OFFICE OF ENVIRONMENTAL AFFAIRS
BUREAU OF LAND AND WASTE MANAGEMENT
HAZARDOUS WASTE PERMIT

Permit Number SCD 043 384 072

Issue Date:	TBD	Effective Date:	TBD
Expiration Date:	TBD	Modification Date of Issue:	N/A
		Modification Date of Effectiveness:	N/A

This Permit is hereby issued to:

Owner/Operator:	SI Group, Inc.
Address:	2750 Balltown Road Schenectady, NY 12301 (518) 347-4200
Facility Contact:	Lauren Proper, Lead Environmental Engineer
Facility Phone:	(803) 539-5155
Facility Address:	725 Cannon Bridge Road Orangeburg, SC 29115

This Permit is for storage and treatment of hazardous waste in four (4) Hazardous Waste Tanks and energy recovery through Boiler No. 4 and identification and corrective action for all solid waste management units (SWMUs) and areas of concern (AOCs) located at 725 Cannon Bridge Road, Orangeburg in Orangeburg County, South Carolina.

This Permit is issued pursuant to Section 44-56-10 et seq. 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.

Stacey French, P.E., Director
Division of Waste Management
Bureau of Land and Waste Management

This Permit is the property of the Bureau of Land and Waste Management and must be surrendered on demand. This signature page must be posted at all times in a conspicuous place on the premises.

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SI Group, Inc.
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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, 270.30(g)]

The Permittee shall treat and 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, 270.42, and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any Permit Condition. [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 ten (10) years. This Permit and all Conditions herein will remain in effect beyond the permit's expiration date, if the Permittee has submitted a timely, complete application (see R.61-79.270.10, 270.13 through 270.29) and, 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, 264, 266, 268, and 270, unless this Permit specifically provides otherwise; where terms are not defined in the regulations or the permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

I.D.1 Approved Permit Application

For purposes of this Permit means the SI Group, Inc. *Resource Conservation and Recovery Act Permit Renewal Application, Revision 5, October 2020*, submitted by the Permittee and received on October 9, 2020, and approved by the Department and U.S. Environmental Protection Agency (EPA) Region IV, including all referenced appendices, documents, reports and workplans including performance burns, air modeling and risk assessment plans and reports.

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 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, may include 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 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 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 Department of Health and Environmental Control, including personnel thereof authorized by the Board to act on behalf of the Department or Board.

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 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 includes all contiguous property, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operation units (e.g. one or more landfills, surface impoundments, waste piles, or some combination of these). For the purpose of implementing corrective action under R.61-79.264.100 and R.61-79.264.101, a facility includes all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA. The approximate facility boundary is depicted in APPENDIX H – SI GROUP FACILITY MAP of this Permit.

I.D.11 Hazardous Constituent

For the purposes of this Permit are those substances listed in Appendix VIII of R.61-79.261 and Appendix IX 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 corrective action management unit.

I.D.16 Postclosure Care Period

For the purpose of this Permit is a thirty (30) year 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 postclosure care period is unit specific and may be more or less than thirty years. The Department may modify the postclosure care period applicable to a unit if it finds that an extended or reduced period is sufficient 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, 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

For the purposes of this Permit refers to a schedule of remedial measures included in this Permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the Resource Conservation and Recovery 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. 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 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.23 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.

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), 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, 270.1(c), 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 includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of 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 to the Department, upon request, copies of records required to be kept by this Permit. [R.61-79.264.74(a), 270.30(h)]

I.E.8 Inspection and Entry

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(a) 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(b) Have access to and copy, at reasonable times, any records that must be kept under the Conditions of this Permit;

I.E.8(c) 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(d) 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 U.S. EPA Region IV Field Branches 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.

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

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

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

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

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

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

I.E.9(d) The Permittee shall retain the items required in Permit Condition I.E.9(c) 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(e) Pursuant to R.61-79.270.30(j)(3), records of monitoring information shall specify:

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

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

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

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

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

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

I.E.9(e)(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.

The Permittee may not commence treatment or storage 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.11(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.11(b) The Department either has waived the inspection or has not, within fifteen (15) days of receipt of the above, notified the Permittee of its intent to inspect [R.61-79.270.30(l)(2).

I.E.12 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 postclosure care period, the Permittee shall notify the new owner or operator in writing of the requirements of R.61-79.264 and 270, and this Permit.

I.E.13 Schedule of Compliance

Written notification of compliance or noncompliance with any item identified in the schedule of compliance APPENDIX D – ADDITIONAL COMPLIANCE DATES of this Permit shall be submitted according to each schedule date. If the Permittee does not notify the Department within fourteen (14) calendar days of its noncompliance with the schedule, the Permittee shall be subject to an enforcement action. Submittal of a required item according to the schedule constitutes notification of compliance.

I.E.14 Imminent Hazard Reporting

The Permittee shall report to the Department, the DHEC Region Office, and the Bureau of Land and Waste Management permit writer 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 [Environmental Reporting Section 1-888-481-0125]. Please note Emergency Response must be contacted immediately. 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.14(a) Information concerning the release of any hazardous waste or hazardous constituents that may endanger public drinking water supplies.

I.E.14(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.

I.E.14(c) The description of the occurrence and its cause shall include:

I.E.14(c)(i) Name, address, and telephone number of the owner or operator;

I.E.14(c)(ii) Name, address, and telephone number of the facility;

I.E.14(c)(iii) Date, time, and type of incident;

I.E.14(c)(iv) Name and quantity of materials involved;

I.E.14(c)(v) The extent of injuries, if any;

I.E.14(c)(vi) An assessment of actual or potential hazard to the environment and human health outside the facility; and,

I.E.14(c)(vii) Estimated quantity and disposition of recovered material that resulted from the incident.

I.E.14(d) A written submission shall also be provided to the Department within fifteen (15) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain the information specified under Permit Conditions I.E.14 and I.E.14(c); 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.15 Manifest Discrepancy Report

If a significant discrepancy in a manifest is discovered, the Permittee must attempt to reconcile the discrepancy. If not resolved within fifteen (15) days, the Permittee must submit a letter report, including a copy of the manifest, to the Department. [R.61-79.270.30(l)(7)]

I.E.16 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.17 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.14, at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Conditions I.E.14(b) and I.E.14(c) , as applicable. [R.61-79.270.30(l)(10)]

I.E.18 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 270.30(k).

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

One printed copy and one 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
2600 Bull Street
Columbia, SC 29201

One printed copy of all reports, notifications, or other information required by this Permit submitted to the Department should also be sent to the US EPA, Region IV by verifiable delivery at the following address:

Attn: Chief, RCRA Programs & Cleanup Branch
Land, Chemicals & Redevelopment Division
U.S. Environmental Protection Agency Region 4
Atlanta Sam Nunn Federal Center
61 Forsyth Street
Atlanta, GA 30303

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. 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:

I.I.1 Permit Application

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

I.I.2 Waste Analyses Plan

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

I.I.3 Inspection Schedules

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

I.I.4 Personnel Training Documents and Records

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

I.I.5 Contingency Plan

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

I.I.6 Operating Record

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

I.I.7 Closure Plan

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

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

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

I.I.9 Installation Records

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

I.I.10 Groundwater Monitoring Records

Required by R.61-79.264.100 and this Permit.

I.I.11 All Other Documents

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

I.J. DOCUMENTS TO BE MAINTAINED DURING POSTCLOSURE CARE PERIOD

Until postclosure care activities are 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:

I.J.1 Permit Application

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

I.J.2 All Reports and Documentation

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

I.J.3 Waste Analyses Plan

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

I.J.4 Contingency Plan

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

I.J.5 Operating Record

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

I.J.6 Inspection Schedules

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

I.J.7 Postclosure Plans

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

I.J.8 Documentation of Compliance

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

I.J.9 Annually-adjusted Cost Estimates

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

I.J.10 Corrective Action Plan(s) and Reports

As required by R.61-79.264.100 and 264.101 and this Permit

I.J.11 Cost Estimates for Completion of Corrective Action

As required by R.61-79.264.90(a)(2) and 264.101 and this Permit.

I.J.12 Installation Records

For all monitoring wells and all groundwater elevation data collected during the postclosure care period.

I.J.13 Groundwater Monitoring Records

Required by R.61-79.264.100 and this Permit.

I.J.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.J.15 All Other Documents

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

MODULE II. GENERAL FACILITY CONDITIONS

II.A. DESIGN AND OPERATION OF FACILITY

The Permittee shall 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 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 of the Approved Permit Application and R.61-79.264.14(b) and (c).

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 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 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 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

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

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. 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 Sections C, D.2 and F of the Approved Permit Application.

II.I. LOCATION STANDARDS

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

II.J. PREPAREDNESS AND PREVENTION

II.J.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.J.2 Fire Alarm System

The Permittee shall maintain a fire alarm system in accordance with R.61-79.264.31 and 264.32 and as described in Section F of the Approved Permit Application.

II.J.3 Testing and Maintenance of Equipment

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

II.J.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.

II.J.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 F.3.2 of the Approved Permit Application.

II.J.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.K. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of R.61-79.264.71, 264.72, and 264.76.

II.L. GENERAL CLOSURE REQUIREMENTS

II.L.1 Performance Standard

The Permittee shall close the hazardous waste operations partially or completely at 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.L.2 Amendment to Closure Plan

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

II.L.3 Notification of Closure

The Permittee shall notify the Department in writing at least forty-five (45) days prior to the date on which he/she expects to begin closure of any of the four (4) Hazardous Waste Storage Tanks at the facility, as required by R.61-79.264.112(d) 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.L.4 Time Allowed for Closure

After receiving 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.1.2 of the Approved Permit Application.

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

The Permittee shall decontaminate and/or dispose of all contaminated equipment, structures, and soils, as required by R.61-79.264.114 and the approved Closure Plan, Section I.1.4.2 of the Approved Permit Application.

II.L.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. COST ESTIMATE FOR FACILITY CLOSURE

II.M.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.2 of the Approved Permit Application.

II.M.2 Cost Estimate Annual Adjustment

The Permittee must adjust the closure cost estimate for inflation pursuant to the requirements as specified in R.61-79.264.142(b).

II.M.3 Cost Estimate Modification

The Permittee must revise the closure and postclosure 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.M.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.N. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Permittee shall demonstrate continuous compliance with R.61-79.264.143 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.M. Changes in financial assurance mechanisms must be approved by the Department pursuant to R.61-79.264.143.

II.O. LIABILITY REQUIREMENTS

II.O.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.O.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.

II.P. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittee shall comply with R.61-79.264.148 whenever necessary.

MODULE III. TANKS

III.A. MODULE HIGHLIGHTS

A complete description of the tank storage system can be found in Section D.2.1 of the Approved Permit Application. The blending of hazardous wastes is a form of treatment and has been identified as such in Part A of the Permit Application.

III.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

III.B.1 Permitted Waste Storage

The Permittee may store a total volume of 170,000 gallons of hazardous waste in four (4) tanks, subject to the terms of this Permit and as follows:

Tank No. & Location	Capacity [gallons]	Type/ Dimensions of Tank	Secondary Containment Required	Maximum Specific Gravity	Description of Hazardous Waste	Hazardous Waste No.
T-8332 (T-100M-5) *(formerly T-100M-2)* Year Constructed: 1994	100,000	Fixed Roof 27 ft (diam) x 24 ft (height)	Yes – In Place	1.10	Hazardous waste being stored and blended to be burned in RCRA Regulated Boiler No. 4	D001 F002 F003 F005 D018
T-8331 (T-30M-66) *(formerly T-30M-37)* Year Constructed: 1993	30,000	Fixed Roof 12 ft (diam) x 36 ft (height)	Yes – In Place	1.10		
T-8333 (T-30M-61) Year Constructed: 1990	30,000	Fixed Roof 12 ft (diam) x 36 ft (height)	Yes – In Place	1.10		
T-8345 (T-10M-32) *(formerly T-10M-5)* Year Constructed: 1993	10,000	Fixed Roof 9.5 ft (diam) x 20 ft (height)	Yes – In Place	1.10		

III.B.2 Permitted Waste Treatment

The Permittee may treat, by blending, a total volume of 170,000 gallons per day of hazardous waste in four (4) tanks, subject to the terms of this Permit and as follows:

Tank No. & Location	Treatment Capacity [gal/day]	Type/ Dimensions of Tank	Secondary Containment Required	Maximum Specific Gravity	Description of Hazardous Waste	Hazardous Waste No.
T-8332 (T-100M-5) *(formerly T-100M-2)* Year Constructed: 1994	100,000	Fixed Roof 27 ft (diam) x 24 ft (height)	Yes – In Place	1.10	Hazardous waste being stored and blended to be burned in RCRA Regulated Boiler No. 4	D001 F002 F003 F005 D018
T-8331 (T-30M-66) *(formerly T-30M-37)* Year Constructed: 1993	30,000	Fixed Roof 12 ft (diam) x 36 ft (height)	Yes – In Place	1.10		
T-8333 (T-30M-61) Year Constructed: 1990	30,000	Fixed Roof 12 ft (diam) x 36 ft (height)	Yes – In Place	1.10		
T-8345 (T-10M-32) *(formerly T-10M-5)* Year Constructed: 1993	10,000	Fixed Roof 9.5 ft (diam) x 20 ft (height)	Yes – In Place	1.10		

III.B.3 Prohibited Waste Storage

III.B.3(a) The Permittee is prohibited from storing and/or processing any hazardous waste that is not identified in Permit Condition III.B.1.

III.B.3(b) The Permittee is prohibited from storing hazardous waste that would cause any of the tanks liquid contents to exceed the approved specific gravity of 1.10.

III.B.4 Prohibited Waste Treatment

III.B.4(a) The Permittee is prohibited from treating any hazardous waste that is not identified in Permit Condition III.B.2.

