

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 Tanks to:

Facility Name: Safety-Kleen Systems, Inc.

Operator: Safety-Kleen Systems, Inc.

Owner: David R. Ruffin  
750 Scenic Ranch Circle  
Fairview, TX 75069

Location: 600 East Trail Street  
Dodge City, KS 67801

EPA Identification Number: KSD980686844

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.

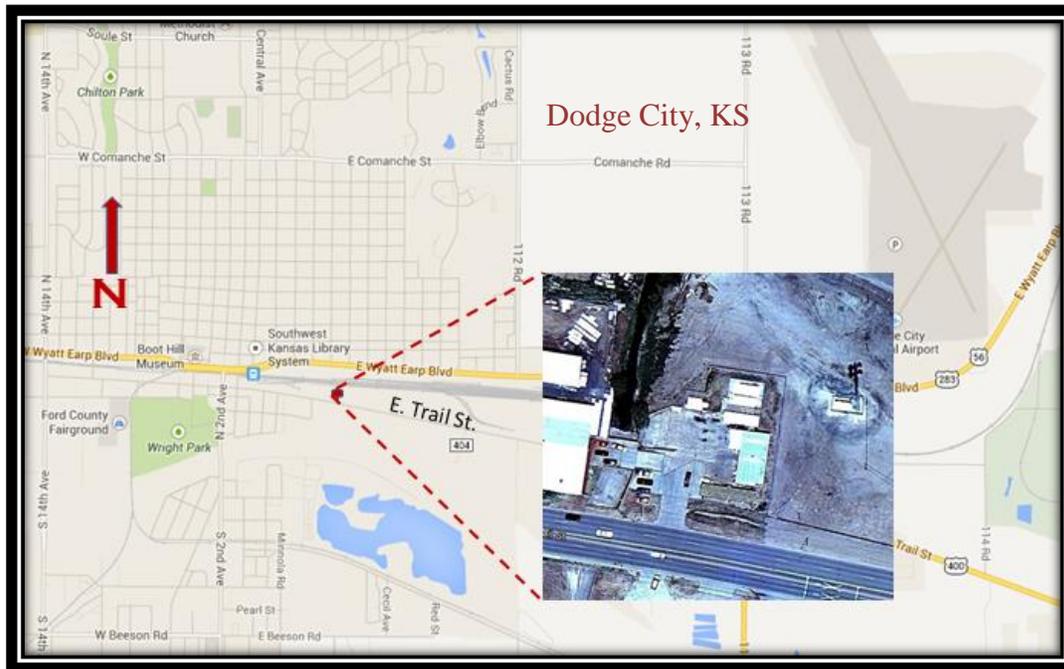
Done at Topeka, this \_\_\_\_\_ day of \_\_\_\_\_



\_\_\_\_\_  
Robert Moser, MD, Secretary  
Kansas Department of Health and Environment

## FACILITY DESCRIPTION

Safety-Kleen Systems, Inc. is an international service-orientated company whose customers are primarily engaged in automotive repair, industrial maintenance and dry cleaning. Safety-Kleen has been in operation since 1968 offering solvent collection and reclamation services to its customers, most of whom generate less than 1,000 kg (2,200 lbs) per month.



Currently, Safety-Kleen Dodge City, which opened in 1975, offers several services involving the accumulation and storage of spent industrial waste. The Dodge City Facility is an accumulation point for spent parts washer solvent and other wastes generated by Safety-Kleen's customers, the majority of whom are small quantity generators. Spent solvent collected at this Facility is recycled at a Safety-Kleen solvent-processing facility in Illinois before being returned for customer reuse. Most other wastes, which are amenable to reclamation, are ultimately shipped to another Safety-Kleen facility or a contract reclaimer. Wastes not amenable to reclamation are disposed of or treated at appropriate third party outlets.

The Facility is located south of the city center on East Trail Street on leased property. The property encompasses one acre and is bounded by BNSF Railroad property to the north and east, an industrial building and a city drainage way to the west and East Trail Street to the south. There are four buildings located at the Facility: an office building, a warehouse with a container storage area, a used oil sample storage shed, and a temporary flammable storage shelter. Additionally, there are three aboveground storage tanks with secondary containment at the Facility, each containing different materials: 20,000-gallon used oil, 10,000-gallon spent solvent, and 8,000-gallon clean solvent. There is also a loading dock with a solvent return and fill station with a dumpster which consists of a 125-gallon tank, used to wash storage drums and ancillary equipment.

**HAZARDOUS WASTE FACILITY PERMIT  
SAFETY-KLEEN SYSTEMS, INC.  
DODGE CITY, KANSAS  
EPA I.D. #KSD980686844**

**TABLE OF CONTENTS**

ACRONYMS AND ABBREVIATIONS ..... 6

SECTION I - STANDARD PERMIT CONDITIONS ..... 9

    I.A.    EFFECT OF PERMIT ..... 9

    I.B.    PERMIT ACTIONS ..... 9

    I.C.    SEVERABILITY ..... 10

    I.D.    DEFINITIONS ..... 10

    I.E.    DUTIES AND REQUIREMENTS ..... 11

    I.F.    SIGNATORY REQUIREMENT ..... 18

    I.G.    WASTE MINIMIZATION ..... 19

    I.H.    REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE SECRETARY ..... 19

    I.I.    CONFIDENTIAL INFORMATION ..... 20

    I.J.    DOCUMENTS TO BE MAINTAINED AT THE FACILITY ..... 20

    I.K.    PENALTIES ..... 21

    I.L.    PROPERTY RIGHTS ..... 21

    I.M.    DISPUTE RESOLUTION ..... 21

SECTION II - GENERAL FACILITY CONDITIONS ..... 22

    II.A.   DESIGN AND OPERATION OF FACILITY ..... 22

    II.B.   REQUIRED NOTICES ..... 22

    II.C.   GENERAL WASTE ANALYSIS ..... 23

    II.D.   SECURITY ..... 24

    II.E.   GENERAL INSPECTION REQUIREMENTS ..... 24

    II.F.   PERSONNEL TRAINING ..... 25

    II.G.   LOCATION STANDARDS ..... 25

    II.H.   SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE  
          WASTE ..... 26

    II.I.   PREPAREDNESS AND PREVENTION ..... 26

    II.J.   CONTINGENCY PLAN ..... 27

    II.K.   RECORDKEEPING AND REPORTING ..... 28

    II.L.   GENERAL CLOSURE REQUIREMENTS ..... 29

    II.M.   FINANCIAL REQUIREMENTS ..... 30

SECTION III - STORAGE IN CONTAINERS ..... 33

    III.A.  DESCRIPTION OF STORAGE FACILITIES ..... 33

    III.B.  PERMITTED AND PROHIBITED WASTE ..... 33

    III.C.  OPERATION AND MAINTENANCE ..... 33

    III.D.  CONTAINER STORAGE FACILITY CAPACITIES ..... 33

III.E.	CONDITION OF CONTAINERS .....	34
III.F.	COMPATIBILITY OF WASTE WITH CONTAINERS.....	34
III.G.	MANAGEMENT OF CONTAINERS.....	34
III.H.	INSPECTION SCHEDULES AND PROCEDURES .....	34
III.I.	CONTAINMENT SYSTEMS .....	34
III.J.	SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE .....	35
III.K.	SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE .....	35
III.L.	RECORDKEEPING .....	35
III.M.	CLOSURE .....	35
SECTION IV – STORAGE IN TANKS .....		37
IV.A.	DESCRIPTION OF TANKS .....	37
IV.B.	PERMITTED AND PROHIBITED WASTE .....	37
IV.C.	OPERATION AND MAINTENANCE .....	37
IV.D.	TANK SYSTEM STORAGE CAPACITIES.....	38
IV.E.	OPERATING REQUIREMENTS .....	38
IV.F.	RESPONSE TO LEAKS OR SPILLS.....	39
IV.G.	INSPECTION SCHEDULES AND PROCEDURES .....	40
IV.H.	RECORDKEEPING AND REPORTING .....	41
IV.I.	CLOSURE AND POST-CLOSURE CARE .....	42
IV.J.	SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES.....	42
SECTION V – AIR EMISSION STANDARDS .....		43
V.A.	AIR EMISSION STANDARDS APPLICABILITY.....	43
V.B.	AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS (SUBPART BB).....	43
V.C.	AIR EMISSION STANDARDS FOR TANKS AND CONTAINERS (SUBPART CC) .....	46
SECTION VI – CORRECTIVE ACTION .....		50
VI.A.	CORRECTIVE ACTION REQUIREMENTS .....	51
VI.B.	APPLICABILITY .....	51
VI.C.	IDENTIFICATION OF SOLID WASTE MANAGEMENT UNITS (SWMUs), AREAS OF CONCERN (AOCs), AND RELEASES .....	52
VI.D.	DESCRIPTION OF PAST AND/OR ON-GOING GROUNDWATER MONITORING AND CORRECTIVE ACTION ACTIVITES.....	53
VI.E.	NOTIFICATION AND ASSESSMENT REQUIREMENTS FOR NEWLY- IDENTIFIED OR SUSPECTED NEW SOLID WASTE MANAGEMENT UNITS (SWMUs), AREAS OF CONCERN (AOCs), AND RELEASES .....	53
VI.F.	NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES FROM PREVIOUSLY IDENTIFIED SOILD WASTE MANAGEMENT UNITS (SWMUs) AND AREAS OF CONCERN (AOCs).....	55
VI.G.	DESCRIPTION OF CURRENT CONDITIONS REPORT .....	55
VI.H.	CONFIRMATORY SAMPLING (CS).....	56
VI.I.	RCRA FACILITY INVESTIGATION (RFI) .....	57
VI.J.	INTERIM MEASURES (IM) .....	61

VI.K. CORRECTIVE MEASURES STUDY (CMS) ..... 63

VI.L. CORRECTIVE MEASURES SELECTION AND PERMIT MODIFICATION..... 65

VI.M. CORRECTIVE MEASURES IMPLEMENTATION..... 66

VI.N. CHANGE IN PROPERTY USE.. ..... 70

VI.O. ADDITIONAL WORK..... 70

VI.P. INSTITUTIONAL CONTROL (IC) REQUIREMENTS ..... 70

VI.Q. CORRECTIVE ACTION SCHEDULE OF COMPLIANCE MODIFICATION ..... 72

VI.R. WORK PLAN AND REPORT REQUIREMENTS ..... 72

VI.S. REIMBURSEMENT OF KDHE CORRECTIVE ACTION COSTS ..... 72

VI.T. CORRECTIVE ACTION FIELD ACTIVITIES NOTIFICATION ..... 74

VI.U. CORRECTIVE ACTION DOCUMENT SUBMITTAL AND WORK  
PERFORMANCE REQUIREMENTS ..... 75

VI.V. FACILITY SUBMISSION SUMMARY ..... 76

LIST OF ATTACHMENTS

ATTACHMENT 1 DEFINITIONS

ATTACHMENT 2 PERMIT WASTE CODES

ATTACHMENT 3 SUBPART CC CONTAINER STANDARDS

ATTACHMENT 4 SWMU AND AOC LOCATION MAP

ATTACHMENT 5 SWMU AND AOC DESCRIPTIONS

ATTACHMENT 6 1990 SPILL DESCRIPTION

ATTACHMENT 7 DESCRIPTION OF CURRENT CONDITIONS REPORT SCOPE OF  
WORK

ATTACHMENT 8 RCRA FACILITY INVESTIGATION SCOPE OF WORK

ATTACHMENT 9 ECOLOGICAL EXCLUSION SCREENING SCOPE OF WORK

ATTACHMENT 10 INTERIM MEASURES SCOPE OF WORK

ATTACHMENT 11 CORRECTIVE MEASURES STUDY SCOPE OF WORK

ATTACHMENT 12 CORRECTIVE MEASURES IMPLEMENTATION SCOPE OF WORK

ATTACHMENT 13 FORM OF INVOICE FOR OVERSIGHT COSTS

ATTACHMENT 14 FIELD ACTIVITES NOTIFICATION FORM

**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
ATSDR	Agency for Toxic Substances and Disease Registry
AWR	Annual Waste Recharacterization
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
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
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
NIOSH	National Institute for Occupational Safety and Health
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
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
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

Safety-Kleen Systems, Inc., (Operator) and David R. Ruffin, (Owner), herein referred to as the Permittee, is permitted to store 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, 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(1)(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(1)(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 II.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 II.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.

The Facility is an accumulation point for spent parts washer solution and other wastes generated by Safety-Kleen's customers, the majority of which are small quantity generators. Most wastes, which are amenable to reclamation, are ultimately shipped to a Safety-Kleen facility or a contract re-claimer, and then returned to Safety-Kleen's customers as product. Other wastes, which are not amenable to reclamation, are disposed of or treated at appropriate third-party outlets. The container storage area has a capacity of 2,304 gallons. Spent cleaning solution from parts washers and spent aqueous solutions are accumulated in a 10,000-gallon aboveground storage tank. The dumpster tank used to wash drums and ancillary equipment in the return and fill station has a capacity of 125 gallons.

### II.B. REQUIRED NOTICES

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

The Permittee shall notify the Secretary in writing at least four (4) weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source, as required by 40 CFR 264.12(a). Notice of subsequent shipments of the same waste from the same foreign source during the same calendar year is not required.

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

When the Permittee is to receive hazardous waste from an off-site source (except where the Permittee is also the generator), he 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 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. 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 for at least three (3) years from the date of such notification. Analytical data provided for waste determination and burning must be performed by a Kansas Certified Laboratory.

II.C.1. 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 2 of approved Part B application.

II.C.2. On or before April 1 and October 1 of each year, the Permittee shall collect samples from both the 10,000-gallon and 125 gallon tanks. Sampling intervals shall be no less than four (4) months or greater than eight (8) months. In addition, at least one sample shall be collected from the sediment of the 10,000-gallon tank whenever the tank is emptied. The sampling will be in accordance with the Facility's WAP found in Section 2 and the Annual Waste Recharacterization

(AWR) Plan found in Appendix D of the approved Part B application. [40 CFR 264.13(2)]

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. The Permittee shall submit the collected data as part of the AWR Report and when requested by the Secretary.

II.C.4. The Permittee must keep at the Facility the current WAP, AWR Plan, and AWR Report. The AWR Plan and AWR Report shall contain sampling procedures and schedule, lab methods, QA/QC procedures, and analytical results. The analytical results must include a copy of the raw laboratory data used in the AWR, chain-of-custody forms, and summary of the data validation and deviations from the WAP and AWR Plan.

## **II.D. SECURITY**

The Permittee shall comply with the security provisions of 40 CFR 264.14(b)(2) and (c) and the Preparedness and Prevention Plan, Section 3 of the approved Part B application.

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

The Permittee shall follow the inspection schedules set out in Section 3.2 and Appendix E 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 3.2 and Appendix E 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 3.2 and Appendix E 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. 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 3 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 5 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.G.1. Prevention of Flash Flooding

This Facility has a history of flash flooding due to the topography, location and surrounding infrastructure. As a condition of the 2006 permit, Safety-Kleen was required to address potential flash flood issues on the property. Subsequently, in May 2007, Safety-Kleen constructed a surface water detention area which widened the northern portion of the run-off channel and added a drainage swale along the north portion of the Facility to help direct water to the run-off channel. Additional preventative measures were taken in October 2007 as a result of a flash flood event in August 2007.

As a result of a May 2010 flash flood event, additional flood prevention improvements were completed on the facility property in December 2010 including: improving drainage on the south portion of the property, increasing the diameter of existing drainage pipes that help divert flood water to the run-off

channel, and performing routine maintenance and upkeep of all flood prevention measures. Notwithstanding the flood prevention improvements completed in December 2010, another flash flood event occurred at the Facility in August 2013.

## II.G.2. Flash Flood Prevention Requirements

II.G.2.a. As a result of continued flash flooding, within sixty (60) days of the effective date of this Permit, the Permittee shall prepare and submit to KDHE a flash flood mitigation plan for the facility property, including a schedule of implementation and completion. Upon KDHE approval, the Permittee shall implement the approved mitigation plan in accordance with the schedule contained therein. [40 CFR 264.31]

All enhancements that have been made to the flash flood prevention system shall be maintained, including but not limited to removal of accumulated soils and debris from water pathways, grading and maintenance of drainage pipes. [40 CFR 270.32(b)(2)]

II.G.2.b. Alternatively, in lieu of submitting a flash flood mitigation plan as described under Permit Condition II.G.2.a., the Permittee may pursue general facility closure under Permit Condition II.L.

## 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 Section 3.4.3 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 4 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.

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 3.5 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 4 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(1)(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 6 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 6 and Appendix H 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 6 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 6 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, Appendix H 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 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 Appendix H 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 container storage area in the warehouse is for the storage of parts washer solution, drum washer/dumpster sediment, spent immersion cleaner, dry cleaning wastes, spent aqueous cleaning solutions, tank bottom sediment, universal waste, and contaminated debris. The waste is stored in properly labeled containers to indicate their contents. The container storage area has secondary containment in the form of a 6-inch wide by 3.5-inch high steel reinforced concrete curb with an 11'19" x 2'6" x 1'8.5" (370 gallons) collection trench. Steel grates cover the trench to facilitate the movement of drums across it. The floor, curbing and trench of the drum storage area are sealed by coating the floor with sealant.

The Permittee is authorized to store 2,304 gallons of hazardous waste in containers, as described in Section 1.2.2 of the approved Part B application. Subject to the requirements of Permit Condition III.B., the Permittee may store hazardous waste generated on-site and off-site in storage areas covered by this Permit.

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

The Permittee is allowed to store the hazardous wastes identified in Attachment 2 of this Permit in the container storage areas described in Section III.A. of the Permit. The Permittee is prohibited from the storage of hazardous wastes that are not identified in Attachment 2.

### **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 the Section 3.3 of the approved Part B application.

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

The Permittee is allowed to store a maximum volume of 2,304 gallons of hazardous waste in the areas described in Section III.A. and subject to the terms of this Permit.

No palletized container unit stored in storage area may be stacked in greater than two tiers. Various sized containers, as described in Section 1.2.2 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 or portable tank of any kind stored in any of the container storage areas shall not exceed the net secondary

containment volume calculated in the approved Part B application (Section 1.2.2) for each area or the maximum stack height allowed by the National Fire Protection Agency 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 2.6.

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

The Permittee shall inspect the container storage areas at least weekly, in accordance with the Inspection Schedule contained in Appendix E 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 system in accordance with the plans and specifications contained in Section 1.2.2 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 3.4.3 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 incompatible wastes and 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 6 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 6 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 – STORAGE IN TANKS**

### **IV.A. DESCRIPTION OF TANKS**

The 10,000-gallon aboveground hazardous waste storage tank is 8.0 feet in diameter and 26.75 feet in height. It is constructed of 0.25-inch thick carbon steel, painted a light color to reflect sunlight and minimize corrosion. The tank is designed in accordance with Underwriters Laboratories Standard 142 and is located more than fifteen (15) feet from the property line, in accordance with the National Fire Protection buffer zone requirements. The secondary containment consists of a steel reinforced slab and dike wall. The slab is approximately 8-inches thick and the walls are approximately 8-inches wide and constructed of steel reinforced concrete. The concrete has been sealed with a chemical resistant coating to deter infiltration. The relief vent gasket and the manway cover are located at the top. The tank is vented to the atmosphere and equipped with a liquid level indicator and a high level alarm (Section 1.2.2 and Section 3.3.1 of approved Part B application) to indicate when the tank is approximately 95 percent full.

The 125-gallon dumpster/drum-washer hazardous waste storage tank is located in the return and fill area. The return and fill station is a sheet steel structure. The secondary containment is also a sheet steel structure. The dumpster/drum-washer unit is tight-piped to the tank.

