SC DEPARTMENT of ENVIRONMENTAL SERVICES

Division of Waste Management
Bureau of Land and Waste Management
2600 Bull Street
Columbia, SC 29201

BUREAU OF LAND AND WASTE MANAGEMENT
HAZARDOUS WASTE MANAGEMENT PERMIT
SCD 981 031 040

Permit Effective Date:	**TBD, 2026**
Last Modification Effective Date:	**N/A**
Permit Expiration Date:	**TBD, 2026**

This Permit is hereby issued to:

Facility Name:	Safety-Kleen Systems, Inc. (Greer)
Facility Address:	2818 Old Woodruff Road Greer, South Carolina 29651-8629 Spartanburg County
Facility Contact:	Carl Williams (843) 879-1135

This Permit is for storage of hazardous wastes in two warehouse container storage areas and in one aboveground storage tank; and for corrective action for all solid waste management units (SWMUs) at 2818 Old Woodruff Road, Greer, Spartanburg County, South Carolina.

This Permit is issued pursuant to Section 44-56-10 et seq. and Regulation 61-79 of the 1976 South Carolina Code of Laws, as amended. The authority granted hereunder is subject to the requirements of the aforementioned laws and regulations and the attached conditions.

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Kent Krieg, Director
Division of Waste Management
Bureau of Land and Waste Management

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Module I. STANDARD CONDITIONS

I.A. EFFECT OF PERMIT

This Permit is issued pursuant to the Resource Conservation and Recovery Act (RCRA), as amended. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), 3008(h), 3013, or 7003 of RCRA; Sections 106(a), 104, or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), or any other law providing for protection of public health or the environment. [R.61-79.270.4, R.61-79.270.30(g)]

The Permittee shall store hazardous waste and perform corrective action in accordance with the Conditions of this Permit. Any storage, treatment, and/or disposal of hazardous waste not authorized in this Permit is prohibited, except as allowed by the South Carolina Hazardous Waste Management Regulations, R.61-79.

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 R.61-79.270.41, R.61-79.270.42, and R.61-79.270.43. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any Permit Condition. [R.61-79.270.30(f)]

I.B.2 Permit Renewal

This Permit may be renewed as specified in Permit Condition I.E.2. Review of any application for a permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations. [R.61-79.270.30(b)]

I.B.3 Permit Expiration

Pursuant to R.61-79.270.50, this Permit shall be effective for a fixed term not to exceed 10 years. This Permit and all Conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely, complete application (see R.61-79.270.10, R.61-79.270.13 through R.61-79.270.29) and,

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through no fault of the Permittee, the Department has not issued a new permit, as set forth in R.61-79.270.51.

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.

I.D. DEFINITIONS

For the purposes of this Permit, terms used herein shall have the same meaning as those in R.61-79 Parts 124, 260, 261, 264, 266, 268, 270 and 273, 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.

I.D.1 Approved Permit Application

For purposes of this Permit means the most recent RCRA Part A Application, Part B Application, and modifications and referenced documents approved by the Department for the duration of this permit.

I.D.2 Area of Concern (AOC)

For the purposes of this Permit includes any area having a probable release of a hazardous waste or hazardous constituent which is not from a solid waste management unit and is determined by the Department to pose a current or potential threat to human health or the environment. Such areas of concern may require investigation and remedial action as required under Section 3005(c)(3) of the Resource Conservation and Recovery Act and R.61-79.270.32(b)(2) in order to ensure adequate protection of human health and the environment.

I.D.3 Certified Laboratory

For the purposes of this Permit means a laboratory that has been approved by the Department to perform specific analyses referenced in R.61-79.260 through R.61-79.270.

I.D.4 Compliance Period

For the purposes of the groundwater requirements of this Permit is the number of years equal to the active life of the unit prior to the Department's approval of certification of closure. The compliance period includes any period of waste

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management activity that may have occurred prior to permitting and begins when the owner/operator initiates a compliance monitoring program for groundwater pursuant to R.61-79.264.99.

I.D.5 **Contamination**

For the purposes of this Permit refers to the presence of any hazardous constituent in a concentration which exceeds the naturally occurring concentration of that constituent in areas not affected by the facility.

I.D.6 **Corrective Action**

For the purposes of this Permit, includes all corrective actions necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents at the facility, regardless of the time at which waste was placed in the unit, as required under R.61-79.264.100(b) and R.61-79.264.101. Corrective action may address releases to air, soils, surface water, sediment, groundwater, or subsurface gas.

I.D.7 **Corrective Action Management Unit (CAMU)**

For the purposes of this Permit, includes any area within a facility that is designated by the Department under R.61-79.264 Subpart S for the purpose of implementing corrective action requirements under R.61-79.264.101 and RCRA Section 3008(h). A CAMU shall only be used for the management of remediation wastes pursuant to implementing such corrective action requirements at the facility.

I.D.8 **Department**

For the purposes of this permit means the South Carolina Department of Environmental Services, including personnel thereof authorized to act on behalf of the Department.

I.D.9 **Extent of Contamination**

For the purposes of this Permit is defined as the horizontal and vertical area in which the concentrations of any hazardous constituents in the environmental media being investigated are above the naturally occurring concentration of that constituent in areas not affected by the facility.

I.D.10 **Facility**

For the purposes of this Permit, means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste, or for managing hazardous secondary materials prior to reclamation. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or

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combinations of them). For the purpose of implementing corrective action under sections R.61-79.264.101, "Facility" includes all contiguous property under the control of the owner or operator seeking a permit under subtitle C of RCRA. This definition also applies to facilities implementing corrective action under RCRA Section 3008(h). The facility boundary is depicted in APPENDIX E – FACILITY MAP.

I.D.11 **Hazardous Constituent**

For the purposes of this Permit are those substances listed in Table 1 of R.61-79.261.24, Subpart D, Appendix VIII (Hazardous Constituents) of R.61-79.261 and Appendix IX (Groundwater Monitoring List) of R.61-79.264.

I.D.12 **Hazardous Waste Management Unit (HWMU)**

For the purposes of this Permit is a contiguous area of land on or in which hazardous waste is managed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include surface impoundments, waste piles, land treatment areas, landfill cells, incinerators, tanks and their associated piping and underlying containment system, and container storage areas. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are managed.

I.D.13 **Interim Measures**

For the purposes of this Permit are actions necessary to minimize or prevent the further migration of contaminants and limit actual or potential human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented.

I.D.14 **Land Disposal**

For the purposes of this Permit and R.61-79.268 means placement in or on the land except for a CAMU and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, underground mine or cave, or concrete vault or bunker intended for disposal purposes.

I.D.15 **Landfill**

For the purposes of this Permit includes any disposal facility or part of a facility where hazardous waste is placed in or on the land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a CAMU.

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I.D.16 **Post-Closure Care Period**

For the purpose of this Permit is a thirty-year (30) period beginning when a hazardous waste management unit is certified as closed and during which time the Permittee shall be required to maintain, monitor, and report in accordance with the appropriate requirements of R.61-79.264 Subparts F, K, L, M, N, and X. The post-closure care period is unit specific and may be more or less than thirty years. The Department may modify the post-closure care period applicable to a unit if it finds that an extended or reduced period is necessary to protect human health and the environment. [R.61-79.264.117]

I.D.17 **Release**

For the purposes of this Permit includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous constituents.

I.D.18 **Remediation Waste**

For the purposes of this Permit includes all solid and hazardous wastes, and all media (including groundwater, surface water, soils and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under R.61-79.264.100, R.61-79.264.101 and RCRA Section 3008(h). For a given facility, remediation wastes may originate only from within the facility boundary but may include waste managed in implementing RCRA Sections 3004(v) or 3008(h) for releases beyond the facility boundary.

I.D.19 **Schedule of Compliance/Compliance Schedule**

For the purposes of this Permit, "Schedule of Compliance" and "Compliance Schedule" are interchangeable terms which mean a schedule of measures included in this Permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the S.C. Hazardous Waste Management Act and the South Carolina Hazardous Waste Management Regulations. [R.61-79.270.2]

I.D.20 **Solid Waste**

For the purposes of this Permit means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or

industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

I.D.21 **Solid Waste Management Unit (SWMU)**

For the purposes of this Permit includes any unit which has been used for the treatment, storage, or disposal of solid waste at any time from which hazardous constituents might migrate, irrespective of whether the unit is or ever was intended for the management of solid waste. RCRA hazardous waste management units are also solid waste management units. Solid Waste Management Units (SWMUs) include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents, excluding one-time accidental spills that are immediately and adequately remediated and cannot be linked to solid waste management activities (e.g. product or process spills).

I.D.22 **Tank**

For the purposes of this Permit means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g. wood, concrete, steel, plastic) which provide structural support. [R.61-79.260.10]

I.D.23 **Tank System**

For the purposes of this Permit means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system. [R.61-79.260.10]

I.D.24 **Temporary Unit (TU)**

For the purposes of this Permit includes any temporary tanks and/or container storage areas used solely for treatment or storage of hazardous remediation wastes during remedial activities required under R.61-79.264.101 or RCRA Section 3008(h). Designated by the Department, such units must conform to specific standards as specified in R.61-79.264.553.

I.D.25 **Unit**

For the purposes of this Permit includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank, container storage area, septic tank, drain field, wastewater treatment unit, elementary neutralization unit, transfer station, or recycling unit.

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I.E. DUTIES AND REQUIREMENTS

I.E.1 Duty to Comply

The Permittee shall comply with the Approved Permit Application and all Conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any Permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of RCRA and the South Carolina Hazardous Waste Management Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application. [R.61-79.270.30(a)]

I.E.2 Duty to Reapply

If the Permittee intends to continue an activity allowed or required 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 eighty (180) days prior to permit expiration. The Permittee must comply with the public notice requirements of R.61-79.124.10. [R.61-79.270.10(h), R.61-79.270.30(b)]

I.E.3 Obligation for Corrective Action

The Permittee is required to continue this Permit for any period necessary to comply with the corrective action requirements of this Permit. [R61-79.264.101, R.61-79.270.1(c), R.61-79.270.51]

I.E.4 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the Conditions of this Permit. [R.61-79.270.30(c)]

I.E.5 Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. [R.61-79.270.30(d)]

I.E.6 Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the Conditions of this Permit. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and

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process controls, including appropriate quality assurance procedures. This provision requires the operation of a backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the Conditions of this Permit. [R.61-79.270.30(e)]

I.E.7 **Duty to Provide Information**

The Permittee shall furnish to the Department, within a reasonable time, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish the Department, upon request, copies of records required to be kept by this Permit. [R.61-79.264.74(a), R.61-79.270.30(h)]

I.E.8 **Inspection and Entry**

I.E.8(a) The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and other documents, as may be required by law, to: [R.61-79.270.30(i)]

I.E.8(b) Enter at reasonable times upon the Permittee's premises where a regulated activity is located or conducted, or where records must be kept under the Conditions of this Permit;

I.E.8(c) Have access to and copy, at reasonable times, any records that must be kept under the Conditions of this Permit;

I.E.8(d) Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices or operations regulated as required under this Permit; and

I.E.8(e) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

I.E.9 **Monitoring and Records**

I.E.9(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste and/or contaminated media to be analyzed must be the appropriate method from Appendix I of R.61-79.261, the EPA Region 4 Quality System and Technical Procedures (most recent version), or an equivalent method as specified in the waste analysis plan of the Approved Permit Application, or otherwise approved by the Department.

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Laboratory methods must be those specified in the most recent edition of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846), or an equivalent method approved by the Department, and must be performed by a laboratory certified for each specific parameter pursuant to the State Environmental Laboratory Certification Regulations, R.61-81 and R.61-79.260.11. [R.61-79.270.30(j)(1)]

I.E.9(b) The Permittee shall retain the following at the facility, or at another location as approved by the Department:

I.E.9(b)(i) Records of all monitoring information required under the terms of this Permit, including all calibration and maintenance records,

I.E.9(b)(ii) Records of all original strip chart recordings for continuous monitoring instrumentation,

I.E.9(b)(iii) Copies of all reports and records required by this Permit and all data used to prepare them,

I.E.9(b)(iv) Records of all data used to complete the application for this Permit, and

I.E.9(b)(v) Certification required by R.61-79.264.73(b)(9), if applicable.

The Permittee shall retain these items for a period of at least three (3) years from the date of the sample, measurement, report, record, certification, or application, or until corrective action is completed, whichever date is later.

This period may be extended by request of the Department at any time and is automatically extended during the course of any unresolved enforcement action regarding this facility.

I.E.9(c) Pursuant to R.61-79.270.30(j)(3), records of monitoring information shall specify:

I.E.9(c)(i) The dates, exact place, and times of sampling or measurements;

I.E.9(c)(ii) The individuals who performed the sampling or measurements;

I.E.9(c)(iii) The dates analyses were performed;

I.E.9(c)(iv) The individuals who performed the analyses;

I.E.9(c)(v) The analytical techniques or methods used; and

I.E.9(c)(vi) The results of such analyses.

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I.E.9(c)(vii) Monitoring results shall be reported at intervals specified by the Department. [R.61-79.270.30(l)(4)]

I.E.10 Reporting Planned Changes

The Permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions which may impact any Hazardous Waste Management Units (HWMUs), Solid Waste Management Units (SWMUs), Areas of Concern (AOCs), or the areas contaminated by them. [R.61-79.270.30(l)(1)].

I.E.11 Reporting Anticipated Noncompliance

The Permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity that may result in noncompliance with Permit requirements. [R.61-79.270.30(l)(2)]

I.E.12 Certification of Construction or Modification

The Permittee may not commence treatment, storage, or disposal of hazardous waste at the facility until the Permittee has submitted to the Department, by certified mail or hand delivery, a letter signed by the Permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the Permit and: [R.61-79.270.30(l)(2)]

I.E.12(a) The Department has inspected the modified or newly constructed facility and finds it is in compliance with the Conditions of the Permit; or

I.E.12(b) Within fifteen (15) days of the date of submission of the letter required in Permit Condition I.E.12(a) above, the Permittee has not received notice from the Department of its intent to inspect, prior inspection is waived and the Permittee may commence treatment, storage, or disposal of hazardous waste.

I.E.13 Transfer of Permits

This Permit may be transferred to a new owner or operator only after notice to the Department pursuant to R.61-79.270.40 and only if the Permit is modified or revoked and reissued pursuant to R.61-79.270.41 to identify the new Permittee and incorporate such other requirements as may be necessary. Before transferring ownership or operation of the facility during its operating life, or of a disposal facility during the post-closure care period, the Permittee shall notify the new owner or operator in writing of the requirements of R.61-79.264 and R.61-79.270, and this Permit.

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I.E.14 Change in Facility Property

The Permittee must submit a request to the Department for a permit modification in accordance with R.61-79.270.40 or R.61-79.270.42 if any portion of the facility property as defined in either Permit Condition I.D.11, R.61-79.260.10, or depicted in Appendix E – Facility Map is transferred to or from any agency, private person, entity, successors and assigns, trustees, and/or receivers. A request for permit modification must be submitted to the Department at least ninety (90) days prior to property transfer.

I.E.15 Monitoring Reports

Monitoring results shall be reported at the intervals specified by the Department. [R.61-79.270.30(l)(4)]

I.E.16 Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim or final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. [R.61-79.270.30(l)(5)].

I.E.17 Imminent Hazard Reporting

The Permittee shall report to the Department's Emergency Response Section at 1-888-481-0125 any noncompliance, imminent or existing hazard from a release of hazardous waste or hazardous constituents, or from a fire or explosion at the facility, which may endanger human health or the environment. The Permittee must also report to the Department's local Environmental Office and to the Hazardous Waste Permitting Project Manager. The Permittee shall also report any fire or explosion at or near a permitted unit or other hazardous waste management area. Such information shall be reported orally within twenty-four (24) hours from the time the Permittee becomes aware of the circumstances. This report shall include the following:

I.E.17(a) Information concerning the release of any hazardous waste or hazardous constituents that may endanger public drinking water supplies. [R.61-79.270.30(l)(6)(i)(A)].

I.E.17(b) Information concerning the release or discharge of any hazardous waste, or hazardous constituents, or a fire or explosion at the facility, which could threaten the environment or human health outside the facility, or of any fire or explosion at or near a permitted unit or other hazardous waste management area at the facility. [R.61-79.270.30(l)(6)(i)(B)].

I.E.17(c) The description of the occurrence and its cause shall include:

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I.E.17(c)(i) Name, address, and telephone number of the owner or operator;

I.E.17(c)(ii) Name, address, and telephone number of the facility;

I.E.17(c)(iii) Date, time, and type of incident;

I.E.17(c)(iv) Name and quantity of materials involved;

I.E.17(c)(v) The extent of injuries, if any;

I.E.17(c)(vi) An assessment of actual or potential hazard to the environment and human health outside the facility, and

I.E.17(c)(vii) Estimated quantity and disposition of recovered material that resulted from the incident. [R.61-79.270.30(l)(6)(ii)].

I.E.17(d) A written report shall also be provided to the Department within fifteen (15) calendar days of the time the Permittee becomes aware of the circumstances. The written report shall contain the information specified under Permit Conditions I.E.17(a), I.E.17(b) and I.E.17(c) and include a description of the noncompliance or imminent hazard and its cause; the periods of noncompliance (including exact dates and times); whether the noncompliance or imminent hazard has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance or imminent hazard. [R.61-79.270.30(l)(6)]

I.E.18 **Manifest Discrepancy Report**

If a significant discrepancy in a manifest is discovered, the Permittee must submit a letter report, including a copy of the manifest, to the Department. If the discrepancy is not resolved within 20 days, the Permittee must immediately submit a Discrepancy Report to the EPA e-Manifest System describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue. [R.61-79.270.30(l)(7)]

I.E.19 **Unmanifested Waste Report**

This report must be submitted to the Department within fifteen (15) days of receipt of unmanifested waste. [R.61-79.270.30(l)(8)]

I.E.20 **Other Noncompliance**

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above by Permit Conditions I.E.11 and I.E.17 at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition I.E.17(c), as applicable. [R.61-79.270.30(l)(10)]

I.E.21 **Other Information**

Whenever the Permittee becomes aware that he/she failed to submit any relevant facts or submitted incorrect information in a permit application or in any report to the Department, the Permittee shall promptly submit such facts or information. [R.61-79.270.30(l)(11)]

I.F. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to the Department shall be signed and certified in accordance with R.61-79.270.11 and R.61-79.270.30(k).

