND MAINTENANCE**

The Permittee shall operate and maintain the OD 2700 Area in accordance with 40 CFR 260.10, 264, Subpart X, 266, Subpart M, and 268 and the specifications and design criteria contained in Section D-8 and the SOP's located in Appendix D-3 of the approved Part B application.

#### **IV.D. THERMAL TREATMENT CAPACITIES**

The Permittee may thermally treat only the following hazardous wastes, as indicated by EPA hazardous waste code, in the table below and subject to the prohibitions of Permit Conditions IV.B.1 and IV.B.2. The Permittee shall not thermally treat more than 100 days per year. The Permittee shall not exceed the maximum Net Explosive Weight (NEW) for each daily event or total quantities per year as listed below:

##### **MAXIMUM HAZARDOUS WASTE THERMAL TREATMENT CAPACITIES**

| <b>EPA Hazardous Waste Code</b> | <b>Maximum Daily*<br/>(NEW lb)</b> | <b>Maximum Yearly*<br/>(NEW lb)</b> |
|---------------------------------|------------------------------------|-------------------------------------|
| D003                            | 500<br>(10 – 50 lb Charges)        | 50,000<br>(1000 – 50 lb Charges)    |

\*Quantities may be adjusted downward pending additional regulatory review of the *Human Health and Ecological Risk Assessment for the Open Detonation Unit Day & Zimmerman Kansas LLC Parsons, Kansas* located in Section D, Appendix D-4 of the approved Part B application.

- IV.D.1. Addition of hazardous waste codes to Permit Condition IV.B requires modification of the permit as specified in 40 CFR 270.42 and Permit Condition I.B.1.
- IV.D.2. The Permittee shall comply with the waste compatibility requirements of 40 CFR 264.17.

#### **IV.E. OPERATING REQUIREMENTS**

- IV.E.1. To meet the performance standards of KAR 28-31-270.23(b) and 40 CFR 264.601 for the OD 2700 Area, the Permittee shall adhere to the site specific SOP's located in Appendix D-3 in Section D of the approved Part B application and the "Policy for Explosive Ordnance Disposal" (AR 75-15) written by the U.S. Army.
- IV.E.2. Operations shall be conducted only within the secure area of the OD 2700 Area with controlled access. At a minimum, Air Force Manual (AFM 91-201), "Explosives Safety Standards", shall be used to dictate safe separation distances from the demolition pits to external receptors.
- IV.E.3. The OD 2700 Area shall be posted with warning signs to keep unauthorized personnel out. Warning flags shall fly and access roads shall be barricaded and posted during operations in accordance with SOP B-4 in Appendix D-3 located in Section D of the approved Part B application.
- IV.E.4. During OD 2700 Area operations, telephone or two-way radio contact shall be maintained with support personnel, including security and fire fighting units in accordance with SOP B-16 in Appendix D-3 located in Section D of the approved Part B application.
- IV.E.5. The integrity of the OD 2700 Area and support equipment shall be determined through regular inspections and in accordance with the inspection plan in Section F-2 and Table's F-1, F-2, F-3 in Section F of the approved Part B application and SOP D in Appendix D-3 of the approved Part B application. Inspection records shall be maintained at the facility in accordance with Permit condition II.E.3.
- IV.E.6. A training plan shall be followed by all operators of the OD 2700 Area in accordance with Permit Condition II.F. The training program shall include operational practices and site- specific hazardous waste handling procedures.
- IV.E.7. Prior to treatment at the OD 2700 Area, meteorological data including wind

speed and direction, approach of storms (including electrical storms), precipitation, cloud cover, visibility and inversions (temperature with altitude) shall be monitored in accordance with Section D-8-1d(3) and SOP C in Appendix D-3, both located in Section D of the approved Part B application to ensure that treatment is not conducted under adverse weather conditions. Meteorological data shall be recorded for each detonation and maintained in the facility operating record in accordance with Permit Condition II.K.1.

- IV.E.8. Hazardous wastes shall be thermally treated within 24 hours of receipt at the OD 2700 Area.
- IV.E.9. Prior to thermal treatment, waste munitions shall be inspected to ensure that only hazardous waste defined in Permit Condition IV.B. is detonated.
- IV.E.10. Within 24 hours after each detonation operation, personnel shall inspect the OD 2700 Area for ejected material and untreated waste in accordance with SOP 16 in Appendix D-3 located in Section D of the approved Part B application. Any untreated waste shall be immediately retreated or saved for treatment the following day in accordance with SOP-15 in Appendix D-3 in Section D of the approved Part B application. When feasible, ejected metal materials shall be stored for recycling.
- IV.E.11. Residues from detonation, such as explosive residues, surface exposed scrap metal, casings, fragments and related items shall be collected after each event and daily in accordance with SOP D in Appendix D-3 in Section D of the approved Part B application
- IV.E.12. The donor charge and placement geometry for OD 2700 Area operations shall be optimized to minimize the generation of un-detonated waste and residue in accordance with the SOP's in Appendix D-3 located in Section D of the approved Part B application. All re-detonations shall be recorded in the facility operating record in accordance with Permit Condition II.K.1.
- IV.E.13. The OD 2700 Area operations shall not generate noise or ground vibration at levels that will have an adverse effect on nearby onsite and offsite receptors. Copies of completed AFMC Form 3514, *Noise Complaint*, in SOP E in Appendix D- 3 located in Section D of the approved Part B application shall be recorded in the operating record in accordance with Permit Condition II.K.1 and submitted to the Secretary in accordance with Permit Condition I.H.
- IV.E.14. In accordance with Permit Condition 1.B.1, the Secretary may require the Permittee to develop a noise prediction, mitigation and management program in accordance with the *Operational Noise Manual, An Orientation For Department*

*of Defense Facilities* (U.S. Army Center for Health Promotion and Preventive Medicine, November 2005) which can be downloaded at <http://chppm-www.apgea.army.mil/dehe/morenoise/>

- IV.E.15. The Permittee shall have available, during each detonation, adequate fire protection equipment and containment measures to assure the confinement and control of any fire resulting from the OD 2700 Area operations.
- IV.E.16. The Permittee shall operate the OD 2700 Area to prevent unacceptable risk of cancer and non-cancer effects to on-site workers and off-site residents and to minimize significant effects to the ecosystem surrounding the OD 2700 Area in accordance with the *Human Health and Ecological Risk Assessment for the Open Detonation Unit Day & Zimmerman Kansas LLC Parsons, Kansas* located in Section D, Appendix D-4 of the approved Part B application..
- IV.E.17. The Permittee shall update the information in the *Human Health and Ecological Risk Assessment for the Open Detonation Unit Day & Zimmerman Kansas LLC Parsons, Kansas* located in Section D Appendix D-4 of the approved Part B application as necessary in accordance with Permit Condition IV.J.5.
- IV.E.18 The Permittee shall provide an updated *Human Health and Ecological Risk Assessment for the Open Detonation Unit Day & Zimmerman Kansas LLC Parsons, Kansas* including the latest Census Data in accordance with Permit Condition IV.J.5.
- IV.E.19. The Facility must comply with all the applicable air emission requirements of 40 CFR 264 Subpart CC in accordance with Section V of this Permit and Section O of the approved Part B application.

#### **IV.F. GROUNDWATER MONITORING**

Groundwater contamination was originally detected in the OD Area during the RCRA Facility Investigation (RFI) phase of the corrective action process. Long Term Monitoring (LTM) was selected as the preferred remedy in the November 2005 Statement of Basis, thus providing the initial framework for groundwater monitoring. Groundwater monitoring of the OD Area has since been performed under the purview of the selected remedy, LTM, throughout interim status operation. Upon issuance of this Permit, previously established LTM requirements shall be superseded by the requirements set forth in this permit. The Secretary has determined the site monitoring program shall consist of groundwater monitoring to ensure that any release of hazardous waste or hazardous constituents from the OD Area to the uppermost aquifer beneath the OD Area is sufficiently monitored, that upon detection of release the monitoring program be continued/expanded to verify no statistically-significant increase at the point of

compliance has occurred, and, as necessary, all releases addressed through corrective action. The groundwater monitoring requirements established in this section are derived from 40 CFR 264 Subpart F, but have been tailored as detailed herein to the unit-specific risks and circumstances posed by this Subpart X unit. The Permittee shall operate and maintain the groundwater monitoring program, as detailed in applicable elements of Section E of the approved Part B application and this section, to comply with 40 CFR 264.601 through 264.603 and applicable requirements of 40 CFR 264 Subpart F. [40 CFR 264.90(d)] Any references herein to particular 40 CFR 264 Subpart F requirements do not imply that the full Subpart F standards are applicable.

**IV.F.1. Groundwater Protection Standard**

- IV.F.1.a. The Groundwater Protection Standard (GWPS) establishes the threshold levels for hazardous constituents in the groundwater at and beyond the point of compliance during the term of this Permit. The hazardous constituents and threshold levels specified in Permit Condition IV.F.1.b. constitutes the GWPS for the OD Area. The listed hazardous constituents identified in Permit Condition IV.F.1.b. have been detected in the groundwater beneath and beyond the subject area and/or are expected to be in or derived from waste thermally treated in the OD Area. [40 CFR 264.92]
- IV.F.1.b. The following hazardous constituents and their threshold levels comprise the GWPS for the OD Area.

**Table 1 – Constituents of Concern**

| Constituent        | KDHE Tier 2 RSK<br>(Residential) | KDHE Tier 2 RSK (Non-<br>residential) |
|--------------------|----------------------------------|---------------------------------------|
| Arsenic            | 10 ug/L                          | 10 ug/L                               |
| Cadmium            | 5 ug/L                           | 5 ug/L                                |
| Chromium (total)   | 100 ug/L                         | 100 ug/L                              |
| Lead               | 15 ug/L                          | 15 ug/L                               |
| RDX                | 7.72 ug/L                        | 25.9 ug/L                             |
| Tetryl             | 62.4 ug/L                        | 407 ug/L                              |
| TNT                | 7.77 ug/L                        | 50.7 ug/L                             |
| HMX                | 782 ug/L                         | 5,110 ug/L                            |
| 2,4-Dinitrotoluene | 2.67 ug/L                        | 8.98 ug/L                             |
| Vinyl Chloride     | 2 ug/L                           | 2 ug/L                                |
| Trichloroethene    | 5 ug/L                           | 5 ug/L                                |
| Tetrachloroethene  | 5 ug/L                           | 5 ug/L                                |
| 1,1-Dichloroethene | 7 ug/L                           | 7 ug/L                                |
| Perchlorate*       | 10.9 ug/L                        | 70.9 ug/L                             |

\* Depending on current and future land use, the Permittee may be required to reassess the corresponding perchlorate threshold level with consideration of relative source contribution.

- IV.F.1.c. The threshold levels for the GWPS hazardous constituents listed in Permit Condition IV.F.1.b. are based on the protection of human health and the environment and were derived from the October 2010 *KDHE Risk-Based Standards for Kansas (RSK) Manual* (Revised March 2014). Risk management decisions will be based on the residential Tier 2 levels with consideration of current and anticipated future land use. As necessary, an Institutional Control Plan shall be implemented as described in Permit Condition VI.P.
- IV.F.1.d. To demonstrate protection of human health and the environment, the detection limit for each hazardous waste constituent shall be less than or equal to the GWPS concentration limit. If the detection limit cannot be achieved due to matrix interference or other analytical limitations (provided that appropriate supporting documentation is provided to the Secretary), the affected sample and associated chemical analysis may be exempted from this requirement. Such an exemption does not, however, in any way relieve the Permittee from complying with the GWPS concentration limit.
- IV.F.1.e. The Permittee may make a demonstration to the Secretary, at any time during the term of this Permit, for establishment of an Alternate Concentration Limit (ACL) in lieu of the GWPS concentration limit contained herein. Any such demonstration shall ensure that any ACL proposed in lieu of the GWPS concentration limit is protective of human health and the environment in accordance with the requirements of 40 CFR 264.94(b). In proposing the ACL, the Permittee shall consider and formally address the factors listed in 40 CFR 264.94(b)(1) and (2). Any ACL approved by the Secretary shall require a permit modification in accordance with 40 CFR 270.42.

#### IV.F.2. Point of Compliance

At the ground surface, the point of compliance is defined by a dashed line connecting the compliance point wells identified in Permit Table 2. In the subsurface, the point of compliance is a vertical surface that extends the dashed line connecting the compliance point wells perpendicularly downward into the uppermost aquifer underlying the facility. [40 CFR 264.95] This definition is based upon the nature of the hazardous waste managed in the unit and the existing data from the current sampling and monitoring at the site. Groundwater contamination at and beyond the point of compliance which exceeds the GWPS concentration limits shall be subject to corrective action pursuant to 40 CFR 264.100.