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

- IV.B.1. The Permittee is allowed to store the hazardous wastes in the tank identified in Attachment 2 of this Permit and Section 3.3.1 of the approved Part B application, subject to the terms of this Permit.
- IV.B.2. The Permittee is prohibited from processing corrosive waste that exhibits a pH of less than or equal to 2, and those wastes that are not identified in Attachment 2 of this Permit.
- IV.B.3. The Permittee is prohibited from storing waste that either exhibit or carry the waste code D003 for the characteristic of reactivity.

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

The Permittee shall operate and maintain the tank storage in accordance with 40 CFR 264, Subpart J, 260.10, 266 and 268 and the specifications and design criteria contained in the approved Part B application.

#### IV.D. TANK SYSTEM STORAGE CAPACITIES

The Permittee shall limit the tank storage systems to the capacities listed in the table below.

Storage Unit	Storage Capacity
Storage Tank	10,000 gallons
Return and Fill Dumpster/Drum-Washer Storage	125 gallons
<b>TOTAL STORAGE CAPACITY</b>	<b>10,125 GALLONS</b>

#### IV.E. OPERATING REQUIREMENTS

IV.E.1. The Permittee shall not place hazardous waste in a tank system if it could cause the tank, its ancillary equipment, or containment system to rupture, leak, corrode, or otherwise fail. [40 CFR 264.194(a)]

IV.E.2. The Permittee shall prevent spills and overflows from the tank or containment systems using the methods described in the approved Part B application. [40 CFR 264.194(b)]

##### IV.E.3. Return and Fill Unit

The Permittee shall operate the return and fill unit in accordance with the following requirements:

IV.E.3.a. All electrical interlocking devices must be in good operating conditions.

IV.E.3.b. The overhead door shall be closed except when adding or removing waste from the unit or performing the routine maintenance or repairs.

IV.E.3.c. The overhead door can be opened for maintenance or repairs to the extent practicable to minimize releases of volatile organics into the environment.

IV.E.3.d. The lid of the dumpster tank shall be closed except when adding or removing waste from the unit or performing the routine maintenance or repairs.

IV.E.3.e. Inspection of the unit shall be conducted in accordance with equipment leaks specified in Section V of this Permit.

IV.E.4. The Facility must comply with all the applicable air emission requirements of 40 CFR 264 Subparts BB and CC in accordance with Section V of this Permit, and Appendix E of the approved Part B application.

#### **IV.F. RESPONSE TO LEAKS OR SPILLS**

In the event of a leak or a spill from the tank system, from a secondary containment system, or if a system becomes unfit for continued use, the Permittee shall remove the system from service immediately and complete the following actions (40 CFR 264.196(a)-(f)):

IV.F.1. Stop the flow of hazardous waste into the system and inspect the system to determine the cause of the release.

IV.F.2. Remove waste and accumulated precipitation from the system within twenty-four (24) hours of the detection of the leak, as is necessary, to prevent further release and to allow inspection and repair of the system. If the Permittee finds that it will be impossible to meet this time period, the Permittee shall notify the Secretary and demonstrate that a longer time period is required.

If the collected material is a RCRA hazardous waste, it must be managed in accordance with all applicable requirements of 40 CFR Parts 262-264 and 268.

IV.F.3. Contain visible releases to the environment. The Permittee shall immediately conduct a visual inspection of all releases to the environment and based on that inspection: (1) prevent further migration of the leak or spill to soils or surface water and (2) remove and properly dispose of any visible contamination of the soil or surface water.

IV.F.4. Close the system in accordance with the Closure Plan, contained in the approved Part B application, unless the following actions are taken:

IV.F.4.a. For a release caused by a spill that has not damaged the integrity of the system, the Permittee shall remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the tank system to service.

IV.F.4.b. For a release caused by a leak from the primary tank system to the secondary containment system, the Permittee shall repair the primary system prior to returning it to service.

IV.F.4.c. For a release to the environment caused by a leak from the portion of the tank system component that is not readily available for visual

inspection, the Permittee shall provide secondary containment that meets the requirements of 40 CFR 264.193 before the component can be returned to service.

- IV.F.4.d. If the Permittee replaces a component of the tank system for any reason, that component must satisfy the requirements for new tank systems or components in 40 CFR 264.192 and 264.193.
- IV.F.5. For all major repairs to eliminate leaks or restore the integrity of the tank system, the Permittee must obtain a certification by an independent, qualified, registered Kansas professional engineer that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. Examples of major repairs are: installation of an internal liner, repair of a ruptured tank, or repair or replacement of a secondary containment vault.

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

- IV.G.1. The Permittee shall inspect the tank systems, in accordance with the Inspection Schedule contained in the approved Part B application and shall complete the items in Permit Conditions IV.G.2. and IV.G.3. as part of those inspections.
- IV.G.2. The Permittee shall inspect the overfill controls, in accordance with the inspection schedule provided in the approved Part B application.
- IV.G.3. The Permittee shall inspect the following components of the tank system once each operating day [40 CFR 264.195(b) and (c)]:
  - IV.G.3.a. Above ground portions of the tank system to detect corrosion or releases of waste;
  - IV.G.3.b. Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and
  - IV.G.3.c. Construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system, to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).
- IV.G.4. The Permittee shall document compliance with Permit Condition IV.G. and place this documentation in the facility operating record. [40 CFR 264.195(d) and (h)]

#### **IV.H. RECORDKEEPING AND REPORTING**

- IV.H.1. The Permittee shall report to the Secretary, within twenty-four (24) hours of detection, whenever a leak or spill occurs from the tank system or secondary containment system to the environment. [40 CFR 264.196(d)(1)] A leak or spill of one pound or less of hazardous waste, that is immediately contained and cleaned-up, need not be reported. [40 CFR 264.196(d)(2)] Releases that are contained within a secondary containment system need not be reported. If the Permittee has reported the release pursuant to 40 CFR Part 302, this report satisfies the requirements of this permit condition. [40 CFR 264.196(d)(1)]
- IV.H.2. Within thirty (30) days of detecting a release to the environment from the tank system or secondary containment system, the Permittee shall report the following information to the Secretary [40 CFR 264.196(d)(3)]:
- IV.H.2.a. Likely route of migration of the release;
  - IV.H.2.b. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);
  - IV.H.2.c. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee shall provide the Secretary with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;
  - IV.H.2.d. Proximity of downgradient drinking water, surface water, and populated areas; and
  - IV.H.2.e. Description of response actions taken or planned.
- IV.H.3. The Permittee shall submit to the Secretary all certifications of major repairs to correct leaks within seven (7) days from returning the tank system to use. [40 CFR 264.196(f)]
- IV.H.4. The Permittee shall obtain, and keep on file at the Facility, the written statements by those persons required to certify the design and installation of the tank system. [40 CFR 264.192(g)]
- IV.H.5. The Permittee shall keep on file at the Facility the written assessment of the tank system's integrity.

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

- IV.I.1. At closure of the tank(s) or tank system(s), the Permittee shall remove all hazardous waste and hazardous waste residues from the tanks and the containment systems, in accordance with the procedures in the Closure Plan, Section 6 of the approved Part B application, and Section II.L. of this Permit. [40 CFR 264.197(a)]
- IV.I.2. The Permittee shall begin closure by submitting a Closure Work Plan, including SAP and QAPP consistent with the requirements Section 6 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.I.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 tank system perform post-closure care following 40 CFR 264.197(b) and (c).

#### **IV.J. SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES**

- IV.J.1. The Permittee shall not place ignitable or reactive waste in the tank system or in the secondary containment system, unless the waste is treated, rendered, or mixed before or immediately after placement in the tank system, so that: (a) the resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste in 40 CFR 261.21 or 261.23 and the precautions in 40 CFR 264.17(b) are complied with; or (b) the waste is managed in such a way that it is protected from any materials or conditions which may cause it to ignite or react; or (c) the tank is used solely for emergencies. [40 CFR 264.198(a)]
- IV.J.2. The Permittee shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in Tables 2-1 through 2-67 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981). [40 CFR 264.198(b)]

## SECTION V - AIR EMISSION STANDARDS

### V.A. AIR EMISSION STANDARDS APPLICABILITY

Air emissions from equipment leaks, tanks and containers are regulated under 40 CFR 264 Subparts BB, and CC; however, each of these subparts contain provisions that allow a facility which is also subject to regulation under 40 CFR Parts 60, 61, or 63 to determine and demonstrate compliance with the Subpart BB and CC standards by documenting compliance pursuant to the relevant provisions of the regulations at 40 CFR Parts 60, 61, or 63.

V.A.1. The Permittee shall also comply with the requirements of 40 CFR 264 Subpart BB for those pumps, valves, compressors, sampling connecting systems, open-ended valves or lines, pressure relief devices, flanges and other connectors, closed vent systems and control devices, which are subject to 40 CFR 264 Subpart BB.

V.A.2. The Permittee shall meet the test methods and procedures, recordkeeping requirements, and reporting requirements of 40 CFR 264 Subpart BB.

### V.B. AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS (SUBPART BB)

Equipment leaks are associated with units that manage hazardous waste with organic concentrations of at least 10 percent by weight. Each piece of equipment subject to 40 CFR 264 Subpart BB requirements shall be marked in such manner that it can be distinguished readily from other pieces of equipment. [40 CFR 264.1050(d)]

The Facility shall identify wastes subject to this part in accordance with Section II.C. of this Permit. [40 CFR 264.1063(d)] Based on identification of any such wastes, the Facility will follow the air emission standards for equipment leak protocol for light liquid and/or gas/vapor service or heavy liquid service.

In light liquid service means that the piece of the equipment contains or contacts a waste stream where the vapor pressure of one or more of the organic components in the stream is greater than 0.3 kilopascals (kPa) at 20 degrees C, the total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 degrees C is equal to or greater than 20 percent by weight, and the fluid is a liquid at operating conditions.

In heavy liquid service means that the piece of equipment is not in gas/vapor service or in light liquid service.

In gas/vapor service means that the piece of equipment contains or contacts a hazardous waste stream that is in the gaseous state at operating conditions.

V.B.1. Standards for Pumps in Light Liquid Service [40 CFR 264.1052]

- V.B.1.a. The Permittee shall conduct monthly monitoring to detect leaks following the procedures in 40 CFR 264.1063(b).
- V.B.1.b. The Permittee shall conduct visual inspection for pump seal leakage at least on a weekly basis.
- V.B.1.c. A leak is detected if: (1) a leak detection instrument reads 10,000 parts per million (ppm) or greater, or (2) there are indications of liquid dripping from the pump seal.
- V.B.1.d. The Permittee shall repair leaks as soon as practicable. Repairs are to be made within fifteen (15) calendar days after detection. Time extensions for repairs must be in accordance with 40 CFR 264.1059.

V.B.2. Standard for Pressure Relief Devices in Gas / Vapor Service [40 CFR 270.25(d), 264.1054]

- V.B.2.a. Except during pressure releases, no pressure relief device shall release detectable emissions. A detectable emission is indicated by an instrument reading of 500 ppm or greater above background levels.
- V.B.2.b. Within five (5) calendar days after a pressure release, no detectable emissions shall emanate from pressure release device.

V.B.3. Standards for Open-ended Valves or Lines [40 CFR 264.1056]

Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve that seals the open end at all time except during operations, requiring hazardous waste stream flow through the open-ended valve or line.

V.B.4. Standards for Valves in Gas/Vapor Service or Light Liquid Service [40 CFR 264.1057]

- V.B.4.a. The Permittee shall monitor based on detection of leaks in accordance with monitoring schedule in the approved Part B application. A reading of 10,000 ppm denotes a detected leak.
- V.B.4.b. The Permittee shall repair leaks as soon as practicable. Repairs are to be made within fifteen (15) calendar days after detection. The

first attempt at repair shall be made no later than five (5) calendar days after each leak is detected.

V.B.5. Standards for Pumps and Valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and Flanges and other Connectors.  
[40 CFR 270.25(d), 264.1058]

- V.B.5.a. Monitoring is required within five (5) days by the method specified in 40 CFR 264.1063(b) if evidence of potential leak is found by sight, sound, smell, or other detection method.
- V.B.5.b. A leak is detected if a leak detection instrument reads 10,000 ppm or greater.
- V.B.5.c. The Permittee shall repair leaks as soon as practicable. Repairs are to be made within fifteen (15) calendar days after detection. The first attempt at repair shall be made no later than five (5) calendar days after each leak is detected.
- V.B.5.d. Time extensions for repairs must be in accordance with 40 CFR 264.1059.

V.B.6. Testing [40 CFR 264.1063]

The Permittee shall perform the compliance testing according to the requirements of 40 CFR 264.1063.

V.B.7. Recordkeeping Requirements [40 CFR 264.1064]

- V.B.7.a. The Permittee shall record the following information in the facility's operating record:
  - i. Equipment identification number and hazardous waste management unit identification,
  - ii. Approximate locations within the Facility,
  - iii. Type of equipment (e.g., pump or pipeline valve),
  - iv. Percent by weight total organics in the hazardous waste stream at the equipment,
  - v. Hazardous waste state at the equipment (e.g., liquid), and
  - vi. Method of compliance with the standard.

- V.B.7.b. Record of Leaks: The Permittee shall record the following information in an inspection log that shall be kept in the facility operating record when each leak is detected:
- i. The instrument and operator identification numbers and the equipment identification number,
  - ii. The date evidence of a potential leak was found,
  - iii. The date the leak was detected and the dates of each attempt to repair the leak,
  - iv. Repair methods applied in each attempt to repair the leak,
  - v. If maximum instrument reading measured by the methods specified in 40 CFR 264.1063(b) after each repair attempt is equal to or greater than 10,000 ppm,
  - vi. "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen (15) calendar days after discovery of the leak,
  - vii. Documentation supporting the delay of repair of a valve in compliance with 40 CFR 264.1059(c),
  - viii. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a hazardous waste management unit shutdown,
  - ix. The expected date of successful repair of the leak if a leak is not repaired within fifteen (15) calendar days, and
  - x. The date of successful repair of the leak.

V.B.8. Reporting Requirements [40 CFR 264.1065]

The Permittee shall fulfill the reporting requirements according to 40 CFR 264.1065.

**V.C. AIR EMISSION STANDARDS FOR TANKS AND CONTAINERS (SUBPART CC)**

The Permittee shall comply with all applicable requirements of 40 CFR 264 Subpart CC and, Exhibit E-8 of the approved Part B application.

V.C.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. Based upon the knowledge, Safety-Kleen determined that all wastes managed in tanks or containers may display an average volatile organic concentration of greater than 500 ppm at the point of origination. Therefore, all hazardous waste managed in tanks or containers at this Facility shall be managed in accordance with the applicable 40 CFR 264 Subpart CC standards (Part B, Appendix E). Documentation of any waste determination must be kept in the facility operating records.

#### V.C.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 20degrees 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.C.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.C.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.C.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.C.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.

V.C.2.e Container level applicable to Safety-Kleen

Based on the Table 1 of Attachment 3 and Appendix E of Part B Application, Container level 1 is applicable to Safety-Kleen Dodge. The Facility shall meet the Container level 1 requirements shown in Table 2 of Attachment 3 of this Permit. The Facility must submit a permit modification request to KDHE if it is found that Container level 1 is no longer applicable to the Facility.

V.C.3. Requirements applicable to Tanks

40 CFR 264 Subpart CC standards applicable to tanks containing hazardous wastes are found in 40 CFR 264.1084. The 40 CFR 264 Subpart CC standard establishes two levels of air emission controls for tanks based on the size of the tank, the maximum organic vapor pressure of the waste and whether or not the tank is used in a waste stabilization process. The Facility is responsible for determining whether Tank Level 1 or Tank Level 2 Controls are applicable. Tank Level 1 Controls pertain to tanks with fixed-roof covers only.

Level 1

A fixed roof tank may be used if:

- Waste has maximum organic vapor pressure less than the cutoff for the tank design capacity (see table below)
- No heating to temperature greater than the temperature at which the vapor pressure was determined
- No waste stabilization (curing or mixing/agitation) occurs in the tank

Tank Design Capacity (gallons)	Waste Maximum Organic Vapor Pressure (psi)
= or > 40,000	<0.75
= or > 20, 000 but < 40,000	<4.0
<20,000	<11.1

Facilities using the Tank Level 1 controls must determine the maximum organic vapor pressure for each hazardous waste placed in a tank using the procedures specified in 40 CFR 264.1084(c). The Facility must maintain records of the maximum organic vapor pressure including the date and time the samples were collected, the analysis method used, and the analytical results.

Based on above table and Appendix E of Part B, the waste tank and drum washer tanks at the Facility are Level 1 tanks under 40 CFR 264 Subpart CC. The tank design capacity is less than 20,000 gallons and the waste in the tank exhibits a vapor pressure of less than 76.6 kPa (11.1 psi). Actual vapor pressure managed in tanks is 0.267 kPa (Part B Application, Appendix E). The Facility must submit permit modification request to KDHE if it is found that Tank Level 1 is no longer applicable to the Facility.

Records of all inspections regardless of the tank control level must be kept at the Facility for a minimum of three (3) years after the date of the inspection.

## SECTION VI – CORRECTIVE ACTION

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;
- 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 by reference. 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 1.B.1. Any administrative

changes shall be categorized as a Class I permit modification. All other changes to Section VI of this Permit shall be categorized as a Class II permit modification.

## **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 Section 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 RELEASES**

The updated 2013 list below comprises and reconciles all former and new SWMUs and AOCs. This list allows all identified SWMUs and AOCs, regardless of when they were initially identified, to be fully accounted for in this Permit. Attachment 4 of this Permit includes a map which identifies the location of each 2013 SWMU and AOC on the updated 2013 list.

##### SWMU

- 2013-1 20,000-gallon split aboveground used oil storage tank and connection point
- 2013-2 Drum Storage Area
- 2013-3 Existing Return and Fill Station
- 2013-4 10,000-gallon waste solvent tank and 8,000-gallon fresh solvent tank
- 2013-5 Former Return and Fill Station
- 2013-6 Used Oil Sample Storage Shed
- 2013-7 Temporary Flammable Storage Shelter
- 2013-8 Former 12,000-gallon used solvent underground storage tank (removed w/no further action)

##### AOC

- 2013-1 Non-flammable transfer storage area (warehouse)
- 2013-2 Concrete runoff area

A detailed description of each SWMU and AOC listed above is presented in Attachment 5 to this Permit.

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

In February 1990, an aboveground storage tank release occurred at the Facility of an estimated 9,000 gallons of spent mineral spirits. A description of the spill event, initial spill response, and subsequent assessment activities, are detailed in Attachment 6 of this Permit. Other than limited spill response, assessment, and monitoring performed as a result of the 1990 spill, no other groundwater monitoring or corrective action activities have occurred at the Facility.

### **VI.D.1. Expedited Corrective Action Requirements for 1990 Spill**

As an expedited milestone requirement in this Permit, the estimated 9,000-gallon release of spent mineral spirits that occurred in February 1990 shall be fully assessed, and mitigated as necessary, under the corrective action provisions contained herein, as directed and approved by KDHE. Concurrently, verification of potential release(s) associated with the Former Return and Fill Station (SWMU 2013-5) shall be conducted and, if release(s) confirmed, KDHE shall provide written notification to the Permittee to fully assess and mitigate as necessary. In order to fulfill this expedited milestone requirement, the Permittee shall initially perform confirmatory sampling activities as described in Permit Condition VI.H., with the initial document deliverable being an Expedited Confirmatory Sampling (CS) Work Plan identified in Permit Condition VI.V. The Expedited CS Work Plan shall be submitted within ninety (90) calendar days from the effective date of this Permit. If based on results of the confirmatory sampling effort KDHE determines that additional corrective action-related activities are necessary, the Permittee shall be required to prepare and implement a work plan as outlined in Permit Condition VI.I. and/or VI.J., as directed by KDHE.

## **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 Condition 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, possibly in lieu of deferral until unit or facility closure as described in Permit Condition VI.B.1., 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 forty-five (45) 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 7 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 7. 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 8 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 Section 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 8. 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 8.