I.G. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DEPARTMENT

One printed copy and one searchable electronic copy in portable document format (PDF) of all reports, notifications, or other information required by this Permit to be submitted to the Department should be sent to the Department by verifiable delivery at the following address:

Attn: Director
Division of Waste Management
Bureau of Land and Waste Management
South Carolina Department of Environmental Services
2600 Bull Street
Columbia, SC 29201

I.H. CONFIDENTIAL INFORMATION

In accordance with R.61-79.270.12, the Permittee may claim confidential certain information required to be submitted by this Permit.

I.I. INFORMATION REPOSITORY

The Department may require the permittee to establish and maintain an information repository at any time, based on the factors set forth in R.61-79.124.33(b). The information repository will be governed by the provisions in R.61-79.124.33(c) through (f). [R.61-79.270.30(m)]

I.J. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

Until closure is completed, certified by an independent registered professional engineer, and verified by the Department, the Permittee shall maintain at the facility the following documents and amendments, revisions, and modifications to these documents:

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I.J.1 **Permit Application**

The Approved Permit Application pursuant to R.61-79.270.2.

I.J.2 **Waste Analyses Plan**

As required by R.61-79.264.13 and this Permit.

I.J.3 **Inspection Schedules**

As required by R.61-79.264.15(b) and this Permit.

I.J.4 **Personnel Training Documents and Records**

As required by R.61-79.264.16(d) and this Permit.

I.J.5 **Contingency Plan**

As required by R.61-79.264.53(a) and this Permit.

I.J.6 **Operating Record**

As required by R.61-79.264.73 and this Permit.

I.J.7 **Closure Plan**

As required by R.61-79.264.112(a) and this Permit.

I.J.8 **Annually-adjusted Cost Estimate for Facility Closure**

As required by R.61-79.264.142(d) and this Permit.

I.J.9 **Installation Records**

For all monitoring wells and all groundwater elevation data collected during the active life of the facility.

I.J.10 **Groundwater Monitoring Records**

Required by R.61-79.264.100 and this Permit.

I.J.11 **All Other Documents**

Required by Permit Conditions I.E.9, I.E.10, and I.E.11.

I.K. DOCUMENTS TO BE MAINTAINED DURING POST-CLOSURE CARE PERIOD

Until post-closure care activities are completed, certified by an independent registered professional engineer, and verified by the Department, the Permittee shall maintain

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at the facility the following documents and amendments, revisions, and modifications to these documents:

I.K.1 **Permit Application**

The Approved Permit Application pursuant to R.61-79.270.2.

I.K.2 **All Reports and Documentation**

Regarding compliance with R.61-79.264.118 and this Permit during the post-closure care period.

I.K.3 **Waste Analyses Plan**

As required by R.61-79.264.13 and this Permit.

I.K.4 **Contingency Plan**

As required by R.61-79.264.53(a) and this Permit.

I.K.5 **Operating Record**

As required by R.61-79.264.73 and this Permit.

I.K.6 **Inspection Schedules**

As required by R.61-79.264.15(b) and this Permit.

I.K.7 **Post-Closure Plans**

As required by R.61-79.264.118, R.61-79.270.14(b)13 and this Permit.

I.K.8 **Documentation of Compliance**

With R.61-79.264.119, R.61-79.264.120 and this Permit.

I.K.9 **Annually-adjusted Cost Estimates**

For facility post-closure as required by R.61-79.264.144(b) and this Permit.

I.K.10 **Corrective Action Plan(s) and Reports**

As required by R.61-79.264.100 and R.61-79.264.101 and this Permit.

I.K.11 **Cost Estimates for Completion of Corrective Action**

As required by R.61-79.264.90(a)(2) and R.61-79.264.101 and this Permit.

I.K.12 **Installation Records**

For all monitoring wells and all groundwater elevation data collected during the post-closure care period.

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I.K.13 **Groundwater Monitoring Records**

Required by R.61-79.264.100 and this Permit.

I.K.14 **A Survey Plat and Record**

Of the type, location, and description of hazardous waste or hazardous constituents disposed of within the surface impoundment and landfill areas as required by R.61-79.264.119.

I.K.15 **All Other Documents**

Required by Permit Conditions I.E.9, I.E.10 and I.E.11.

I.L. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

I.L.1 **Notification**

An owner or operator must notify the Department by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in R.61-79.264.143(f) and R.61-79.264.145(f) must make such a notification if he is named as debtor, as required under the terms of the corporate guarantee (R.61-79.264.151(h)). [R.61-79.264.148(a)]

I.L.2 **Bankruptcy of Trustee**

An owner or operator who fulfills the requirements of R.61-79.264.143, R.61-79.264.145, or R.61-79.264.147 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator must establish other financial assurance or liability coverage within 60 days after such an event. [R.61-79.264.148(b)]

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Module II. GENERAL FACILITY CONDITIONS

II.A. DESIGN AND OPERATION OF FACILITY

The Permittee shall design, construct, maintain and operate the facility in a manner 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, as required by R.61-79.264.31.

II.B. GENERAL WASTE ANALYSIS

The Permittee shall follow the waste analysis procedures required by R.61-79.264.13, as described in the Waste Analysis Plan, Section C of the Approved Permit Application.

The Permittee shall verify the analysis of each incoming and outgoing waste stream annually as part of its quality assurance program, in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846), or equivalent methods approved by the Department. At a minimum, the Permittee shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct laboratory calculations. If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this Permit.

II.C. SECURITY

The Permittee shall comply with the security provisions as specified in Section F-1 of the Approved Permit Application and R.61-79.264.14.

II.D. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the general inspection requirements set out in R.61-79.264.15 and Section F of the Approved Permit Application. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by R.61-79.264.15(c) and the Approved Permit Application. Records of inspections shall be kept as required by R.61-79.264.15(d).

II.E. CONTINGENCY PLAN

II.E.1 Implementation of Plan

The Permittee shall immediately carry out the provisions of the Contingency Plan, Section G of the Approved Permit Application, whenever there is a fire, explosion, or release of hazardous waste or constituents that could threaten human health or

the environment. As applicable, the plan must cover the requirements of R.61-79.264.50 through R.61-79.264.56.

II.E.2 **Copies of Plan**

The Permittee shall comply with the requirements of R.61-79.264.53.

II.E.3 **Amendments to Plan**

The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by R.61-79.264.54. Any amendment shall be subject to the requirements of R.61-79.270.41 and R.61-79.270.42.

II.E.4 **Emergency Coordinator**

A trained emergency coordinator shall be available at all times in case of an emergency, as required by R.61-79.264.55.

II.F. RECORD KEEPING AND REPORTING

The Permittee shall conduct record keeping and reporting as specified in this Permit.

II.F.1 **Operating Record**

The Permittee shall maintain a written operating record at the facility in accordance with R.61-79.264.73.

II.F.2 **Quarterly Report**

The Permittee shall comply with the quarterly reporting requirements of R.61-79.264.75.

II.G. PERSONNEL TRAINING

The Permittee shall conduct personnel training, as required by R.61-79.264.16. This training shall follow the outline described in Section H of the Approved Permit Application. The Permittee shall maintain training documents and records at the facility, as required by R.61-79.264.16(d) and (e).

II.H. REQUIRED NOTICES

II.H.1 **Hazardous Waste Imports**

The Permittee shall notify the Department in writing at least four weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source. Notice of subsequent shipments of the same waste from the same foreign source in the same calendar year is not required. [R.61-79.264.12(a)]

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II.H.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/she must inform the generator in writing that he/she 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. [R.61-79.264.12(b)]

II.I. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall comply with the requirements of R.61-79.264.17. The Permittee shall follow the procedures for handling ignitable, reactive and incompatible wastes set forth in Section F of the Approved Permit Application.

II.J. LOCATION STANDARDS

The Permittee shall comply with the requirements of R.61-79.264.18 and R.61-104, as applicable.

II.K. PREPAREDNESS AND PREVENTION

II.K.1 Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment set forth in the approved Contingency Plan, Section G of the Approved Permit Application, as required by R.61-79.264.32.

II.K.2 Fire Alarm System

The Permittee shall maintain a fire alarm system in accordance with R.61-79.264.31 and R.61-79.264.32 and as described in Section G of the Approved Permit Application.

II.K.3 Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in Permit Condition II.K.1. and II.K.2., as necessary, to assure its proper operation in time of emergency, as required by R.61-79.264.33.

II.K.4 Access to Communications or Alarm Systems

The Permittee shall maintain access to the communications or alarm systems, as required by R.61-79.264.34.

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II.K.5 **Required Aisle Space**

At a minimum, the Permittee shall maintain adequate aisle space, as required by R.61-79.264.35 and the plans and specifications described in Section D of the Approved Permit Application.

II.K.6 **Arrangements with Local Authorities**

The Permittee shall maintain arrangements with state and local authorities, as required by R.61-79.264.37. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

II.L. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of R.61-79.264.71, R.61-79.264.72, and R.61-79.264.76.

II.M. GENERAL CLOSURE REQUIREMENTS

II.M.1 **Performance Standard**

The Permittee shall close the facility as required by R.61-79.264.111 and in accordance with the Closure Plan included in Section I of the Approved Permit Application.

II.M.2 **Amendment to Closure Plan**

The Permittee shall amend the Closure Plan, in accordance with R.61-79.264.112(c), whenever necessary.

II.M.3 **Notification of Closure**

The Permittee shall notify the Department in writing at least sixty (60) days prior to the date on which closure will begin of any storage tanks, container storage areas, or final closure of the facility. The Permittee shall notify the Department at least forty-five (45) days prior to the date on which he/she expects to begin partial or final closure of a boiler or industrial furnace, as required by R.61-79.264.112(d).

II.M.4 **Time Allowed for Closure**

After managing the final volume of hazardous waste, the Permittee shall treat or remove from the units or facility all hazardous waste and shall complete closure activities in accordance with R.61-79.264.113 and the schedules specified in the approved Closure Plan, Section I of the Approved Permit Application.

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II.M.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 R.61-79.264.114 and the approved Closure Plan, Section I of the Approved Permit Application.

II.M.6 Certification of Closure

The Permittee shall certify that the unit(s) has been closed in accordance with the specifications in the approved Closure Plan, Section I of the Approved Permit Application. [R.61-79.264.115]

II.M.7 Survey Plat

The Permittee shall submit a survey plat no later than the submission of certification of closure of each hazardous waste disposal unit, in accordance with R.61-79.264.116.

II.N. COST ESTIMATE FOR FACILITY CLOSURE

II.N.1 Most Recent Cost Estimate

The Permittee's most recent closure cost estimate, prepared in accordance with R.61-79.264.142(a), is specified in Section I of the Approved Permit Application.

II.N.2 Cost Estimate Annual Adjustment

The Permittee must adjust the closure cost estimate for inflation within sixty (60) days, as specified in R.61-79.264.142(b) and R.61-79.264.144(b).

II.N.3 Cost Estimate Modification

The Permittee must revise the closure and post-closure cost estimates whenever there is a change in the facility's Closure Plan, as required by R.61-79.264.142(c) and R.61-79.270 Subpart D.

II.N.4 Closure Cost Estimate Recording

The Permittee must keep at the facility the latest closure cost estimate as required by R.61-79.264.142(d).

II.O. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Permittee shall demonstrate compliance with R.61-79.264.143 and R.61-79.264.146 by providing documentation of financial assurance as required by R.61-79.264.151 in at least the amount of the cost estimate required by Permit Condition II.N. Changes in financial assurance mechanisms must be approved by the Department pursuant to R.61-79.264.143 and R.61-79.264.145.

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II.P. LIABILITY REQUIREMENTS

II.P.1 Sudden Occurrences

The Permittee shall demonstrate continuous compliance with the requirements of R.61-79.264.147 and the documentation requirements of R.61-79.264.151 including the requirements to have and maintain liability coverage for sudden and accidental occurrences in the amount of at least one million dollars ($1,000,000) per occurrence with an annual aggregate of at least two million dollars ($2,000,000), exclusive of legal defense costs.

II.P.2 Non-Sudden Occurrences

The Permittee shall demonstrate continuous compliance with the requirements of R.61-79.264.147(b) and the documentation requirements of R.61-79.264.151 including the requirements to have and maintain liability coverage for non-sudden accidental occurrences in the amount of at least three million dollars ($3,000,000) per occurrence with an annual aggregate of at least six million dollars ($6,000,000), exclusive of legal defense costs.

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Module III. CONTAINERS

III.A. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

The conditions of this module apply to the storage of hazardous waste in the following two container storage areas: the East Warehouse Container Storage Area, having a capacity of 5,904 gallons, and the West Warehouse Container Storage Area, having a capacity of 6,912 gallons. Each area is constructed of concrete and provided with proper secondary containment. The secondary containment capacities for each area are: 598 gallons in the East Warehouse Container Storage Area, and 2,604 gallons in the West Warehouse Container Storage Area. Note that III.B.3 contains a special condition for storage of transfer wastes and non-hazardous wastes in these areas. A complete description of the container storage areas, including a description of the types of wastes stored in each, can be found in Section D of the Approved Permit Application.

III.A.1 Permitted Waste

The Permittee may store the following wastes in containers at the facility, subject to the terms of this Permit and as follows:

Container Storage Area(s)	Description of Hazardous Wastes	EPA Hazardous Waste Number	Maximum Volume, Gallons	Maximum Number and Type of Containers
East Warehouse Container Storage Area	See Table D-1 of the Approved Permit Application	See Part A of the Approved Permit Application	5,904	Various sizes – 5, 16, 30, 55, 85, 110, 275, 330 gallons, and Cubic Yard Box or equivalent volumes.
West Warehouse Container Storage Area	See Table D-1 of the Approved Permit Application		6,912	Various sizes – 5, 16, 30, 55, 85, 110, 275, 330 gallons, and Cubic Yard Box or equivalent volumes.

III.A.2 Prohibited Waste

The Permittee is prohibited from storing and/or treating hazardous waste that is not identified in Permit Condition III.A.1.

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III.A.3 Transfer and Non-Hazardous Waste

The Permittee may store transfer wastes and non-hazardous wastes in the East and West Warehouse Container Storage Areas provided they are stored separately from all permitted wastes, if space allows. If not, then these wastes must be distinguished in a manner that clearly identifies the transfer wastes or non-hazardous wastes. The capacity for the container storage in each building includes all wastes stored in that building, therefore the total amount of waste stored in the East Container Storage Building must not exceed 5,904 gallons, and in the West Container Storage Building the amount must not exceed 6,912 gallons.

III.B. 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 and the requirements of R.61-79.264 Subpart I. [R.61-79.264.171]

III.C. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee must 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. [R.61-79.264.172]

III.D. MANAGEMENT OF CONTAINERS

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 that may rupture the container or cause it to leak. [R.61-79.264.173]

III.D.1 Stacking of containers

The Permittee may stack 5-gallon and 16-gallon containers on a single pallet to a height not exceeding that of a 55-gallon drum. The Permittee shall ensure that pallets will be stacked in such a manner as to not tip over or fall. All containers stacked in this manner must be made available for inspection upon request of the Department.

III.E. CONTAINMENT SYSTEMS

The Permittee shall maintain the containment system in accordance with R.61-79.264.175 and Section D of the Approved Permit Application.

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If the Permittee discovers that the impermeable coating of the containment system is not intact, the Permittee must immediately remove wastes from the storage area, until the containment system integrity is restored and documented in the Facility operating record in accordance with R.61-79.264.175(b)(1).

III.E.1. The Permittee shall store all wastes on pallets to prevent contact with spillage or accumulated liquids in accordance with R.61-79.264.175(b)(2) and Section D of the Approved Permit Application.

III.F. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the container area at least weekly in accordance with the Inspection Schedule included in Section F of the Approved Permit Application, to detect leaking containers and deterioration of containers and the containment system caused by corrosion and other factors. [R.61-79.264.174]

III.G. RECORDKEEPING

The Permittee shall place the results of all waste analyses and trial tests and any other documentation showing compliance with the requirements of Permit Conditions III.I and III.J and R.61-79.264.17(a) & (b) and R.61-79.264.177 in the facility operating record. [R.61-79.264.73]

III.H. CLOSURE

At closure of the container area, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system and surrounding areas, in accordance with the procedures in the approved Closure Plan contained in Section I of the Approved Permit Application and R.61-79.264.112 and R.61-79.264.178.

III.I. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

III.I.1 Ignitability or Reactive Waste Setback

The Permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line. [R.61-79.264.176]

III.I.2 Ignitability or Reactive Waste Precautions

The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste and follow the procedures specified in Section F of the Approved Permit Application. [R.61-79.264.17(a) and R.61-79.264.176]

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III.J. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

III.J.1 Placement in Same Container

The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same container. unless R.61-79.264.17(b) is complied with and the procedures specified in Section F of the Approved Permit Application are followed [R.61-79.264.177(a)]

III.J.2 Placement in Unwashed Container

The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material. [R.61-79.264.177(b)]

III.J.3 Separation of Containers

The Permittee shall separate containers of incompatible wastes as required by R.61-79.264.177(c) and described in Section F of the Approved Permit Application.

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Module IV. TANKS

The conditions of this module apply to the storage of hazardous waste in one aboveground hazardous waste storage tank area. The tank area is comprised of a 15,000-gallon aboveground storage tank constructed of carbon steel with concrete secondary containment capable of holding 27,392 gallons, aboveground tight-piping, and two return-and-fill station units. The tanks system is equipped with a siren and strobe light high-level alarm system, a manual feed system, and a pressure/vacuum vent. The return and fill stations are manually loaded with waste from containers that is tight-piped to the tank. The types of waste stored in this tank are described in Condition IV.B.I. A complete description of the tank system can be found in Section D of the Approved Permit Application.