III.B.4(b) The only form of treatment of hazardous waste allowed in the tanks identified in Permit Condition III.B.2 is blending/mixing.

III.C. SECONDARY CONTAINMENT AND INTEGRITY ASSESSMENTS

III.C.1 Tank 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)]

III.C.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.2.2 of the Approved Permit Application. [R.61-79.264.193(b)-(f)]

III.C.3 New and Replacement Tanks

The Permittee shall have an assessment performed in all new or replacement tank systems as required by R.61-70.264.192. This assessment shall be submitted to the Department and approved prior to tank operation.

III.D. OPERATING REQUIREMENTS

III.D.1 Damage Protection

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)] The Permittee shall protect the tank systems from accelerated corrosion, erosion, or abrasion as required by and as specified in Section D.2 of the Approved Permit Application.

III.D.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 Sections F and G of the Approved Permit Application.

III.D.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.

III.E. 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)]

III.E.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.

III.E.2 Spill or Leak Material Removal

Remove waste and accumulated precipitation from the system within 24 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, Parts 262-264. The Permittee shall note that if the collected material is discharged through a point source to U.S. waters or to a 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.

III.E.3 Spill or Leak Cleanup

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

III.E.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:

III.E.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.

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

III.E.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.

III.E.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.

III.E.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.

III.E.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 264.193.

III.E.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.

III.F. INSPECTION SCHEDULES AND PROCEDURES

III.F.1 Inspection Schedule

The Permittee shall inspect the tank systems, in accordance with the Inspection Schedule, in Section F and Table F-1 of the Approved Permit Application, and shall complete the items in Permit Conditions III.F.2 and III.F.3 as part of those inspections.

III.F.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)]

III.F.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)]

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

III.F.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;

III.F.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).

III.F.4 Tank System Inspection Documentation

The Permittee shall document compliance with Permit Conditions III.F.2 through III.F.3 and place this documentation in the operating record for the facility. [R.61-79.264.195(h)]

III.F.5 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.2.2 and Appendices D-2 through D-2.4 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.

III.F.6 Measurement of Tank Wall Thickness

The Permittee shall measure tank shell and bottom thickness every six (6) months (via external ultrasonic) and top thickness of tanks every two (2) years (via external ultrasonic), as specified in Table F-1 and Table F-3 of the Approved Permit Application. 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:

III.F.6(a) Testing must be done by an individual trained in the use of shell thickness measuring equipment.

III.F.6(b) Measurements shall be concentrated at areas that are most likely to be in frequent contact with stored liquid.

III.F.6(c) At a minimum, measurements shall be made as follows:

III.F.6(c)(i) For the tank wall, take measurements along three (3) vertical rows spaced 120 degrees apart, at no greater than 2-foot vertical intervals. At least one (1) measurement in each row shall be taken within one (1) foot of the bottom of the tank. Measurements shall be concentrated near the most common liquid level of the tank.

III.F.6(c)(ii) For the tank bottom measurements, take no fewer than four (4) measurements, at least two (2) feet from the center point of the tank bottom, spaced at 90-degree intervals.

III.F.6(c)(iii) At least 25% of all measurements must be taken within one (1) inch of high-stress areas (i.e. seam or heat-affected zone), if possible.

III.F.6(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.

III.F.7 Visual Tank Inspection

The Permittee shall open the tanks at least every three (3) 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.

III.G. RECORDKEEPING AND REPORTING

III.G.1 Immediate Tank or Spill Report

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

III.G.2 Follow-up 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)]

III.G.2(a) Likely route of migration of the release;

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

III.G.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;

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

III.G.2(e) Description of response actions taken or planned.

III.G.3 Tank System Repair Certification

The Permittee shall submit to the Department all certifications of major repairs to correct leaks within seven (7) days from returning the tank system to use. [R.61-79.264.196(f)]

III.G.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)]

III.G.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)]

III.G.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.

III.H. CLOSURE AND POST-CLOSURE CARE

III.H.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)]

III.H.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 in Section I of the Approved Permit Application, then the Permittee shall close the tank system(s) and perform post-closure care

in accordance with the closure and postclosure care requirements that apply to landfills. [R.61-79.264.197(b) and all applicable Subparts required in G and H of R.61-79.264]

III.I. SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

III.I.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 D.2.1.3 of the Approved Permit Application are followed. [R.61-79.264.198(a)].

III.I.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)]

III.J. SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES

III.J.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 D.2.1.3 of the Approved Permit Application are followed. [R.61-79.264.199(a)]

III.J.2 Placement in Un-decontaminated Tank

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)]

III.K. COMPLIANCE SCHEDULE

The Permittee shall provide the following information to the Department:

Item	Date Due to the Department

MODULE IV. INDUSTRIAL BOILER SYSTEM REQUIREMENTS

IV.A. AUTHORIZED UNITS

This Permit authorizes the Permittee to treat liquid hazardous wastes in one Industrial Boiler System constructed and maintained as described in the Approved Permit Application. Hazardous waste treatment in the Industrial Boiler System must occur in accordance with the terms and conditions of this Permit.

The Industrial Boiler System, identified as Boiler No. 4 (HE-3800-1), is described in Sections D.9 and E of the Approved Permit Application and a June 2003 Trial Burn/Risk Burn Plan, dated June 2, 2003. The system consists of a Cleaver-Brooks 800 HP packaged firetube boiler with ancillary hazardous waste feed equipment, a computerized boiler management controller and oxygen trim system, a soot blower system, an economizer, an air pollution control system (baghouse), and an exhaust stack (hereafter referred to as the "Industrial Boiler System").

The Permittee no longer direct burns at this Facility. Use of the direct burn system for transfer of liquid hazardous waste to the Industrial Boiler System directly from a tanker-trailer truck is prohibited.

IV.B. AUTHORIZED WASTES

IV.B.1 Approved

The Permittee may treat only those on-site generated liquid hazardous wastes identified in Sections 6 and 7 of the Hazardous Waste Permit Part A Form in the Approved Permit Application. Approved Hazardous Waste Nos. include D001, D018, F002, F003 and F005.

IV.B.2 Prohibited

The Permittee is prohibited from treating the following materials: Hazardous Waste Nos. F020, F021, F022, F023, F026, F027; Toxic Substances Control Act (TSCA)-regulated polychlorinated biphenyl (PCB) waste(s) subject to the disposal requirements of 40 CFR Part 761 Subpart D; regulated infectious waste; regulated radioactive waste; compressed gases; explosives and any hazardous wastes that are not approved in Permit Condition IV.B.1.

IV.C. PERFORMANCE STANDARDS AND EMISSION LIMITATIONS AND INTEGRATION OF MACT STANDARDS

[R.61-79.270.32(b)(3), R.61-79.266.100(b) and R.61-79.270 Subpart I]

Except as provided by R.61-79.266.100(b)(2), (b)(3) and (b)(4), the standards of R.61-79.266 Subpart H do not apply when an owner or operator of an existing hazardous waste boiler demonstrates compliance with the maximum achievable control technology (MACT) requirements of 40 CFR Part 63, Subpart EEE, by conducting a comprehensive performance test and submitting to the U.S. EPA Regional Administrator a Notification of Compliance under 40 CFR §§ 63.1207(j) and 63.1210(d) documenting compliance with the requirements of 40 CFR Part 63, Subpart EEE.

Nevertheless, even after this demonstration of compliance with the MACT standards, RCRA permit conditions that were based on the R.61-79.266 Subpart H standards of this Part will continue to be in effect until they are removed from the Permit or the Permit is terminated or revoked, unless the Permit expressly provides otherwise.

- Boiler No. 4 has demonstrated compliance with the MACT standards with the exception of total chlorine. Boiler No. 4 is currently operating subject to the Hazardous Waste Combustion MACT though the MACT performance standards and emission limitations have not been incorporated into SI Group's State Part 70 Air Quality Permit (Title V Permit).

- An eligibility demonstration for a Health-Based Compliance Alternative for total chlorine was requested and approved by the Department in 2008, setting the maximum chlorine feed rate to Boiler No. 4 of 2.05 grams/second or 16.3 pounds per hour.

However, the performance standards and emissions limits of the Permit that are based on the long-term, multi-pathway risk assessment performed for this Facility dated March 18, 2005 with a June 29, 2005 addendum and are more stringent than the current R.61-79.266 and 40 CFR Part 63 Subpart EEE standards and emission limits. At the time of issuance of this Permit, the Title V Permit is not equivalent to the standing risk-based emission limits of this Permit. Thus, the U.S. EPA Regional Administrator determines that the performance standards and emission limits of this Permit continue to be necessary in addition to those required under 40 CFR Part 63 Subpart EEE, and R.61-79.264 and 266 to ensure the protection of human health and the environment for the hazardous waste Industrial Boiler System.

IV.C.1 Compliance with Performance Standards and Emission Limits of this Permit

The Permittee shall operate and maintain the Industrial Boiler System so that, when operated in accordance with the feed limitations and operating requirements specified in this Permit, it will meet the performance standards and emission limitations of Permit Conditions IV.D and IV.E.

IV.C.1(a) Upon issuance by the Department of a Title V Permit with MACT performance standards and emission limits equivalent to this Permit's risk-based emission limits, the Permittee may request a permit modification to remove duplicative regulatory permit conditions from this Permit except for the following standards which shall continue to apply:

IV.C.1(a)(i) Conditions Necessary to Minimize Emissions During Startup, Shutdown and Malfunction Events
[R.61-79.266.102(e)(1)]

The Permittee shall operate in accordance with the monitoring and operating requirements specified in the Permit associated with the control and minimization of emissions during startup, shutdown and malfunction of the Industrial Boiler System at all times that hazardous waste is in the unit.

IV.C.1(a)(ii) Hazardous Waste Startup and Shutdown
[R.61-79.266.102(e)(2)(iii)]

During startup and shutdown of Boiler No.4, hazardous waste must not be fed into the Boiler unless the Boiler is operating within the conditions of operation specified in this Permit.

IV.C.1(a)(iii) The Permittee shall comply with closure requirements of R.61-79.266.102(e)(11) and 266.103(l);

IV.C.1(a)(iv) The Permittee shall comply with standards for regulation of residues of R.61-79.266.112. A residue derived from the burning or processing of a hazardous waste in a boiler is not excluded from the definition of hazardous waste unless it satisfies one of the requirements listed in R.61-79.266.112; and,

IV.C.1(a)(v) The Permittee shall comply with all applicable requirements of Subparts A through H, BB and CC of Parts 264 and 265 of this Chapter.

IV.D. PERFORMANCE STANDARDS AND EMISSION LIMITATIONS

IV.D.1 Principal Organic Hazardous Constituents Destruction and Removal Efficiency
[R.61-79.266.104]

The Industrial Boiler System must achieve a destruction and removal efficiency (hereafter referred to as DRE) of 99.99 percent (%) for each principal organic hazardous constituent (hereafter referred to as POHC) designated in this Permit for each waste feed. The designated POHCs are toluene and chlorobenzene or approved alternates. The DRE shall be determined using the method specified in R.61-79.266.104(a).

IV.D.2 Particulate Matter Standard
[R.61-79.266.105]

The Permittee must control stack emissions of particulate matter from the Industrial Boiler System such that particulate matter is not emitted in excess of 0.08 grains per dry standard cubic foot of stack gas when corrected to a stack gas concentration of seven percent (%) by volume of oxygen according to the following formula:

$$P_c = P_m \times \frac{14}{E-Y}$$

where:

P_c = the corrected concentration of particulate matter;
P_m = the measured concentration of particulate matter;
E = oxygen concentration in the total combustion air provided to the unit, considering oxygen enrichment if applicable; and
Y = measured oxygen concentration in the stack gas on a dry gas basis.

IV.D.3 Metals Emissions Standards
[R.61-79.266.106]

The Permittee shall control stack emissions of toxic metals from the Industrial Boiler System such that toxic metals are not emitted to the atmosphere at levels which could threaten human health or the environment. The emission limits identified in this condition are based on the long-term, multi-pathway risk assessment performed for this Facility dated March 18, 2005, with a June 29, 2005 addendum. These risk-based limits are equivalent to or more stringent than the level of control required by R.61-79.266.106 and are, therefore, sufficient for assuring compliance with R.61-79.266.106. Metals emissions shall not exceed the following limitations:

RCRA Metal	Grams per second
Antimony	2.54e-03
Arsenic	1.13e-04
Barium	1.24e-03
Beryllium	3.80e-05
Cadmium	4.81e-05
Chromium (hexavalent)	3.11e-04
Lead	1.27e-03
Manganese	2.39e-02
Mercury	No known sources of mercury in boiler feed streams
Silver	3.34e-05
Thallium	1.49e-04

IV.D.4 Hydrogen Chloride and Chlorine Gas Standard

[R.61-79.266.107]

The Permittee shall control stack emissions of hydrogen chloride and chlorine gas from the Industrial Boiler System such that hydrogen chloride and chlorine gas are not emitted to the atmosphere at levels which could threaten human health or the environment. The emission limits identified in this condition are based on the long-term, multi-pathway risk assessment performed for this Facility dated March 18, 2005, with a June 29, 2005 addendum. These risk-based limits are equivalent to or more stringent than the level of control required by R.61-79.266.107 and are, therefore, sufficient for assuring compliance with R.61-79.266.107. Hydrogen chloride and chlorine gas emissions shall not exceed the following limitations:

Constituent	Grams per second
Hydrogen Chloride	3.44
Chlorine (Cl_2)	5.02e-02

IV.D.5 Polychlorinated Dibenzo-*p*-dioxins and Dibenzofurans Standard

[R.61-79.266.104(e)]

The Permittee shall control stack emissions of polychlorinated dibenzo-*p*-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) from the Industrial Boiler System such that polychlorinated dibenzo-*p*-dioxins and dibenzofurans are not emitted to the atmosphere at levels which could threaten human health or the environment. The emission limit identified in this Permit Condition is based on the long-term, multi-pathway risk assessment performed for this Facility dated March 18, 2005, with a June 29, 2005 addendum. This risk-based limit is equivalent to or more stringent than the level of control required by R.61-79.266.104(e) and is, therefore, sufficient for assuring compliance with R.61-79.266.104(e). Polychlorinated dibenzo-*p*-dioxin and dibenzofuran emissions shall not exceed 0.27 nanograms per dry standard cubic meter of stack gas (ng/dscm), calculated on a 2,3,7,8-TCDD equivalent basis and corrected to a stack gas concentration of seven percent (%) by volume of oxygen. The 2,3,7,8-TCDD equivalent basis calculation is to be performed using procedures described in *Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans (CDDs and CDFs)* and 1989 Update, EPA/625/3-89/016, March 1989.