Based on available information and current hydrogeologic conditions at the site, the wells specified in Permit Table 2 will serve as the point of compliance wells at the locations specified in Section E of the Part B application. This list may be modified based on the Optimization Evaluation Report conducted pursuant to Permit Condition IV.F.3.d. or as new information becomes available.

**Table 2 – Point of Compliance Monitoring Wells**

| <b>WELL I.D.</b> |
|------------------|
| 15-7             |
| 18-3             |
| 19-3             |
| 20-3             |

IV.F.3. Groundwater Monitoring Program

During the term of this Permit, the Permittee shall establish and maintain a groundwater monitoring program to demonstrate compliance with the GWPS. Groundwater monitoring shall be conducted to comply with the general requirements specified below which are in compliance with that portion of 40 CFR 264.97 applicable to groundwater monitoring programs conducted in accordance with 40 CFR 264.99.

IV.F.3.a. The groundwater monitoring system consists of one (1) background monitoring well four (4) compliance monitoring wells, and three (3) supplemental monitoring wells as specified in Permit Table 3.

**Table 3 – Groundwater Monitoring Well Network**

| <b>Well I.D.</b> | <b>Monitoring Frequency</b> | <b>Monitoring Well Network Association</b> | <b>Gradient Location</b> |
|------------------|-----------------------------|--|--------------------------|
| 17-3             | Semi-annually               | Background                                 | Upgradient               |
| 15-7             | Semi-annually               | Compliance                                 | Downgradient             |
| 18-3             | Semi-annually               | Compliance                                 | Crossgradient            |
| 19-3             | Semi-annually               | Compliance                                 | Downgradient             |
| 20-3             | Semi-annually               | Compliance                                 | Downgradient             |
| 10-1             | Semi-annually               | Supplemental                               | Crossgradient            |
| 17-7             | Semi-annually               | Supplemental                               | Downgradient             |
| 16-7             | Semi-annually               | Supplemental                               | Downgradient             |

- i. The sampling locations specified in Permit Table 3 and depicted in Figure 1-5 of the Field Sampling Plan, Section E of the approved Part B application will serve as the groundwater monitoring system.
  - ii. Should the Secretary determine that the wells designated to monitor groundwater passing the point of compliance are not adequate, the Permittee shall propose a Permit modification in accordance with 40 CFR 270.42 to install/establish additional and/or alternate monitoring wells.
  - iii. The Permittee shall report the surveyed elevation of the monitoring wells to the nearest 0.01 foot when the wells are installed. The total depth of wells and elevation of the following should be reported: top of casing reference mark, ground surface and/or concrete apron, the protective casing, and the top and bottom of the well screen, gravel pack, and well seals.
  - iv. All groundwater monitoring wells in the OD Area shall be maintained at locations specified in the Field Sampling Plan, Section E of the Part B Permit Application.
- IV.F.3.b. The groundwater monitoring system shall consist of a set of monitoring wells designed, installed, and operated to collect samples from the uppermost aquifer and that meet the following objectives:
- i. Is adequate to intercept transmissive zone(s) within the uppermost fractured or weathered bedrock aquifer, as applicable;
  - ii. Is adequate to support collection of representative groundwater samples for comparison to the GWPS;
  - iii. Is adequate to detect significant evidence of increased/decreased contamination of groundwater at the point of compliance;
  - iv. Is adequate to detect the rate of migration and three-dimensional extent of all groundwater contaminant plumes at and beyond the point of compliance (including beyond the facility property boundary, if necessary).
- IV.F.3.c. If the Secretary or Permittee determines that the groundwater monitoring program does not adequately meet the objectives as

specified by Permit Condition IV.F.3.b., the Permittee shall implement the following:

- i. Submit, within ninety (90) days of the date of the determination that Permit Condition IV.F.3.b. has not been met, an application for a permit modification to make appropriate changes to the groundwater monitoring program in accordance with 40 CFR 264.99(j) and 270.42.
  - ii. The Permittee must continue to monitor in accordance with the groundwater monitoring program established in Permit Condition IV.F.3.a. until the permit modification is approved.
- IV.F.3.d. Within one-hundred twenty (120) days of the effective date of this Permit, the Permittee shall submit an Optimization Evaluation Report of the OD Area groundwater monitoring system. At a minimum, the evaluation shall include a determination that the groundwater monitoring program is sufficient to meet the objectives established in Permit Condition IV.F.3.b. If the groundwater monitoring system is determined to be insufficient, the Permittee shall request a permit modification, subject to KDHE approval, to make appropriate changes to the groundwater monitoring system to meet the objectives of Permit Condition IV.F.3.b. and in a manner consistent with Permit Condition IV.F.3.c.
- IV.F.3.e. Inspection and Maintenance of Monitoring System
- i. The Permittee shall implement an inspection and maintenance program for the groundwater monitoring system identified in Permit Condition IV.F.3.a. These wells are to be inspected and maintained in accordance with Permit Conditions IV.F.3.e.ii. through IV.F.3.e.vii. This program shall be designed to ensure the structural integrity of all wells during the term of this Permit.
  - ii. Above ground well integrity inspections shall be performed at the time of each sampling event and shall be documented in the inspection log. The evaluation for each monitoring well shall include a visual inspection of the outer protective casing, inner casing riser, concrete apron, well cap, and locking mechanism to document any damage or deterioration. The ground surface in the immediate vicinity of each monitoring well and the annular space between the outer protective casing and inner casing riser shall

be inspected for visible anomalies (e.g., collection or ponding of water, ground subsidence, etc.).

- iii. Subsurface well integrity inspections shall be performed annually for all wells and shall be documented in the inspection log. Subsurface well integrity inspections shall consist of one or more of the following: total well depth measurements, ground water turbidity measurements, in-situ hydraulic conductivity tests, casing caliper logs, down-hole video camera surveys, and/or other methods capable of verifying the subsurface integrity of the well casing and screen.
- iv. The Permittee shall perform an annual wellbore siltation evaluation to assess downwell siltation and well screen occlusion for all monitoring wells. This evaluation shall be designed to ensure the representative nature of the required groundwater sample analysis and field measurement results through minimization of sampling and measurement interferences (e.g., turbidity, excessive well screen occlusion, etc.).
- v. Wells demonstrating well screen occlusion equal to or in excess of 10% of the well screen length shall be redeveloped prior to the next scheduled sampling event.
- vi. The Permittee shall perform well-specific surface and subsurface integrity inspections within seven (7) days following any contact of wells by flood waters.
- vii. Monitoring well repairs shall be undertaken within thirty (30) days of identification of any surface or subsurface well integrity problem. If adverse weather or site conditions preclude the Permittee from gaining access to and repairing wells within thirty (30) days, then the Permittee shall take appropriate action with respect to this requirement as soon as practicable. Written justification for any delay, completed well inspection log sheets, a narrative description of any well repairs and before/after photographic documentation (in case of visible surface well repairs) shall be provided to the Secretary as part of the Annual Groundwater Monitoring Reports required by Permit Condition IV.F.4.

IV.F.3.f. Modifications to Monitoring System

- i. Any modification in the number and/or location of the monitoring wells established in Permit Condition IV.F.3.a. for the OD Area shall require a Permit modification approved by the Secretary in accordance with 40 CFR 270.42 and Permit Condition IV.F.8.
- ii. Any new groundwater monitoring well(s) installed by the Permittee to meet the requirements of this Permit shall be designed and installed in accordance with the requirements of 40 CFR 264.97, the objectives of the groundwater monitoring program specified in Permit Condition IV.F.3.b., and well-specific plans and specifications approved by the Secretary.
- iii. The Permittee shall contact the Secretary at least twenty (20) working days prior to conducting any field work associated with the construction or modification of the groundwater monitoring system required by this Permit. Notification of field activities shall be conducted in a manner consistent with Permit Condition VI.T. The Secretary shall have the option of observing any portion of the system's construction or modification.
- iv. New or additional wells shall be inspected and maintained in accordance with procedures outlined in Permit Condition IV.F.3.e., the Field Sampling Plan, Section E of the approved Part B application, and 40 CFR 264.97.
- v. All wells deleted from the monitoring system shall be plugged and abandoned in accordance with Kansas Regulatory requirements contained in K.S.A. 82a-1213 and K.A.R 28-30-7. Well plugging and abandonment methods and certification shall be submitted to the Secretary within thirty (30) days from the date the wells are removed from the monitoring system.

IV.F.3.g. The Permittee shall perform groundwater sampling and analysis and field measurement of the groundwater-related parameters listed in Permit Table 4 to monitor compliance with the GWPS in the OD Area according to the schedule in Permit Table 4.

**Table 4 –Groundwater Monitoring, Sampling, Analysis, and Parameter Measurements Schedule**

| Parameters                               | Type of Measurement       | Frequency        |
|--|---------------------------|------------------|
| Expanded Constituent List <sup>(1)</sup> | Fixed Laboratory Analyses | Every Five Years |
| GWPS Constituents <sup>(2)</sup>         | Fixed Laboratory Analyses | Semi-Annually    |
| Static Water Levels <sup>(3)</sup>       | Field Measurement         | Semi-Annually    |
| Total Well Depth                         | Field Measurement         | Annually         |

<sup>(1)</sup> Permit Attachment 14

<sup>(2)</sup> Permit Table 1

<sup>(3)</sup> Groundwater potentiometric surface measurements shall be collected at the time of each regularly scheduled sampling event from all monitoring wells in the OD Area, including those which are not being sampled regularly.

IV.F.3.h. The Permittee shall determine the groundwater surface elevation, total well depths, and immiscible layer measurements at each of the existing wells listed in Permit Table 3 in accordance with procedures specified in the Field Sampling Plan, Section E of the approved Part B application and the following:

- i. The Permittee shall obtain groundwater surface elevations semi-annually and total well depths annually for the monitoring wells established in Permit Condition IV.F.3.a.
- ii. Groundwater surface elevations and total well depth measurements, when required, shall be obtained prior to well purging.

IV.F.3.i. The Permittee shall use the following techniques and procedures when obtaining and analyzing samples from groundwater monitoring wells established in Permit Condition IV.F.3.a.

- i. Samples shall be collected by the techniques described in the Field Sampling Plan, Section E of the approved Part B application.
- ii. Samples shall be preserved and shipped for analysis, in accordance with the procedures specified in the Field Sampling Plan, Section E of the approved Part B application.
- iii. Samples shall be analyzed according to the procedures specified in the Field Sampling Plan, Section E of the approved Part B application.

- iv. Samples shall be tracked and controlled using the chain-of-custody procedures specified in the Field Sampling Plan, Section E of the approved Part B application.
  - v. All constituent chemical analyses shall be performed by a laboratory certified by KDHE in accordance with K.A.R. 28-31-264a(e).
- IV.F.3.j. The Permittee shall determine the concentrations of the hazardous constituents specified in Permit Condition IV.F.1.b, throughout the term of this Permit to demonstrate conformance with the GWPS. The Permittee shall determine the concentration of the hazardous constituents specified in Permit Condition IV.F.1.b for each sampling location specified in Permit Table 3, at least semi-annually.
- IV.F.3.k. Within six (6) months of the effective date of this Permit and every five (5) years thereafter, the Permittee shall sample and analyze groundwater from a subset of two (2) wells listed in Permit Table 3, as chosen by the Secretary, for the expanded constituent list (Permit Attachment 14) to determine the concentrations of hazardous constituents present in the uppermost aquifer.
- i. If the Permittee finds additional hazardous constituents present (i.e., not listed in Permit Table 3), their concentrations shall be reported to the Secretary in writing within seven (7) days from completion of the analyses. The results of the analyses must be submitted to the Secretary within sixty (60) days of the sample collection date.
  - ii. If hazardous constituents are identified in the groundwater, which are not currently specified in the GWPS, the Permittee may resample the groundwater to confirm detection within thirty (30) days from notifying the Secretary. The results of the resample analyses must be submitted to the Secretary within sixty (60) days of the sample collection date. If the Permittee's subsequent groundwater analyses confirm the presence of additional hazardous constituents, then the Permittee shall have thirty (30) days from the date KDHE receives the results to propose a Permit modification in accordance with 40 CFR 270.42 to add the confirmed hazardous constituents to the GWPS (Permit Table 3) and the groundwater monitoring program.