- 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 9 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 10 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 10.
- 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 11 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 Section 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 11 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 RCRA §3005(c)(3) and 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 12, 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 12. 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, including but not limited to, *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 and the draft *Institutional Controls: A Guide to Implementing, Monitoring, and Enforcing Institutional Controls at Superfund, Brownfields, Federal Facility, UST and RCRA Corrective Action Cleanups*, February 2003.
- 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.
  - 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.

#### **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 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. Costs incurred by KDHE 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 costs incurred by KDHE during each calendar quarter forty-five (45) days following the end of the calendar quarter. Unless the Permittee disagrees with the costs pursuant to 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 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 13.
- VI.S.3. Payment for all 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. 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 costs incurred by KDHE 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 14) 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 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 Section 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.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 this Permit.

SUBMISSION REQUIREMENTS	DUE DATE	PERMIT CONDITION
Expedited CS Work Plan	Within ninety (90) calendar days from effective date of Permit	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 forty-five (45) calendar days from date of written KDHE request	VI.G.1.
CS Work Plan	Within forty-five (45) calendar days from date of written KDHE request	VI.H.1.

SUBMISSION REQUIREMENTS	DUE DATE	PERMIT CONDITION
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.
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 EPA'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. VI.J.3.a. VI.M.3.a.

# Attachment 1

## **ATTACHMENT 1 DEFINITIONS**

For purposes of this Permit, as provided under Permit Condition I.D., terms used herein shall have the same meaning as those in 40 CFR Parts 124, 260, 261, 264, 266, 268, and 270, unless this Permit specifically provides otherwise; where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

“Ancillary equipment” means any device including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps that is used to distribute, meter, or control the flow of hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal on-site, or to a point of shipment for disposal off-site.

“Annually” means one time per calendar year such that at least eleven (11) months and no more than thirteen (13) months have elapsed since the last annual event.

“Area of Concern” or “AOC” means any area of the facility under the control or ownership of the owner or operator where a release to the environment of hazardous waste(s) or hazardous constituents has occurred, is suspected to have occurred, or may occur, regardless of the frequency or duration of the release.

“BWM” means the Bureau of Waste Management within the KDHE – Division of Environment.

“Closure Plan” means the closure plan set forth in Section 6 of the approved Part B application, and any subsequent KDHE-approved revisions or modifications to the closure plan.

“Contingency Plan” means the contingency plan discussed in Section 4 of the approved Part B application, and any subsequent KDHE-approved revisions or modifications to the contingency plan.

“Daily” means once each calendar day, unless expressly stated to be a working day. “Working day” means a day other than a Saturday, Sunday or State of Kansas holiday. In computing any period of time under this Permit where the last day would fall on a Saturday, Sunday or holiday recognized by the State of Kansas, the period shall run until the end of the next working day.

“Data Quality Objectives (DQOs)” means performance and acceptance criteria that clarify study objectives, define the appropriate type of data, and specify tolerable levels of potential decision errors that will be used as the basis for establishing the quality and quantity of data needed to support decisions. Unless otherwise approved by KDHE, the DQOs shall be prepared consistent with 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.*

“Day” or “Days” means a calendar day(s) unless otherwise specified.

“Engineering Controls” means any mechanism used to contain or stabilize contamination that ensures the effectiveness of a remedial action and acts as a physical barrier between the contamination and contact with humans or the environment.

“EPA” means the United States Environmental Protection Agency.

“Facility” means the Permittee’s facility located at 600 East Trail Street, Dodge City, KS, and all contiguous property at this location under the control of the Permittee.

“Hazardous Constituent” means any constituent identified in Appendix VIII of 40 CFR Part 261 or any constituent identified in Appendix IX to 40 CFR Part 264.

“Hazardous Waste” means any solid waste as defined at 42 U.S.C. 6903 (27) and 40 CFR 261.2 which also meets any of the criteria of a hazardous waste as listed in 42 U.S.C. 6903 (5) and 40 CFR 261.3.

“HSWA” means the Hazardous and Solid Waste Management Act of 1984.

“In gas/vapor service” means that the piece of equipment contains or contacts a hazardous waste stream that is in the gaseous state at operating conditions.

“In heavy liquid service” means that the piece of equipment is not in gas/vapor service or in light liquid service.

“In light liquid service” means that the piece of the equipment contains or contacts a waste stream where the vapor pressure of one or more of the organic components in the stream is greater than 0.3 kilopascals (kPa) at 20 degree C, the total concentration of the pure organic components having a vapor pressure greater than 0.3 kilopascals (kPa) at 20 degree C is equal to or greater than 20 percent by weight, and the fluid is a liquid at operating conditions.

“Inspection Schedule” means the inspection schedule set forth in Section 3.2 of the approved Part B application, and any subsequent KDHE-approved revision or modification to the Inspection Schedule.

“Institutional Controls” means administrative and/or legal mechanisms that help limit exposure to humans from contamination and/or protect the integrity of the remedy.

“Interim Measures” means those actions taken to immediately control or abate threats or potential threats to human health or the environment from releases or potential releases of

hazardous waste or hazardous constituents, which can be initiated before implementation of the final corrective measures for a facility, or in an emergency situation for an operating facility only.

“KDHE” means the Kansas Department of Health and Environment.

“Monthly” means twelve (12) times per year (once per calendar month) such that at least fifteen (15) days and no more than forty-five (45) days have elapsed since the last monthly event.

“PDF format” means the Adobe Portable Document Format developed by Adobe Systems Incorporated, or Permittee may use any other electronic format as agreed upon between the Permittee and KDHE. Reference herein to an “electronic copy” refers to PDF format, or in an electronic format as otherwise agreed.

“Permit Application” means the Permit Application originally submitted 7/6/2012, modified by subsequent amendments dated 5/31/2013 including the Part A application dated 5/30/2013 and any subsequent revisions or modifications.

“Quality Assurance Project Plan” means a plan of the same name prepared consistent with the EPA guidance document titled *EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5)*, and any subsequent revisions or editions.

“Quarterly” means four times per calendar year such that at least two (2) months and no more than four (4) months have elapsed since the last quarterly event.

“RCRA” means the Resource Conservation and Recovery Act of 1976, as amended by HSWA in 1984.

“RCRA Corrective Action Plan” means the document of the same name dated May 1994 and given the OSWER Directive Number 9902.3-2A and EPA Document Number 520-R-94-004, and any subsequent revisions or editions.

“RCRA Facility Investigation Guidance” means the document of the same name dated May 1989 and given the OSWER Directive Number 9502.00-6D and the EPA Document Number 530/SW-89-031, and any subsequent revisions or editions.

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

“RSK Manual” means the KDHE *Risk-Based Standards for Kansas Manual – 5<sup>th</sup> Version* (October 2010), and any subsequent updates/revisions.

“Secretary” means the Secretary of the Kansas Department of Health and Environment (KDHE), or a designee or authorized representative of KDHE.

“Semi-Annually” means two times per calendar year such that at least five (5) months and no more than seven (7) months have elapsed since the last semi-annual event.

“Site” means the real property, buildings, structures and fixtures located at 600 East Trail Street, Dodge City, KS and shall include all areas and media from which hazardous constituents or wastes, and any other contamination or pollution connected with the real property, buildings, structures and fixtures have been release and/or have migrated or emanated.

“Solid Waste Management Unit” or “SWMU” means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

“Stabilization” means actions to control or abate threats to human health and/or the environment from releases at RCRA facilities, and/or to prevent or minimize the further spread of contamination while long-term remedies are pursued.

“Standard Operating Procedure” or “SOP” means a document that establishes or prescribes methods to be followed in the operation of hazardous waste storage, treatment and disposal activities. All SOPs must be signed by a responsible corporate officer and include the certification in 40 CFR 270.11(d)(1) . The responsible corporate officer shall be as defined in 40 CFR 270.11(a).

“Solid Waste Management Unit” or “SWMU” means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous wastes. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

“Waste Analysis Plan” means the waste analysis plan set forth in Section 2 of the approved Part B application, and any subsequent KDHE-approved revisions or modifications to the waste analysis plan.

“Weekly” means fifty-two (52) times per calendar year such that no fewer than five (5) days and no more than ten (10) days have elapsed since the last weekly event.

## Attachment 2

**ATTACHMENT 2  
PERMIT WASTE CODES**

The SAFETY-KLEEN SYSTEMS, Inc., Dodge City, Kansas, facility may accept for storage the following RCRA waste codes, as defined in 40 CFR 261 Subparts C and D, subject to the terms of this Permit.

**Waste Codes Allowed for Storage at the Container Storage Area**

D001 D004 D005 D006 D007 D008 D009 D010 D011 D018 D019 D021 D022 D023 D024  
D025 D026 D027 D028 D029 D030 D032 D033 D034 D035 D036 D037 D038 D039 D040  
D041 D042 D043 F001 F002 F003 F004 F005

**Waste Codes Allowed for Storage in the Tanks**

D001 D004 D005 D006 D007 D008 D009 D010 D011 D018 D019 D021 D022 D023 D024  
D025 D026 D027 D028 D029 D030 D032 D033 D034 D035 D036 D037 D038 D039 D040  
D041 D042 D043

# Attachment 3

**ATTACHMENT 3  
SUBPART CC CONTAINER STANDARDS**

Table 1 – Determination of Applicable Level of Control for Containers of Hazardous Waste Subject to Subpart CC Regulations

Container Design Capacity	Containers in Light Material Service	Does Waste Stabilization Occur in the Container?	Level of Control
<0.1 m <sup>3</sup> (approx. 26 gals.)	Yes	Yes	Exempt
	No	No	Exempt
	No	Yes	Exempt
	Yes	No	Exempt
>=0.1 m <sup>3</sup> and <4.46 m <sup>3</sup> (approx. 119 gals.)	Yes	Yes	Container level 3
	No	No	Container level 1
	No	Yes	Container level 3
	Yes	No	Container level 1
>=0.46 m <sup>3</sup>	Yes	Yes	Container level 3
	No	No	Container level 1
	No	Yes	Container level 3
	Yes	No	Container level 2

Table 2 - Container Standards: Container standards apply to containers greater than 0.1 m<sup>3</sup> (about 26 gallons). There are 3 levels of acceptable controls:

<u>LEVEL 1</u> Containers <0.46 m <sup>3</sup> (119 gal) or containers >0.46 m <sup>3</sup> (119 gal) but not in light material service	<u>LEVEL 2</u> Containers not meeting Level 1 criteria of size and waste type	<u>LEVEL 3</u> Containers > 0.1m <sup>3</sup> used for waste stabilization
Use container that meets DOT regulations or	Use container that meets DOT regulations or	Place the open container inside a total enclosure vented directly to a control device or
Use covered container or	Use container that operates with no detectable organic emissions as tested using Method 21 of 40 CFR Part 60 or	Vent the container opening directly to a control device
Use organic suppression barrier	Use container that is vapor tight as tested using Method 27 of 40 CFR Part 60	

“Light material service” means the vapor pressure of one or more of the organic constituents is >0.3 kPa at 20 degrees C AND the total concentration of pure organic constituents with vapor pressures >0.3 kPa at 20 degrees C is > or = 20% by weight.

# Attachment 4



# Attachment 5

## ATTACHMENT 5 SWMU AND AOC DESCRIPTIONS

*SWMU 2013-1. 20,000-gallon split aboveground used oil storage tank and connection point:* This SWMU consists of two existing 10,000-gallon aboveground used oil tanks and the tank/truck connection point. This SWMU is located immediately north of the Safety-Kleen warehouse. The used oil storage tank holds used oil for no more than 35 days before it is transferred by a contracted waste oil hauler. There is a secondary containment system constructed of steel with a 22,000-gallon capacity. This SWMU is co-located with the two former 6,000-gallon underground storage tanks (USTs) that were removed in 1993. These tanks were misidentified in the 1989 RFA as waste solvent tanks. They were closed in 1993 during the partial closure and it was determined at the time of closure that the tanks held clean solvent. The soils surrounding these tanks were sampled and showed minimal impact and were considered certified closed based on the 1993 Partial Closure Certification Report. These former USTs had been identified in the 1992 and 2006 permit as SWMUs 1 and 2.

*SWMU 2013-2. Drum Storage Area:* The Drum Storage Area is located in the northeast corner of the warehouse located along the east edge of the property with a poured concrete floor. The drum storage area has a capacity of 2,304 gallons. This storage area also has a secondary containment system comprised of a concrete curb with a collection trench, which has a 370-gallon capacity. This trench has no drain and if the Facility has a catastrophic event, the secondary containment could not contain such a release.

*SWMU 2013-3. Existing Return and Fill Station:* The Existing Return and Fill Station consists of a loading dock and two 125-gallon dumpsters. This SWMU is attached to the warehouse, with the dumpsters side by side. The north dumpster is part of the continued use program (CUP). The south dumpster is a drum washer which receives bottom sediment, spent parts washer solvent, and spent aqueous brake cleaning solution. This SWMU has a 748-gallon secondary containment pan at its base. Both dumpsters are holding tanks where spent solvent passes through to the 10,000-gallon waste solvent storage tank.

*SWMU 2013-4. 10,000-gallon waste solvent tank and 8,000-gallon fresh solvent tank:* These aboveground solvent tanks consist of one 8,000-gallon clean solvent tank and a 10,000-gallon waste solvent tank. The spent solvents are transferred to the waste tank via the Existing Return and Fill Station (SWMU 2013-3). Both tanks are constructed of carbon steel and painted to reflect sunlight. The secondary containment system consists of a steel-reinforced concrete slab and dike which holds 24,824 gallons. Stainless steel covers the majority of the base. These tanks are equipped with an audiovisual high-level alarm. This SWMU is located in the northeast portion of the Facility.

*SWMU 2013-5. Former Return and Fill Station:* The Former Return and Fill Station was dismantled and decontaminated in April 1993. The location of this SWMU is near the stairs, which gives access to SWMU 2013-4 and the Flammable Storage Shed (SWMU 2013-7), and immediately in front (south) of the concrete-retaining wall along the north side of the parking

area. The Former Return and Fill Station was not certified closed during the Partial Closure Report in 1993 and no samples were taken in the immediate vicinity. The Former Return and Fill Station has been listed in previous permits as SWMU 3.

*SWMU 2013-6. Used Oil Sample Storage Shed:* This is a small unpermitted temporary storage facility that holds the used oil samples that are collected when used oil is picked up from clients and brought to the Facility. These samples are held for up to 90 days and consist of small jars. The samples are used to identify clients who may have supplied contaminated oil. No secondary containment exists for this structure. This SWMU is located adjacent to the Temporary Flammable Waste Storage Shelter (SWMU 2013-7), which rests on the elevated portion of the Facility north of the concrete retaining wall.

*SWMU 2013-7. Temporary Flammable Waste Storage Shelter:* This SWMU is designed to hold flammable waste for 10 days or less before being transferred for disposal. Waste is held in marked containers ranging from 5-gallon containers to 350-gallon totes. The secondary containment for this structure consists of a metal containment pan with a capacity of approximately 448 gallons. The Temporary Flammable Waste Storage Shelter is located in the northwest portion of the Facility, north of the concrete retaining wall and adjacent to SWMU 2013-6.

*SWMU 2013-8. Former 12,000-gallon Used Solvent Underground Storage Tank (removed with no further action required):* This SWMU was removed during the 1993 partial closure. This UST was incorrectly identified in the 1989 RFA as a 10,000-gallon clean solvent UST located adjacent to the north end of the warehouse. During the partial closure, it was determined that this UST had a 12,000-gallon capacity for storage of waste solvent. It was also determined to be located due west of the location identified in the 1989 RFA, which places the former unit directly south of the Temporary Flammable Waste Storage Shelter. Due to these inaccuracies, this UST was never listed as a SWMU, and only identified as an AOC in the 1989 RFA (AOC 5.3). During the partial closure, soil samples were taken and showed minimal impact. This area was considered certified closed based on the 1993 Partial Closure Certification Report; due to this no further action is required for this newly identified SWMU.

*AOC 2013-1. Non-Flammable Transfer Storage Area:* This AOC comprises the 10-day transfer waste storage area inside the warehouse on the eastern edge of the property. It includes all the open floor space outside of the permitted container storage area (SWMU 2013-2). Non-flammable waste containers of varying size, ranging from 5-gallon containers to 350-gallon totes, are stored in this area temporarily prior to shipping for off-site disposal.

*AOC 2013-2. Concrete Run-Off Area:* The Concrete Run-Off Area consists of the western portion of the facility parking lot. It is located inside the fenced boundary of the property and represents an area that has multiple uses which pose possible contamination. These activities include loading and unloading of product and waste, and transfers of bulk spent and clean solvents between trucks and aboveground storage tanks. This area of the parking lot would receive any accidental spills or releases from any location that lacked secondary containment or

if that containment were to be overwhelmed. This Facility has a long history of flash flooding; the potential exists for a release to have occurred during a previous or future flood event. A drain (identified in the 1989 RFA as AOC 5.2) is located along the western retaining wall which discharges into the city storm ditch, which eventually flows into the Arkansas River some 1,500 feet to the south. Additionally, this area was impacted during the 1990 release of spent mineral spirits which resulted in groundwater monitoring and other spill response activities. Groundwater monitoring wells associated with this spill were plugged and abandoned in 1998 when the wells were found to be consistently dry or, when samples were taken, found to have very low levels or undetectable levels of contamination.

# Attachment 6

## **ATTACHMENT 6 1990 SPILL DESCRIPTION**

### General Spill Information

In February 1990, a release of an estimated 9,000 gallons of spent mineral spirits occurred from an aboveground storage tank. This release is believed to have been a result of failed theft or vandalism. The exact timing of this incident is unknown, but was estimated to have occurred between February 18 and 19, 1990. Neighboring business noticed the spill and reported it to the Dodge City Fire Department (DCFD) on February 20, 1990; KDHE was then contacted by the DCFD. KDHE immediately notified Safety-Kleen and Safety-Kleen initiated their emergency spill response actions. This release impacted the soils and groundwater in the vicinity of former underground storage tanks and the former return and fill station that were scheduled for removal, as well as the western portion of the Facility (run-off area) and the adjacent city drainage ditch. Stained soils were mapped, based on a visual inspection, from the release point at the aboveground storage tank north of the concrete retaining wall, along the western portion of the Facility (run-off area) and the city drainage ditch.

### Spill Response

Spill assessment activities began on February 21, 1990. Soil samples were taken at the surface near the point of release; these soil samples indicated the presence of mineral spirits, but did not exhibit the characteristics of hazardous waste. Surface water samples were taken from the city drainage ditch, and spent mineral spirits were detected ranging from 0.61 to 5.2 milligrams per liter (mg/L).

Soil and sand that had accumulated in the concrete run off area were cleaned and stockpiled. Stained soils from the concrete lined portion of the drainage ditch were removed and stockpiled. The area where the stockpile was located was graded to provide a flat area for future drilling; the remaining stained soils were containerized and disposed of offsite.

Near the point of the release, soils were excavated. Soils with a mineral spirit odor were encountered from the ground surface to a depth of approximately 10 feet below grade adjacent to the foundation of the underground storage tanks (USTs). Due to the proximity of the tanks, the excavation was backfilled with the contaminated soil, so as to not disturb the integrity of the concrete wall, pad and USTs. Five test pits were excavated near the point of release; two of these pits exhibited soil degradation from the ground surface to a depth of 15 feet. These test pits were also backfilled with their native soil. The findings from the test pits correlated with the surface soil staining that was observed during the visual site inspection. A shallow gas survey was conducted February 23, 1990. Numerous test holes (42) were tested for shallow subsurface hydrocarbon degradation using a photoionization detector (PID). The locations that had elevated organic vapor readings above 500 parts per million (ppm) were consistent with the mapped soil staining and test pits. Soil quality in the drainage ditch was also investigated and found to have

the greatest impacts where the mineral spirits had pooled north of the concrete-lined portion of the drainage ditch (west and slightly north of the spill area). The extent of the vertical degradation ranged from 5 feet below the surface to the depth groundwater was first encountered. PID readings indicated high organic vapor concentrations throughout the earthen portion of the drainage ditch. Limited soil samples were taken. Analytical results indicated cadmium, chromium and lead were below or very near the background concentration levels. Mineral spirits were found at concentrations ranging from 590 to 9,000 milligrams per kilogram (mg/kg) in the locations where the spill was most highly concentrated. No other facility-related volatile organic compounds (VOCs) were detected and all semi-VOCs (SVOCs) were below quantitation limits in samples collected from the most degraded areas.