IV.D.6 Carbon Monoxide Standard

[R.61-79.266.102(e)(2)(ii)]

The Permittee shall control stack emissions of carbon monoxide from the Industrial Boiler System such that carbon monoxide is not emitted to the atmosphere in excess of 100 parts per million volume (ppmv), calculated on an hourly rolling average basis (i.e., over any 60 minute period), continuously corrected to seven percent (%) oxygen, dry gas basis.

IV.D.7 Permit Compliance

Compliance with the performance standards and emissions limitations specified in this Permit will be regarded as compliance with R.61-79.266.104 through 266.107 and with the risk-based emission limitations identified in this Permit. However, any evidence indicating that compliance with such permit conditions is insufficient to ensure compliance with R.61-79.266.104 through 266.107 or with the risk-based emission limitations shall constitute new information justifying modification, revocation, or reissuance of the permit pursuant to R.61-79.270.41.

IV.E. FEED LIMITATIONS AND OPERATING REQUIREMENTS

IV.E.1 Physical Form and Location

The Permittee may introduce pumpable liquid hazardous waste fuels to the Industrial Boiler System via the air-atomized burner system located at the head of the boiler. Hazardous wastes shall not be fed to the Industrial Boiler System in any other physical form or location unless this Permit is modified pursuant to R.61-79.270.42.

IV.E.2 Treatment Rate (Capacity)

Hazardous waste treatment in the Industrial Boiler System shall not exceed a total hazardous waste treatment rate of 32,200,000 British thermal units per hour (Btu/hr). The Permittee shall perform monitoring and recording of hazardous waste treatment rates as necessary to document compliance with this Permit Condition. The records must be maintained as provided in Permit Condition IV.K.

IV.E.3 Specific Feed Limitations

The following feed limitations are established to ensure conformance with the performance standards and emission limitations set forth in Permit Condition IV.D. The Permittee must adhere to these feed limitations at all times when there is hazardous waste in the Industrial Boiler System.

IV.E.3(a) The Permittee shall not burn any hazardous waste in the Industrial Boiler System that has a heating value of less than 5,000 British thermal units per pound (Btu/lb) as generated.

IV.E.3(b) Maximum viscosity of any liquid hazardous waste feed stream entering the Industrial Boiler System shall not exceed 150 centipoise.

IV.E.3(c) Maximum total ash feed rate from all feed streams entering the Industrial Boiler System, monitored as specified in Permit Conditions IV.G.2 and IV.H.2, shall not exceed 10,053 grams per hour.

IV.E.3(d) Maximum total chlorine/chloride feed rate from all feed streams entering the Industrial Boiler System, monitored as specified in Permit Conditions IV.G.2 and IV.H.2, shall not exceed 2.05 grams per second.

IV.E.3(e) Maximum total metal feed rates from all feed streams entering the Industrial Boiler System, monitored as specified in Permit Conditions IV.G.2 and IV.H.2, shall not exceed the following limits:

RCRA Metal	Grams per second
Antimony	2.54e-03
Arsenic	1.13e-04
Barium	1.24e-03
Beryllium	3.80e-05
Cadmium	4.81e-05
Chromium (total)	3.11e-04
Lead	1.27e-03
Manganese	2.39e-02
Mercury	No known sources of mercury in boiler feed streams
Silver	3.34e-05
Thallium	1.49e-04

IV.E.4 Specific Operating Requirements

The following operating requirements are established to ensure conformance with the performance standards and emission limitations set forth in Permit Conditions IV.D and IV.E.6. The Permittee must adhere to these operating requirements at all times when there is hazardous waste in the Industrial Boiler System.

IV.E.4(a) Maximum total hazardous waste feed rate to the Industrial Boiler System, monitored on an hourly rolling average basis as specified in Permit Condition IV.H.1, shall not exceed 26.8 pounds per minute.

IV.E.4(b) Minimum combustion chamber temperature in the Industrial Boiler System, monitored on an hourly rolling average basis as specified in Permit Condition IV.H.1, shall not be less than 1,294°F.

IV.E.4(c) Maximum steam production rate of the Industrial Boiler System, monitored on an hourly rolling average basis as specified in Permit Condition IV.H.1, shall not exceed 22,600 pounds per hour.

IV.E.4(d) Maximum inlet gas temperature to the fabric filter air pollution control device, monitored on an hourly rolling average basis as specified in Permit Condition IV.H.1, shall not exceed 431°F.

IV.E.4(e) In accordance with the *Bag Leak Detection System Monitoring Plan*, which was submitted on September 21, 2007 and November 5, 2007, and approved by U.S. EPA Region IV on January 24, 2008, the minimum fabric filter pressure drop, monitored on an hourly rolling average basis as specified in Permit Condition IV.H.1, shall not be less than 2.2 inches of water.

IV.E.4(f) Maximum carbon monoxide emitted to the atmosphere, monitored on an hourly rolling average basis as specified in Permit Condition IV.H.1 and continuously corrected to seven percent (%) oxygen, dry gas basis, shall not exceed 100 parts per million volume (ppmv).

IV.E.4(g) Combustion chamber pressure, monitored on an instantaneous basis (i.e., the value that occurs any time), shall not exceed (-)3.0 inches water column gauge pressure.

IV.E.4(h) The Permittee shall continuously operate a bag leak detection system that meets the specifications, requirements, and corrective measures provisions of APPENDIX G – BAG LEAK DETECTION SYSTEM REQUIREMENTS of this Permit.

IV.E.4(h)(i) The system shall be operated in accordance with the *Bag Leak Detection System Monitoring Plan* prior to suspension of the pressure drop limitation of Permit Condition IV.E.4(e).

IV.E.4(h)(ii) The bag leak detection system shall be equipped with an alarm system that will sound an audible alarm when an increase in relative particulate loadings is detected over a preset level. The *Bag Leak Detection System Monitoring Plan* shall specify the alarm set point and corrective measures to be implemented in response to an alarm.

IV.E.4(h)(iii) Failure to initiate the corrective measures required by APPENDIX G – BAG LEAK DETECTION SYSTEM REQUIREMENTS and the approved *Bag Leak Detection System Monitoring Plan* is considered failure to ensure compliance with the performance standards and emission limitations in Permit Condition IV.D.

IV.E.5 Startup and Shutdown

[R.61-79.266.102(e)(2)(iii)]

During startup and shutdown of the Industrial Boiler System, hazardous waste must not be fed to the device unless the device is operating within the conditions of operation specified in this Permit.

IV.E.6 Fugitive Emissions Standard

[R.61-79.266.102(e)(7)(i)]

The Permittee shall control fugitive emissions from the Industrial Boiler System by maintaining the combustion zone pressure lower than atmospheric pressure.

IV.F. AUTOMATIC WASTE FEED CUTOFF

[R.61-79.266.102(e)(7)(ii)]

IV.F.1 Requirements for Waste Feed Cutoff

The Industrial Boiler System must be operated with a functioning system that automatically cuts off hazardous waste feed when operating conditions deviate from those established under Permit Condition IV.E.4. Hazardous waste feed shall also be immediately and automatically cutoff should any of the continuous monitors identified in Permit Condition IV.H.1 or the associated data acquisition system malfunction or fail.

IV.F.2 Maintenance of Minimum Combustion Chamber Temperature After Cutoff

[R.61-79.266.102(e)(7)(ii)(A)]

The minimum combustion chamber temperature identified in Permit Condition IV.E.4(b) must be maintained after waste feed cutoff while hazardous waste or hazardous waste residues remain in the combustion chamber. Hazardous waste or hazardous waste residues are considered to remain in the combustion chamber until the hazardous waste residence time has expired. Hazardous waste residence time must be calculated, and the calculation maintained in the operating record required by Permit Condition IV.K.

IV.F.3 Exhaust Gas Treatment

[R.61-79.266.102(e)(7)(ii)(B)]

Exhaust gases must be ducted to the air pollution control system operated in accordance with the Permit requirements while hazardous waste or hazardous waste residues remain in the combustion chamber.

IV.F.4 Continual Monitoring During a Waste Fuel Cutoff

[R.61-79.266.102(e)(7)(ii)(C)]

The operating parameters identified in Permit Condition IV.E.4 must continue to be monitored during the waste feed cutoff while hazardous waste or hazardous waste residues remain in the combustion chamber, and hazardous waste feed shall not be restarted until the levels of those parameters comply with the Permit limits.

IV.G. WASTE ANALYSIS

IV.G.1 Chemical and Physical Analysis

The Permittee must conduct sampling and analysis as necessary to ensure that the hazardous waste and other fuels fired into the Industrial Boiler System are within the physical and chemical composition limits specified in this Permit. Waste analysis shall be conducted in accordance with the Waste Analysis Plan submitted as Section C of the Approved Permit Application.

IV.G.2 Constituent Feed Rate Limitations

Feed stream analysis and monitoring to document compliance with the constituent feed rate limitations for ash, total chlorine/chloride, and metals as identified in Permit Condition IV.E.3 shall be conducted in accordance with the following procedures.

IV.G.2(a) Prior to burning, any tank serving as a waste fuel feed tank shall be isolated, analyzed for the constituent feed rate parameters (ash, total chlorine/chloride and each metal), and certified in accordance with the Waste Analysis Plan.

IV.G.2(b) Compliance with the constituent feed rate limitations shall be demonstrated by either:

1) Documenting that the constituent concentrations in the certified tank are below concentrations calculated from the maximum allowable constituent feed rate limitations identified in Permit Condition IV.E.3 and the maximum total hazardous waste feed rate limitation identified in Permit Condition IV.E.4(a);

2) Complying with a lower maximum total hazardous waste feed rate limitation that achieves compliance based on the actual constituent concentrations measured in the certified tank, in which case the lower total hazardous waste feed rate limitation shall be documented in the operating record and entered into the automatic waste feed cutoff system prior to burning the tank contents; or,

3) Calculating and recording actual constituent feed rates on an hourly rolling average basis as specified in Permit Condition IV.H.1.

IV.G.2(c) Compliance with the mercury feed restrictions identified in Permit Conditions IV.D and IV.E.3 shall be demonstrated by submitting a certification to both the U.S. EPA Region IV and the Department no less often than annually, no later than March 31st of each year, starting one year after the effective date of this Permit, that no mercury-containing substance is knowingly introduced to any process that generates waste treated in the boiler. The annual certification shall be based upon a detailed review of all processes and associated raw materials contributing to the boiler waste feed streams, with further review and certification required prior to implementing any change to those processes or raw materials. In addition, the Permittee shall analyze each waste feed tank as described in Permit Condition IV.G.2(a) and the Approved Permit Application to verify that mercury remains below the limit of detection. Should mercury be detected in a waste feed tank or tank trailer, a detailed review of all processes and raw materials associated with the boiler waste feed streams shall be conducted to identify and eliminate the source of mercury contamination. A report documenting the response shall be submitted to both the U.S. EPA Region IV and the Department within 60 days of the initial mercury detection. If mercury is detected more often than once per year, this Permit may be modified to impose additional restrictions. Failure to conduct the required process and raw material reviews and certifications or to identify and eliminate sources of mercury contamination in accordance with the Waste Analysis Plan in Section C of the Approved Permit Application shall be regarded as non-compliance with this Permit.

IV.H. MONITORING, RECORDING AND INSPECTIONS

IV.H.1 Monitoring Requirements for Operating Parameters

The Permittee shall maintain, calibrate, and operate continuous monitors that monitor and record the operating parameters specified in Permit Condition IV.E.4. The Permittee is prohibited from feeding hazardous waste to the Industrial Boiler System unless all continuous monitors are installed, maintained, calibrated and operating as specified in APPENDIX F – INDUSTRIAL BOILER SYSTEM CONTINUOUS MONITOR SPECIFICATIONS of this Permit.

IV.H.1(a) A continuous monitor is one which continuously samples the regulated parameter without interruption, evaluates the detector response at least once every 15 seconds, and computes and records the average value at least every 60 seconds.

IV.H.1(b) An hourly rolling average is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.

IV.H.1(c) All monitors shall record data in units corresponding to the permit limits unless otherwise specified.

IV.H.1(d) Continuous monitoring data must be recorded, and the records must be placed in the operating record required by Permit Condition IV.K.

IV.H.1(e) Records of calibration, inspection, maintenance and performance specification test activities for each continuous monitor shall be maintained and placed in the operating record required by Permit Condition IV.K.

IV.H.2 Monitoring Requirements for Constituent Feed Rate Limits

The feed rate limits for ash, total chlorine/chloride, and metals identified in Permit Condition IV.E.3 shall be monitored by knowing the concentration of the substance (ash, total chlorine/chloride and metals) in each feed stream and the flow rate of the feed stream. To monitor the feed rate of these substances, the flow rate of each feed stream must be monitored under the continuous monitoring requirements of Permit Condition IV.H.1. Permit Condition IV.G.2 identifies specific options for constituent feed rate monitoring.