IV.A. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

IV.A.1 Permitted Waste Storage

The Permittee may store a total volume of 15,000 gallons of hazardous waste in 1 tank, subject to the terms of this Permit and as follows:

Tank No. & Location	Capacity, Gallons	Dimensions of Tank	Secondary Containment Required	Maximum Specific Gravity	Description of Hazardous Waste	Hazardous Waste No.
Above-ground Hazardous Waste Storage Tank	15,000	10’6” (diam.) X 23’11”	Yes - in place 27,392 gal	1.0	Spent Parts Washer Solvent	See Part A of the Approved Permit Application

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IV.A.2 **Prohibited Waste Storage**

The Permittee is prohibited from storing hazardous waste that is not identified in Permit Condition IV.A.1.

IV.B. SECONDARY CONTAINMENT AND INTEGRITY ASSESSMENTS

IV.B.1 **Tanks Systems Storing Newly Regulated Waste With No Secondary Containment**

For tank systems used to store or treat materials that are defined as hazardous waste in the future, the Permittee must obtain a written assessment of the existing tank system integrity within 12 months from the date the waste is defined as hazardous. [R.61-79.264.191(c)] The assessment shall be certified by an independent, qualified, registered professional engineer. [R.61-79.264.191(a) and (b)]

IV.B.2 **Tank Systems with Secondary Containment**

The Permittee shall design, construct, and operate the secondary containment system, in accordance with the detailed design plans and descriptions contained in Section D of the Approved Permit Application. [R.61-79.264.193(b)-(f)]

IV.C. OPERATING REQUIREMENTS

IV.C.1 **Damage Protection**

IV.C.1(a) The Permittee shall not place hazardous wastes or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail. [R.61-79.264.194(a)]

IV.C.1(b) The Permittee shall protect the tank systems from accelerated corrosion, erosion, or abrasion as required by and as specified in Section D of the Approved Permit Application.

IV.C.2 **Spill and Overflow Prevention**

The Permittee shall use appropriate controls and practices to prevent spills and overflows from tanks or containment systems as required by R.61-79.264.194(b), and by the methods specified in Section D of the Approved Permit Application.

IV.C.3 **Air Emission Standards**

The Permittee shall ensure that all hazardous waste placed in tanks is managed so that compliance with R.61-79.264.200 is met.

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IV.D. 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: [R.61-79. 264.196(a)-(f)]

IV.D.1 Spill or Leak Cessation

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

IV.D.2 Spill or Leak Material Removal

Remove waste from the system within 8 hours of the detection of the leak 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 Department and demonstrate that the 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 R.61-79.262, R.61-79.263 and R.61-79.264. The Permittee shall note that if the collected material is discharged through a point source to U.S. waters or to a Publicly Owned Treatment Works (POTW), it is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to reporting under 40 CFR Part 302.

IV.D.3 Spill or Leak Cleanup

The Permittee shall immediately contain 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.D.4 Tank System Closure or Repair

Close the system in accordance with the Closure Plan in Section I of the Approved Permit Application unless the following actions are taken:

IV.D.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.D.4(b) For a release caused by a leak from the primary tank system to the

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secondary containment system, the Permittee shall repair the primary system prior to returning it to service.

IV.D.4(c) For a release to the environment caused by a leak from a component of the tank system that is below ground and does not have secondary containment, the Permittee must provide this component with secondary containment that meets the requirements of R.61-79.264.193 before the component can be returned to service.

IV.D.4(d) For a release to the environment caused by a leak from the aboveground portion of the tank system that does not have secondary containment, and can be visually inspected, the Permittee shall repair the tank system before returning it to service.

IV.D.4(e) 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 R.61-79. 264.193 before the component can be returned to service.

IV.D.4(f) If the Permittee replaces a component of the tank system to eliminate the leak, that component must satisfy the requirements for new tank systems or components in R.61-79.264.192 and R.61-79.264.193.

IV.D.5 **Tank System Repair Certification**

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 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.E. INSPECTION SCHEDULES AND PROCEDURES

IV.E.1 **Inspection Schedule**

The Permittee shall inspect the tank systems, in accordance with the Inspection Schedule included in Section F of the Approved Permit Application, and shall complete the items in Permit Conditions IV.E.2 and IV.E.3 as part of those inspections.

IV.E.2 **Overfill Control Inspection**

Permittee shall inspect the overfill controls, in accordance with the Inspection Schedule in Section F of the Approved Permit Application. [R.61-79. 264.195(a)]

IV.E.3 **Other Tank System Component Inspection**

The Permittee shall inspect the following components of the tank system once each operating day: [R.61-79. 264.195(b)]

IV.E.3(a) Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;

IV.E.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;

IV.E.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.E.4 **Cathodic Protection System Inspection**

The Permittee shall inspect cathodic protection systems, in accordance with the following schedule: [R.61-79.264.195(g)]

IV.E.4(a) The proper operation of the cathodic protection system must be confirmed within six months from initial installation and annually thereafter and

IV.E.4(b) All sources of impressed current must be inspected and tested every other month.

IV.E.5 **Tank System Inspection Documentation**

The Permittee shall document compliance with Permit Conditions IV.E.2 through IV.E.4 and place this documentation in the operating record for the facility. [R.61-79.264.195(h)]

IV.E.6 **Minimum Tank Wall Thickness**

The Permittee shall construct and/or maintain all new and existing tanks systems in accordance with all applicable requirements of R.61-79.264 Subpart J, and as specified in the plans and specifications contained in Section D of the Approved Permit Application. The Department requires that a minimum shell, bottom, and top thickness as specified in the Approved Permit Application be maintained at all times to ensure sufficient tank integrity.

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IV.E.7 **Measurement of Tank Wall Thickness**

The Permittee shall measure tank shell and bottom thickness annually. The top thickness of tanks shall be measured every two years. Records of all measurements and an annual assessment of remaining tank life shall be kept in the operating record for the life of the tank. Specifically:

IV.E.7(a) Testing must be done by an individual trained in the use of shell thickness measuring equipment.

IV.E.7(b) Measurements shall be concentrated at areas that are most likely to be in frequent contact with stored liquid.

IV.E.7(c) At a minimum, measurements shall be made as follows:

IV.E.7(c)(i) For the tank wall, take measurements along three vertical rows spaced 120 degrees apart, at no greater than 2-foot vertical intervals. At least one measurement in each row shall be taken within one foot of the bottom of the tank. Measurements shall be concentrated near the most common liquid level of the tank.

IV.E.7(c)(ii) For the tank bottom measurements, take no fewer than four measurements, at least two feet from the center point of the tank bottom, spaced at 90-degree intervals.

IV.E.7(c)(iii) At least 25% of all measurements must be taken within one inch of high-stress areas (i.e. seam or heat-affected zone), if possible.

IV.E.7(d) Permanent test points on exterior surfaces must be selected in accordance with the above criteria and permanently marked to assure consistency of measurement and give a valid indication of any thickness reduction.

IV.E.8 **Visual Tank Inspection**

The Permittee shall open the tanks every two years for visual inspection. Prior to the tank inspection, the tank shall be emptied of sludges, residual liquids, gases and fumes (see Occupational Safety and Health Administration (OSHA) requirements relating to entry of tanks for inspection). Records of the visual inspections shall be kept in the operating record for the life of the tank and used in the assessment of the remaining tank life.

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IV.F. RECORDKEEPING AND REPORTING

IV.F.1 Immediate Tank or Spill Report

The Permittee shall report to the Department within 24 hours when a leak or spill occurs from the tank system or secondary containment system to the environment. A leak or spill of one pound or less of hazardous waste, that is immediately contained and cleaned-up, need not be reported. 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. [R.61-79. 264.196(d)(1), R.61-79.264.196(d)(2)]

IV.F.2 Followup Leak or Spill Report

Within 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 Department: [R.61-79. 264.196(d)(3)]

IV.F.2(a) Likely route of migration of the release;

IV.F.2(b) Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

IV.F.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 should provide the Department with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;

IV.F.2(d) Proximity of downgradient drinking water, surface water, and populated areas; and

IV.F.2(e) Description of response actions taken or planned,

IV.F.3 Tank System Repair Certification

The Permittee shall submit to the Department all certifications of major repairs to correct leaks within seven days from returning the tank system to use. [R.61-79. 264.196(f)]

IV.F.4 Design and Installation Certification

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. [R.61-79. 264.192(g)]

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IV.F.5 Tank System Integrity Assessment

The Permittee shall keep on file at the facility the written assessment of the tank system's integrity. [R.61-79.264.191(a)]

IV.F.6 Record of Leak and Integrity Tests

The Permittee shall maintain at the facility a record of the results of leak tests and integrity tests conducted, in accordance with applicable Permit Conditions.

IV.G. CLOSURE AND POST-CLOSURE CARE

IV.G.1 Closure Procedures

At closure of the tank system(s), the Permittee shall follow the procedures in the Closure Plan in Section I of the Approved Permit Application. [R.61-79. 264.197(a)]

IV.G.2 Inability to Close By Removal or Decontamination

If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated, in accordance with the Closure Plan, then the Permittee shall close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills. [R.61-79.264.197(b)]

IV.H. SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

IV.H.1 Ignitable or Reactive Waste Placement

The Permittee shall not place ignitable or reactive waste in the tank system or in the secondary containment system, unless the procedures specified in Section F of the Approved Permit Application are followed. [R.61-79. 264.198(a)]

IV.H.2 Ignitable or Reactive Waste Setbacks

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 that can be built upon, as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981). [R.61-79. 264.198(b)]

IV.I. SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES

IV.I.1 Placement in Same Tank

The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same tank system or the same secondary containment system,

unless the procedures specified in Section F of the Approved Permit Application are followed. [R.61-79. 264.199(a)]

IV.I.2 **Placement in Tank System**

The Permittee shall not place hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless the requirements of R.61-79.264.17(b) are met. [R.61-79. 264.199(b)]

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Module V. CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS & AREAS OF CONCERN

V.A. APPLICABILITY

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 constituents, and if necessary, implement corrective measures to protect human health and the environment. The Permittee is required to implement corrective action in accordance with R.61-79.264.101 and the conditions of this Permit. The Permittee shall follow applicable guidance, including but not limited to the RCRA Corrective Action Plan, EPA 520-R-94-004, dated May 1994 (most recent version).

The Permit Conditions of this Module apply to:

V.A.1 SWMUs and AOCs Identified by the RFA:

The solid waste management units (SWMUs) and areas of concern (AOCs) identified by the initial RCRA Facility Assessment, any subsequent investigations, or other means, as listed in Appendix A – List of All Solid Waste Management Units (SWMUs), Areas of Concern (AOCs), and Regulated Units.

V.A.2 Additional SWMUs or AOCs

Any additional SWMUs or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means. As used in this part of the Permit, the terms “discover”, “discovery”, or “discovered” refer to the date on which the Permittee or a Department representative either, (1) visually observes evidence of a new SWMU or AOC, (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.

V.A.3 Contamination Beyond Facility Boundary

The Permittee shall implement corrective actions beyond the facility boundary where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of the Department that, despite the Permittee's best efforts, as determined by the Department, 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 off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of

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financial responsibility for completion of such off-site corrective action will be required. [R.61-79.264.100, R.61-79.264.101]

V.B. NOTIFICATION AND ASSESSMENT REQUIREMENTS FOR NEWLY IDENTIFIED SWMUS AND AOCS

V.B.1 Notification

The Permittee shall notify the Department in writing, within fifteen (15) calendar days of discovery, of any additional AOCs and/or SWMUs as discovered under Permit Condition V.A.2. The notification shall include, at a minimum, a unique sequential identification number, the location of the SWMU or AOC and all available information pertaining to the nature of the release (e.g., media affected, hazardous constituents released, magnitude of release, etc.).

V.B.2 Assessment Report

The Permittee shall prepare and submit to the Department, within ninety (90) calendar days of notification, an Assessment Report (AR) for each SWMU or AOC identified under Permit Condition V.B.1. At a minimum, the AR shall provide the following information:

V.B.2(a) The unique sequential identification for the SWMU or AOC.

V.B.2(b) Location of unit(s) on a topographic map of appropriate scale such as required under R.61-79.270.14(b)(19).

V.B.2(c) Designation of type and function of unit(s).

V.B.2(d) General dimensions, capacities and structural description of unit(s) (supply any available plans/drawings).

V.B.2(e) Dates that the unit(s) was (were) operated.

V.B.2(f) Specification of all wastes that have been managed at/in the unit(s) to the extent available. Include any available data on R.61-79.261 Appendix VIII constituents contained in the wastes.

V.B.2(g) All available information pertaining to any release of hazardous waste or hazardous constituents from such unit(s) (to include groundwater, soil, air, surface water, and/or sediment data).

V.B.3 Department Determination

The Department or the Permittee shall determine the need for further investigations at the SWMUs or AOCs covered in the AR. If the Department determines that such investigations are needed, the Permittee shall be required to

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prepare a plan for such investigations as outlined in Permit Conditions V.D.6 and/or V.E. If the Department determines that further investigation of a SWMU or AOC is required, the Permit will be modified in accordance with R.61-79.270 Subpart D.

V.C. NOTIFICATION REQUIREMENTS FOR NEWLY DISCOVERED RELEASES AT PREVIOUSLY IDENTIFIED SWMUS OR AOCS

V.C.1 Notification

The Permittee shall notify the Department in writing of any newly discovered release(s) of hazardous waste or hazardous constituents at previously identified SWMUs or AOCs during the course of groundwater monitoring, field investigations, environmental audits, or other means, within fifteen (15) calendar days of discovery. Such newly discovered releases may be from SWMUs or AOCs identified in Permit Condition V.A.1 or SWMUs or AOCs identified in Permit Condition V.A.2. The notification shall include all available information pertaining to the nature of the release (e.g. media affected, hazardous constituents released, magnitude of release, etc.).

V.C.2 Plan for Investigation

If the Department or the Permittee determines that further investigation of the SWMUs or AOCs is needed, the Permittee shall be required to prepare a plan for such investigations as outlined in Permit Condition V.D or V.E.

V.D. CONFIRMATORY SAMPLING (CS)

V.D.1 CS Workplan

The Permittee shall prepare and submit a Confirmatory Sampling (CS) Workplan to the Department within forty-five (45) calendar days of notification by the Department. The CS Workplan must determine any releases from SWMUs or AOCs identified in Permit Conditions V.A.1 and V.A.2 or as required by Permit Condition V.B.3 or V.C.2. The CS Workplan shall include schedules of implementation and completion of specific actions necessary to determine whether a release has occurred and a cost estimate for a third party to complete the work required and preparation of the CS Report as required in Permit Condition V.D.5.

V.D.2 Approval Required

The CS Workplan must be approved by the Department, in writing, prior to implementation. The Department shall specify the start date of the CS Workplan in the letter approving the CS Workplan or within sixty (60) days if a time frame is not provided. If the Department disapproves the CS Workplan, the Department shall: (1) notify the Permittee in writing of the CS Workplan's deficiencies and specify a

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due date for submission of a revised CS Workplan; (2) revise the CS Workplan and notify the Permittee of the revisions, or; (3) conditionally approve the CS Workplan and notify the Permittee of the conditions.

V.D.3 **Implementation**

The Permittee shall implement the confirmatory sampling in accordance with the approved CS Workplan.

V.D.4 **Financial Assurance for Confirmatory Sampling**

Within sixty (60) calendar days after the Department approves the CS Workplan, the Permittee shall demonstrate financial assurance for the costs to complete Confirmatory Sampling pursuant to Permit Condition V.D.1. The mechanism for financial assurance shall be one that is allowable under R.61-79.264 Subpart H.

V.D.5 **CS Report**

The Permittee shall prepare and submit to the Department in accordance with the schedule in the approved CS Workplan a Confirmatory Sampling (CS) Report for SWMUs or AOCs listed in Permit Conditions V.A.1 and V.A.2 or as required by Permit Condition V.B.3 or V.C.2, that have released hazardous waste or hazardous constituents into the environment. The CS Report shall include all data, including raw data, and an analysis and summary of the data that supports the above determination.

V.D.6 **Department Determination**

Based on the results of the CS Report, the Department shall determine the need for further investigations at the SWMUs or AOCs covered in the CS Report. If the Department determines that such investigations are needed, the Permittee shall be required to prepare a plan for such investigations as outlined in Permit Condition V.E. The Department shall notify the Permittee of any no further action decision.

V.D.7 **Continuation of Financial Assurance Following CS**

The Permittee shall maintain financial assurance for Confirmatory Sampling until such time as the Department notifies the Permittee of any No Further Action decision for those specific SWMUs or AOCs. If it is determined that further corrective action work is required pursuant to Permit Condition(s) V.E, V.F, and/or V.G, financial assurance shall be maintained and adjusted accordingly based on any Department approved corrective action workplan.

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V.D.8 **Adjustments to Cost Estimate**

The Permittee shall annually adjust the cost estimate for inflation sixty (60) days prior to the anniversary date of the establishment of the financial assurance mechanism unless using a financial test or corporate guarantee, in which case the estimate shall be updated thirty (30) days after the close of the firm's fiscal year.

V.E. RCRA FACILITY INVESTIGATION (RFI)

V.E.1 **RFI Workplan**

The Permittee shall prepare and submit to the Department within ninety (90) days of notification by the Department a RCRA Facility Investigation (RFI) Workplan(s) for those units identified in Permit Condition V.A. This Workplan shall be developed to meet the requirements of Permit Condition V.E.3.

V.E.2 **RFI Workplan for Newly Identified SWMUs and AOCs**

The Permittee shall prepare and submit to the Department within ninety (90) calendar days of notification by the Department, an RFI Workplan for those units identified under Permit Conditions V.B.3, V.C.2, or V.D.6. The RFI Workplan(s) shall be developed to meet the requirements of Permit Condition V.E.3.

V.E.3 **Required Contents**

The RFI Workplan(s) shall meet the requirements of Appendix B – RCRA Facility Investigation (RFI) Workplan Outline. The Permittee shall provide sufficient written justification for any omissions or deviations from any requirements of Appendix B. Such omissions or deviations are subject to the approval of the Department.