- IV.F.3.1. The Permittee shall statistically compare the measured concentration of each monitored hazardous constituent with its concentration limit in the GWPS each time groundwater quality is determined. When evaluating the monitoring results to determine compliance with the GWPS, the Permittee shall determine whether there is statistically significant evidence of an exceedance or compliance with the GWPS at each monitoring well at the completion of each sampling analysis. Statistical procedures must comply with the requirements of 40 CFR 264.99 and 40 CFR 264.97(h). The Permittee shall perform the statistical evaluation within thirty (30) days from the completion of the sampling analysis. The sampling analysis must be completed within forty (40) days of the sample collection date. The Permittee shall notify the Secretary in writing within seven (7) days of completion of the analysis if the groundwater protection standard has been exceeded at any monitoring well.

#### IV.F.4. Groundwater Reporting Requirements

- IV.F.4.a. The Permittee shall prepare and submit on an annual basis for the preceding calendar year, a Groundwater Monitoring Report providing a comprehensive evaluation of the groundwater monitoring program including a narrative discussion of the nature and evolution of the program as well as the overall adequacy of the program. Any conclusions concerning inadequacies in the groundwater monitoring program shall be accompanied by a discussion of proposed amendments. Specific details concerning any proposed amendments should be further developed outside the scope of these reports and/or as otherwise specified in this Permit. The Permittee's Annual Groundwater Monitoring report shall be submitted to the Secretary by March 1 for each preceding calendar year. [40 CFR 264.97(j)]
- IV.F.4.b. The Permittee's Annual Groundwater Monitoring Reports shall evaluate the adequacy of the groundwater monitoring program including, but not limited to, the following:
- i. A comparison of the levels of each hazardous constituent measured at each sampling location during the previous calendar year, to the associated concentration limit. The hazardous constituents and concentration limits required by the Groundwater Protection Standard (GWPS) are specified in Permit Table 3.

- ii. An evaluation of the rate and direction of groundwater movement in the underlying aquifer and potential effects on any component of the groundwater monitoring program to determine compliance with the GWPS.
  - iii. An evaluation of the horizontal and vertical extent and concentrations of any hazardous constituents in groundwater throughout the OD Area as determined from the data collected from the Permittee's groundwater monitoring system.
  - iv. An analysis of trends in the levels of hazardous constituents from year to year based on sampling results to determine whether there is significant evidence of increased contamination. If there is an increasing trend for any of the hazardous constituents at any well, the report must contain an evaluation of the source of the increased contamination and provide conclusions as to whether a new release from a regulated unit has occurred.
  - v. An evaluation of surface and/or subsurface monitoring well integrity including identification of any actual or potential problems that may influence the groundwater data or efficiency of the groundwater monitoring program.
- IV.F.4.c. The Annual Reports shall comprehensively address technical requirements of 40 CFR Part 264 Subpart F, as applicable, and this Permit. The Permittee shall summarize relevant groundwater monitoring information and shall present this information in the form of narrative discussions, groundwater flow calculations, and/or diagrammatic illustrations (i.e., tabular groundwater and statistical data summaries, hydrogeologic and potentiometric contour maps/cross-sections, chemical parameter trend graphs, calculated rate(s) of contaminant migration, contaminant isoconcentration maps/cross-sections, fence/isometric diagrams, groundwater flow nets, etc.), and other information as appropriate.
- IV.F.4.d. The Annual Monitoring Reports shall provide sampling results including, but not limited to, the following:
- i. A description of the monitoring activities and operation and maintenance performed including recommendations, if necessary, for the groundwater monitoring system,

- ii. Semi-annual groundwater monitoring laboratory analytical reports, including quality assurance/quality control data,
- iii. Semi-annual groundwater static water level measurements,
- iv. Photocopies of the field forms and laboratory chain of custody forms,
- v. A digital copy of the Annual Groundwater Monitoring Report including tables, figures, and appendices.

#### IV.F.5.Groundwater Monitoring Well Installation Reporting Requirements

IV.F.5.a. The Permittee shall submit a well installation report to the Secretary within sixty (60) days from the date the field activities were completed with the following information:

- i. A discussion summarizing the field activities,
- ii. Detailed boring logs with descriptions of soils and geologic formations encountered during the drilling activities,
- iii. Detailed as-built monitoring well diagrams,
- iv. Well records,
- v. A copy of the report submitted by the Registered Land Surveyor; and
- vi. A copy of the field notes documentation.

IV.F.5.b. The Permittee shall provide a summary of all well installation activities performed during the year in the Annual Groundwater Monitoring Report.

#### IV.F.6.Recordkeeping

The Permittee shall enter all monitoring, testing, and analytical data collected according to Permit Condition IV.F.3., in the operating record. The data must include all computations, calculated means, variances, and results of the statistical tests that the Secretary has specified. [40 CFR 264.73(b)(6)]

IV.F.7.Requirements if the Groundwater Protection Standard is Exceeded

- IV.F.7.a. The Permittee shall notify the Secretary in writing within seven (7) days of the groundwater protection standard exceedance at any groundwater monitoring well. The notification must identify the hazardous constituent(s), the concentration(s), and the monitoring wells where the groundwater protection standard has been exceeded. [40 CFR 264.99(h)(1)] The Permittee may include a request to demonstrate that exceedance of the groundwater protection standard was due to sources other than the OD Area or errors in sampling, analysis, or evaluation. [40 CFR 264.99(i)(1)]
- IV.F.7.b. Demonstration of Other Sources
- i. The Permittee must submit a report to the Secretary, within ninety (90) days, that demonstrates a source other than the regulated units caused exceedance of the groundwater protection standard or was a result of an error in sampling, analysis, or evaluation.[40 CFR 264.99(i)(2)]
  - ii. If the Permittee demonstrates the exceedance of the groundwater protection standard was due to a source other than the regulated units or was a result of an error in sampling, analysis, or evaluation, the Permittee may continue groundwater monitoring in accordance with Permit Section IV.F.; otherwise, the Permittee shall submit an application for a permit modification to establish a corrective action program in accordance with Permit Condition IV.F.7.c.
  - iii. The Permittee must continue to monitor in accordance with the groundwater monitoring program established in Permit Section IV.F. until the Secretary determines the demonstration specified in Permit Condition IV.F.7.b. is acceptable. [40 CFR 264.99(i)(4)]
- IV.F.7.c. If an exceedance is confirmed, the Permittee shall implement the Release Detection Soil Sampling Program (RDSSP) as specified in Permit Condition IV.H.1. and submit an application for a permit modification to establish a corrective action program meeting the requirements of 40 CFR 264.100 within 180 days. The application must at a minimum include the following information:

- i. A detailed description of corrective actions that will achieve compliance with the GWPS specified in Permit Condition IV.F.1.
- ii. A plan for a groundwater monitoring program that will demonstrate the effectiveness of the corrective action.

#### IV.F.8.Request for Permit Modification

If the Permittee or the Secretary determines that the groundwater monitoring program established in this section no longer satisfies the requirements of 40 CFR 264.601 through 264.603 and/or applicable requirements of 40 CFR 264 Subpart F, the Permittee shall submit an application for a permit modification within ninety (90) days of the date of this determination detailing changes to the compliance monitoring program.[40 CFR 264.99(j)] The request for permit modification must be made in accordance with Permit Condition I.B.1.

#### **IV.G. AMBIENT AIR MONITORING**

The Secretary has determined that air monitoring is not necessary at this time. The permit may be modified at some future time if the Secretary determines that air monitoring is necessary.

#### **IV.H. SOIL MONITORING**

The Secretary has determined the site monitoring program shall consist of soil monitoring to ensure that any release of hazardous waste or hazardous constituents from the OD 2700 Area to the surface and subsurface soils is sufficiently monitored, that upon detection of release the soil monitoring program be continued/expanded to determine the location of the release, and, as necessary, all releases to the soil are addressed through corrective action.

##### IV.H.1.Soil Monitoring Program

- IV.H.1.a. Within ninety (90) days of the effective date of this Permit, the Permittee shall submit a Soil Monitoring Plan for KDHE review and approval. The Soil Monitoring Plan shall meet the Confirmatory Sampling (CS) Work Plan requirements of Permit Condition VI.H.1. and establish a soil monitoring program comprised of the following components:
  - i. A Release Detection Soil Sampling Program (RDSSP) shall be developed that is adequate to detect any releases to the surface

and/or subsurface soils within the OD Area. The RDSSP shall be implemented upon an exceedance in the GWPS as specified in Permit Condition IV.F.7.c.

- ii. A Dispersion Model Soil Sampling Program (DMSSP) shall be developed that is adequate to demonstrate that thermal treatment within the OD Area is conducted in a manner that prevents deposition of hazardous constituents upon surface soils within a one-thousand (1,000) foot radius surrounding the OD Area. The DMSSP shall be implemented every five (5) years. If the DMSSP program reveals a release to surface soils has occurred, KDHE may require further investigation to evaluate potential impacts of the release on surface water and sediment.

IV.H.1.b. The Permittee shall prepare and submit a Soil Monitoring Report to KDHE within forty-five (45) days of sample collection. The Soil Monitoring Report shall meet the CS Report requirements of Permit Condition VI.H.5.

IV.H.1.c. Based on the results of the Soil Monitoring Report, KDHE shall determine the need for further investigation, interim measure, and/or corrective measure activities to address the release(s) covered in the Soil Monitoring Report. If KDHE determines such activities are needed, the Permittee shall be required to prepare and implement a plan for such as outlined in Permit Condition VI.I., VI.J., and/or VI.K. If applicable, KDHE will notify the Permittee of any no further action decisions related to the specific release being evaluated.

#### **IV.I. INSPECTION SCHEDULES AND PROCEDURES**

IV.I.1. The integrity of the OD 2700 Area and support equipment shall be determined through regular inspections in accordance with the inspection plan in Section F-2 and Table's F-1, F-2, and F-3 of the approved Part B application. The Permittee shall conduct inspections of the OD 2700 Area on each day of thermal treatment to document all requirements in Permit Condition IV.E. Inspection records shall be maintained at the facility. [40 CFR 264.602]

IV.I.2. The Permittee shall document compliance with Permit Condition IV.I.1 and place this documentation in the facility operating record. [40 CFR 264.602]

#### **IV.J. RECORDKEEPING AND REPORTING**

The recordkeeping and reporting requirements of this section are in addition to the recordkeeping and reporting requirements specified elsewhere in this Permit. With the exception of permit condition IV.J.5, the Permittee shall submit by March 31 of each year, for the previous year ending December 31, a report containing the following:

- IV.J.1. The types and quantity of wastes that were thermally treated at the OD 2700 Area during the previous calendar year.
- IV.J.2. Certification that thermally treating waste at the OD 2700 Area during the previous calendar year is the most technically practicable method currently available to the Permittee to minimize the present and future threat to human health or the environment from that waste.
- IV.J.3. Evaluation of available alternative treatment technologies to replace thermal treatment at the OD 2700 Area. The evaluation shall include analysis of viable alternatives according to technical feasibility, economic feasibility, impact to employee health and safety, and whether the alternative will reduce releases and discharges. Alternatives that are not viable shall be identified with the rationale for the rejection.
- IV.J.4. The Permittee shall maintain information in Permit Condition IV.J in the Operating Record at the facility in accordance with 40 CFR 264.73.
- IV.J.5. Beginning on the effective date of this permit; the Permittee shall submit a report to the Secretary every five (5) years that evaluates the effectiveness of the OD 2700 Area operating requirements, including soil and groundwater monitoring requirements for the unit, over the previous five (5) year period. As a part of completing this 5-year review report, the permittee shall update the information in the Human Health and Ecological Risk Assessment for the Open Detonation Unit Day & Zimmerman Kansas LLC Parsons, Kansas located in Section D, Appendix D-4 of the approved Part B application. The evaluation shall be consistent with available guidance as approved by EPA and KDHE. Upon review of this report, the Secretary may require additional investigation and/or modify the permit as necessary, as provided by 40 CFR 270.41. Modifications to the permit shall be completed in accordance with Permit Condition I.B.1.