During the week of February 27, 1990, 15 borings were advanced onsite. Soils were screened for total organic vapors using a PID and samples which indicated high readings were retained for further analysis. The samples that indicated elevated levels of mineral spirits, ranged from 0.87 to 14.0 mg/kg. PID readings were consistent with previously mapped areas of contamination. Readings at those locations indicated high organic vapor concentrations from the ground surface to groundwater. Five of these borings were completed as groundwater monitoring wells. Monitoring wells were screened across what was believed to be the upper most aquifer at the site, at a depth of approximately 20-22 feet below ground surface. Three additional monitoring wells were added to better define the extent of downgradient contamination in December 1990.

Regional data suggests the groundwater interval previously monitored by Safety-Kleen is a perched aquifer that is highly subject to seasonal climate events and has limited recharge. The hydraulic gradient is nearly flat on the property; however the direction of groundwater flow is generally northeast. Groundwater wells in the immediate vicinity are typically 150 to 200 feet deep and draw from the Ogallala Aquifer. Both the monitoring network and the investigation conducted by Safety-Kleen were not designed to assess impacts in the Ogallala Aquifer.

### Partial Closure

In the spring of 1993, the inactive return and fill station and the former USTs that had been scheduled for removal were decontaminated and removed. Three USTs were removed: two 6,000-gallon clean mineral spirit tanks, located east of the spill area, and a 12,000-gallon spent mineral spirit tank located within the spill area. The removal of these tanks resulted in two excavation pits. Soil samples (15) were collected from the sidewalls and floor of the tank excavation areas. These soil samples were analyzed for mineral spirits, VOCs, cadmium, chromium and lead. Soil samples indicated mineral spirits below the analytical detection limit of 10-13 mg/kg. None of the soil samples indicated detectable quantities of VOCs. Cadmium was not detected in any of the samples, chromium and lead were detected however their concentration were within the range of background concentrations and below the levels established for clean closure. Approximately 60 cubic yards of soil and concrete were sent to a Kansas City area recycler and disposal facility.

## Post-Partial Closure

Regularly scheduled groundwater monitoring began in 1993. Groundwater levels have dropped in the perched aquifer, likely due to prolonged drought in the area. Detection levels were near or below the Kansas Action Levels (KALs) and the maximum contaminant levels (MCLs) when samples were physically able to be collected. In 1994, Safety-Kleen met with EPA and KDHE to discuss corrective action needs. EPA indicated that the site was a low priority and an RFI Work Plan would not be requested in the near future. In 1997, Safety-Kleen proposed abandoning the groundwater monitoring program due to lack of water and low levels of contamination when samples were taken. EPA and KDHE indicated that the site was still a low priority and reiterated the discussion from 1994. KDHE indicated that the groundwater monitoring program was voluntary and that Safety-Kleen had the option of terminating the program at any point, since Safety-Kleen was not under a current regulated monitoring program. The wells were plugged in July 1998. No additional action has been taken to address the spill.

# Attachment 7

**ATTACHMENT 7**  
**DESCRIPTION OF CURRENT CONDITIONS REPORT**  
**SCOPE OF WORK**

**PURPOSE**

The purpose of a Description of Current Conditions (DCC) Report is to document pertinent background information to facilitate identification of potential contamination sources and to characterize current site/facility conditions. The DCC Report shall include information gathered during any previous investigations, inspections, corrective action/interim measure activities, and any other relevant data/information (e.g., institutional controls). In addition, as applicable, 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. As required, development and submittal of a DCC Report may be accomplished in advance of or during the RCRA Facility Investigation (RFI). Independent of the RFI, the Kansas Department of Health and Environment (KDHE) may also request submission of a DCC Report to baseline or update current conditions at the site/facility (e.g., to supplement RCRA Part B permit renewal application).

**SCOPE**

As required, the Permittee/Respondent shall submit for KDHE approval a DCC Report providing the following information:

A. Facility Background

The DCC Report shall summarize the regional location, pertinent boundary features, general site/facility physiography, hydrogeology, and historical use of the site/facility for the treatment, storage, or disposal of solid and hazardous waste. At a minimum, the report shall include:

- 1) Map(s) of sufficient detail and accuracy, consistent with the requirements set forth in 40 CFR 270.14, depicting:
  - a. General geographic location;
  - b. Property lines, with the owners of all adjacent property clearly indicated;
  - c. Topography (with an appropriate contour interval and scale of 1 inch = 100 feet), showing all waterways, wetlands, floodplains, water features, drainage patterns, and surface water containment areas;
  - d. All tanks, buildings, utilities, paved areas, easements, rights-of-way, and other features;
  - e. All solid or hazardous waste treatment, storage, or disposal areas active after November 19, 1980;
  - f. All known past solid or hazardous waste treatment, storage, or disposal areas regardless of whether active on November 19, 1980;

- g. All known past spill, fire, or other accidental release locations;
  - h. All known past and present product/waste underground tanks or piping;
  - i. Surrounding land uses (e.g., residential, commercial, industrial, agricultural, recreational, etc.);
  - j. Location of all past and present injection, production, and groundwater monitoring wells, at and in the vicinity of the site/facility, with wells clearly labeled, and ground surface and top of casing elevations included on map or as table summary (well construction details may be included as attachment); and,
  - k. Wind rose and meteorology data.
- 2) History and description of ownership and operation, solid and hazardous waste generation, and, treatment, storage and disposal activities at the site/facility;
  - 3) Approximate dates or periods of past product and waste spills, identification of materials spilled, amount spilled, location where spilled, and description of response actions conducted, including any inspection/technical reports generated as a result of response; and,
  - 4) Summary of past permits requested and/or received, any enforcement actions taken and subsequent outcomes/responses, and a list of documents and studies prepared related to the site/facility.

**B. Nature and Extent of Contamination**

The DCC Report shall present existing information on the nature and extent of contamination. At a minimum, the report shall include:

- 1) Summary of all possible source areas of contamination (i.e., all regulated units, solid waste management units (SWMUs), areas of concern (AOCs), spill areas, and other suspected source areas of contamination) with identification of the following for each unit/area:
  - a. Location of unit/area (depicted on a facility map);
  - b. Quantities of solid and hazardous wastes (both managed and spilled/released);
  - c. Type of hazardous waste or hazardous constituents (both causing or potentially causing contamination), to the extent known;
  - d. Identification of areas where additional information is necessary; and,
  - e. Proposal/schedule for acquisition of additional information.
- 2) Preliminary assessment and description of the existing degree and extent of contamination including:
  - a. Available monitoring/sampling data for all media, and evaluation of contaminant transport mechanisms between environmental media;
  - b. General assessment of data quality and indication of whether off-site contaminant migration has occurred;

- c. Qualitative, or definitive (if available), depiction of locations and levels of contamination at the site/facility (both onsite and offsite) on a map(s) showing sampling locations in relation to potential source areas, as well as contaminant distribution;
- d. All potential migration pathways including information on geology, soils, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality;
- e. Potential impact(s) on human health and the environment, including demography, identification of possible sensitive subpopulations (e.g., schools, nursing homes, hospitals, ecosystems, etc.) groundwater and surface water use, and land use; and,
- f. Brief description of all previous investigations at the site/facility including date, purpose, and results.

#### C. Implementation of Interim Measures

The DCC Report shall document all Interim Measures (IMs) which were, or are, being undertaken at the site/facility. At a minimum, the report shall include:

- 1) Objectives of IM implementation with discussion of how each measure is mitigating a potential threat to human health and the environment and/or is consistent with and integrated into any long-term solution at the site/facility;
- 2) Design, construction, and operation and maintenance (O&M) requirements for each IM;
- 3) Schedule for design, construction, monitoring, progress reporting of each IM; and,
- 4) Data in support of the potential need for future IMs or related to any assessment undertaken to determine the need for future IM.

#### D. Establishment of Institutional Controls

The DCC Report shall provide a summary of all Institutional Controls (ICs) which are currently in place for the site/facility. In addition, copies of relevant documents and declarations (e.g., deed restriction, Environmental Use Control Agreement (EUCA), etc.) shall be included as an attachment to the DCC Report.

#### E. Environmental Indicator Assessment

The DCC Report shall include an assessment of whether the current data supports achievement of the following U.S. Environmental Protection Agency (EPA) Environmental Indicators: *Current Human Exposures Under Control, and Migration of Contaminated Groundwater Under Control*. Unless otherwise directed or approved by KDHE, the assessment shall be performed in accord with EPA guidance available at <http://www.epa.gov/osw/hazard/correctiveaction/eis/>.

# Attachment 8

**ATTACHMENT 8  
RCRA FACILITY INVESTIGATION  
SCOPE OF WORK**

**PURPOSE**

The purpose of a RCRA Facility Investigation (RFI) is to determine the nature, extent, direction, rate, movement, and concentration of releases of hazardous wastes or hazardous constituents from regulated units, solid waste management units (SWMUs), areas of concern (AOCs), and other source or release areas at the site/facility. The information gathered during the RFI is used to determine potential human health and ecological risks, and to support development and implementation of interim measure (IM) and/or corrective measure (CM) activities, as necessary. The RFI should be tailored to the site/facility-specific conditions and focused on the units, releases, and exposure pathways of concern. Subject to Kansas Department of Health and Environment (KDHE) approval, the RFI may be implemented in a phased manner based on site/facility-specific needs as long as all RFI objectives are fully and timely satisfied. For clarification, the term “site/facility” as used throughout this document means all areas and media from where hazardous waste and/or hazardous constituents, and any other contamination or pollution connected with the subject facility or property, have been released and/or have come to be located.

**OBJECTIVES**

The RFI must meet the following primary objectives:

- 1) Determine and describe current site/facility conditions, as required;
- 2) Identify and fully evaluate the known and suspected primary origin(s) or source(s) of contamination at the site/facility, including identification of all chemicals used and wastes generated/managed/stored/disposed, to facilitate determining the mechanisms of release, estimating the quantities of release, and determining whether these releases are ongoing or inactive;
- 3) 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/facility;
- 4) Characterize the environmental setting, including regional and local geology, hydrogeology, and hydrology, particularly as those physical characteristics may pertain to contaminant transport and fate mechanisms or may affect the evaluation, selection, and design of corrective action alternatives for the site/facility;
- 5) Characterize the physiochemical properties of all known and suspected COCs, their mobility and persistence in the environment, and their important fate and transport mechanisms as they relate to the physical characteristics of the site/facility;

- 6) Identify and evaluate all potential human and ecological receptors that may be threatened or affected by all COCs associated with the site/facility;
- 7) Develop a conceptual site model (CSM) of site/facility conditions depicting what is known or suspected about the sources, releases and release mechanisms, contaminant fate and transport, exposure pathways and potential receptors, and human health and ecological risks;
- 8) Revise/update the CSM as more information becomes available to determine the need for additional investigation, to support risk-based decisions, and to aid in identification and design of potential corrective action alternatives;
- 9) Utilize KDHE's October 2010 *Risk-Based Standards for Kansas RSK Manual – 5<sup>th</sup> Version* (RSK Manual), and any subsequent updates, and/or other applicable KDHE-approved threshold levels, to perform rapid assessment of human health risk, and to facilitate determination of cleanup goals for the site/facility;
- 10) Utilize U.S. Environmental Protection Agency (EPA) Region 6 Ecological Exclusion Criteria Worksheet and Ecological Assessment Checklist to perform a rapid assessment of ecological risk, and to facilitate determination of cleanup goals for the site/facility;
- 11) As determined necessary, perform a site/facility-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 the site/facility requires corrective action;
- 12) Perform bench- or pilot-scale treatability study testing, as necessary, to support development of potential corrective action alternatives and/or corrective action design;
- 13) Develop a preliminary list of site/facility-specific corrective action objectives and corresponding potential corrective action alternatives; and,
- 14) Evaluate the need for IM implementation for source control purposes and/or to mitigate imminent threats to human health and/or the environment consistent with KDHE's *RCRA Interim Measures Scope of Work* (Attachment 4).

Besides all known or suspected discharges, releases, or spills, the RFI is required to also fully assess any and all secondary contamination issues (e.g., daughter/degradation products, from mobilization of naturally-occurring elements/substances in the presence of site/facility-related contamination, etc.). In addition, if there is any uncertainty in site/facility history and potential release mechanisms, KDHE may require a broader, more robust sampling and analytical program up front to ensure complete identification/quantification of all known and suspected site/facility-related COCs. Also, consideration of current and anticipated future land use may result in a more rigorous sampling and analytical program. Initial RFI results will be used to focus, to the extent possible, any future sampling and analysis associated with the site/facility.

## **SCOPE**

After a Corrective Action Agreement Meeting<sup>1</sup> to establish framework, objectives, criteria, and expectations; identification of SWMUs, AOCs, and other source or release areas (or conduct of an RCRA Facility Assessment (RFA), as necessary); and, an RFI Scoping Meeting<sup>1</sup>, an RFI will be developed and implemented consisting of the following steps:

### ***STEP 1: DESCRIPTION OF CURRENT CONDITIONS (as required)***

As required, prior to or as a component of the RFI Work Plan, the Permittee/Respondent shall submit for KDHE approval a Description of Current Conditions (DCC) Report providing the background information pertinent to the site/facility. Consistent with KDHE's *Description of Current Conditions Report Scope of Work* (Attachment 2), the DCC Report shall include information gathered during any previous investigations, inspections, interim measure activities, and any other relevant data, which helps to identify potential sources of contamination and characterize the current site/facility conditions.

### ***STEP 2: RFI WORK PLAN DEVELOPMENT AND IMPLEMENTATION***

An RFI Work Plan describing in detail all activities proposed to satisfy the RFI objectives must be prepared and submitted to KDHE for review and approval before any investigation activities commence, unless otherwise requested or approved by KDHE. The RFI Work Plan shall minimally include the following project- or site/facility-specific components: 1) field sampling plan; 2) quality assurance project plan (QAPP); and, 3) health and safety plan. A detailed RFI working schedule, presented graphically in the form of a milestone chart (e.g., Gantt chart) to show the duration and interdependencies of the various activities must be included in the RFI Work Plan.

A field sampling plan provides the guidance for all fieldwork by defining in detail the sampling and data gathering methods and standard operating procedures (SOPs) to be used. The field sampling plan should be written so that a field sampling team unfamiliar with the site/facility would be able to gather the required samples and field information. A QAPP describes the policy, organization, functional activities, and quality assurance and quality control protocols necessary to achieve the data quality objectives dictated by the intended use of the data. KDHE requires that QAPPs be prepared in general accord with available EPA guidance titled *Requirements for Quality Assurance Project Plans (QA/R-5)* (EPA 2001) and *Guidance for Quality Assurance Project Plans (G-5)* (EPA 2002). EPA has compiled a set of helpful references pertaining to data quality at [www.epa.gov/quality/index.html](http://www.epa.gov/quality/index.html). Key components of a QAPP include quality assurance objectives for data, sample custody and handling, data generation and acquisition, standard operating procedures, report and data management, project management elements, laboratory QAPP, and data validation and usability. It is often necessary to update the QAPP throughout a project's lifecycle to ensure that the document encompasses all site/facility-related activities. A health and safety plan prepared to support the field effort must conform to the implementing party's or contractor's health and safety program, which must, in turn, be in compliance with requirements of the Occupational Safety and Health Administration (OSHA). Although submittal is necessary for completion of the Administrative Record (AR) file

for a given site/facility, please note that KDHE does not customarily review and approve the implementing party's health and safety plan.

In general, a detailed description of field activities to satisfy the primary objectives of the RFI must be included in the RFI Work Plan. RFI activities may include any of several components including, but not limited to, the following: investigation of waste, soil, groundwater, surface water, sediment, air or biota; geotechnical evaluations; inspection and tightness testing of tanks, pipelines, sewers, etc.; geophysical surveys; land elevation surveys; personnel interviews; etc. All data gathered during the investigation must be included in the RFI Report. Sufficient biased/unbiased grid sampling must be proposed to ensure meeting RFI objectives. With KDHE's advance approval, the RFI may be implemented in a phased manner; however, the expectation is that the total duration of the investigative effort be limited to the extent possible, generally within six months to a year. If a phased investigation program is proposed, the initial work plan submittal should describe the anticipated scope and schedule of each investigative phase to avoid unnecessary delays in the investigation process. In addition, KDHE may require interim reports/memoranda to support a phased implementation prior to submittal of the RFI Report.

The RFI Work Plan shall at a minimum include a review of available information and documented findings including, but not limited to, the following: description of physical location, including legal description, and street address; complete summary of ownership/operational history of the source facility and ownership status of other nearby affected properties; facility layout identifying operational features and chemical/waste management/storage/disposal areas or units (e.g., vapor degreaser, sumps, etc.); description of all past and present activities/operations conducted (i.e., nature of business operations, chemicals used, wastes generated, chemical and waste disposal methods, and records or descriptions of all known discharges, releases, spills, etc.); a description of the physical site/facility characteristics (e.g., geology, hydrogeology, surface water hydrology, meteorology, past/present land use, etc.); a detailed description of the type(s) of contaminants/wastes involved, release characteristics and contaminated media; evaluation or investigation objectives; and, detailed procedures for determining waste distribution as well as the nature and extent of contamination, and evaluating all exposure pathways of concern. Environmental permits issued relative to past or present business operations should be identified. Descriptions of any previous environmental investigations conducted at the site/facility and summaries of the significant findings of those investigations should be included. While acceptance and use of data for the purposes of the RFI is subject to KDHE approval, KDHE does encourage consideration of previously collected data or investigation results for the sake of focusing or optimizing the proposed RFI effort. However, if those previous data collection or investigation efforts were collected without KDHE oversight, then verification sampling will likely be required at key locations to corroborate the earlier data/results.

The RFI Work Plan must summarize available historical records (including drawings, aerial photographs, plot plans, as-builts) encompassing the entire site/facility history to ensure comprehensive identification of all known or potential COCs; provide a listing and corresponding map of chemical/waste management/storage/disposal areas and wastewater management units; and, provide a written summary of all wastes generated and

management/storage/disposition methods. Focus should be on known and suspected source areas such as, but not limited to, the following: pits; holding ponds, waste ponds or surface impoundments; drains, oil/water separators; vapor degreasers; drum storage areas; loading docks or racks; loading docks; earthen mound, fill and soil disturbance areas; landfill, landfarm or land application areas; conveyance piping; tanks; stained soil and standing liquid areas; septic tank and lateral field areas; and, any other chemical/waste management/storage/disposal areas and wastewater management units.

Through conduct of the RFI at a given site/facility, besides assessing the distribution of any wastes present, the lateral and vertical extent of contamination for all known and suspected COCs shall be fully delineated for all affected or potentially affected environmental media. Potential media to be investigated include surface and subsurface soils, groundwater, surface water, sediment, air, including the vapor intrusion into indoor air pathway, and biota. To accomplish these activities, this component of the RFI may include monitoring well or piezometer installation, soil boring/sampling, soil or groundwater probing/sampling, field and laboratory analyses, geophysical surveys, hydrogeological evaluations, surveying, computer modeling, and biota studies, among others. Analytical data must be collected of appropriate data quality and quantity to facilitate comparison to applicable threshold levels as established in KDHE's *Risk-Based Standards for Kansas RSK Manual* (RSK Manual) or support a more thorough evaluation of risks posed through conduct of a quantitative baseline risk assessment (i.e., HHRA and SLERA/BERA), if one is to be performed, and to support the evaluation of potential remedial alternatives. In addition, a rapid assessment of ecological risk using the EPA Region 6 Ecological Exclusion Criteria Worksheet and Ecological Assessment Checklist shall be performed at this stage.