IV.H.3 Sampling and Analysis

Upon request of both the U.S. EPA Region IV and the Department, and no less frequently than at 5-year intervals following issuance of this Permit, the Permittee shall perform sampling and analysis of the hazardous waste (and other fuels as appropriate) and exhaust emissions to verify that the feed limitations and operating requirements established in this Permit achieve the performance standards and emission limitations established in Permit Condition IV.D and R.61-79.266.102, 266.104, 266.105, 266.106, and 266.107. The sampling and analysis shall be conducted in accordance with an updated version of the June 2003 Trial Burn/Risk Burn Plan for Boiler HE-3800-1 to be submitted at least six (6) months prior to the scheduled test date. The U.S. EPA Region IV and the Department may jointly waive portions of the plan pertaining to risk burn testing for constituents beyond those identified in Permit Condition IV.D.

IV.H.4 Inspections

The Industrial Boiler System and associated equipment (pumps, valves, pipes, hazardous waste fuel storage tanks, etc.) shall be subjected to thorough visual inspection when the equipment contains hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering. These inspections shall be conducted and recorded as specified in Section F.2 of the Approved Permit Application.

IV.H.5 Waste Fuel Cutoff System Tests

[R.61-79.266.103(j)(3)]

The automatic waste feed cutoff system and associated alarms must be tested at least once every 30 days when hazardous waste is burned to verify operability.

IV.H.5(a) The automatic waste feed cutoff system tests shall be conducted and recorded according to the procedures outlined in Section F.2 of the Approved Permit Application.

IV.H.5(b) The Permittee shall test the automatic waste feed cutoff system reflecting the requirements of Permit Condition IV.E and IV.F in accordance with Appendix F-2 of the Approved Permit Application.

IV.H.6 Operating Record

[R.61-79.266.103(j) and 266.103(k)]

The analysis, monitoring and inspection data required by this Permit shall be recorded and placed in the operating record required by R.61-79.264.73 and this Permit. The records must be maintained as provided in Permit Condition IV.K.

IV.I. CHANGES

[R.61-79.266.103(j)]

The Permittee must cease burning hazardous waste when changes in combustion properties, feed rates of the hazardous waste or other fuels, or changes in the Industrial Boiler System design or operating conditions deviate from the limits as specified in this Permit. The Permittee may burn hazardous waste under different feed, operating, or design conditions than specified in this Permit only if the Permit is modified pursuant to R.61-79.270.41 or 270.42 to reflect revised conditions.

IV.J. RISK ASSESSMENT REQUIREMENTS

[R.61-79.270.32(b)(3)]

If, at any time, the U.S. EPA Region IV and the Department jointly determine that changes in emission rates, stack parameters, toxicity values, or other conditions could cause the stack emissions from the Permittee's Industrial Boiler System to pose a potential threat to human health or the environment, the Permit may be modified to impose additional restrictions.

IV.K. RECORDKEEPING

[R.61-79.266.103(k)]

All information and data required by Module IV of this Permit shall be recorded and placed in the operating record required by R.61-79.264.73 and this Permit. The records must be maintained until closure of the Industrial Boiler System as a hazardous waste burner or until occurrence of an alternate event as specified by revision of the federal regulations, except that the inspection records for Permit Condition IV.H.4 need be kept only three (3) years.

IV.L. CLOSURE

[R.61-79.266.103(l)]

IV.L.1 Hazardous Waste Removal

At closure, the Permittee shall implement the closure plan provided in Section I of the Approved Permit Application and remove all hazardous waste and hazardous waste residues from the Industrial Boiler System, including ancillary hazardous waste feed equipment and the air pollution control systems, as described in Section I of the Approved Permit Application.

IV.L.2 Submission of Revised Closure Plan

Within 180 calendar days of Permit issuance, the Permittee shall submit a revised Closure Plan that includes the closure procedures and confirmatory sampling of the boiler and boiler area foundation, baghouse and foundation, and all pumps and transfer area equipment.

IV.L.3 Confirmatory Sampling Requirements

IV.L.3(a) Confirmatory sampling shall include comprehensive R.61-79 Part 261 Appendix VIII analysis.

IV.L.3(b) Confirmatory samples shall be grab samples of the first 6 inches of soil or concrete, underlying the closed boiler system at the node of an established 20-foot by 20-foot sampling grid.

IV.L.3(c) Additional confirmatory samples shall be collected at any locations underlying the boiler system observed to be stained or to be breeched in the underlying containment and foundation structures.

IV.L.4 Revised Closure Cost Estimate

A detailed line item closure cost estimate shall also be submitted with the Closure Plan with updated Financial Assurance as necessary to accomplish and confirm all RCRA closure requirements and demonstrate clean closure.

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 – SOLID WASTE MANAGEMENT UNIT / AREA OF CONCERN SUMMARY.

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 financial responsibility for completion of such off-site corrective action will be required.

V.B. COST ESTIMATE FOR COMPLETION OF CORRECTIVE ACTION

V.B.1 Preparation of Cost Estimate

The Permittee shall prepare a remedial strategy and a cost estimate for the completion of any corrective action required under this Permit for the SWMUs and AOCs listed in Appendix A-4 – SWMUs and AOCs Requiring Confirmatory Sampling, Appendix A-5 – SWMUs and AOCs Requiring a RCRA Facility Investigation (RFI), Appendix A-6 – SWMUs and AOCs Requiring a Corrective Measures Study and Appendix A-7 – SWMUs and AOCs Requiring

Corrective Action With Land Use Controls in order to provide financial assurance for completion of corrective action as required under R.61-79.264.90 and 264.101. The remedial strategy shall be a plan for remedies for the adversely impacted areas at the facility and beyond the facility boundary. The level of detail and specificity related to the remedial technologies being considered for the facility shall increase as the facility obtains more information through facility characterization. The cost estimate will be based upon the cost of assessment and corrective action to meet the requirements of R.61-79.264.100 and 264.101 and this Permit.

V.B.2 Remedial Strategy

The Permittee shall submit for Department approval the remedial strategy and cost estimate for completion of corrective action required under R.61-79.264.90(a)(2), 264.100 and 264.101 and this Permit within one hundred eighty (180) days of the effective date of this Permit.

V.B.3 Financial Assurance for Corrective Action

Within one hundred and twenty (120) calendar days after the Department approves the cost estimate for corrective action, the Permittee shall demonstrate financial assurance for remaining corrective action work pursuant to Permit Condition V.B.1. The mechanism for financial assurance shall be one that would also be allowable for closure/post-closure financial assurance as outlined in R.61-79.264 Subpart H.

V.B.4 Adjustments to Cost Estimate

V.B.4(a) 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.B.4(b) The Permittee shall submit cost adjustments for modifications to the corrective action plan to the Department within thirty (30) calendar days after receiving approval of the modification if the change increases the cost of corrective action.

V.C. NOTIFICATION AND ASSESSMENT REQUIREMENTS FOR NEWLY IDENTIFIED SWMUs AND AOCs

V.C.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.C.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.C.1. At a minimum, the AR shall provide the following information:

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

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

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

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

V.C.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; and,

V.C.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.C.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 prepare a plan for such investigations as outlined in Permit Conditions V.E and/or V.F. 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.D. NOTIFICATION REQUIREMENTS FOR NEWLY DISCOVERED RELEASES AT PREVIOUSLY IDENTIFIED SWMUs or AOCs

V.D.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.D.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.E or V.F.

V.E. CONFIRMATORY SAMPLING (CS)

V.E.1 CS Workplan

The Permittee shall prepare and submit a Confirmatory Sampling (CS) Workplan to the Department within forty-five (45) calendar days of the effective date of this Permit or 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 and Appendix A-4 – SWMUs and AOCs Requiring Confirmatory Sampling or as required by Permit Condition V.C.3 or V.D.2. The CS Workplan shall include schedules of implementation and completion of specific actions necessary to determine whether a release has occurred.

V.E.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 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.E.3 Implementation

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

V.E.4 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 and Appendix A-4 – SWMUs and AOCs Requiring Confirmatory Sampling, or as required by Permit Condition V.C.3 or V.D, 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.E.5 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.F. The Department shall notify the Permittee of any no further action decision.

V.F. RCRA FACILITY INVESTIGATION (RFI)

V.F.1 RFI Workplan

The Permittee shall prepare and submit to the Department within ninety (90) days of the effective date of this Permit 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.F.3.

V.F.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, a RFI Workplan for those units identified under Permit Conditions V.C.3, V.D.2 or V.E.5. The RFI Workplan(s) shall be developed to meet the requirements of Permit Condition V.F.3.

V.F.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).

V.F.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.F.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.F.6 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.F.6(a) A description of the portion of the RFI completed;

V.F.6(b) Summaries of findings;

V.F.6(c) Summaries of any deviations from the approved RFI Workplan during the reporting period;

V.F.6(d) Summaries of any significant contacts with local community public interest groups or State government;

V.F.6(e) Summaries of any problems encountered during the reporting period;

V.F.6(f) Actions taken to rectify problems;

V.F.6(g) Changes in relevant personnel; and,

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

V.F.7 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.F.1 or Permit Condition V.F.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.F.8 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.H and R.61-79.264.101.

V.G. INTERIM MEASURES (IM)

V.G.1 IM Workplan

V.G.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.G.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.G.3.

V.G.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.

V.G.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.G.2 IM Implementation

V.G.2(a) The Permittee shall implement interim measures in accordance with the approved IM Workplan.

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

V.G.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.I as a permit modification.

V.G.3 IM Reports

V.G.3(a) If the time required for completion of interim measures is greater than one (1) 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.G.3(a)(i) A description of the portion of the interim measures completed;

V.G.3(a)(ii) Summaries of findings;

V.G.3(a)(iii) Summaries of any deviations from the IM Workplan during the reporting period;

V.G.3(a)(iv) Summaries of any problems encountered during the reporting period; and,

V.G.3(a)(v) Projected work for the next reporting period.

V.G.3(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.G, an Interim Measures (IM) Report. The IM Report shall contain the following information at a minimum:

V.G.3(b)(i) A description of interim measures implemented;

V.G.3(b)(ii) Summaries of results;

V.G.3(b)(iii) Summaries of all problems encountered;

V.G.3(b)(iv) Summaries of accomplishments and/or effectiveness of interim measures; and,

V.G.3(b)(v) Copies of all relevant laboratory/monitoring data, etc. in accordance with Permit Condition I.E.9.

V.H. CORRECTIVE MEASURES STUDY

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

V.H.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.H.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.H.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 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, 264.552, 264.553 and 270.32(b)(2). The Permittee shall implement corrective actions beyond the facility boundary, as set forth in Permit Condition V.A.3.

V.H.1(c) 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.H.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.H.3 CMS Report

V.H.3(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.I.

V.H.3(b) If the Department determines that the CMS Report does not fully satisfy the information requirements specified under Permit Condition V.H.3(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.H.3(c) As specified under Permit Condition V.H.3(b) based on preliminary results and the CMS Report, the Department may require the Permittee to evaluate additional remedies or particular elements of one (1) or more proposed remedies.

V.I. REMEDY APPROVAL AND PERMIT MODIFICATION

V.I.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.I.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.I.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.I.1. This modification will serve to incorporate a final remedy into this Permit.

V.I.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 for the SWMUs and AOCs listed in Appendix A-7 – SWMUs and AOCs Requiring Corrective Action With Land Use Controls. The mechanism for financial assurance shall be one that is allowable under R.61-79.264 Subpart H.

V.J. CORRECTIVE MEASURES IMPLEMENTATION (CMI)

V.J.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. At a minimum, this workplan shall include the following:

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

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

V.J.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.J.1(b). The O&MP, at a minimum, shall include the following:

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

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

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

V.J.3 Department Approval

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

V.J.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.J.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.J.5 Remedy with Land Use Controls

When corrective measures incorporate land use controls as part of the selected remedy, the following information should be provided: (See APPENDIX E – LAND USE CONTROL MANAGEMENT PLAN for further detail)

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

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

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

V.J.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.J.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.J.5(i) The above information is outlined in detail in APPENDIX E – LAND USE CONTROL MANAGEMENT PLAN.

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

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

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

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

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

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

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

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

V.J.7 Remedy Completion Report

V.J.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.J.2(c). Approval by the Department of the final RCR constitutes remedy completion.

V.J.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.

V.K. MODIFICATION OF THE CORRECTIVE ACTION SCHEDULE OF COMPLIANCE

V.K.1 Initiation

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

V.K.2 Permittee Requested Modification

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

V.L. WORKPLAN AND REPORT REQUIREMENTS

V.L.1 Submittal Requirements

All reports submitted to the Department should be in printed (one copy) and electronic (as a PDF file on a CD) formats.

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

If the Permittee at any time determines that the Assessment Report information required under Permit Condition V.C.2, the CS Workplan under Permit Condition V.E, or RFI Workplan(s) required under Permit Condition V.F, 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 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.M. 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.