The RFI Workplan(s) shall include schedules of implementation and completion of specific actions necessary to determine the nature and extent of releases and the potential pathways of contaminant releases to air, land, surface water, and groundwater. The Permittee must provide sufficient justification and/or documentation that a release is not probable if a unit or a media/pathway associated with a unit (groundwater, surface water, sediment, soil, air or subsurface gas) is not included in the RFI Workplan(s). Such deletions of a unit, media or pathway from the RFI(s) are subject to the approval of the Department. In addition, the scope of the RFI Workplan(s) shall include all investigations necessary to ensure compliance with R.61-79.264.101(c). The RFI Workplan(s) shall also include a cost estimate for a third party to complete the RFI including the preparation of RFI Progress Reports (as necessary pursuant to Permit Condition V.E.7) and the final RFI Report as required in Permit Condition V.E.8.

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V.E.4 **Department Approval**

The RFI Workplan(s) must be approved by the Department, in writing, prior to implementation. The Department shall specify the start date of the RFI Workplan schedule in the letter approving the RFI Workplan(s). If the Department disapproves the RFI Workplan(s), the Department shall: (1) notify the Permittee in writing of the RFI Workplan's deficiencies and specify a due date for submission of a revised RFI Workplan; (2) revise the RFI Workplan and notify the Permittee of the revisions and the start date of the schedule within the approved RFI Workplan, or; (3) conditionally approve the RFI Workplan and notify the Permittee of the conditions.

V.E.5 **RFI Implementation**

The Permittee shall implement the RFI(s) in accordance with the approved RFI Workplan(s). The Permittee shall notify the Department at least twenty (20) days prior to any sampling activity.

V.E.6 **Financial Assurance for RFI**

Within sixty (60) calendar days after the Department approves the RFI Workplan, the Permittee shall demonstrate financial assurance for the costs to complete the RFI as required in Permit Condition V.E.1 or V.E.2. The mechanism for financial assurance shall be one that is allowable under R.61-79.264 Subpart H.

V.E.7 **RFI Progress Reports**

If the time required to conduct the RFI(s) is greater than one hundred eighty (180) calendar days, the Permittee shall provide the Department with quarterly RFI Progress Reports (90 day intervals) beginning ninety (90) calendar days from the start date specified by the Department in the RFI Workplan approval letter. The Progress Reports shall contain the following information at a minimum:

V.E.7(a) A description of the portion of the RFI completed;

V.E.7(b) Summaries of findings;

V.E.7(c) Summaries of any deviations from the approved RFI Workplan during the reporting period;

V.E.7(d) Summaries of any significant contacts with local community public interest groups or State government;

V.E.7(e) Summaries of any problems encountered during the reporting period;

V.E.7(f) Actions taken to rectify problems;

V.E.7(g) Changes in relevant personnel;

V.E.7(h) Projected work for the next reporting period.

V.E.8 RFI Report

The Permittee shall prepare and submit to the Department a RCRA Facility Investigation Report(s) for the investigations conducted pursuant to the RFI Workplan(s) submitted under Permit Condition V.E.1 or Permit Condition V.E.2. The RFI Report(s) shall be submitted to the Department for review in accordance with the schedule in the approved RFI Workplan(s). Any revised RFI Report(s) shall be submitted to the Department within thirty (30) calendar days of receipt of the Department's comments. The RFI Report(s) shall include an analysis and summary of all required investigations of SWMUs and AOCs 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. 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 Corrective Measures Study (CMS), if necessary.

The RFI Report(s) shall propose a groundwater monitoring and reporting schedule for those SWMUs and/or AOCs at which groundwater contamination has been detected. Routine monitoring will be continued at these units until a remedy selection decision is made by the Department.

V.E.9 Department Notification

The Department will review the RFI Report(s) and shall notify the Permittee of the need for further investigation, if necessary; and if appropriate, the need for a CMS to meet the requirements of Permit Condition V.G and R.61-79.264.101.

V.E.10 Continuation of Financial Assurance Following RFI

The Permittee shall maintain financial assurance for corrective action work until such time as the Department notifies the Permittee of any No Further Action decision for those specific SWMUs or AOCs. If the Department notifies the Permittee of the need for further investigation or the need for a CMS to meet the requirements of Permit Condition V.G and R.61-79.264.101, financial assurance shall be maintained and adjusted accordingly based on Department approved corrective action workplan(s).

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V.E.11 **Adjustments to Cost Estimate**

The Permittee shall annually adjust the cost estimate for inflation sixty (60) days prior to the anniversary date of the establishment of the financial assurance mechanism unless using a financial test or corporate guarantee, in which case the estimate shall be updated thirty (30) days after the close of the firm's fiscal year.

V.F. INTERIM MEASURES (IM)

V.F.1 **IM Workplan**

V.F.1(a) Upon notification by the Department, the Permittee shall prepare and submit an Interim Measures (IM) Workplan for any SWMU or AOC that poses a current or potential threat to human health or the environment. The Permittee may submit an IM Workplan for approval prior to notification by the Department. The IM Workplan shall be submitted within thirty (30) calendar days of notification by the Department and shall include the elements listed in Permit Condition V.F.1(b). Interim measures may be conducted concurrently with investigation required under the terms of this Permit. The Permittee shall comply with the reporting requirements of Permit Condition V.F.4.

V.F.1(b) The IM Workplan shall ensure that the interim measures are designed to mitigate any current or potential threat(s) to human health or the environment and is consistent with and integrated into any long-term solution at the facility. The IM Workplan shall include: the interim measures objectives, procedures for implementation (including any designs, plans, or specifications), and schedules for implementation, and a cost estimate for a third party to complete the IM and prepare the IM Report(s) as required in Permit Condition V.F.4.

V.F.1(c) The IM Workplan must be approved by the Department, in writing, prior to implementation. The Department shall specify the start date of the IM Workplan schedule in the letter approving the IM Workplan. If the Department disapproves the IM Workplan, the Department shall: (1) notify the Permittee in writing of the IM Workplan's deficiencies and specify a due date for submission of a revised IM Workplan; (2) revise the IM Workplan and notify the Permittee of the revisions and the start date of the schedule within the approved IM Workplan, or; (3) conditionally approve the IM Workplan and notify the Permittee of the conditions.

V.F.2 **IM Implementation**

V.F.2(a) The Permittee shall implement interim measures in accordance with the

approved IM Workplan.

V.F.2(b) The Permittee shall give notice to the Department prior to any changes, reductions or additions to the IM Workplan.

V.F.2(c) Final approval of corrective action required under R.61-79.264.101 which is achieved through interim measures shall be in accordance with R.61-79.270.41 and Permit Condition V.H as a permit modification.

V.F.3 **Financial Assurance for IM**

Within sixty (60) calendar days after the Department approves the IM Workplan, the Permittee shall demonstrate financial assurance for the costs to complete the IM as required in Permit Condition V.F.1. The mechanism for financial assurance shall be one that is allowable under R.61-79.264 Subpart H.

V.F.4 **IM Reports**

V.F.4(a) If the time required for completion of interim measures is greater than one year, the Permittee shall provide the Department with progress reports at intervals specified in the approved workplan. The Progress Reports shall contain the following information at a minimum:

V.F.4(a)(i) A description of the portion of the interim measures completed;

V.F.4(a)(ii) Summaries of findings;

V.F.4(a)(iii) Summaries of any deviations from the IM Workplan during the reporting period;

V.F.4(a)(iv) Summaries of any problems encountered during the reporting period; and

V.F.4(a)(v) Projected work for the next reporting period.

V.F.4(b) The Permittee shall prepare and submit to the Department, within ninety (90) calendar days of completion of interim measures conducted under Permit Condition V.F an Interim Measures (IM) Report. The IM Report shall contain the following information at a minimum:

V.F.4(b)(i) A description of interim measures implemented;

V.F.4(b)(ii) Summaries of results;

V.F.4(b)(iii) Summaries of all problems encountered;

V.F.4(b)(iv) Summaries of accomplishments and/or effectiveness of interim measures; and

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V.F.4(b)(v) Copies of all relevant laboratory/monitoring data, etc. in accordance with Permit Condition I.E.9.

V.F.5 Continuation of Financial Assurance Following IM

The Permittee shall maintain financial assurance for corrective action work until such time as the Department notifies the Permittee of any No Further Action decision for those specific SWMUs or AOCs. If the Department notifies the Permittee of the need for further investigation to meet the requirements of Permit Condition V.E or the need for a CMS to meet the requirements of Permit Condition V.G and R.61-79.264.101, financial assurance shall be maintained and adjusted accordingly based on Department approved corrective action workplan(s).

V.F.6 Adjustments to Cost Estimate

The Permittee shall annually adjust the cost estimate for inflation sixty (60) days prior to the anniversary date of the establishment of the financial assurance mechanism unless using a financial test or corporate guarantee, in which case the estimate shall be updated thirty (30) days after the close of the firm's fiscal year.

V.G. CORRECTIVE MEASURES STUDY

V.G.1 Corrective Measures Study (CMS) Workplan

V.G.1(a) The Permittee shall prepare and submit a CMS Workplan for those units requiring a CMS within ninety (90) calendar days of notification by the Department that a CMS is required. This CMS Workplan shall be developed to meet the requirements of Permit Condition V.G.1(b). The CMS may be performed concurrent with the RFI if the Department determines that sufficient investigative details are available to allow concurrent action.

V.G.1(b) The CMS Workplan shall meet the requirements of Appendix C – Corrective Measure Study (CMS) Outline, at a minimum. The CMS Workplan shall include schedules of implementation and completion of specific actions necessary to complete a CMS. The CMS Workplan shall also include a cost estimate for a third party to complete the CMS including the preparation of the CMS Report as required in Permit Condition V.G.4. The Permittee must provide sufficient written justification and documentation for any unit deleted from the CMS Workplan. Such deletion of a unit is subject to the approval of the Department. The CMS shall be conducted in accordance with the approved CMS Workplan. The Permittee shall provide sufficient written justification for any omissions or deviations from the minimum requirements of Appendix C. Such omissions or deviations are subject to the approval of the Department. The scope of the CMS Workplan shall

include all investigations necessary to ensure compliance with R.61-79.264.101, R.61-79.264.552, R.61-79.264.553 and R.61-79.270.32(b)(2). The Permittee shall implement corrective actions beyond the facility boundary, as set forth in Permit Condition V.A.3.

V.G.1(c) The Department will either approve or disapprove the CMS Workplan. If the Department disapproves the CMS Workplan, the Department shall; (1) notify the Permittee in writing of the CMS Workplan's deficiencies and specify a due date for submittal of a revised CMS Workplan; (2) revise the CMS Workplan and notify the Permittee of the revisions, or; (3) conditionally approve the CMS Workplan and notify the Permittee of the conditions.

V.G.2 **Corrective Measures Study Implementation**

The Permittee shall implement the Corrective Measures Study according to the schedules specified in the CMS Workplan, or no later than fifteen (15) calendar days after the Permittee has received written approval from the Department for the CMS Workplan. The CMS shall be conducted in accordance with the approved CMS Workplan.

V.G.3 **Financial Assurance for CMS**

Within sixty (60) calendar days after the Department approves the CMS Workplan, the Permittee shall demonstrate financial assurance for the costs to complete the CMS as required in Permit Condition V.G.1. The mechanism for financial assurance shall be one that is allowable under R.61-79.264 Subpart H.

V.G.4 **CMS Report**

V.G.4(a) The Permittee shall prepare and submit to the Department a CMS Report for the study conducted pursuant to the approved CMS Workplan. The CMS Report shall be submitted to the Department in accordance with the schedule in the approved CMS Workplan. Any revised CMS Report(s) shall be submitted to the Department within thirty (30) days of receipt of the Department's comments. The CMS Report shall summarize any bench-scale or pilot tests conducted. The CMS Report must include an evaluation of each remedial alternative. The CMS Report shall present all information gathered under the approved CMS Workplan. The CMS Report must contain adequate information to support the Department's decision on the recommended remedy, described under Permit Condition V.H.

V.G.4(b) If the Department determines that the CMS Report does not fully satisfy the information requirements specified under Permit Condition V.G.4(a), the Department may disapprove the CMS Report. If the Department

disapproves the CMS Report, the Department shall notify the Permittee in writing of the deficiencies in the CMS Report and specify a due date for submittal of a revised CMS Report. The Department will notify the Permittee of any no further action decision.

V.G.4(c) As specified under Permit Condition V.G.4(b) based on preliminary results and the CMS Report, the Department may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

V.G.5 Continuation of Financial Assurance Following CMS

The Permittee shall maintain financial assurance for corrective action work until such time as the Department selects a remedy pursuant to Permit Condition V.H at which point financial assurance requirements for Remedy Selection (Permit Condition V.H.4) will apply or if the Department notifies the Permittee of any No Further Action decision for those specific SWMUs or AOCs. If the Department notifies the Permittee of the need for further corrective action work to complete the CMS pursuant to the requirements of Permit Condition V.G and R.61-79.264.101, financial assurance shall be maintained and adjusted accordingly based on Department approved corrective action workplan(s).

V.G.6 Adjustments to Cost Estimate

The Permittee shall annually adjust the cost estimate for inflation sixty (60) days prior to the anniversary date of the establishment of the financial assurance mechanism unless using a financial test or corporate guarantee, in which case the estimate shall be updated thirty (30) days after the close of the firm's fiscal year.

V.H. REMEDY APPROVAL AND PERMIT MODIFICATION

V.H.1 Remedy Selection

The Department shall select a remedy from the remedial alternatives evaluated in the CMS. The selection will be based at a minimum on protection of human health and the environment, as per specific site conditions, existing regulations, and guidance. The selected remedy may include any interim measures implemented to date.

V.H.2 Statement of Basis

Upon approval of the CMS Report or other Department decision [i.e. NFA], the Permittee shall prepare a draft Statement of Basis that provides a summary and justification of the selected remedy. The Statement of Basis should be written following EPA guidance "Guidance on RCRA Corrective Action Decision Documents:

The Statement of Basis, Final Decision and Response to Comments," February 1991, EPA/540/G-91/011, (or most recent version) or other Department approved guidance, and should include information on the proposed remedy, facility background, exposure pathways, cleanup goals, the scope of the corrective action, the remedial alternatives considered, an evaluation of those alternatives, and public participation. The Statement of Basis shall be submitted to the Department in draft form within the time frame specified in the letter from the Department that notifies the Permittee that the CMS Report is approved or within thirty (30) days if a time frame is not provided. The Department shall notify the Permittee of deficiencies and specify a due date for submittal of a revised Statement of Basis or revise and finalize the Statement of Basis.

V.H.3 **Permit Modification**

Pursuant to R.61-79.270.41, a permit modification will be initiated by the Department after recommendation of a remedy under Permit Condition V.H.1. This modification will serve to incorporate a final remedy into this Permit. The remedy selection is not final until a Permit Modification is issued.

V.H.4 **Financial Assurance**

Within one hundred and twenty (120) calendar days after this Permit has been modified for remedy selection, the Permittee shall demonstrate financial assurance for completing the approved remedy. The mechanism for financial assurance shall be one that is allowable under R.61-79.264 Subpart H.

V.I. CORRECTIVE MEASURES IMPLEMENTATION (CMI)

V.I.1 **CMI Workplan**

Within thirty (30) days of the effective date of the permit modification for the remedy selection, unless otherwise agreed by the Department, the Permittee shall prepare and submit a Corrective Measures Implementation (CMI) Workplan for the SWMUs or AOCs listed in Appendix A-7 – SWMUs and AOCs Requiring Corrective Action with Land Use Controls (LUCs). At a minimum, this workplan shall include the following:

V.I.1(a) A description of the conceptual design, technical features (e.g. Plans and Specifications) and a Construction Plan for the selected remedy(ies) to achieve media cleanup standards protective of human health and the environment, controlling the source(s) of release, and complying with standards for the management of wastes and any remedial residues.

V.I.1(b) A proposed schedule that takes into account all phases of the CMI. The schedule should also include the submittal of documents to support the

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CMI (e.g. Operation and Maintenance Plan, Construction Completion Report, etc.) as described in Permit Conditions V.I.2 and V.I.4.

V.I.1(c) Requirements for removal and decontamination of units, equipment, devices or structures that will be used to implement the remedy(ies).

V.I.2 **Operation and Maintenance Plan**

An Operation and Maintenance Plan (O&MP) shall be submitted to the Department in accordance with the schedule required by Permit Condition V.I.1(b). The O&MP, at a minimum, shall include the following:

V.I.2(a) A system description, startup procedures, operation and maintenance procedures and schedule of inspection and maintenance;

V.I.2(b) Waste management practices, sampling and analysis required for operation and contingency procedures;

V.I.2(c) A description of the Corrective Measure(s) completion criteria and the method to be used to show when the criteria are met; and

V.I.2(d) For remedies with Land Use Controls, the Operation and Maintenance Plan should include the requirements of Permit Condition V.I.5.

V.I.3 **Department Approval**

All Plans required for the CMI phase, required by Permit Condition V.I must be approved, in writing, by the Department prior to implementation, in accordance with Permit Condition V.K.1.

V.I.4 **Construction Completion Report**

A Construction Completion Report (CCR) shall be submitted to the Department, in accordance with the schedule required by Permit Condition V.I.1(b) that demonstrates the completion of the remedy construction in accordance with approved plans and specifications. The CCR shall be submitted when all operational tests have been completed. Any necessary documentation required by the Department shall be included in this report.

V.I.5 **Remedy with Land Use Controls**

The SWMUs and AOCs for which land use controls are selected as an integral part of the final remedy are listed in Appendix A-7- SWMUs and AOCs Requiring Corrective Action with Land Use Controls. When corrective measures incorporate land use controls as part of the selected remedy, the following information should be provided:

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V.I.5(a) The name, address and phone number of the person to contact about the SWMU or AOC;

V.I.5(b) Any necessary security provisions consistent with R.61-79.264.117(b) to prevent unauthorized entry and/or use of the waste unit;

V.I.5(c) A description of measures to protect the integrity of any installed engineering control(s) and associated features considered as part of the selected remedy, for the period that has to be maintained;

V.I.5(d) Planned maintenance and monitoring activities, and frequencies to ensure the security provisions are maintained;

V.I.5(e) An inspection checklist describing the land use control elements to be inspected, the frequency of inspection, and the potential problems that could be encountered. The checklist shall contain an area where the inspector may enter his/her name, the date of inspection, and the date upon which any problems encountered are remediated;

V.I.5(f) Procedure(s) to follow when a determination is made that the land use control(s) are not effective and require modification;

V.I.5(g) The mechanism by which a notification will be recorded on the deed for the facility property, or some other instrument which is normally examined during title search, that will in perpetuity notify any potential future purchaser of the property, that the property had been used for waste management and disposal activities and that restrictions exist precluding a residential use of the land. The need for a deed restriction may be reevaluated upon the transfer of ownership or control; and

V.I.5(h) The mechanism by which other pertinent agencies (State or Federal) will be given notice of restrictions placed on the use of the property, that is affecting or may affect in the future, areas under the control of other State or Federal agencies.