All data should be validated at the appropriate field or laboratory quality control level to determine whether it is appropriate for its intended use. Data quality is of critical importance because decisions about how to appropriately manage the relative risk to human health and the environment depend on the quality of data collected for a project. Quality Control (QC) samples are collected during each sampling event to help evaluate data quality and usability. The number and types of QC samples collected is typically specified in the QAPP and will vary depending on the types of sampling being performed, types of equipment used, number of samples collected, analytical methodology, and intended use of the data. The following are the most common types of QC samples collected and analyzed during an RFI: field duplicate samples; equipment rinsate samples; trip blank samples; field blank samples; matrix spike and matrix spike duplicate samples; performance evaluation samples; split samples; laboratory control and laboratory control duplicate samples; and, method blank samples.

### ***STEP 3: BASELINE RISK ASSESSMENT (as required/optional)***

Information and environmental data collected and validated as representative of site/facility conditions are used to qualitatively or quantitatively assess the potential excess human health risk and/or ecological risk posed by the site/facility in the absence of remediation. For simplicity, this is typically accomplished through direct comparison to the Tier 2 Levels which become the default cleanup goals for a site/facility, or through other methods of analysis, as provided in KDHE's RSK Manual. However, in lieu of such direct comparison or simplified tier

analysis, a site/facility-specific quantitative baseline risk assessment (i.e., HHRA and SLERA/BERA) may either be proposed by the implementing party or requested by KDHE to evaluate human health and ecological risk and facilitate determination of cleanup goals for a site/facility. If KDHE determines that the completion of a quantitative risk assessment is appropriate, the implementing party may, at their option, perform such risk assessment for submittal to KDHE for review and approval. KDHE typically utilizes an outside contractor to support technical review and discussion of risk assessment documents. Alternatively, the implementing party may elect to have KDHE, utilizing outside contractor support, perform the risk assessment. In either case, KDHE's direct and indirect costs associated with oversight or conduct of risk assessment activities will be at the implementing party's expense.

Prior to performing the risk assessment, the implementing party must submit a baseline risk assessment work plan that, among other items, provides a site/facility-specific exposure conceptual model, which either graphically illustrates or clearly identifies the impacted media and all the primary and secondary exposure pathways, lists all contaminants of concern, standard exposure parameters, current and future land use assumptions, methodologies for determining reasonable maximum exposure point concentrations, proxy determinations, and other statistical considerations. The quantitative baseline risk assessment must be performed in accordance with KDHE policy in a manner consistent with available EPA guidance at [www.epa.gov/oswer/riskassessment/risk\\_superfund.htm](http://www.epa.gov/oswer/riskassessment/risk_superfund.htm) and [www.epa.gov/risk/](http://www.epa.gov/risk/). All risk assessment work plan documentation must be approved by KDHE prior to commencing risk assessment activities. Resultant risk assessment reports must be then be submitted to KDHE for review and approval. Coordination with KDHE is required throughout the risk characterization process and cleanup goal determination process. However, early on scoping discussions between KDHE and the implementing party as part of work plan development will be critical to the overall success of the risk assessment effort. Ultimately, KDHE will make all final risk management decisions related to the site/facility.

***STEP 4: TREATABILITY STUDIES/MODELING/ADDITIONAL DATA ACQUISITION  
(as required/optional)***

To keep the RFI process on schedule, it may be appropriate to identify and initiate any bench- or pilot-scale treatability study testing necessary to evaluate corrective action alternatives early in the RFI process. Treatability studies are conducted to provide sufficient data to allow treatment alternatives to be fully developed and evaluated during the corrective measures study (CMS) process and to support the subsequent remedial design of the corrective action alternative ultimately selected by KDHE. Treatability studies also serve to reduce cost and performance uncertainties to acceptable levels for treatment alternatives under consideration to permit a more reliable remedy selection process. Examples of treatability data gathering activities that might be performed during the RFI include aquifer pumping tests, soil vapor extraction pilot tests, or bench- or pilot-scale applications of innovative technologies to evaluate their applicability to site/facility wastes and contamination. All treatability studies/modeling/additional data acquisition activities must be completed in a manner consistent with available KDHE policy and guidance. If there is a desire or need to conduct such activities, the implementing party must first submit an appropriate work plan for KDHE review and approval. At KDHE's discretion, reporting associated with treatability study/modeling/additional data acquisition activities may be

reported separately or incorporated into the RFI Report. Similar to baseline risk assessments, KDHE typically utilizes an outside contractor to support technical review and discussion of environmental modeling documents (e.g., groundwater fate and transport model work plan and report). KDHE's direct and indirect costs associated with oversight or conduct of environmental modeling activities will be at the implementing party's expense.

### ***STEP 5: RFI REPORT***

Upon completion of all investigative/evaluation activities necessary to fully achieve the RFI objectives, an RFI Report must be submitted to KDHE, in a timeframe consistent with the implementation schedule in the approved RFI Work Plan, for review and approval. The RFI Report must include all information and data collected during the investigation and describe in detail the work performed to accomplish the objectives as set forth within this Scope of Work (SOW). The RFI Report format shall be consistent with this SOW and include appropriate tables, figures, well logs, laboratory analytical data, references, appendices, etc. to effectively portray the data generated during the investigation and to support any conclusions drawn in the RFI Report. The RFI Report shall present the results of the RFI including, but not limited to, the following:

- 1) Summary of site/facility investigation/evaluation work completed with relevant presentation of the data in figures and tables (including appendices with all ancillary documentation such as field notes; photographs; chain-of-custody records; laboratory reports; survey reports; data validation summary; etc.).
- 2) Description of all COCs, including a discussion and summary of data collected (with appropriate QA/QC and data validation information);
- 3) An evaluation of possible exposure pathways including areal extent of all COCs;
- 4) A preliminary list of remedial action objectives, corresponding potential corrective action alternatives and initial identification of key regulatory requirements that may have bearing on corrective action implementation;
- 5) Comparison of data collected to appropriate threshold levels (e.g., Tier 2 Levels in the RSK Manual); and,
- 6) Conclusions and recommendation(s) for further investigation or interim measure activities.

Once samples have been collected and data reported by the laboratory, it is important to consider the quality of the data to ensure it is precise, accurate, representative, complete, and comparable before relying on it to support project decisions. The procedures and thresholds for evaluating data quality are typically laid out in the QAPP. It is KDHE's general expectation that data validation be performed in accord with EPA Contract Laboratory Program's *National Functional Guidelines for Superfund Organic Methods Data Review* (EPA 2008) and *National Functional Guidelines for Superfund Inorganic Methods Data Review* (EPA 2010a), or as otherwise

approved by KDHE. Together, these documents identify methods for evaluating and documenting the quality of analytical data for the majority of contaminants encountered at sites in Kansas. In all cases, data validity must be incorporated into reporting documentation in the form of a data validation summary. The data validation summary should describe all data validation activities and discuss, in detail, the results of analysis of quality control samples and their effect on primary data. The summary should provide an overall assessment of the data evaluated with respect to precision, accuracy, representativeness, completeness, comparability, and the general acceptability and usability of the data.

Upon successful completion of the RFI effort, KDHE will determine the path forward for future site/facility activities to be conducted by the implementing party, including further site/facility investigation, development of a presumptive remedy design concept, detailed evaluation/comparative analysis of cleanup alternatives through a separate CMS process, interim measure design/implementation, and/or implementation of the remedy selected by KDHE with consideration of public input on the Statement of Basis.

<sup>1</sup>Face-to-face meetings or teleconferences between KDHE and Permittee/Respondent are strongly encouraged to facilitate achieving consensus on approach and overall streamlining of the corrective action process.

# Attachment 9

## **ATTACHMENT 9 ECOLOGICAL EXCLUSION SCREENING SCOPE OF WORK**

### **INTRODUCTION**

With minor modification, the Kansas Department of Health and Environment (KDHE) has adopted the ecological exclusion screening methodology developed by the U.S. Environmental Protection Agency (EPA) Region 6 to help facilities and regulators determine whether or not further ecological evaluation is necessary at an affected property where corrective action is contemplated. The methodology includes use of an Ecological Exclusion Criteria Worksheet and an Ecological Assessment Checklist to facilitate such determinations.

Utilizing the Ecological Exclusion Criteria Worksheet, the ecological screening process involves initial collection of general information about the facility, its operation, physical site characteristics, ecological habitats and receptors. A determination is then made as to whether incomplete or insignificant exposure pathways exist at the affected property thereby eliminating the need for further ecological evaluation.

If an area cannot be excluded from further evaluation, more detailed information about ecological areas will be collected utilizing the Ecological Assessment Checklist to assist in determining the need for further ecological risk evaluations. If the affected property meets the exclusion criteria, then the facility should document the site conditions and justification for how the criteria have been met within the rapid assessment of risk section of the RCRA Facility Investigation (RFI) Report. Upon review and approval of the exclusion by KDHE, further evaluation of ecological risk will not be required.

If the affected property does not meet the exclusion criteria, then a screening level ecological risk assessment/baseline ecological risk assessment (SLERA/BERA) may be warranted. Additional ecological risk screening/assessment should be conducted following EPA's *Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments* dated June 5, 1997 and *Guidelines for Ecological Risk Assessment (EPA/630/R-95/002F)* dated April 1998, or other guidance for ecological risk evaluation as approved by KDHE.

### **ECOLOGICAL EXCLUSION CRITERIA WORKSHEET**

The Ecological Exclusion Criteria Worksheet is intended to facilitate determination of whether or not further ecological evaluation is necessary at an affected property where corrective action is contemplated. Exclusion criteria refer to those conditions at an affected property which preclude the need for a formal ecological risk assessment (i.e., SLERA/BERA) because there are incomplete or insignificant ecological exposure pathways due to the nature of the affected property setting and/or the condition of the affected property media. The worksheet is designed for general applicability to all affected property; however, there may be unusual circumstances which require professional judgment or technical support (e.g., consultation with U.S. Fish and Wildlife Service) in order to determine the need for further ecological evaluation (e.g., cave-

dwelling receptors). In these cases, it is strongly encouraged to contact KDHE for additional guidance before proceeding.

The worksheet consists of three major parts: Part 1, identification of the affected property and background information, Part 2, the actual exclusion criteria and supportive information, and Part 3, a qualitative summary statement and certification of the information submitted. Answers to the worksheet should reflect existing conditions and should not consider future remedial actions at the affected property. Completion of the worksheet should lead to a logical conclusion as to whether further detailed ecological evaluation is warranted.

***Part 1: Affected Property Identification and Background Information***

- 1) Provide a description of the specific area of the response action and the nature of the release. Include estimated acreage of the affected property and the facility property, and a description of the type of facility and/or operation associated with the affected property. Also describe the location of the affected property with respect to the facility property boundaries and public roadways.

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Attach available USGS topographic maps and/or aerial or other affected property photographs to this form to depict the affected property and surrounding area.

Topo map     Aerial photo     Other \_\_\_\_\_ (specify)

- 2) Identify the environmental media known or suspected to contain contaminants of concern (COCs) at the present time. Check all that apply:

<u>Known/Suspected Impacted Media</u>	<u>Based on sampling data?</u>
<input type="checkbox"/> Soil < 5 ft below ground surface	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Soil > 5 ft below ground surface	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Groundwater	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Surface Water/Sediment	<input type="checkbox"/> Yes <input type="checkbox"/> No

Explain (previously collected information may be referenced):

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**Part 2: Exclusion Criteria and Supporting Information**

**Subpart A. Surface Water/Sediment Exposure**

- 1) Regarding the affected property where a response action is being contemplated, have COCs migrated and resulted in a release or imminent threat of release to either surface waters or to their associated sediments via surface water runoff, air deposition, groundwater seepage, etc.?

Exclude: wastewater treatment facilities and stormwater conveyances/impoundments authorized by permit.

Also exclude: conveyances, decorative ponds, and those portions of the process facilities which are:

- a. Not in contact with surface waters of the State or other surface waters which are ultimately in contact with surface waters of the State; and
- b. Not consistently or routinely utilized as valuable habitat for natural communities including birds, mammals, reptiles, etc.

\_\_\_\_\_ Yes \_\_\_\_\_ No

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**If the answer is “Yes” to Subpart A above, the affected property does not meet the exclusion criteria.** (However, complete the remainder of Part 2 to determine if there is a complete and/or significant soil exposure pathway, and then complete Part 3, Qualitative Summary and Certification).

**If the answer is “No” to Subpart A above, go directly to Subpart B.**

**Subpart B. Affected Property Setting**

In answering “Yes” to the following question, it is understood that the affected property is not attractive to wildlife or livestock, including threatened or endangered species (i.e., the affected property does not serve as valuable habitat, foraging area, or refuge for ecological communities). Further consultation with management agencies may be required.

- 1) Is the affected property wholly contained within contiguous land characterized by: pavement, buildings, landscaped area, functioning cap, roadways, equipment storage area, manufacturing or process area, or other surface cover or structure, or otherwise disturbed ground?

\_\_\_\_\_ Yes \_\_\_\_\_ No

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**If the answer is “Yes” to Subpart B above, the affected property meets the exclusion criteria, assuming the answer to Subpart A was “No”.** (Skip Subparts C and D and complete Part 3, Qualitative Summary and Certification).

**If the answer is “No” to Subpart B above, go directly to Subpart C.**

### **Subpart C. Soil Exposure**

- 1) Are COCs which are in the soil of the affected property solely below the first 5 feet beneath ground surface, or does the affected property have a physical barrier present to prevent exposure to receptors to COCs in the surface soil?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**If the answer is “Yes” to Subpart C above, the affected property meets the exclusion criteria, assuming the answer to Subpart A was “No”.** (Skip Subpart D and complete Part 3, Qualitative Summary and Certification).

**If the answer is “No” to Subpart C above, go directly to Subpart D.**

### **Subpart D. DeMinimus Land Area**

In answering “Yes” to the question below, it is understood that all of the follow conditions apply:

- Affected property is not known to serve as habitat, foraging area, or refuge to threatened/endangered or otherwise protected species. (*Will likely require consultation with wildlife management agencies*).
- Similar but unimpacted habitat exists within a half-mile radius.
- Affected property not known to be located within one-quarter mile of sensitive environmental areas (e.g., rookeries, wildlife management areas, preserves). (*Will likely require consultation with wildlife management agencies*).
- No reason to suspect COCs associated with the affected property will migrate such that the affected property will become larger than one acre.

Using human health protective concentration levels as a basis to determine the extent of the COCs, does the affected property consist of one acre or less and does it meet all the conditions described above?

\_\_\_\_\_ Yes \_\_\_\_\_ No

Explain how the conditions are/are not met:

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**If the answer is “Yes” to Subpart D, then no further ecological evaluation is needed at the affected property, assuming the answer to Subpart A was “No”. (Complete Part 3, Qualitative Summary and Certification).**

**If the answer is “No” to Subpart D, Proceed to an Ecological Risk Evaluation (i.e., SLERA/BERA).**

***Part 3. Qualitative Summary and Certification (Complete in all cases)***

Attach a brief statement (one page or less) summarizing the information provided in this form. This summary should include sufficient information to verify that the affected property meets or does not meet the exclusion criteria. The facility should make the initial decision regarding the need to conduct further ecological evaluation based on the results of this worksheet. However, KDHE will make a final determination on the need for further detailed ecological assessment.

**Note: The facility has the continuing obligation to re-enter the SLERA/BERA process if changing circumstances result in the affected property not meeting the exclusion criteria requirements presented in this worksheet.**

Completed by: \_\_\_\_\_ (Typed Name)

\_\_\_\_\_ (Title)

\_\_\_\_\_ (Date)

I believe that the information submitted is true, accurate, and complete, to the best of my knowledge.

\_\_\_\_\_ (Typed Name of Person)

\_\_\_\_\_ (Title of Person)

\_\_\_\_\_ (Signature of Person)

\_\_\_\_\_ (Date Signed)

## **Definitions** (applicable to Exclusion Worksheet)

**Affected property** - entire area (i.e., all affected environmental media at on-site and off-site locations) containing releases of contaminants of concern at concentrations equal to or greater than the assessment level applicable for the land use (i.e., residential or non-residential) and groundwater classification, or other threshold level for each affected media.

**Assessment level** - critical protective concentration level for a contaminant of concern used for affected property assessments where the human health protective concentration level is established by State regulation or guidance.

**Bedrock** - solid rock (i.e., consolidated, coherent, and relatively hard naturally formed material that cannot normally be excavated by manual methods alone) that underlies gravel, soil, or other surficial material.

**Contaminant of concern** - any contaminant that has the potential to adversely affect ecological or human receptors due to its concentration, distribution, and mode of toxicity.

**Community** - assemblage of plant and animal populations occupying the same habitat in which the various species interact via spatial and trophic relationships (e.g., a desert community or a pond community).

**Complete exposure pathway** - exposure pathway where a human or ecological receptor is exposed to a contaminant of concern via an exposure route (e.g., incidental soil ingestion, inhalation of volatiles and particulates, consumption of prey, etc).

**De Minimus** - description of an area of affected property comprised of one acre or less where the ecological risk is considered to be insignificant due to small extent of contamination, absence of protected species, availability of similar unimpacted habitat nearby, and lack of adjacent sensitive environmental areas.

**Ecological protective concentration level** - concentration of a contaminant of concern at the point of exposure within an exposure medium (e.g., soil, sediment, groundwater, or surface water) which is determined to be protective for ecological receptors. These concentration levels are intended to be protective for more mobile or wide-ranging ecological receptors and, where appropriate, benthic invertebrate communities within waters of the State. These concentration levels are not intended to be directly protective of receptors with limited mobility or ranges (e.g., plants, soil invertebrates, and small rodents), particularly those residing within active areas of a facility, unless these receptors are threatened/endangered species or unless impacts to these receptors result in disruption of the ecosystem or other unacceptable consequences for the more mobile or wide-ranging receptors (e.g., impacts to an off-site grassland habitat eliminate rodents which causes a desirable owl population to leave the area).

**Ecological risk assessment** - process that evaluates the likelihood that adverse ecological effects may occur or are occurring as a result of exposure to one or more stressors; however, as used in this context, only chemical stressors (i.e., COCs) are evaluated.

**Environmental medium** - material found in the natural environment such as soil, (including non-waste fill materials), groundwater, air, surface water, and sediment, or a mixture of such materials with liquids, sludges, gasses or solids, including hazardous waste which is inseparable by simple mechanical removal processes, and is made up of primarily natural material.

**Exclusion criteria** - those conditions at an affected property which preclude the need to establish a protective concentration level for an ecological exposure pathway because the exposure pathway between the contaminant of concern and the ecological receptors is not complete or is insignificant.

**Exposure medium** - environmental medium or biological tissue in which or by which exposure to contaminants of concern by human or ecological receptors occurs.

**Facility** - installation associated with the affected property where the release of contaminants of concern has occurred.

**Functioning cap** – low-permeability layer or other approved cover meeting its design specifications to minimize water infiltration and chemical of concern migration, and prevent ecological or human receptor exposure to contaminants of concern, where design requirements are routinely maintained.

**Landscaped area** - area of ornamental, introduced, commercially installed, or manicured vegetation, which is routinely maintained.

**Off-site property** - all environmental media which is outside the legal boundaries of the on-site property.

**On-site property** - all environmental media within the legal boundaries of a property that has become subject to corrective action, either through voluntary action, permit or order.

**Physical barrier** - any natural or manmade structure or system that prevents exposure or prevents physical migration of contaminants of concern to points of exposure.

**Point of exposure** - location within an environmental medium where a receptor will be assumed to have a reasonable potential to come into contact with contaminants of concern. The point of exposure may be a discrete point, plane, or an area within or beyond some location.