Corrective Action Schedule of Compliance

Permit Condition	Event	Due Date
V.C.1	Notification of Newly Identified SWMUs and AOCs	Within fifteen (15) days of discovery
V.C.2	Assessment Report	Within ninety (90) days of notification
V.D.1	Notification for Newly Discovered Releases at Previously Identified SWMUs and AOCs	Within fifteen (15) days of discovery
V.E.1	Confirmatory Sampling Workplan for SWMUs or AOCs Identified in Appendix A-4	Within forty-five (45) days of the effective date of this Permit or notification by the Department
V.E.2	Implementation of Confirmatory Sampling Workplan	In accordance with the Department's approval letter for the CS Workplan
V.E.4	Confirmatory Sampling Report	In accordance with the approved CS Workplan
V.F.1	RFI Workplan for SWMU(s) and AOC(s) Identified under Permit Condition V.A.1	Within ninety (90) days of the effective date of this Permit.
V.F.2	RFI Workplan for Newly Identified SWMU(s) and AOC(s)	Within ninety (90) calendar days of notification by the Department.
V.F.5	Implementation of RFI Workplan	In accordance with the Department approved RFI Workplan
V.F.5	Notification of Sampling Activities	At least twenty (20) days prior to any RFI sampling activity
V.F.6	RFI Progress Reports	Quarterly, beginning ninety (90) days from the start date specified by the Department[1]
V.F.7	RFI Report	In accordance with the approved RFI Workplan
V.F.7	Revised RFI Report	Within thirty (30) days of receipt of the Department's comments on the RFI Report
V.G.1(a)	Interim Measures Workplan	Within thirty (30) days of notification by the Department
V.G.2	Implementation of IM Workplan	In accordance with the Department's approval letter for the IM Workplan
V.G.3(a)	Interim Measures Progress Reports	In accordance with the approved Interim Measures Workplan.[2]

Permit Condition	Event	Due Date
V.G.3(b)	Interim Measures Report	Within ninety (90) days of completion
V.H.1(a)	CMS Workplan	Within ninety (90) days of notification by the Department that a CMS is required
V.H.2	Implementation of the CMS Workplan	Within fifteen (15) days after receipt of the Department's approval of the Workplan
V.H.3(a)	CMS Report	In accordance with the schedule in the approved CMS Workplan
V.H.3(a)	Revised CMS Report	Within thirty (30) days of receipt of the Department's comments on the CMS Report
V.I.2	Statement of Basis	Within thirty (30) days of receipt of the Department's approval letter for the CMS Report
V.I.4	Demonstration of Financial Assurance	Within one hundred twenty (120) days after Permit modification for remedy
V.J.1	CMI Workplan	Within thirty (30) days of the permit modification for remedy selection
V.J.2	Operations and Maintenance Plan	In accordance with the schedule in the approved CMI Workplan
V.J.4	Construction Completion Report	In accordance with the schedule in the approved CMI Workplan
V.J.6	CMI Progress Reports	Semi-annually, beginning one hundred eighty (180) days after approval of the CMI Workplan
V.J.7	Remedy Completion Report	Within ninety (90) days of completion of the selected remedy
V.L.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.

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 should address the objectives listed on the following two pages (Waste Minimization Objectives).

WASTE MINIMIZATION CERTIFICATION OBJECTIVES

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

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.

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.

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 AA: AIR EMISSION STANDARDS FOR PROCESS VENTS

[R.61-79.264 Subpart AA]

The Permittee does not currently operate any hazardous waste, thermal treatment units subject to R.61-79.264 Subpart AA. However, the Permittee does operate four (4) hazardous waste storage and treatment tanks with Level 2 controls that vent to a closed-vent system with a non-assisted flare to reduce fugitive organic air emissions. Selection of a closed-vent system and a control device for control of organic air emissions from tanks with Level 2 controls requires compliance with R.61-79.264.1033 of Subpart AA for design, operation, inspection, monitoring, repair and recordkeeping in accordance with R.61-79.264.1084(d) and 264.1087(b). Therefore, the closed-vent system and flare are subject to compliance with Subpart AA requirements including Subpart AA-specified test methods and monitoring procedures, recordkeeping and reporting in accordance with this Permit, Sections N and O of the Approved Permit Application and R.61-79.264 Subparts AA and CC.

VIII.C.1 Applicability

[R.61-79.264.1030(b)]

Regulation 61-79.264, Subpart AA contains emission standards for process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, and air or steam stripping operations that manage hazardous wastes with an annual average total organic concentration of at least ten (10) parts per million by weight (ppmw). Regulation 61-79.264, Subpart AA also contains standards for closed-vent systems and control devices referenced in R.61-79.264, Subparts BB and CC.

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

Prior to installing or operating any hazardous waste thermal treatment unit, closed-vent systems, or control devices subject to R.61-79.264, Subpart AA, or modifying any existing equipment, procedure, or process such that the process vents, closed-vent systems, or control devices will become subject to R.61-79.264, Subpart AA, 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 270.24, as applicable, with the modification request, and obtain a permit modification in accordance with R.61-79.270.42.

VIII.C.3 Standards: Closed-Vent Systems

[R.61-79.264.1033(a), 264.1033(d) and 264.1087]

VIII.C.3(a) The Permittee shall design, install, operate and maintain the closed-vent system with no detectable emissions in accordance with the requirements of R.61-79.264.1033(k)(1) and Appendix N-1 of the Approved Permit Application.

VIII.C.3(b) The Permittee shall comply with the operational and venting requirements of R.61-79.264.1087(c)(2)(i – vi) as recorded as specified per R.61-79.264.1089(e)(1)(v), except during periods of planned maintenance or control device system malfunction that shall not exceed 240 hours per calendar year.

VIII.C.3(c) The Permittee shall monitor and inspect each closed-vent system and organic emission control device to ensure proper operation, maintenance and compliance with the requirements of R.61-79.264.1033(f) and 264.1033(l), and Section O of the Approved Permit Application.

VIII.C.3(d) The Permittee shall make a first attempt at repair of the closed-vent system no later than five (5) calendar days after emission is detected.

VIII.C.3(e) The Permittee shall control a detected emission as soon as practicable, but not less than 15 calendar days after the emission is detected.

VIII.C.3(f) The Permittee shall operate the closed-vent system and the organic air emissions control device at all times emissions may be vented to the closed-vent system and the control device.

VIII.C.4 Emission Control Device Standards: Flare Design and Performance

VIII.C.4(a) The Permittee shall design, install, operate, and maintain the flare in accordance with R.61-79.264.1033(d) and Section N of the Approved Permit Application.

VIII.C.4(b) The Permittee shall design for and operate the flare with no visible emissions as determined by Reference Method 22 and R.61-79.264.1033(d), the Approved Permit Application and this Permit, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.

VIII.C.4(c) Reference Method 22 in 40 CFR Part 60 and an observation period of 2 hours shall be used to determine compliance of a flare with the visible emissions provision of this Permit.

VIII.C.4(d) The Permittee shall operate the flare with a flame present at all times as determined and recorded by a flame sensing monitoring device.

VIII.C.4(e) The Permittee shall install, calibrate, maintain and operate a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

VIII.C.4(f) The Permittee shall operate the flare with a net heating value of 200 BTU/scf or greater as calculated using net heating value using formula in section R.61-79.264.1033(e)(2).

VIII.C.4(g) The Permittee shall install, calibrate, maintain and operate a flow indicator monitor in accordance with the manufacturer's specifications and R.61-79.264.1033(f)(2) that provides a record of emissions vented to the closed-vent system and the flare from each tank or hazardous waste management unit venting to the system that measures and records the measurement at least once every hour. The flow indicator shall be installed in the closed-vent system at the nearest feasible point to the flare but before the emissions from the hazardous waste management unit are combined in the common closed-vent system.

VIII.C.5 Test Methods and Procedures

[R.61-79.264.1034]

VIII.C.5(a) The Permittee shall comply with the test methods and procedures of R.61-79.264.1034(b) when testing the closed-vent system for compliance with no detectable emissions (NDE), as required by R.61-79.264.1033(l), for the closed-vent system subject to R.61-79.264, Subpart AA.

VIII.C.5(b) All testing, monitoring and confirmatory sampling must be conducted while the HWMU, closed-vent system and emission control device are operating and managing hazardous wastes.

VIII.C.5(c) All testing, monitoring and confirmatory sampling must be conducted by persons with documented training in the proper implementation of the test methods and procedures required by R.61-79.264.1034, and 264.1033, including, but not limited, to Reference Method 21, Reference Method 22 and manufacturer's training in the use of the specific organic emission monitor used for leak detection.

VIII.C.6 Recordkeeping Requirements

[R.61-79.264.1035]

VIII.C.6(a) Records demonstrating compliance with R.61-79.264, Subpart AA, 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 with the technical, control device

emission reduction efficiency and monitoring requirements of Subpart AA shall be included in the Facility operating records. At a minimum, the required recordkeeping information listed in R.61-79.264.1035, and as prescribed in the Approved Permit Application and this Permit.

VIII.C.6(b) These records shall include but are not limited to: (1) the current list of regulated process vents, closed-vent systems or control devices, and their physical location at the Facility as illustrated on Facility process diagrams, drawings, and piping and instrumentation diagrams; (2) all associated engineering calculations, waste determinations, design analysis, operating information, specifications, drawings, schematics, piping and instrumentation diagrams (P&ID) and standards for each process vent, closed-vent system, or control device; (3) all maintenance, inspection, monitoring, leak detection, repair, and delay of repair records associated with each process vent, closed-vent system, or control device; and (4) training documentation for persons conducting inspections or monitoring.

VIII.C.6(c) Records explaining why a component(s) of a closed-vent system has been designated as unsafe-to-monitor in accordance with R.61-79.264.1033(o) 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.61-79.264.1033(o), 264.1035(c)(9) and 264.1035(c).

VIII.C.7 Reporting Requirements
[R.61-79.264.1036]

VIII.C.7(a) The Permittee shall prepare and submit a semiannual report to the Department that includes all information required by R.61-79.264.1036 for that semiannual reporting period.

VIII.C.7(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 BB: AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS
[R.61-79.264 Subpart BB]

The Permittee has implemented an equipment leak detection and repair (LDAR) Program for the hazardous waste management system supplying waste fuel to Boiler No. 4 in compliance with R.61-79.264 Subpart BB, Air Emission Standards for Equipment Leaks. All equipment that contains or contacts hazardous wastes is considered to have an organic concentration of at least 10 percent (%) by weight and are, therefore, included in the LDAR Program. This includes all equipment associated with the four (4) Hazardous Waste Blend Tanks T-8332, T-8331, T 8333 and T-8345 and Boiler No. 4. Process and Instrumentation Drawings (P&IDs) are located in Appendix D-2 of the Approved Permit Application. The Plantwide Procedures for LDAR Program (Plantwide Procedure OB62308) are located in Appendix N-1 of the Approved Permit Application.

Because the vapor pressure of the majority of constituents is greater than 0.3 kilopascals (0.044 pounds per square inch) and the concentration of the constituents can vary, the Permittee takes a conservative approach that all components are in light liquid service.

Tanks and lines are marked with words "Hazardous Waste." A site map identifying the hazardous waste tanks is maintained at the facility. The LDAR Program discusses how the P&IDs are designated.

The Permittee operates valves and pumps in light liquid service, pressure relief valves in gas/vapor service, and sample ports that are subject to R.61-79.264, Subpart BB.

The Permittee does not operate compressors, open-ended valves, or open-ended lines subject to R.61-79.264, Subpart BB at the time of Permit issuance.

Operational set point information for the pressure relief/safety valves associated with the Tank Farm System is presented in Appendix N-3 of the Approved Permit Application.

The Permittee operates equipment associated with the transfer lines for tank trucks 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. In LeakDAS (or equivalent LDAR management software as specified in the Approved Permit Application), the equipment is identified as <300 hours on contact. Additional information regarding the equipment at the facility with <300 contact hours/year is maintained within LeakDAS.

VIII.D.1 Applicability

[R.61-79.264.1050]

VIII.D.1(a) The requirements of R.61-79.264, Subpart BB and Permit Condition VIII.D contain Air Emission Standards For Equipment Leaks that apply to equipment associated with the four (4) Hazardous Waste Blend Tanks (T-8332, T-8331, T 8333 and T-8345) and Boiler No. 4, all of which are considered to contain or contact hazardous wastes with organic concentrations of at least 10 percent (%) by weight.

VIII.D.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. While similar, the requirements of Permit Condition VIII.D do not apply to such units.

VIII.D.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.D.3 Marking and Tagging

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

VIII.D.3(a) The Permittee shall maintain the most current equipment identification list and up-to-date P&ID in the Facility's operating record. Appendix N-2 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.

VIII.D.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.D.3(c) The unique identification number of the equipment shall correspond to, and be identified on, the current equipment list, equipment compliance tracking system (i.e., LeakDAS) 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.D.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.D.3(d)(i) Tags must include the equipment identification number;

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

VIII.D.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.D.4 Excluded Equipment

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

VIII.D.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 in the Permittee's LeakDAS system as required by R.61-79.264.1064(g)(6) and complies with documentation requirements in Permit Condition VIII.D.4(b).

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

VIII.D.4(c) Should conditions change such that the Permittee is no longer able to claim the exclusion identified in Permit Condition VIII.D.4(a), 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.D.5 Equipment Standards

[R.61-79.264.1052 through 264.1062]

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 requirements of the LDAR Program (Plantwide Procedure OB62308) in Appendix N-1 and the Inspection Plan in Appendix F-3 of the Approved Permit Application.

VIII.D.5(a) Standards: Pumps in Light Liquid Service
[R.61-79.264.1052]

The Permittee shall install and maintain equipment and associated emission control devices according to R.61-79.264.1052, manufacturer's specifications, Section N and the LDAR Program (Plantwide Procedure OB62308) specified in Appendix N-1 of the Approved Permit Application.

VIII.D.5(a)(i) The Permittee shall monitor each pump monthly to detect leaks per Reference Method 21, R.61-79.264.1063(b), and the LDAR Program (Plantwide Procedure OB62308) in Appendix N-1 of the Approved Permit Application.

VIII.D.5(a)(ii) The Permittee shall visually inspect each pump each calendar week for indications of liquids dripping from the pump seals, odors or sounds which indicate emissions or liquid releases from the pump.

VIII.D.5(a)(iii) A leak is detected if an instrument reading of 10,000 ppm is measured during monitoring in accordance with Reference Method 21 and R.61-79.264.1063(b).

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

VIII.D.5(a)(v) 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.D.5(a)(vi) Any pump that is designated to operate at no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as determined by Reference Method 21 is exempt from Permit Conditions VIII.D.5(a)(i), VIII.D.5(a)(ii), VIII.D.5(a)(iv) and VIII.D.5(a)(v) if the pump satisfies the criteria of R.61-79.264.1052(e) annually.