V.I.5(i) The above information is outlined in detail in Appendix D – Land Use Control Management Plan (LUCMP).

V.I.6 **CMI Progress Reports**

If the time frame required to complete corrective measures implementation is greater than one hundred and eighty (180) days, the Permittee shall provide the Department with semi-annual Corrective Measures Implementation Progress Reports (180-day intervals) beginning from the date the CMI Workplan is approved by the Department, until the Remedy Completion Report is approved by the

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Department. The time frame stated is effective unless otherwise agreed to by the Department. The CMI Progress Reports shall contain at least the following information:

V.I.6(a) A description of the portion of the CMI Workplan completed (e.g. sampling events, operations, volumes removed/treated, wastes generated, etc.);

V.I.6(b) A summary of system performance/compliance and progress toward achieving cleanup goals;

V.I.6(c) A summary of any deviations from the approved CMI Workplans during the reporting period;

V.I.6(d) Summaries of all contacts with local community and public interest groups or State and Federal Government;

V.I.6(e) A summary of any problems or potential problems encountered during the reporting period;

V.I.6(f) A summary of actions taken to rectify the problems;

V.I.6(g) Any changes in relevant personnel; and

V.I.6(h) Projected work for the next reporting period.

V.I.7 **Remedy Completion Report**

V.I.7(a) Within ninety (90) days of completion of CMI phase, unless otherwise agreed by the Department, the Permittee shall submit a Remedy Completion Report (RCR), including certification of completion of the corrective measures activities. The RCR shall summarize the activities and results from the entire period of Corrective Measures Implementation. The RCR shall also demonstrate compliance with all media cleanup goals and meet the corrective measures completion criteria in accordance with Permit Condition V.I.2(c). Approval by the Department of the final RCR constitutes remedy completion.

V.I.7(b) For corrective measures involving the cleanup of groundwater, the Permittee must demonstrate that the concentrations of the constituents of concern remain at or below cleanup levels for three (3) consecutive years after the corrective measures have been terminated. The time frame stated is effective unless otherwise agreed to by the Department.

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V.J. MODIFICATION OF THE CORRECTIVE ACTION COMPLIANCE SCHEDULE

V.J.1 Initiation

If at any time the Department determines that modification of Table V-A Corrective Action Compliance Schedule is necessary, the Department may initiate a modification to the Corrective Action Compliance Schedule, in accordance with the applicable provisions of R.61-79.270.

V.J.2 Permittee Requested Modification

The Permittee may request a permit modification in accordance with R.61-79.270 to change the Corrective Action Compliance Schedule.

V.K. WORKPLAN AND REPORT REQUIREMENTS

V.K.1 Submittal Requirements

All reports submitted to the Department should be in the following format: one printed copy and one searchable electronic copy required under Permit Condition I.G.

V.K.2 Department Approval

All workplans, reports and schedules shall be subject to approval by the Department prior to implementation to assure that such workplans, reports and schedules are consistent with the requirements of this Permit and with applicable regulations and guidance. The Permittee shall revise all submittals and schedules as specified by the Department. Upon approval, the Permittee shall implement all workplans and schedules as written.

V.K.3 Extensions for Submittals

All workplans and reports shall be submitted in accordance with the approved schedule. Extensions of the due date for submittals may be granted by the Department based on the Permittee's demonstration that sufficient justification for the extension exists.

V.K.4 Amendment of the Workplan(s)

If the Permittee at any time determines that the Assessment Report information required under Permit Condition V.B.2, the CS Workplan under Permit Condition V.D, or RFI Workplan(s) required under Permit Condition V.E, no longer satisfy the requirements of R.61-79.264.101 or this Permit for prior or continuing releases of hazardous waste or hazardous constituents from solid waste management units

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and/or areas of concern, the Permittee shall submit an amended Assessment Report and/or Workplan(s) to the Department within ninety (90) calendar days of such determination.

V.L. APPROVAL/DISAPPROVAL OF SUBMITTALS

The Department will review the workplans, reports, schedules, and other documents ("submittals") which require the Department's approval in accordance with the conditions of this Permit. The Department will notify the Permittee in writing of any submittal that is disapproved, and the basis thereof.

Table V-A

Corrective Action Compliance Schedule

Permit Condition	Event	Due Date
V.B.1	Notification of Newly Identified SWMUs and AOCs	Within fifteen (15) days of discovery.
V.B.2	Assessment Report	Within ninety (90) days of notification
V.C.1	Notification for Newly Discovered Releases at Previously Identified SWMUs and AOCs	Within fifteen (15) days of discovery.
V.D.1	Confirmatory Sampling Workplan and Cost Estimate	Within forty-five (45) days of notification by the Department
V.D.3	Implementation of Confirmatory Sampling Workplan	In accordance with the Department's approval letter for the CS Workplan.
V.D.4	Financial Assurance for Confirmatory Sampling	Within sixty (60) days after Department approves CS Workplan.
V.D.5	Confirmatory Sampling Report	In accordance with the approved CS Workplan.

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Table V-A		
Corrective Action Compliance Schedule		
Permit Condition	**Event**	**Due Date**
V.E.1	RFI Workplan for SWMU(s) and AOC(s) Identified under Permit Condition V.A.1	Within ninety (90) days of notification by the Department.
V.E.2	RFI Workplan for Newly Identified SWMU(s) and AOC(s)	Within ninety (90) days after receipt of notification by the Department of which SWMUs or AOCs require an RFI.
V.E.5	Implementation of RFI Workplan	In accordance with the Department-approved RFI Workplan.
V.E.5	Notification of Sampling Activities	At least twenty (20) days prior to any RFI sampling activity.
V.E.6	Financial Assurance for RFI	Within sixty (60) days after Department approves RFI Workplan.
V.E.7	RFI Progress Reports	Quarterly, beginning ninety (90) days from the start date specified by the Department[1]
V.E.8	RFI Report	In accordance with the approved RFI Workplan.
V.E.8	Revised RFI Report	Within thirty (30) days of receipt of the Department's comments on the RFI Report.

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Table V-A		
Corrective Action Compliance Schedule		
Permit Condition	**Event**	**Due Date**
V.F.1(a)	Interim Measures (IM) Workplan	Within thirty (30) days of notification by the Department.
V.F.2	Implementation of IM Workplan	In accordance with the Department-approved IM Workplan.
V.F.3	Financial Assurance for IM	Within sixty (60) days after Department approves IM Workplan.
V.F.4(a)	Interim Measures Progress Reports	In accordance with the approved IM Workplan.[2]
V.F.4(b)	Interim Measures Report	Within ninety (90) days of completion.
V.G.1(a)	CMS Workplan	Within ninety (90) days of notification by the Department that a CMS is required.
V.G.2	Implementation of the CMS Workplan	Within fifteen (15) days after receipt of the Department's approval of the Workplan.
V.G.3	Financial Assurance for CMS	Within sixty (60) days after Department approves CMS Workplan.
V.G.4(a)	CMS Report	In accordance with the schedule in the approved CMS Workplan.

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Table V-A		
Corrective Action Compliance Schedule		
Permit Condition	**Event**	**Due Date**
V.G.4(a)	Revised CMS Report	Within thirty (30) days of receipt of the Department's comments on the CMS Report.
V.H.2	Statement of Basis	Within thirty (30) days of receipt of the Department's approval letter for the CMS Report.
V.H.4	Demonstration of Financial Assurance	Within one hundred twenty (120) days after Permit modification for remedy.
V.I.1	CMI Workplan	Within thirty (30) days of the permit modification for remedy selection.
V.I.2	Operations and Maintenance Plan	In accordance with the schedule in the approved CMI Workplan.
V.I.4	Construction Completion Report	In accordance with the schedule in the approved CMI Workplan.
V.I.6	CMI Progress Reports	Semi-annually, beginning one hundred eighty (180) days after approval of the CMI Workplan.
V.I.7	Remedy Completion Report	Within ninety (90) days of completion of the selected remedy.

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Table V-A		
Corrective Action Compliance Schedule		
Permit Condition	**Event**	**Due Date**
V.K.4	Amendment of Assessment Report, CS Workplan, or RFI Workplan that no longer satisfies requirements of R.61-79.264.101 or this Permit	Within ninety (90) days of determination.
The above reports must be signed and certified in accordance with R.61-79.270.11.		
[1] Applies to workplan execution that requires more than one hundred eighty (180) days.		
[2] Applies to workplan execution that requires more than one (1) year.		

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Module VI. WASTE MINIMIZATION

VI.A. GENERAL RESTRICTIONS

In the event that the Permittee treats, stores, or disposes of hazardous wastes onsite where such wastes were generated, then the Permittee must comply with R.61-79.264.73(b)(9), and Section 3005 (h) of RCRA (42 U.S.C. 6925(h)), and the Permittee must certify, no less than annually, that:

VI.A.1 Reduction of Hazardous Waste

The Permittee has a program in place to reduce the volume and toxicity of hazardous waste generated to the degree determined by the Permittee to be economically practicable; and

VI.A.2 Method of Treatment, Storage or Disposal

The proposed method of treatment, storage or disposal is the most practicable method available to the Permittee that minimizes the present and future threat to human health and the environment.

VI.B. RECORDING REQUIREMENTS

If Permit Condition VI.A is applicable, then the Permittee shall maintain copies of this certification in the facility operating record as required by R.61-79.264.73(b)(9).

VI.C. WASTE MINIMIZATION OBJECTIVES

If Permit Condition VI.A is applicable, the Waste Minimization program required under Permit Condition VI.A must address the objectives listed on the following two pages (Waste Minimization Objectives).

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The Waste Minimization Program should include the following elements:

I. Top Management Support

A. Dated and signed policy describing management support for waste minimization and for implementation of a waste minimization plan.

B. Description of employee awareness and training programs designed to involve employees in waste minimization planning and implementation to the maximum extent feasible.

C. Description of how a waste minimization plan has been incorporated into management practices so as to ensure ongoing efforts with respect to product design, capital planning, production operations, and maintenance.

II. Characterization of Waste Generation

A. Identification of types, amounts, and hazardous constituents of waste streams, with the source and date of generation.

III. Periodic Waste Minimization Assessments

A. Identification of all points in a process where materials can be prevented from becoming a waste, or can be recycled.

B. Identification of potential waste reduction and recycling techniques applicable to each waste, with a cost estimate for capital investment and implementation.

C. Description of technically and economically practical waste reduction/recycling options to be implemented, and a planned schedule for implementation.

D. Specific performance goals, preferably quantitative, for the source reduction of waste by stream. Whenever possible, goals should be stated as weight of waste generated per standard unit of production, as defined by the generator.

IV. Cost Allocation System

A. Identification of waste management costs for each waste, factoring in liability, transportation, recordkeeping, personnel, pollution control, treatment, disposal, compliance and oversight costs to the extent feasible.

B. Description of how departments are held accountable for the wastes they generate.

C. Comparison of waste management costs with costs of potential reduction and recycling techniques applicable to each waste.

V. Technology Transfer

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A. Description of efforts to seek and exchange technical information on waste minimization from other parts of the company, other firms, trade associations, technical assistance programs, and professional consultants.

VI. Program Evaluation

A. Description of types and amounts of hazardous waste reduced or recycled.

B. Analysis and quantification of progress made relative to each performance goal established and each reduction technique to be implemented.

C. Amendments to waste minimization plan and explanation.

D. Explanation and documentation of reduction efforts completed or in progress before development of the waste minimization plan.

E. Explanation and documentation regarding impediments to hazardous waste reduction specific to the individual facility.

References:

"Draft Guidance to Hazardous Waste Generators on the Elements of a Waste Minimization Program", 54 FR 25056, June 12, 1989.

"Waste Minimization Opportunity Assessment Manual", EPA/625/7 88/003, July 1988.

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Module VII. LAND DISPOSAL RESTRICTIONS

VII.A. GENERAL RESTRICTIONS

R.61-79.268 identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be placed on or in a land treatment, storage, or disposal unit. The Permittee shall maintain compliance with the requirements of R.61-79.268. Where the Permittee has applied for an extension, waiver or variance under R.61-79.268, the Permittee shall comply with all restrictions on land disposal under this Part once the effective date for the waste has been reached pending a final decision for such application.

VII.B. LAND DISPOSAL PROHIBITIONS AND TREATMENT STANDARDS

VII.B.1 Restricted Waste Disposal Prohibition

A restricted waste identified in R.61-79.268 Subpart C may not be placed in a land disposal unit without further treatment unless the requirements of R.61-79.268 Subparts C and/or D are met.

VII.B.2 Storage Prohibition

The storage of hazardous wastes restricted from land disposal under R.61-79.268 is prohibited unless the requirements of R.61-79.268 Subpart E are met.

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Module VIII. ORGANIC AIR EMISSION STANDARDS

[R.61-79.264 Subparts AA, BB and CC]

VIII.A. APPLICABILITY

Section 3004(n) of RCRA requires the development of standards to control air emissions from hazardous waste treatment, storage and disposal facilities as necessary to protect human health and the environment. The conditions of this Module apply to certain process vents, equipment leaks and emissions from certain tanks, containers, surface impoundments and miscellaneous units.

The Permittee operates tanks, containers, equipment, and a closed-vent system to an organic emissions control device subject to RCRA Organic Air Emissions Standards. Compliance with the RCRA Organic Air Emissions Standards is demonstrated through detailed recordkeeping and written inspection, monitoring and maintenance plans, and dated records certified by trained Permittee personnel.

VIII.B. NO DETECTABLE EMISSIONS

VIII.B.1 No Detectable Emissions Definition

For the purposes of this Module, the phrases no detectable organic emissions or no detectable emissions (NDE) shall mean that no organic emissions are escaping to the atmosphere from any HWMU or ancillary equipment as detected and quantified by Reference Method 21 and specified in R.61-79.264.1034(b), 264.1063(b) and R.61-79.264 Subpart CC.

VIII.B.2 Confirming No Detectable Emissions (NDE)

The requirement of no detectable emissions shall be confirmed by using a calibrated, organic air emission detection instrument reading of less than 500 ppm above background, as measured in accordance with Reference Method 21 and R.61-79.264.1034(b), 264.1063(c) and 265.1084(d) as applicable.

VIII.C. SUBPART BB: AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

Subpart BB applies to all equipment identified in this Permit except as provided in R.61-79.264.1. Subpart BB contains emission standards that address leaks from specific equipment (i.e. pumps, valves, compressors, etc.) that contains or contacts hazardous waste that has an organic concentration of at least ten (10) percent by weight. The Facility manages organic chemicals that range in concentration from 0 to 100 percent. The equipment listed in Table N-1 and Attachment N-1 of the Approved

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Permit Application are subject to the requirements of R.61-79.264 Subpart BB, Air Emission Standards for Equipment Leaks. Developed drawings identifying the location and associated units are located in Attachment N-2 of the Approved Permit Application.

The Permittee operates open-ended valves, and pumps and valves in heavy liquid service that are subject to R.61-79.264, Subpart BB.

VIII.C.1 **Applicability**

[R.61-79.264.1050]

VIII.C.1(a) The requirements of R.61-79.264, Subpart BB and Permit Condition VIII.C contain Air Emission Standards For Equipment Leaks that apply to equipment associated with the listed in Table N-1 of the Approved Permit Application, all of which are considered to contain or contact hazardous wastes with organic concentrations of at least 10 percent (%) by weight.

VIII.C.1(b) The requirements of R.61-79.265, Subpart BB contain Air Emission Standards For Equipment Leaks that apply to equipment associated with units that are exempt from permitting under the provisions of R.61-79.262.17 (i.e., a "ninety (90)-day tank or container) and are not recycling units under the provisions of R.61-79.261.6, and all of which are considered to contain or contact hazardous wastes with organic concentrations of at least 10 percent (%) by weight.

VIII.C.2 **Notification of Modifications, Additions or New Units**

Prior to installing or operating any new unit or equipment subject to R.61-79.264, Subpart BB, or modifying any existing unit, equipment, procedure, or process such that the unit(s) or equipment will become subject to R.61-79.264, Subpart BB, the Permittee shall apply for a permit modification under R.61-79.270.42, provide specific RCRA permit application information required under R.61-79.270.14 through 270.16 and 270.25, as applicable, with the modification request, and obtain a permit modification in accordance with R.61-79.270.42.

VIII.C.3 **Marking and Tagging**

[R.61-79.264.1050(d) and 264.1064(c)]

VIII.C.3(a) The Permittee shall maintain the most current equipment identification list and up-to-date P&ID in the Facility's operating record. Section M of the Approved Permit Application includes the equipment list and P&ID subject to marking and tagging requirements of R.61-79.264, Subpart BB and this Permit at the time of Permit issuance.

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VIII.C.3(b) The Permittee shall ensure that all subject equipment and the equipment's interfaces are marked with a unique identification number for the specific purposes of tracking, monitoring, inspecting and repairing each piece of equipment in accordance with and demonstration of R.61-79.264, Subpart BB. The marking must be of a permanent nature, weatherproof, and regularly maintained to ensure it is clearly visible at all times of operation.

VIII.C.3(c) The unique identification number of the equipment shall correspond to, and be identified on, the current equipment list, in the equipment compliance tracking system and up-to-date P&IDs maintained at the Facility and used to conduct all inspections and monitoring for the life of this Permit.

VIII.C.3(d) Tags used to identify leaks and potential leaks must comply with all the applicable requirements of R.61-79.264.1064(c), including, but not limited to the following requirements:

VIII.C.3(d)(i) Tags must include the equipment identification number;

VIII.C.3(d)(ii) Tags must be red or some other readily visible bright color;

VIII.C.3(d)(iii) Tags must be made of or coated in a material that is not degraded by the hazardous waste stream, or weather, including UV light.