**Protective concentration level** - concentration of a contaminant of concern which can remain within the source medium and not result in levels which exceed the applicable human health risk based exposure limit considering cumulative risk and hazard index for both carcinogenic and non-carcinogenic effects respectively, or ecological protective concentration level at the point of exposure for that exposure pathway.

**Release** - any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, with the exception of:

- a release that results in an exposure to a person solely within a workplace, concerning a claim that the person may assert against the person's employer;
- an emission from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, pipeline pumping station engine;
- a release of source, by product, or special nuclear material a nuclear incident, as those terms identified by the Atomic Energy Act of 1954, as amended (42 USC 2201 et. seq.); if the release area is subject to requirements concerning financial protection established by the Nuclear Regulatory Commission under Section 170 of that Act;
- for the purpose of the environmental response law Section 104, as amended, or other response action, release of source, by-product, or special nuclear material from a processing site designated under Section 102(a)(1) for Section 302(a) of the Uranium Mill Tailings Radiation Control Act of 1978 (42 USC Section 7912 and Section 7942) as amended; and,
- normal application of fertilizer.

**Sediment** - non-suspended particulate material lying below surface waters such as bays, oceans, rivers, streams, lakes, ponds, or other similar surface water body (including intermittent streams). Dredged sediments which have been removed from surface water bodies and placed on land shall be considered soils.

**Sensitive environmental areas** - areas that provide unique and often protected habitat for wildlife species. These areas are typically used during critical life stages such as breeding, hatching, rearing of young, and overwintering. Examples include: critical habitat for threatened and endangered species, wilderness areas, parks and wildlife refuges.

**Source medium** - environmental medium containing contaminants of concern which must be removed, decontaminated and/or controlled in order to protect human health and the environment. The source medium may be the exposure medium for some exposure pathways.

**Stressor** - any physical, chemical, or biological entity that can induce an adverse response; however, as used in this context, only chemical entities apply.

**Subsurface soil** - for human health exposure pathways, represents portion of soil zone between base of surface soil and top of groundwater-bearing unit(s). For ecological exposure pathways, represents portion of soil zone between 0.5 feet and 5 feet in depth.

**Surface cover** - layer of artificially-placed utility material (e.g., gravel).

**Surface soil** - for human health exposure pathways, represents soil zone extending from ground surface to 15 feet in depth for residential land use, and from ground surface to 5 feet in depth for non-residential land use; or to the top of the uppermost groundwater-bearing unit or bedrock, whichever is less in depth. For ecological exposure pathways, represents soil zone extending from ground surface to 0.5 feet in depth.

**Surface water** - any water meeting the definition of surface water in Kansas.

## **ECOLOGICAL ASSESSMENT CHECKLIST**

The evaluation associated with the checklist is intended to be a screening-level survey of the developed and undeveloped ecological portions of the site. Answers to the checklist should reflect existing conditions and should not consider future remedial actions at the site.

In general, the checklist is designed for applicability to all sites; however, there may be unusual circumstances which require professional judgment or technical assistance in order to determine the need for further detailed ecological evaluation. Sources and general information available for the identification of ecological receptors and habitats may include: the U.S. Fish and Wildlife Service, Kansas Department of Wildlife and Parks, United States Geological Service (USGS), Kansas Geological Survey, National Wetland Inventory Maps, National Audubon Society, Kansas Biological Survey, national and local wildlife clubs, National and State Heritage Programs, State and National Parks System, and tribal organizations.

### **Section 1. Site Description**

1) Site Name: \_\_\_\_\_

Location: \_\_\_\_\_

County/Parish: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_

Type of Facility: \_\_\_\_\_

2) Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

3) What is the approximate area of the site? \_\_\_\_\_

4) Is this the first site visit? Yes \_\_\_\_ No \_\_\_\_\_. If "No", attach trip report of previous site visit(s), if available. Date(s) of previous site visit(s): \_\_\_\_\_  
\_\_\_\_\_

5) Please attach to the checklist USGS topographic map(s) of the site, if available.

6) Are aerial or other site photographs available? Yes \_\_\_\_ No \_\_\_\_\_. If "Yes", please attach any available photo(s) to the site map at the conclusion of this section.

7) The land use on the site is:

\_\_\_\_\_ % Urban  
\_\_\_\_\_ % Rural  
\_\_\_\_\_ % Residential  
\_\_\_\_\_ % Industrial \_\_ light \_\_ heavy  
\_\_\_\_\_ % Agriculture  
(Crops: \_\_\_\_\_)  
\_\_\_\_\_ % Recreational  
(Describe; note if it is a park, etc.)

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ % Undisturbed  
\_\_\_\_\_ % Other

The area surrounding the site is:

\_\_\_\_\_ mile radius

\_\_\_\_\_ % Urban  
\_\_\_\_\_ % Rural  
\_\_\_\_\_ % Residential  
\_\_\_\_\_ % Industrial \_\_ light \_\_ heavy  
\_\_\_\_\_ % Agriculture  
(Crops: \_\_\_\_\_)  
\_\_\_\_\_ % Recreational  
(Describe; note if it is a park, etc.)

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ % Undisturbed  
\_\_\_\_\_ % Other

8) Has any movement of soil taken place at the site? Yes \_\_\_ No \_\_\_. If "Yes", please identify the most likely cause of this disturbance:

\_\_\_\_\_ Agricultural Use      \_\_\_\_\_ Heavy Equipment      \_\_\_\_\_ Mining  
\_\_\_\_\_ Natural Events      \_\_\_\_\_ Erosion      \_\_\_\_\_ Other

Please describe:

\_\_\_\_\_  
\_\_\_\_\_

9) Do any potentially sensitive environmental areas exist adjacent to or in proximity to the site, e.g., Federal and State parks, National and State Monuments, wetlands, prairie potholes? *Remember, flood plains and wetlands are not always obvious; do not answer "No" without confirming information.*

\_\_\_\_\_  
\_\_\_\_\_

10) What type of facility is located at the site?

\_\_\_\_\_ Chemical      \_\_\_\_\_ Manufacturing      \_\_\_\_\_ Mixing      \_\_\_\_\_ Waste Disposal  
\_\_\_\_\_ Other (specify) \_\_\_\_\_

11) What are the suspected contaminants of concern at the site? If known, what are their maximum concentration levels? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

12) Check any potential routes of off-site migration of contaminants observed at the site:  
\_\_\_\_\_ Swales            \_\_\_\_\_ Depressions            \_\_\_\_\_ Drainage Ditches  
\_\_\_\_\_ Runoff            \_\_\_\_\_ Windblown Particulate            \_\_\_\_\_ Vehicular Traffic  
\_\_\_\_\_ Other (specify) \_\_\_\_\_

13) If known, what is the approximate depth to the water table? \_\_\_\_\_

14) Is the direction of surface runoff apparent from site observations? Yes \_\_\_ No \_\_\_. If “Yes”, to which of the following does the surface runoff discharge? Mark all that apply.  
\_\_\_\_\_ Surface water    \_\_\_\_\_ Groundwater    \_\_\_\_\_ Sewer    \_\_\_\_\_ Collection impoundment

15) Is there a navigable waterbody or tributary to a navigable waterbody? Yes \_\_\_ No \_\_\_.  
\_\_\_\_\_

16) Is there a waterbody anywhere on or in the vicinity of the site? If “Yes”, also complete Section 3: Aquatic Habitat Checklist - Non-Flowing Systems and /or Section 4: Aquatic Habitat Checklist - Flowing Systems.

Yes \_\_\_\_\_ (approximate distance \_\_\_\_\_)            No \_\_\_\_\_

17) Is there evidence of flooding? Yes \_\_\_\_\_ No \_\_\_\_\_. *Wetlands and flood plains are not always obvious; do not answer “No” without confirming information.* If “Yes”, complete Section 5: Wetland Habitat Checklist.  
\_\_\_\_\_

18) If a field guide was used to aid any of the identifications, please provide references. Also, estimate the time spent identifying the fauna. (Use a blank sheet if additional space is needed for text).  
\_\_\_\_\_  
\_\_\_\_\_

19) Are any threatened and/or endangered species (plant or animal) known to inhabit the area of the site? Yes \_\_\_\_\_ No \_\_\_\_\_. *If “Yes”, you are required to verify this information with the U.S. Fish and Wildlife Service.* If species identities are known, please list them in the text. \_\_\_\_\_

20) Are any species in need of conservation (plant or animal) known to inhabit the area of the site? Yes \_\_\_\_\_ No \_\_\_\_\_. *If “Yes”, you are required to verify this information with the Kansas Department of Wildlife and Parks.* If species identity known, please list them in the text. \_\_\_\_\_

21) Record weather conditions at the time this checklist was prepared:

Date: \_\_\_\_\_

\_\_\_\_\_ Temperature (°C /°F)

\_\_\_\_\_ Normal daily high temperature

\_\_\_\_\_ Wind (direction/speed)

\_\_\_\_\_ Precipitation (rain,snow)

\_\_\_\_\_ Cloud cover

**Section 1A. Summary of Observations and Site Setting**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Completed by \_\_\_\_\_ Affiliation \_\_\_\_\_

Additional Preparers \_\_\_\_\_

Site Manager \_\_\_\_\_

Date \_\_\_\_\_

**Section 2. Terrestrial Habitat Checklist**

**Section 2A. Wooded**

1) Are there any wooded areas on the site? Yes \_\_\_\_\_ No \_\_\_\_\_. If “No”, go to Section IIB: Shrub/Scrub.

2) What percentage of the area of the site is wooded? (\_\_\_\_\_ % \_\_\_\_\_ acres) Indicate the wooded area on the site map which is attached to a copy of this checklist. Please identify what information was used to determine the wooded area of the site. \_\_\_\_\_  
\_\_\_\_\_

3) What is the dominant type of vegetation in the wooded area?  
(Circle one: Evergreen/Deciduous/Mixed) Provide a photograph(s) if available.  
Dominant plant, if known: \_\_\_\_\_

4) What is the predominant size of the trees at the site? Use diameter at breast height.  
\_\_\_\_\_ 0-6 inches                      \_\_\_\_\_ 6-12 inches                      \_\_\_\_\_ > 12 inches

5) Specify type of understory present, if known. Provide a photograph(s), if available.  
\_\_\_\_\_  
\_\_\_\_\_

**Section 2B. Shrub/Scrub**

- 1) Is shrub/scrub vegetation present at the site? Yes \_\_\_\_ No \_\_\_\_\_. If “No”, go to Section IIC: Open Field.
  
- 2) What percentage of the site is covered by shrub/scrub vegetation? (\_\_\_\_ % \_\_\_\_ acres) Indicate the acres of shrub/scrub on the site map. Please identify what information was used to determine this area.  
\_\_\_\_\_  
\_\_\_\_\_
  
- 3) What is the dominant type of shrub/scrub vegetation, if known? Provide a photograph(s) if available. \_\_\_\_\_
  
- 4) What is the approximate average height of the shrub/scrub vegetation?  
\_\_\_\_ 0-2 feet                      \_\_\_\_ 2-5 feet                      \_\_\_\_ > 5 feet
  
- 5) Based on site observations, how dense is the shrub/scrub vegetation?  
\_\_\_\_ Dense                      \_\_\_\_ Patchy                      \_\_\_\_ Sparse

**Section 2C. Open Field**

- 1) Are there open (bare, barren) field areas present at the site? Yes \_\_\_\_ No \_\_\_\_\_. If “Yes”, please indicate the type below:  
\_\_\_\_ Prairie/plains \_\_\_\_ Savannah \_\_\_\_ Old field \_\_\_\_ Other (specify) \_\_\_\_\_  
\_\_\_\_\_
  
- 2) What percentage of the site is open field? (\_\_\_\_ % \_\_\_\_ acres) Indicate the open field areas on the site map.
  
- 3) What is/are the dominant plant plants? Provide a photograph(s) if available. \_\_\_\_\_  
\_\_\_\_\_
  
- 4) What is the approximate average height of the dominant plant? \_\_\_\_\_
  
- 5) Describe the vegetation cover: \_\_\_\_ Dense \_\_\_\_ Sparse \_\_\_\_ Patchy

**Section 2D. Miscellaneous**

- 1) Are other types of terrestrial habitats present at the site, other than woods, shrub/scrub, and open field? Yes \_\_\_\_\_ No \_\_\_\_\_. If “Yes”, identify and describe below.

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- 2) Describe the terrestrial miscellaneous habitat(s) and identify these areas on the site map.

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- 3) What observations, if any, were made at the site regarding the presence and/or absence of insects, fish, birds, mammals, etc?

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- 4) Review the questions in Section I to determine if any additional habitat checklists should be completed for this site.

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**Section 3. Aquatic Habitat Checklist – Non-Flowing Systems**

*Note: Aquatic systems are often associated with wetland habitats. Please refer to Section 5, Wetland Habitat Checklist.*

- 1) What type of open-water, non-flowing system is present at the site?

\_\_\_\_\_ Natural (pond or lake)

\_\_\_\_\_ Artificially created (lagoon, reservoir, canal, impoundment)

- 2) If known, what is the name(s) of the waterbody(ies) on or adjacent to the site?

---

- 3) If a waterbody is present, what are its known uses (e.g., recreation, navigation, etc.)?

---

- 4) What is the approximate size of the waterbody(ies)? \_\_\_\_\_ acre(s)

5) Is any aquatic vegetation present? Yes \_\_\_\_ No \_\_\_\_\_. If "Yes", please identify the type of vegetation present, if known.

\_\_\_\_ Emergent                      \_\_\_\_ Submergent                      \_\_\_\_ Floating

6) If known, what is the depth of the water? \_\_\_\_\_

7) What is the general composition of the substrate? Check all that apply.

\_\_\_\_ Bedrock                      \_\_\_\_ Sand                      \_\_\_\_ Muck (fine/black)  
\_\_\_\_ Boulder (>10 inch)                      \_\_\_\_ Silt (fine)                      \_\_\_\_ Debris  
\_\_\_\_ Cobble (2.5-10 inch)                      \_\_\_\_ Marl (shells)                      \_\_\_\_ Detritus  
\_\_\_\_ Gravel (0.1-2.5 inch)                      \_\_\_\_ Clay (slick)                      \_\_\_\_ Concrete  
\_\_\_\_ Other (specify) \_\_\_\_\_

8) What is the source of water in the waterbody?

\_\_\_\_ River/Stream/Creek                      \_\_\_\_ Groundwater                      \_\_\_\_ Other (specify) \_\_\_\_\_  
\_\_\_\_ Industrial discharge                      \_\_\_\_ Surface runoff

9) Is there a discharge from the site to the waterbody? Yes \_\_\_\_ No \_\_\_\_\_. If "Yes", please describe this discharge and its path.

\_\_\_\_\_  
\_\_\_\_\_

10) Is there a discharge from the waterbody? Yes \_\_\_\_ No \_\_\_\_\_. If "Yes", and the information is available, identify from the list below the environment into which the waterbody discharges.

\_\_\_\_ River/Stream/Creek                      \_\_\_\_ onsite                      offsite                      \_\_\_\_ Distance \_\_\_\_\_  
\_\_\_\_ Groundwater                      \_\_\_\_ onsite                      offsite                      \_\_\_\_  
\_\_\_\_ Wetland                      \_\_\_\_ onsite                      offsite                      \_\_\_\_ Distance \_\_\_\_\_  
\_\_\_\_ Impoundment                      \_\_\_\_ onsite                      offsite                      \_\_\_\_

11) Identify any field measurements and observations of water quality that were made. For those parameters for which data were collected provide the measurement and the units of measure below:

\_\_\_\_ Area  
\_\_\_\_ Depth (average)  
\_\_\_\_ pH  
\_\_\_\_ Dissolved Oxygen  
\_\_\_\_ Salinity  
\_\_\_\_ Turbidity (clear, slightly turbid, turbid, opaque) (Secchi disk depth \_\_\_\_)  
\_\_\_\_ Other (specify) \_\_\_\_\_

12) Describe observed color and area of coloration.

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13) Mark the open-water, non-flowing system on the site map attached to this checklist.

14) What observations, if any were made at the waterbody regarding the presence and/or absence of benthic macroinvertebrates, fish, birds mammals, etc.?

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#### Section 4. Aquatic Habitat Checklist – Flowing Systems

*Note: Aquatic systems are often associated with wetland habitats. Please refer to Section 5, Wetland Habitat Checklist.*

1) What type(s) of flowing water system(s) is (are) present at the site?

<input type="checkbox"/> River	<input type="checkbox"/> Stream	<input type="checkbox"/> Creek
<input type="checkbox"/> Dry wash	<input type="checkbox"/> Arroyo	<input type="checkbox"/> Brook
<input type="checkbox"/> Artificially Created (ditch, etc.)	<input type="checkbox"/> Intermittent Stream	<input type="checkbox"/> Channeling
<input type="checkbox"/> Other (specify) _____		

2) If known, what is the name of the waterbody? \_\_\_\_\_

3) For natural systems, are there any indicators of physical alteration (e.g., channeling, debris, etc.)? Yes  No . If “Yes”, please describe indicators that were observed.

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4) What is the general composition of the substrate? Check all that apply.

<input type="checkbox"/> Bedrock	<input type="checkbox"/> Sand	<input type="checkbox"/> Muck (fine/black)
<input type="checkbox"/> Boulder (>10 inch)	<input type="checkbox"/> Silt (fine)	<input type="checkbox"/> Debris
<input type="checkbox"/> Cobble (2.5-10 inch)	<input type="checkbox"/> Marl (shells)	<input type="checkbox"/> Detritus
<input type="checkbox"/> Gravel (0.1-2.5 inch)	<input type="checkbox"/> Clay (slick)	<input type="checkbox"/> Concrete
<input type="checkbox"/> Other (specify) _____		

5) What is the condition of the bank (e.g., height, slope, extent of vegetative cover)?

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6) Is the system influenced by tides? Yes \_\_\_\_\_ No \_\_\_\_\_. What information was used to make this determination?

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7) Is the flow intermittent? Yes \_\_\_\_\_ No \_\_\_\_\_. If “Yes”, please note the information that was used in making this determination.

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---

8) Is there a discharge from the site to the waterbody? Yes \_\_\_\_\_ No \_\_\_\_\_. If “Yes”, please describe the discharge and its path.

---

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9) Is there a discharge from the waterbody? Yes \_\_\_\_\_ No \_\_\_\_\_. If “Yes”, and the information is available, please identify what the waterbody discharges to and whether the discharge is onsite or off site.

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10) Identify any field measurements and observations of water quality that were made. For those parameters for which data were collected, provide the measurement and the units of measure in the appropriate space below:

\_\_\_\_\_ Width (feet)  
\_\_\_\_\_ Depth (feet)  
\_\_\_\_\_ Velocity (specify units)  
\_\_\_\_\_ Temperature (depth of the water at which the temperature was taken)  
\_\_\_\_\_ pH  
\_\_\_\_\_ Dissolved Oxygen  
\_\_\_\_\_ Salinity  
\_\_\_\_\_ Turbidity (clear, slightly turbid, turbid, opaque) (Secchi disk depth \_\_\_\_\_)  
\_\_\_\_\_ Other (specify) \_\_\_\_\_

11) Describe observed color and area of coloration.

---

---

12) Is any aquatic vegetation present? Yes \_\_\_\_\_ No \_\_\_\_\_. If "Yes", please identify the type of vegetation present, if known.

\_\_\_\_\_ Emergent                      \_\_\_\_\_ Submergent                      \_\_\_\_\_ Floating

13) Mark the flowing water system on the attached site map.

14) What observations were made at the waterbody regarding the presence and/or absence of benthic macroinvertebrates, fish, birds, mammals, etc.?