VIII.D.5(b) Standards: Compressors
[R.61-79.264.1053]

The Permittee does not have any compressors associated with the Hazardous Waste Blend Tanks T-8332, T-8331, T-8333 and T-8345 and Boiler No. 4 at the time of this Permit issuance. Prior to adding a compressor that is subject to R.61-79.264.1053 and associated with the hazardous waste management units, the Permittee shall submit a Hazardous Waste Permit Modification in accordance with R.61-79.270.42 and receive approval from the Department.

VIII.D.5(c) Standards: Pressure Relief Devices in Gas/Vapor Service
[R.61-79.264.1054]

Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by Reference Method 21 specified in R.61-79.264.1063(c) and confirmed at least annually and in the event the pressure relief device has a release.

VIII.D.5(c)(i) At the time of Permit issuance, the Permittee vents pressure relief devices from its four aboveground Hazardous Waste Blend Tanks T-8332, T-8331, T-8333 and T-8345 to a closed-vent system with a non-assisted flare for

organic air emissions control, which are subject to R.61-79.264, Subpart CC Tank Level 2 emissions controls and R.61-79.264.1033.

VIII.D.5(c)(ii) For any pressure relief device in gas/vapor subject to R.61-79.264, Subpart BB that does not vent to a closed-vent system to an organic emissions control device and that is not associated with the Hazardous Waste Blend Tanks T-8332, T-8331, T-8333 and T-8345 that vents to a closed-vent system to an organic air emissions control device, the Permittee shall maintain monitoring records in LeakDAS to demonstrate monitoring and operation of the pressure relief device with no detectable emissions per the criteria of R.61-79.264.1054.

VIII.D.5(c)(iii) The Permittee shall operate and maintain each pressure relief device to return to service with no detectable emissions following each pressure release occurrence and at all times the pressure in the HWMU is less than its designed maximum pressure tolerance.

VIII.D.5(c)(iv) No later than 5 days after a pressure release, the Permittee shall monitor each pressure relief device to confirm it has returned to the condition of no detectable emissions after each pressure release.

VIII.D.5(d) Standards: Sampling Connection Systems
[R.61-79.264.1055]

Hazardous Waste Blend Tanks T-8332, T-8331, T-8333 and T-8345 have Strahman sample valves. These valves allow a representative sample to be collected without purging through the valve. Sampling systems without purges are exempt from the requirements of R.61-79.264.1055. Therefore, the Permittee's sampling connection system is exempt from the requirements of this provision.

VIII.D.5(e) Standards: Open-ended Valves or Lines
[R.61-79.264.1056]

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

VIII.D.5(f) Standards: Valves in Gas/Vapor Service or In Light Liquid Service
[R.61-79.264.1057]

VIII.D.5(f)(i) The Permittee currently monitors all valves on an annual basis (in April), skipping three (3) quarterly periods in accordance with R.61-79.264.1062(b)(3).

VIII.D.5(f)(ii) Only valves in light liquid service can be designated unsafe-to-monitor or difficult-to-monitor pursuant to R.61-79.264.1057(g) or (h). The Permittee shall not designate any other components subject to the R.61-79.264, Subpart BB regulations as unsafe-to-monitor or difficult-to-monitor.

VIII.D.5(g) Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors
[R.61-79.264.1058]

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

VIII.D.5(g)(i) In association with other required daily tank inspections and weekly container inspections, 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.D.5(g)(ii) A leak is detected if an instrument reading of 10,000 ppm is measured during monitoring in accordance with Reference Method 21 and R.61-79.264.1063(b).

VIII.D.5(g)(iii) 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.D.5(g)(iv) 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.D.5(g)(v) 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.D.5(h) Standards: Delay of Repair
[R.61-79.264.1059, 264.1064(d) and 264.1065]

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

VIII.D.5(h)(ii) 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.D.5(h)(iii) 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.

VIII.D.5(h)(iv) 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.D.5(h)(v) 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.D.5(i) Standards: Closed-Vent Systems and Control Devices
[R.61-79.264.1060]

Hazardous Waste Blend Tanks T-8332, T-8331, T-8333 and T-8345 are equipped with a closed vent system which routes emissions to a non-assisted flare for organic air emissions control. The emissions from these tanks are controlled with Level 2 tank controls compliant with R.61-79.264, Subpart CC, 264.1033, and the Closed-Vent

Systems and Flare Control Standards of Permit Conditions VIII.C.3 and VIII.C.4, respectively.

VIII.D.5(j) Alternative Standards for Valves in Gas/Vapor Service or In Light Liquid Service: Percentage of Valves Allowed To Leak
[R.61-79.264.1061]

The Permittee has elected to have all valves within the hazardous waste management units comply with an alternative standard that allows no greater than 2 percent (%) of valves to leak in accordance with R.61-79.264.1061.

VIII.D.5(k) Alternative Standards for Valves in Gas/Vapor Service or In Light Liquid Service: Skip Period Leak Detection and Repair
[R.61-79.264.1062]

The Permittee has elected to comply with Skip Period Leak Detection and Repair Standard. The Permittee currently monitors all valves on an annual basis (in April), skipping three (3) quarterly periods in accordance with R.61-79.264.1062(b)(3).

VIII.D.5(k)(i) The Permittee shall monitor valves in compliance with the requirements of R.61-79.264.1062(b)(3).

VIII.D.5(k)(ii) If the percentage of valves leaking is greater than 2 percent (%), the Permittee shall monitor monthly in compliance with R.61-79.264.1057, but may again elect to use this method after meeting the requirements of R.61-79.264.1057(c)(1).

VIII.D.5(k)(iii) The Permittee shall monitor valves monthly per Reference Method 21 and as specified in R.61-79.264.1063(b).

VIII.D.5(k)(iv) A leak is detected if an instrument reading of 10,000 ppm is measured during monitoring in accordance with Reference Method 21 and R.61-79.264.1063(b).

VIII.D.5(k)(v) 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.D.5(k)(vi) 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.D.5(k)(vii) The Permittee has not designated any valves as no detectable emissions as described in R.61-79.264.1064(g) at the time of Permit issuance. For any valve designated as no detectable emissions, the Permittee shall comply with R.61-79.264.1057(f).

VIII.D.5(k)(viii) The Permittee has not designated any valves as unsafe-to-monitor or difficult-to-monitor as described in R.61-79.264.1064(g) and (h) at the time of Permit issuance. For any valves designated as unsafe-to-monitor or difficult-to-monitor, the Permittee shall comply with R.61-79.264.1057(g) and (h).

VIII.D.6 Test Methods and Procedures
[R.61-79.264.1063]

VIII.D.6(a) The Permittee shall comply with the test methods and procedures of R.61-79.264.1063,

Reference Method 21, and the LDAR Program (Plantwide Procedure OB62308) in Appendix N-1 of the Approved Permit Application, for equipment subject to R.61-79.264, Subpart BB.

VIII.D.6(a)(i) The organic air emission detection instrument shall be calibrated each day prior to use in accordance with Reference Method 21.

VIII.D.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.D.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.D.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.D.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.

VIII.D.7 Recordkeeping Requirements

[R.61-79.264.1064]

VIII.D.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.D.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.D.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.D.8 Reporting Requirements

[R.61-79.264.1065]

VIII.D.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.D.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.9 Equipment Maintenance Change Management

VIII.D.9(a) The Permittee shall establish and maintain a written protocol in the LDAR Program in Appendix N-1 of the Approved Permit Application and in the recordkeeping system (i.e., LeakDAS) to track changes in the equipment and associated unique identification number marking.

VIII.D.9(b) The Permittee shall maintain a historical record for each piece of equipment, its maintenance or replacement, and disposition of the equipment identification number per the LDAR Program (Plantwide Procedure OB62308) in Appendix N-1 of the Approved Permit Application and this Permit.

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

[R.61-79.264 Subpart CC]

VIII.E.1 Applicability

[R.61-79.264.1080 and 264.601]

VIII.E.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.E.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.E apply to the hazardous waste management units and their covers, closure devices, and control devices, as specifically listed in Table 1 of this Permit and in Section O and the Section O Appendices from the Approved Permit Application.

VIII.E.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.E do not apply to such units.

Table 1: Hazardous Waste Management Units and Control Devices Subject to R.61-79.264, Subpart CC

Hazardous Waste Management Unit	Unit Type	Brief Description
Blend Tank T-8332 (T-100M-5)	Level 2 Tank	Tank with Level 2 controls to closed-vent system to Flare (E-8832) operated in accordance with R.61-79.264.1087 and 264.1033.
Blend Tank T-8331 (T-30M-66)	Level 2 Tank	
Blend Tank T-8333 (T-30M-61)	Level 2 Tank	
Blend Tank T-8345 (T-10M-32)	Level 2 Tank	
Closed-Vent System and Flare (E-8832)	Closed-Vent System to Organic Emission Control Device	Closed-vent system to Flare (E-8832) operated in accordance with R.61-79.264.1087 and 264.1033.

VIII.E.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.E.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.E.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).

VIII.E.5 Waste Determination Procedures

[R.61-79.264.1083]

These procedures are not applicable. No exemptions have been requested by the Permittee.

VIII.E.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.

VIII.E.7 Standards: Level 2 Tank Emission Controls

[R.61-79.264.1084]

The Permittee shall control organic air pollutant emissions using tanks vented through a closed-vent system to flare (E-8832), a control device, as specified in R.61-79.264.1084(g).

VIII.E.7(a) The Permittee shall operate the tank covered by a fixed roof and vented directly through a closed-vent system to the control device at all times the tank is managing hazardous waste.

VIII.E.7(a)(i) Whenever hazardous waste is in the tank, the fixed roof and all closure devices will be in the closed position and the vapor headspace shall be vented to the closed-vent system and operating control device.

VIII.E.7(a)(ii) Venting to the control device is not required during routine inspection and maintenance and other normal operations when access to the tank is necessary or at time conditions require opening of safety or pressure relief devices as specified in R.61-79.264.1084(g)(2).

VIII.E.7(a)(iii) Any opening in a fixed roof or pressure relief device not vented to the control device shall be equipped with a closure device and shall be secured in the closed position and operated with no detectable emissions when the tank vapor headspace is less than atmospheric or within the tank's design pressure tolerance.

VIII.E.7(b) The Permittee shall inspect and monitor the emissions control equipment and pressure relief devices associated with the tanks, its covers and closure devices at the time that it is first put in service, and at least annually, thereafter, as required by R.61-79.264.1084(c)(3) and Reference Method 21. 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.E.7(c) The Permittee shall inspect the closed-vent system for compliance with Permit Condition VIII.C.3 Closed-Vent Standards and Permit Condition VIII.C.4 Flare Standards, as specified in R.61-79.264.1084(g)(3), 264.1087 and 264.1033, and the LDAR Program (Plantwide Procedure OB62308) in Appendix N-1 and the Inspection Plan in Appendix F-3 of the Approved Permit Application.

VIII.E.7(d) The Permittee shall transfer hazardous waste to a tank subject to R.61-79.264, Subpart CC following the requirements of R.61-79.264.1084(j), including the use of continuous hard-piping between tanks and other closed systems between tank trailers and Level 2 tanks. Figure D.9-1 in the Approved Permit Application shows the piping diagrams for

the hazardous waste Blend Tanks.

VIII.E.7(e) The Permittee shall repair each defect detected during inspection or monitoring in accordance with R.61-79.264.1084(k).

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

VIII.E.7(e)(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.61-79.264.1059.

VIII.E.7(f) 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. 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.E.8 Standards: Containers

[R.61-79.264.1086]

At the time of Permit issuance, the Permittee operates mobile tank trailers that transport organic hazardous wastes to the Hazardous Waste Blend Tanks. The mobile tank trailers are containers located in less than 90-day storage areas and are subject to the provisions of R.61-79.265.1087.

VIII.E.9 Standards: Closed-Vent Systems and Control Devices

[R.61-79.264.1087]

VIII.E.9(a) Hazardous Waste Blend Tanks T-8332, T-8331, T-8333 and T-8345 are equipped with a closed vent system which routes emissions to a non-assisted flare for organic air emissions control. The emissions from these tanks are controlled with Level 2 tank controls.

VIII.E.9(b) The Permittee shall operate, maintain, inspect and monitor the closed-vent system to the non-assisted flare control device for compliance with R.61-79.264.1087, 264.1033, as specified in LDAR Program (Plantwide Procedure OB62308) in Appendix N-1 and Sections N and O of the Approved Permit Application, and the Closed-Vent Systems and Flare Control Standards of Permit Conditions VIII.C.3 and VIII.C.4, respectively.

VIII.E.10 Inspection and Monitoring Requirements

[R.61-79.264.1088]

VIII.E.10(a) The Permittee shall comply with the inspection and monitoring requirements of R.61-79.264.1088, as prescribed by the Conditions of this Permit, the LDAR Program (Plantwide Procedure OB62308) in Appendix N-1, the Inspection Plan in Appendix F-3 inspection plan, and Sections M, N and O of the Approved Permit Application.

VIII.E.10(a)(i) The organic air emission detection instrument shall be calibrated each day prior to use in accordance with Reference Method 21.

VIII.E.10(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 40 C.F.R. § 264.1063(b)(4).

VIII.E.10(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.E.10(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.E.10(b) Inspections and monitoring shall be conducted at times when the hazardous waste management unit or equipment is in operation, and by qualified persons with the appropriate training.

VIII.E.11 Recordkeeping Requirements

[R.61-79.264.1089]

VIII.E.11(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.E.11(b) These 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, 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.E.11(c) Records justifying any covers designated as unsafe to inspect or monitor shall comply with R.61-79.264.1084(l) or 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.E.12 Reporting Requirements

[R.61-79.264.1090]

VIII.E.12(a) The Permittee shall prepare and submit a report within fifteen (15) calendar days to the Department documenting each occurrence of noncompliance.