VIII.C.4 **Excluded Equipment**

[R.61-79.264.1050(e) and (f)]

VIII.C.4(a) Equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent (%) by weight for less than 300 hours per calendar year is excluded from the requirements of R.61-79.264.1052 through 264.1060 if the equipment is identified as required by R.61-79.264.1064(g)(6) and complies with documentation requirements in Permit Condition VIII.C.4(b).

VIII.C.4(b) The Permittee shall identify, mark, and tag each piece of equipment determined to operate less than 300 hours per calendar year in accordance with Permit Condition VIII.C.3 and R.61-79.264.1050(d) and 264.1064(g)(6).

VIII.C.4(c) For each piece of equipment marked as contacting hazardous waste less than 300 hours per year, a log of the use of the equipment in organic hazardous waste service, the log shall identify the waste manage, the date and start time of service and the date the equipment is cleaned, the date and time that hazardous waste service is stopped, the total hours in service,

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and total service for the calendar year.

VIII.C.4(d) Should conditions change such that the Permittee is no longer able to claim the exclusion identified in Permit Condition **Error! Reference source not found.**, the Permittee shall submit to the Department a Permit Modification in accordance with R.61-79.270.42, with information that the equipment no longer satisfies the exemption criteria and complies with the requirements of R.61-79.264, Subpart BB.

VIII.C.5 **Equipment Standards**

All equipment subject to R.61-79.264, Subpart BB shall comply with the appropriate equipment standards of R.61-79.264, Subpart BB, the conditions of this Permit, and the monitoring program in Attachment M-1 of the Approved Permit Application.

VIII.C.5(a) Standards: Compressors

The Permittee does not operate any compressors at the time of this Permit issuance. Prior to installing a compressor that is subject to R.61-79.264.1053 and is associated with a hazardous waste management unit, the Permittee shall submit a Hazardous Waste Permit Modification in accordance with R.61-79.270.42 and receive approval from the Department.

VIII.C.5(b) Standards: Pressure Relief Devices in Gas/Vapor Service

At the time of Permit issuance, the Permittee does not operate any pressure relief devices subject to subject to R.61-79.264.1054.

VIII.C.5(c) Standards: Sampling Connection Systems

At the time of Permit issuance, the Permittee does not operate any sampling connecting systems subject to R.61-79.264.1055.

VIII.C.5(d) Standards: Open-ended Valves or Lines

The Permittee has no open-ended valves or lines at the time of this Permit issuance.

VIII.C.5(e) Standards: Valves in Gas/Vapor Service or In Light Liquid Service

The Permittee has no valves in gas/vapor service or in light liquid service at the time of this Permit issuance.

VIII.C.5(f) Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other

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Connectors

The Permittee has equipment subject to R.61-79.264.1058.

VIII.C.5(f)(i) The Permittee shall monitor any pressure relief devices, flanges and other connectors if evidence of a potential leak is found by visual, audible or olfactory, or any other detection method, within five (5) calendar days using Reference Method 21 as specified in R.61-79.264.1063(b).

VIII.C.5(f)(ii) The Permittee shall make a first attempt at repair of each detected leak no later than five (5) calendar days after it is detected.

VIII.C.5(f)(iii) The Permittee shall repair each leak as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in R.61-79.264.1059.

VIII.C.5(f)(iv) Any connector that is inaccessible or is ceramic or ceramic-lined is exempt from monitoring requirements of R.61-79.264.1058 and recordkeeping requirements of R.61-79.264.1064.

VIII.C.5(g) Standards: Delay of Repair

VIII.C.5(g)(i) Equipment leak repair delays exceeding 15 calendar days shall comply with the requirements of R.61-79.264.1059.

VIII.C.5(g)(ii) The Permittee must record the reason that a repair of a piece of equipment for which a leak has been detected, is technically infeasible without a hazardous waste management unit shutdown in the Facility operating records within 5 calendar days of detection.

VIII.C.5(g)(iii) For each piece of equipment that incurs repair delays, the Permittee shall record in a log that is kept at the Facility or other appropriate location approved by the Department, the information required per R.61-79.264.1064(d)(6) through 264.1064(d)(9).

VIII.C.5(g)(iv) Delay of repair of equipment for which leaks have been detected is allowed provided the equipment is isolated from the hazardous waste management unit and does not continue to contain or contact hazardous waste with organic concentrations of at least 10 percent (%) by weight.

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VIII.C.5(g)(v) Delay of repair of valves is allowed if the emissions of purged material from immediate repair are greater than the emissions likely to result from delay of repair. Purged material must be collected and destroyed or recovered in a control device complying with R.61-79.264.1060.

VIII.C.5(g)(vi) Delay of repair for pumps is allowed if the repair requires use of a dual mechanical seal system that includes a barrier fluid system and the repair is completed as soon as practicable, but not later than six (6) months after the leak is detected.

VIII.C.6 **Test Methods and Procedures**

VIII.C.6(a) The Permittee The Permittee shall comply with the test methods and procedures of R.61-79.264.1063, for equipment subject to R.61-79.264, Subpart BB.

VIII.C.6(a)(i) Monitoring shall comply with Reference Method 21 in 40 CFR part 60. The detection instrument shall meet the performance criteria of Reference Method 21. The organic air emission detection instrument shall be calibrated each day prior to use in accordance with Reference Method 21 and at the end of each day at the minimum.

VIII.C.6(a)(ii) The organic air emission detection instrument shall be calibrated using calibration gases of less than 10 ppm of hydrocarbon in air (i.e. zero air) and a mixture of methane or n-hexane and air at a concentration of approximately, but not less than, 10,000 ppm methane or n-hexane in accordance with R.61-79.264.1063(b)(4).

VIII.C.6(a)(iii) During Reference Method 21 monitoring, the instrument probe shall traverse around all potential leak interfaces as close to the interface as possible in accordance with Reference Method 21.

VIII.C.6(a)(iv) During monitoring, the emissions monitoring technician shall record the highest measured emission at each equipment interface to two decimal points regardless of the measurement above or below the leak definition for that piece of equipment to demonstrate complete and accurate monitoring for each piece.

VIII.C.6(b) All testing, monitoring and confirmatory sampling must be conducted during times of operation by persons trained in the proper implementation of the test methods and procedures required by R.61-79.264.1063, including, but not limited to, Reference Method 21.

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VIII.C.7 **Recordkeeping Requirements**

VIII.C.7(a) Records demonstrating compliance with 40 C.F.R. Part 264, Subpart BB, including any third party's records, shall be maintained, accessible at the Facility or other appropriate location approved by the Department, for a period of not less than three (3) years. All records necessary for demonstrating compliance shall include, at a minimum, the required recordkeeping information in R.61-79.264.1064 and records specified in the Conditions of this Permit.

VIII.C.7(b) These records shall include, but are not limited to: (1) the current list of regulated equipment and its physical location at the Facility as illustrated on a Facility map and P&ID; (2) all associated operating information, specifications, and standards for each unique piece of equipment; (3) all maintenance, inspection, leak detection, repair, and delay of repair records associated with each unique piece of equipment; and (4) training documentation for persons conducting inspections or monitoring.

VIII.C.7(c) Records justifying valves in light liquid service designated as unsafe-to-monitor or difficult-to-monitor shall comply with R.61-79.264.1057(g) and (h), shall be recorded in a log that is kept at the Facility or other appropriate location approved by the Department, be available for inspection at reasonable times, and demonstrate compliance with the requirements of R.61-79.264.1064(h).

VIII.C.8 **Reporting Requirements**

[R.61-79.264.1065]

VIII.C.8(a) The Permittee shall prepare and submit a report semiannually to the Department that includes all information required by R.61-79.64.1065 for each month during that semiannual reporting period.

VIII.C.8(b) The semiannual report shall be submitted by January 31st and July 31st of each calendar year. A copy of the semiannual report shall be maintained in the Facility's operating record.

VIII.D. SUBPART CC: AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS, CONTAINERS AND MISCELLANEOUS UNITS

VIII.D.1 **Applicability**

VIII.D.1(a) The provisions of R.61-79.264, Subpart CC contain Air Emissions Standards for Hazardous Waste Tanks, Surface Impoundments, Containers and Miscellaneous Units (per R.61-79.264.601) that contact hazardous waste

containing an average volatile organic concentration greater than 500 ppmw at the point of waste origination, as determined by the procedures outlined in R.61-79.264.1083, except as excluded by R.61-79.264.1080(b) or specifically exempted by R.61-79.264.1082(c).

VIII.D.1(b) The Permittee operates Hazardous Waste Management Units which contact hazardous waste containing an average volatile organic concentration greater than 500 ppmw and are, therefore, subject to R.61-79.264, Subpart CC. The requirements of R.61-79.264, Subpart CC and Permit Condition VIII.D apply to the hazardous waste management units and their covers, closure devices, and control devices, as specified in Section M and the Section M Appendices from the Approved Permit Application.

VIII.D.1(c) The requirements of R.61-79.265, Subpart CC contain Air Emission Standards for Tanks and Containers that are exempt from permitting under the provisions of R.61-79.262.17 (i.e., a "ninety (90)-day tank or container). While similar, the requirements of Permit Condition VIII.D do not apply to such units.

VIII.D.2 **Notification of New Modifications, Additions or New Units**

Prior to installing or operating a tank, container, surface impoundment, miscellaneous unit, closed-vent system or control device subject to R.61-79.264, Subpart CC, or modifying any existing unit, procedure, or process such that the unit(s) will become subject to R.61-79.264, Subpart CC, the Permittee shall apply for a permit modification under R.61-79.270.42, provide specific Part B application information required under R.61-79.270.14 through 270.16 and 270.27, as applicable, with the modification request, and obtain a permit modification in accordance with R.61-79.270.42.

VIII.D.3 **Excluded Units**

[R.61-79.264.1080(b)]

The Permittee currently does not have hazardous waste management units which are excluded from the R.61-79.264, Subpart CC standards.

VIII.D.4 **Exempted Units**

[R.61-79.264.1082(c)]

The Permittee currently does not have tanks, surface impoundments or containers that are exempt from the R.61-79.264.1084 through 264.1087 standards by R.61-79.264.1082(c).

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VIII.D.5 **Waste Determination Procedures**

[R.61-79.264.1083]

The Permittee shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using Tank Level 1 controls in accordance with the standards specified in R.61
79.264.1084(c) and 264.1083(c), and/or miscellaneous unit whenever changes to the hazardous waste managed in the unit could potentially cause the maximum organic pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design category specified as specified appropriate to the tank or miscellaneous unit. The Permittee shall document each determination in accordance with the Leak Detection and Repair Program recordkeeping system, available upon request.

VIII.D.6 **Standards: General**

[R.61-79.264.1082 and 264.1084 through 264.1087]

Each unit subject to R.61-79.264, Subpart CC shall comply with the appropriate standard applicable to the hazardous waste management unit [R.61-79.264.1082 and R.61-79.264.1084 through 264.1087].

VIII.D.7 **Standards: Level 1 Tank Emission Controls**

The Permittee shall control organic air pollutant emissions from Level 1 Tanks using fixed roof design as specified in R.61-79.264.1084(c)(2).

VIII.D.7(a) The owner or operator shall determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using Tank Level 1 controls before the first time the hazardous waste is placed in the tank. The maximum organic vapor pressure shall be determined using the procedures specified in R.61-79.264.1084(c). Thereafter, the owner or operator shall perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in R.61-79.264.1084(b)(1)(i), as applicable to the tank. All inspection and monitoring activities must be conducted at times when the unit is in operation, and by qualified persons with the appropriate training.

VIII.D.7(b) The Permittee shall operate the tank covered by a fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank.

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VIII.D.7(b)(i) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

VIII.D.7(b)(ii) Each opening in the fixed roof, and any manifold system associated with the fixed roof, shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device.

VIII.D.7(b)(iii) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life.

VIII.D.7(b)(iv) Opening of closure devices or removal of the fixed roof is allowed to perform routine inspection, maintenance, or other activities needed for normal operations. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

VIII.D.7(b)(v) Opening of any safety relief device or a pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications.

VIII.D.7(c) The Permittee shall inspect and shall document the fixed roof and closure devices control device compliance with R.61-79.264.1084(c)(4) and repair each defect detected during inspection or monitoring in accordance with R.61-79.264.1084(k).

VIII.D.7(c)(i) The Permittee shall make a first attempt at repair of each defect no later than five (5) calendar days after detection.

VIII.D.7(c)(ii) The Permittee shall repair as soon as practicable, but not later than 45 calendar days after each defect is detected, except as provided in R.61-79.264.1084(k)(2).

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VIII.D.7(c)(iii) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in R.61-79.264.1089(b).

VIII.D.7(d) In the event that the Permittee designates a cover as "unsafe to inspect and monitor cover", the requirements of R.61-79.264.1084(l) must be met and documented in the operating record. Only covers subject to the R.61-79.264, Subpart CC requirements can be designated as "unsafe to inspect and monitor cover." This includes covers under extreme pressure or heat, or other circumstances where monitoring personnel would be exposed to dangerous, hazardous, or other unsafe conditions. No other components subject to the R.61-79.264, Subpart CC regulations can be designated as "unsafe to inspect and monitor cover" unless a Hazardous Waste Permit Modification in accordance with R.61-79.270.42 is submitted to and approved by the Department.

VIII.D.8 **Standards: Containers**

At the time of Permit issuance, the Permittee manages Level 1 containers as specified in Section M and listed in Section D of the Approved Permit Application.

VIII.D.8(a) Level 1 containers shall meet applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in R.61-79.264.1086(f).

VIII.D.8(a)(i) The Permittee shall inspect and maintain each container's cover and closure devices to form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate and installed on the container (e.g., a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a "portable tank" or bulk cargo container equipped with a screw-type cap).

VIII.D.8(a)(ii) A container shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity for as long as the container is in service.

VIII.D.8(a)(iii) Opening of a closure device or cover is allowed for the purpose of adding or removing hazardous waste or other material to the

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container, or to perform routine activities in accordance with R.61-79.264.1086(c)(3).

VIII.D.8(a)(iv) The owner or operator of containers using Container Level 1 controls shall inspect the containers and their covers and closure devices in accordance with R.61-79.264.1086(c)(4) and shall document the inspection event in the operating record.

VIII.D.8(a)(v) If a defect is detected in a container, cover, or closure devices, the Permittee shall make first efforts at repair no later than 24 hours after detection. Repair shall be completed as soon as possible but no later than five (5) calendar days after detection. If repair of a defect cannot be completed within five (5) calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

VIII.D.9 **Inspection and Monitoring Requirements**

VIII.D.9(a) The Permittee shall inspect and monitor air emission control equipment used to comply with this subpart in accordance with the applicable requirements specified in R.61-79.264.1084 through R.61-79.264.1087.

VIII.D.9(b) The Permittee shall implement a written leak detection and repair plan and schedule to perform inspections and monitoring in accordance with R.61-79.264.1088 and Section G of the Approved Permit Application and document compliance with this Plan in the operating record.

VIII.D.10 **Recordkeeping Requirements**

VIII.D.10(a) Records demonstrating compliance with R.61-79.264, Subpart CC, including any third party's records, shall be maintained, accessible at the Facility or other appropriate location approved by the Department, for a period of not less than three (3) years. At a minimum, records of sufficient detail shall be maintained to demonstrate compliance with R.61-79.264, Subpart CC leak definitions and operation at no detectible emissions, monitoring events, as specified in R.61-79.264.1089 and the Conditions of this Permit.

VIII.D.10(b) Records shall include, but are not limited to, the: (1) current list of regulated hazardous waste management units and their unique identification number, covers, closure, pressure relief devices and control devices and their physical location at the Facility as illustrated on a P&ID and/or Facility Map; (2) all associated operating information, specifications,

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and standards for each hazardous waste management unit; (3) all maintenance, inspection, leak detection and repair records associated with each hazardous waste management unit and closure or pressure relief device; and (4) training documentation for persons conducting inspections or monitoring.

VIII.D.10(c) Records justifying any covers designated as unsafe to inspect or monitor shall comply with R.61-79.264.1084(l) or R.61-79.264.1085(g), recorded in a log that is kept at the Facility or other appropriate location approved by the Department, be available for inspection at reasonable times, and demonstrate compliance with the requirements of R.61-79.264.1089(g).

VIII.D.11 **Reporting Requirements**

VIII.D.11(a) The Permittee shall prepare and submit a report within fifteen (15) calendar days to the Department documenting each occurrence of noncompliance.

VIII.D.11(b) The Permittee shall submit a report semiannually to the Department documenting, for control
devices operating in noncompliance with R.61-79.264.1087. The report must document each occurrence where a control device could not be returned to compliance within twenty-four (24) hours and the actions that were taken to correct the noncompliance per R.61-79.264.1090(c).

The semiannual report shall be submitted by January 31st and July 31st of each calendar year as required per R.61-79.264.1090. A copy of the semiannual report shall be maintained in the Facility's operating record.

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APPENDIX A – SOLID WASTE MANAGEMENT UNIT / AREA OF CONCERN SUMMARY

Appendix A-1	
List of All Solid Waste Management Units (SWMUs) and Regulated Units	
SWMU Number	**SWMU Name**
1	Return and Fill Stations
2	Above-Ground Hazardous Waste Storage Tank
3	East Warehouse Container Storage Area
4	Flammables Container Storage Shelter
5	Non-Hazardous Waste Tank Farm
6	West Warehouse Container Storage Area

Appendix A-2	
Units Regulated Under R.61-79.264 (RCRA-regulated units)	
SWMU Number	**SWMU Name**
1	Return and Fill Stations
2	Above-Ground Hazardous Waste Storage Tank
3	East Warehouse Container Storage Area
6	West Warehouse Container Storage Area

Appendix A-3	
SWMUs Requiring No Further Action at this Time	
SWMU Number	**SWMU Name**
4	Flammables Container Storage Shelter
5	Non-Hazardous Waste Tank Farm

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Appendix A-4	
SWMUs and AOCs Requiring Confirmatory Sampling	
SWMU Number or AOC Letter	**SWMU or AOC Name**
	None at this time

Appendix A-5	
SWMUs and AOCs Requiring a RCRA Facility Investigation (RFI)	
SWMU Number or AOC Letter	**SWMU or AOC Name**
	None at this time

Appendix A-6	
SWMUs and AOCs Requiring a Corrective Measures Study (CMS)	
SWMU Number or AOC Letter	**SWMU or AOC Name**
	None at this time

Appendix A-7				
SWMUs and AOCs Requiring Corrective Action with Land Use Controls (LUCs)				
SWMU Number or AOC Letter	**SWMU or AOC Name**	**Description of Corrective Action**	**Description of LUC**	**Document Selecting Corrective Action and LUCs**
	None at this time			

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APPENDIX B - RCRA FACILITY INVESTIGATION (RFI) WORKPLAN OUTLINE

I. RFI WORKPLAN REQUIREMENTS

The Permittee shall prepare a RCRA Facility Investigation (RFI) Workplan that meets the requirements of Part II of this appendix and the RFI Guidance, EPA-530/SW-89-031. This workplan shall also include the development of the following plans, which shall be prepared concurrently:

A. Project Management Plan

Permittee shall prepare a Project Management Plan that will include a discussion of the technical approach, schedules, and personnel. The Project Management Plan will also include a description of qualifications of personnel performing or directing the RFI, including contractor personnel. This plan shall also document the overall management approach to the RCRA Facility Investigation.