\_\_\_\_\_  
\_\_\_\_\_

### Section 5. Wetland Habitat Checklist

1) Based on observations and/or available information, are designated or know wetlands definitely present at the site? Yes \_\_\_\_\_ No \_\_\_\_\_. Please note the sources of observations and information used (e.g., USGS Topographic maps, National Wetland Inventory, Federal or State Agency, etc.) to make this determination.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2) Based on the location of the site (e.g., along a waterbody, in a floodplain) and site conditions (e.g., standing water; dark, wet soils; mud cracks; debris line; water marks), are wetland habitats suspected? Yes \_\_\_\_\_ No \_\_\_\_\_. If "Yes", proceed with the remainder of the wetland habitat identification checklist.

3) What type(s) of vegetation are present in the wetland?

\_\_\_\_\_ Submergent                      \_\_\_\_\_ Emergent  
\_\_\_\_\_ Shrub/Scrub                      \_\_\_\_\_ Wooded  
\_\_\_\_\_ Other (specify) \_\_\_\_\_

4) Provide a general description of the vegetation present in and around the wetland (height, color, etc.). Provide a photograph of the known or suspected wetlands, if available.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# Attachment 10

## **ATTACHMENT 10 INTERIM MEASURES SCOPE OF WORK**

### **PURPOSE**

This Kansas Department of Health and Environment (KDHE) Scope of Work (SOW) establishes the general framework for implementation of interim measure activities at a site/facility. The primary purpose of an interim measure is 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 action remedies are being evaluated. When a release or potential release of hazardous waste(s) and/or hazardous waste constituent(s) from regulated units, solid waste management units (SWMUs), areas of concern (AOCs), and other source or release areas at the site/facility, poses a threat to human health or the environment, KDHE may require interim measure implementation. Alternatively, subject to KDHE approval, the Permittee/Respondent may propose interim measure implementation as long as consistent with and integrated into any long-term corrective action solution at the site/facility.

Interim measures may be warranted in either an emergency or non-emergency situation. In the case of an emergency, the Permittee/Respondent may initiate interim measures with concurrent notification of KDHE, no later than twenty-four (24) hours of becoming aware of the need for interim measure implementation to mitigate or stabilize an emergency situation.

For clarification, the term “site/facility” as used throughout this document means all areas and media from where hazardous waste and/or hazardous constituents, and any other contamination or pollution connected with the subject facility or property, have been released and/or have come to be located. Face-to-face meetings or teleconferences between KDHE and Permittee/Respondent are strongly encouraged to facilitate achieving consensus on approach and overall streamlining of the corrective action process.

### **DEFINITION AND APPLICABILITY**

In general, an interim measure is defined as a set of short-term actions or activities taken to quickly prevent, mitigate, or remedy unacceptable risk(s) posed to human health and the environment by an actual or potential release of a hazardous substance, pollutant, or contaminant. An interim measure is generally a less complex type of remedial response, requiring minimal design effort, and somewhat presumptive in nature, thereby negating the need for rigorous treatability study or pilot testing. An interim measure may be warranted in either an emergency (immediate response) or non-emergency situation to manage the source(s) of contamination, control the exposure pathway(s), and/or control the hazard(s) to human and environmental receptors. An interim measure may be conducted without extensive investigation at any time during the investigation or corrective action alternatives evaluation process with KDHE approval. Minimally, implementation of an interim measure must be conducted in a manner consistent with the concept of best management practices (BMPs) wherein overall improvement in site/facility conditions is achieved. Depending upon site/facility-specific circumstances or conditions, one or more interim measures may be determined necessary.

Factors to be considered in assessing the need for interim measure implementation include the following:

- Actual or imminent threat of exposure to hazardous substances, pollutants, or contaminants by nearby human populations, ecological receptors or ecosystem food web;
- Actual or imminent threat of contamination to drinking water supplies or sensitive ecosystems;
- Hazardous substances or wastes in drums, barrels, tanks, piles, or other bulk storage containers that may pose an imminent threat of release;
- High levels of hazardous substances, pollutants, or contaminants in predominantly surface soils that may readily migrate;
- Weather conditions that may cause hazardous substances, pollutants, or contaminants to migrate or be released;
- Threat of fire or explosion; and,
- Other situations or factors that may pose imminent threats to public health or welfare or the environment.

In order to assess the relative magnitude of an actual or imminent threat to human health and the environment and the need for possible interim measure implementation, KDHE will consider all applicable federal and state regulatory standards or threshold screening levels for the media of interest including, but not limited to, the following:

- U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs);
- EPA numeric removal action levels (RALs) for contaminated drinking water sites;
- Tier 2 screening levels as provided in the KDHE *Risk-Based Standards for Kansas RSK Manual* (RSK Manual), as revised; and,
- Kansas surface water quality standards.

If gross measurable or visible contamination to the environment is evident (e.g., catastrophic release of separate phase liquid waste), this may serve as a threshold criterion for interim measure implementation as required by KDHE.

The intent in allowing interim measure implementation is not to circumvent the more linear RCRA corrective action process: investigation, alternatives evaluation, and corrective action design/ implementation. However, if site/facility characteristics suggest circumstances are amenable to interim measures designed to control or abate imminent threats, or prevent or minimize the further spread of contamination, KDHE may consider the appropriateness of interim measure implementation as an element of the final corrective action remedy.

## **GOALS/OBJECTIVES AND TIMING**

The ultimate goal of an interim measure is to control or abate threats to human health and/or the environment from releases of or exposures to hazardous substances, pollutants, or contaminants, and to prevent or minimize the further spread of contamination while long-term remedies are evaluated. An interim measure is intended to provide a partial, albeit more immediate, solution

while being consistent with the final site remedy. Implementation of an interim measure often results in significant overall reduction in cost and scope of the final remedy. In some instances, the interim measure may prove to be all that is necessary to achieve site/facility-wide corrective action goals should all significant threats to human health and the environment be mitigated or eliminated. In terms of timing, an interim measure is generally conducted before the investigation and evaluation of remedial alternatives are completed. However, for an active facility, this timing preference is largely irrelevant in the case of a new or newly-discovered release warranting immediate action.

## **PROCESS ELEMENTS AND EXAMPLES**

Again, an interim measure is intended to be a generally less complex type of remedial response requiring only focused characterization, as necessary; “back of the envelope” target receptor identification and exposure pathway analysis; focused interim measure identification/selection; and, minimal design effort with emphasis on “off-the-shelf” remedial system components. Since somewhat contrary to the overall purpose of interim measure implementation, the scope and duration of treatability study or pilot-testing activities is expected to be limited. A typical interim measure may include, but is not limited to, one or more of the following:

- Removal of abandoned drums or other waste containers;
- Excavation of contaminated soil “hot spots”;
- Hydraulic control of groundwater contaminant plume;
- Removal of non-aqueous phase liquid (NAPL) from groundwater;
- Provision of alternate water supply or point-of-use treatment;
- Installation of indoor air vapor mitigation systems;
- Construction of perimeter fencing to limit uncontrolled site access;
- Construction of surface (e.g., dike or berm for runoff/runoff control) or subsurface barriers (e.g., French drain or interceptor trench); and/or,
- Receptor point monitoring (e.g., periodic residential well or public water supply sampling).

## **PLAN/DESIGN AND REPORTING REQUIREMENTS**

Whether conducted in an emergency or non-emergency situation, the decision process leading to the selection and implementation of an interim measure, and the resultant action itself, must be appropriately documented. As part of the initial notification to KDHE, the Permittee/Respondent must provide a brief proposal consisting of a description, implementation schedule and justification for the emergency interim measure proposed to be taken. Upon completion of the emergency interim measure, the Permittee/Respondent will be required to provide a final summary report of the emergency action taken while noting any deviations from the original proposal. KDHE may request the Permittee/Respondent perform additional investigative or mitigative measures, and/or submit a more formal work plan or report.

For all non-emergency interim measures, an Interim Measure Work Plan/Design must be submitted for KDHE review and approval. This Work Plan/Design may vary in detail depending on program requirements. The Work Plan/Design will include, at a minimum, a summary of

available site information and available investigation results; a detailed description of the proposed interim measure; justification and benefit of interim measure implementation including interim remedial action objectives; depending on the complexity of the interim measure, complete design specifications and drawing/schematics, including any relevant figures and/or site system engineering layouts (e.g., process flow diagram, piping and instrumentation diagram, etc.) and engineering design basis; cost estimate; and, a detailed working schedule presented graphically in the form of a milestone chart (e.g., Gantt chart) to show the duration and interdependencies of the various activities. Depending on the complexity of the proposed interim measure and specific program requirements, the Interim Measure Work Plan/Design may need to address operation and maintenance (O&M) as well as performance monitoring needs. Attachment A provides an example outline of an Interim Measure Work Plan/Design package. Attachment A is not intended to be prescriptive in nature, rather a model from which to work. The exact elements and content of any Interim Measure Work Plan/Design package will be determined by KDHE dependent upon the overall complexity of the anticipated interim measure while being consistent with specific program requirements.

Once the non-emergency interim measure is determined by KDHE to be complete (e.g., alternate water supply provided) or fully operational and functional (e.g., soil vapor extraction system installed in accordance with the KDHE-approved design and achieves performance expectations), the Permittee/Respondent must submit an Interim Measure Report documenting the nature of the threat, the action(s) taken and the success in mitigating the threat. KDHE will determine the appropriate form or content of the Interim Measure Report. If the interim measure continues as an on-going effort (e.g., subsurface interceptor trench operation), then the implementing party must submit a monitoring/progress report at a frequency specified in the KDHE-approved Interim Measure Performance Monitoring Plan (e.g., quarterly).

## **PUBLIC INVOLVEMENT**

Given that interim measure implementation will normally precede the final corrective action remedy and any associated decision documents (i.e., Statement of Basis), KDHE may prepare a fact sheet describing the interim measure and distribute to interested parties in the immediate site/facility vicinity. This is not for the intent of soliciting public comment on a proposed interim measure, but rather to keep local government officials and area residents informed as to site/facility activities. Depending on the site/facility-related complexities or sensitivities, conduct of a public availability session may be warranted, as determined necessary by KDHE. In such instance, KDHE may request Permittee/Respondent to prepare supporting documents or presentation materials.

**Attachment A**  
**Interim Measure Work Plan/Design Package**  
**Example Outline**

- I. Site Background
- II. Previous Investigations and Summary of Results
- III. Description of Proposed Interim Measure
- IV. Interim Measure Remedial Action Objectives
- V. Interim Measure Design
  - a. Design Basis
  - b. Design Specifications
  - c. Drawings/Schematics
  - d. Cost Estimate
  - e. Detailed Working Schedule (to be periodically updated)

**APPENDICES**

Appendix A – Data Acquisition Plan (optional)

Appendix B – Quality Assurance Project Plan (or reference existing document)

Appendix C – Treatability Study Testing Plan (optional)

Appendix D – Health and Safety Plan (or reference existing document)

Appendix E – Operations and Maintenance Plan

Appendix F – Community Relations Plan

# Attachment 11

**ATTACHMENT 11  
CORRECTIVE MEASURES STUDY  
SCOPE OF WORK**

**INTRODUCTION**

Undertaken by the Permittee/Respondent, the Corrective Measures Study (CMS) provides an objective and standardized process for evaluating, comparing, and contrasting potential corrective measure alternatives. The primary objectives of the CMS are to:

- 1) Evaluate the feasibility, effectiveness, and cost of at least two (2) potential corrective action alternatives based on the findings of the RCRA Facility Investigation (RFI), and to compare and contrast those alternatives to each other and the "no action" alternative;
- 2) Recommend and justify a specific corrective action for the site/facility; and,
- 3) Determine the benefits and consequences of the recommended corrective action.

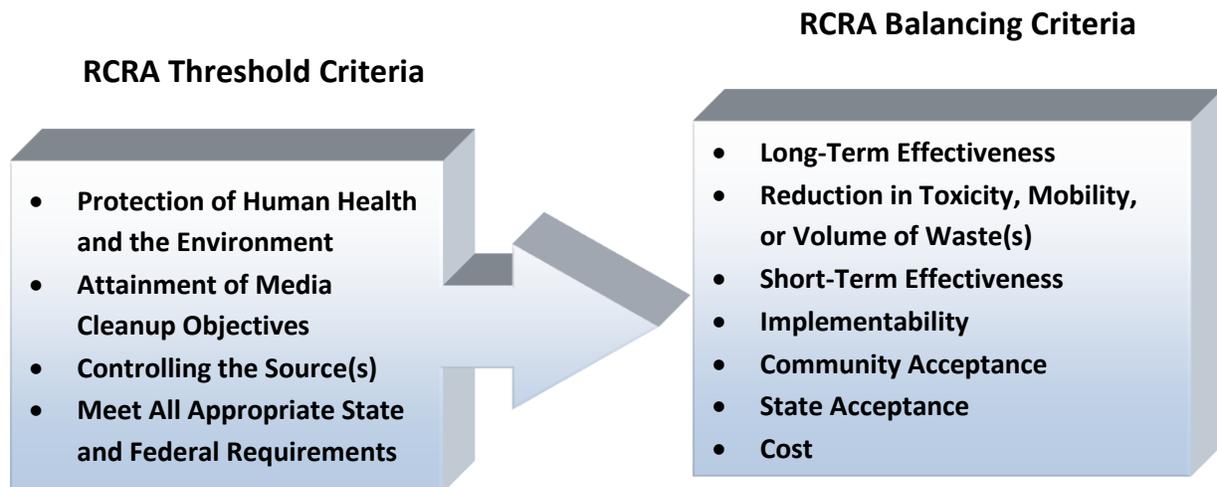
The individual corrective action alternatives selected for evaluation as part of the CMS process must be plausible and not skew or bias the evaluation process. The alternatives considered must be capable of achieving cleanup objectives while, to the maximum extent practicable, contemplating permanent solutions and treatment technologies. Depending upon project needs, the alternatives to be evaluated are typically broken out on a media-specific basis, or sometimes on a geographic basis. For example, if contaminant impacts are to be addressed in groundwater and soil, a minimum of two corrective action alternatives (in addition to the no action alternative) for each media of concern are evaluated in most circumstances. If interim measures have been implemented or other actions taken in the past at a site, those do not necessarily need to be subjected to a comparative analysis at the time of CMS development; however, they must be described/justified in detail within the CMS Report itself with an estimate of associated implementation costs, to the extent available. The overall intent is that any interim measures taken not be inconsistent with the final selected site remedy.

**CMS EVALUATION PROCESS**

This guidance and scope of work (SOW) outlines the primary activities to be completed as part of the CMS process necessary to satisfy the objectives stated above. At KDHE's discretion, this general process may be streamlined and focused to best serve project needs. In general, the evaluation of corrective actions alternatives must include:

- Description of the contaminants of concern (COCs) and media affected;
- Identification of human and ecological targets and an evaluation of all direct and indirect exposure pathways;
- Description of the site-specific remedial action objectives (RAOs);
- Detailed individual analysis of each alternative;
- Tabular summary of regulatory requirements and relevant guidance for each alternative; and,
- Comparative analysis of each of the proposed corrective action alternatives.

The detailed evaluation of potential corrective action alternatives provides the basis for recommending and supporting a specific remedial action or group of remedial actions for the site. Notably, any remedy selected for a site absolutely, unequivocally must satisfy the four identified threshold criteria identified in Figure 1. The seven balancing criteria represent the primary criteria upon which the CMS evaluation/comparative analysis is based.



**Figure 1: Criteria for evaluation of corrective action alternatives**

Face-to-face meetings or teleconferences between KDHE and Permittee/Respondent are strongly encouraged to facilitate achieving consensus on approach and overall streamlining of the corrective action process. By doing such, in most cases, submission of a CMS Work Plan can be avoided. However, if additional data gathering is warranted following completion of the RFI in order to evaluate potential corrective action alternatives, KDHE may require submission of a CMS Work Plan for review and approval.

The exact content requirements of any CMS Work Plan should be developed in consultation with KDHE. A detailed CMS working schedule, presented graphically in the form of a milestone chart (e.g., Gantt chart) to show the duration and interdependencies of the various activities must be included in any required CMS Work Plan. In addition, any analytical data collected must be of appropriate data quality and quantity to facilitate comparison to applicable threshold levels as established in KDHE's *Risk-Based Standards for Kansas RSK Manual* (RSK Manual), or as otherwise approved or required by KDHE, or support the evaluation of potential corrective action alternatives.

In some cases, the Permittee/Respondent may propose or KDHE may require implementation of bench- or pilot-scale treatability study testing to demonstrate the efficacy of a particular technology where there might be some uncertainty in the viability or suitability to site conditions. Treatability studies are conducted to provide sufficient data to allow treatment alternatives to be fully developed and evaluated during the CMS process and to support the subsequent remedial design of the corrective action alternative ultimately selected by KDHE.

Treatability studies also serve to reduce cost and performance uncertainties to acceptable levels for treatment alternatives under consideration to permit a more reliable remedy selection process. All treatability studies/modeling/additional data acquisition activities must be completed in a manner consistent with available KDHE policy and guidance. If there is a desire or need to conduct such activities, the Permittee/Respondent must first submit a treatability study work plan for KDHE review and approval. At KDHE's discretion, reporting associated with treatability study/modeling/additional data gathering activities may be reported separately or incorporated into the CMS Report.

## **CMS REPORTING**

A CMS Report must be submitted to KDHE for review and approval, in a timeframe consistent with the implementation schedule in the approved CAS Work Plan, or as otherwise directed by KDHE. The CMS Report must include all information and data collected during the investigation and describe in detail the work performed to accomplish the objectives as set forth within this SOW. The CMS Report shall include: 1) a brief summary of the findings of previous environmental investigations, including a risk assessment, if performed; 2) a description of the site-specific RAOs; 3) a detailed description of each corrective action alternative evaluated, including the "no action" alternative; 4) a detailed discussion of each corrective action alternative evaluated relative to the threshold and balancing criteria identified above; 5) a comparative analysis of one alternative versus the others in both narrative and tabular form; 6) a recommendation for corrective action at the site which provides a clear basis for recommending and supporting a specific corrective action or group of corrective actions for the site; and, 7) any supporting background information or literature which was used to evaluate each corrective action alternative (to be included in an appendix).

All elements of the recommended corrective action as proposed in the CMS Report must be fully substantiated. Specifically, sufficient data must be available and presented in the CMS Report to support the recommended alternative consistent with available state and federal policy and guidance. KDHE may also require identification of a contingent remedy up front in the event the selected remedy is not able to achieve RAOs or if there is uncertainty as to the efficacy of that being proposed. Once KDHE has reviewed and approved the CMS Report, a Statement of Basis will be prepared that identifies KDHE's preferred remedy for the site. The draft decision document will be made available for public comment before KDHE issues a final remedy decision. At this juncture, the Permittee/Respondent will be required to design and perform corrective action activities under KDHE oversight.

### ***STEP 1: Identification and Development of Corrective Measure Alternatives***

Based on RFI results, the Permittee/Respondent shall identify, screen, and develop the alternatives for removal, containment, treatment and/or other remediation of the contamination based on established media cleanup objectives. At a minimum, all corrective actions concerning groundwater releases from RCRA regulated units shall be consistent with, and as stringent as, those required under 40 CFR 264.100. In general, the media cleanup objectives, established in conjunction with KDHE, shall be based upon available KDHE and EPA guidance, public health

and environmental criteria, information gathered during the RFI, and generally include the following components:

- Cleanup levels which are media-specific concentrations that achieved before the final remedy is considered complete;
- Point(s) of compliance representing where the media-specific cleanup levels are to be achieved; and,
- Remedy construction timeframe and estimate of time needed to achieve media-specific cleanup levels at the point(s) of compliance.

Multiple technologies (e.g., treatment train) can be combined to constitute the overall corrective action alternative being carried through the evaluation. Again, each of the alternatives being considered must be screened against the threshold criteria shown in Figure 1. If a given alternative does not meet all of the threshold criteria, then the alternative does not warrant further consideration.

### ***STEP 2: Detailed Evaluation of Corrective Measure Alternatives***

For those alternatives that satisfy the threshold criteria screening in Step 1, the Permittee/Respondent must fully describe and evaluate each alternative and its individual components relative to the balancing criteria depicted in Figure 1.