VIII.E.12(b) The Permittee shall submit a report semiannually to the Department documenting, for control devices operating in accordance with R.61-79.264.1087, each occurrence where the control device could not be returned to compliance within twenty-four (24) hours and the actions taken to correct the noncompliance.

VIII.E.12(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.

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

Appendix A-1 **List of All Solid Waste Management Units (SWMUs), Areas of Concern (AOCs) and Regulated Units**	
SWMU Number or AOC Letter	**SWMU or AOC Name**
1	Landfill
2	Old Spoils Area
3	Former Hi-TOC Lagoon
4	French Drain A
5	French Drain B
6	French Drain C
7	East/West French Drain
8	South Swamp French Drain
9	South Swamp – has been determined to be AOC – see AOC E below
10	Stormwater Collection System: A) Drainage Ditches B) Stormwater Impoundment Basin
11	Stormwater Outfall Ditches
12	Industrial Sewer System
13N	Former North/South Ditch (Northern Section)
13S	Former North/South Ditch (Southern Section)
14	Former East/West Ditch
15	Current North/South Ditch
16	Primary Clarifier
17	T-9639 (T-10M-21) – 10,000-gal Oily Waste Tank
18	Deep Sump
19	Equalization Tank
20	Mechanical Dewatering System: A) Filter Presses (2) B) Floc Tanks (2)

Appendix A-1 List of All Solid Waste Management Units (SWMUs), Areas of Concern (AOCs) and Regulated Units	
SWMU Number or AOC Letter	**SWMU or AOC Name**
21	Sludge Roll-Offs
22	Sludge Holding Basin (aka Old Holding Area)
23A	Sand Bed No. 1
23B	Sand Bed No. 2
23C	Sand Bed No. 3
23D	Sand Bed No. 4
24	Pond No. 1
25	Pond No. 2
26	Pond No. 3
27	Secondary Clarifier
28	Sludge Decant Tank
29	Less Than 90-Day Drum Storage Area
30	GSX Area
31	Sample Container Shed
34	Paint Solids Drum Storage Area
35	Sand Blast Drum Storage Area
36	Welding/Vehicle Waste Shop Collection Areas
37	Plant No. 5 Waste Collection Drums
38	Plant No. 7 Blending Area Drums
39	Plant No. 8 Waste Collection Areas (2)
40	Plant No. 9 Waste Collection Area
41	Plant No. 12 Waste Collection Area
42	Second Street Waste Collection Area
43	Raw Materials Warehouse Waste Collection Area
44	Drum Loading Waste Collection Area
45	EPDT Decon Waste Collection Drum

Appendix A-1 List of All Solid Waste Management Units (SWMUs), Areas of Concern (AOCs) and Regulated Units	
SWMU Number or AOC Letter	**SWMU or AOC Name**
46	Maintenance Area Waste Collection Drum
47	R&D Laboratory Waste Accumulation Containers
48	Plant No. 1 Sample Bottle Drum
49	Plant No. 7 Waste Collection Drum
50	Plant No. 8 Sample SAA
52	K-1600-2 EPTD Vacuum Oil Tank
53	K-1600-3 Waste Oil Hydrolysis Tank
54	T-7333 (T-1M-51) 1,000-gallon Cleaning Solvents Tank
56	T-500-14 500-gallon Washout Portable Tank
66	T-5143B (T-2M-7) 2,000-gallon MMT Column Bottoms Tank
67	T-5143A (T-2M-8) 2,000-gallon MMT Column Bottoms Tank
73	T-8155 (T-15M-42) 15,000-gallon Hazardous Waste Fuel Tank
82	T-9241 (T-30M-69) (T-434) 30,000-gallon DR-3 Acidic Wastes Tank
84	T-9240 (T-30M-70) (T-438) 30,000-gallon DR-3 Acidic Wastes Tank
89	T-9320 DR-3 Wastewater Collection Tank
95	V-1482 (T-500-58) 500-gallon Scrubber Spent Acid Tank
96	T-1135 (T-10M-24) Spent Caustic Tank
100	T-9232 (T-30M-60) 30,000-gallon Hazardous Waste Storage Tank
107	T-9730 (T-15M-61) 15,000-gallon DII Spent Acid Tank
108	T-8332 (T-100M-5) 100,000-gallon Hazardous Waste Fuel Tank *(formerly T-100M-2)*
109	T-8331 (T-30M-66) 30,000-gallon Hazardous Waste Fuel Tank *(formerly T-30M-37)*
110	T-8333 (T-30M-61) 30,000-gallon Hazardous Waste Fuel Tank
111	T-8345 (T-10M-32) 10,000-gallon Hazardous Waste Fuel Tank *(formerly T-10M-5)*
116	Former Drum Sump
120	E-1 Tank Trailer
121	E-3 Tank Trailer

Appendix A-1 List of All Solid Waste Management Units (SWMUs), Areas of Concern (AOCs) and Regulated Units	
SWMU Number or AOC Letter	**SWMU or AOC Name**
122	E-4 Tank Trailer
125	Boiler No. 4
127	DR-3 Incinerator
128	MMT Flare
129	Former Trash Incinerator
130	Former Burn Pit
131	Former Ground Burner Unit
132	Former Aluminum Alkyl Burn Pit
133	Bubble Pots
134	Plant No. 8 Scrubber
135	Plant No. 9 HCL Scrubber
137	Plant No. 12 DMA Scrubber
138	Plant No. 14 DMA Scrubber
139	BIF Loading/Unloading Area
145	Plant No. 8 Loading Area
146	EPTD Decon Area
147	Container Decontamination Area
152N	Sand Blasting Area (North)
152S	Sand Blasting Area (South)
153	Dump Trucks
155	Scrap Metal Dumpsters
156	Plant No. 8 Catalyst Dumpster
157	Lime Grit Bin
159	Plant No. 8 Wastewater Sumps
160	Plant No. 10 Sump
AOC A	North Fork Edisto River

Appendix A-1 **List of All Solid Waste Management Units (SWMUs), Areas of Concern (AOCs) and Regulated Units**	
SWMU Number or AOC Letter	**SWMU or AOC Name**
AOC B	Area East of Landfill
AOC C	DMC Spill Site
AOC D	Fire Training Area
AOC E	South Swamp (in area of former SWMU 9)
AOC F	Eastern Debris Area
AOC G	Product Area South of Pond 1
AOC H	Product Area Northeast of Pond 3

Appendix A-2 **Units Regulated Under R.61-79.264 (RCRA-regulated units)**	
SWMU Number or AOC Letter	**SWMU or AOC Name**
108	T-8332 (T-100M-5) 100,000-gallon Hazardous Waste Fuel Tank *(formerly T-100M-2)*
109	T-8331 (T-30M-66) 30,000-gallon Hazardous Waste Fuel Tank *(formerly T-30M-37)*
110	T-8333 (T-30M-61) 30,000-gallon Hazardous Waste Fuel Tank
111	T-8345 (T-10M-32) 10,000-gallon Hazardous Waste Fuel Tank *(formerly T-10M-5)*
125	Boiler No. 4

Appendix A-3 SWMUs and AOCs Requiring No Further Action at this Time (NFA)	
SWMU Number or AOC Letter	**SWMU or AOC Name**
4	French Drain A
5	French Drain B
6	French Drain C
7	East/West French Drain
8	South Swamp French Drain
10	Stormwater Collection System: A) Drainage Ditches B) Stormwater Impoundment Basin
17	T-9639 (T-10M-21) – 10,000-gal Oily Waste Tank
19	Equalization Tank
20	Mechanical Dewatering System: A) Filter Presses (2) B) Floc Tanks (2)
21	Sludge Roll-Offs
28	Sludge Decant Tank
29	Less Than 90-Day Drum Storage Area
30	GSX Area
31	Sample Container Shed
34	Paint Solids Drum Storage Area
35	Sand Blast Drum Storage Area
36	Welding/Vehicle Waste Shop Collection Areas
37	Plant No. 5 Waste Collection Drums
38	Plant No. 7 Blending Area Drums
39	Plant No. 8 Waste Collection Areas (2)
40	Plant No. 9 Waste Collection Area
41	Plant No. 12 Waste Collection Area
42	Second Street Waste Collection Area
43	Raw Materials Warehouse Waste Collection Area

Appendix A-3 SWMUs and AOCs Requiring No Further Action at this Time (NFA)	
SWMU Number or AOC Letter	**SWMU or AOC Name**
44	Drum Loading Waste Collection Area
45	EPDT Decon Waste Collection Drum
46	Maintenance Area Waste Collection Drum
47	R&D Laboratory Waste Accumulation Containers
48	Plant No. 1 Sample Bottle Drum
49	Plant No. 7 Waste Collection Drum
50	Plant No. 8 Sample SAA
52	K-1600-2 EPTD Vacuum Oil Tank
53	K-1600-3 Waste Oil Hydrolysis Tank
54	T-7333 (T-1M-51) 1,000-gallon Cleaning Solvents Tank
56	T-500-14 500-gallon Washout Portable Tank
66	T-5143B (T-2M-7) 2,000-gallon MMT Column Bottoms Tank
67	T-5143A (T-2M-8) 2,000-gallon MMT Column Bottoms Tank
73	T-8155 (T-15M-42) 15,000-gallon Hazardous Waste Fuel Tank
82	T-9241 (T-30M-69) (T-434) 30,000-gallon DR-3 Acidic Wastes Tank
84	T-9240 (T-30M-70) (T-438) 30,000-gallon DR-3 Acidic Wastes Tank
89	T-9320 DR-3 Wastewater Collection Tank
95	V-1482 (T-500-58) 500-gallon Scrubber Spent Acid Tank
96	T-1135 (T-10M-24) Spent Caustic Tank
100	T-9232 (T-30M-60) 30,000-gallon Hazardous Waste Storage Tank
107	T-9730 (T-15M-61) 15,000-gallon DII Spent Acid Tank
116	Former Drum Sump
120	E-1 Tank Trailer
121	E-3 Tank Trailer
122	E-4 Tank Trailer
127	DR-3 Incinerator
128	MMT Flare

Appendix A-3 SWMUs and AOCs Requiring No Further Action at this Time (NFA)	
SWMU Number or AOC Letter	**SWMU or AOC Name**
129	Former Trash Incinerator
133	Bubble Pots
134	Plant No. 8 Scrubber
135	Plant No. 9 HCL Scrubber
137	Plant No. 12 DMA Scrubber
138	Plant No. 14 DMA Scrubber
139	BIF Loading/Unloading Area
145	Plant No. 8 Loading Area
146	EPTD Decon Area
147	Container Decontamination Area
153	Dump Trucks
155	Scrap Metal Dumpsters
156	Plant No. 8 Catalyst Dumpster
157	Lime Grit Bin
159	Plant No. 8 Wastewater Sumps
160	Plant No. 10 Sump
AOC C	DMC Spill Site

Appendix A-4 SWMUs and AOCs Requiring Confirmatory Sampling (CS)	
SWMU Number or AOC Letter	**SWMU or AOC Name**
9	South Swamp – has been determined to be AOC – see AOC E below
AOC D	Fire Training Area
AOC E	South Swamp (in area of former SWMU 9)

Appendix A-5 SWMUs and AOCs Requiring a RCRA Facility Investigation (RFI)	
SWMU Number or AOC Letter	**SWMU or AOC Name**
2	Old Spoils Area
13N	Former North/South Ditch (Northern Section)
14	Former East/West Ditch
131	Former Ground Burner Unit
132	Former Aluminum Alkyl Burn Pit
AOC G	Product Area South of Pond 1
AOC H	Product Area Northeast of Pond 3

Appendix A-6 SWMUs and AOCs Requiring a Corrective Measures Study (CMS)	
SWMU Number or AOC Letter	**SWMU or AOC Name**
3	Former Hi-TOC Lagoon
12	Industrial Sewer System
13S	Former North/South Ditch (Southern Section)
15	Current North/South Ditch
23A	Sand Bed No. 1
23B	Sand Bed No. 2
23C	Sand Bed No. 3
23D	Sand Bed No. 4
130	Former Burn Pit
152N	Sand Blasting Area (North)

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 LUC
22	Sludge Holding Basin (aka Old Holding Area)	• Source Removal • French Drain for upgradient groundwater capture • Geomembrane cap • Groundwater Monitored Natural Attenuation	Deed restrictions limiting use of groundwater beneath site and restricting future use of property to industrial use	• CMS Report dated Apr 10, 2019; approved Apr 30, 2019 • Declaration of Covenants and Restrictions signed July 20, 2011
24	Pond No. 1	• Source Removal • Groundwater Monitored Natural Attenuation	Deed restrictions limiting use of groundwater beneath site and restricting future use of property to industrial use	• CMS Report dated Nov 11, 2016; approved Feb 2, 2017 • Declaration of Covenants and Restrictions signed July 20, 2011
26	Pond No. 3	• Source Removal • Groundwater Monitored Natural Attenuation	Deed restrictions limiting use of groundwater beneath site and restricting future use of property to industrial use	• CMS Report dated Dec 22, 2016; approved Mar 3, 2017 • Declaration of Covenants and Restrictions signed July 20, 2011
AOC F	Eastern Debris Area	• Source Removal • Groundwater Monitored Natural Attenuation	Deed restrictions limiting use of groundwater beneath site and restricting future use of property to industrial use	• CMS Report dated Jan 2, 2018; approved Mar 2, 2018 • Declaration of Covenants and Restrictions signed July 20, 2011

Appendix A-8

SWMUs and AOCs Transferred to Another Environmental Program

SWMU Number or AOC Letter	SWMU or AOC Name	Name of Environmental Program	Type of Permit and ID Number
1	Landfill	SCDHEC Solid Waste Program	Class 3 Solid Waste Landfill Permit #383345-1601
11	Stormwater Outfall Ditches	SCDHEC Stormwater Program	NPDES Industrial Stormwater General Permit SCR000000 (Coverage # SCR005584)
16	Primary Clarifier	SCDHEC Industrial Wastewater Program	NPDES Wastewater Permit #SC0001180
18	Deep Sump	SCDHEC Industrial Wastewater Program	NPDES Wastewater Permit #SC0001180
25	Pond No. 2	SCDHEC Industrial Wastewater Program	NPDES Wastewater Permit #SC0001180
27	Secondary Clarifier	SCDHEC Industrial Wastewater Program	NPDES Wastewater Permit #SC0001180