#### **IV.K. CLOSURE AND POST-CLOSURE CARE**

- IV.K.1. At closure of the OD 2700 Area, the Permittee shall remove all hazardous waste and hazardous waste residues, in accordance with the procedures in the Closure Plan, Section I of the approved Part B application, and Section II.L. of this Permit. [40 CFR 264.178]
- IV.K.2. The Permittee shall begin closure by submitting a Closure Work Plan, including SAP and QAPP consistent with the requirements found in Section I of the approved Part B application at least forty-five (45) days prior to beginning closure implementation. Following the receipt of department approval of the Closure Work Plan, including SAP and QAPP, the Permittee shall implement closure in accordance with the closure schedule approved in the Closure Work Plan.
- IV.K.3. If contaminated soils and groundwater cannot be completely removed or decontaminated during closure, then the Permittee shall submit an application for a permit modification to establish a post-closure care program meeting the requirements of 40 CFR 264.601. The Permittee must specify the procedures that will be used to satisfy this requirement in the Post-Closure Plan as required by 40 CFR 264.118. [40 CFR 264.603]

## **SECTION V - AIR EMISSION STANDARDS**

### **V.A. AIR EMISSION STANDARDS FOR CONTAINERS (SUBPART CC)**

The Permittee shall comply with all applicable requirements of 40 CFR 264 Subpart CC and, Section O of the approved Part B application.

#### V.A.1. Waste Determination

Waste determination (volatile organic concentration) is only required when a unit is NOT using required air emission controls. Initial waste determinations are required with updates at least once every twelve (12) months. A new waste determination is required if the process generating the waste changes such that it is likely to cause the volatile organic concentration to be at or above 500 ppm by weight (ppmw). Knowledge of the waste may be used. Knowledge of the waste can include organic material balances, test data, manifest, etc. Documentation of any waste determination must be kept in the facility operating records.

#### V.A.2 Requirements Applicable to Containers

40 CFR 264 Subpart CC regulations applicable to containers of hazardous wastes are found in 40 CFR 264.1086 and 265.1087. There are three levels of air emissions controls for containers based on container size, contents and whether the container is used in a waste stabilization process. Table 1 of Attachment 3 provides a matrix for determining the applicable control level for a container. The term "in light material service" means the container is used to manage a hazardous waste for which both of the following conditions apply: the vapor pressure of one or more of the organic constituents in the material is greater than 0.3 kilopascals kPa at 20degrees C; and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20 degrees is equal to or greater than 20 percent by weight. 0.3 kPa is approximately 0.043 pounds per square inch (psi). There are three levels of acceptable controls. Table 2 of Attachment 3 provides a matrix for determining requirements for all three container levels (Container Standards). Requirements for all three container levels are summarized in the following paragraphs:

V.A.2.a Container Level 1 controls require that the hazardous waste is stored in (1) an approved Department of Transportation (DOT) container, (2) a container equipped with a cover and closure devices for each opening, or (3) an open top container with an

organic-vapor suppressing barrier, such as a tight fitting trap or an organic-vapor suppressing foam. Method 21 testing is not required for Level 1 containers.

V.A.2.b Container Level 2 controls require that the hazardous waste is stored in (1) an approved DOT container, (2) a container that operates with no detectable organic emissions as tested using Method 21 of 40 CFR Part 60, Appendix A, or (3) a demonstrated vapor-tight container using 40 CFR Part 60, Appendix A, Method 27.

V.A.2.c Container Level 3 controls require that the hazardous waste is stored in a container that is either vented directly to an air emission control device or located inside an enclosure that is vented through a closed vent system to a control device. The Level 3 enclosure must be designed and Container Level 3 controls require that the hazardous waste is stored in a container that is either vented directly to an air emission control device or located inside an enclosure that is vented through a closed vent system to a control device. The Level 3 enclosure must be designed and operated in accordance with criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B.

V.A.2.d Additional requirements applicable to containers

If hazardous waste is in a container when the Facility first accepts it, the Facility must perform a visual inspection of the container within 24 hours after its arrival and at least once a year thereafter. Repairs of defects must be completed within five (5) days of detection or the contents of the container must be transferred to a container that is in compliance with the 40 CFR 264 Subpart CC regulations.

For containers using Level 3 control, recordkeeping requirements include: (1) design documentation for enclosures, and (2) records for closed-vent system and control device in accordance with 40 CFR 264 Subpart CC requirements.

The owner or operator of containers without air emission controls shall prepare and maintain the facility operating log fulfilling 40 CFR 264 Subpart CC requirements.

## **SECTION VI – CORRECTIVE ACTION FOR SWMUs/AOCs/RELEASES**

The objective of the corrective action program at a hazardous waste management facility is to evaluate the nature and extent of releases of hazardous waste and/or hazardous constituents and, if necessary, implement corrective measures to protect human health and the environment. KDHE may require corrective action, as specified in the following permit conditions, for any previously or newly identified, known or suspected, SWMU/AOC/release pursuant to the following:

- 40 CFR 264.101 which specifies corrective action requirements associated with SWMUs for an owner or operator seeking a permit for the treatment, storage or disposal of hazardous waste;
- 40 CFR 270.32(b)(2) which provides for establishment of permit conditions, on a case-by-case basis, related to permit duration, schedules of compliance, and monitoring, including the establishment of corrective action requirements for AOCs and releases
- K.S.A. 65-3453 which provides the Secretary certain statutory authority concerning clean-up activities including, but not limited to, reimbursement of KDHE oversight costs; and,
- K.S.A. 65-3455 which describes responsibilities associated with payment of clean-up costs, and those actions necessary to recover such costs.

The Permittee shall implement corrective action activities as specified in this Permit, and in a manner consistent with available guidance as directed or approved by KDHE. Furthermore, pursuant to 40 CFR 264.101, the Permittee shall provide assurances of financial responsibility for completing such corrective action activities as required under Permit Condition II.M.

All corrective action activities contemplated or performed pursuant to Section VI of this Permit shall be conducted subject to the approval of KDHE in accordance with the terms of this Permit and consistent with the standards, specifications, and schedules approved by KDHE as contained in the attachments to this Permit. Unless otherwise specified in this Permit, and/or as approved or directed by KDHE, corrective action activities will be accomplished through implementation of the process steps detailed in Permit Conditions VI.G. through VI.M., as required. All documents submitted to KDHE pursuant to this Permit shall be considered draft documents until approved by KDHE. Any documents, reports, plans, specifications, schedules, and/or attachments required by this Permit, upon approval by KDHE, and any KDHE documents granting such approval, shall be deemed incorporated into this Permit. Upon KDHE approval, the Permittee shall implement the tasks detailed in the subject work plan in accordance with the corresponding implementation schedule.

If KDHE determines that further actions beyond those provided by Section VI of this Permit, or changes to permit conditions stated herein, are warranted, KDHE shall modify the permit conditions in Section VI, in accordance with this Permit Condition I.B.1.

## **VI.A. CORRECTIVE ACTION REQUIREMENTS**

### VI.A.1. Corrective Action at the Facility

The Permittee shall institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste(s) or hazardous constituent(s) from any SWMU or AOC at the Facility, regardless of the time the waste was placed in such unit(s). [40 CFR 264.101(a)]

### VI.A.2. Corrective Action beyond the Facility Boundary

The Permittee shall institute corrective action beyond the facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to KDHE's satisfaction that, despite the Permittee's best efforts, the Permittee 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 access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for such corrective action must be provided. [40 CFR 264.101(c)]

### VI.A.3. Additional Corrective Action Requirements

In addition to those corrective action requirements, as specified under Permit Conditions VI.A.1. and VI.A.2., the Permittee shall institute corrective action in accordance with all terms and conditions established in this Permit, as KDHE has determined necessary to protect human health and the environment. [40 CFR 270.32(b)(2)]

## **VI.B. APPLICABILITY**

The permit conditions of this section apply to:

- VI.B.1. The SWMUs/AOCs/releases identified by the initial RCRA Facility Assessment (RFA), any subsequent investigations, or other means, are listed in Permit Condition VI.C. Unless otherwise specified in this Permit, all currently known SWMUs/AOCs/releases identified herein, shall be addressed individually at the point of unit closure or in total at the time of facility closure, whichever occurs first. However, if new information becomes available to indicate an imminent

threat to human health or the environment, or off-site contaminant migration is occurring or is likely to occur, KDHE may direct the Permittee in writing to immediately conduct corrective action activities.

- VI.B.2. Any additional SWMUs/AOCs/releases discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means. As used in this Section of the Permit, the terms "discover", "discovery", or "discovered" refer to the date on which the Permittee or a KDHE representative either (1) visually observes evidence of a new SWMU/AOC/release (2) visually observes evidence of a previously unidentified release of hazardous constituents to the environment, or (3) receives information which suggests the presence of a new release of hazardous waste or hazardous constituents to the environment.

#### **VI.C. IDENTIFICATION OF SOLID WASTE MANAGEMENT UNITS (SWMUs), AREAS OF CONCERN (AOCs), AND/OR RELEASES**

A RCRA Facility Assessment (RFA) was completed for the Kansas Army Ammunition Plant (KAAP) facility in March 1989 in which one-hundred sixty (160) SWMUs and AOCs were identified. In Part II of the 1989 Permit, the SWMUs and AOCs were divided into SWMU Groups to facilitate planning and implementation of the RCRA Facility Investigation (RFI). A table correlating SWMU Groups to RFA SWMU numbers is included as Permit Attachment 4A. Approximately 4,000 acres of the KAAP facility was transferred to DZI in 2013. The following list, based on currently available information, represents the SWMU Groups and AOCs that have been retained on the DZI property. Attachment 4B of this Permit includes a map which identifies the location of each SWMU Group and AOC identified below. A generalized description of each SWMU Group and AOC is presented in Attachment 5 to this Permit.

##### SWMU Group

|    |  |
|----|--|
| 9  | 1000 Area SWMUs  |
| 10 | 1100 Area SWMUs  |
| 17 | Open Detonation Field  |
| 21 | Closed Container Storage Areas 1813, 1914, 1915, 1916, 1917, 1958, 1961, 1974 and 1976<br>Container Storage Areas 1816, 1934, 1935, 1936, 1942, 1967, 1969, 1970, and 1979 to begin operation upon permit issuance<br>Container Storage Areas 2707, 2708, and 2709 |
| 24 | Burn Pad 6   |

##### AOC

|   |                                 |
|---|---------------------------------|
| 1 | Water Tower 4                   |
| 2 | Mercury Fulminate Disposal Site |
| 3 | Old Ammunition Storage Area     |
| 4 | Quarry Operation                |

Within ninety (90) days of the effective date of this Permit, the Permittee shall submit a Description of Current Conditions (DCC) Report in accordance with Permit Condition VI.G. and Permit Attachment 6. In addition to the scope of work provided in Permit Attachment 6, the DCC Report shall provide a complete list of SWMU Groups, individual SWMUs and AOCs located within the DZI property boundary along with a summary of all associated historical investigations and/or corrective action activities. Upon KDHE review and approval of the DCC Report, a permit modification will be initiated to update the list of SWMU Groups, individual SMWUs and AOCs provided herein as well as the SWMU/AOC descriptions provided in Attachment 5.

#### **VI.D. DESCRIPTION OF PAST AND/OR ON-GOING GROUNDWATER CORRECTIVE ACTION ACTIVITIES**

Groundwater contamination was originally detected in the 1000 Area and 1100 Area (SWMU Groups 9 and 10, respectively) during the RFI phase of the corrective action process. Long Term Monitoring (LTM) was selected as the remedy in the November 2005 Statement of Basis, thus providing the existing framework for groundwater monitoring within these areas. Pending determinations made pursuant to Permit Condition VI.D.1., the Permittee shall continue groundwater monitoring at SWMU Groups 9 and 10 in accordance with the procedures described in *Site Wide Groundwater Corrective Measures Decision Implementation Sampling and Analysis Plan*, Section E-1 of the approved Part B Application.

##### VI.D.1. Optimization Evaluation Report

Within one-hundred twenty (120) calendar days of the effective date of this Permit, the Permittee shall submit an Optimization Evaluation Report of SWMU Groups 9 and 10 groundwater monitoring systems. At a minimum, the evaluation shall include a determination that the groundwater monitoring program is sufficient to meet the following objectives:

- a. Is adequate to intercept any more transmissive zone(s) within the uppermost fractures or weathered bedrock aquifer, as applicable;
- b. Is adequate to support collection of representative groundwater samples for comparison to the GWPS;
- c. Is adequate to detect significant evidence of increased/decreased contamination of groundwater;

- d. Is adequate to detect the rate of migration and three-dimensional extent of all groundwater contaminant plumes (including beyond the facility property boundary, if necessary).

If the groundwater monitoring system for SWMU Groups 9 and/or 10 is determined to be insufficient, the Permittee shall request a permit modification, subject to KDHE approval, to make appropriate changes to the groundwater monitoring system to meet the objectives listed above.