#### Long-Term Effectiveness

The Permittee/Respondent shall demonstrate the expected long-term effectiveness, reliability, and risk of failure of the alternatives in terms of:

- Effectiveness of the alternative under analogous site conditions;
- Potential impact resulting from alternative failure, including failures from uncontrollable changes affecting the site (e.g., heavy precipitation events, off-site pumping well influences, etc.); and,
- Estimates of alternative projected useful life, including any component technologies.

#### Reduction in Toxicity, Mobility, or Volume of Waste(s)

In general, the preference is for remedies capable of eliminating or substantially reducing the potential for wastes in the contaminated media to cause future environmental releases or other risks to human health and the environment. For the sake of the CMS evaluation, the Permittee/Respondent must estimate how much or to what extent the corrective measure alternatives will reduce the toxicity, mobility, or volume of waste. The assessment must include a comparison of initial site conditions to anticipated post-corrective measure conditions.

#### Short-Term Effectiveness

Short-term effectiveness has particular bearing when the remedial activities will be occurring in densely populated areas, or where waste characteristics pose a high risk to workers/environment

necessitating special protective measures during the implementation. Typical factors to be considered in the CMS evaluation include, but are not limited to, fire, explosion, exposure to hazardous substances and potential threats associated with treatment, excavation, transportation and redisposal, or containment of the waste material.

### Implementability

The Permittee/Respondent shall fully describe the implementability of each alternative, including the relative ease of installation (or constructability) within the context of time required to achieve a given level of response. The following specific information shall be considered and included in the CMS Report:

- Administrative activities (e.g., permits, off-site approvals) needed to implement the alternative, and the length of time needed to accomplish these activities;
- Constructability, implementation time, and time for beneficial results;
- Availability of adequate off-site treatment, storage capacity, disposal services, needed technical services and materials; and,
- Availability of prospective technologies for each corrective measure alternative.

### Community Acceptance

The Permittee/Respondent is responsible for involving and supporting community involvement activities as an ongoing part of the corrective action. The CMS Report shall include a discussion of any concerns raised by the community during the conduct of corrective action activities to that point in time (e.g., investigation and interim measures). In addition, the CMS Report shall discuss any aspects associated with an alternative for which there is a potential for community concerns and objections.

### State Acceptance

The Permittee/Respondent shall include a discussion in the CMS Report of how the specific corrective measure activities will be conducted in compliance with all applicable state regulations (i.e., permit requirements), and KDHE policy and guidance relevant to the proposed corrective measures implementation.

### Cost

The Permittee/Respondent shall develop a cost estimate for each corrective measure alternatives. Cost estimates shall include costs for engineering, site preparation, construction, materials, labor, sampling/analysis, waste management/disposal, permitting, health and safety measures, training, operation and maintenance, long-term monitoring, etc.

### ***STEP 3: Corrective Measure(s) Recommendation***

The Permittee/Respondent shall fully justify and recommend a corrective measure(s) for implementation with a detailed summary of how the measure(s) satisfy each of the threshold criteria and why the measure(s) appears most favorable based on the balancing criteria comparative analysis evaluation. This recommendation shall include summary tables presenting the alternatives in an easily understood manner and specifically highlighting tradeoffs among the balancing criteria factors for the alternatives considered/evaluated. KDHE will then identify a proposed corrective measure(s) in the Statement of Basis. With consideration of public comment on the Statement of Basis, KDHE will make a final selection of the corrective measure(s) to be implemented.

# Attachment 12

**ATTACHMENT 12**  
**CORRECTIVE MEASURES IMPLEMENTATION**  
**SCOPE OF WORK**

**INTRODUCTION**

The Final Corrective Measure(s) Decision and Response to Comments (FDRTC) issued by the Kansas Department of Health and Environment (KDHE) identifies the remedial action(s) that will be implemented to address residual waste and contamination of environmental media, and prevent or eliminate exposure to human and ecological receptors from site/facility-related contaminants of concern (COCs). The selected remedy is planned, designed, constructed, and implemented during the Corrective Action Plan (CAP) and Corrective Action (CA) phases with oversight provided by KDHE. Face-to-face meetings or teleconferences between KDHE and Permittee/Respondent are strongly encouraged to facilitate achieving consensus on approach and overall streamlining of the corrective action process.

**CAP/CA OBJECTIVES**

The primary objectives of the CAP phase are described as follows:

- 1) To provide a preliminary design of the CA and a description of the tasks necessary to implement the corrective action consistent with the FDRTC;
- 2) To obtain additional data, if necessary, to support the development of the detailed design plans and specifications;
- 3) To provide detailed intermediate, pre-final and final design plans and specifications including an Operations and Maintenance (O&M) Plan for the remedial system;
- 4) To provide a Contingency Plan, as required by KDHE, that identifies an alternative corrective action to be implemented in the event of a significant failure of the remedial system;
- 5) To identify and obtain necessary easements and permits required for the implementation of the corrective action; and,
- 6) To provide a Site Monitoring and Performance Evaluation Plan to monitor the effectiveness of the corrective action.

The CAP and associated design documents may vary in detail and delivery strategy (e.g., preliminary (10%), intermediate (30-50%), pre-final/final (90-100%)) depending on project-specific needs. For example, in the case of complex design efforts, preliminary and/or intermediate design submittals may be appropriate in advance of the pre-final/final design stage. For a simple remedy, it may only be necessary to submit a draft and final CAP where no up-front design is explicitly warranted; instead, a report is provided after CA implementation/installation fully documenting the effort with any as-builts. Often times, the first design submittal seems to actually be the pre-final/final design equivalent. At the discretion of KDHE, instead of submitting with the CAP and associated design package, the O&M Plan as well as the Site Monitoring and Performance Evaluation Plan may be submitted after CA implementation/start-up with the as-builts. KDHE may also require upfront or later submittal of a Contingency Plan, primarily if identified explicitly in the FDRTC, or as project needs might dictate based on site-

wide and performance monitoring. Typically, in these circumstances, the expectation is that a contingency be identified in general terms only with a Contingency Plan developed if/when the need arises at a later date as requested by KDHE. If the contingent remedy represents a fundamental change from the original selected remedy, then community involvement activities and/or decision document amendment may be necessary.

The primary objectives of the CA phase are described as follows:

- 1) To implement the CAP as approved by KDHE;
- 2) To operate and maintain the corrective action system as described in the approved O&M Plan;
- 3) To evaluate and monitor the performance of the corrective action as described in the approved Site Monitoring and Performance Evaluation Plan;
- 4) To determine whether remedial action objectives (RAOs) or media cleanup goals have been attained, or are likely to be attained;
- 5) To confirm attainment of RAOs or media cleanup goals by conducting post-corrective action monitoring as described in the approved Site Monitoring and Performance Evaluation Plan;
- 6) To implement the approved Contingency Plan, as required by KDHE, to design, install and operate additional or alternative corrective action measures in the event the implemented corrective action is unable to attain corrective action goals within a reasonable timeframe as determined by KDHE;
- 7) To document and report to KDHE all activities performed pursuant to the corrective action; and,
- 8) To submit a final report to KDHE for approval which briefly describes the corrective action implemented at the site, and provides the appropriate data documenting that site-specific corrective action goals have been attained.

Depending on the complexity of the selected corrective action, the CAP and associated design documents may need to address operation and maintenance via an O&M Plan as well as remedial system performance monitoring and site-wide monitoring (e.g., plume control) via a Site Monitoring and Performance Monitoring Plan. As discussed above, KDHE may also require upfront or later submittal of a Contingency Plan.

### **CAP/CA PLANNING/IMPLEMENTATION/REPORTING**

***CAP/Design***—In general, the CAP and associated design documents will include, at a minimum, a summary of available site information and available investigation results; a detailed description of the proposed corrective action; RAOs or media cleanup goals; depending on the complexity of the proposed corrective action, complete design specifications and drawing/schematics, including any relevant figures and/or site system engineering layouts (e.g., process flow diagram, piping and instrumentation diagram, etc.) and engineering design basis; cost estimate; and, a detailed working schedule presented graphically in the form of a milestone chart (e.g., Gantt chart) or critical path diagram to show the duration and interdependencies of the various activities. As necessary, the detailed working schedule must be updated and submitted to KDHE as part of the routine reporting requirements.

The exact elements, content and delivery strategy of the CAP and all associated design documents will be determined by KDHE in consultation with the Permittee/Respondent. Typically, a preliminary (10%) design package will minimally include a design delivery strategy, preliminary construction schedule, specifications outline, preliminary drawings, design basis report, and a detailed statement of how all applicable regulatory requirements will be met. An intermediate (30-50%) design package will include an updated construction schedule, preliminary specifications, intermediate drawings, updated design basis report, and updated requirements evaluation. A pre-final/final (90-100%) design package will include updates of the above-mentioned items plus pre-final/final design specifications/drawings and design basis report/design analysis. Unless submitted separately, the CAP/Final Design Package must address O&M and performance monitoring needs as well as shakedown testing and startup procedures. There may also be a need for development of a Construction Quality Assurance Plan and a separate Health and Safety Plan for CA implementation.

The implementing party must describe in detail all tasks necessary to acquire additional data to support the development of a CAP/Final Design Package and to construct, implement, and monitor the performance of the corrective action. All necessary tasks shall be documented and described in adequate detail to clearly state the manner in which they will be implemented and reported. The tasks shall address obtaining appropriate easements, permits, etc. and, where wastes or hazardous substances, pollutants, or contaminants will remain on site at concentrations that disallow unlimited use and unrestricted exposure, include those tasks necessary for implementing institutional controls within the framework of KDHE's Environmental Use Control Program, or as otherwise approved by KDHE.

***Additional Data Acquisition Plan (Optional)***—If additional data collection is needed to prepare the CAP or support the design effort, an Additional Data Acquisition Plan must be submitted in advance for KDHE approval. The intent of any additional data acquisition is to provide sufficient data to support the subsequent remedial design and/or start-up of the KDHE selected remedy. All data gathering activities must be completed in a manner consistent with available KDHE policy and guidance. Analytical data must be collected of appropriate data quality and quantity to facilitate comparison to applicable threshold levels as established in KDHE's *Risk-Based Standards for Kansas RSK Manual* (RSK Manual). All data should be validated at the appropriate field or laboratory quality control level to determine whether it is appropriate for its intended use. At KDHE's discretion, reporting associated with additional data gathering activities may be reported separately, incorporated into the CAP/Final Design Package or incorporated into the CA Report.

***Site Monitoring And Performance Evaluation Plan***—Whether included in the CAP/Final Design Package described above or prepared separately, a Site Monitoring and Performance Evaluation Plan is intended to document the activities necessary to evaluate the effectiveness of the corrective action, in terms of remedial system performance monitoring and site-wide monitoring, as appropriate. At a minimum, the Site Monitoring and Performance Evaluation Plan shall include:

- a description of the site-specific RAOs or media cleanup goals;
- a description of the remedial system operations that will be evaluated and identification

- of criteria that will be used to evaluate system performance;
- frequency, methods, and rationale for site monitoring;
- a description of the environmental media to be monitored (groundwater, surface water, soil, soil vapor, indoor air, etc.);
- a description of quality assurance/quality control (QA/QC) considerations for the laboratory and field;
- identification of institutional controls that will be inspected/monitored;
- a plan for evaluating changes in land use of impacted areas that may alter the effectiveness of the corrective action; and,
- a description of reporting methods, format, and frequency.

**O&M Plan**—Whether included in the CAP/Final Design Package described above or prepared separately, an O&M Plan must be submitted for KDHE review and approval. To facilitate preparation of an O&M Plan, please refer to available U.S. Environmental Protection Agency (EPA) guidance entitled *Operation and Maintenance in the Superfund Program* (OSWER 9200.1-37FS; EPA540-F-01-004; May 2001), or as approved by KDHE. The intent is for any operator to be able to use the O&M Plan and clearly understand O&M procedures to be followed, documentation requirements and corrective measures to be taken dependent upon anticipated circumstances or upset conditions. Proper planning and advance contingencies are appropriate considerations to minimize remedial system downtime.

**CA Implementation and Reporting**—The corrective action selected for the site shall be implemented in accordance with the KDHE-approved CAP/Final Design Package. Implementation of the corrective action shall proceed according to the KDHE-approved schedule. The Permittee/Respondent shall conduct a pre-construction inspection and meeting as well as routine inspections during CA implementation. Depending on the complexity and duration of the corrective action effort, KDHE may require submission of interim status reports on a periodic basis (e.g., weekly, bi-monthly, monthly, etc.) documenting CA activities. When construction is complete, Permittee/Respondent shall notify KDHE for the purposes of conducting a final inspection consisting of a walk-thru of the project site.

A Final CA Report that documents the corrective action constructed or implemented at the site shall be submitted to KDHE for review and approval. KDHE should be consulted to determine the appropriate form or content of the Final CA Report. Submission of the Final CA Report should not be construed to constitute fulfillment of all obligations on the part of the Permittee/Respondent at a given site. Instead, the Final CA Report more typically represents reporting of the remedial actions taken to that point in time, predominantly a reporting of the constructed or engineered systems.

**Site Monitoring and Performance Evaluation Reporting**—The effectiveness of the corrective action shall be monitored as specified, including schedule and frequency, in the KDHE-approved Site Monitoring and Performance Evaluation Plan. Site Monitoring and Performance Evaluation Reports must be submitted to KDHE in accordance with the KDHE-approved Site Monitoring and Performance Evaluation Plan. The Site Monitoring and Performance Evaluation Reports must contain all of the information and data as described within the Site Monitoring and Performance Evaluation Plan, including a narrative description and/or graphic evaluation of the

effectiveness of the corrective action as compared to the site-specific RAOs or media cleanup goals.

If the site monitoring and performance evaluation program demonstrates that the implemented corrective action is incapable of achieving corrective action goals within a reasonable timeframe as determined by KDHE, the Site Monitoring and Performance Evaluation Report should recommend modifications or augmentation to the existing remedial system that will enable the system to achieve the medial cleanup goals. KDHE must be notified within seven days of any significant changes that may diminish the effectiveness of the implemented corrective action to protect human health and the environment.

At a minimum, the Site Monitoring and Performance Evaluation Reports shall include:

- a narrative description and graphic illustration of the effectiveness of the corrective action;
- a description of system operations and performance;
- a system startup report and “as built” drawings of the remedial system (required for the first Site Monitoring and Performance Evaluation Report unless approved by KDHE to be reported separately);
- a description of repairs or modifications made to the corrective action system during the reporting period, as appropriate;
- laboratory analytical data including copies of laboratory reports and summary tables;
- contaminant isoconcentration maps;
- a tabular comparison of the current monitoring data to previous monitoring results;
- a figure illustrating the site and associated monitoring wells or other sample point locations;
- static water elevation measurements;
- a contour map of the water level elevation;
- a description of any deviations from the approved sampling procedures;
- results of QA/QC data and an evaluation of the validity of the analytical data;
- logs of any newly constructed site wells;
- an evaluation of the effectiveness of institutional controls implemented for the corrective action (monitoring frequency will be identified in the approved Site Monitoring and Performance Evaluation Plan);
- an evaluation of land use of the impacted area (monitoring frequency will be identified in the approved Site Monitoring and Performance Evaluation Plan);
- specific conclusions and recommendations (for further action or change) based on historical site monitoring and performance data trends; and, all other relevant site data collected during the reporting period.

# Attachment 13

**ATTACHMENT 13  
FORM OF INVOICE FOR OVERSIGHT COSTS  
(Payroll and Expense Detail Entries are for Example Purposes Only)**

KDHE/Bureau of Waste Management  
Attn: E. Jean Underwood  
1000 SW Jackson Street, Suite 320  
Topeka, KS 66612-1366

Period: XX/XX/XX through XX/XX/XX  
Date: XX/XX/XX

**Payment Due in 30 days**

Bill To: XXXXXXXXXXXX  
XXXXXXXXXXXX  
XXXXXXXXXXXX  
XXXXXXXXXXXX

This invoice is for costs incurred by or on behalf of KDHE for the referenced project. Please make check payable to the Bureau of Waste Management and enclose a copy of the invoice with payment to the above address to ensure your account is credited appropriately. Questions regarding this invoice should be directed to E. Jean Underwood at (785) 296-1603 or [junderwood@kdheks.gov](mailto:junderwood@kdheks.gov).

**Project Name:** XXXXXXXXXXXXXXXXXXXXXXXX

**Consent Order:** KDHE Case No. XX-E-XX

XXXXXXXXXXXX

**Project Code:** EPA ID No. KSXXXXXXXXXXXX

**Cost Acct:**

**Payroll Details:**

Title	Hourly Rate	Category	Total Hours
<b>Environmental Scientist II</b>	<b>\$ XX.XX</b>	Site Visit/Inspection and/or Field Oversight/Sampling	<b>X.XX</b>
<b>Professional Geologist IV</b>	<b>\$ XX.XX</b>	Letter/Document Preparation/Review and/or Approval	<b>X.XX</b>
<b>Total Payroll Costs</b>			<b>\$ XXX.XX</b>

**Expense Details:**

<b>Travel Expenses</b>	<b>(Description)</b>	<b>\$ XXX.XX</b>
<b>Lab Analysis</b>	<b>(Description)</b>	<b>\$ XXX.XX</b>
<b>Other 3<sup>rd</sup> Party Costs</b>	<b>(Description)</b>	<b>\$ XXX.XX</b>

**Summary:**

Payroll Costs: \$ XXX.XX  
Other Costs: \$ XXX.XX  
Administrative Costs: \$ XXX.XX

**TOTAL DUE:** \$ XXX.XX

Please Note: The Kansas Department of Health and Environment's (KDHE) administrative office expenses included with this invoice are computer use, rent, utilities and other support services. This amount equals 40% of the payroll and other costs totals, except for contractual, field supplies, KDHE equipment use, and lab analysis, which are computed at 12.5%.

**THIS IS AN INVOICE**

# Attachment 14

**ATTACHMENT 14**  
**KDHE/BUREAU OF WASTE MANAGEMENT (KDHE/BWM)**  
**RCRA CORRECTIVE ACTION FIELD ACTIVITIES NOTIFICATION FORM**

This field notification form is only applicable to certain facilities/sites managed by the Hazardous Waste Permits Section and is **not** intended for use by other programs. Specifically, the form is to be used solely for notification of RCRA corrective action-related field activities. Please provide advance written notification by completing this form and faxing to 785-296-1592. If you have any problems completing this form, please call the assigned KDHE/BWM Project Manager, or 785-296-1602 for assistance. Note: If you are amending or canceling a previous notification, please enter the date of that previous notification (if known).

- I want to submit a new notification.
- I want to amend a previous notification. (Enter date if known)\_\_\_\_\_
- I want to cancel a previous notification. (Enter date if known)\_\_\_\_\_

(\*denotes required fields)

\*Project Name:\_\_\_\_\_

\*KDHE Project Manager:\_\_\_\_\_

**Location of work:**

\*County:\_\_\_\_\_

\*City (or nearest city):\_\_\_\_\_

**Anticipated dates and duration of work:**

\*Start Date (mm/dd/yy):\_\_\_\_\_

\*Duration of work (days):\_\_\_\_\_

- Check this box if work is expected to occur on any weekend or holiday days.

**Primary Field Contact:**

\*Name:\_\_\_\_\_

\*Affiliation/Company:\_\_\_\_\_

\*Primary Phone Number:\_\_\_\_\_ Alternate Phone Number:\_\_\_\_\_

Email Address:\_\_\_\_\_

**Alternate Contact:**

\*Name:\_\_\_\_\_

\*Affiliation/Company:\_\_\_\_\_

\*Primary Phone Number:\_\_\_\_\_ Alternate Phone Number:\_\_\_\_\_

Email Address:\_\_\_\_\_

**\*Brief Description of Work to be Performed:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_