B. Sampling and Analysis Plan(s)

The Permittee shall prepare a plan to document all monitoring procedures: field sampling, sampling procedures and sample analysis performed during the investigation to characterize the environmental setting, source, and releases of hazardous constituents, so as to ensure that all information and data are valid and properly documented. The Sampling Strategy and Procedures shall be in accordance with EPA Region 4 Quality System and Technical Procedures (most recent version). Any deviations from this reference must be requested by the applicant and approved by the Department. The Sampling and Analysis Plan must specifically discuss the following unless the SOP procedures are specifically referenced.

1. Sampling Strategy

a) Selecting appropriate sampling locations, depths, etc.;

b) Obtaining all necessary ancillary data;

c) Determining conditions under which sampling should be conducted;

d) Determining which media are to be sampled (e.g. groundwater, air, soil, sediment, subsurface gas);

e) Determining which parameters are to be measured and where;

f) Selecting the frequency of sampling and length of sampling period;

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g) Selecting the types of samples (e.g. composites vs. grabs) and number of samples to be collected.

2. Sampling Procedures

a) Documenting field sampling operations and procedures, including:

(i) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g. filters, preservatives, and absorbing reagents);

(ii) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;

(iii) Documentation of specific sample preservation method;

(iv) Calibration of field instruments;

(v) Submission of field-biased blanks, where appropriate;

(vi) Potential interferences present at the facility;

(vii) Construction materials and techniques, associated with monitoring wells and piezometers;

(viii) Field equipment listing and sampling containers;

(ix) Sampling order; and

(x) Decontamination procedures.

b) Selecting appropriate sample containers;

c) Sampling preservation; and

d) Chain-of-custody, including:

(i) Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and

(ii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

3. Sample Analysis

Sample analysis shall be conducted in accordance with Test Methods for Evaluating Solid Waste:/, Physical/Chemical Methods (SW-846) (most recent version). The sample analysis section of the Sampling and Analysis Plan shall specify the following:

a) Chain-of-custody procedures, including:

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(i) Identification of a responsible party to act as sampling custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;

(ii) Provision for a laboratory sample custody log consisting of serially numbered standard lab tracking report sheets; and

(iii) Specification of laboratory sample custody procedures for sample handling, storage, and dispersement for analysis.

b) Sample storage;

c) Sample preparation methods;

d) Analytical Procedures, including:

(i) Scope and application of the procedure;

(ii) Sample matrix;

(iii) Potential interferences;

(iv) Precision and accuracy of the methodology; and

(v) Method detection limits.

e) Calibration procedures and frequency;

f) Data reduction, validation and reporting;

g) Internal quality control checks, laboratory performance and systems audits and frequency, including:

(i) Method blank(s);

(ii) Laboratory control sample(s);

(iii) Calibration check sample(s);

(iv) Replicate sample(s);

(v) Matrix-spiked sample(s);

(vi) "Blind" quality control sample(s);

(vii) Control charts;

(viii) Surrogate samples;

(ix) Zero and span gases; and

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(x) Reagent quality control checks.

h) External quality control checks by the Department, including:

(i) Spikes and blanks at sampling events for which the Department or its technical representative provides oversight; and

(ii) The equivalent of a CLP data package for samples split with the Department or for which the Department specifically requests the package.

i) Preventive maintenance procedures and schedules;

j) Corrective action (for laboratory problems); and

k) Turnaround time.

C. Data Management Plan

The Permittee shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

1. Data Record

The data record shall include the following:

a) Unique sample or field measurement code;

b) Sampling or field measurement location and sample or measurement type;

c) Sampling or field measurement raw data;

d) Laboratory analysis ID number;

e) Property or component measures; and

f) Result of analysis (e.g. concentration).

2. Tabular Displays

The following data shall be presented in tabular displays:

a) Unsorted (raw) data;

b) Results for each medium, or for each constituent monitored;

c) Data reduction for statistical analysis, as appropriate;

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d) Sorting of data by potential stratification factors (e.g. location, soil layer, topography); and

e) Summary data

3. Graphical Displays

The following data shall be presented in graphical formats (e.g. bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transits, three dimensional graphs, etc.):

a) Display sampling location and sampling grid:

b) Indicate boundaries of sampling area, and area where more data are required;

c) Display geographical extent of contamination;

d) Illustrate changes in concentration in relation to distances from the source, time, depth or other parameters; and

e) Indicate features affecting inter media transport and show potential receptors.

II. RCRA Facility Investigation (RFI) Requirements

The Permittee shall conduct those investigations necessary to: characterize the facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of release of hazardous constituents (Contamination Characterization); and identify actual or potential receptors.

The investigations should result in data of adequate technical content and quality to support the development and evaluation of the corrective action plan if necessary. The information contained in previously developed documents such as a RCRA Part B Permit Application and/or RCRA Section 3019 Exposure Information Report may be referenced as appropriate but must be summarized in both the RFI Workplan and RFI Report.

All sampling and analyses shall be conducted in accordance with the Sampling and Analysis Plan. All sampling locations shall be documented in a log and identified on a detailed site map.

A. Environmental Setting

The Permittee shall collect information to supplement and/or verify Part B information on the environmental setting at the facility. The Permittee shall characterize the following as they relate to identified sources, pathways and areas of releases of hazardous constituents from Solid Waste Management Units.

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1. Hydrogeology

The Permittee shall conduct a program to evaluate hydrogeologic conditions at the facility. This program shall provide the following information:

a) A description of the regional and facility specific geologic and hydrogeologic characteristics affecting ground-water flow beneath the facility, including:

(i) Regional and facility specific stratigraphy: description of strata including strike and dip, identification of stratigraphic contacts;

(ii) Structural geology: description of local and regional structural features (e. g., folding, faulting, tilting, jointing, etc.);

(iii) Depositional history;

(iv) Regional and facility specific ground-water flow patterns; and

(v) Identification and characterization of areas and amounts of recharge and discharge.

b) An analysis of any topographic features that might influence the ground-water flow system.

c) Based on field data, tests, and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the facility (i. e., the aquifers and any intervening saturated and unsaturated units), including:

(i) Hydraulic conductivity and porosity (total and effective);

(ii) Lithology, grain size, sorting, degree of cementation;

(iii) An interpretation of hydraulic interconnections between saturated zones; and

(iv) The attenuation capacity and mechanisms of the natural earth materials (e.g. ion exchange capacity, organic carbon content, mineral content etc.).

d) Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:

(i) Water-level contour and/or potentiometric maps;

(ii) Hydrologic cross sections showing vertical gradients;

(iii) The flow system, including the vertical and horizontal components of flow; and

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(iv) Any temporal changes in hydraulic gradients, for example, due to tidal or seasonal influences.

e) A description of man-made influences that may affect the hydrology of the site, identifying:

(i) Local water-supply and production wells with an approximate schedule of pumping; and

(ii) Man-made hydraulic structures (pipelines, french drains, ditches, etc.).

2. Soils

The Permittee shall conduct a program to characterize the soil and rock units above the water table in the vicinity of contaminant release(s). Such characterization may include, but not be limited to, the following types of information as appropriate:

a) Surface soil distribution;

b) Soil profile, including ASTM classification of soils;

c) Transects of soil stratigraphy;

d) Hydraulic conductivity (saturated and unsaturated);

e) Relative permeability;

f) Bulk density;

g) Porosity;

h) Soil sorption capacity;

i) Cation exchange capacity (CEC);

j) Soil organic content;

k) Soil pH;

l) Particle size distribution;

m) Depth of water table;

n) Moisture content;

o) Effect of stratification on unsaturated flow;

p) Infiltration;

q) Evapotranspiration;

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r) Storage capacity;

s) Vertical flow rate; and

t) Mineral content.

3. Surface Water and Sediment

The Permittee shall conduct a program to characterize the surface water bodies in the vicinity of the facility. Such characterization may include, but not be limited to, the following activities and information:

a) Description of the temporal and permanent surface water bodies including:

(i) For lakes and estuaries: location, elevation, surface area, inflow, outflow, depth, temperature stratification, and volume;

(ii) For impoundments: location, elevation, surface area, depth, volume, freeboard, and construction and purpose;

(iii) For streams, ditches, and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, flooding tendencies (i.e. 100 year event), discharge point(s), and general contents.

(iv) Drainage patterns; and

(v) Evapotranspiration.

b) Description of the chemistry of the natural surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients, chemical oxygen demand, total organic carbon, specific contaminant concentrations, etc.

c) Description of sediment characteristics including:

(i) Deposition area;

(ii) Thickness profile; and

(iii) Physical and chemical parameters (e.g. grain size, density, organic carbon content, ion exchange capacity, pH, etc.)

4. Air

The Permittee shall provide information characterizing the climate in the vicinity of the facility. Such information may include, but not be limited to:

a) A description of the following parameters:

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(i) Annual and monthly rainfall averages;

(ii) Monthly temperature averages and extremes;

(iii) Wind speed and direction;

(iv) Relative humidity/dew point;

(v) Atmospheric pressure;

(vi) Evaporation data;

(vii) Development of inversions; and

(viii) Climate extremes that have been known to occur in the vicinity of the facility, including frequency of occurrence. (i.e. Hurricanes)

b) A description of topographic and man-made features which affect air flow and emission patterns, including:

(i) Ridges, hills or mountain areas;

(ii) Canyons or valleys;

(iii) Surface water bodies (e. g. rivers, lakes, bays, etc.); and

(iv) Buildings.

B. Source Characterization

For those sources from which releases of hazardous constituents have been detected, the Permittee shall collect analytical data to completely characterize the wastes and the areas where wastes have been placed, to the degree that is possible without undue safety risks, including: type, quantity; physical form; disposition (containment or nature of deposits); and facility characteristics affecting release (e. g., facility security, and engineering barriers). This shall include quantification of the following specific characteristics, at each source area:

1. Unit/Disposal Area Characteristics:

a) Location of unit/disposal area;

b) Type of unit/disposal area;

c) Design features;

d) Operating practices (past and present)

e) Period of operation;

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f) Age of unit/disposal area;

g) General physical conditions; and

h) Method used to close the unit/disposal area.

2. Waste Characteristics:

a) Type of wastes placed in the unit;

(i) Hazardous classification (e. g. flammable, reactive, corrosive, oxidizing or reducing agent);

(ii) Quantity; and

(iii) Chemical composition.

b) Physical and chemical characteristics such as;

(i) Physical form (solid, liquid, gas);

(ii) Physical description (e. g., powder, oily sludge);

(iii) Temperature;

(iv) pH;

(v) General chemical class (e. g., acid, base, solvent);

(vi) Molecular weight;

(vii) Density;

(viii) Boiling point;

(ix) Viscosity;

(x) Solubility in water;

(xi) Cohesiveness of the waste; and

(xii) Vapor pressure.

c) Migration and dispersal characteristics of the waste such as:

(i) Sorption capability;

(ii) Biodegradability, bioconcentration, biotransformation;

(iii) Photodegradation rates;

(iv) Hydrolysis rates; and

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(v) Chemical transformations.

The Permittee shall document the procedures used in making the above determinations.

C. Characterization of Releases of Hazardous Constituents

The Permittee shall collect analytical data on groundwater, soils, surface water, sediment, and subsurface gas contamination in the vicinity of the facility in accordance with the sampling and analysis plan as required above. These data shall be sufficient to define the extent, origin, direction, and rate of movement of contamination. Data shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individuals performing the sampling and analysis. The Permittee shall address the following types of contamination at the facility:

1. Groundwater Contamination

The Permittee shall conduct a groundwater investigation to characterize any plumes of contamination detected at the facility. This investigation shall at a minimum provide the following information:

a) A description of the horizontal and vertical extent of any plume(s) of hazardous constituents originating from within the facility;

b) The horizontal and vertical direction of contamination movement;

c) The velocity of contaminant movement;

d) The horizontal and vertical concentration profiles of hazardous constituents in the plume(s);

e) An evaluation of factors influencing the plume movement; and

f) An extrapolation of future contaminant movement.

The Permittee shall document the procedures used in making the above determinations (e. g., well design, well construction, geophysics, modeling, etc.).

2. Soil Contamination

The Permittee shall conduct an investigation to characterize the contamination of the soil and rock units above the saturated zone in the vicinity of any contaminant release. The investigation may include the following information:

a) A description of the vertical and horizontal extent of contamination;

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b) A description of appropriate contaminant and soil chemical properties within the contaminant source area and plume. This may include contaminant solubility, speciation, absorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;

c) Specific contaminant concentrations;

d) The velocity and direction of contaminant movement; and

e) An extrapolation of future contaminant movement.

The Permittee shall document the procedures used in making the above determinations.

3. Surface Water and Sediment Contamination

The Permittee shall conduct a surface water investigation to characterize contamination in surface water bodies resulting from releases of hazardous constituents at the facility. The investigation may include, but not be limited to, the following information:

a) A description of the horizontal and vertical extent of any plume(s) originating from the facility, and the extent of contamination in underlying sediments;

b) The horizontal and vertical direction of contaminant movement;

c) The contaminant velocity;

d) An evaluation of the physical, biological and chemical factors influencing contaminant movement;

e) An extrapolation of future contaminant, movement; and

f) A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, specific contaminant concentrations, etc.

4. Air Contamination

The Permittee shall conduct an investigation to characterize gaseous releases of hazardous constituents into the atmosphere or any structures or buildings. This investigation may provide the following information:

a) A description of the horizontal and vertical direction and velocity of contaminant movement;

b) The rate and amount of the release; and

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c) The chemical and physical composition of the contaminant(s) released, including horizontal and vertical concentration profiles.

The Permittee shall document the procedures used in making the above determinations.

D. Potential Receptors

The Permittee shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical analysis of biological samples and/or data on observable effects in ecosystems may also be obtained as appropriate. The following characteristics shall be identified:

1. Current local uses and planned future uses of groundwater:

   a) Type of use (e. g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial); and

   b) Location of ground water users, to include withdrawal and discharge wells, within one mile of the impacted area.

   The above information should also indicate the aquifer or hydrogeologic unit used and/or impacted for each item.

2. Current local uses and planned future uses of surface waters directly impacted by the facility:

   a) Domestic and municipal (e. g., potable and lawn/gardening watering);

   b) Recreational (e. g. swimming, fishing);

   c) Agricultural;

   d) Industrial; and

   e) Environmental (e. g., fish and wildlife propagation).

3. Human use of or access to the facility and adjacent lands, including but not limited to:

   a) Recreation;

   b) Hunting;

   c) Residential;

   d) Commercial; and

   e) Relationship between population locations and prevailing wind direction.

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4. A general description of the biota in surface water bodies on, adjacent to, or affected by the facility.
5. A general description of the ecology within the area adjacent to the facility.
6. A general demographic profile of the people who use, or have access to, the facility and adjacent land, including, but not limited to: age; sex; and sensitive subgroups.
7. A description of any known or documented endangered or threatened species near the facility.

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APPENDIX C - CORRECTIVE MEASURE STUDY (CMS) OUTLINE

The purpose of the CMS portion of the RCRA corrective action process is to identify and evaluate potential remedial alternatives for the releases of hazardous constituents that have been identified at the facility through the RFI or other investigations to need further evaluation. The scope and requirements of the CMS are balanced with the expeditious initiation of remedies and rapid restoration of contaminated media. The scope and requirements of the CMS should be focused to fit the complexity of the site-specific situation. It is anticipated that Permittee's with sites with complex environmental problems may need to evaluate a number of technologies and corrective measure alternatives. For other facilities, however, the evaluation of a single corrective measure alternative may be adequate. Therefore, a streamlined or focused approach to the CMS may be initiated. Information gathered during any stabilization or interim measures will be used to augment the CMS and in cases where corrective action goals are met, may be a substitute for the final CMS.

Regardless of whether a streamlined/focused or a detailed CMS is required, a CMS Workplan and CMS Report are generally required elements. The requirements for a full, detailed CMS are listed below. The Department has the flexibility not to require sections of the plan and/or report, where site-specific situations indicate that all requirements are not necessary. Additionally, the Department may require additional studies besides these discussed in order to support the CMS.

I. Corrective Measures Study (CMS) Workplan

A. Elements of the CMS Workplan

The Corrective Measures Study (CMS) Workplan shall include at a minimum the following elements:

1. A site-specific description of the overall purpose of the CMS;
2. A description of the corrective measure objectives, including proposed target media cleanup standards (e.g. promulgated federal and state standards) and preliminary points of compliance or a description of how a risk assessment will be performed (e.g. guidance documents);
3. A description of the specific corrective measure technologies and/or corrective measure alternatives which will be studied;
4. A description of the general approach to investigating and evaluating potential corrective measures;
5. A detailed description of any proposed pilot, laboratory and/or bench scale studies;

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6. A proposed outline for the CMS Report including a description of how information will be presented;

7. A description of overall project management including overall approach, levels of authority (include organization chart), lines of communication, project schedules, budget and personnel. Include a description of qualifications for personnel directing or performing the work;

8. A project schedule that specifies all significant steps in the process and when key documents (e.g. CMS Progress Reports, draft CMS Report) are to be submitted to the Department;

9. A detailed Public Involvement Plan.

II. Corrective Measures Study (CMS) Report

The detail of a CMS may vary based upon the complexity of the site, on-going Interim Measures, etc. However, the CMS Report may include the following elements:

A. Introduction/Purpose

The Permittee shall describe the purpose of the CMS Report and provide a summary description of the project.