**VI.E. NOTIFICATION AND ASSESSMENT REQUIREMENTS FOR NEWLY-IDENTIFIED OR SUSPECTED NEW SOLID WASTE MANAGEMENT UNITS (SWMUs), AREAS OF CONCERN (AOCs), AND RELEASES**

- VI.E.1. No later than fifteen (15) calendar days from discovery, the Permittee shall notify KDHE in writing of any newly-identified or suspected new SWMU/AOC/release as discovered under Permit Condition VI.B.2. The notification shall include, at a minimum, a unique sequential identification number, the location of the newly-identified or suspected new SWMU/AOC/release in relation to other SWMUs/AOCs/releases, and all available information pertaining to the nature of the release including, but not limited to, suspected or known wastes, hazardous constituents released, media affected, magnitude of release, etc.
- VI.E.2. The Permittee shall prepare and submit to KDHE, within thirty (30) calendar days of notification provided per Permit Condition VI.E.1., a SWMU/AOC/Release Preliminary Assessment Report (PAR) for each SWMU/AOC/release identified under Permit Condition VI.B.2. At a minimum, the PAR shall provide the following information as applicable:
  - a. Unique sequential identification for the SWMU/AOC/release;
  - b. Location of unit(s) in relation to SWMUs/AOCs/releases on a topographic map of appropriate scale such as required under 40 CFR 270.14(b)(19);
  - c. Designation of type and function of unit(s);
  - d. General dimensions, capacities and structural description of unit(s) (supply any available plans/drawings);
  - e. Period during which the unit(s) was operated;
  - f. Past and present operating practices;
  - g. Previous uses of the area occupied by the SWMU/AOC/release;
  - h. Amounts and specifications of waste managed;
  - i. Drainage areas and/or drainage patterns near the SWMU/AOC/release;

- j. Physical and chemical properties of all wastes, including any available data on hazardous constituents in the wastes, that have been managed at/in the unit(s) to the extent available; and,
- k. All available information pertaining to any release of hazardous waste or hazardous constituents from such unit(s) (including results of any sampling and analysis conducted, such as groundwater, soil, air, surface water, and/or sediment).
- l. Recommendations, if any, for additional sampling/data collection, investigation, and/or interim measure activities.

VI.E.3. Based on the information presented in the PAR for each SWMU/AOC/release identified under Permit Condition VI.B.2., KDHE shall determine the need for and timing of confirmatory sampling, investigation, and/or interim measures for each newly-identified or suspected SWMU/AOC/release. If KDHE determines that such additional corrective action-related activities are necessary, the Permittee shall be required to prepare and implement a work plan as outlined in Permit Conditions VI.H., VI.I., and/or VI.J. KDHE will notify the Permittee in writing of the final determination as to the status of the newly-identified or suspected SWMU/AOC/release and any specific corrective action requirements.

**VI.F. NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES FROM PREVIOUSLY IDENTIFIED SOLID WASTE MANAGEMENT UNITS (SWMUs) AND AREAS OF CONCERN (AOCs)**

- VI.F.1. Within fifteen (15) calendar days from discovery, the Permittee shall notify KDHE in writing of any newly-discovered releases(s) of hazardous waste or hazardous constituents from previously-identified SWMUs or AOCs, as described in Permit Conditions VI.B.1. and VI.B.2. The notification shall include, at a minimum, a unique sequential identification number, location of SWMU/AOC/release, and all available information pertaining to the nature and extent of the release (e.g., media affected, hazardous constituent(s) released, magnitude of release, etc.).
- VI.F.2. Based on the information presented in the Permittee's notification, KDHE shall determine the need for and timing of confirmatory sampling, investigation and/or interim measures for each newly-discovered release(s) from previously-identified SWMUs/AOCs. If KDHE determines that such additional corrective action-related activities are necessary, the Permittee shall be required to prepare and implement a plan as outlined in Permit Conditions VI.H., VI.I. and/or VI.J. KDHE will notify the Permittee in writing of the final determination as to the status of the newly-discovered release(s) from previously identified SWMUs/AOCs and any specific corrective action requirements.

## **VI.G. DESCRIPTION OF CURRENT CONDITIONS REPORT**

- VI.G.1. As required, within ninety (90) calendar days from date of a written request from KDHE, the Permittee shall submit to KDHE a Description of Current Conditions (DCC) Report providing background information pertinent to the Facility. The DCC Report shall include information gathered during any previous investigations, inspections, corrective action/interim measure activities, and any other relevant data, to facilitate identification of potential contamination sources and to characterize current site conditions. In addition, the DCC Report shall determine whether or not current human exposures and migration of contaminated groundwater are under control. Specifically, the DCC Report must evaluate whether current human exposure to environmental contamination is occurring at unacceptable levels, and assess migration of existing groundwater contaminant plumes to verify whether or not expanding or adversely affecting nearby surface water bodies.
- VI.G.2. The DCC Report shall meet the requirements of Attachment 6 unless otherwise directed or approved by KDHE in writing. The Permittee shall provide sufficient written justification for any omissions or deviations from the minimum requirements of Attachment 6. Such omissions or deviations are subject to the approval of KDHE.

## **VI.H. CONFIRMATORY SAMPLING (CS)**

- VI.H.1. Within forty-five (45) calendar days of written KDHE notification, the Permittee shall prepare and submit a Confirmatory Sampling (CS) Work Plan to KDHE for each newly-identified or suspected SWMU/AOC/release per Permit Condition VI.E.3., or for each newly-discovered release(s) from previously-identified SWMUs/AOCs per Permit Condition VI.F.2. The CS Work Plan shall include:
- a. Schedule(s) of implementation;
  - b. Sampling and analysis program description of specific actions and parameters necessary to determine whether or not a release of hazardous waste and/or hazardous constituents to the environment has occurred, or is occurring, and to determine whether the release is harmful to human health or the environment;
  - c. Discussion of DQOs;
  - d. QAPP to demonstrate the sampling and analysis program is capable of yielding representative samples of all affected or potentially affected environmental media (e.g., groundwater, surface and subsurface soil, sediment, surface water, and/or air);

- e. Available existing data, with appropriate supporting documentation for KDHE consideration, to partly or wholly satisfy the confirmatory sampling requirement.
- VI.H.2. The CS Work Plan must be approved by KDHE, in writing, prior to implementation. KDHE shall specify the start date of CS Work Plan implementation in the written approval letter. If KDHE disapproves the CS Work Plan, consistent with Permit Condition VI.U., KDHE shall either: (1) notify the Permittee in writing of the CS Work Plan's deficiencies and specify a due date for submission of a revised CS Work Plan; (2) revise the CS Work Plan and notify the Permittee of the revisions; or, (3) conditionally approve the CS Work Plan and notify the Permittee of the conditions.
- VI.H.3. The Permittee shall implement the confirmatory sampling in accordance with the approved CS Work Plan.
- VI.H.4. The Permittee shall provide notification of all CS-related field activities in accordance with Permit Condition VI.T.
- VI.H.5. The Permittee shall prepare and submit to KDHE in accordance with the schedule in the approved CS Work Plan, a Confirmatory Sampling (CS) Report summarizing confirmatory sampling activities and identifying all SWMUs/AOCs/releases where release of hazardous waste or hazardous constituents into the environment is confirmed. The CS Report shall include all data, including raw data, and a summary and analysis of the data that supports the above determination. If submission of the CS Report coincides with submission of the RCRA Facility Investigation (RFI) Report, then the CS Report and the RFI Report may be combined into one submission.
- VI.H.6. Based on the results of the CS Report, KDHE shall determine the need for further investigation, interim measure, and/or corrective measure activities to address the SWMUs/AOCs/releases covered in the CS Report. If KDHE determines that such activities are needed, the Permittee shall be required to prepare and implement a plan for such as outlined in Permit Condition VI.I., VI.J., and/or VI.K. If applicable, KDHE will notify the Permittee of any no further action decision related to the specific SWMUs/AOCs/releases being evaluated.

## **VI.I. RCRA FACILITY INVESTIGATION (RFI)**

The Permittee shall conduct an RFI, as deemed necessary by KDHE, to determine the nature and extent of known and suspected releases of hazardous waste(s) and/or hazardous waste constituent(s) from each SWMU/AOC/release at the Facility, identified

in accordance with Permit Condition VI.B. of this Permit, and to gather data to facilitate risk management decisions, and support development of a Corrective Measures Study (CMS) or Presumptive Remedy Design Concept. The Permittee shall conduct the RFI in accordance with the approved RFI Work Plan, completed per current EPA guidance documents (*RCRA Facility Investigation Guidance, Volumes I through IV*, or equivalent). The RFI Work Plan(s) shall meet the requirements of Attachment 7 unless otherwise directed or approved by KDHE. The Permittee shall conduct the RFI for each SWMU/AOC/release, in accordance with the Facility Submission Summary in Permit Condition VI.V. of this Permit.

#### VI.I.1. RFI Work Plan

- VI.I.1.a. The Permittee shall prepare and submit to KDHE, within sixty (60) calendar days of written notification by KDHE, an RFI Work Plan for those SWMUs/AOCs/releases identified under Permit Condition VI.C., or as otherwise directed by KDHE. The RFI Work Plan(s) shall be developed to meet the requirements of Permit Condition VI.I. Specifically, the RFI Work Plan(s) shall describe in detail all proposed activities and procedures to be conducted and the overall technical and analytical approach to completing all actions necessary to achieve investigation objectives.
- VI.I.1.b. The RFI Work Plan(s) shall include schedules of implementation and completion of specific actions necessary to delineate and fully characterize the nature, and lateral and vertical extent of contamination for all known and suspected contaminants of concern (COCs) for all affected or potentially affected environmental media at the site. As a component of delineation/characterization efforts, the RFI is required to also fully assess any and all secondary contamination issues (e.g., resulting from mobilization of naturally-occurring elements/substances in the presence of site-related contamination, degradation byproducts, etc.).

The Permittee must provide sufficient justification and associated documentation that a release is not probable or has already been characterized if a unit or a media/pathway associated with a unit (groundwater, surface water, soil, subsurface gas, or air) is not included in the RFI Work Plan(s). Such deletions of a unit, media or pathway from the investigation are subject to the approval of KDHE. The Permittee shall provide sufficient written justification for any omissions or deviations from the minimum requirements of Attachment 7. Such omissions or deviations are subject to the approval of KDHE. In addition, the scope of the RFI Work Plan(s) shall include

all investigations necessary to ensure compliance with 40 CFR 264.101(c).

- VI.I.1.c. The RFI Work Plan(s) must be approved by KDHE, in writing, prior to implementation. KDHE shall specify the start date of the RFI Work Plan schedule in the letter approving the RFI Work Plan(s). If KDHE disapproves the RFI Work Plan, consistent with Permit Condition VI.U., KDHE shall either: (1) notify the Permittee in writing of the RFI Work Plan's deficiencies and specify a due date for submission of a revised RFI Work Plan; (2) revise the RFI Work Plan and notify the Permittee of the revisions; or, (3) conditionally approve the RFI Work Plan and notify the Permittee of the conditions.

#### VI.I.2. RFI Implementation

- VI.I.2.a. The Permittee shall implement the RFI(s) in accordance with the approved RFI Work Plan(s) and Attachment 7.
- VI.I.2.b. The Permittee shall provide notification of all RFI-related field activities in accordance with Permit Condition VI.T.

#### VI.I.3. RFI Reporting

- VI.I.3.a. The Permittee shall prepare and submit to KDHE Draft and Final RFI Report(s) for the investigations conducted pursuant to the RFI Work Plan(s) submitted under Permit Condition VI.I.1. The Draft RFI Report(s) shall be submitted to KDHE for review in accordance with the schedule in the approved RFI Work Plan(s). The Final RFI Report(s) shall be submitted to KDHE within thirty (30) calendar days of receipt of KDHE's final comments on the Draft RFI Report. The RFI Report(s) shall include an analysis and summary of all required investigations of SWMUs/AOCs/releases and their results. The summary shall describe the type and extent of contamination at the Facility, including sources and migration pathways, identify all hazardous constituents present in all media, and describe actual or potential receptors. The RFI Report(s) shall also describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative of the area. If the Draft RFI Report is a summary of the initial phase investigatory work, the Report shall include a work plan for the final phase investigatory actions required based on the initial findings. Implementation of any final phase work plan, as approved by KDHE, shall be carried out in accordance with Permit Condition VI.I.2. The objective of this task shall be to ensure that the

investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support a CMS, if necessary.