Appendix A-9 SWMUs Identified In The February 1993 RFA Report As SWMUs But Subsequently Determined Not To Be SWUMs	
SWMU Number or AOC Letter	**SWMU or AOC Name**
32	Transformer Containment Box
33	Equipment Laydown Yard
51	T-20M-10 EPTD Hydrolysis Tank
55	T-6M-17 Dilute Alkyl Holding Tank
57	K-1000-11 Hydrolysis Feed Tank
58	K-1000-26 Hydrolysis Holding Tank
59	K-2M-14 Hydrolysis Tank
60	T-10M-23 Intermediate Organics Tank
61	T-8200-1 MMT Column Bottoms Wastewater Tank
62	T-8200-2 MMT Column Bottoms Wastewater Tank
63	T-6M-18 Former DMC-Water Stripper Bottoms
64	T-6M-23 DMC-Water Stripper Bottoms Tank
65	T-4800-1 MMT Washwater Tank
68	K-4M-2 Former MPA Process Wastewater Tank
69	K-4M-8 MPA Process Wastewater Tank
70	T-100M-3 Oily Wastewater Tank
71	T-100M-4 DETDA Wastewater Tank
72	T-15M-41 DETDA Wastewater Tank
74	T-10M-11 Wastewater Tank
75	T-5M-1 301 Lights Tank
76	T-5M-4 Orthoalkylation Still Bottoms Tank
77	T-5M-3 Orthoalkylation Still Bottom Tank
78	T-1M-30 Column Vent Lights Tank
79	T-1M-47 Phenol Scrubber Tank
80	T-431 DR-3 Acidification Water Washes Tank
81	T-433 Ground-Water Recovery Tank

Appendix A-9 SWMUs Identified In The February 1993 RFA Report As SWMUs But Subsequently Determined Not To Be SWUMs	
SWMU Number or AOC Letter	**SWMU or AOC Name**
83	T-437 DR-3 Process Wastewater Tank
85	T-1431 DR-3 Reactors Wastewater Tank
86	T-1432 DR-3 Process Wastewater Tank
87	T-1437 DR-3 Reactors Wastewater Tank
88	D-1413 Pressure Wash Tank
90	T-19M-1 330 Process Sump Wastewater Tank
91	T-11M-2 330 MeCl Recovery Wastewater Tank
92	T-10M-14 330 Heel Organics Tank
93	T-30M-65 330 Acidic Wastewater Tank
94	T-300-9 330 Process Wastewater Tank
97	T-225-2 Neutralization Tank
98	K-3000-4 702 Still Bottoms Tank
99	K-3000-6 702 Bottoms Tank
101	T-1M-23 Waste Hydrolysis Kettle
102	T-15M-46 DETDA Extraction Tank
103	T-15M-45 Oily Waste Tank
104	T-15M-34 701 Process Acidic Wastewater Tank
105	T-15M-29 Caustic Waste Tank
106	T-15M-33 701 Process Acidic Wastewater Tank
112	T-200M-1 Sludge Holding Tank
113	T-20M-9 Sludge Holding Tank
114	T-3300-4 Water Recycle Tank
115	T-2300-1 pH Adjustment Tank
117	K-500-14 Waste Transfer Hopper
118	T-500-18 Portable Hazardous Waste Tank
119	K-1000-3 Hazardous Waste Collection Tank

Appendix A-9 SWMUs Identified In The February 1993 RFA Report As SWMUs But Subsequently Determined Not To Be SWUMs	
SWMU Number or AOC Letter	**SWMU or AOC Name**
123	E-5 Tank Trailer
124	E-6 Tank Trailer
126	Boiler No. 4 AECS
136	Plant No. 11 Scrubber
140	Railcar Loading/Unloading Area
141	Used Acid/Base Loading Areas
142	DETDA Trailer Unloading Area
143	Cylinder Cleaning Solvents Loading/Unloading Area
144	Blending Area Loading/Unloading Area
148	Trailer Washing Area
149	Railcar Washing Area
150	Vehicle/Equipment Washing Area
151	Aluminum Alyls Staging and Washing Area
154	Refuse Dumpsters
158	Groundwater Well

NOTE: SWMUs listed in Appendix A-9 were identified in the RFA dated Feb 1993 (EPA Contract 68-W9-0040) and subsequently determined not to be SWMUs. They are included in this list to memorialize them.

Appendix A-10 SWMUs and AOCs Under SCDHEC Review to Determine Corrective Action Status	
SWMU Number or AOC Letter	**SWMU or AOC Name**
152S	Sand Blasting Area (South)
AOC A	North Fork Edisto River
AOC B	Area East of Landfill

APPENDIX B – RCRA FACILITY INVESTIGATION (RFI) WORKPLAN OUTLINE

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 Environmental Compliance Branch's Standard Operating Procedure and Quality Assurance Manual (SOP) (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;

(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:

(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

(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:

(i) Unique sample or field measurement code;

(ii) Sampling or field measurement location and sample or measurement type;

(iii) Sampling or field measurement raw data;

(iv) Laboratory analysis ID number;

(v) Property or component measures; and

(vi) 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;

(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.

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.

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

(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;

(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:

(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;

(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

(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;

(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

(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 (1) 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.

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.

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;
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 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.

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.

6. 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.

7. Attain Media Cleanup Standards

   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).

8. 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.

9. 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).

10. Other Factors

    Five (5) general factors will be considered as appropriate by the Department in selecting/approving a remedy that meets the four (4) standards listed above. These five (5) 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:

    f) 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.

g) 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.

h) 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.

i) 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.
   v. 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.

APPENDIX D – ADDITIONAL COMPLIANCE DATES

Permit Condition	Event	Due Date
I.E.14	Imminent Hazard Report	Oral notification within 24 hours. Written notification within fifteen (15) days.
IV.G.2(c)	Certification of process and raw material review documenting no known sources of mercury	Received by March 31st of each year, and prior to any process or raw material change.
IV.G.2(c)	Report documenting response to detection of mercury in a waste feed tank	Within sixty (60) days of initial mercury detection.
IV.L.2	Deadline to submit revised Closure Plan that includes the closure procedures and confirmatory sampling of the boiler and boiler area foundation, baghouse and foundation, and all pumps and transfer area equipment	Within one hundred eighty (180) days of the effective date of this Permit.
V.B.2	Deadline to Submit Remedial Strategy and Corrective Action Cost Estimate	One hundred eighty (180) days from effective date of this Permit.
V.B.3	Financial Assurance for Corrective Action	One hundred twenty (120) days after Department approves corrective action cost estimate.
VI.A	Waste Minimization Certification	If applicable, annually from the effective date of this Permit.
The submittals above must be signed and certified in accordance with R.61-79.270.11.		

APPENDIX E – 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).
- 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 quarterly inspections/review of all SWMUs and/or AOCs identified in Appendix A-7. 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 quarterly 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-7.

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.

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.)

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-7, 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.)

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:

APPENDIX F – INDUSTRIAL BOILER SYSTEM CONTINUOUS MONITOR SPECIFICATIONS

Control Parameter	Instrument Description	Instrument Tag Number[1, 5]	Physical Location	Instrument Range	Calibration Frequency[2]
Waste Feed Rate	Micro-Motion Mass Flow Meter	FT-E8394-069	Between boiler controls and burner gas	0-40 lb/min	Annually
Combustion Temperature	Type R - Thermocouple In Stainless Steel Thermowell	TT-E8394-068	End of firing chamber prior to gases entering boiler tubes	0-1500°C (32-2732°F)	Weekly
Steam Production Rate	Johnson-Yokogowa Vortex Meter, Model YF115	FT-E8394-051	Steam output line from boiler	0-50,00 lb/hour	Annually
Fabric Filter Inlet Temperature	Type J - Thermocouple In 316 Stainless Steel Thermowell	TT-E8397-D	Between economizer exhaust and inlet to baghouse	0-250°C (32-482°F)	Weekly
Fabric Filter Pressure Drop[3]	Rosemount DP Cells	DPI-S8397-A	Baghouse S8397	0-25 inches water	Weekly
Carbon Monoxide[4]	Rosemount Model 880 NDIR Stack Gas Analyzer	AE-S8394-A	Boiler exhaust stack	Dual range: 0-200 ppm 0-3000 ppm	Daily – Calibration check and system audit Quarterly – Calibration error test Annually – Performance specification test
Oxygen[4]	Rosemount Model 775 Paramagnetic Stack Gas Analyzer	AE-S8394-A	Boiler exhaust stack	0-25%	
Combustion Chamber Pressure	Rosemount Model 3051 Gauge Pressure Transmitter	PT-E8394-A	Between boiler exhaust and inlet to economizer	-25 to 25 inches water relative to atmosphere	Monthly
Fabric Filter Broken Bag Particulate Detector	Auburn Systems Tribolectric Sensor	AE-S8397-A	Between baghouse S8397 and fan B8397.	0-100%	Monthly

1 Instrument tag numbers are depicted on the following figures included in Appendix D-2 of the Approved Permit Application:

- Figure D.2-8, Utilities E8394 (HE-3800-1) Boiler-4 System P&ID; Drawing #0BH25F013, Rev.16
- Figure D.2-9, Boiler #4 Baghouse S8394 P&ID; Drawing #0BH25F014, Rev. 18

2 The Permittee shall maintain written calibration procedures for each monitor identified in this Appendix and shall ensure that each monitor is calibrated in accordance with those procedures prior to burning hazardous waste in the boiler. The written calibration procedures shall be available at all times for inspection.

3 Fabric filter pressure drop is no longer required to be monitored after the Permittee installs a bag leak detection monitoring system and the system is operating under the approved *Bag Leak Detection System Monitoring Plan* in accordance with Permit Condition IV.E.4(h). Specifications and calibration procedures for the bag leak detection monitoring system must be included in the *Bag Leak Detection System Monitoring Plan* required by Permit Condition IV.E.4(h)(i). The *Bag Leak Detection System Monitoring Plan* was submitted on September 21, 2007 and November 5, 2007, and was approved on January 24, 2008.

4 The carbon monoxide and oxygen monitors shall be installed, operated and maintained in accordance with the performance specifications identified in 40 CFR Part 266, Appendix IX, Section 2.1. The Section 2.1 performance criteria include:

Carbon Monoxide Monitor			
	Low Range	High Range	Oxygen Monitor
Calibration drift	< 6 ppm	< 90 ppm	< 0.5% O_2
Calibration error	< 10 ppm	< 150 ppm	< 0.5% O_2
Response time	< 2 min	< 2 min	< 2 min
Relative accuracy	The greater of 10% of performance test method or 10 ppm CO; oxygen is incorporated in the CO relative accuracy calculation.		

Calibration checks and performance specification testing shall be conducted in accordance with procedures specified in 40 CFR Part 266, Appendix IX, Section 2.1.

5 The Appendix F Table references the equipment's Tag Number at the time of Permit issuance. If the equipment is replaced with an equivalent piece of equipment during the effective duration of this Permit, the tag number may change. Change Management shall be directed as specified in Section N of the Approved Permit Application.

APPENDIX G – BAG LEAK DETECTION SYSTEM REQUIREMENTS

A. SYSTEM SPECIFICATION AND REQUIREMENTS

1. The bag leak detection system must be certified by the manufacturer to be capable of continuously detecting and recording particulate matter emissions at concentrations of 1.0 milligrams per actual cubic meter or other level as approved by both the U.S. EPA Region IV and the Department.
2. The bag leak detection system shall provide output of relative particulate matter loadings.
3. The bag leak detection system shall be equipped with an alarm system that will sound an audible alarm when an increase in relative particulate loadings is detected over a preset level.
4. The bag leak detection system shall be installed and operated in a manner consistent with the September 1997 *U.S. EPA Fabric Filter Bag Leak Detection Guidance* and manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.
5. The initial adjustment of the system shall be conducted following a complete baghouse inspection which demonstrates the baghouse is in good operating condition.
6. The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device and establishing the alarm set points. These parameters shall be document in the *Bag Leak Detection System Monitoring Plan* required by Permit Condition IV.E.4(h).
7. Following initial adjustment, no adjustment shall be made to the sensitivity or range, averaging period, or alarm set points except as detailed in the *Bag Leak Detection System Monitoring Plan* required by Permit Condition IV.E.4(h). The sensitivity may not be increased by more than 100 percent or decreased by more than 50 percent over a 365-day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.

B. CORRECTIVE MEASURES REQUIREMENTS

1. The *Bag Leak Detection System Monitoring Plan* required by Permit Condition IV.E.4(h) must include a corrective measures plan that specifics the procedures to be followed in the case of a bag leak detection system alarm. The corrective measures plan must include, at a minimum, the procedures to be used to determine and record the time and cause of the alarm as well as the corrective measures to be taken to correct the control device malfunction or minimize emissions. Failure to initiate the corrective measures is considered failure to ensure compliance with the performance standards and emissions limitations in Permit Condition IV.D.
2. The procedures for determining the cause of the alarm must be initiated within 30 minutes of the time the alarm first sounds.
3. The cause of the alarm must be alleviated by taking the necessary corrective measures which may include, but are not limited to, the following measures:
    a. Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions;
    b. Sealing off defective bags or filter media;

c. Replacing defective bags or filter media, or otherwise repairing the control device;

d. Sealing off a defective baghouse compartment;

e. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; or,

f. Shutting down the combustor.

APPENDIX H – SI GROUP FACILITY MAP