B. Description of Current Situation

The Permittee shall submit a summary and an update to the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the RCRA Facility Investigation (RFI) Report. This discussion should concentrate on those issues which could significantly affect the evaluation and selection of the corrective measures alternative(s). The Permittee shall provide an update to information presented in the RFI regarding previous response activities and interim measures that have or are being implemented at the facility. The Permittee shall also make a facility-specific statement of the purpose for the response, based on the results of the RFI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

C. Establishment of Proposed Media Specific Cleanup Standards

The Permittee shall describe the proposed media cleanup standards and point of compliance. The standards must be background, promulgated federal and state standards or risk-derived standards. If media clean-up standards are not proposed, then the Department will unilaterally propose setting media clean-up standards to

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either background, promulgated federal and state standards or the most conservative risk-derived standards.

D. Identification, Screening and Development of Corrective Measure Technologies

1. Identification:

List and briefly describe potentially applicable technologies for each affected media that may be used to achieve the corrective action objectives. Include a table that summarizes the available technologies.

The Permittee should consider innovative treatment technologies, especially in situations where there are a limited number of applicable corrective measure technologies.

2. Screening:

The Permittee shall screen the corrective measure technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies that have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations.

Site, waste, and technology characteristics that are used to screen inapplicable technologies are described in more detail below:

a) Site Characteristics: Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration.

b) Waste Characteristics: Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site).

c) Technology Limitations: During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

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3. Corrective Measure Development:

   The Permittee shall assemble the technologies that pass the screening step into specific alternatives that have the potential to meet the corrective action objectives for each media. Options for addressing less complex sites could be relatively straightforward and may only require evaluation of a single or limited number of alternatives. Each alternative may consist of an individual technology or a combination used in sequence (i.e. treatment train). Different alternatives may be considered for separate areas of the facility, as appropriate. List and briefly describe each corrective measure alternative.

E. Evaluation of a Final Corrective Measure Alternative

   For each remedy which warrants a more detailed evaluation (i.e. those that passed through the screening step), including those situations when only one remedy is being proposed, the Permittee shall provide detailed documentation of how the potential remedy will comply with each of the standards listed below. These standards reflect the major technical components of remedies including cleanup of releases, source control and management of wastes that are generated by remedial activities. The specific standards are as follows:

1. Protect human health and the environment.
2. Attain media cleanup standards set by the Department.
3. Control the source of releases to reduce or eliminate, to the extent practicable, further releases that may pose a threat to human health and the environment.
4. Comply with applicable standards for management of wastes.
5. Other factors.

   In evaluating the selected alternative or alternatives, the Permittee shall prepare and submit information that documents that the specific remedy will meet the standards listed above. The following guidance should be used in completing this evaluation.

1. Protect Human Health and the Environment

   Corrective action remedies must be protective of human health and the environment. Remedies may include those measures that are needed to be protective, but are not directly related to media cleanup, source control or management of wastes. An example would be a requirement to provide alternative drinking water supplies in order to prevent exposures to releases from an aquifer used for drinking water purposes. Therefore, the Permittee shall provide a discussion of any short term remedies necessary to meet this standard, as well as discuss how the corrective measures alternative(s) meet this standard.

2. Attain Media Cleanup Standards

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Remedies will be required to attain media cleanup standards. As part of the necessary information for satisfying this requirement, the Permittee shall address whether the potential remedy will achieve the remediation objectives. An estimate of the time frame necessary to achieve the goals shall be included. Contingent remedies may be proposed if there is doubt if the initial remedy will be successful (e.g. contingent remedies to innovative technologies).

3. Control of Sources of Releases

   The Permittee shall address the issue of whether source control measures are necessary, and if so, the type of actions that would be appropriate. Any source control measure proposed should include a discussion on how well the method is anticipated to work given the particular situation at the facility and the known track record of the specific technology.

4. Comply With any Applicable Standards for Management of Wastes

   The Permittee shall include a discussion of how the specific waste management activities will be conducted in compliance with all applicable state and federal regulations (e.g. closure requirements, LDRs).

5. Other Factors

   Five general factors will be considered as appropriate by the Department in selecting/approving a remedy that meets the four standards listed above. These five decision factors include:

   a) Long-term reliability and effectiveness;
   b) Reduction in the toxicity, mobility or volume of wastes;
   c) Short-term effectiveness;
   d) Implementability; and
   e) Cost.

   Examples of the type of information to include are provided below:

   a) Long-term reliability and effectiveness: The Permittee may consider whether the technology, or combination of technologies, have been used effectively under analogous site conditions, whether failure of any one technology in the alternative would have any immediate impact on receptors, and whether the alternative would have the flexibility to deal with uncontrollable changes at the site. Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. In addition, each corrective measure alternative should be evaluated in terms of the projected useful life of the overall alternative and of its component technologies. Useful life is defined as the length of time the level of effectiveness can be maintained.

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b) Reduction in the toxicity, mobility or volume of wastes: As a general goal, remedies will be preferred that employ techniques that are capable of eliminating or substantially reducing the potential for the wastes in SWMUs and/or contaminated media at the facility to cause future environmental releases. Estimates of how the corrective measure alternative will reduce toxicity, mobility and or volume of the waste is required and may be accomplished through a comparison of initial site conditions to expected post-corrective measures conditions.

c) Short-term effectiveness: The Permittee shall evaluate each corrective measure alternative for short-term effectiveness. Possible factors to consider are fire, explosion, exposure to hazardous constituents and potential threats associated with the treatment, excavation, transportation and re-disposal or containment of the waste material.

d) Implementability: Information to consider when assessing implementability include:

(i) The administrative activities needed to implement the corrective measure alternative [e.g. permits, rights of way, etc.] and the length of time these activities will take;

(ii) The constructability, time for implementation, and time for beneficial results;

(iii) The availability of adequate off-site treatment, storage capacity, disposal services, needed technical services and materials; and

(iv) The availability of prospective technologies for each corrective measure alternative.

e) Cost: The Permittee shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs. The capital costs shall include, but are not limited to, costs for: engineering, site preparation, construction, materials, labor, sampling/analysis, waste management/disposal, permitting, health and safety measures, etc. The operation and maintenance costs shall include labor, training, sampling and analysis, maintenance materials, utilities, waste disposal and/or treatment, etc. Costs shall be calculated as the net present value of the capital and operation and maintenance costs.

F. Justification and Recommendation of the Corrective Measure or Measures

The Permittee shall justify and recommend in the CMS Report a corrective measure alternative for consideration by the Department. Such a recommendation should include a description and supporting rationale for the preferred alternative that is consistent with the corrective action standards and remedy selection decision factors discussed above. In addition, this recommendation shall include summary tables that

allow the alternative or alternatives to be understood easily. Trade-offs among health risks, environmental effects, and other pertinent factors shall be highlighted. The Department will select the corrective measure alternative or alternatives to be implemented based on the results presented in the CMS Report.

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APPENDIX D - LAND USE CONTROL MANAGEMENT PLAN

DEFINITION

As used herein, the term "land use control" or "LUC" with regard to real property means any restriction or control that limits the use of and/or exposure to any portion of that property, including water resources, arising from the need to protect human health and the environment. The term encompasses “institutional controls”, such as those involved in real estate interests, governmental permitting, zoning, public advisories, deed notices, and other “legal” restrictions. The term also includes restrictions on access, whether achieved by means of engineered barriers (e.g. fence or concrete pad) or by human means (e.g. the presence of security guards). Additionally, the term includes both affirmative measures to achieve the desired restrictions (e.g. night lighting of an area) and prohibitive directives (e.g. no drilling of drinking water wells for the duration of the corrective action). Considered altogether, the LUCs for a facility will provide a tool for how the property should be used in order to maintain the level of protectiveness that one or more corrective actions were designed to achieve.

PURPOSE

When land use controls (LUCs) are necessary to assure the reliability of land use assumptions, the Permittee must put appropriate procedures in place to ensure that such controls will be maintained for as long as necessary to keep the chosen remedy fully protective of human health and the environment. This Land Use Control Management Plan (LUCMP) was developed to assure the effectiveness and reliability of the required LUCs for as long as any LUCs continue to be required in order for the corrective action to remain protective and to serve as an enforceable document for any noncompliance. The requirements described herein are only applicable to those SWMUs and/or AOCs for which LUCs were selected as part of the final corrective action. The conceptual outline for the LUC should be developed as part of the final corrective action. The specific details for the implementation of the LUC should be outlined in the CMI Workplan (or other Corrective Action document approved by the Department). Appendix A-7 provides a list of SWMUs and/or AOCs for which LUCs are selected as part of the corrective action, a summary of the corrective action requiring LUC, and a reference to the document selecting the final corrective action.

The purpose of the LUCMP is to accomplish the following specific objectives for SWMUs and/or AOCs listed in Appendix A-7:

- To implement a process for the Permittee to periodically advise the Department of the continued maintenance of any LUCs and of any planned changes in land use which might impact these LUCs.
- To implement procedures for integrating all SWMUs and/or AOCs into the Facility Planning Process as applicable (e.g. Facility Management Plan).

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- To implement procedures for integrating all SWMUs and/or AOCs into the Property Conveyance Process as applicable.
- To implement a process to inform current and future property users of environmental conditions at SWMUs and/or AOCs.

I. LUC INSPECTION - REVIEW - CERTIFICATION

The Permittee shall initiate the following specific actions:

A. Conduct semi-annual inspections/review of all SWMUs and/or AOCs identified in Appendix A-8. These inspections shall be for the purposes of verifying that all necessary LUCs have been implemented and are being properly maintained. The Permittee will be responsible for the following:

1. Ensuring that all required inspections are performed.
2. Ensuring that the Department is provided with thirty (30) days advance notice of, and opportunity to observe facility personnel as they conduct at least one of the semi-annual inspections each year.
3. Ensuring that the Department is notified in writing within thirty (30) days of any deficiencies noted.
4. Ensuring that all appropriate measures are undertaken within thirty (30) days to correct any deficiencies and timely notification in writing to the Department detailing measures taken.

B. Prepare and forward an annual report to the Department signed by the Permittee certifying the continued maintenance of all LUCs associated with those SWMUs and/or AOCs identified in Appendix A-8.

II. CHANGE IN LAND USE

The following shall constitute a change in land use:

A. Any change in land that would be inconsistent with those specific exposure assumptions in the human health and/or ecological risk assessments or other criteria that served as the basis for selecting the LUCs as part of the final corrective action.

B. Any activity that may disrupt the effectiveness of the LUC. Including but not limited to: excavation at a SWMU and/or AOC; groundwater pumping that may impact a groundwater mixing zone or groundwater corrective action or monitoring program; a construction project that may impact ecological habitat protected by the corrective action; removal of access control; removal of warning signs; or rezoning.

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C. Any activity that may alter or negate the need for the specific LUCs.

III. REQUEST FOR PERMIT MODIFICATION FOR LAND USE CHANGE

A. The Permittee will provide written notification to the Department at least sixty days (60) (except in emergency situations- where notice should be given as soon as practicable) prior to implementation of any change in land use at the SWMUs and/or AOCs identified in Appendix A-7. A request for a permit modification will be provided for the purpose of obtaining the Department's concurrence with the Permittee's determination as to whether the contemplated change will or will not necessitate re-evaluation of the selected corrective action or implementation of specific measures to ensure continued protection of human health and the environment.

B. No land use change should be implemented until the permit modification is effective. The request for modification will include the following at a minimum:

1. An evaluation of whether the anticipated land use change will pose unacceptable risks to human health and the environment or negatively impact the effectiveness of the selected corrective action;

2. An evaluation of the need for any additional corrective action or LUCs resulting from implementation of the anticipated land use change; and,

3. A proposal for any necessary changes in the selected corrective action.

IV. FINANCIAL ASSURANCE

The Permittee shall provide financial assurance to continue maintenance of LUCs selected during final corrective action or post-closure care and, where necessary, reimplementation of LUCs and/or completion of corrective action necessitated by any inappropriate change to a LUC in accordance with R.61-79.264.101 (b) and (c). The proof of financial assurance should fulfill the requirements of one of the options specified in R.61-79.264.145.

V. REQUEST FOR PERMIT MODIFICATION FOR PROPERTY CONVEYANCE

Should the decision be made to transfer to any other agency, private person, or entity, either title to, or some lesser form of property interest (e.g. an easement, or right of way, etc.) SWMUs and/or AOCs identified in Appendix A-7, then the Permittee will ensure that at a minimum in accordance with R.61-79.270.42:

A. The Department is provided with written notification at least ninety (90) days prior the initiation of the property conveyance process. Such notice shall indicate the following:

1. The type of property conveyance (e.g. an easement, or right of way, etc.)

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2. The anticipated final date for the conveyance
3. Future property owners
4. A list of SWMUs and/or AOCs affected by the conveyance
5. Mechanism(s) that will be used to maintain any LUCs which may need to remain in place after the property conveyance.

B. All LUCs for SWMUs and/or AOCs identified in Appendix A-7 must be incorporated into the property conveyance documents so that the transferee(s) is given adequate notice of existing site condition(s). The details of the LUC provided in the property conveyance documents must be consistent with the details in the document where the final corrective action was selected

C. It is understood that for the planned conveyance of any SWMUs and/or AOCs identified in Appendix A-7, the Department will re-evaluate the continued appropriateness of any previously agreed upon LUC(s) based upon the level of assurance provided, to ensure that necessary LUCs will be maintained and enforced.

VI. IMPLEMENTATION OF LAND USE CONTROLS

For every SWMU and/or AOC identified in Appendix A-8, the Permittee must provide the information listed below prior to implementing any LUC. This information should be presented in the CMI Workplan (or other Corrective Action document approved by the Department).

A. SWMU and/or AOC Description: (e.g. provide survey plat map certified by a professional land surveyor)

B. Location/Area Under Restriction: (e.g. northeast corner of the facility between buildings 250 and 260 as reflected on BMP page ___ / GIS index under IR Site ____).

C. LUC(s) Implemented and Corresponding Objective(s): (e.g. installation of a fence to restrict public access, etc.)

D. Corrective Action Selection Document: (e.g. CMS dated _____).

E. Field Implementation Methods with Appropriate Figures: (e.g. engineering design drawings, etc.).

F. Inspection Methods and Maintenance Procedures: (e.g. Monitoring well plan to include analytical suite, well identification, reporting format, etc.)

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G. Facility Planning Process: (e.g. a tracking system for facility employees to ensure proper maintenance of LUCs.)

H. Schedule for Submitting a Contingency Plan to be Implemented in the Case that Corrective Action and LUCs are no Longer Effective: (e.g. procedure for notification and implementation corrective action in the event that pump and treat system is not achieving modeled goals, etc.)

I. Corrective Action Completion – LUC Termination Process: (e.g. Pump and treat system has achieved goals and prohibition of drilling of drinking water wells is no longer needed, etc.)

J. Other Pertinent Information.

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APPENDIX E - FACILITY MAP

Figure B-3 From Approved Permit Application

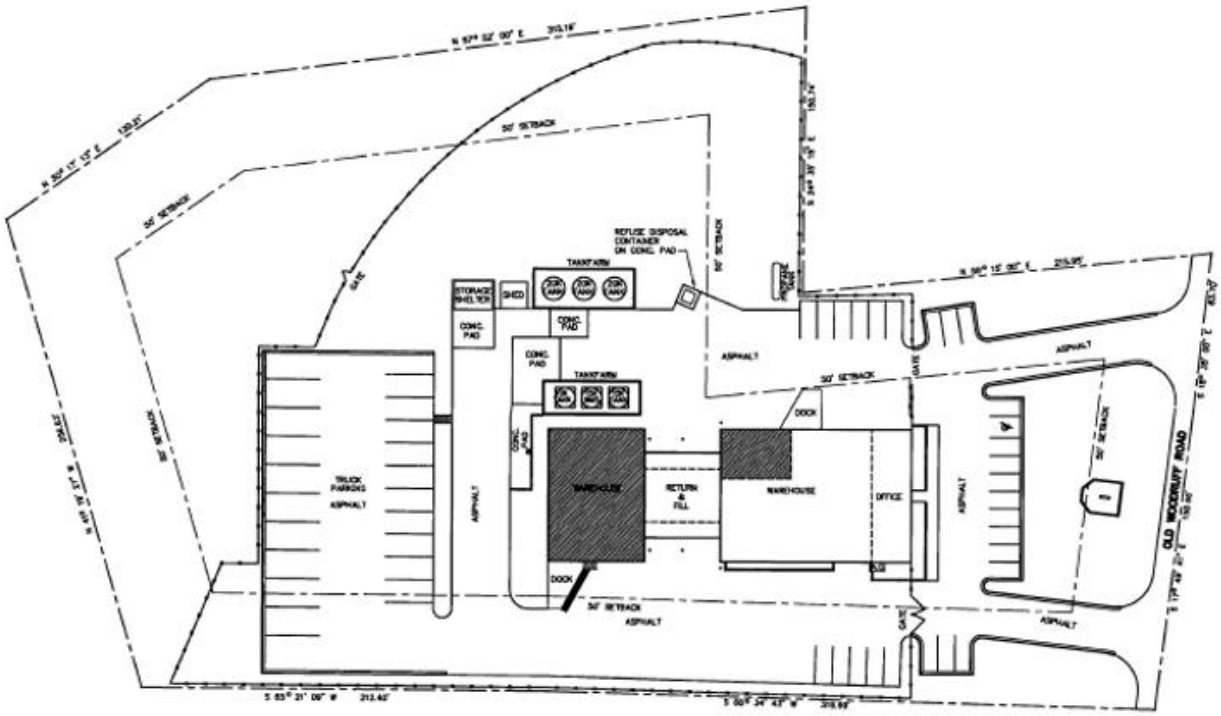

Figure B-4 From Approved Permit Application