- VI.I.3.b. The Permittee shall prepare and submit to KDHE, along with the Draft and Final RFI Report(s), screening levels for each of the hazardous constituents reported in Permit Condition VI.I.3.a. Screening levels shall be based on the most current version of KDHE's *Risk-Based Standards for Kansas (RSK) Manual*, the latest EPA guidance, or as otherwise directed or approved by KDHE.
- VI.I.3.c. KDHE will review the RFI Report(s), including the screening levels described in Permit Condition VI.I.3.b. KDHE shall notify the Permittee of the need for further investigation if necessary and, if appropriate at this juncture of the investigative process, inform the Permittee, if not already notified, of the need for a CMS to meet the requirements of Permit Condition VI.K. and 40 CFR 264.101. KDHE will notify the Permittee of any no further action decision. Any further investigation required by KDHE shall be conducted in accordance with a schedule specified by KDHE and as approved in accordance with Permit Condition VI.I.1.
- VI.I.3.d. If the time required to conduct the RFI(s) is greater than one-hundred eighty (180) calendar days, the Permittee shall provide KDHE with quarterly RFI Progress Reports (at 90-day intervals) beginning ninety (90) calendar days from the start date specified by KDHE in the RFI Work Plan approval letter. The Progress Reports shall contain the following information at a minimum:
- i. A description of the portion of the RFI completed;
  - ii. Summaries of findings;
  - iii. Summaries of any deviations from the approved RFI Work Plan during the reporting period;
  - iv. Summaries of any significant contacts with local community public interest groups or other state/local government entities;
  - v. Summaries of any problems or potential problems encountered during the reporting period;
  - vi. Actions taken to rectify problems;
  - vii. Changes in relevant personnel;
  - viii. Projected work for the next reporting period; and
  - ix. Copies of daily reports, inspection reports, data, etc.

#### VI.I.4. Assessment of Risk

- VI.I.4.a. At a minimum, consistent with Permit Condition VI.I.3.b., the Permittee shall assess the potential excess human health risk posed by site-related COCs through direct comparison to the Tier 2 Levels as provided in KDHE's RSK Manual, or as otherwise directed or approved by KDHE. In addition, the Permittee shall perform a rapid assessment of ecological risk using the EPA Region 6 *Ecological Exclusion Criteria Worksheet* and *Ecological Assessment Checklist*, included as Attachment 8 of this Permit.
- VI.I.4.b. Alternatively, as directed or approved by KDHE, the Permittee shall perform a site-specific quantitative baseline human health risk assessment (HHRA) and screening level ecological risk assessment/baseline ecological risk assessment (SLERA/BERA) to determine whether and the extent to which corrective action is required and arrive at cleanup goals for a site. Any site-specific baseline risk assessment (i.e., HHRA and SLERA/BERA) must be performed consistent with available EPA risk assessment guidance titled *Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual, Parts A-F* (1989 & 2009), and any subsequent revisions or editions; and, *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments – Interim Final* (1997), and any subsequent revisions or editions; or, as otherwise directed and approved by KDHE.
- VI.I.4.c. Prior to performing a site-specific baseline risk assessment, the Permittee shall submit HHRA and SLERA/BERA Work Plans and, upon completion of site-specific risk assessment activities, the Permittee shall submit HHRA and SLERA/BERA reports, for KDHE approval. All work plans and reports are subject to the provisions of Permit Condition VI.U.

#### **VI.J. INTERIM MEASURES (IM)**

If KDHE determines, during the course of any activity initiated in compliance with the permit conditions of Section VI of this Permit, that a release or potential release of hazardous waste(s) and/or hazardous waste constituent(s) from a SWMU/AOC poses a threat to human health or the environment, KDHE may require the Permittee to perform specific interim measures. Interim measures shall be used whenever necessary to achieve the goal of stabilization, which is to control or abate immediate threats to human health and the environment, and to prevent or minimize the spread of contamination while long-

term corrective remedies are being evaluated. Alternatively, subject to KDHE approval, the Permittee may propose interim measures implementation.

VI.J.1. IM Work Plan/Design

- VI.J.1.a. Within thirty (30) calendar days of written KDHE notification, the Permittee shall prepare and submit an IM Work Plan/Design for any SWMU/AOC/release, as determined necessary by KDHE, or as Permittee-proposed/KDHE-approved for implementation. The IM Work Plan/Design shall meet the requirements of Attachment 9 unless otherwise directed or approved by KDHE. Such interim measures may be conducted concurrently with investigations required under the terms of this Permit.
- VI.J.1.b. The Permittee shall notify KDHE within twenty-four (24) hours of becoming aware of the need for IM implementation to mitigate or stabilize an emergency situation. In the case of such an emergency, the Permittee may initiate interim measures at a SWMU/AOC/release concurrent with this notification to KDHE. KDHE may request the Permittee perform additional mitigative measures, request submission of an IM Work Plan/Design per Permit Condition VI.J.1.a., and/or request submission of an IM Report per Permit Condition VI.J.3.
- VI.J.1.c. The IM Work Plan/Design shall ensure that the interim measures are designed to mitigate any current or potential threat(s) to human health or the environment and are consistent with and integrated into any long-term solution at the Facility. The IM Work Plan/Design shall include: the interim measures objectives, procedures for implementation (including any designs, plans, or specifications), and schedules for implementation.
- VI.J.1.d. The IM Work Plan/Design shall be approved by KDHE, in writing, prior to implementation. KDHE shall specify the start date of the IM Work Plan/Design schedule in the letter approving the IM Work Plan/Design. If KDHE disapproves the IM Work Plan/Design, consistent with Permit Condition VI.U., KDHE shall either: (1) notify the Permittee in writing of the IM Work Plan/Design's deficiencies and specify a due date for submission of a revised IM Work Plan/Design, (2) revise the IM Work Plan/Design and notify the Permittee of the revisions and the start date of the schedule within the approved IM Work Plan/Design, or (3) conditionally approve the IM Work Plan/Design and notify the Permittee of the conditions.

VI.J.2. IM Implementation

- VI.J.2.a. The Permittee shall implement the interim measures in accordance with the approved IM Work Plan/Design and Attachment 9.
- VI.J.2.b. The Permittee shall provide notification of all IM-related field activities in accordance with Permit Condition VI.T.
- VI.J.2.c. Final approval of corrective action required under 40 CFR 264.101 which is achieved through interim measure implementation shall be in accordance with 40 CFR 270.41 and Permit Condition 1.B.1. as a permit modification.

VI.J.3. IM Reporting

- VI.J.3.a. If the time required for completion of interim measure implementation is greater than one (1) year, the Permittee shall provide KDHE with progress reports at intervals specified in the approved IM Work Plan or semi-annually for Permittee-initiated interim measures. The Progress Reports shall contain the following information at a minimum:
  - i. A description of the portion of the IM completed;
  - ii. Summaries of findings;
  - iii. Summaries of any deviations from the IM Work Plan during the reporting period;
  - iv. Summaries of any problems or potential problems encountered during the reporting period; and
  - v. Projected work for the next reporting period.
- VI.J.3.b. The Permittee shall prepare and submit to KDHE, within ninety (90) calendar days of completion of interim measures conducted under Permit Condition VI.J., an IM Report. The IM Report shall contain the following information at a minimum:
  - i. A description of interim measures implemented;
  - ii. Summaries of results;
  - iii. Summaries of all problems encountered;
  - iv. Summaries of accomplishments and/or effectiveness of IM; and
  - v. Copies of all relevant laboratory/monitoring data, etc. in accordance with Permit Condition I.E.11.

- VI.J.3.c. When KDHE fulfills the public participation requirements for proposed and final remedy selection, KDHE will concurrently notify the public of interim actions completed or being conducted, and invite the public to consider these actions at the time.
- VI.J.3.d. KDHE may, if warranted, require the Permittee perform additional interim measures and/or corrective action activities to ensure permit requirements are fully met.

## **VI.K. CORRECTIVE MEASURES STUDY (CMS)**

Based on the results of the RFI, as required by KDHE under Permit Condition VI.I.3.c., the Permittee shall identify, screen, and develop the alternative(s) for removal, containment, treatment and/or other remediation of the contamination. The Permittee shall conduct the CMS in accordance with an approved CMS Work Plan, completed per current guidance documents from EPA (*RCRA Corrective Action Plan* (EPA/520-R-94-004), or equivalent). The CMS Work Plan(s) shall meet the requirements of Attachment 10 unless otherwise directed or approved by KDHE. KDHE may require the Permittee to evaluate as part of the CMS one or more additional potential corrective measures. These corrective measures may include a specific technology or combination of technologies that, in KDHE's judgment, achieves protection of human health and the environment.

As appropriate, with detailed justification for an alternate approach and subject to KDHE approval, the Permittee may develop a Presumptive Remedy Design Concept without the comparative alternatives analysis element typical of a CMS. All other CMS-related requirements contained in Permit Condition VI.K. apply to design concept development and implementation.

Where interim measures have been implemented and are anticipated to constitute the final remedy, subject to KDHE approval, the Permittee may prepare a Focused CMS following the general CMS outline in Permit Conditions VI.K.1. through VI.K.4. below. Within the Focused CMS, the Permittee shall propose the final corrective remedy for the Facility, a justification of why the proposed corrective action (i.e., interim measures having occurred or are occurring) are protective of human health and the environment, and proposed criteria for KDHE to determine when the proposed corrective action shall be considered complete.

- VI.K.1. The Permittee shall prepare and submit to KDHE a CMS for those SWMUs/AOCs/releases where hazardous constituents have come to be located at concentrations exceeding those appropriate for the protection of human health and the environment. The CMS shall be developed to meet the requirements of Permit Condition VI.K. The Permittee may seek approval from KDHE for concurrent RFI/CMS. The CMS may be performed concurrent with the RFI

process if KDHE determines that sufficient investigative details are available to allow concurrent action.

- VI.K.2. The CMS shall meet the requirements of Attachment 10 of this Permit at a minimum. The CMS shall include schedules of implementation and completion of specific actions necessary to complete a CMS. The Permittee must provide sufficient justification and/or documentation for any unit deleted from the CMS.

Such deletion of a unit is subject to the approval of KDHE. The scope of the CMS shall include all investigations necessary to ensure compliance with 40 CFR §§264.101, 264.552, and 270.32(b)(2). The Permittee shall implement corrective actions beyond the facility boundary, as set forth in Permit Condition VI.A.2.

- VI.K.3. The Permittee shall submit the draft CMS no later than ninety (90) calendar days of written notification by KDHE that a CMS is required.
- VI.K.4. KDHE shall either approve or disapprove, in writing, the CMS. If KDHE disapproves the CMS, consistent with Permit Condition VI.U., KDHE shall either (1) notify the Permittee in writing of the CMS's deficiencies and specify a due date for submission of a revised CMS, (2) revise the CMS and notify the Permittee of the revisions, or (3) conditionally approve the CMS and notify the Permittee of the conditions. This modified CMS becomes the approved CMS.

## **VI.L. CORRECTIVE MEASURES SELECTION AND PERMIT MODIFICATION**

KDHE will select corrective measure(s) that will (1) protect human health and the environment; (2) attain media cleanup standards set by KDHE; (3) control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases that may pose a threat to human health and the environment; and, (4) meet all appropriate state and federal requirements. Before selecting corrective measures, KDHE will prepare a Statement of Basis that identifies the preferred corrective measure or measures and provides the reasons for the selection. KDHE will make a Final Remedy Decision after public notice and public review of the Statement of Basis, and review of all public comments. If necessary, KDHE will initiate a permit modification pursuant to 40 CFR 270.41 to require implementation of the preferred corrective measure or measures. Alternatively, this Permit may be modified by the Permittee pursuant to 40 CFR 270.42(c) for the implementation of the KDHE-selected corrective measure or measures.

- VI.L.1. A corrective measures decision shall be selected from the remedial alternatives evaluated in the CMS. It will be based at a minimum on protection of human health and the environment, as per specific site conditions and existing

regulations. The selected remedy may include any interim measures implemented to date.

- VI.L.2. KDHE will provide the public an opportunity to review and comment on the Statement of Basis. Pursuant to 40 CFR 270.41, a permit modification will be initiated by KDHE after recommendation of a remedy under Permit Condition I.B.1. This modification will serve to incorporate a final remedy and remedy implementation schedules into this Permit. The permit modification shall include a schedule and date for remedy construction.
- VI.L.3. Following the public comment period, KDHE may approve the CMS Report and select a final corrective measure(s) or require the Permittee to revise the CMS Report and/or perform additional CMS activities.
- VI.L.4. KDHE will notify the Permittee of the final corrective measure selected by KDHE in the Final Decision and Response to Comments. The notification will include KDHE's reasons for corrective measure selection.
- VI.L.5. Upon the effective date of the permit modification approving the selected remedy, the Permittee shall implement the approved remedy per the CMS remedy implementation schedule. The Permittee shall submit the corrective measures implementation and/or final remedy effectiveness reports annually to KDHE in accordance with Permit Condition VI.M.3.c.
- VI.L.6. Within one-hundred and twenty (120) calendar days after this Permit has been modified for remedy selection, the Permittee shall provide cost estimates and demonstrate financial assurance for completing the approved remedy in accordance with Permit Condition VI.M. Thereafter, the Permittee shall review the remedy cost estimates, adjust the financial assurance instrument, and submit to the KDHE any necessary changes in the cost estimates and adjustments to the financial assurance instrument annually. The mechanism for financial assurance shall be one that is described and allowable under 40 CFR 264.140 through 264.151 Subpart H.

## **VI.M. CORRECTIVE MEASURES IMPLEMENTATION**

Within sixty (60) calendar days of selection by KDHE of a final remedy/corrective measure, the Permittee shall submit a Corrective Measures Implementation (CMI) Work Plan to implement the selected corrective measure(s). The CMI Work Plan shall meet the requirements of Attachment 11, unless otherwise directed or approved by KDHE. All CMI-related activities shall be conducted in a manner consistent with available EPA guidance (*RCRA Corrective Action Plan*, EPA 520-R-94-004, OSWER Directive 9902.3-2A, May 1994).

- VI.M.1. The CMI Work Plan shall be approved by KDHE, in writing, prior to implementation. KDHE shall specify the start date of the CMI Work Plan schedule in the letter approving the CMI Work Plan. If KDHE disapproves the CMI Work Plan, consistent with Permit Condition VI.U., KDHE shall either: (1) notify the Permittee in writing of the CMI Work Plan's deficiencies and specify a due date for submission of a revised CMI Work Plan, (2) revise the CMI Work Plan and notify the Permittee of the revisions and the start date of the schedule within the approved CMI Work Plan, or (3) conditionally approve the CMI Work Plan and notify the Permittee of the conditions.
- VI.M.2. The Permittee shall implement the corrective measures in accordance with the approved CMI Work Plan and Attachment 11. The Permittee shall provide notification of all CMI-related field activities in accordance with Permit Condition VI.T. KDHE may, if warranted, require the Permittee perform additional corrective action measures to ensure permit requirements are fully met.

#### VI.M.3. CMI Reporting

- VI.M.3.a. If the time required for completion of corrective measure implementation is greater than one (1) year, the Permittee shall provide KDHE with progress reports at intervals specified in the approved CMI Work Plan. The Progress Reports shall contain the following information at a minimum:
- i. A description of the portion of the corrective measures completed;
  - ii. Summaries of findings;
  - iii. Summaries of any deviations from the CMI Work Plan during the reporting period;
  - iv. Summaries of any problems or potential problems encountered during the reporting period; and
  - v. Projected work for the next reporting period.
- VI.M.3.b. The Permittee shall prepare and submit to KDHE, in accordance with the approved CMI Work Plan schedule, a Corrective Measures Construction Completion (CMCC) Report. The CMCC Report shall contain the following information at a minimum:
- i. Description of purpose of the CMCC Report;
  - ii. Synopsis of the corrective measure, design criteria, and certification that the corrective measure was constructed in

accordance with the final plans and specifications as contained in the CMI Work Plan;

- iii. Explanation and description of any modifications to the KDHE-approved CMI Work Plan and why these were necessary for the project;
- iv. Results of any operational testing and/or monitoring, indicating how initial operation of the corrective measure compares to the design criteria;
- v. Summary of significant activities that occurred during construction, including a discussion of problems encountered and how they were addressed;
- vi. Summary of any inspection findings (include copies of key inspection documents in appendices); and,
- vii. As-built drawings, process flow diagrams, and photographs depicting the constructed corrective measures.

VI.M.3.c. The Permittee shall submit a Corrective Measures Implementation (CMI) Annual Report to KDHE no later than March 1 of each year of the prior year's performance of the corrective measures above, including institutional controls (ICs). The CMI Annual Report shall include documentation of all samples and data collected and their analysis, and an evaluation of both the short-term and long-term effectiveness of the corrective measures. The CMI Annual Report shall include any deficiencies or violations of engineering controls (ECs) or ICs determined from the inspection, maintenance, and monitoring required in the Corrective Measures Work Plan. Based upon KDHE's review of the report, KDHE may require the Permittee to conduct additional investigation, study, and/or work in order to modify an existing corrective measure or to select a new corrective measure or measures. If action is needed to protect human health or the environment from releases or to prevent or minimize the further spread of contamination while long-term remedies are pursued, KDHE may require the Permittee to implement Interim Measures pursuant to Permit Condition VI.J.

VI.M.3.d. Every five (5) years, the Permittee shall submit a report to KDHE which evaluates the effectiveness and performance of corrective measures implementation. Within sixty (60) days after the five-year anniversary of KDHE approval of the CMCC Report, the Permittee shall submit to KDHE for review and approval a Five-Year Corrective Measures Performance Evaluation Report. The evaluation shall be consistent with the *CERCLA Comprehensive Five-Year Review Guidance, OSWER9355.7-03B-P*, and any subsequent revisions or

additions, or as otherwise directed by KDHE, and include the following:

- i. Annual reports required in the CMI Work Plan.
- ii. Effectiveness of corrective measures in protecting human health and the environment as planned in the Statement of Basis.
- ii. Effectiveness of ECs and ICs in protecting human health and the environment as planned in the Statement of Basis.
- iii. Results of sampling and analysis to determine the effectiveness and performance of the corrective measures.
- iv. Any changed circumstances that render the corrective measures, including ECs and ICs, ineffective.
- v. Possible modifications to the corrective measures to provide necessary protection.
- vi. Any other reporting requirements included in the KDHE-approved CMI Work Plan.

Based upon KDHE's review of the report, KDHE may require the Permittee to conduct additional investigation, study, and/or work in order to modify an existing corrective measure or to select a new corrective measure(s). If action is needed to protect human health or the environment from releases or to prevent or minimize the further spread of contamination while long-term remedies are pursued, KDHE may require the Permittee to implement interim measures pursuant to Permit Condition VI.J.

VI.M.3.e. The Permittee shall submit a Corrective Measures Completion (CMC) Report to KDHE within ninety (90) calendar days of the completion of all remedial activities required by Permit Condition VI.M. The purpose of the CMC Report is to fully document how the corrective measure completion criteria have been satisfied and to justify why the corrective measure and/or monitoring may cease. The CMC Report shall, at a minimum, include the following elements:

- i. Purpose;
- ii. Synopsis of the corrective measure;
- iii. Corrective Measure Completion Criteria: Describe the process and criteria for determining when corrective measures, maintenance and monitoring may cease.
- iv. Demonstration that the completion criteria have been met. Include results of testing and/or monitoring, indicating how operation of the corrective measure compares to the completion criteria;

- v. Summary of work accomplishments (e.g., performance levels achieved, total treated and/or excavated volumes, nature and volume of wastes generated, etc.);
- vi. Summary of significant activities that occurred during operations. Include a discussion of problems encountered and how they were addressed;
- vii. Summary of inspection findings (include copies of key inspection documents in appendices);
- viii. Summary of total operation and maintenance costs; and
- ix. Determination of whether ECs and/or ICs are required to continue to be maintained.

KDHE will review the CMC Report for approval in accordance with the procedures set forth in Permit Condition VI.U. The Permittee shall also submit an electronic copy of the report in a format and on a media approved by KDHE that incorporates all changes and/or revisions required for approval. Upon approval of the CMC Report, KDHE shall notify the Permittee in writing of release from financial assurance obligations.

#### **VI.N. CHANGE IN PROPERTY USE**

If property use restrictions are included as a part of the KDHE-selected corrective measures, before the property use can be changed, the Permittee shall submit a request for a permit modification to include a new risk assessment, as determined necessary by KDHE, and corrective measures study, or equivalent, that addresses potential exposures associated with the proposed property use. KDHE will review the permit modification supporting documentation for approval in accordance with the procedures set forth in Permit Condition VI.U. Changes in corrective measures shall be selected in accordance with procedures in Permit Condition VI.L. Upon final selection and modification into the Permit, the Permittee shall implement any new corrective measures.

#### **VI.O. ADDITIONAL WORK**

If at any time during implementation of corrective action under this Permit KDHE determines that additional work is necessary to accomplish the corrective action required under this Permit, KDHE will provide written notification to the Permittee of the requirement for additional work to be performed by the Permittee. KDHE may determine that certain tasks, including, but not limited to, investigatory work or engineering evaluation are necessary in addition to the tasks and deliverables already required under this Permit. KDHE will specify the basis and reasons for its determination that the additional work is necessary and will request submittal of a draft work plan to perform the additional work. Within sixty (60) days of KDHE's written request, the Permittee

shall submit a draft work plan for KDHE review and approval pursuant to Permit Condition VI.U. Upon KDHE approval, the Permittee shall perform the additional work according to the KDHE-approved work plan. The completion of the additional work, as specified in this permit condition, shall be documented by the Permittee in accordance with the approved schedule for the additional work.

## **VI.P. INSTITUTIONAL CONTROL (IC) REQUIREMENTS**

- VI.P.1. If contamination will remain onsite at levels that do not allow for unrestricted use and unlimited exposure at the Facility, the Permittee and any subsequent owners or operators, shall implement ICs to ensure protection of human health and the environment by minimizing the potential for exposure to contamination that remains on the Facility property. At a minimum, ICs shall ensure the facility property is not developed, used, or operated in a manner incompatible with the KDHE-approved corrective action. Required ICs shall be maintained for the duration of this Permit and any subsequent modifications or renewals, or as otherwise directed by KDHE.
- VI.P.2. The Permittee, and any subsequent owner or operator, shall implement ICs to meet the requirements of Permit Condition VI.N., pursuant to Kansas statutes and regulations, to prevent unacceptable exposures to human health and the environment.
- VI.P.3. The Permittee must propose to KDHE in a detailed IC Plan, the ICs to be implemented if unrestricted use of and unlimited exposure at the Facility is not attainable. The IC Plan must be submitted within thirty (30) calendar days following the determination that unrestricted use and unlimited exposure cleanup standards have not been reached, or as otherwise directed by KDHE.
- VI.P.4. The ICs shall be consistent with available EPA guidance as approved by KDHE, including but not limited to, *Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites*, EPA-540-R-09-001, OSWER 9355.0-89, December 2012; *Institutional Controls: A Guide to Preparing Institutional Control Implementation and Assurance Plans at Contaminated Sites*, EPA-540-R-09-002, OSWER 9200.0-77, December 2012; and, *Institutional Controls: A Site Manager's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups*, EPA 540-F-00-005, OSWER 9355.0-74FS-P, September 2000.
- VI.P.5. The Permittee shall provide a detailed IC Plan for the establishment of enforceable ICs. The IC Plan shall include:

- a. Drafts of all proposed IC documents and/or instruments;
- b. Specifications and schedule for monitoring, review and reporting on the effectiveness of the IC(s); and
- c. A schedule for the implementation of the IC Plan, and a title search report for the Facility.
- d. KDHE will review the IC Plan for approval in accordance with the procedures in Permit Condition VI.U. Upon approval of the IC Plan by KDHE, the Permittee shall implement the IC Plan in conformance with the schedule contained therein and in a form acceptable to or as provided by KDHE.
- e. The Permittee shall record all instruments approved by KDHE with the register of deeds in the county where the property is located. The Permittee shall submit, to KDHE, a copy of the recorded instrument with the notarized signature of the applicant and the seal of the register of deeds indicating the agreement has been recorded.
- f. The requirements for ICs shall be maintained as specified in this Permit and shall not be terminated until KDHE has determined that the concentration of hazardous constituents in the soil and groundwater are at such levels to allow for unlimited use and unrestricted exposure. Before ICs are terminated or modified, KDHE must agree in writing to any modification or termination of ICs.

#### **VI.Q. CORRECTIVE ACTION SCHEDULE OF COMPLIANCE MODIFICATION**

- VI.Q.1. If at any time KDHE determines that modification of the corrective action Schedule of Compliance is necessary, KDHE may initiate a modification to the corrective action Schedule of Compliance.
- VI.Q.2. Modifications that are initiated and finalized by KDHE will be in accordance with the applicable provisions of 40 CFR Part 270. The Permittee may also request a permit modification in accordance with 40 CFR Part 270 to change the corrective action Schedule of Compliance.

#### **VI.R. WORK PLAN AND REPORT REQUIREMENTS**

- VI.R.1. All work plans and schedules shall be subject to approval by KDHE prior to implementation to assure that such work plans and schedules are consistent with the requirements of this Permit and with applicable regulations. Any approved schedule of implementation contained in any work plan, addendum, or additional phases becomes part of the Permit. The Permittee shall revise all

submissions and schedules as specified by KDHE. Upon approval, the Permittee shall implement all work plans and schedules as written.

- VI.R.2. All work plans and reports shall be submitted in accordance with the approved schedule. Extensions of the due date for submissions may be granted by KDHE based on the Permittee's demonstration that sufficient justification for the extension exists.
- VI.R.3. If the Permittee at any time determines that the corrective action work having been or being performed no longer satisfy the requirements of 40 CFR 264.101 or this Permit for prior or continuing releases of hazardous waste or hazardous constituents from SWMUs and/or AOCs, the Permittee shall submit an amended work plan(s) to KDHE within ninety (90) calendar days of such determination.
- VI.R.4. One (1) hard copy of all reports and work plans and an electronic version of the same reports/work plans shall be provided by the Permittee to KDHE as described in Permit Condition I.H.

#### **VI.S. REIMBURSEMENT OF KDHE CORRECTIVE ACTION COSTS**

The Permittee shall reimburse KDHE costs as defined herein, pursuant to K.S.A. 65-3453(a)(4), K.S.A. 65-3453(a)(6), and K.S.A. 65-3455, for all corrective action activities performed under this Permit:

- VI.S.1. "KDHE costs" shall mean all direct and administrative costs and expenditures incurred by or on behalf of KDHE to conduct or support corrective action activities at the Facility. The term "direct costs" shall include, but is not limited to, employee or contractor time related to oversight, sampling, investigation work, corrective action work, document review and preparation, negotiation and preparation of enforcement documents and actions, internal and external discussions, travel expenses, and public involvement activities; equipment used; and other costs directly associated with, or incurred at or in relation to, the Facility. The term "administrative costs" shall include, but is not limited to, overhead and general administrative expenses.
- VI.S.2. As described herein, a quarterly invoice shall be prepared for all KDHE costs incurred during each calendar quarter. On a per annum basis, the quarterly invoice amount shall be subtracted from the credited corrective action cost reimbursement balance until no balance remains of the annual post-closure monitoring fee. Costs incurred by KDHE thereafter shall be billed on a quarterly basis as described in the paragraphs below. There shall be no carry-over from one year to the next of any residual post-closure monitoring fee credited towards corrective action cost reimbursement.

KDHE costs incurred from the effective date of the Permit until the end of the next calendar quarter shall be billed forty-five (45) days following the end of the calendar quarter. Thereafter, KDHE shall bill the Permittee for all KDHE costs incurred during each calendar quarter forty-five (45) days following the end of the calendar quarter. Unless the Permittee disagrees with the KDHE costs pursuant to Permit Condition VI.S.5., payment of the invoice is due upon receipt for which the Permittee shall remit a check for the full amount of those KDHE costs made payable to the Kansas Department of Health and Environment. Failure to pay the total invoice due within thirty (30) days of issuance of the invoice shall be considered a violation of the Permit. An exemplar of the invoice to be used may be found as Attachment 12.

- VI.S.3. Payment for all KDHE costs assessed to the Permittee shall be made to the attention of the program contact and address noted on the invoice:

Kansas Department of Health and Environment  
Bureau of Waste Management  
1000 SW Jackson Street, Suite 320  
Topeka, KS 66612-1366

A copy of the check and transmittal letter shall be sent to KDHE as outlined in Permit Condition I.H.

- VI.S.4. KDHE costs that have been invoiced to the Permittee and that are past-due and owing shall be subject to interest if KDHE initiates a civil action to enforce the cost reimbursement requirements in this Permit. KDHE shall notify the Permittee in writing of its past-due requirements to pay KDHE's costs before filing a civil action to enforce any cost reimbursement requirements. Interest shall be calculated pursuant to K.S.A. 16-201 and K.S.A. 16-204, as applicable.
- VI.S.5. In the event the Permittee disagrees with any cost invoiced under this Permit, the Permittee shall, within fifteen (15) days of receipt of the applicable invoice, send written notice of cost disagreement to KDHE, as described in Permit Condition I.H., stating the specific terms of the disagreement, and providing copies of relevant information.
- VI.S.5.a. Within thirty (30) days of receipt of any such notice of cost disagreement from the Permittee, KDHE and the Permittee shall meet by telephone or in person to attempt to reach agreement on the matter. If the parties cannot reach agreement by consent during this period, KDHE shall issue a final written decision on the cost disagreement.

- VI.S.5.b. In the event that the Permittee seeks resolution of cost disagreement concerning an invoice, the date for payment of the invoice shall be extended for a period equal to and running concurrent with the delay resulting from the invocation of the cost disagreement resolution provision. However, such extension does not alter the schedule for performance of completion of any other tasks required by this Permit, including but not limited to timely payment of preceding and subsequent invoices.
- VI.S.5.c. In the event that the Secretary determines that resolution of cost disagreement was not sought in good faith, the Permittee shall be responsible for all additional KDHE costs incurred as a result of the Permittee invoking resolution of cost disagreement.

#### **VI.T. CORRECTIVE ACTION FIELD ACTIVITIES NOTIFICATION**

The Permittee shall provide KDHE at least twenty (20) calendar days advance written notification before conducting any investigation and/or corrective action, or other ancillary activities related to such measures, whether conducted pursuant to this Permit or to a request, requirement, or order from any other federal, state, or local regulatory authority where the resultant data or information would be used in part or in full to satisfy requirements of this Permit. Failure to provide advance written notification may result in KDHE rejecting the data obtained or work performed by the Permittee. Once the Permittee is formally notified of web-based form availability, advance written notification shall be provided by the Permittee by completing the *KDHE-BWM Hazardous Waste Permitting Section Field Activities Notification Form* on the KDHE website for each activity as distinguished by separate field mobilizations. Until the point of such formal notification, or if internet or website access is not available, the Permittee shall submit the *KDHE-BWM Hazardous Waste Permitting Section Field Activities Notification Form* (Attachment 13) to KDHE, as described in Permit Condition I.H.

#### **VI.U. CORRECTIVE ACTION DOCUMENT SUBMITTAL AND WORK PERFORMANCE REQUIREMENTS**

##### VI.U.1. Document Submission and Modification Process

As outlined in Permit Conditions I.H. and VI.V., the Permittee shall submit identified or requested documents to KDHE within the timeframes established in this Permit, or as otherwise approved or specified by KDHE. KDHE shall review the document and send a written letter to the Permittee indicating approval, approval with comment, denial, or such other designation as KDHE

determines appropriate. If a written response and/or document revision is requested, the Permittee shall provide such in the form and by the due date specified in KDHE's written letter.

#### VI.U.2. Inadequate Document Modification – Notice to Correct

In the event that the Permittee does not respond to KDHE's written letter request or if KDHE finds that a document submitted pursuant to this Permit is inadequate, KDHE will issue a Notice to Correct to the Permittee requesting that the Permittee make specific modifications to any document required by this Permit. The Notice to Correct sets out the deficiencies in the work, describes the necessary modifications to address the deficiencies and provides an expected timeframe to correct the deficiencies. Failure to revise, correct or otherwise respond to the Notice to Correct shall be a violation of this Permit and may subject the Permittee to additional tasks or penalties.

#### VI.U.3. Work Takeover – Notice

If the Permittee fails to revise, correct or otherwise respond to KDHE's Notice to Correct for inadequate document modification or work performance in accordance with the schedule specified in the Notice to Correct, or if KDHE determines the Permittee, either: 1) has ceased implementation of any of the work, 2) is seriously or repeatedly deficient or late in its performance of the work, or 3) is implementing the work in a manner which may cause an endangerment to human health or the environment, KDHE at its discretion, may assume or arrange for a contractor or contractors to assume the performance of all of any portions of the work as KDHE determines necessary. If KDHE determines that such a work takeover is necessary, it will send the Permittee a Notice of Work Takeover specifying a date upon which KDHE may assume or arrange for a contractor or contractors to assume the performance of all or any portions of the work. In the event of work takeover, pursuant to K.S.A. 65-3453(a)(4) and K.S.A. 65-3453(a)(6), the Permittee shall pay for all KDHE costs incurred by KDHE and any contractor who performs work pursuant to this Paragraph.

#### VI.U.4. Additional Tasks May Be Required

KDHE may determine that tasks may be required that are in addition to those specified in the approved work plans or associated documents/reports, as identified in Permit Condition VI.V. of this Permit. In the event KDHE makes such a determination, it shall notify the Permittee in writing that additional tasks are necessary in order to meet the goals and objectives of this Permit, to assess risk in accordance with Permit Condition VII.I.4. for any additional

contaminant(s) detected, to conform to applicable laws, and/or to protect public health or safety or the environment. If such tasks are required, they shall be completed as specified by KDHE and within the timeframes established by KDHE.

VI.U.5. Failure to Comply

Failure to comply with any of the terms and conditions of this Permit shall be considered a violation of this Permit and may subject the Permittee to such administrative actions and penalty provisions as set forth in this Permit or otherwise authorized by law.

**VI.V. FACILITY SUBMISSION SUMMARY**

The following is a summary table of the required facility submissions/reporting pursuant to Section VI of this Permit.

| SUBMISSION REQUIREMENTS   | DUE DATE   | PERMIT CONDITION    |
|---|--|---------------------|
| Optimization Evaluation Report  | Within one-hundred twenty (120) calendar days from effective date of Permit                | IV.F.3.d<br>VI.D.1. |
| Notification of Newly-Identified or Suspected New SWMUs/AOCs/Releases           | No later than fifteen (15) calendar days from discovery                                    | VI.E.1.             |
| SWMU/AOC/Release Preliminary Assessment Report                                  | Within thirty (30) calendar days of notification per Permit Condition VI.E.1.              | VI.E.2.             |
| Notification of Newly-Discovered Releases from Previously Identified SWMUs/AOCs | No later than fifteen (15) days from discovery   | VI.F.1.             |
| DCC Report  | Within ninety (90) calendar days from effective date of Permit                             | VI.C.<br>VI.G.      |
| CS Work Plan  | Within forty-five (45) calendar days from date of written KDHE request                     | VI.H.1.             |
| CS Report   | According to the schedule contained in approved CS Work Plan                               | VI.H.5.             |
| RFI Work Plan   | Within sixty (60) calendar days from date of written KDHE request                          | VI.I.1.a.           |
| RFI Report  | According to schedule contained in approved RFI Work Plan and/or any RFI Work Plan addenda | VI.I.3.a.           |
| Quantitative Baseline HHRA and SLERA/BERA                                       | As directed or approved by KDHE  | VI.I.4.             |
| IM Work Plan/Design   | Within thirty (30) calendar days from date of written KDHE request                         | VI.J.1.a.           |

| SUBMISSION REQUIREMENTS                                    | DUE DATE  | PERMIT CONDITION                    |
|--|---|-------------------------------------|
| IM Report  | Within ninety (90) calendar days of IM completion   | VI.J.3.b.                           |
| CMS  | Within ninety (90) calendar days from date of written KDHE request  | VI.K.3.                             |
| CMI Work Plan  | Within sixty (60) calendar days of KDHE selection of final remedy/corrective measure  | VI.M.                               |
| CMCC Report  | According to schedule contained in approved CMI Work Plan   | VI.M.3.b.                           |
| CMI Annual Report  | No later than March 1 of each year reporting on prior year's effectiveness and performance of corrective measures   | VI.M.3.c.                           |
| CMI 5-Year Review Report                                   | Within sixty (60) days of the 5-year anniversary of KDHE's approval of the CMCC Report  | VI.M.3.d.                           |
| CMC Report   | Within ninety (90) calendar days of the completion of all remedial activities   | VI.M.3.e.                           |
| Cost Estimate for Corrective Action Work                   | Within thirty (30) calendar days after the permit effectiveness date. For Additional Work, within thirty (30) calendar days after KDHE has approved a new work plan   | II.M.2.a.                           |
| Adjustment of the estimated cost of the work for inflation | Annually within sixty (60) days prior to the anniversary date of KDHE's initial approval of such estimated cost of the work, or within thirty (30) days after fiscal year close if financial test and corporate guarantee demonstration used. | II.M.2.b.                           |
| Financial Assurance for Completing the Work                | Within thirty (30) days after KDHE has approved the initial and any subsequent Estimated Cost of Work   | II.M.4.                             |
| Quarterly Progress Reports                                 | As approved or as otherwise directed by KDHE  | VI.I.3.d.<br>VI.J.3.a.<br>VI.M.3.a. |